

TECHNICAL PAPER

03

Non-Aboriginal heritage

ALBURY TO ILLABO ENVIRONMENTAL IMPACT STATEMENT





GML
HERITAGE

Inland Rail—Albury to Illabo

Technical Paper 3—Non-Aboriginal Heritage

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Executive summary

WSP Australia Pty Ltd (WSP), on behalf of Australian Rail Track Corporation (ARTC), has engaged GML Heritage Pty Ltd (GML) to prepare a Statement of Heritage Impact (SoHI) for the Albury to Illabo section of Inland Rail (the proposal). Inland Rail is a major national program that will enhance Australia's existing national rail network and serve the interstate freight market.

Enhancement works are required to provide increased vertical and horizontal clearances to support the transport of double-stacked freight trains. Works are proposed at 24 discrete sites along the route of the existing rail corridor between Albury and Illabo.

This SoHI assesses the potential impacts on registered and unregistered potential non-Aboriginal (historical) heritage items by the proposal. It has been prepared in accordance with the requirements established by Heritage NSW in the *Statements of Heritage Impact* (Heritage Council of NSW, 2002) and *Assessing Significance for Historical Archaeological Sites and 'Relics'* (Heritage Council of NSW, 2009).

A total of 42 registered heritage items—inclusive of several substantial groups of items—are located within the enhancement sites. A further 86 items are located within 200 metres of the proposal and the railway corridor more broadly. Several of these sites have multiple listings on state, local, and Section 170 registers. An additional three unregistered potential heritage items were identified, inclusive of one archaeological site. Several previously un-assessed components located within curtilages of other registered heritage items were also identified.

The impacts of the proposal are concentrated on the following works:

- demolition of structures located at the Albury Station, Culcairn Station, Wagga Wagga Conservation Area, Wagga Wagga Station, and Junee Station
- disturbance of archaeological material located at the Albury Station and former Yerong Creek Station site
- viewsheds and aesthetics of the heritage curtilages, where new, taller structures would be installed among existing heritage landscapes
- impacts arising from vibration and accidental impacts.

Overall, the likely impacts from the proposal were assessed as being moderate to minor. Where impacts have not been eliminated through avoidance, mitigation measures have been proposed:

- Detailed design phase—Measures to reduce further impacts, exploration of opportunities to reuse or gift salvaged materials from demolished heritage items, and heritage interpretation
- Pre-construction phase—Archival recording, archaeological test/salvage excavation, and installation of exclusion measures
- Construction phase—Installation of exclusion measures, a heritage unexpected finds protocol, and a heritage management sub-plan.

1 Introduction

1.1 Overview

The Australian Government has committed to delivering a significant piece of national transport infrastructure by constructing a high performance and direct interstate freight rail corridor between Melbourne and Brisbane, via central-west New South Wales (NSW) and Toowoomba in Queensland. Inland Rail is a major national program that would enhance Australia's existing national rail network and serve the interstate freight market.

The Inland Rail route, which is about 1,700 kilometres long, would involve:

- using the existing interstate rail line through Victoria and southern NSW
- upgrading about 400 kilometres of existing track, mainly in western NSW
- providing about 600 kilometres of new track in northern NSW and south-east Queensland.

Inland Rail has been divided into 13 projects, seven of which are located in NSW. Each of these projects can be delivered and operated independently with tie-in points on the existing railway.

Australian Rail Track Corporation Ltd (ARTC) ('the proponent') is seeking approval to construct and operate the Albury to Illabo section of Inland Rail ('the proposal').

The proposal is Critical State Significant Infrastructure (CSSI) and is subject to approval by the NSW Minister for Planning under Division 5.2, Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act). This report has been prepared as part of the Environmental Impact Statement (EIS) for the proposal. The EIS has been prepared to support the application for approval of the proposal, and address the environmental assessment requirements of the Secretary of then NSW Department of Planning, Industry and Environment (now the Department of Planning and Environment), dated 14 October 2020.

1.2 The proposal

The proposal involves enhancement works to structures and sections of track along 185 kilometres of the existing operational standard gauge railway between Albury and Illabo. Enhancement works are required to provide the increased vertical and horizontal clearances required for double-stacked freight trains.

1.2.1 Location

The proposal is generally within the existing active rail corridor between the town of Albury on the Victorian-NSW border and around three kilometres to the north-east of Illabo. The alignment passes through two major regional towns, Albury and Wagga Wagga, NSW, and several smaller regional towns. Works are proposed at 24 locations along the 'Main South Line' corridor, described as 'enhancement sites'.

The enhancement sites have been broken down into four precincts which align with the local government areas (LGA) of Albury, Greater Hume – Lockhart, Wagga Wagga and Junee, as identified in Table 1.1 and shown in Figure 1.1

Table 1.1 Enhancement sites.

Precinct	Enhancement Sites
Albury	Murray River bridge
	Albury Station pedestrian bridge
	Albury Yard clearances
	Riverina Highway bridge
	Billy Hughes bridge
	Table Top Yard clearances
Greater Hume, Lockhart	Culcairn pedestrian bridge
	Culcairn Yard clearances
	Henty Yard clearances
	Yerong Creek Yard clearances
	The Rock Yard clearances
Wagga Wagga	Uranquinty Yard clearances
	Pearson Street bridge
	Cassidy Parade pedestrian bridge
	Edmondson Street bridge
	Wagga Wagga Station pedestrian bridge
	Wagga Wagga Yard clearances
	Bomen Yard clearances
Junee	Harefield Yard clearances
	Kemp Street bridge
	Junee Station pedestrian bridge
	Junee Yard clearances
	Olympic Highway underbridge
	Junee to Illabo clearances

1.2.2 Key features

The key features of the proposal include:

- adjustments to approximately 44 kilometres of track across 14 enhancement sites to accommodate the vertical and horizontal clearances according to Inland Rail clearance specifications, comprising:
 - realignment of track within the rail corridor
 - lowering of track up to 1.6 metres at three enhancement sites
- changes to bridges and culverts at enhancement sites to accommodate vertical clearances and track realignment as follows:
 - replacement of two road bridges and adjustments to adjoining intersections
 - replacement of three pedestrian bridges

- removal of two redundant pedestrian bridges
- modifications to four rail bridges
- ancillary works, including adjustments to nine level crossings, modifications to drainage and road infrastructure, signalling infrastructure, fencing, signage, and services and utilities.

No additional works would be required outside the enhancement sites identified in Figure 1.1 as they meet the clearance requirement for the Inland Rail program.



Figure 1.1 Locations and key features of the proposal.

1.2.3 Timing and operation

Subject to approval, further design and procurement, construction of the proposal is planned to start in early 2024 and is expected to take about 16 months. The proposal would be fully operational in 2025 with enhancement sites progressively commissioned on completion of construction. Inland Rail as a whole would be operational once all 13 sections are complete, which is estimated to be in 2027.

1.2.4 Construction

An indicative construction methodology has been developed based on the current design to be used as a basis for the environmental assessment process. Overall, the construction strategy is based on an approach of dividing the proposal into four construction packages which align with the precincts: Albury, Greater Hume-Lockhart, Wagga Wagga and Junee.

Construction of the proposal would require:

- construction compounds, laydown areas and other areas needed to facilitate construction works
- temporary changes to the road network, including road closures to undertake works on road bridges and level crossings
- other ancillary works.

Construction within each precinct would generally involve the site establishment and enabling works, main construction works as relevant to the enhancement site and finishing works as outlined in Table 1.2.

Further information on the construction of the proposal is provided in Chapter 8 of the EIS.

Table 1.2 Indicative construction activities.

Construction stages	Indicative activities
Site establishment and enabling works	<ul style="list-style-type: none">• Establishment of key construction infrastructure, work areas, access points and other construction facilities• Installation of environmental controls, fencing and site services• Preliminary activities including clearing/trimming of vegetation
Main construction works	<ul style="list-style-type: none">• Track works• Rail bridge works• Road bridge replacement• Pedestrian bridge works• Associated infrastructure works on level crossings, culverts and signalling
Finishing works	<ul style="list-style-type: none">• Testing and commissioning of the new and modified infrastructure• Demobilisation and removal of construction compounds and other construction infrastructure• Restoration of disturbed areas, as required, including revegetation and landscaping, where required

1.2.5 Operation

The proposal would form part of the rail network managed and maintained by ARTC. Train services would be provided by a variety of operators.

The proposal would enable the use of double stacked trains along its entire length. Inland Rail would operate 24 hours per day and would initially accommodate double-stacked freight trains up to 6.5 metres high and up to 1,800 metres in length. The possible future use of the railway between Albury and Illabo by freight

trains up to 3,600 metres long would be subject to separate assessment. Freight train speeds would range from 60 to 115 kilometres per hour, which is consistent with current train speeds.

The average number of freight trains movements between Albury and Illabo would increase from a current average of up to 12 per day in 2021 to 18 per day in 2025, further increasing to about 20 per day in 2040.

ARTC would continue to maintain the Main South Line. This would typically involve minor maintenance works, such as bridge and culvert inspections, rail grinding and track tamping, through to major maintenance, such as reconditioning of track and topping up of ballast as required. Maintenance works and schedule are not proposed to change as a result of the proposal.

Further information on the operation of the proposal is in Chapter 7 of the EIS.

1.3 Scope and purpose of the report

This report has been prepared to identify and assess potential impacts of the proposal to historical heritage in accordance with the Secretary's environmental assessment requirements (SEARs) issued by the then Department of Planning, Industry and Environment (now the Department of Planning and Environment) on 14 October 2020.

The following SEARs are relevant to this assessment (Table 1.3).

Table 1.3 Heritage issues and requirements relating to historical heritage identified in the SEARs.

Key Issue and Desired Performance Outcome	Requirements	Chapter reference
2. Heritage The design, construction and operation of the project facilitates, to the greatest extent possible, the long-term protection, conservation and management of the heritage significance of items of environmental heritage.	1. The proponent must identify and assess direct and/or indirect impacts to the heritage significance of: (c) environmental heritage, as defined under the <i>Heritage Act 1977</i> ; (d) items listed on the National and World Heritage lists; (e) heritage items and conservation areas identified in environmental planning instruments applicable to the project area; (f) heritage items in relevant Section 170 Heritage and Conservation Registers.	1(c)—Section 5.1 1(d)—Section 5.1 1(e)—Section 5.1 1(f)—Section 5.1
	2. Where impacts to State or locally significant heritage items are identified, the assessment must: (a) include a significance assessment, a statement of heritage impact for heritage items and a historical archaeological assessment; (b) justify any changes to heritage fabric and/or landscape analysis, including an options analysis; (c) assess the consistency of the project against conservation policies of any relevant conservation management plan; (d) consider impacts to the item of significance caused by, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, visual amenity, landscape and vistas, curtilage, subsidence and architectural noise treatment (as relevant); (e) consider heritage sites located within the vicinity of the proposed corridor beyond the 200 metre zone, where there may be a potential impact on significant view lines or corridors; (f) outline measures to avoid and minimise those impacts during construction and operation in accordance with the current guidelines;	2(a)—Section 4.6, Section 5.1, Appendix B 2(b)—Section 5.1 2(c)—Section 5.4 2(d)—Section 5.1, Section 5.2, Section 5.3 2(e)—Section 5.2 2(f)—Section 5.7 2(g)—Chapter 3 2(h)—Section 1.4

Key Issue and Desired Performance Outcome	Requirements	Chapter reference
	(g) be undertaken in accordance with relevant stakeholders including Councils; and (h) be undertaken by a suitably qualified heritage consultant(s) and/or historical archaeologist (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria).	

This report fulfils the requirements of a Statement of Heritage Impact (SoHI) in accordance with the:

- Heritage Office and Department of Urban Affairs and Planning, 1996, *NSW Heritage Manual*;
- Heritage Council of NSW, 2002, *Statements of Heritage Impact*;
- Department of Urban Affairs and Planning, 1996, *Archaeological Assessment Guidelines*;
- Heritage Council of NSW, 2009, *Assessing Significance for Historical Archaeological Sites and 'Relics'*;
- NSW Heritage Office, 1998, *Skeletal Remains—Guidelines for Management of Human Remains under the Heritage Act 1977*;
- Heritage Council of NSW, 2011, *Criteria for the Assessment of Excavation Directors*; and
- Australia ICOMOS, 2013, *The Burra Charter—The Australia ICOMOS Charter for Places of Cultural Significance* (the Burra Charter).

The objectives of this assessment were to:

- identify the heritage items that may be impacted by the proposal;
- assess the significance of the identified heritage items;
- determine how the proposal may impact the identified heritage items;
- aim to minimise those impacts through prudent, feasible, and pragmatic design solutions;
- determine where impacts are unavoidable and develop a series of impact mitigation strategies; and
- provide clear recommendations for the conservation of heritage values and mitigation of impacts to these values.

1.3.1 Report structure

This report is set out as follows:

Table 1.4 Overview of report structure.

Chapter	Content
Chapter 1	Introduction
Chapter 2	Legislation and policy context
Chapter 3	Methodology
Chapter 4	Existing environment
Chapter 5	Impact assessment

Chapter 6	Cumulative impacts
Chapter 7	Mitigation and management measures

1.4 Authors

This report has been prepared by the following consultants:

Table 1.5 Authors of this report.

Person	GML Position	Qualifications	Project Role
Martin Rowney	Principal, Archaeologist	Bachelor of Arts (Honours) Prehistoric Archaeology Bachelor of Visual Arts (Honours) Sculpture	Project Director, report review
Elise Jakeman	Consultant, Archaeologist	Bachelor of Archaeological Practice (Honours) Bachelor of Arts (Biological Anthropology)	Project Manager, report author

2 Legislation and policy context

This report has been prepared in accordance with the following statutory controls and guidelines:

- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Heritage Act 1977* (NSW) (the Heritage Act)
- *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act)
- *The Burra Charter—The Australia ICOMOS Charter for Places of Cultural Significance* (the Burra Charter) (Australia ICOMOS, 2013).

2.1 Legislation

2.1.1 Commonwealth legislation

Environment Protection and Biodiversity Conservation Act 1999

The objective of the EPBC Act is to protect and manage prescribed matters of national environmental significance (MNES). Under the EPBC Act, proposed 'actions' that have the potential to significantly impact on MNES, the environment of Commonwealth land, or that are being carried out by an Australian Government agency, must be referred to the Australian Minister for the Environment for assessment. MNES include:

- World Heritage properties
- National Heritage places
- wetlands of national importance
- listed threatened species and ecological communities
- migratory species
- Commonwealth marine areas
- Great Barrier Reef Marine Park
- nuclear actions (including uranium mines)
- water resources, in relation to coal seam gas development and large coal mining development.

As a result of the potential for impacts on protected matters (concerning biodiversity), the proposal was referred to the (then) Australian Minister for the Environment on 2 June 2020 (EPBC Referral No 2020/8670). On 29 June 2020, the Australian Government Department of Agriculture, Water and the Environment (DAWE) notified that the proposal is a not controlled action. Two items were identified within 10 kilometres of the proposal—the Albury Post Office (CHL ID 105506) and Junee Post Office (CHL ID 105500). This assessment concludes there would not be any impacts to these items.

'Commonwealth agency' is defined in section 528 of the EPBC Act and includes:

- a Minister
- a body corporate established for a public purpose by a law of the Commonwealth
- a body corporate established by a Minister

- a Commonwealth-owned company
- a person holding a Commonwealth office or appointment.

ARTC is not a Commonwealth agency under the EPBC Act.

Commonwealth Heritage List

Under Section 324A of the EPBC Act, a place that is located on land or in waters directly owned by the Crown or under control of the government can be included on the Commonwealth Heritage List (CHL) if it is found to be 'significant' at a local, state or national level.

Preliminary environmental investigations identified two heritage items protected under the EPBC Act within 10 kilometres (km) of the proposal. These items are:

- Albury Post Office (Commonwealth Heritage List ID 105506)
- Junee Post Office (Commonwealth Heritage List ID 105500).

National Heritage List

A 2003 amendment to the EPBC Act introduced the National Heritage List (NHL), which provides protection to places identified as having 'outstanding' heritage value to the nation.

No heritage items included on the NHL have been identified within the proposal.

2.1.2 NSW state legislation

Environmental Planning and Assessment Act 1979

The EP&A Act and Environmental Planning and Assessment Regulation 2021 (EP&A Regulation) establish a framework for the assessment and approval of developments in NSW. They also provide for the making of environmental planning instruments, including state environmental planning policies (SEPPs) and local environmental plans (LEPs), which determine the permissibility and approval pathway for development proposals and form a part of the environmental assessment process. In accordance with the provisions of the EP&A Act, the proposal is State significant infrastructure (SSI).

SSI may also be declared to be Critical State significant infrastructure (CSSI) in accordance with Section 5.13 of the EP&A Act, if it is of a category that, in the opinion of the Minister for Planning, is essential to the state for economic, environmental or social reasons. The proposal was declared as CSSI in 2021.

Under Section 5.14 of the EP&A Act, the approval of the Minister for Planning is required for State significant infrastructure (including CSSI), and an EIS has been prepared under Division 5.2 of the EP&A Act. This EIS addresses the requirements of the EP&A Act and regulations and the SEARs (outlined above in Section 1.2).

As the proposal is a declared CSSI, an approval under Part 4 of the Heritage Act—for impacts on interim heritage orders and listings on the State Heritage Register (SHR)—or an excavation permit under section 139 of the Heritage Act is not required, per the provisions of Section 5.23 of the EP&A Act.

Local Environmental Plans

Under the EP&A Act, each LEP is required to include a schedule of environmental heritage. These schedules include all places identified as having local heritage significance identified within an LGA. The aim of the LEPs in relation to heritage is to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings, views and archaeological sites. The LEPs list items of heritage significance within the LGA.

Heritage items listed in the following LEPs have been considered in this assessment: Albury LEP 2010, Greater Hume LEP 2012, Lockhart LEP 2012, Wagga Wagga LEP 2010 and Junee LEP 2012.

LEPs may also list Aboriginal objects or places of heritage significance. Aboriginal heritage is considered in Technical Paper 2 – Aboriginal cultural heritage assessment report.

Heritage Act 1977

All environmental heritage located in NSW is protected under the *Heritage Act 1977* (NSW) (Heritage Act). The Heritage Act regulates the impact of proposed works on places, buildings, relics and other heritage items.

State Heritage Register

The SHR is established under Section 22 the Heritage Act and is a list of identified heritage items of significance to NSW. The SHR includes items and places (such as buildings, works, archaeological relics, moveable objects or precincts) determined to be of State heritage significance.

The SHR is pursuant to Section 57(1) of the Heritage Act, which states that approval from the Heritage Council of NSW is required:

When an interim heritage order or listing on the State Heritage Register applies to a place, building, work, relic, moveable object, precinct, or land, a person must not do any of the following things except in pursuance of an approval granted by the approval body under Subdivision 1 of Division 3:

- (a) demolish the building or work;*
- (b) damage or despoil the place, precinct, or land, or any part of the place, precinct, or land;*
- (c) move, damage, or destroy the relic or moveable object;*
- (d) excavate any land for the purpose of exposing or moving the relic;*
- (e) carry out any development in relation to the land on which the building, work, or relic is situated, the land that comprises the place, or land within the precinct;*
- (f) alter the building, work, relic, or moveable object,*
- (g) display any notice or advertisement on the place, building, work, relic, moveable object, or land, on in the precinct; and*
- (h) damage or destroy any tree or other vegetation on or remove any tree or other vegetation from the place, precinct, or land.*

Section 57(2) of the Heritage Act establishes Standard Exemptions for works requiring Heritage Council approval.

However, as the proposal has been declared a CSSI, the proposal is subject to the assessment and approval process in accordance with Division 5.2 of the EP&A Act, and approvals under the Heritage Act are not applicable. Instead, assessment matters which would have been considered in the context of an application for an approval under the Heritage Act are taken to account in the assessment of the application for approval under the EP&A Act.

Section 139

The Heritage Act also affords automatic statutory protection to relics that form part of archaeological deposits. The Heritage Act defines a 'relic' as:

Any deposit, artefact, object, or material evidence that:

- (a) *related to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and*
- (b) *is of State or local heritage significance.*

Under Section 139, a person must not disturb or excavate any land knowing, or having reasonable cause to suspect, that a historical archaeological deposit will be moved, damaged or destroyed during the proposed works. Authorisation for activities that harm historical archaeological deposits can be given under a Section 140 permit.

As noted above, as the proposal has been declared a CSSI, the proposal is subject to the assessment and approval process in accordance with Division 5.2 of the EP&A Act, and approvals under the Heritage Act are not applicable. Instead, assessment matters which would have been considered in the context of an application for an excavation permit are taken to account in the assessment of the application for approval under the EP&A Act.

Section 170 Register

The Heritage Act also established the Section 170 Heritage and Conservation Register (Section 170 registers).¹ Section 170 requires all government agencies in NSW to identify, conserve, and manage the heritage assets it owns, occupies, or manages. Under Section 170, each government agency is responsible for ensuring the items on its register are maintained with due diligence in accordance with the Heritage Act.

Section 170 heritage items that are located within a railway corridor are typically managed by a railway government agency. The following Section 170 registers have been reviewed for the purpose of this SoHI:

- ARTC
- Transport for NSW (TfNSW)
- John Holland Group (John Holland)
- Sydney Trains

2.2 Guidelines

2.2.1 NSW Heritage Manual 1996

The *NSW Heritage Manual* (Heritage Office [now Heritage NSW] and Department of Urban Affairs and Planning, 1996) provides a complete series of guidelines for undertaking a variety of heritage identification, assessment, and management processes within NSW. Each of the guidelines has been designed to work through the three steps of the NSW heritage management system, which are:

- Investigate significance—The heritage significance of an item should be investigated through: thorough research regarding its historical context and place within the wider heritage landscape; community consultation; and its fabric.
- Assess significance—The results of the investigation should be: summarised (including a description of its history, its historical themes, archaeological potential, and contemporary

¹ Whilst the SHI includes heritage items registered on Section 170 registers, it does not identify the applicable register identification number attributed to that item. Additionally, the majority of Section 170 registers are not publicly available. This makes identifying the responsible government agency and current status of the heritage item difficult.

community values); assessed against the NSW heritage assessment criteria, and its significance evaluated in a local, regional, or state context; and developed into a statement of significance.

- Manage significance—Considerations should be made regarding the: management impacts of the context (local, regional, or state) of the item; constraints and opportunities, such as sensitivity to change and ongoing owner and user requirements; and conservation and management recommendations, including those that must be discounted due to unsuitability.

2.2.2 Statements of Heritage Impact 2002

The Heritage Council of NSW (now Heritage NSW) *Statements of Heritage Impact* (2002) provides a framework for the preparation of SoHIs. The guidelines require a SoHI to:

... explain how the heritage value of an item is to be conserved, or preferably enhanced, by the proposed development ... Where the effect of proposed work is likely to be detrimental to the heritage significance of the item or area, a SoHI needs to argue why such an action is the only viable solution.

A SoHI should explain the following points:

- the aspects of the proposal that respect or enhance the heritage significance of the item or conservation area;
- the aspects of the proposal that could severely impact on the heritage significance of the item or conservation area, the reasons for undertaking these impacts, and the mitigation measures that will be taken; and
- the sympathetic solutions that have been considered and discounted in developing the proposal.

2.2.3 Archaeological Assessment Guidelines 1996

The Department of Urban Affairs and Planning *Archaeological Assessment Guidelines* (1996) provide a summary of the management of archaeological resources in NSW and a detailed process for undertaking archaeological assessments.

An archaeological assessment should:

- Review existing data, including available historical documentation (i.e. documents, oral history, primary and secondary sources) to identify themes and environmental conditions (i.e. topography, surface survey, geotechnical data) to determine the likelihood of archaeological remains being present.
- Assess the significance of likely and/or confirmed archaeological remains. This should include the identification of research questions.
- Develop a policy for the management of the likely and/or confirmed archaeological remains based on the significance assessment. This should include management actions, procedures, and implementation measures.

2.2.4 Assessing Significance for Historical Archaeological Sites and 'Relics' 2009

The Heritage Council of NSW (now Heritage NSW) *Assessing Significance for Historical Archaeological Sites and 'Relics'* (2009) provides a re-evaluation of the way significance is assessed for historical archaeological sites and relics. It states the need to move away from the need for archaeological research to add to the knowledge of the past in an important way, rather than duplicating information that is known or could be gained from other archaeological sites, documentary records or oral history. The following points should be considered when providing assessment for archaeological sites:

- **Intactness**—An archaeological site may need to retain sufficient intactness in order to yield well-provenanced archaeological deposits, more accurately conveying its significance.
- **Lifeways**—An archaeological site may be assessed for significance in terms of its ability to demonstrate a way of life, taste, function, custom, or process. This may be realised by identifying or interpreting the site as the location of a historical event or demolished structure.
- **The challenge of potential**—The experience and knowledge of the archaeological practitioners may influence the interpreted significance of an archaeological site.
- **Changes in significance**—An archaeological site may have its significance altered through subsequent phases of development, where earlier deposits were either preserved or completely eradicated by later disturbance events. Another instance of changing significance may be through poor post-excavation recording, analysis, reporting or conservation.
- **Multiple heritage values**—An archaeological site may have conflicting heritage values. For example, a cemetery may have significance for its research potential but also for its social values to the descendants and community members who do not want it to be disturbed.

2.2.5 Skeletal Remains—Guidelines for Management of Human Remains under the Heritage Act 1977 1998

The NSW Heritage Office (now Heritage NSW) guidelines, *Skeletal Remains—Guidelines for Management of Human Remains under the Heritage Act 1977*, were developed to address situations where disturbance of skeletal remains occurs, including situations where disturbance happens inadvertently through an accidental discovery or chance find during construction work. The guidelines cover circumstances where the human remains may be either Aboriginal or non-Aboriginal and are not recent in origin. They also set out the relevant legislative frameworks that apply along with management procedures, including community consultation procedures and expectations, principles of conservation practice and re-interment, and archaeological investigation.

2.2.6 Criteria for the Assessment of Excavation Directors 2011

The Heritage Council of NSW (now Heritage NSW) *Criteria for the Assessment of Excavation Directors* (updated 2011) outlines the skills required when selecting an Excavation Director to be nominated under section 140 or section 60 applications, or section 65A or section 144 variations under the Heritage Act. These criteria include:

- minimum tertiary education and/or industry experience
- demonstrated experience working with NSW heritage legislation
- demonstrated experience working to previous approvals and conditions outlined by the Heritage Council (now Heritage NSW), with the submission of final reports.

The criteria required to be met vary based on whether the Excavation Director is overseeing the excavation of a locally significant site, a State significant site, or monitoring at sites of either significance.

2.2.7 The Burra Charter

The *Burra Charter—The Australia ICOMOS Charter for Places of Cultural Significance* (Australia ICOMOS, 2013) (Burra Charter) provides a best-practice standard for managing and conserving cultural heritage places in Australia.

The Burra Charter recognises that conservation is integral to the sustainable management of culturally significant places and is an ongoing responsibility. It sets out key principles, processes, and practices for the management of heritage places, to guide those who provide advice, make decisions about, or undertake works to places of cultural significance, including owners, managers, and custodians. The Burra Charter provides specific guidance for physical and procedural actions that should occur in relation to significant places.

3 Methodology

The general methodology for this assessment comprised a combination of desktop assessments relating to the historical context of the study area, the existing environment and site investigations. Data gathering through these processes allowed an assessment of the nature of the historical heritage landscape.

Outcomes from the desktop assessment and the field survey have informed the design for the proposal. The locations of identified registered and/or unregistered potential heritage items and areas of archaeological sensitivity have been provided to the project design team to assist in design re-evaluation to avoid sites, objects, and areas of sensitivity where possible. Where this has not been possible, recommendations have been provided for areas that need further investigation as part of the establishment of appropriate mitigation and management measures.

3.1 Study area

For the purpose of this assessment, the study area includes the length of the existing railway corridor from Albury to Illabo. This broad area has enabled the capture of the wider heritage landscape, which provides context for the desktop assessment of the history, themes and values of the heritage items discussed in this SoHI.

Direct assessment of the significance and proposal impacts to heritage items has been limited to those located within the 24 enhancement sites (identified in Table 1.1 and Figure 1.1). Where relevant, items located within 200 metres of the enhancement sites have been assessed for impacts related to vibration, noise and views. Items located outside of the 200 metre zone were assessed for viewsheds only, where there may be a potential impact on significant view lines or corridors.

3.2 Desktop review

The desktop assessment phase comprised the following steps:

- A review of existing background documentation, including primary source materials and prior heritage assessments and historical studies, to establish a historical context for the identified registered heritage items.
- A search of the statutory heritage registers (including the Australian Heritage Database [which included results from the World Heritage List, CHL, and NHL], State Heritage Inventory [SHI] [which includes results from the SHR, LEPs, and Section 170 registers], and relevant LEPs) to identify registered heritage items previously recorded within 200 metres of the study area, and conservation areas and view scapes surrounding the study area.
- A review of historical aerial photography, relevant previous heritage assessments (including Conservation Management Plans [CMPs] and other management plans, condition assessments, archival recordings, and other assessments) to identify disturbance and/or altered historical arrangement and/or access.

The aim of the desktop assessment was to provide baseline information, identify gaps and inform the ongoing investigation methodology. This was achieved by:

- establishing the locations of known heritage items and the potential for additional unregistered and/or unrecorded potential heritage items
- establishing the locations of significant streetscapes and views
- identifying the potential for archaeological deposits to be present in the study area

- providing historical context for the significance of identified heritage items.

3.3 Survey

A survey of the enhancement sites was undertaken on 22–23 March 2021:

- 22 March 2021:
 - The Rock Yard clearances enhancement site
 - Uranquinty Yard clearances enhancement site
 - Pearson Street bridge enhancement site
 - Cassidy Parade pedestrian bridge enhancement site
 - Edmondson Street bridge enhancement site
 - Wagga Wagga Station pedestrian bridge enhancement site
 - Wagga Wagga Yard clearances enhancement site
 - Bomen Yard clearances enhancement site
 - Harefield Yard clearances enhancement site
 - Kemp Street bridge enhancement site
 - Junee Station pedestrian bridge enhancement site
 - Junee Yard clearances enhancement site
 - Olympic Highway underbridge enhancement site
 - Junee to Illabo clearances enhancement site.
- 23 March 2021:
 - Murray River bridge enhancement site
 - Albury Station pedestrian bridge enhancement site
 - Albury Yard clearances enhancement site
 - Riverina Highway bridge enhancement site
 - Billy Hughes bridge enhancement site
 - Table Top Yard clearances enhancement site
 - Culcairn pedestrian bridge enhancement site
 - Culcairn Yard clearances enhancement site
 - Henty Yard clearances enhancement site
 - Yerong Creek Yard clearances enhancement site.

The aim of the survey was to undertake a visual assessment of the enhancement sites that were identified through the desktop assessment as containing registered heritage items and areas of archaeological potential.

A preliminary assessment of significance of potential unregistered and/or unrecorded potential heritage items was undertaken during field survey based on visual observations.

The archaeological survey involved:

- inspecting the ground surface for evidence of archaeological items or possible features
- a preliminary assessment of the integrity and condition of built heritage items
- a preliminary assessment of the view scape from and to the existing rail corridor
- taking photographs of the registered heritage items and unregistered and/or unrecorded potential heritage items.

The preliminary assessment of significance of potential unregistered and/or unrecorded potential heritage items is based on a comparative assessment with other local heritage items within the immediate heritage landscape and appropriate comparable heritage items in other areas. This assessment provides context regarding heritage values and significance that has or has not been attributed to other items of a similar nature to those identified during the survey.

3.4 Impact assessment

The impact assessment process relies on the identification of heritage sites and places, an assessment of their significance, and an understanding of whether or not the proposal can be designed to avoid those places. Impacts can be assessed as both direct and indirect, and mitigation measures are formulated to account for the nature of the impact.

Where impact is proposed to archaeological sites, this is specifically discussed in the Archaeological Research Design (ARD) report (Appendix B).

3.4.1 Assessing significance

Assessing the cultural significance of a place means defining the reasons why a place is culturally important. In NSW, the significance of heritage sites is assessed based on four key values, as outlined in *Assessing Heritage Significance* (NSW Heritage Office, 2001), as follows:

- historical significance
- aesthetic significance
- scientific significance
- social significance.

The historical values of a place are its associations with historical events, the passage of recorded history, and historically important people. Historic places do not always have physical evidence of their historical importance, such as structures, planted vegetation or landscape modifications.

Aesthetic values are the sensory, scenic and creative aspects of the place. They may include buildings, structures, objects, locations, views, landscapes, materials, smells and sounds. Aesthetic values are often closely linked to the social and cultural values of a place.

The scientific or archaeological value of a place is determined based on its rarity, representativeness and the degree to which further investigation of it can increase our understanding of the history of a place.

Cultural value of a place is its spiritual, traditional, historical or contemporary associations and attachments for the community. These are the values derived from an understanding of how people express their connection with a place and the meaning that the place has for them.

Significance assessments have been made in accordance with the State Heritage Register (SHR) criteria:

- **Criterion A**—An item is important in the course, or pattern, of NSW's cultural or natural history.
- **Criterion B**—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.
- **Criterion C**—An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW.
- **Criterion D**—An item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons.
- **Criterion E**—An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history.
- **Criterion F**—An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history.
- **Criterion G**—An item is important in demonstrating the principal characteristics of a class of NSW's
 - cultural or natural places
 - cultural or natural environments.

3.4.2 Assessing impacts

The impact of any works proposal on a heritage place can be defined as the harm to, the diminution of, or the removal of the attributes and reasons for its significance. The harm to, diminution or removal of significance can result from changes to sites, places, and their context, and can be measured based on the degree of impact. This includes both direct and indirect impacts.

In general, direct impacts include demolition of structures or portions of structures, removal and relocations of structures and heritage sites, unsympathetic additions or alterations to buildings, activity which disturbs the archaeological sites including, but not limited to, site preparation activities, installation of services and infrastructure, roadworks.

Indirect impacts may affect sites or features located immediately beyond, or within, the area of the proposed activity. Examples of indirect impacts include, but are not limited to, increased vibration from traffic and activities.

The impact assessment outlined in Chapter 5 includes consideration of both the direct and indirect impacts of permanent and temporary works, as well as the ongoing operation of the proposal. Permanent works include the changes to the rail alignment, the demolition and replacement of existing infrastructure such as bridges, and the installation of new infrastructure. The assessment of temporary works includes the construction impact zone. Where impact is proposed to group listings (discussed below), an overall impact assessment has been provided in addition to detailing impacts to individual heritage items.

Mitigating impacts requires that all prudent and feasible alternatives to the activity be considered as the first step in redesigning a proposal to avoid impacts. Where no prudent and feasible alternatives can be found, a hierarchy of mitigation measures are proposed.

Multiple listings

Due to the nomination process for items added to the NSW Heritage Register, where a heritage item has multiple listings (i.e. both at a local and at a state level) it also often has multiple curtilages and variations in its description. In order to reconcile this, the following approach has been taken in this assessment:

- Where multiple curtilages apply to a heritage item that do not align, the cumulative area of all of the curtilages (i.e. the total area covered by the listings) has conservatively been assessed for impact.
- Where there are items included in a group listing but not necessarily located within the curtilage (e.g. railway precincts that include multiple features), impact has been assessed to items detailed in the 'Physical Description' on the SHI.
- Where there are multiple individual local listings that are grouped into one SHR listing (e.g. railway precincts), impact has been assessed for each individual item and an overall impact rating has been provided for the group.

Curtilages

The curtilage of a heritage item is the land surrounding the item that is essential for retaining and interpreting its significance. Curtilages are defined for items and areas listed on the SHR, LEPs and Section 170 registers, and often form the listing boundary. In the majority of instances, these align to cadastral boundaries. Exceptions include conservation areas, which often encompass wide ranging areas.

Due to inconsistencies in spatial data, there may be instances where the curtilage for an item matches the area and shape of the cadastre but has a misaligned overlay. In these instances, it can be assumed that the cadastre shows the correct boundary of the curtilage.

Individual items listed on Section 170 registers may not necessarily have a defined curtilage, with the boundary of the item being confined to the item itself. Impacts to heritage curtilages generally stem from changes to cadastral boundaries or when development is proposed that would encroach on the curtilage.

3.5 Stakeholder consultation

ARTC provided a briefing to Heritage NSW on the proposal with a focus on the options selected for key enhancement sites and the assessment methodology. In briefings provided to local councils by ARTC, matters relating to heritage were identified. This included the opportunities for the Culcairn and Junee footbridges to be gifted, impacts to the North Signal Hut at Albury Station, and the potential heritage values of the Kemp Street bridge (**Table 3.1**).

Table 3.1 Summary of matters raised during stakeholder consultation.

Council	Matters raised	Resolution
Albury City Council	The current pedestrian bridge at Albury Station does not meet DDA requirements, with stairs provided at the western end, the mid-point of the bridge (where it joins the new section of the bridge over the Hume Highway) and eastern end of the bridge. Council identified the importance of providing a solution that does satisfy DDA requirements and acknowledged that this would require the replacement of the existing heritage listed bridge.	The replacement bridge incorporates DDA compliant ramps on the eastern and western connections of the pedestrian bridge, and an at-grade connection with the section of the bridge over the Hume Highway. The design includes urban design responses to the surrounding heritage context to minimise the impacts on the State heritage listed station group. Further refinement would occur during detailed design (refer to sections 7.5, 11.4.2 and 17.5 of the EIS).

Council	Matters raised	Resolution
	Albury City Council requested during reference design meetings that ARTC consider lighting on the replacement Albury Station pedestrian bridge that is consistent with the existing lighting in the surrounding area.	ARTC will investigate sympathetic lighting arrangements during detailed design.
	Albury City Council advised ARTC that the Albury North Signal Hut which forms part of the Albury state heritage item is of local value to the community. Rather than being removed as proposed in an earlier iteration of the reference design, the community sought that ARTC retain the Albury North Signal Hut. Albury City Council also queried how the current condition and maintenance of the Albury North Signal Hut could be improved.	ARTC modified the reference design to avoid removal of the Albury North Signal Hut by adjusting the main line and loop slew to go around the Albury North Signal Hut. ARTC is investigating the safety and work planning requirements for the maintenance of the Albury North Signal Hut.
Greater Hume Shire Council	Greater Hume Shire Council expressed an interest in repurposing the Culcairn Station pedestrian bridge in acknowledgement of the importance of railway heritage in the area. The bridge itself forms part of the broader heritage listing for the station and yard.	The gifting of the Culcairn pedestrian bridge for the purpose of reuse elsewhere would be investigated with Greater Hume Shire Council prior to removal.
Wagga Wagga City Council	Consultation with Wagga Wagga City Council, surrounding residents, schools and the wider community confirmed that the existing pedestrian bridge at Wagga Wagga Station (known as Mothers footbridge) is a key pedestrian access point for the city and replacement rather than removal of the bridge is required in order to meet the needs of community and schools. Council support the replacement of the pedestrian bridge and have asked that ARTC consider the heritage character of Wagga Wagga Station and Yard in the design of the new pedestrian footbridge.	A new pedestrian bridge was incorporated into the proposal. The design includes urban design responses to the surrounding heritage context to minimise the impacts on the State heritage listed station group. Further refinement would occur during detailed design (refer to sections 7.5 and 17.5 of the EIS).
Junee Shire Council	Junee Shire Council expressed an interest in repurposing the Junee Station pedestrian bridge in acknowledgement of the importance of railway heritage in the area. The bridge itself is not listed but is viewed as part of the wider State heritage listed item for the station, yard and locomotive depot.	The gifting of the Junee pedestrian bridge for the purpose of reuse elsewhere would be investigated with Junee Shire Council prior to removal.
	Junee Shire Council indicated that Kemp Street bridge may have heritage value and requested that this be considered in the impact assessment.	The assessment has considered the potential heritage values of the site. Mitigation measures have been identified that would investigate the re-purposing of salvaged materials within the final design (bricks and street lights).

ARTC provided a briefing to Heritage NSW on the proposal between the 30 per cent and 70 per cent reference design. This was focused on the options selected for key enhancement sites and the assessment methodology. Continual efforts have been made to meet with Heritage NSW to seek further feedback, with efforts ongoing.

4 Existing environment

4.1 Historical context

4.1.1 Early pastoralism

The first European to arrive in the Riverina area was John Oxley in 1817. Several years prior, George Evans—Oxley's assistant—had observed the Lachlan River and reported the country southwest of Bathurst to be of suitable quality for pastoralism. Oxley was subsequently tasked with ascertaining '*the real course ... of the Lachlan ... and whether it falls into the sea, or into some inland lake*'.¹

Several other surveyors mapped the area in the years following Oxley. Hamilton Hume and William Hovel arrived in the Albury area in 1824 charged with finding new grazing land, while Charles Sturt mapped the Wagga Wagga area in 1829 as part of an expedition to chart the course of the Murrumbidgee River.

Few additional Europeans had ventured into the Riverina, however, before the enforcement of the 'Limits of Location' line from 1826. The line was introduced to prevent unlicensed land claims and settlement; no settlers were to purchase land beyond it. There were, of course, those who disregarded the decree and proceeded to squat outside of the permitted area. In the vicinity of modern-day Wagga Wagga, several ex-convicts claimed runs along the banks of the Murrumbidgee River—Charles Thompson established the 'Eunonyharenyha' run on the northern bank in 1832 and was shortly followed by George Best, who claimed the southern bank for his 'Wagga Wagga' run. Recognising the difficulties faced in actually enforcing the Limits of Location, the scheme was partially rolled back in 1836, with squatters occupying Crown lands allowed to lease their claimed lots for £10 per year, and those found to be residing outside of the Limits of Location to be fined £10.²

The gazetting of towns began in earnest following this. Assistant Surveyor Thomas Townsend mapped out the centre of Albury in 1838—although he initially proposed the town be named 'Bungambrawatha', the Wiradjuri name for the area. In 1849, Wagga Wagga was formally gazetted, due to the continued population growth in the area.

The Victorian goldrushes in the 1850s contributed to the development of the Riverina area. The subsistence requirements of the suddenly booming Victorian gold towns—such as Bendigo and Beechworth—meant that there was a high demand for stock.³ Cattle were preferred for long-distance stock trading, as they travelled faster and maintained their physical condition for longer.⁴ The predominance of saltbush in the Riverina area made it the perfect location for raising cattle for the 'fat stock' market. When the cattle were 'overlanded' across NSW, groups of up to 2,000 to 15,000 cattle crossed the Murrumbidgee at Wagga Wagga and drove down past Yerong Creek, Culcairn, and Gerogery to the Victorian border.⁵ Following the collapse of the cattle prices in 1861, many of the Riverina runs swapped to rearing sheep.⁶

4.1.2 The rise of the railway in NSW

The NSW railway network began from two centres—Sydney in 1855 and Newcastle in 1857.⁷ The impetus for the construction of the networks was largely driven by the burgeoning pastoral industry.

In the 1830s, farmers petitioned for the construction of railways in order to transport their produce more easily and cheaply to the ports on the east coast.⁸ Following the end of the depression in the late 1840s, the calls for a railway network had increased.⁹ On 28 January 1846, an advertisement was placed in the Sydney Morning Herald stating 'Railroads: Parties favourable to the construction of railways in New South Wales are requested to meet'.¹⁰ The aim of the meeting was not to discuss the construction of a railway network in the Sydney basin, but to extend the line inland to the production centre of Goulburn.¹¹; however, despite their enthusiasm for the construction of the network, the private nature of the endeavour meant that

it was restricted by the financial capabilities of its sponsors.¹² By 1856, the continuation of the NSW railway network had been assumed by the NSW Government.

As part of the transition of the railway from the private to public spheres, John Whitton—a member of the Institution of Civil Engineers in London—was appointed as Engineer-in-Chief. His appointment also coincided with a shift in economic and social conditions. Pastoralists had lost their monopoly of the market to other economic sectors, such as coal mining and the gold rush.¹³ Interest also grew in the use of the railway for passenger traffic, particularly tourism.¹⁴

The Main South Line

Construction on the Main South Line had initially begun in 1853 at the original Sydney station—an area known as ‘Cleveland Fields’ at the time, now Central Station.¹⁵ The station opened on 26 September 1855 in conjunction with stations at Newtown, Ashfield, Burwood and Homebush to create the first NSW railway line.¹⁶ Before Whitton’s appointment to the NSW railway network, a further two stops were added to the line at Fairfield and Liverpool.¹⁷

Despite Whitton’s vision for the NSW railway network, the advancement of the lines was excruciatingly slow. By 1863—seven years after his appointment—the Main South Line comprised of a mere 85 kilometres between Sydney and Picton. This was largely due to the economic downturn of the 1860s, which resulted in strict budgets:

*Whitton had to adopt every money saving idea he could ... [This included] the stripping of every conceivable disposable feature from his building plan while still leaving a basically substantial mainline ... Iron rails were substituted for steel, ... line-side buildings reduced or eliminated, cutting and road-bed widths narrowed, timber for sleepers and stonework for viaducts to be obtained locally.*¹⁸

While the downturn affected the rate at which the railway could be extended and new stations constructed, it did nothing to dampen the increasing public demand and enthusiasm for the venture, which *The Freeman’s Journal* mused on with particular flair:

Every town in the colony wants a railway, and every man who owns land anywhere near a possible route for the ‘iron king’ wants a railway too. Some people would not object to have a railway to their gardens, and even a scheme of railways intersecting the narrow flower-beds and ornamental walks.

The Illawarra people want a railway. The Mudgee people want a railway. The Circular Quay shippers and wool-brokers want a railway. The people at Singleton want two railways, and the inhabitants of Gunnedah are open to have a line extended to their very doors. Molong still sighs for a railway, and is going to have another shot for one. Forbes, Parkes, Cobar, Wilcannia, Dutchman’s Gully, Muddy Flat, and lots of other equally important and prosperous localities (the names of which can’t be found on the maps) want railways.

*I want a railway, too, as soon as I can find a place to put it.*¹⁹

The economic situation did force Whitton to source all building materials locally as part of his austerity measures. Many of his successors have since argued that NSW held abundant, natural resources that were more suited than more expensive, imported materials. Sharp synthesised some of these claims:

[T A] Coghlan [in 1900] said “... the Colony has no need to import building materials of any description, as it possesses a supply amply sufficient to provide for its own wants and those of its neighbours” ... “In every part of the Colony excellent clays, well adapted for brick making purposes, are extensively [worked]. Slates are found in several districts ...”

[R T] Baker [in 1915] says “... so many localities are known from which lithic building material can be procured ...”

*[A] Duckworth [in 1902] says inland, lies a large area of gums, hardwoods and stringybarks, whilst out west ... we find areas containing cypress pine and box”.*²⁰

This view did not make it into practice until later phases of rail construction works. In 1855, Whitton’s predecessor had decreed that all railway stations were to be constructed wholly from corrugated iron, simply because it ‘can be applied with a minimum of skill ... and because of its low acquisition cost’.²¹

Brick became the preferred material following Whitton’s appointment. Whitton argued that ‘if we put up buildings of any kind for the Government, they should be respectable buildings ... substantial and fit to look at’.²² Between 1858 and 1884, wherever brick was readily available it was used, even at small stations.²³ Larger or more prestigious stations were often then dressed in stone or plastered with stucco and lined to appear like stone.²⁴

An additional cost-saving method employed by Whitton was to avoid commissioning of new architectural designs for new railway stations. This resulted in a restricted number of station building ‘types’. Those applicable to the railway stations present in the proposal area are discussed in Table 4.1.

Table 4.1 Types of nineteenth century railway station buildings present within the study area. (After: Sharp, 1982)

Design Type	Nomenclature	Features	Railway Station
4	Second Class	Roofscape—Hip, extending to form awning over platform Floor Plan—Two-rooms wide at the ends, often with one detached “wing” Awning Support—Timber posts	Bomen (1878)
5	Standard Roadside / Third Class	Roofscape—Gable, sometimes broken by centre transverse gable Floor Plan—Symmetrical, flanked with detached “wings” Awning Support—Timber or metal posts	The Rock (1880), Henty (1880, demolished 1902), Culcairn (1880), Gerogery (1880), Table Top (1881)
6	First Class	Roofscape—Hip and valley, complicated pattern Floor Plan—More than six rooms in the main structure Awning Support—Timber or metal posts	Wagga Wagga (1879), Albury (1881), Junee (1885 replacement)
14	Side Platform Stations / Second Island	Roofscape—Hip or flat behind full, partial, or no fascia Floor Plan—Single room Awning Support—Cantilevered beams	Illabo (1878)
Unknown due to subsequent demolition			Uranquinty (1880), Yerong Creek (1880), Ettamogah (1881)

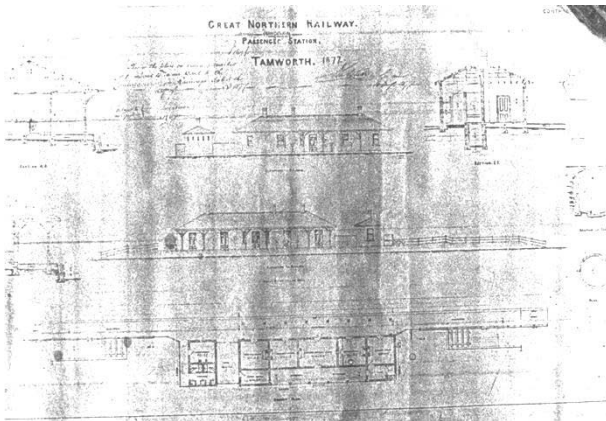


Figure 4.1 Type 4 plan for Bomen Station. (Source: Sharp, 1982)

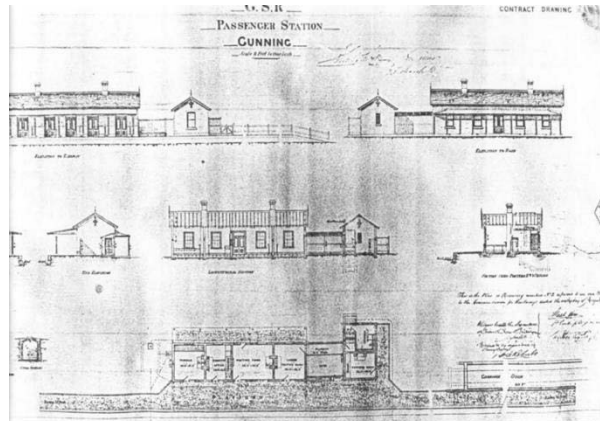


Figure 4.2 An example of a Type 5 plan, prepared for Gunning Station. (Source: Sharp, 1982)

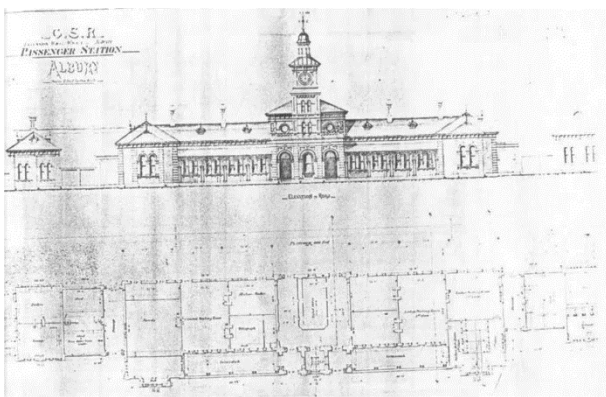


Figure 4.3 Type 6 plan for Albury Station. (Source: Sharp, 1982)

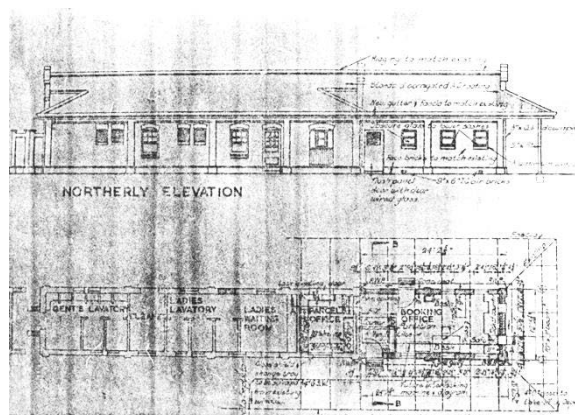


Figure 4.4 An example of a Type 14 plan, prepared for East Hills Station. (Source: Sharp, 1982)

With the economic climate of NSW taking a turn for the better by the early 1870s, the fortunes of the Main South Line increased too. In quick succession the line was extended 290 kilometres from Goulburn (1869) to:

- 1875—Yarra, Breadalbane, Fish River, and Gunning.
- 1876—Jerrawa, Yass, and Bowning.
- 1877—Rocky Ponds, Galong, Cunningham, Harden, Wallendbeen, Jindalee, and Cootamundra.
- 1878—Frampton, Bethungra, Illabo, Junee, Harefield, and Bomen.
- 1879—Wagga Wagga.
- 1880—Uranquinty, The Rock, Yerong Creek, Henty, Culcairn, and Gerogery.²⁵

The opening of the Murrumbidgee River railway bridge (Figure 4.5) at Wagga Wagga in 1881 allowed the Main South Line to be extended further south. That same year, the railway line arrived at Table Top, Ettamogah and Albury.²⁶



Figure 4.5 A c1870–1890 photograph of the Murrumbidgee River railway bridge at Wagga Wagga on the Main South Line. (Source: State Library Victoria, H2003.80/130)

4.1.3 The decline of the railway

The enthusiasm the people of NSW had for the railway network had worn off by the mid-twentieth century. This was, in large part, due to the sudden boom in the manufacturing of motor vehicles following the end of World War II. In 1946, approximately 1 in 14 people owned a personal vehicle, which had increased to 1 in 3 by the 1970s.²⁷ Concurrent in the rise of personal motor vehicles was the use of trucks for freight transport, which was considered a more efficient method for the direct transportation of goods. The railways were also affected by the simultaneous expansion of the construction industry, which saw valuable materials diverted to the building of dwellings and other similar infrastructure.²⁸

Between 1941 and 1977, no new route kilometres of railway were constructed.²⁹ Numerous branch railway lines and less popular stations were also closed and demolished. A number of stations on the Main South Line between Albury and Illabo were casualties from the decline, including:

- Illabo, 1878–demolished c1980s
- Bomen, 1878–close unknown
- Yerong Creek, 1880–demolished c1980s
- Gerogery, 1880–closed 1984, relocated to Lockhart 2003
- Table Top, 1880–demolished c1980s
- Ettamogah, 1881–demolished c1975
- Albury Racecourse, 1881–closed 1962, demolition date unknown.³⁰

Out of the 20 stations originally constructed between 1878 and 1943 on the line between Albury and Illabo, only seven were still operational by the end of the twentieth century.

4.2 Registered heritage items

Searches of the following heritage registers were undertaken on 23 February 2021:

- Australian Heritage Database, which includes results from the World Heritage List, CHL, and NHL¹
- SHI, which includes results from the SHR, LEPs, and Section 170 registers²
- Albury LEP 2010
- Greater Hume LEP 2012
- Lockhart LEP 2012
- Wagga Wagga LEP 2010
- Junee LEP 2012.

4.3 LGA heritage studies

The proposal is within five LGAs, all of which have been subject to a local heritage study to inform their LEPs and planning schemes. Three of the five of these local heritage studies—Albury, Lockhart, Wagga Wagga—are publicly available and were reviewed as part of the contextual research into the local heritage environment.

City of Albury, Albury City Wide Heritage Study, March 2003

The *Albury City Wide Heritage Study* was undertaken to identify and investigate places and items of local heritage significance, to prepare a list of those items for the local planning scheme, and to propose measures for the management of those items and of Albury's heritage environment in general. The study focused on a thematic history based around four themes—Albury as a rural service centre, as a thoroughfare town, as a border community and as a migrant centre.

A range of previous studies had been undertaken prior, including a Central Area Urban Conservation Study in 1976, an Albury Central Area Heritage study in 1991, a Main Street Study in 1993, plus the more specific *Albury Station Heritage Assessment and Conservation Guidelines 1990*.

¹ Results from the Register of the National Estate (RNE) were not included, as the register was closed in 2007 and operates as a non-statutory archive.

² As noted in Section 2.1, whilst the SHI can be used to identify Section 170 items, information regarding the responsible government agency, relevant list, and identification number attributed to that item is not provided. Additionally, the majority of Section 170 registers are not publicly available. This makes identifying the responsible government agency and current status of the heritage item difficult. Priority was given to identifying Section 170 heritage items located within the enhancement sites (Table 4.2). The following Section 170 registers were searched:

- ARTC
- TfNSW
- John Holland
- Sydney Trains

Section 170 heritage items located outside of the enhancement sites have been included in Table 4.3. A note has been made to indicate the heritage item's Section 170 status, but the applicable list has not been identified.

Therefore, the 2003 study aimed to focus on community-held values relating to local heritage themes, stories and places, with a summary of listed items from previous studies included. Specific emphasis was placed on places and items outside of the Albury Central Business District (CBD), and also on the theme of Albury as a migrant centre. A specific migrant history was produced as part of the study.

The study included an identification of previously listed heritage items, nomination of newly identified items and a compilation of items, conservation areas, precincts and management strategies to inform the LEP.

This 2003 heritage study coincides with the proposal through its acknowledgement and listing of the Albury Railway Station Group, and the Murray River bridge as items of both State and local heritage significance, plus the identification of houses in the conservation precincts in close proximity to the proposal, such as the Kenilworth Street houses.

Particular note is also made of the migrant connection to the transshipment platform within the Albury Station precinct. The transshipment platform was built in 1944 with the NSW gauge rail on the east side of the platform and the Victorian gauge on the west side of the platform. Migrants were used as labour during the war, transferring goods from one side of the platform to the other.

While this study notes the significance of the Murray River bridge to the identity and function of Albury, it incorrectly identifies this bridge as the Union Bridge.

Black Mountain Projects Architects, Lockhart Shire community-based heritage study, 2006

The study included the identification of places that represent the history and heritage of the Shire, the identification of items for LEP and SHR listing, the identification of conservation areas and the preparation of management strategies to inform the LEP.

Over 140 items or precincts were identified and assessed. At the conclusion of the assessment process the study proposed 79 locally listed heritage items, four conservation areas and five state listed items. Places within conservation areas were not individually listed as the conservation area itself was considered sufficient recognition and protection of the heritage values of these places.

This study coincides with the proposal in the following ways:

- the proposal for the formulation of the Yerong Creek Urban Conservation Area and The Rock Urban Conservation Area, both of which overlap the railway corridor
- the proposal for the listing of The Rock Station group on the SHR
- the proposed inclusion of the silos at The Rock on the LEP.

NGH Environmental, Wagga Wagga Heritage Study Review, May 2013

This heritage study provided a review and update of the 2002 *Wagga Wagga City Council Urban Heritage Study* and the 2000 *Wagga Wagga City Council Rural Heritage Study*, and sought to confirm, identify and assess places of heritage significance within the Wagga Wagga LGA.

The study encompassed the whole of the Wagga Wagga LGA and included the preparation of a thematic history, consultation with the community and the preparation of an inventory of heritage places.

The study concluded that the LGA was rich in heritage places from the 1840s through to the early 21st century. Central Wagga Wagga has many fine historical examples of civic and commercial buildings and a variety of significant residential buildings. A wide range of the NSW historic themes were also represented by heritage items and places across the LGA, with a predominance of places related to agriculture, domestic

life, leisure, social institutions, sport, commerce, education, religion, pastoralism, accommodation and cemeteries.

The study reviewed the 310 previously listed places and recommended a number of additions and removals. A total of 307 places are currently included on the LEP.

This study coincides with the proposal in the following way:

- The Bowen Railway Station and Wagga Wagga Railway Station and Yard Group were both noted as being places demonstrative of NSW Historic Theme 3: Developing local, regional and national economies, sub-category transport. They are noted as being of both state and local significance.
- The Wagga Wagga Showground was noted as being a place demonstrative of Historic Theme 3: Developing local, regional and national economies, sub-category pastoral and agricultural society. It was noted as being of local heritage significance.
- The central Wagga Wagga Conservation Area, which overlaps with the proposal at Edmondson Street and the Wagga Wagga Station.

4.3.2 Items within the enhancement sites

There are 42 registered heritage items located within the enhancement sites, including five conservation areas.³ These are detailed below (Table 4.2).

Table 4.2 Heritage items located within the enhancement sites. *Note that several of the SHR listings are inclusive of one or more LEP listing. Additionally, many heritage items on the SHR are also registered on the applicable LEP.*

Name	Address	Context	Listing	Item ID	s170 ID
Murray River bridge enhancement site					
Albury rail bridge over Murray River (also referred to as the Murray River bridge)	Main South, Albury	State	SHR Albury LEP	01020 I204	4280312 (ARTC)
Albury Station pedestrian bridge, Albury Yard clearances and Riverina Highway enhancement sites					
Albury Railway Station and Yard Group	Main South, Albury	State	SHR	01073	4280274 (ARTC and TfNSW)
<i>Inclusive of:</i>					
<i>Albury Railway Station</i>	-	-	<i>Albury LEP</i>	<i>I206</i>	-
<i>Albury signal box and footbridge⁴</i>	-	-	<i>Albury LEP</i>	<i>I207</i>	-
<i>Transshipment shed</i>	-	-	<i>Albury LEP</i>	<i>I208</i>	-

³ This figure has been calculated by counting:

- each individual listing;
- each SHR group listing; and
- each local listing included in a SHR listing.

⁴ This item is referred to throughout this report as the 'Albury North Signal Hut' to differentiate it from several smaller signal boxes identified during the survey. This is further detailed in Section 4.4.1.

Name	Address	Context	Listing	Item ID	s170 ID
<i>Railway workers' hut</i>	-	-	<i>Albury LEP</i>	<i>I210</i>	-
<i>Railway turntable</i>	-	-	<i>Albury LEP</i>	<i>I209</i>	-
Railway Conservation Area	Albury Railway Station and Yard and immediate corridor	Local	Albury LEP	C13	-
Billy Hughes bridge enhancement site					
No registered heritage items					
Table Top Yard clearances enhancement site					
No registered heritage items					
Culcairn pedestrian bridge and Culcairn Yard clearances enhancement sites					
Culcairn Railway Station and Yard Group	Main South, Culcairn	State	SHR Greater Hume LEP	01126 I44	4280282 (ARTC and TfNSW)
Street trees	Walbrundie Road, Holbrook Road, and Balfour Street, Culcairn	Local	Greater Hume LEP	I54	-
Henty Yard clearances enhancement site					
Henty Railway Station and Yard Group	Main South, Henty	State	SHR Greater Hume LEP	01169 I78	4280285 (ARTC and TfNSW)
Yerong Creek Yard clearances enhancement site					
Yerong Creek Urban Conservation Area	Cole Street, Cox Street, Finlaysons Lane, McArthur Street, and Plunkett Street	Local	Lockhart LEP	C3	-
The Rock Yard clearances enhancement site					
The Rock Station and Yard Group	Main South, The Rock	State	SHR Lockhart LEP	01268 I10	4280256 (ARTC and TfNSW)
The Rock Urban Conservation Area	Burke Street, Ford Street, John Street, Mitchell Street, Nicholas Street, Queen Street, Railway Street, Urana Street	Local	Lockhart LEP	C2	-
Uranquinty Yard clearances enhancement site					
Uranquinty silos	Pearson Street, Uranquinty	Local	Wagga Wagga LEP	I296	-
Pearson Street bridge enhancement site					
Wagga Wagga Showground, 'Kyeamba Smith' Hall, and grandstand	Bourke Street, Wagga Wagga	Local	Wagga Wagga LEP	I246	-
Cassidy Parade pedestrian bridge enhancement site					
Cassidy Parade and Brookong Avenue footbridge	Cassidy Parade and Brookong Avenue, Wagga Wagga	Local	ARTC s170	-	4280661 (ARTC)

Name	Address	Context	Listing	Item ID	s170 ID
Edmondson Street bridge enhancement site					
Mount Erin Convent, Chapel, High School and grounds	Edmondson Street, Turvey Park	Local	Wagga Wagga LEP	I260	-
Edmondson Street bridge, Wagga Wagga Station pedestrian bridge and Wagga Wagga Yard clearances enhancement sites					
Wagga Wagga Conservation Area	Fitzmaurice Street commercial precinct, and the residential precincts to the west and south	Local	Wagga Wagga LEP	-	-
Wagga Wagga Railway Station and Yard Group	Main South, Wagga Wagga	State	SHR	01279	4280250 (ARTC and TfNSW)
<i>Inclusive of:</i>					
Wagga Wagga Railway Station and Yard Group	-	-	Wagga Wagga LEP	I98	-
Stationmaster's Residence (former)	-	-	Wagga Wagga LEP	I99	-
Best Street Railway Gatehouse (former)	-	-	Wagga Wagga LEP	I254	-
Bomen Yard clearances enhancement site					
Bomen Railway Station	Main South, Bomen	State	SHR Wagga Wagga LEP	01093 I8	4280278 (ARTC)
Harefield Yard clearances enhancement site					
No registered heritage items					
Kemp Street bridge, Junee Station pedestrian bridge, Junee Yard clearances and Olympic Highway underbridge enhancement sites					
Junee Station, Yard, and Locomotive Depot	Main South, Junee	State	SHR	01173	4280760 (ARTC and TfNSW)
<i>Inclusive of:</i>					
Junee Railway Station	-	-	Junee LEP	I8	-
Junee Railway Refreshment Rooms	-	-	Junee LEP	I10	-
Junee Railway Station Moveable Relics	Main South, Junee	State	SHR	01172	-
Junee Heritage Conservation Area	Both sides of the railway, the majority of the CBD, and some residential areas	Local	Junee LEP 2012	C1	-
Junee to Illabo clearances enhancement site					
No registered heritage items					

4.3.3 Items within 200 metres of the enhancement sites

An additional 86 registered heritage items are located within 200 metres of the enhancement sites. These sites are outside of the enhancement sites. These are detailed below (Table 4.3) and shown on figures provided in Section 4.3.

Table 4.3 Heritage items located within 200 metres of the enhancement sites.

Name	Address	Context	Listing	Item ID	s170 ID
Murray River bridge enhancement site					
Laotian Buddhist Temple	355–369 Charles Street, South Albury	Local	Albury LEP	I322	-
Albury Station pedestrian bridge, Albury Yard clearances and Riverina Highway bridge enhancement sites					
House	355–369 Charles Street, South Albury	Local	Albury LEP	I8	-
Houses	Hanel Street, East Albury	Local	Albury LEP	I69	-
Houses	347–381 Kenilworth Street, East Albury	Local	Albury LEP	I74	-
Houses	438 and 440 Macauley Street, Albury	Local	Albury LEP	I100	-
Houses	446 and 448 Macauley Street, Albury	Local	Albury LEP	I101	-
House	447 Macauley Street, Albury	Local	Albury LEP	I103	-
Houses	480–484 Macauley Street, Albury	Local	Albury LEP	I104	-
House	552 Macauley Street, Albury	Local	Albury LEP	I105	-
House	364 Rau Street, East Albury	Local	Albury LEP	I132	-
House	369 Rau Street, East Albury	Local	Albury LEP	I133	-
Corner Store	370 Rau Street, East Albury	Local	Albury LEP	I134	-
Houses	371–379 Rau Street, East Albury	Local	Albury LEP	I135	-
House	378 Rau Street, East Albury	Local	Albury LEP	I136	-
'Macquarie Worsteds'	Schubach Street, East Albury	Local	Albury LEP	I138	-
'Commercial' or 'Waterstreet' Hotel and Cottage	430 Smollet Street, Albury	State	SHR Albury LEP	00538 I142	-
Bottleshop	Smollet Street, Albury	Local	Albury LEP	I143	-
Quilter's Cottage	Spencer Street, Albury	Local	Albury LEP	I156	-

Name	Address	Context	Listing	Item ID	s170 ID
Houses	432 and 436 Swift Street, Albury	Local	Albury LEP	I157	-
House	363 Wilson Street, East Albury	Local	Albury LEP	I177	-
Houses	368–376 Wilson Street, East Albury	Local	Albury LEP	I178	-
House	371 Wilson Street, East Albury	Local	Albury LEP	I179	-
House	375 Wilson Street, East Albury	Local	Albury LEP	I180	-
‘Cumnock’ House	418 Wilson Street, Albury	Local	Albury LEP	I184	-
House	420–424 Wilson Street, Albury	Local	Albury LEP	I185	-
Shop	Wilson Street, Albury	Local	Albury LEP	I186	-
Shop and two dwellings	436–440 Wilson Street, East Albury	Local	Albury LEP	I187	-
Station Master’s Residence	Young Street, Albury	Local	Albury LEP	I205	-
Houses	532–536 Young Street, Albury	Local	Albury LEP	I211	-
House	540 Young Street, Albury	Local	Albury LEP	I212	-
House	570 Young Street, Albury	Local	Albury LEP	I213	-
House	361 Rau Street, East Albury	Local	Albury LEP	I313	-
Remnant Box Gum Woodland	Wood Street, Albury	Local	Albury LEP	I334	-
Bonegilla Conservation Area	Albury High School, Crisp Street, David Street (north), George Street, Guinea Street, Jones Street, and Wyse Street, Albury	Local	Albury LEP	C1	-
Dean Street Conservation Area	Dean Street, Albury	Local	Albury LEP	C6	-
Hanel Street Conservation Area	Hanel Street, Albury	Local	Albury LEP	C8	-
Kenilworth Street Conservation Area	Kenilworth Street, Albury	Local	Albury LEP	C9	-
South Albury Conservation Area	Thomas Street, Charles Street, and Fleming Street, South Albury	Local	Albury LEP	C14	-
Billy Hughes bridge enhancement site					
No registered heritage items					

Name	Address	Context	Listing	Item ID	s170 ID
Table Top Yard clearances enhancement site					
No registered heritage items					
Culcairn pedestrian bridge and Culcairn Yard clearances enhancement sites					
Court house and police building	Balfour Street, Culcairn	Local	Greater Hume LEP	I41	Y
'Culcairn' Hotel	Railway Parade, Culcairn	Local	Greater Hume LEP	I43	-
'London' Bank	Balfour Street, Culcairn	Local	Greater Hume LEP	I46	-
'Papworth's Bakery' shop	66 Balfour Street, Culcairn	Local	Greater Hume LEP	I49	-
Post Office	Balfour Street, Culcairn	Local	Greater Hume LEP	I50	-
'Scholz's Corner'	Balfour Street, Culcairn	Local	Greater Hume LEP	I51	-
Henty Yard clearances enhancement site					
House	4 Keightley Steet, Henty	Local	Greater Hume LEP	I69	-
'Doodle Cooma Arms' Hotel	Sladen Street, Henty	Local	Greater Hume LEP	I73	-
Government dam	Henty Pleasant Hills Road, Henty	Local	Greater Hume LEP	I74	-
Masonic Hall	Ivor Street, Henty	Local	Greater Hume LEP	I81	-
Former Methodist church	Ivor Street, Henty	Local	Greater Hume LEP	I82	-
Police station	Allan Street, Henty	Local	Greater Hume LEP	I83	Y
Former shop	Keightley Street, Henty	Local	Greater Hume LEP	I86	-
Saint Barnabas Anglican Church	Ivor Street, Henty	Local	Greater Hume LEP	I87	-
Yerong Creek Yard clearances enhancement site					
No registered heritage items					
The Rock Yard clearances enhancement site					
No registered heritage items					
Uranquinty Yard clearances enhancement site					
Saint Patrick's Roman Catholic Church	Morgan Street, Uranquinty	Local	Wagga Wagga LEP	I288	-
'Uranquinty' Hotel	Morgan Street, Uranquinty	Local	Wagga Wagga LEP	I289	-
General Store post boxes	Morgan Street, Uranquinty	Local	Wagga Wagga LEP	I291	-
'Gannawarra' House	Pearson Street, Uranquinty	Local	Greater Hume LEP	I294	-

Name	Address	Context	Listing	Item ID	s170 ID
Community Hall	Pearson Street, Uranquinty	Local	Wagga Wagga LEP	I295	-
Uranquinty School	Pearson Street, Uranquinty	Local	Wagga Wagga LEP	I297	Y
Memorial Avenue	Pearson Street, Uranquinty	Local	Wagga Wagga LEP	I304	-
Pearson Street bridge enhancement site					
Charles Sturt University South Campus	Urana Street, Turvey Park	Local	Wagga Wagga LEP	I245	-
Former Docker Street Railway Gatehouse	1 Docker Street, Wagga Wagga	Local	Wagga Wagga LEP	I257	-
Cassidy Parade pedestrian bridge enhancement site					
No registered heritage items					
Edmondson Street bridge enhancement site					
No registered heritage items					
Wagga Wagga Station pedestrian bridge and Wagga Wagga Yard clearances enhancement sites					
South Wagga Public School	Edward Street, Wagga Wagga	Local	Wagga Wagga LEP	I97	Y
Former 'Murrumbidgee Milling Company' flour mill and outbuildings	Edward Street, Wagga Wagga	Local	Wagga Wagga LEP	I100	-
House	100 Coleman Street, Turvey Park	Local	Wagga Wagga LEP	I243	-
House	108 Coleman Street, Turvey Park	Local	Wagga Wagga LEP	I244	-
Charles Sturt University South Campus	Hely Avenue, Turvey Park	Local	Wagga Wagga LEP	I245	-
House	7 Beauty Point Avenue, Turvey Park	Local	Wagga Wagga LEP	I253	-
Corner store	135 Edward Street, Wagga Wagga	Local	Wagga Wagga LEP	I262	-
House	2 Macleay Street, Turvey Park	Local	Wagga Wagga LEP	I303	-
Bomen Yard clearances enhancement site					
Bomen Station Master's Residence	Dampier Street, Bomen	Local	Wagga Wagga LEP	I9	-
Harefield Yard clearances enhancement site					
No registered heritage items					
Kemp Street bridge, Junee Station pedestrian bridge, Junee Yard clearances and Olympic Highway underbridge enhancement sites					
Court house	Belmore Street, Junee	Local	Junee LEP	I3	Y
Former 'Westpac' Bank	Lorne Street, Junee	Local	Junee LEP	I4	-
'Commercial' Hotel	Lorne Street, Junee	Local	Junee LEP	I5	-

Name	Address	Context	Listing	Item ID	s170 ID
Former 'Loftus' Hotel	Humphrys Street, Junee	Local	Junee LEP	I7	-
'Junee' Hotel	Seignior Street, Junee	Local	Junee LEP	I11	-
Former general store	Seignior Street, Junee	Local	Junee LEP	I12	-
Former solicitor's office	Seignior Street, Junee	Local	Junee LEP	I13	-
'Australia and New Zealand Banking Group' Bank	Broadway, Junee	Local	Junee LEP	I14	-
Former 'Broadway' Hotel	82–86 Broadway, Junee	Local	Junee LEP	I15	-
'Broadway Stores Group'	Broadway, Junee	Local	Junee LEP	I16	-
Post office	Lorne Street, Junee	Local	CHL SHR	105500 01425	-
Former 'Jadda' Centre	Broadway, Junee	State	SHR Junee LEP	01687 I2	-
Junee Public School	116 Lorne Street, Junee	Local	s170	-	Y
Junee to Illabo clearances enhancement site					
No registered heritage items					

4.3.4 Commonwealth heritage items

A desktop search was completed by ARTC to identify MNES or other matters protected by the EPBC Act (such as heritage) that could be impacted by the proposal. The buffer used for the search examined an area of 10 kilometres either side of the railway corridor. Two items were identified during the search—the Albury Post Office (CHL ID 105506) and Junee Post Office (CHL ID 105500). These sites are owned by the Australian Government and are considered to be locally significant.

The Junee Post Office is within 200 metres of the Junee Station pedestrian bridge and Junee Yard clearances enhancement sites. The Albury Post Office is located over 700 metres west of the Albury Station pedestrian bridge and Albury Yard clearances enhancement sites, so is not located within the study area for this SoHI.

4.4 Survey

The following section discusses the observations made during the survey of the enhancement sites. See **Appendix A** for photographs taken during the survey.

4.4.1 Viewsheds and vistas

Many of the viewsheds that define the railway corridor are confined to each of the individual railway station precincts. In these spaces, the views are generally characterised by long-reaching views down the railway line, which are framed by the buildings and landscapes that are immediately adjacent to the corridor. Visibility beyond this boundary is largely restricted, with views to other features obscured by the structures adjacent to the railway corridor. This is particularly evident in areas that have been built up (e.g. Albury Station, Wagga Wagga Station) and/or are predominantly level (e.g. Junee Station).

Similarly, views to the railway corridor are largely obscured by the structures immediately adjacent to it. Due to this, heritage items that have views of the railway corridor are generally sited within its immediate vicinity (i.e. immediately adjacent or within a few hundred metres). Heritage items that are located beyond 200 metres of the railway corridors (and enhancement sites) are generally unable to directly view the railway corridor due to interceding structures. Where these distant heritage items are raised within the environment (e.g. East Albury), views remain restricted by vegetation and structures.

Where views beyond the railway corridor are not obscured, they tend to be of prominent geographical features (e.g. The Rock). Outside of the railway station precincts and urban areas, the railway corridor is characterised by wide, sweeping views of agricultural landscapes.

4.4.2 Murray River bridge enhancement site

The Murray River bridge enhancement site comprises 650 metres of the railway alignment over the Murray River bridge and Townsend Street, an unsealed vehicle track providing access to the underbridge. The results of the survey are summarised in Table 4.4.

Table 4.4 Survey results of the Murray River bridge enhancement site.

Name	Item ID	Description	Figures
Registered items			
Albury rail bridge over the Murray River (SHR 01020) (known as Murry River bridge)	SHR 01020	The Murray River bridge is a double-track, three-span steel lattice truss bridge with overhead stabilising transverse frames. It has rivetted steel pillars, cast concrete and steel pylons for abutments, and several sections of girders for approaches to the abutments. There is also an underslung mobile work platform attached to the rails beneath the bridge for maintenance work. The bridge is predominantly in good condition, although has extensive graffiti damage.	Appendix A.1–2
Unregistered potential heritage items			
No additional potential heritage items or values were identified within the enhancement site.			



Figure 4.6 Identified heritage items at the Murray River bridge enhancement site. (Source: ARTC aerial with GML additions, 2021)

4.4.3 Albury Station pedestrian bridge, Albury Yard clearances and Riverina Highway bridge enhancement sites

The Albury Station pedestrian bridge and Albury Yard clearances enhancement sites comprise a 1.3 kilometre long section of the railway alignment centred on Albury Station. They also include: a 50 metre section of the western extent of Kenilworth Street; a 112 metre long section on Kenilworth Street on the other side of the pedestrian bridge crossing the Hume Highway; the brownfield where the Bunge Flour Mill was demolished in 2012; and the brownfield where the goods shed was demolished in the 1980s. The Albury Yard clearances enhancement site adjoins to the southern border to the Riverina Highway bridge enhancement site. This site comprises a 680 metre section of the railway alignment, north of Wilson Street on the western side of the Hume Highway. This enhancement site terminates as Wood Street turns westward into The Scots School, Albury.

The results of the survey are summarised in Table 4.5.

Table 4.5 Survey results of the Albury Station pedestrian bridge, Albury Yard clearances and Riverina Highway bridge enhancement sites.

Name	Item ID	Description	Figures
Registered items			
Albury Railway Station and Yard Group, inclusive of: <ul style="list-style-type: none"> station building and platform (1881) and 	SHR 01073	The Albury Railway Station is a substantial and ornate structure, built in the Victorian Italianate style. ³¹ It comprises a highly symmetrical, single-storey building. The platform is a mixture of brick and stone construction. The station building appears to be in good condition.	Appendix A.3–9

Name	Item ID	Description	Figures
<ul style="list-style-type: none"> refreshment rooms (1880s) Station Master's residence (1881) (located outside of the enhancement site) railway workers' hut (c1890) North Signal Hut (1885), located at the northern end of the platform South Signal Hut (1962), located at the southern end of the platform footbridge (1910), located at the northern end of the platform turntable (1880, modified in 1904 and 1926) transhipment shed (1944) gantry cranes broad gauge cripple sidings, located in dock platform (interpretive display). 		<p>Immediately adjacent to the station platform is the North Signal Hut. The hut is a two-storey brick and timber structure with a gabled roof, timber cladding on the operating level, stylistic arched windows on the ground level, inset wall panels, and corbelled brick coursing around the windows. The switching gear housed in the operating level and its external connection to the railway tracks appears to be intact, as does the toilet cupboard. Two later extensions have been added to the original building—a single-storey brick structure abuts the northern wall of the original building. The extension was built in two events, the first in English bond with a flat iron roof, the second in stretcher bond with a flat concrete roof. An additional set of switching gear was added on the northern side of the building extension. The entire building is in fair to poor condition—timber work shows signs of deterioration—but maintains a high integrity.</p> <p>A footbridge abuts the North Signal Hut on its northern face. The footbridge is a steel-framed structure with timber treads constructed in a simplified form of Warren truss. The upper chord of the truss is braced laterally by a straight angle-iron strut to the lower chord (see Chapter 4.4.1 for comparison with the footbridges at Culcairn and Junee).</p> <p>The South Signal Hut is a one- and two-storey brick structure with a tiled roof. Some remnant switching gear appears to remain within the building and attached to the railway tracks. It is in poor condition with evidence of extensive vandalism.</p> <p>The transhipment shed is located on the eastern side of the railway yard. It comprises a single central brick and concrete platform with railway tracks running either side, covered by a timber-framed open-sided shed with asbestos sheet clad roof. It is in fair condition, with some smoke or heat damage to the upper timber framing.</p> <p>Potential archaeological deposits were identified within the Albury Railway Station Yard and in the brownfield that was the location of the railway station goods shed:</p> <ul style="list-style-type: none"> Albury Railway Station Yard—Several areas of extant, unused railway track are visible in the yard, and additional pieces of track are likely to be present subsurface. Some of this track is likely to be remnant broad-gauge rail, particularly around the location of the North Signal Hut. Railway station goods shed—A large remnant brick footing pad and areas of crushed brick are present throughout the brownfield. 	
Railway Conservation Area	Albury LEP 2010 C13	The conservation area comprises the Albury Railway Station and Yard, described above.	-
Unregistered potential heritage items			
Albury Yard signal boxes	-	An additional four signal boxes are present in the Albury Yard, which are not identified as part	Appendix A.10–13

Name	Item ID	Description	Figures
		<p>of the Albury Railway Station and Yard Group citation. These are arranged in two sets of pairs.</p> <p>Signal box pair 1:</p> <ul style="list-style-type: none"> Signal box 1a—The larger signal box is located in the centre of the railway yard opposite the platform. It comprises a rectangular building constructed from concrete slabs—cast with a pattern to appear like weatherboard panels—which have been dropped into slotted uprights, a concrete slab floor, and a hipped roof clad in corrugated iron sheets. A single double door is placed off centre in the north-facing short wall of the structure. It is in good condition. Signal box 1b—A smaller signal box is located at the southern end of the platform in line with the South Signal Hut. It comprises a rectangular building in the same style as signal box 1a, but with a single door centred in the north-facing short wall. It is in good condition. <p>Signal box pair 2:</p> <ul style="list-style-type: none"> Signal box 2a—Located at the far southern extent of the railway yard. It comprises a narrow rectangular building constructed from cast concrete panels—with decorative pieces around the doorframe— which have been dropped into slotted uprights, a concrete slab floor and a gable roof. A single door is centred in the south-facing short wall. It sits on cast concrete piers and steel rail bearers on the western side of the railway corridor. The roof is clad with flat asbestos-cement fibro sheeting. It is in poor condition with extensive vandalism. Signal box 2b—Located on the western side of the southern extent of the platform. It comprises a rectangular building in the same style as signal box 2a, but in better condition. 	



Figure 4.7 Identified heritage items at the Albury Station pedestrian bridge, Albury Yard clearances and Riverina Highway bridge enhancement sites. (Source: ARTC aerial with GML additions, 2021)

4.4.4 Billy Hughes bridge enhancement site

The Billy Hughes bridge enhancement site comprises a 1.1 kilometre long section of brownfield in the Ettamogah area on the western side of the Hume Highway, where Davey Road intersects with Wagga Road. The results of the survey are summarised in Table 4.6.

Table 4.6 Survey results of the Billy Hughes bridge enhancement site.

Name	Item ID	Description	Figures
Registered items			
There are no registered heritage items within the enhancement site			
Unregistered potential heritage items			
No additional potential heritage items or values were identified within the enhancement site			

4.4.5 Table Top Yard clearances enhancement site

The Table Top Yard clearances enhancement site comprises a 190 metre long stretch of the railway alignment to the west of the Hume Highway and east of Perryman Lane. The results of the survey are summarised in Table 4.7.

Table 4.7 Survey results of the Table Top Yard clearances enhancement site.

Name	Item ID	Description	Figures
Registered items			
There are no registered heritage items within the enhancement site			
Unregistered potential heritage items			
No additional potential heritage items or values were identified within the enhancement site			

4.4.6 Culcairn pedestrian bridge enhancement site and Culcairn Yard clearances enhancement site

The Culcairn pedestrian bridge and Culcairn Yard clearances enhancement sites comprise an 840 metre long section of the railway alignment centred on the Culcairn Station. The results of the survey are summarised in Table 4.8.

Table 4.8 Survey results of the Culcairn pedestrian bridge and Culcairn Yard clearances enhancement sites.

Name	Item ID	Description	Figures
Registered items			
Street Trees along Walbrundie Road, Holbrook Road, and Balfour Street	Greater Hume LEP 2012 I54	Lines of mature and young trees are present on the verges and through the median strip of Balfour Street, between its intersection with Donald Street and approximately 400 metres east of its intersection with Federal Street. Four trees—located immediately either side of Balfour Street—are present within the enhancement site.	-
Culcairn Railway Station and Yard Group, inclusive of:	SHR 01126	The Culcairn Railway Station is a weatherboard structure with a gabled roof clad in corrugated iron sheets. A concrete slab has been added to the surface of the brick platform to raise the height. The Station Master's residence is a two-storey brick structure in the Victorian Filigree	Appendix A.14–16

Name	Item ID	Description	Figures
<ul style="list-style-type: none"> station building and platform (1880, modified 1915) Station Master's residence (1880) footbridge (1920) per-way office (c1920) remnant timber fences. 		<p>style. Both buildings appear to be in good condition.</p> <p>South of the railway precinct is a footbridge. The main structure is a simplified form of Warren truss spanning two tracks with two double-flight sets of stairs—steel framed with timber treads. The upper chord of the truss is supported by a curved lateral brace to the lower chord (see Chapter 4.4.1 for comparison with the footbridges at Albury and Junee). The footbridge is now disused.</p>	
Unregistered potential heritage items			
No additional potential heritage items or values were identified within the enhancement site			

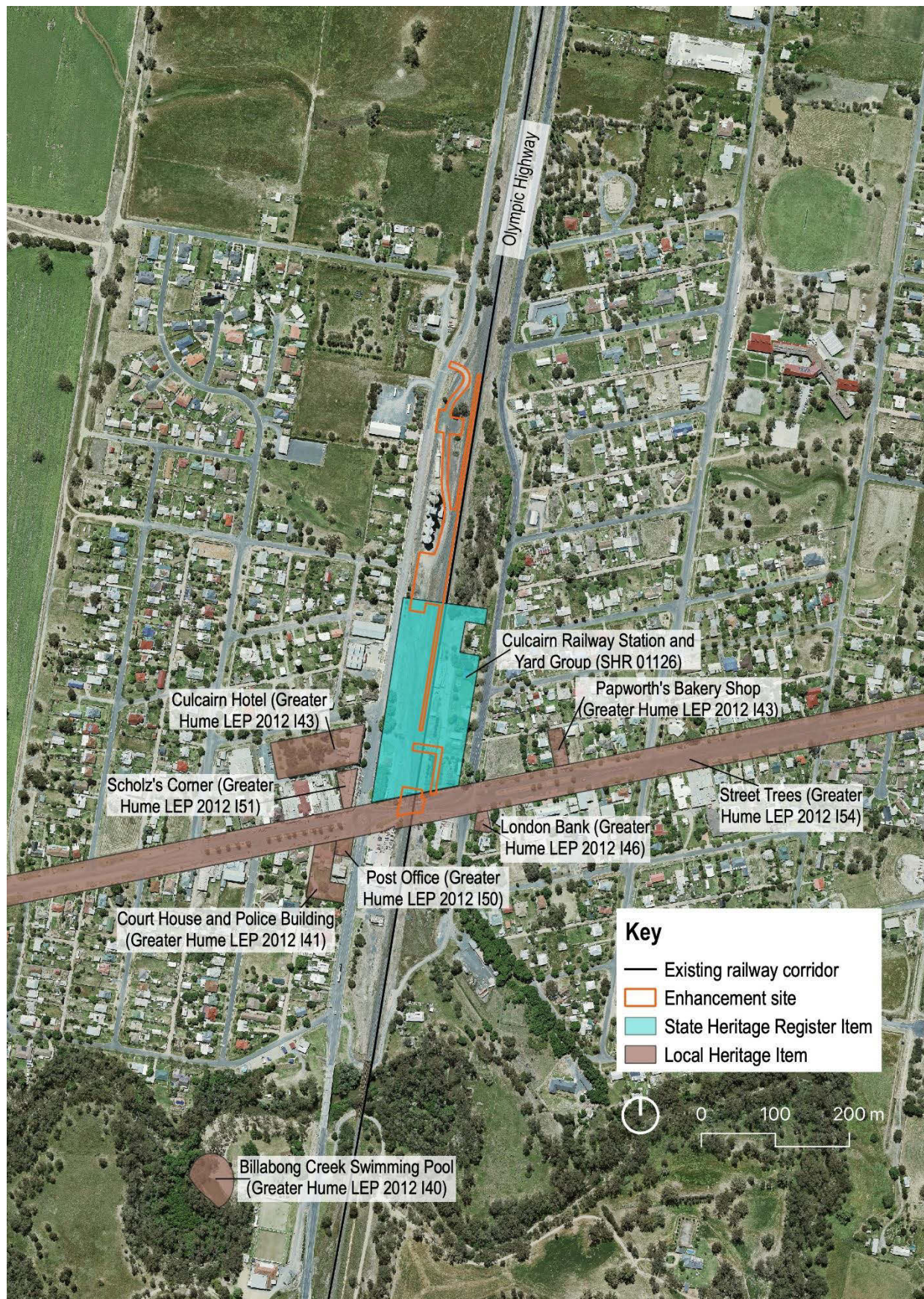


Figure 4.8 Identified heritage items at the Culcairn pedestrian bridge and Culcairn Yard clearances enhancement sites. (Source: ARTC aerial with GML additions, 2021)

4.4.7 Henty Yard clearances enhancement site

The Henty Yard clearances enhancement site comprises two areas at Henty Station:

- A 770 metre long section of the railway alignment centred on the railway station itself. This includes a 100 metre stretch across Sladen Street to the north of the station.
- A 40 metre long section approximately 450 metres south of the previous section.

The results of the survey are summarised in Table 4.9.

Table 4.9 Survey results of the Henty Yard clearances enhancement site.

Name	Item ID	Description	Figures
Registered items			
Henty Railway Station and Yard Group, which includes the following items: <ul style="list-style-type: none"> • station building (1880, relocated in 1904 and extended in 1937) and platform (1904) • goods shed (c1904) • moveable relics. 	SHR 01169	<p>The Henty Railway Station is a weatherboard structure with a skillion roof clad in corrugated iron sheets. The platform is of brick construction—stretcher bond capped with four corbelled courses. Two additional courses of bricks have been added to the surface of the platform to raise the height. The station building and platform appear to be in good condition.</p> <p>The goods shed is a timber-framed structure with steel uprights and supports, a timber loading platform on the northern end, access platform on the track side, and steps on the southern end of the platform. The structure is clad with corrugated iron sheets, and it has a curved corrugated iron clad roof. The roof curve is supported internally by a king post extending from the centre of the collar-tie, without a diagonally braced truss structure, or rafters.</p> <p>The roof and a number of the wall corrugated iron sheets have been replaced. Casement windows are set in both short walls and there are two sets of sliding doors on each long wall. The sliding doors are clad in timber set in a herringbone pattern and hung from steel rails with castors. The internal single room has been cordoned on the southeast corner by a wire mesh storage cage. The goods shed is largely in good condition, although the external timber platforms have deteriorated and there is evidence of vandalism and squatting. The original roof and wall corrugated iron sheets are present beneath the loading platform.</p>	Appendix A.17–25
Unregistered potential heritage items			
No additional potential heritage items or values were identified within the enhancement site			

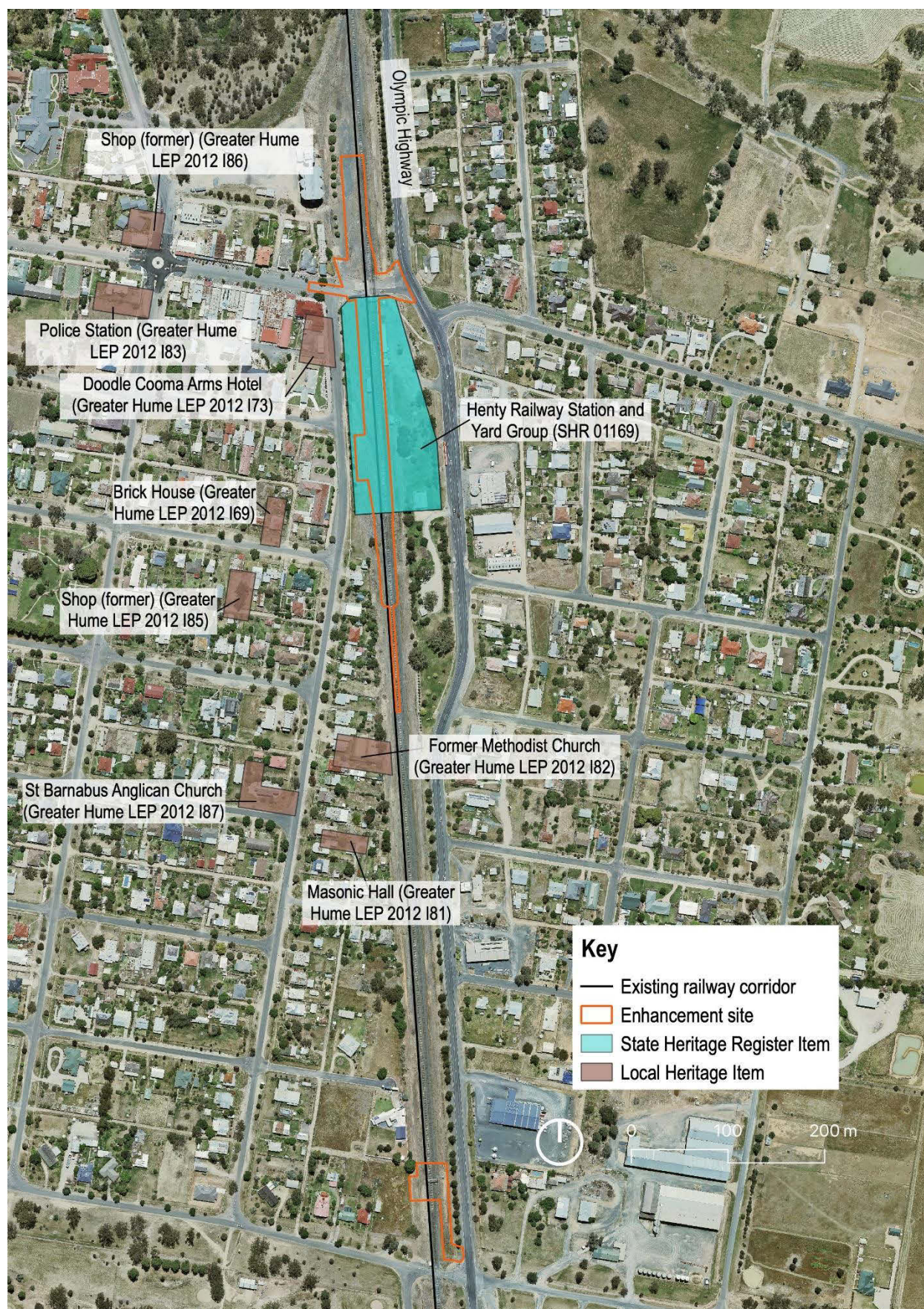


Figure 4.9 Identified heritage items at the Henty Yard clearances enhancement site. (Source: ARTC aerial with GML additions, 2021)

4.4.8 Yerong Creek Yard clearances enhancement site

The Yerong Creek Yard clearances enhancement site comprises a 1.2 kilometre long section of the railway alignment at Yerong Creek. The results of the survey are summarised in Table 4.10.

Table 4.10 Survey results of the Yerong Creek Yard clearances enhancement site.

Name	Item ID	Description	Figures
Registered items			
Yerong Creek Urban Conservation Area	Lockhart LEP 2012 C3	The conservation area is partially located within and adjacent to the railway corridor. The conservation area includes a number of nineteenth and early twentieth century buildings.	-
Unregistered potential heritage items			
Yerong Creek Railway Station archaeological site	-	An area of exposed brick footings and surface artefacts (e.g. small sherds of ceramic) was identified adjacent to the nineteenth century brick railway platform. The platform is of brick construction—stretcher bond capped with four corbelled courses. This is likely the site and archaeological remnants of the old railway station (demolished in the 1980s).	Appendix A.26–27

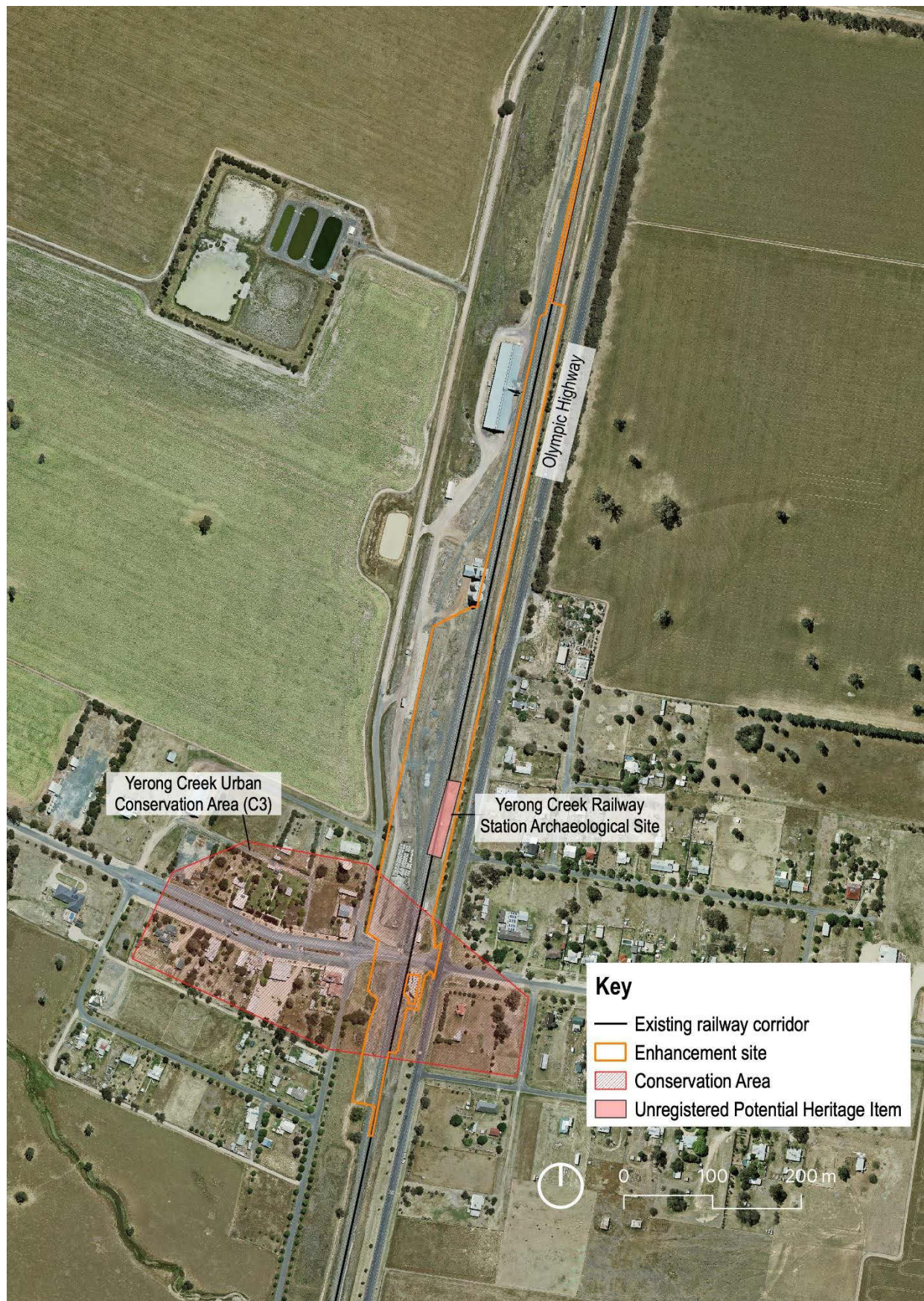


Figure 4.10 Identified heritage items at the Yerong Creek Yard clearances enhancement site. (Source: SIX Maps aerial with GML additions, 2021)

4.4.9 The Rock Yard clearances enhancement site

The Rock Yard clearances enhancement site comprises two areas at The Rock Station:

- a 1.2 kilometre long section of the railway alignment centred on the railway station itself.
- a 30 metre long section where it crosses Urana Street 130 metres north of the previous section.

The results of the survey are summarised in Table 4.11.

Table 4.11 Survey results of The Rock Yard clearances enhancement site.

Name	Item ID	Description	Figures
Registered items			
The Rock Station and Yard Group, inclusive of: <ul style="list-style-type: none"> • station building and platform (1880) • Station Master's residence (1880) • gantry crane • moveable relics. 	SHR 01268	The Rock Station is a weatherboard structure with a gabled roof clad in corrugated iron sheets. The gantry crane is located in the centre of the railway yard. The Station Master's residence is a simple brick building, which has been rendered. Both buildings appear to be in good condition, although many of the rooms in the station building have been closed up.	Appendix A.28–30
The Rock Urban Conservation Area	Lockhart LEP 2012 C2	The conservation area is partially located with and adjacent to the railway corridor. The conservation area includes a number of nineteenth and early twentieth century buildings.	Appendix A.31
Unregistered potential heritage items			
No additional potential heritage items or values were identified within the enhancement site.			

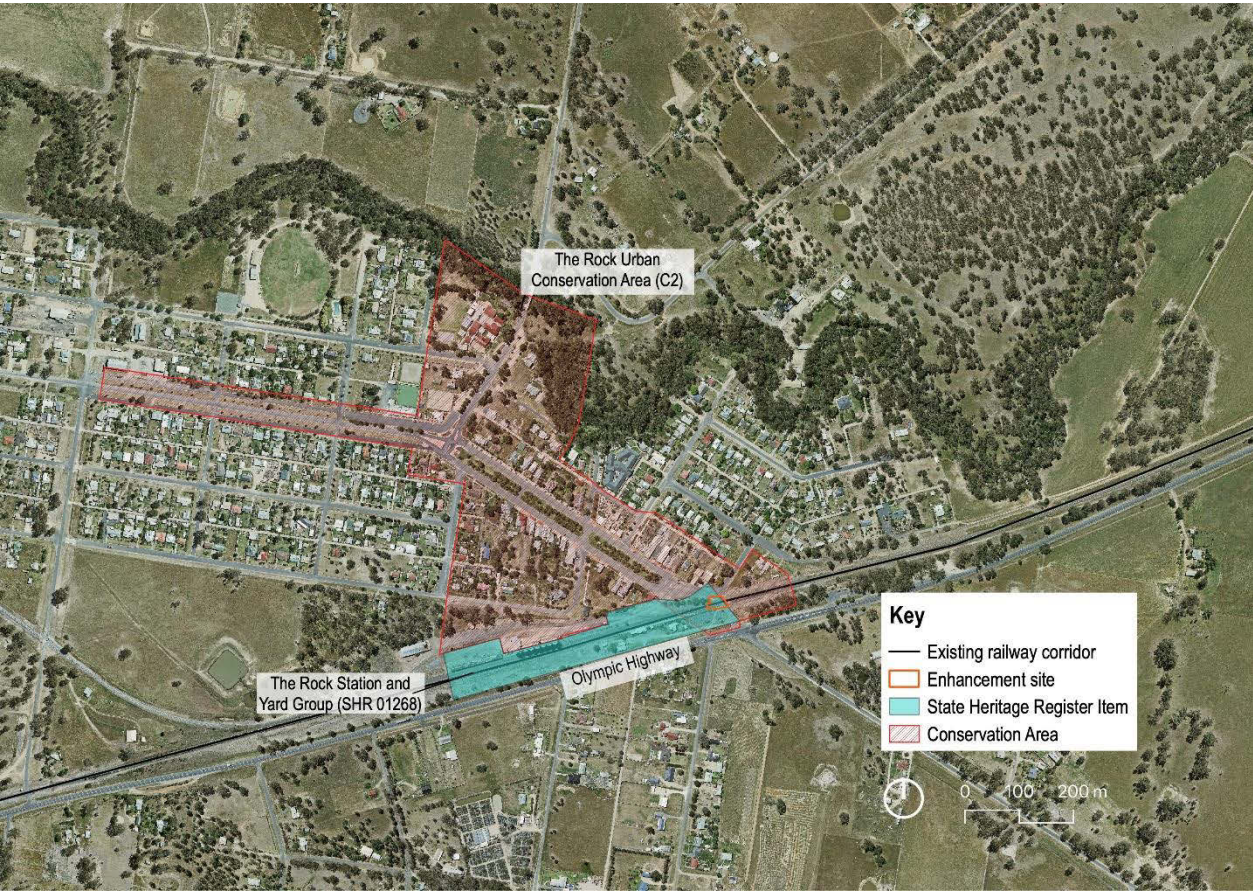


Figure 4.11 Identified heritage items at The Rock Yard clearances enhancement site. (Source: ARTC aerial with GML additions, 2021)

4.4.10 Uranquinty Yard clearances enhancement site

The Uranquinty Yard clearances enhancement site comprises a 1.2 kilometre long section of the railway alignment at Uranquinty. The results of the survey are summarised in Table 4.12.

Table 4.12 Survey results of the Uranquinty Yard clearances enhancement site.

Name	Item ID	Description	Figures
Registered items			
Uranquinty silos	Wagga Wagga LEP 2010 I296	The silos comprise three older concrete silos, capped by a grain elevator, and two modern steel silos.	Appendix A.32
Unregistered potential heritage items			
No additional potential heritage items or values were identified within the enhancement site			



Figure 4.12 Identified heritage items located in proximity to the Uranquinty Yard clearances enhancement site. (Source: SIX Maps aerial with GML additions, 2021)

4.4.11 Pearson Street bridge enhancement site

The Pearson Street bridge enhancement site comprises a one kilometre long section of the railway alignment centred on the Pearson Street Bridge at Wagga Wagga. It also includes: a portion of the campground and unsealed vehicle access track in the Wagga Wagga Showground campground between the railway alignment and Urana Street; a portion of unsealed vehicle access track in an industrial area between the railway alignment and Fernleigh Road; a portion of unsealed vehicle access track between the railway alignment and Cheshire Street; a portion of the drainage easement on the western side of Pearson Street; and a section of brownfield between the railway alignment and Urana Street. The results of the survey are summarised in Table 4.13.

Table 4.13 Survey results of the Pearson Street bridge enhancement site.

Name	Item ID	Description	Figures
Registered items			
Wagga Wagga Showground, 'Kyeamba Smith' Hall, and grandstand	Wagga Wagga LEP 2010 I246	The Wagga Wagga Showground includes a number of early and mid-twentieth century buildings. The 'Neil Skeers' Grandstand is an ornate Federation-style brick structure with decorative cast iron balustrade, timber bench seats, and a timber and corrugated iron sheet clad roof. The roof is an asymmetrical shape, with a curved hip on its eastern aspect and open gable on the western aspect—the structure may have been altered in the past, removing a	Appendix A.33–34

Name	Item ID	Description	Figures
		<p>portion of the Grandstand. A brick and iron shed adjoins the Grandstand on its eastern side. The Grandstand appears to be in fair condition.</p> <p>The 'Kyeamba Smith' Hall is a brick building with a corrugated iron sheet clad roof. It is of a similar style to the Grandstand, suggesting they are likely to be contemporary structures. The Hall appears to be in fair condition.</p> <p>Several other contemporary buildings are located within the curtilage of the Wagga Wagga Showground.</p>	

Unregistered potential heritage items

No additional potential heritage items or values were identified within the enhancement site.



Figure 4.13 Identified heritage items at the Pearson Street bridge enhancement site. (Source: ARTC aerial with GML additions, 2021)



Figure 4.14 Identified heritage items in the vicinity of Docker Street gantry, part of the Wagga Wagga Yard clearances enhancement site. (Source: ARTC aerial with GML additions, 2021)

4.4.12 Cassidy Parade pedestrian bridge enhancement site

The Cassidy Parade pedestrian bridge enhancement site comprises the western extent of the 1.6 kilometre long section of railway alignment centred on the Wagga Wagga Station. It also includes: a 110 metre section at the junction between Cassidy Parade and Kildare Street and it widens the pedestrian access route from Brookong Avenue. The results of the survey are summarised in Table 4.14.

Table 4.14 Survey results of the Cassidy Parade pedestrian bridge enhancement site.

Name	Item ID	Description	Figures
Registered Items			
Cassidy Parade and Brookong Avenue footbridge	ARTC s170 ID 4280661	The Cassidy Parade and Brookong Avenue footbridge comprises cast concrete columns—with inverted cone-shaped capitals—and beams—with indented or ‘scaloped’ sides. The deck has also been constructed from cast concrete with a steel pipe and wire railing fence. There are concrete slab abutments at either end of the pedestrian ramp. It was opened in 1965. The footbridge appears to be in good condition, although has some graffiti damage.	Appendix A.35
Unregistered potential heritage items			
No additional potential heritage items or values were identified within the enhancement site.			



Figure 4.15 Identified heritage items at the Cassidy Parade pedestrian bridge enhancement site. (Source: ARTC aerial with GML additions, 2021)

4.4.13 Edmondson Street bridge, Wagga Wagga Station pedestrian bridge, and Wagga Wagga Yard clearances enhancement sites

The Edmondson Street bridge, Wagga Wagga Station pedestrian bridge, and Wagga Wagga Yard clearances enhancement sites comprise the central and eastern extent of a 1.6 kilometre long section of the railway alignment centred on the Wagga Wagga Station. It also includes: a 330 metre section of Edmondson Street where it crosses the railway alignment; a 30 metre section of the western extent of Erin Street; a 50 metre section of the eastern extent of Donnelly Avenue; an access point at the western end of Railway Street; and Little Best Street. The results of the survey are summarised in Table 4.15.

Table 4.15 Survey results of the Wagga Wagga Station pedestrian bridge and Wagga Wagga Yard clearances enhancement sites.

Name	Item ID	Description	Figures
Registered items			
Wagga Wagga Conservation Area	Wagga Wagga LEP 2010	The conservation area is partially located within and adjacent to the railway corridor. The conservation area includes a number of nineteenth and early twentieth century buildings.	-
Mount Erin Convent, Chapel, high school, and grounds	Wagga Wagga LEP 2010 I260	The Mount Erin complex comprises of a number of buildings, many of which date to the late nineteenth century. The curtilage also includes extensive mature plantings, which screen much of the site from external views.	-

Name	Item ID	Description	Figures
<p>Wagga Wagga Railway Station and Yard Group, inclusive of:</p> <ul style="list-style-type: none"> station building and platform (1879) Stationmaster's residence (former) (1879) Wagga Wagga footbridge ('Mothers Footbridge') (1936), located at the southern end of the platform former Best Street Railway Gatehouse (c1880). 	SHR 01279	<p>The Wagga Wagga Railway Station is a substantial and ornate structure, built in the Victorian Free Classical style.³² It comprises a highly symmetrical, single-storey building.</p> <p>West of the station building is the Wagga Wagga footbridge ('Mothers Footbridge'), which was built in 1936. It is a simple steel girder bridge with a steel post-and-rail safety barrier and straight lateral bracing post). The footbridge does not provide access to the Wagga Wagga Railway Station platforms but spans from the station carpark to the opposite side of the railway corridor. The footbridge is in fair condition.</p> <p>Immediately west of the station building is the Wagga Wagga Railway Museum. The museum is a single-storey brick building with a corrugated iron sheet clad roof.</p> <p>Southwest of the station building is the former Best Street gatehouse. It has a T-shaped floorplan and has been constructed from brick—English bond—with a corrugated iron roof (partially missing). It also has an external water closet and laundry structure. The building is in poor condition, with evidence of fire damage, ongoing squatting, and general disrepair.</p>	Appendix A.39–40
Unregistered potential heritage items			
Edmondson Street bridge	-	<p>The Edmondson Street bridge is included in the Wagga Wagga Conservation Area but has not been identified specifically as a contributory item.</p> <p>The bridge is a steel-framed girder bridge with red brick—header/stretcher bond—masonry. Modifications have been made to raise the deck approximately 1.2 metres using an additional 17 brick courses and concrete retaining walls along the top of the abutment (see Chapter 4.4.3 for comparison with the Kemp Street Bridge at Junee).</p>	Appendix A.38

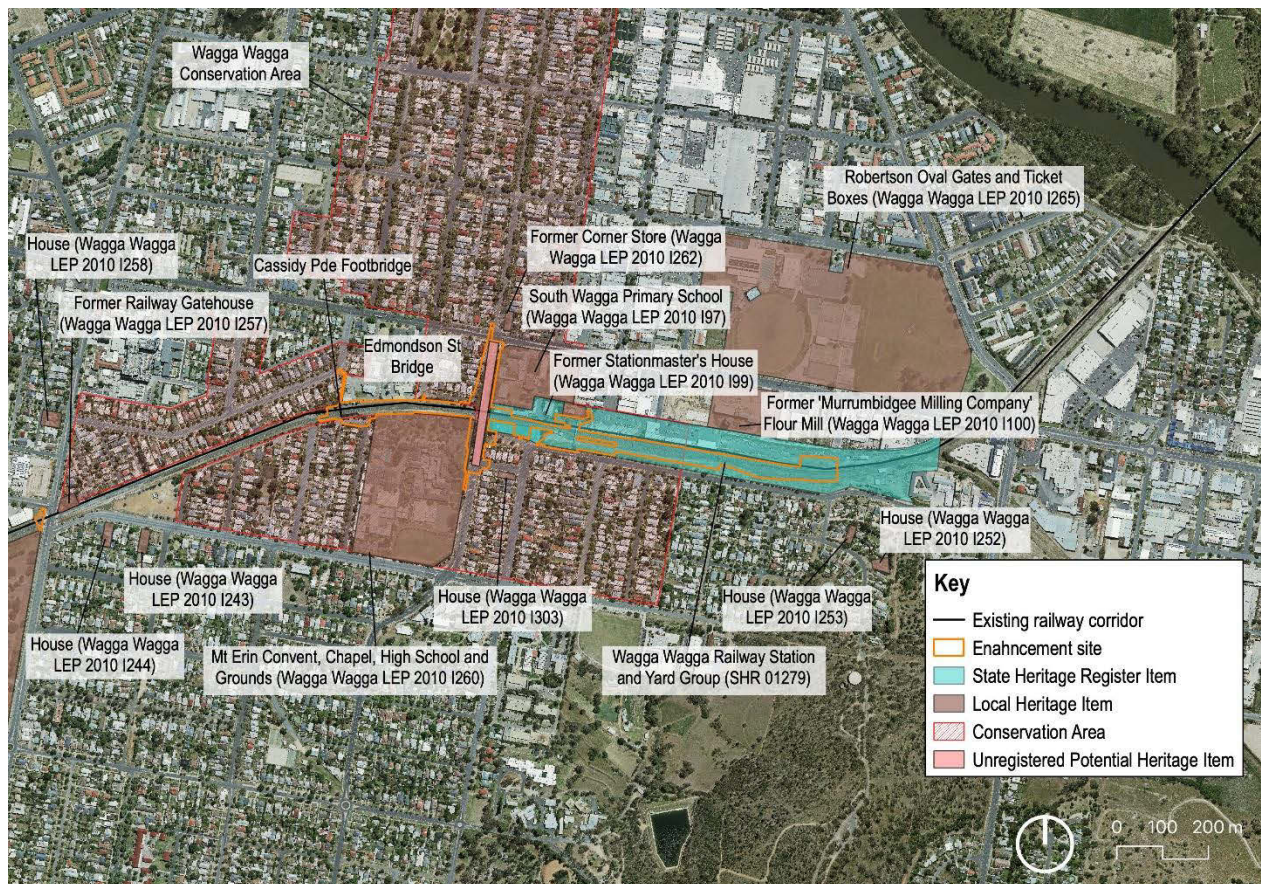


Figure 4.16 Overview of the Identified heritage items at the Wagga Wagga Station pedestrian bridge and Wagga Wagga Yard clearances enhancement site. (Source: ARTC aerial with GML additions, 2021)

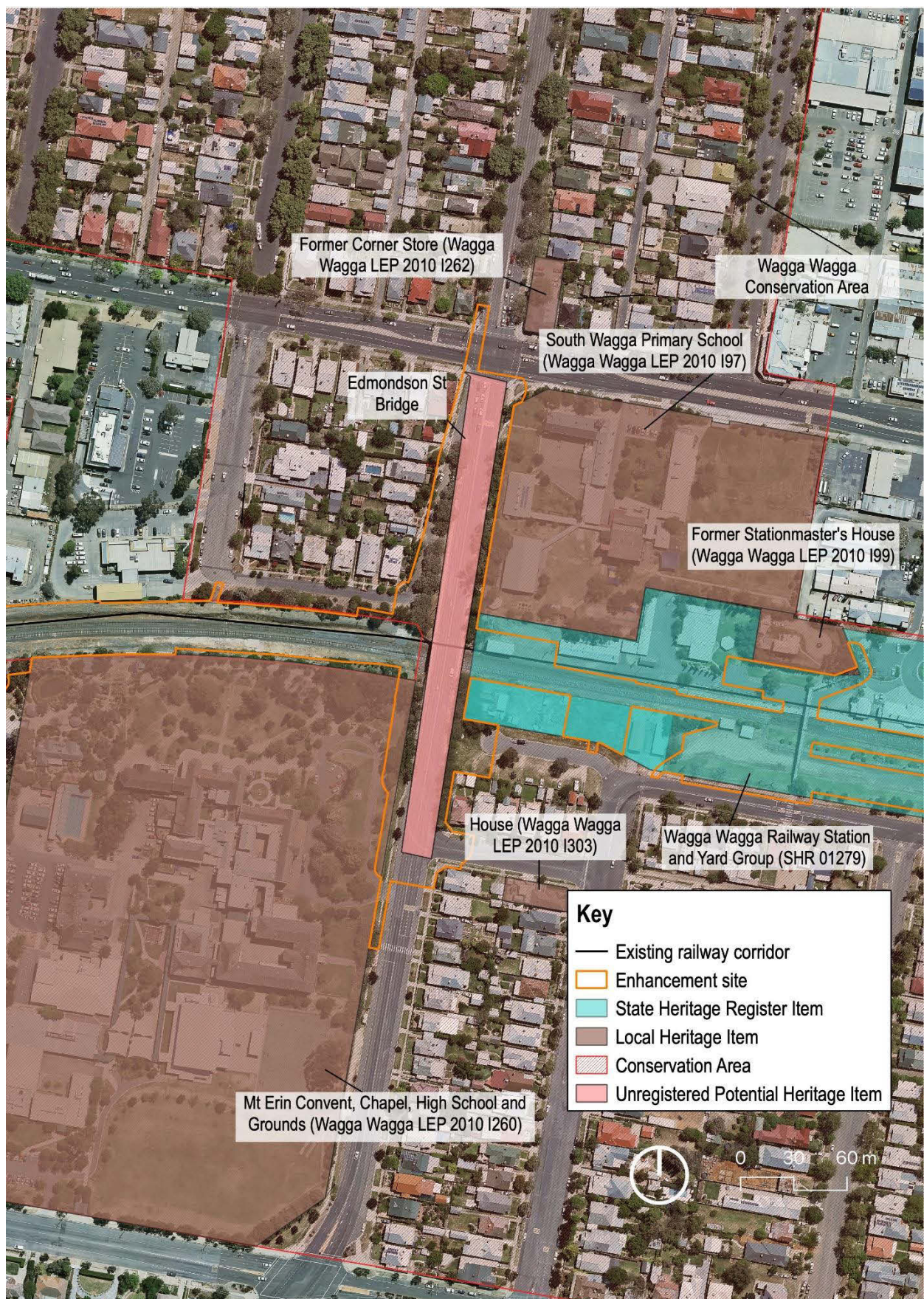


Figure 4.17 Identified heritage items at the Edmondson Street bridge enhancement site. (Source: ARTC aerial with GML additions, 2021)



Figure 4.18 Identified heritage items at the Wagga Wagga Station pedestrian bridge and Wagga Wagga Yard clearances enhancement sites. (Source: ARTC aerial with GML additions, 2021)

4.4.14 Bomen Yard clearances enhancement site

The Bomen Yard clearances enhancement site comprises a 1.4 kilometre long section of the railway alignment centred around the Bomen Station and an 80 metre section of Bomen Road where it crosses the railway alignment and intersects with Byrnes Road. The results of the survey are summarised in Table 4.16.

Table 4.16 Survey results of the Bomen Yard clearances enhancement site.

Name	Item ID	Description	Figures
Registered items			
Bomen Railway Station	SHR 01093	The station building is a small unpainted brick building with a corrugated iron clad hipped roof. The verandah is supported by simple timber posts, which is not typical of NSW Government Railway style. The station appears to be in fair condition.	Appendix A.41
Unregistered potential heritage items			
No additional potential heritage items or values were identified within the enhancement site.			

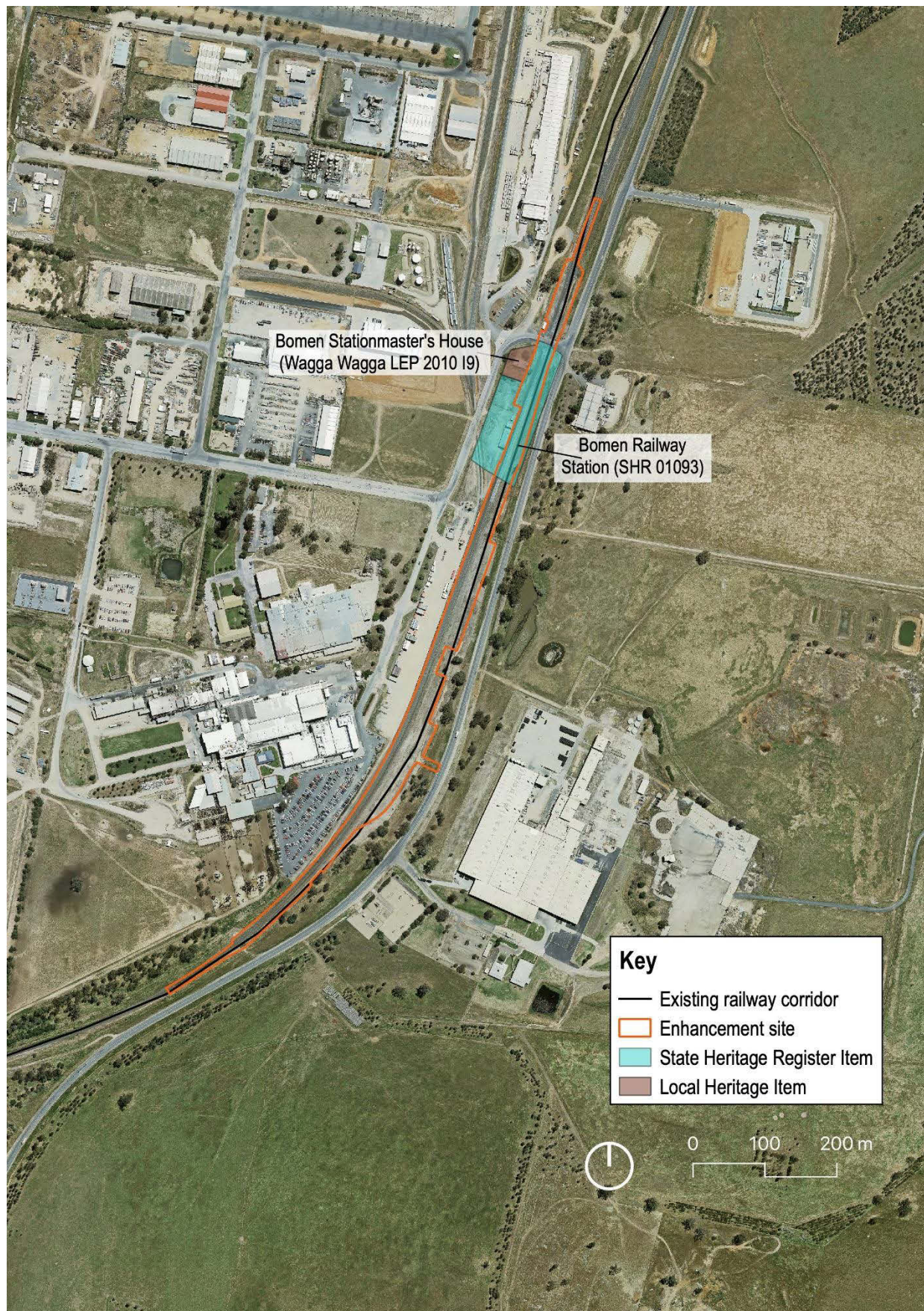


Figure 4.19 Identified heritage items at the Bomen Yard clearances enhancement site. (Source: ARTC aerial with GML additions, 2021)

4.4.15 Harefield Yard clearances enhancement site

The Harefield Yard clearances enhancement site comprises a 1.5 kilometre long section of the railway alignment adjacent to the Harefield freight container terminal. The results of the survey are summarised in Table 4.17.

Table 4.17 Survey results of the Harefield Yard clearances enhancement site.

Name	Item ID	Description	Figures
Registered items			
There are no registered heritage items located within the enhancement site			
Unregistered potential heritage items			
No additional potential heritage items or values were identified within the enhancement site			

4.4.16 Kemp Street bridge, Junee Station pedestrian bridge , Junee Yard clearances and Olympic Highway underbridge enhancement sites

The Kemp Street bridge enhancement site comprises a 420 metre long section of the railway alignment where it passes beneath Kemp Street bridge; 290 metres of the eastern extent of the Olympic Highway where it intersects with Railway Parade, Seignior Street, Edgar Street and Ducker Street, including the northern 150 metres of Edgar Street; a portion of the open space contained by the Olympic Highway, Seignior Street and Pretoria Avenue; and a 100 metre long section of Railway Parade where it intersects with the Olympic Highway. The enhancement site extends 140 metres west along Pretoria Street and 70 metres south down Joffre Street to meet the Olympic Highway.

The Junee Station pedestrian bridge and Junee Yard clearances enhancement sites comprise a 210 metre section of the railway alignment centred around Junee Railway; a 60 metres section of nature strip on the eastern side of Seignior Street adjacent to the railway alignment; and a 50 metre section east to meet Belmore Street at the south end of the station.

The Olympic Highway underbridge enhancement site comprises: a 1.5 kilometre section of the railway alignment where it passes over the Olympic Highway; a 230 metre section of brownfield between the Olympic Highway overbridge, Illabo Road and Regent Street; an unsealed vehicle access track extending southeast from Regent Street adjacent to the railway alignment; and a gravel laydown area on the western side of the railway alignment at Pitt Street.

The results of the survey are summarised in Table 4.18.

Table 4.18 Survey results of the Kemp Street bridge, Junee Station pedestrian bridge, Junee Yard clearances and Olympic Highway underbridge enhancement sites.

Name	Item ID	Description	Figures
Registered items			
Junee Railway Station, Yard, and Locomotive Depot, inclusive of: <ul style="list-style-type: none"> station building and platform (1885) (Junee LEP 2012 18) 	SHR 01173	The Junee Railway Station is a substantial and ornate structure, built in the Victorian Free Classical style. ³³ It comprises a highly symmetrical, single-storey building. The Junee Locomotive Depot/Roundhouse comprises a circular brick building split into two 'halves', with the internal structure laid	Appendix A.43–44

Name	Item ID	Description	Figures
<ul style="list-style-type: none"> refreshment rooms (1885) (June LEP 2012 I10) yard locomotive depot/roundhouse (1943–47, modified in 1952 and 1972). 		out in a radial pattern from a central turntable.	
June Railway Station moveable relics	SHR 01172	The moveable relics include a various array of items such as signage, benches, storm water grates, lamp posts and indoor furniture. The moveable relics were not assessed as part of this survey.	-
June Heritage Conservation Area	June LEP 2012 C1	The conservation area is partially located within and adjacent to the railway corridor. The conservation area includes a majority late nineteenth century buildings, but some 1920s–1930s structures are present.	-
Unregistered potential heritage items			
Locomotive Depot/Roundhouse office buildings	-	Several brick office buildings are located around the depot/roundhouse precinct. Two further brick buildings are situated northwest of the depot/roundhouse, up the slope towards Harold Street. The northern-most building is a two-winged structure, whilst the southern-most building is arranged in a house-like configuration. Both buildings share similar stylistic details and construction methods to the Depot/Roundhouse offices and the buildings adjacent to the Kemp Street bridge. This suggests that these groups of buildings were constructed around the same time. The two-winged building is in fair condition but slightly derelict, whilst the house structure appears to be being used as an office. None of the Depot/Roundhouse office or adjacent buildings are specifically included in the June Railway Station, Yard, and Locomotive Depot (SHR 01173) citation.	Appendix A.51–54
June Yard office buildings	-	On the southwestern edge of the June Yard—immediately north of the Kemp Street bridge—and adjacent to the railway line are two small brick buildings. Neither of the buildings are specifically included in the June Railway Station, Yard, and Locomotive Depot (SHR 01173) citation. They are rectangular in plan and have been constructed from red brick—stretcher bond—with corrugated iron roofing, and the internal walls clad in painted Masonite. The doors to the buildings open into the railway corridor, whilst only windows face into Seignior Street. Their similarity with the June	Appendix A.49–50

Name	Item ID	Description	Figures
		Locomotive Depot/Roundhouse, associated offices, and other buildings (discussed below) may suggest all buildings were constructed around the same time. The buildings are in poor condition, with evidence of vandalism and squatting.	
Kemp Street bridge	-	The Kemp Street bridge is a steel-framed girder bridge with red brick—header/stretcher bond—masonry, which spans the entire railway corridor and provides access from the Olympic Highway to Edgar Street. The bridge is in good condition and is free from any modifications, maintaining high design integrity.	Appendix A.42
Junee Station footbridge	-	The Junee Yard includes a footbridge, which is not identified as part of the Junee Railway Station, Yard, and Locomotive Depot (SHR 01173) citation. The footbridge is a steel-framed structure with timber handrails and treads. The main structure is a simplified form of Warren truss spanning three tracks with two double-flight sets of stairs—steel framed with timber treads. The upper chord of the truss is supported by a curved lateral brace to the lower chord. The platform and footbridge are both now disused.	Appendix A.45–46
Junee Yard signal huts	-	Two signal boxes are present in the Junee Yard, which are not identified as part of the Junee Railway Station, Yard, and Locomotive Depot (SHR 01173) citation. One is located north of the station adjacent to the Olympic Highway rail crossing, and one south of the station in proximity to the Kemp Street overbridge. Both structures are two-storey buildings clad in fibrous cement sheet. They were likely constructed in the 1940s–1950s. Both buildings are now disused and show signs of damage—several windows have been boarded up and the northern structure may have been affected by a fire. Neither of the signal huts are specifically included in the Junee Railway Station, Yard, and Locomotive Depot (SHR 01173) citation.	Appendix A.47–48

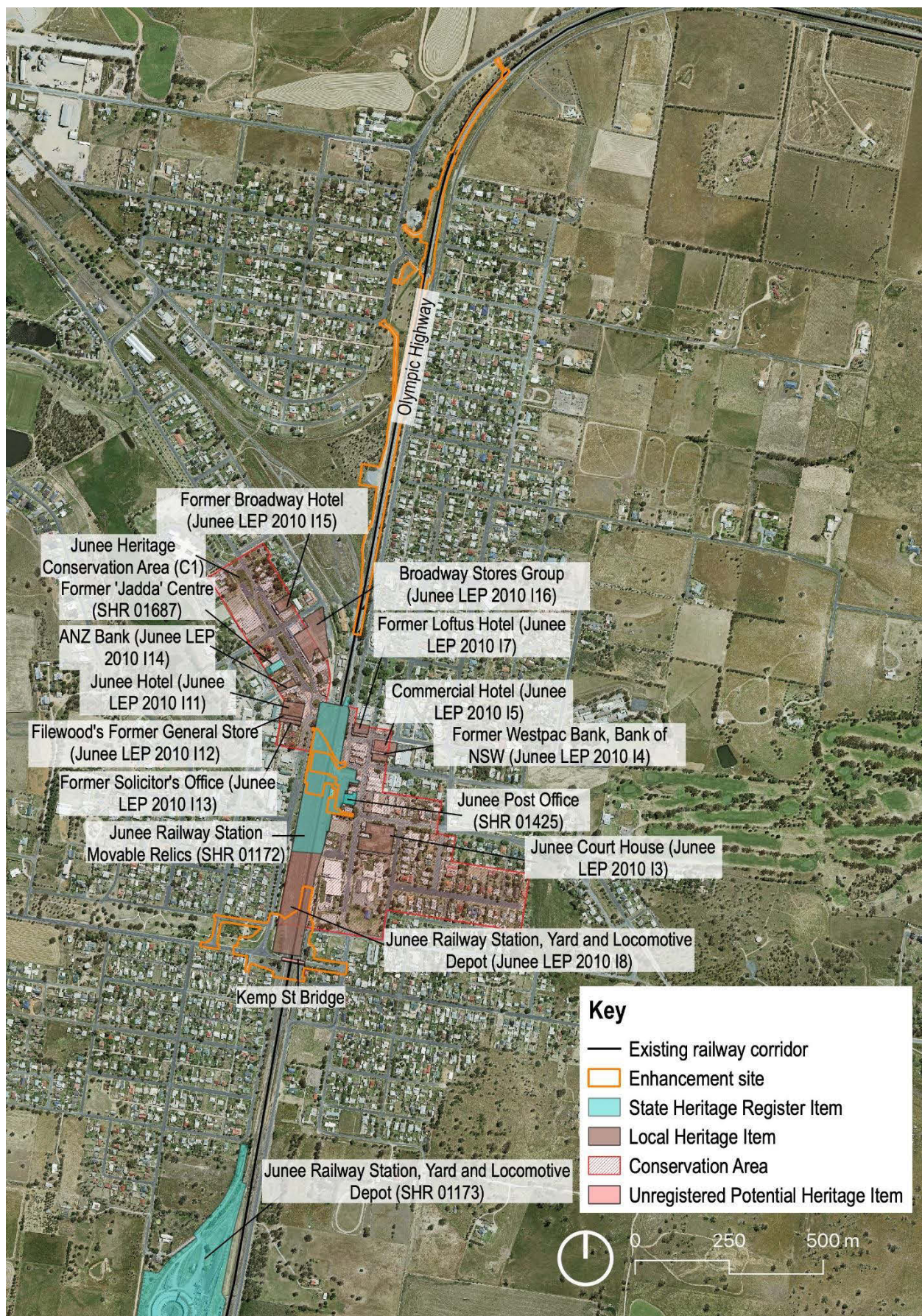


Figure 4.20 Identified heritage items at the Kemp Street bridge, Junee Station pedestrian bridge, Junee Yard clearances, and Olympic Highway underbridge enhancement sites. (Source: ARTC aerial with GML additions, 2021)



Figure 4.21 Identified heritage items at the Kemp Street bridge enhancement site. (Source: ARTC aerial with GML additions, 2021)

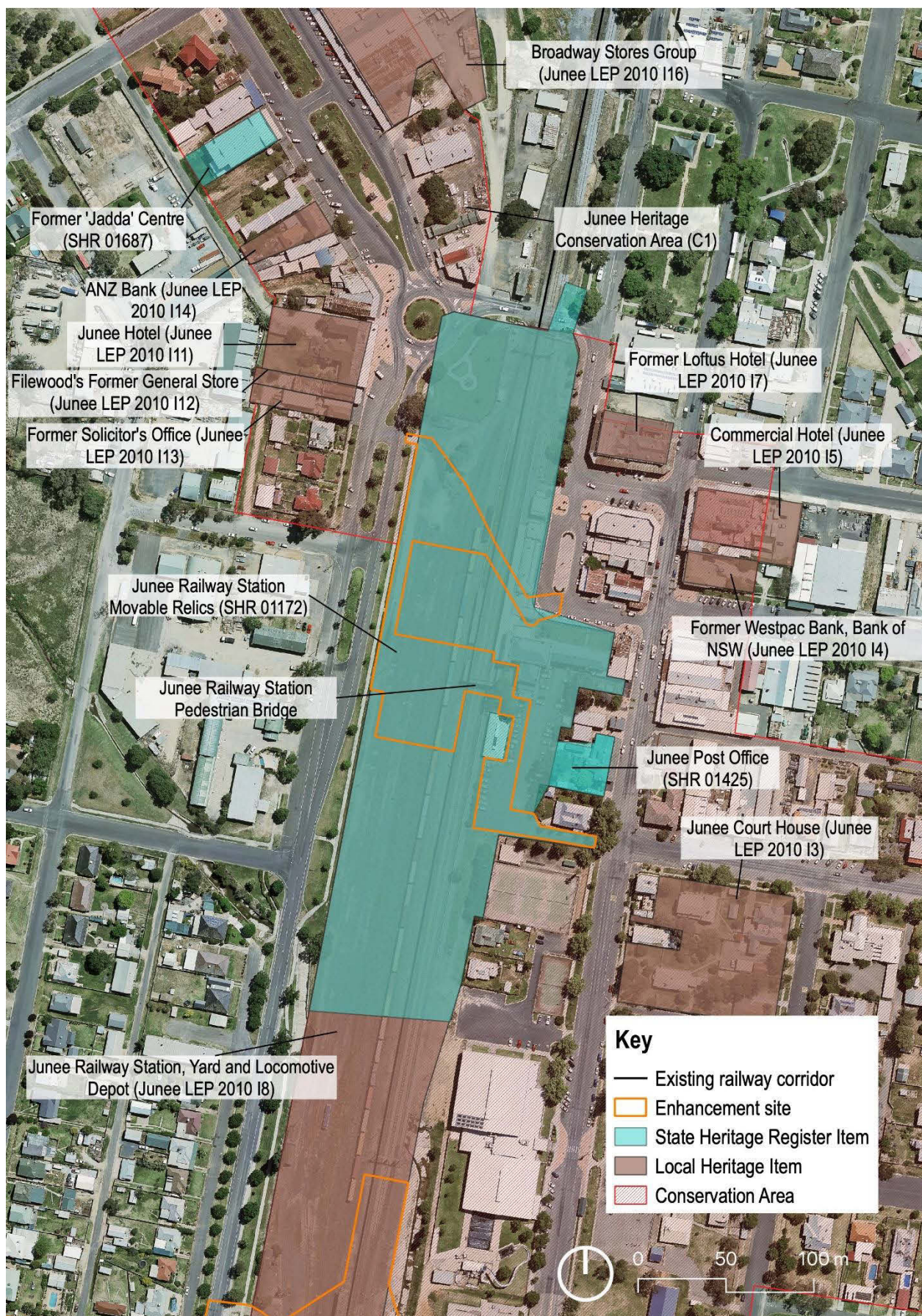


Figure 4.22 Identified heritage items at the Junee pedestrian bridge enhancement site. (Source: ARTC aerial with GML additions, 2021)



Figure 4.23 Identified heritage items at the Olympic Highway underbridge enhancement site. (Source: ARTC aerial with GML additions, 2021)

4.4.17 Junee to Illabo clearances enhancement site

The Junee to Illabo clearances enhancement site comprises a 16 kilometre section of the railway alignment adjacent to the Olympic Highway between the northern extent of Junee and the southern extent of Illabo. It includes: a 120 metre section connecting Warrens Lane across the Olympic Highway; a 190 metre section across Brabins Road; and access roads to Ballengoarrah Lane and Waterworks Road. The results of the survey are summarised in Table 4.19.

Table 4.19 Survey results of the Junee to Illabo clearances enhancement site.

Name	Item ID	Description	Figures
Registered items			
There are no registered heritage items within the enhancement site			
Unregistered potential heritage items			
No additional potential heritage items or values were identified within the enhancement site			

4.5 Comparative analysis

The following comparative analysis provides context regarding potential heritage values and significance for items identified during the survey that:

- are located within an existing heritage curtilage but have not been identified as contributory items
- have not previously been assessed for heritage value.

These items are:

- the signal huts and boxes located within the Albury Station Yard
- the footbridges at the Albury, Culcairn, Junee, and Wagga Wagga Stations and the Cassidy Parade and Brookong Avenue footbridge
- the Edmondson Street and Kemp Street bridges.

4.5.1 Signal huts and boxes

The following terminology is used to distinguish between the types of signal structures observed:

- signal hut—a structure that can accommodate an operator for an extended period of time, may include multiple rooms or facilities
- signal box—a small structure that can accommodate an operator for immediate requirements but not for an extended period of time.

During the survey, it was noted that—where signal huts were present—the huts were predominantly positioned on the platform adjacent to the railway station building (e.g. Culcairn). Only in two circumstances—Junee and Albury—were the signal huts located within the railway corridor. A 2010 audit and conservation strategy prepared for regional NSW signal huts and boxes identified 14 distinct styles of signal boxes, which could be located either on the platform or within the railway corridor..³⁴

The majority of the signal huts observed during the survey were identified and assessed for their typological characteristics as part of this audit. This includes the Junee and Albury signal huts, which were discussed in depth. This discussion will not be repeated here. The audit, however, did not identify or assess the four smaller signal boxes located within the railway corridor at Albury (Table 4.5, 'Unidentified Items'). As these

four signal boxes have been identified as unregistered potential heritage items, the following section discusses how they compare with the typologies identified elsewhere (Table 4.20).

Table 4.20 Signal box typologies. (Source: BCS, 2010)

Signal box type	Time period	Description	Albury Station signal boxes
K ³⁵	1920s	Type K structures are manufactured from concrete drop slabs with a gable roof clad in corrugated steel sheets.	Signal box pair 2
Q ³⁶	1930s	Type Q structures are generally similar to Type K structures. The main difference is the replacement of the gable roof with a hipped roof.	Signal box pair 1

The location of the four Albury Station signal boxes is shown in Figure 4.24.

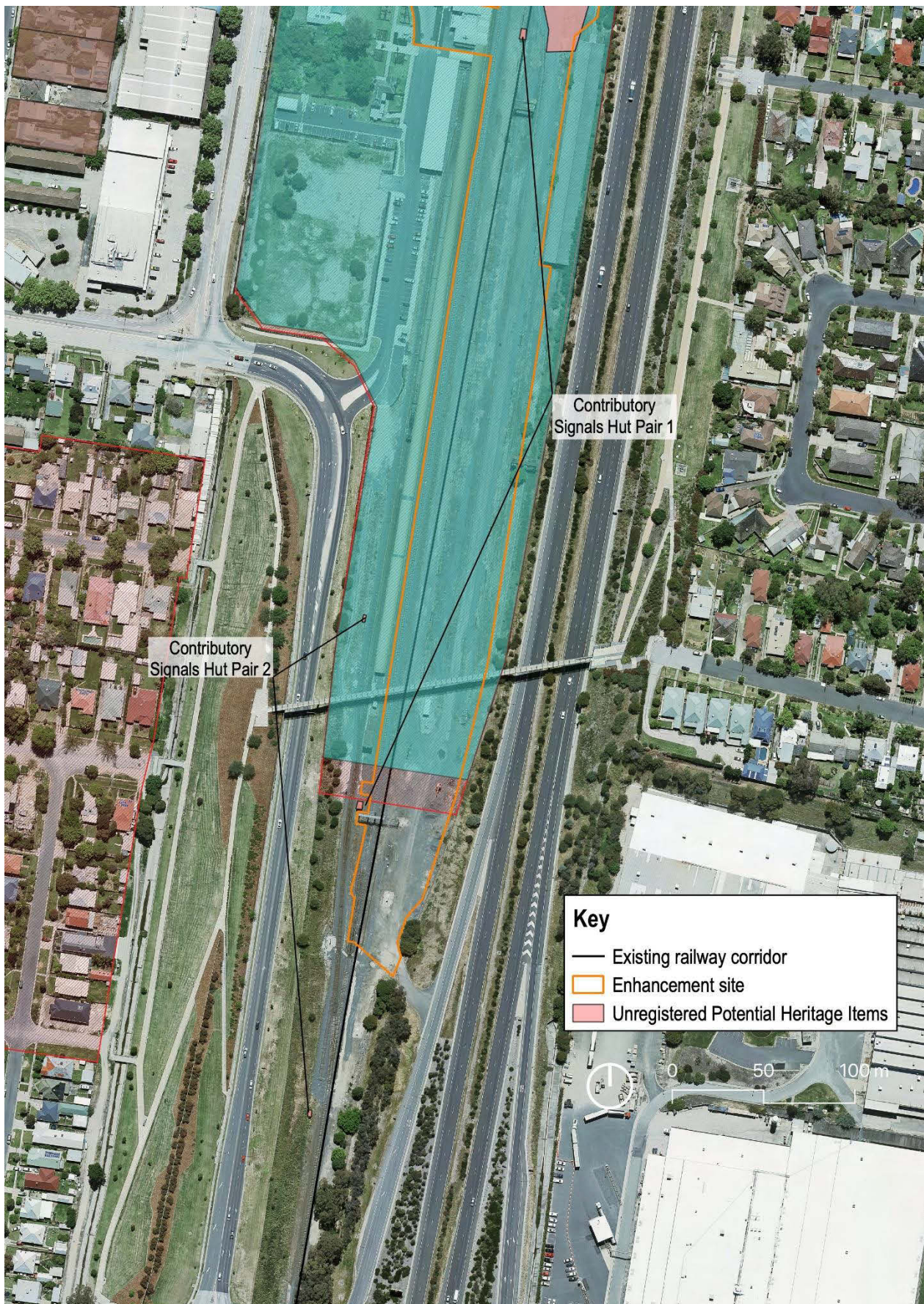


Figure 4.24 Albury Station signal box pairs (Source: ARTC aerial with GML additions, 2021).

Other Type K signal boxes identified in regional NSW in the conservation strategy included Leeton (1922), Bombala (1921), Coolamon (c1920) and Narrandera (1925). These structures are generally much larger in scale and are of a more complex construction than the example demonstrated by Albury signal box pair 2, with slightly different orientations, larger footprints and the addition of windows; however, they do share the same general construction methods of decorative concrete drop panels and gable roofs. It is likely that the Albury signal box pair 2 were not required to be as substantial as Type K signal boxes at other locations—their function was to support the Albury North signal hut, rather than provide full signal control capabilities. In order to fulfil this function, the Type K template was simplified to suit the necessary capabilities.

The case of the Albury signal box pair 1 is similar. The conservation strategy identified one other Type Q signal box located in regional NSW. The Tarago signal box (1938) is of a similar scale and overall design to the Albury examples, but has a number of key differences. The Tarago signal box includes at least one window and has been constructed from fibrous cement sheet, rather than concrete drop slabs. Where there is only one signal box at Tarago Railway Station, the Albury signal box pair 1 provide support to other signal structures within the railway precinct.

As both Albury signal box pairs are not directly comparable to either Type K or Type Q, they may be considered as sub-types. Additionally, their function as support signal boxes makes them unlike the other boxes examined here—they represent the operation of a prominent railway hub that requires multiple signal boxes to maintain performance.



Figure 4.25 The Type K signal hut at Bombala Railway Station. (Source: Chippindale, A 2005, NSWrail.net)



Figure 4.26 The Type Q signal hut at Tarago Railway Station. (Source: Brown, I 2006, NSWrail.net)



Figure 4.27 Albury Signal Box 2a, a smaller version of the Type K signal hut.



Figure 4.28 Albury Signal Box 1a, a variation on the Type Q signal hut.

4.5.2 Pedestrian footbridges

A 1996 study of the railway footbridges located in NSW prepared for the Heritage Manager State Rail Authority of NSW concluded that only three types of superstructure designs had been used for over 200 footbridges—the survey identified 205 beam footbridges, 41 truss footbridges and a single portal frame footbridge.³⁷

The truss design comprises ‘open, spatial, and lightweight structures’.³⁸ The footbridges at Albury (1910), Culcairn (1920) and Junee (1919) are in a subclass of the truss design, patented in 1848 as the ‘Warren truss’. 36 Warren truss footbridges were identified during the 1996 survey.³⁹ This variation requires only two sets of standardised pieces of steel angles—the long horizontal top and bottom chords and the W-pattern of diagonal web members—which gives it an advantage in reduced fabrication and assemblage costs.⁴⁰



Figure 4.29 The Warren truss footbridges at Albury (1910, left), Culcairn (1920, centre) and Junee (1919, right).

The Wagga Wagga footbridge (‘Mothers Footbridge’) at Wagga Wagga (1936) is a beam design footbridge. It is one of 205 beam footbridges identified during the survey and was not considered to be a unique or interesting example.

The 1996 study identified the Cassidy Parade and Brookong Avenue footbridge (1965) as an unusual beam design footbridge.⁴¹ The conical concrete capitals at the tops of the concrete columns are more commonly part of enclosed concrete buildings, not open footbridges, making the footbridge highly unusual and the only one of its kind.⁴²

4.5.3 Bridges

A number of roads (e.g. the Riverina Highway bridge, Billy Hughes bridge) and railway bridges (e.g. Sandy Creek railway bridge at Uranquinty, Harefield railway bridge) were assessed during the survey. Only two bridges—Edmondson Street bridge, Wagga Wagga and Kemp Street bridge, Junee were identified as being unregistered potential heritage items. The following section discusses how they compare with other like bridges.

The Edmondson Street and Kemp Street bridges are steel-framed girder bridges with red brick abutments. Although there are distinct differences between the two bridges (e.g. the single central brick pile in the Edmondson Street bridge vs the multiple steel piles in the Kemp Street bridge), it is not possible to say whether these are original design features or the result of the c1950s alterations to the Edmondson Street bridge. There are enough shared characteristics to suggest that the bridges may have been near-identical when constructed.

One direct comparison was identified in NSW for Edmondson Street and Kemp Street bridges. Guess Avenue, Wollie Creek, features the same distinctive red brick abutments (Figure 4.31). It was constructed in 1915 and altered in 1923 to accommodate an additional set of railway tracks. It differs from the Edmondson Street and Kemp Street bridges in that it is an underbridge, with trains passing across the deck of the bridge. Guess Avenue Bridge is not a registered heritage item.

It is unknown whether the design for the three bridges was standard across the NSW railway network, or whether it was a specialised design implemented in a select number of locations. While the distinctive abutments appear to be from the original 1915 design for the Guess Avenue Bridge, the earliest references to the Edmondson Street (originally Best Street) and Kemp Street bridges are 1925 and 1944, respectively.⁴³ This disparity in the construction dates between the bridges would suggest the design was a standard template that could be replicated when required. It is, however, unknown how many of these bridges remain.



Figure 4.30 Edmondson Street bridge (1925, left) and Kemp Street Bridge (c1945, right).



Figure 4.31 Guess Avenue Bridge (1915). (Source: Maxwell, K 2015, Australian Small Bridges Conference)

4.6 Significance assessment

The following section discusses the significance for items located within the enhancement sites identified during the survey. Items located outside of the enhancement sites and conservation areas have not been included here.

The discussion below outlines the significance assessments previously made for registered heritage items against the Heritage Act. New significance assessments have been made where potential heritage items have been identified or significance assessments are not available for contributing elements within a recognised heritage curtilage.

4.6.1 Registered heritage items and identified contributory items

The following table presents summaries of the significance assessments previously prepared for registered heritage items.

Table 4.21 Significance assessment for registered heritage items.

Name	Context	Item ID	Criteria met
Murray River bridge enhancement site			
Albury rail bridge over the Murray River (SHR 01020) (known as Murry River bridge)	State	SHR 01020	A, B, C, D, E, G ⁴⁴
Albury Station pedestrian bridge and Albury Yard clearances enhancement site			
Albury Railway Station and Yard Group	State	SHR 01073	A, B, C, D, G ⁴⁵ <ul style="list-style-type: none"> The Albury North Signal Hut has been identified as contributing to criteria C and G The footbridge has been identified as contributing to criterion G
Railway Conservation Area	Local	C13	Identified in Albury City Wide Heritage Study
Culcairn pedestrian bridge and Culcairn Yard clearances enhancement sites			
Street Trees along Walbrundie Road, Holbrook Road and Balfour Street	Local	Greater Hume LEP 2012 I54	Identified in Greater Hume Heritage Study
Culcairn Railway Station and Yard Group	State	SHR 01126	F ⁴⁶ <ul style="list-style-type: none"> The footbridge has been identified as contributing to criterion F
Henty Yard clearances enhancement site			
Henty Railway Station and Yard Group	State	SHR 01169	F ⁴⁷ <ul style="list-style-type: none"> The Goods Shed has been identified as contributing to criterion F
Yerong Creek Yard clearances enhancement site			
Yerong Creek Urban Conservation Area	Local	C3	Identified in Greater Hume Heritage Study
The Rock Yard clearances enhancement site			
The Rock Station and Yard Group	State	SHR 01268	F ⁴⁸
The Rock Urban Conservation Area	Local	C2	Identified in Greater Hume Heritage Study
Uranquinty Yard clearances enhancement site			

Name	Context	Item ID	Criteria met
Uranquinty silos	Local	Wagga Wagga LEP I296	A heritage citation sheet is unavailable for this item
Pearson Street bridge enhancement site			
Wagga Wagga Showground, 'Kyeamba Smith' Hall, and grandstand	Local	Wagga Wagga LEP 2010 I246	Identified in Wagga Wagga Heritage Study Review
Cassidy Parade pedestrian bridge enhancement site			
Cassidy Parade and Brookong Avenue footbridge	Local	ARTC s170 ID 4280661	A heritage citation sheet is unavailable for this item. Its significance has been assessed below
Edmondson Street bridge enhancement site			
Edmondson Street bridge (as part of the Wagga Wagga Conservation Area)	Local	Wagga Wagga LEP 2010	A heritage citation sheet is unavailable for this item. Its significance has been assessed below
Mount Erin Convent, chapel, high school, and grounds	Local	Wagga Wagga LEP 2010 I260	Identified in Wagga Wagga Heritage Study Review
Wagga Wagga Station pedestrian bridge and Wagga Wagga Yard clearances enhancement sites			
Wagga Wagga Railway Station and Yard Group	State	SHR 01279	F ⁴⁹
Wagga Wagga Conservation Area	Local	-	Identified in Wagga Wagga Heritage Study Review
Bomen Yard clearances enhancement site			
Bomen Railway Station	State	SHR 01093	F ⁵⁰
Junee Station pedestrian bridge and Junee Yard clearances enhancement sites			
Junee Railway Station and Yard Group	State	SHR 01173	A, B, C, D, E, F, G ⁵¹
Junee Heritage Conservation Area	Local	C1	Identified through local planning strategy

Significance assessment for unassessed items

Although identified as heritage items, the following items have not been formally assessed for heritage significance.

Cassidy Parade pedestrian bridge enhancement site—Cassidy Parade and Brookong Avenue footbridge

The Cassidy Parade and Brookong Avenue footbridge has been identified as a heritage item on the ARTC s170 register (ID 4280661). A heritage citation sheet is not available for the footbridge. The following table presents a significance assessment for the footbridge, which should be viewed as a component of the wider railway setting.

Table 4.22 Significance assessment for the Cassidy Parade and Brookong Avenue footbridge (ARTC s170 ID 4280661).

State Heritage Register criteria	Significance assessment
Criterion A An item is important in the course, or pattern, of NSW's cultural or natural history.	<p>The Cassidy Parade and Brookong Avenue footbridge was not specifically built as part of the NSW railway network development and is not a distinctive part of the history of the development of the Wagga Wagga area.</p> <p><i>The item does not meet this criterion.</i></p>
Criterion B 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.	<p>The Cassidy Parade and Brookong Avenue footbridge is not known to be associated with a particular person or group of persons.</p> <p><i>The item does not meet this criterion.</i></p>
Criterion C An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW.	<p>The Cassidy Parade and Brookong Avenue footbridge features conical concrete capitals that are rarely seen on structures outside of enclosed buildings. No comparable railway footbridges have been identified in NSW, indicating it is a highly unique design.</p> <p><i>The item meets this criterion.</i></p>
Criterion D An item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons.	<p>The Cassidy Parade and Brookong Avenue footbridge is not known to be associated with a particular community or cultural group.</p> <p><i>The item does not meet this criterion.</i></p>
Criterion E An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history.	<p>The Cassidy Parade and Brookong Avenue footbridge is one of over 200 railway footbridges in NSW. As part of this collective group, the footbridge contributes to the understanding of footbridge design and construction techniques over the life span of the railway network in NSW. The footbridge also has this potential in its own right, being of a unique design not comparable to other railway footbridges identified in NSW.</p> <p><i>The item does meet this criterion.</i></p>
Criterion F An item possesses uncommon, rare, or endangered aspects of NSW's cultural or natural history.	<p>The use of conical concrete capitals in the design of the Cassidy Parade and Brookong Avenue footbridge is unique, as no other comparable railway footbridges have been identified in NSW. This footbridge is a unique example of its design.</p> <p><i>The item does meet this criterion.</i></p>
Criterion G An item is important in demonstrating the principal characteristics of a class of NSW's: <ul style="list-style-type: none"> • cultural or natural places; or • cultural or natural environments. 	<p>The Cassidy Parade and Brookong Avenue footbridge is a contributory element to a wider heritage landscape, but in its own right is not an exemplar of the principal characteristics of its type.</p> <p><i>The item does not meet this criterion.</i></p>
Summary statement	<p>The Cassidy Parade and Brookong Avenue footbridge is one of over 200 footbridges constructed to facilitate pedestrian movement in and around railway precincts in NSW. Of this number, the footbridge is the only known example to feature conical concrete capitals that are rarely seen on structures outside of enclosed buildings. As such, it is a unique and rare example of creative design demonstrated through railway footbridges.</p>

Wagga Wagga Yard clearances enhancement site—'Mothers Footbridge'

The Wagga Wagga footbridge ('Mothers Footbridge') has been identified as an element of the Wagga Wagga Railway Station and Yard Group, but has not been recognised as contributing to the significance of

the railway precinct. The following table presents a significance assessment for the footbridge, which should be viewed as a component of the wider railway setting.

Table 4.23 Significance assessment for the Wagga Wagga footbridge ('Mothers Footbridge').

State Heritage Register criteria	Significance assessment
Criterion A An item is important in the course, or pattern, of NSW's cultural or natural history.	The Wagga Wagga footbridge was not specifically built as part of the NSW railway network development and is not a distinctive part of the history of the development of the Wagga Wagga area. <i>The item does not meet this criterion.</i>
Criterion B 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.	The Wagga Wagga footbridge is not known to be associated with a particular person or group of persons. <i>The item does not meet this criterion.</i>
Criterion C An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW.	The Wagga Wagga footbridge is a beam design footbridge. It does not demonstrate particular aesthetic characteristics or a high degree of creative or technical achievement. <i>The item does not meet this criterion.</i>
Criterion D An item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons.	The Wagga Wagga footbridge is not known to be associated with a particular community or cultural group. <i>The item does not meet this criterion.</i>
Criterion E An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history.	The Wagga Wagga footbridge is one of over 200 railway footbridges in NSW. As part of this collective group, the footbridge contributes to the understanding of footbridge design and construction techniques over the life span of the railway network in NSW. However, the footbridge does not contribute to this in its own right, as it contributes no information that cannot be gleaned from another beam design footbridge. <i>The item does not meet this criterion.</i>
Criterion F An item possesses uncommon, rare, or endangered aspects of NSW's cultural or natural history.	The Wagga Wagga footbridge is one of approximately 200 beam design railway footbridges identified in NSW. It does not possess uncommon, rare, or endangered traits as part of this group. <i>The item does not meet this criterion.</i>
Criterion G An item is important in demonstrating the principal characteristics of a class of NSW's: <ul style="list-style-type: none"> • cultural or natural places; or • cultural or natural environments. 	The Wagga Wagga footbridge demonstrates the principal characteristics of a typical footbridge and their purpose to facilitate pedestrian movement in and around railway precincts. However, in its own right it is not an exemplar of the principal characteristics of its type. <i>The item does not meet this criterion.</i>
Summary statement	The Wagga Wagga footbridge is one of over 200 footbridges constructed to facilitate pedestrian movement in and around railway precincts in NSW. Of this number of footbridges, approximately 200 are of the same or similar beam design as the footbridge. The footbridge does not demonstrate particular aesthetic characteristics or possess uncommon design aspects. It does not contribute any information or value that cannot be contributed by another beam design footbridge.

Junee Yard clearances enhancement site—Junee Railway Station footbridge

The footbridge located at Junee Station has not been individually identified but is within the current SHR listing for the Junee Railway Station and Yard Group. The following table presents a significance assessment for the footbridge, which should be viewed as a component of the wider railway setting.

Table 4.24 Significance assessment for the footbridge located at Junee Railway Station.

State Heritage Register criteria	Significance assessment
Criterion A An item is important in the course, or pattern, of NSW's cultural or natural history.	The footbridge located at Junee Railway Station is not a distinctive part of the history of the development of the Junee area. <i>The item does not meet this criterion.</i>
Criterion B 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.	The Junee Railway Station footbridge is not known to be associated with a particular person or group of persons. <i>The item does not meet this criterion.</i>
Criterion C An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW.	The Junee Railway Station footbridge has been constructed using the simple and effective Warren truss design. This design is not specifically identified as having aesthetic values. The addition of the curved lateral bracing is an element of design that is not common across all examples of railway footbridges in NSW. However, this does not constitute a substantial aesthetic contribution or technical achievement. <i>The item does not meet this criterion.</i>
Criterion D An item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons.	The Junee Railway Station footbridge is not known to be associated with a particular community or cultural group. <i>The item does not meet this criterion.</i>
Criterion E An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history.	The Junee Railway Station footbridge is one of over 200 railway footbridges in NSW. As part of this collective group, the footbridge contributes to the understanding of footbridge design and construction techniques over the life span of the railway network in NSW. However, the footbridge does not contribute to this in its own right, as it contributes no information that cannot be gained from any other Warren truss design footbridge. <i>The item does not meet this criterion.</i>
Criterion F An item possesses uncommon, rare, or endangered aspects of NSW's cultural or natural history.	The Junee Railway Station footbridge is one of approximately 30 Warren truss design railway footbridges identified in NSW. As continued development and upgrading of the railway stations and network occurs, these footbridges are being successively decommissioned and removed, and are consequently becoming rarer. <i>The item meets this criterion.</i>
Criterion G An item is important in demonstrating the principal characteristics of a class of NSW's: <ul style="list-style-type: none"> cultural or natural places cultural or natural environments. 	The Junee Railway Station footbridge demonstrates the principal characteristics of a typical footbridge and their purpose to facilitate pedestrian movement in and around railway precincts; however, in its own right it is not an exemplar of the principal characteristics of its type. <i>The item does not meet this criterion.</i>

State Heritage Register criteria	Significance assessment
Summary statement	The Junee Railway Station footbridge is one of over 200 footbridges constructed to facilitate pedestrian movement in and around railway precincts in NSW. Of this number, approximately 30 are Warren truss bridges. As continued development and upgrading of the railway stations and network occurs, these footbridges are being successively decommissioned and removed. The Junee Railway Station footbridge represents a rapidly disappearing part of NSW railway history.

4.6.2 Unregistered potential heritage items

The following items were identified during the survey as having potential heritage values. Significance assessments have been undertaken to determine which criteria may be met by the items and whether this is to a local or state level.

Albury Yard clearances enhancement site—archaeological sites and signal boxes

An area of archaeological potential was identified within the railway yard in proximity to the north signal hut, where there may be remnants of the broad-gauge railway track. The archaeological deposits may contribute to an understanding of:

- the historical path of the railway tracks through the railway yard and varying phases of this (e.g. remnant railway track, cut and fill features, other structural remains).

Table 4.25 Significance assessment for the Albury remnant broad-gauge railway track archaeological site.

State Heritage Register criteria	Significance assessment
Criterion A An item is important in the course, or pattern, of NSW's cultural or natural history.	The Albury Railway Station and Yard is a prominent railway hub in the NSW and Victorian railway networks. The use of both broad- and standard-gauge railway track in the yard facilitated the movement of goods and passengers across state borders. <i>This item meets this criterion.</i>
Criterion B 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.	The broad-gauge railway track in the Albury Railway Station and Yard is not known to be associated with a particular person or group of persons. <i>The item does not meet this criterion.</i>
Criterion C An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW.	The inclusion of two different railway gauges in the Albury Railway Station and Yard demonstrated a degree of economical strategy but was not a technical achievement. <i>The item does not meet this criterion.</i>
Criterion D An item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons.	The broad-gauge railway track in the Albury Railway Station and Yard is not known to be associated with a particular community or cultural group. <i>The item does not meet this criterion.</i>
Criterion E An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history.	The remnant broad-gauge railway track may contribute to an understanding of how the nineteenth century Albury Railway Station and Yard was arranged. This may reveal how different spaces and functions within the yard were delineated, contributing to the overall function of the railway precinct. <i>The item is likely to meet this criterion.</i>

State Heritage Register criteria	Significance assessment
Criterion F An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history.	The remnant broad-gauge railway track in the Albury Railway Station and Yard represents an uncommon aspect of NSW's nineteenth century railway history. Few railway stations possessed multiple gauges. The presence of two gauges demonstrates the important role the Albury precinct played in the economic relationship between NSW and Victoria. <i>The item meets this criterion.</i>
Criterion G An item is important in demonstrating the principal characteristics of a class of NSW's: <ul style="list-style-type: none"> cultural or natural places cultural or natural environments. 	The extent and integrity of the archaeological remains of the remnant broad-gauge railway track are unknown; however, even if the remains are well preserved and/or extensive, they are unlikely to be demonstrative of the principal characteristics of nineteenth century NSW railway precincts. <i>The item is unlikely to meet this criterion.</i>
Summary statement	The remnant broad-gauge railway archaeological site represents an uncommon element of nineteenth century NSW railway history. The use of both broad- and standard-gauge railway track in the yard facilitated the movement of goods and passengers across the NSW and Victoria border, demonstrating the important role the railway precinct played in the NSW economy. It is likely to be significant at a state level.

The Albury signal box pairs 1 and 2 have not been specifically identified within the current SHR listing for the Albury Railway Station and Yard Group. The following table presents a significance assessment for the items as a collective group, which should be viewed as a component of the wider railway setting.

Table 4.26 Significance assessment for the Albury signal box pairs 1 and 2.

State Heritage Register criteria	Significance assessment
Criterion A An item is important in the course, or pattern, of NSW's cultural or natural history.	The Albury Railway Station and Yard is a prominent railway hub in the NSW and Victorian railway networks. The Albury signal box pairs 1 and 2 contributed directly to the operation of the yard, providing support to additional signal huts. <i>These items meet this criterion.</i>
Criterion B 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.	The Albury signal box pairs 1 and 2 are not known to be associated with a particular person or group of persons. <i>The items do not meet this criterion.</i>
Criterion C An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW.	The Albury signal box pairs 1 and 2 are a sub-type of a modest railway signal box typology. They are constructed from simple materials, designed for function rather than form. <i>The items do not meet this criterion.</i>
Criterion D An item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons.	The Albury signal box pairs 1 and 2 are not known to be associated with a particular community or cultural group. <i>The items do not meet this criterion.</i>
Criterion E	The Albury signal box pairs 1 and 2 represent previously unrecognised sub-types of established railway signal box typologies. They may contribute further information to the understanding of the design and

State Heritage Register criteria	Significance assessment
An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history.	construction of railway signal boxes, and may facilitate the recognition of additional sub-types. <i>The items meet this criterion.</i>
Criterion F An item possesses uncommon, rare, or endangered aspects of NSW's cultural or natural history.	The Albury signal box pairs 1 and 2 are not directly comparable to other signal boxes, with regards to either their form or their function. Their simple appearances likely derive from their function as support signal structures within a large railway precinct that already possesses other, larger signal huts. Despite their simple appearances, the Albury signal box pairs 1 and 2 contributed to the setting and operation of the Albury Railway Station and Yard as a prominent railway hub. Examples of other support signal boxes have not been identified in the course of this assessment, indicating they are of a rare typology. <i>The items meet this criterion.</i>
Criterion G An item is important in demonstrating the principal characteristics of a class of NSW's: <ul style="list-style-type: none"> cultural or natural places cultural or natural environments. 	The Albury signal box pairs 1 and 2 are contributory elements to a wider heritage landscape. <i>The items meet this criterion.</i>
Summary statement	The Albury signal box pairs 1 and 2 represent a rare sub-type of a modest railway signal box typology. While they are un-prepossessing in appearance, their contribution to the Albury Railway Station and Yard Group is through their functionality. The Albury Railway Station precinct is a prominent railway hub in the NSW and Victorian networks, and requires precise management of multiple track lines. The Albury signal box pairs 1 and 2 provide support to the larger Albury signal huts to enable the continual management of the railway network as it passes through Albury. The Albury signal box pairs 1 and 2 are valuable contributory elements to a larger railway heritage landscape. They are likely to be significant at a state level.

Yerong Creek Yard clearances enhancement site—Yerong Creek Railway Station archaeological site

The Yerong Creek Station has not previously been identified as an archaeological site on any heritage register. The station building was demolished in the 1980s. The site has remained a brownfield site since the demolition, with no further intensive works undertaken since. It is unknown to what extent the structural remains were cleared from the site, although there is surface evidence to suggest the subsurface archaeological deposits may be extensive. The archaeological deposits may contribute to an understanding of:

- the layout of the station building and its construction method and materials (e.g. footings, other structural remains)
- the users of the railway station (e.g. lost items, other occupational deposits)

Table 4.27 Significance assessment for the Yerong Creek Railway Station archaeological site.

State Heritage Register criteria	Significance assessment
Criterion A	The Yerong Creek Railway Station was a key station along the Main South Line. It assisted in the movement of goods and passengers through regional NSW, between Victoria and Sydney.

State Heritage Register criteria	Significance assessment
An item is important in the course, or pattern, of NSW's cultural or natural history.	<i>These item meets this criterion.</i>
Criterion B 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.	The Yerong Creek Railway Station was designed by John Whitton, Engineer-in-Chief of NSW Railways (from 1856–1890). The original design type of the station is unknown, due to its demolition prior to synthesis of the designs used across the NSW railway network. If the archaeological remains of the railway station are well preserved and/or extensive, they may indicate which building typology was chosen for construction. <i>The item meets this criterion.</i>
Criterion C An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW.	The extent and integrity of the archaeological remains of the Yerong Creek Railway Station are unknown; however, even if the remains are well preserved and/or extensive and indicative of the building typology used, they are likely to be representative of a more common and less complex design. <i>The item is unlikely to meet this criterion.</i>
Criterion D An item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons.	The Yerong Creek Railway Station is not known to be associated with a particular community or cultural group. <i>The item does not meet this criterion.</i>
Criterion E An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history.	The Yerong Creek Railway Station was a key station along the Main South Line. The archaeological remains of the railway station may contribute further information to the understanding of John Whitton's designs and construction choices, and the types of people who were utilising the station. <i>The item is likely to meet this criterion.</i>
Criterion F An item possesses uncommon, rare, or endangered aspects of NSW's cultural or natural history.	The extent and integrity of the archaeological remains of the Yerong Creek Railway Station are unknown. If the remains are well preserved and/or extensive, they are likely to be representative of a rare archaeological resource of demolished late nineteenth century railway stations. <i>The item is likely to meet this criterion.</i>
Criterion G An item is important in demonstrating the principal characteristics of a class of NSW's: <ul style="list-style-type: none"> • cultural or natural places • cultural or natural environments. 	The extent and integrity of the archaeological remains of the Yerong Creek Railway Station are unknown. If the remains are well preserved and/or extensive, they are likely to demonstrate the principal characteristics of a late nineteenth century railway station. <i>The item is likely to meet this criterion.</i>
Summary statement	The Yerong Creek Railway Station archaeological site represents a rare opportunity to archaeologically examine a nineteenth century railway station. If the archaeological remains are well preserved and/or extensive, they may contribute information to the understanding of John Whitton's designs and construction choices, and the people who were using the station. It is likely to be significant at a local level.

Edmondson Street bridge enhancement site—Edmondson Street bridge

The Edmondson Street bridge has not been identified as a heritage item on any heritage register; however, it is included within the curtilage of the Wagga Wagga Conservation Area. A heritage sheet is not available for the bridge. The following table presents a significance assessment for the bridge, which should be viewed as a component of the wider railway and conservation area setting.

Table 4.28 Significance assessment for the Edmondson Street bridge.

State Heritage Register criteria	Significance assessment
Criterion A An item is important in the course, or pattern, of NSW's cultural or natural history.	The Edmondson Street bridge was not specifically built as part of the railway precinct and is not a distinctive part of the history of the development of the Wagga Wagga area. <i>The item does not meet this criterion.</i>
Criterion B 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.	The Edmondson Street bridge is not known to be associated with a particular person or group of persons. <i>The item does not meet this criterion.</i>
Criterion C An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW.	The Edmondson Street bridge appears to share a similar design template with several other railway bridges, all of which have been constructed across a wide temporal period. The bridge does not constitute a substantial aesthetic contribution or technical achievement. <i>The item does not meet this criterion.</i>
Criterion D An item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons.	The Edmondson Street bridge is not known to be associated with a particular community or cultural group. <i>The item does not meet this criterion.</i>
Criterion E An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history.	The Edmondson Street bridge appears to share a similar design template with several other railway bridges. It is unknown how this design was developed, how it was distributed, and how long it was used for. Based on the precautionary principle (EPBC Act Part 16), the Edmondson Street bridge may have heritage value for its potential to contribute to the understanding of railway bridge design and construction techniques over the life span of the railway network in NSW. <i>The item may meet this criterion.</i>
Criterion F An item possesses uncommon, rare, or endangered aspects of NSW's cultural or natural history.	The Edmondson Street bridge appears to be an example of a railway bridge design that was used across the NSW railway network. It is unknown how many examples of this design remain. As continued development and upgrading of the railway stations and network occurs, these bridges are being successively decommissioned and removed, and are consequently becoming rarer. Based on the precautionary principle, the Edmondson Street bridge may have heritage value as an uncommon example of its type. <i>The item may meet this criterion.</i>
Criterion G	The Edmondson Street bridge is a contributory element to a wider heritage landscape, but in its own right is not an exemplar of the principal characteristics of its type.

State Heritage Register criteria	Significance assessment
<p>An item is important in demonstrating the principal characteristics of a class of NSW's:</p> <ul style="list-style-type: none"> cultural or natural places cultural or natural environments. 	<p><i>The item does not meet this criterion.</i></p>
Summary statement	<p>The Edmondson Street bridge is one of the many railway bridges constructed to facilitate the movement of pedestrians and vehicles across railway precincts in NSW. Of this number, it appears to have two direct comparisons, suggesting that it was part of a design template that was implemented across a wide temporal period. It is unknown how this design was developed and how it was distributed. It is unknown how many railway bridges using this design remain.</p> <p>Based on the precautionary principle and the unknown nature of the bridge design, the Edmondson Street bridge has been identified as possibly having heritage significance at a local level.</p>

Kemp Street bridge enhancement site—Kemp Street bridge

The Kemp Street bridge has not been identified as a heritage item on any heritage register. The following table presents a significance assessment for the bridge, which should be viewed as a component of the wider railway setting.

The bridge has the potential to meet criteria E and F at a local significance level.

Table 4.29 Significance assessment for the Kemp Street bridge.

State Heritage Register criteria	Significance assessment
<p>Criterion A</p> <p>An item is important in the course, or pattern, of NSW's cultural or natural history.</p>	<p>The Kemp Street bridge was not specifically built as part of the railway precinct and is not a distinctive part of the history of the development of the Junee area.</p> <p><i>The item does not meet this criterion.</i></p>
<p>Criterion B</p> <p>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.</p>	<p>The Kemp Street bridge is not known to be associated with a particular person or group of persons.</p> <p><i>The item does not meet this criterion.</i></p>
<p>Criterion C</p> <p>An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW.</p>	<p>The Kemp Street bridge appears to share a similar design template with several other railway bridges, all of which have been constructed across a wide temporal period. The bridge does not constitute a substantial aesthetic contribution or technical achievement.</p> <p><i>The item does not meet this criterion.</i></p>
<p>Criterion D</p> <p>An item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons.</p>	<p>The Kemp Street bridge is not known to be associated with a particular community or cultural group.</p> <p><i>The item does not meet this criterion.</i></p>
<p>Criterion E</p> <p>An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history.</p>	<p>The Kemp Street bridge appears to share a similar design template with several other railway bridges. It is unknown how this design was developed, how it was distributed, and how long it was used for.</p> <p>Based on the precautionary principle (EPBC Act Part 16), the Kemp Street bridge may have heritage value for its potential to contribute to the understanding of railway bridge design and construction techniques over the life span of the railway network in NSW.</p>

State Heritage Register criteria	Significance assessment
	<i>The item may meet this criterion.</i>
Criterion F An item possesses uncommon, rare, or endangered aspects of NSW's cultural or natural history.	<p>The Kemp Street bridge appears to be an example of a railway bridge design that was used across the NSW railway network. It is unknown how many examples of this design remain. As continued development and upgrading of the railway stations and network occurs, these bridges are being successively decommissioned and removed, and are consequently becoming rarer.</p> <p>Based on the precautionary principle, the Kemp Street bridge may have heritage value as an uncommon example of its type.</p> <p><i>The item meets this criterion.</i></p>
Criterion G An item is important in demonstrating the principal characteristics of a class of NSW's: <ul style="list-style-type: none"> • cultural or natural places • cultural or natural environments. 	<p>The Kemp Street bridge is a contributory element to a wider heritage landscape, but in its own right is not an exemplar of the principal characteristics of its type.</p> <p><i>The item does not meet this criterion.</i></p>
Summary statement	<p>The Kemp Street bridge is one of the many railway bridges constructed to facilitate the movement of pedestrians and vehicles across railway precincts in NSW. Of this number, it appears to have two direct comparisons, suggesting that it was part of a design template that was implemented across a wide temporal period. It is unknown how this design was developed and how it was distributed. It is unknown how many railway bridges using this design remain.</p> <p>Based on the precautionary principle and the unknown nature of the bridge design, the Kemp Street bridge has been identified as possibly having heritage significance at a local level.</p>

5 Impact assessment

5.1 Impact to heritage items within the enhancement sites

Table 5.2 discusses the impacts of the proposal on the individual heritage items located within the 24 discrete enhancement sites, as identified in Chapter 4.5. The impact assessments and statements of heritage impact have been prepared in accordance with the *Statements of Heritage Impact* (Heritage NSW, 2002) which requires the discussion of:

- the aspects of the proposal that respect or enhance the heritage significance of the item or conservation area;
- the aspects of the proposal that could severely impact on the heritage significance of the item or conservation area, the reasons for undertaking these impacts, and the mitigation measures that will be taken; and
- the sympathetic solutions that have been considered and discounted in developing the proposal.

The table below identifies the qualifiers used to undertake this assessment.

Table 5.1 Rating of degree of impact

Level of impact	Description
Major	Major damage is irreversible and extensive caused to a registered or potential heritage item, such as the construction of larger or prominent structures immediately adjacent to the heritage item, demolition or extensive removal of associated fabric or structures, or extensive addition of new fabric.
Moderate	Moderate damage is caused to a registered or potential heritage item. This damage may include the construction of larger or prominent structures in the vicinity of the heritage item, partial demolition or removal of associated fabric or structures, or partial addition of new fabric.
Minor	Minor damage is caused to a registered or potential heritage item. This damage may include the construction of larger or prominent structures at a distance from the heritage item or removal of associated structures.
Negligible	Any damage caused is fully recoverable with no permanent effect on the registered or potential heritage item.

The cumulative effects of these impacts are discussed in Chapter 6.

Table 5.2 Impact assessment for heritage items within the enhancement sites.

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
Murray River bridge enhancement site				
<p>Albury rail bridge over the Murray River (known as Murray River bridge)</p> <p>Significance—State Listings:</p> <ul style="list-style-type: none">SHR 01020Albury LEP 2010 I204ARTC s170 4280312 <p>The details of this heritage item are in Chapter 4.3.2 and its significance is discussed in Chapter 4.5.1.</p>	<p>The existing truss metal bracing over the bridge does not provide sufficient vertical clearance for the proposed freight trains. As such, the bridge would be modified by:</p> <ul style="list-style-type: none">raising the top bracing by approximately 1.9 metresinstalling of a new bracing, which would be in the same style, colour, and similar materials as the existing elements, but raised on stanchions. <p>In addition to these works:</p> <ul style="list-style-type: none">a permanent walkway would also be established on the eastern side of the bridge to facilitate inspection and maintenance activitiesthe bridge would be reinforced along the downside lattice trusstemporary work platforms would be installed during construction to support construction workslead paint would be removed and the bridge would be paintedtemporary construction compounds would be established within the rail corridor.	<p>Partial demolition—The proposal would remove the original top bracing framework from the bridge structure. The impact of this would be minimised by the sympathetic addition of new fabric.</p> <p>Addition of new fabric—The new portal elements would be designed and installed in a manner that is sympathetic to the heritage style of the bridge. This would reduce the impact of the proposal on the overall character of the bridge.</p> <p>Temporary work platforms—Details regarding the attachment method for the temporary work platforms to the bridge have not been confirmed. The final attachment method selected would need to ensure that no lasting fabric change or damage remains following removal of the platforms.</p>	<p>Viewshed—The viewshed of the bridge is largely reminiscent of those that would have existed following its initial construction. Dense vegetation encloses views to and from the bridge from the southwest and north, with some obstruction from the southeast by the Hume Highway. The proposal would not alter views to and from the bridge.</p> <p>Aesthetic—The proposal would alter the visual appearance of the bridge. The existing bracing would be removed and the new fabric installed at a greater height than the original fabric, elongating the silhouette.</p> <p>Increase in train size—The heritage values of the bridge are intrinsically linked to the railway network and its use by passing railway traffic. Due to this, the adaptation of the existing railway corridor—whilst to support trains of an increased size—would not impact on</p>	<p>The proposal would modify the existing bridge to a sufficient height to support the safe running of double-stacked freight trains.</p> <p>The proposal to the bridge would enable its continued use following the completion of the proposal. At its current dimensions, it does not have sufficient clearance for the passing of double-stacked freight trains. The proposal is the most sympathetic option. The alternative solution would have required the demolition of the bridge to allow for a new rail bridge to be constructed on the existing alignment.</p> <p>The proposal would have a moderate impact on the heritage significance of the Murray River bridge. Where possible, the original top bracing framework would be retained and reinstated, preserving the original design features. Opportunities to repurpose removed original fabric would be identified during detailed design. Where this is not possible, a suitably qualified heritage professional (such as a heritage architect) would be consulted in the design and installation of the new bracing framework to ensure that it is appropriate to the existing fabric and style of the bridge.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
			the heritage values of the bridge..	
Albury Station pedestrian bridge, Albury Yard clearances, and Riverina Highway bridge enhancement sites				
<p>Albury Railway Station and Yard Group</p> <p><i>Inclusive of identified signal huts, boxes and archaeological sites</i></p> <p>Significance—State Listings:</p> <ul style="list-style-type: none"> SHR 01073 Multiple Albury LEP 2010 items, refer to Table 4.2 ARTC and TfNSW s170 4280274 <p>The details of this heritage item are in Chapter 4.3.3 and its significance is discussed in Chapter 4.5.1 and 4.5.2.</p>	<p>The footbridge that passes over the rail corridor and its western access ramps would be demolished and replaced with a new pedestrian bridge. This bridge would:</p> <ul style="list-style-type: none"> be a steel truss span tie in with the design of the pedestrian bridge over the Hume Highway, which was designed to be in keeping with the railway pedestrian bridge. <p>Proposed works to the yard clearances would include:</p> <ul style="list-style-type: none"> slewing a section of the railway track for approximately 1 kilometre modification to turnouts and siding access roads an extant signal gantry would be relocated and altered to provide adequate clearances existing signalling infrastructure would be modified. <p>Proposed works to the railway station would include adjustments and relocation of utilities. This would include adjustments to an existing telecommunications pole located in between station buildings.</p>	<p>Demolition—The proposal would result in the loss of the footbridge. This would have a major impact on the significance of the footbridge, which is identified as a contributing factor to the citation and as a vanishing characteristic of the wider heritage landscape. The proposal would also remove the external lever system, which (although disconnected) remains representative of the physical connection between the North Signal Hut and its siding. The proposal would also result in the loss of signal box 1a.</p> <p>Addition of new fabric—The new pedestrian bridge would be designed and installed in a manner that would be in keeping with the appearance of the existing footbridge. This would reduce the visual impact of a new structure within the historic character of the yard landscape. Further detail on the urban design</p>	<p>Vibration— During construction, vibration intensive works would occur within safe working distances, such as piling and vibratory compaction. This has assumed a more stringent criterion (three mm/s), noting that heritage buildings should not be assumed as being structurally unsound, and that these structures would typically be exposed to high vibration levels on a daily basis (due to the movement of trains). Mitigation measures have been identified to manage these risks within Technical Paper 6. This includes the selection of equipment and construction methods, pre-condition surveys and monitoring of these structures, where risk remains.</p> <p>Viewshed—The viewshed of the group is largely concentrated within the yard and its associated structures. The new pedestrian bridge would be 10 metres tall at its highest point and raise the</p>	<p>The proposal would modify the existing track and associated overhead structures to a sufficient height and width to support the safe running of double-stacked freight trains.</p> <p>The proposed demolition of the existing footbridge would enable for the installation of a pedestrian bridge with sufficient clearance for the passing of double-stacked freight trains. At its current dimensions, it does not have sufficient clearance for the intended outcomes of the proposal. The demolition and replacement of the bridge was selected as the preferred option as it required fewer changes to connecting infrastructure and avoided potential land acquisition while maintaining connectivity and delivering a DDA-compliant bridge.</p> <p>As discussed in Chapter 6 of the EIS, other options were identified but not considered technically feasible as:</p> <ul style="list-style-type: none"> track lowering would have resulted in operational impacts (passenger and freight) as well as changes to the heritage-listed station platform to enable services to continue. Deep excavation would be required adjacent to the North Signal Hut in addition to other structures. reinstatement would not meet current design requirements without substantial structural modifications. <p>Opportunities to repurpose removed original fabric of the footbridge would be identified during detailed design.</p> <p>The slewing of the track within the yard would require the demolition of signal box 1a as well as</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
	<p>Slewing and realignment of the railway track would impact one area of the remnant broad gauge archaeological site and the Albury signal box 1a. The removal of redundant siding adjacent to the Albury North Signal Hut would impact the lever system attached to the railway track and any redundant systems associated with the North Signal Hut where left in situ.</p> <p>Construction compounds would be located within the existing railway corridor, which includes the Remnant Broad Gauge Archaeological Site.</p>	<p>of the bridge, including photomontages of the new structure is provided in Technical Paper 10.</p> <p>Temporary construction compound—Where the construction compounds are situated within an area of archaeological sensitivity, a layer of gravel would be applied to the entire ground surface area of the compound prior to the construction of demountable buildings and laydown storage of materials. Gravel would be applied to all vehicle parking spaces and high traffic pedestrian areas. No excavation of the ground surface would occur during the construction of the demountable buildings. If ground anchors would be required, these would be in the form of concrete blocks.</p> <p>Disturbance of archaeological material—The proposal would result in direct impact to any subsurface archaeological materials (e.g. railway track, footings, other structural features, and occupational deposits)</p>	<p>viewpoint over the yard. Whilst this offers a greater vantage over the railway station and yard, this would not change the character of the viewshed.</p> <p>Aesthetic—The visual aesthetics of the group are associated with its historical and ongoing use for passenger and freight transport. This would be impacted by the proposal. The new pedestrian bridge would be designed and installed in a manner that would reduce the visual impact of a new structure within the historic character of the yard landscape. The works would largely be in keeping with the primary function of the yard and its visual display.</p> <p>Increase in train size—The heritage values of the group are intrinsically linked to the railway network and its use by passing railway traffic. Due to this, the adaptation of the existing railway corridor—whilst to support trains of an increased size—would not impact on the heritage values of the group.</p>	<p>disturbance of archaeological material associated with the broad-gauge railway track.</p> <p>As discussed in Chapter 6 of the EIS, the preferred option for the track realignment was selected as it reduced the potential interaction with the North Signal Hut during construction and operation given clearances to the structure and adjustments to track formation. It also afforded other operational and construction benefits when compared to the available alternative.</p> <p>The demolition of signal box 1a would have a major impact on its heritage significance and would disrupt the visual continuity and relationship between the supporting signal boxes. Opportunities to relocate the structure would be identified during detailed design phase.</p> <p>The disturbance of the archaeological material associated with the broad-gauge railway track would enable the proposal to avoid more invasive track work immediately adjacent to the North Signal Hut. Other temporary construction compounds are situated outside of areas of archaeological potential.</p> <p>The proposed demolition of the redundant sidings adjacent to the North Signal Hut would remove the connection between the hut and its lever system currently attached to the railway track. This would have a moderate impact on the heritage significance of the hut. This is the design solution with the least impact on the signal hut and its surrounds.</p> <p>The alterations to the utilities at an existing telecommunications pole would have a negligible impact on the railway station building.</p> <p>There are no proposed works to the railway workers' hut or turntable.</p> <p>Overall, the proposal would have a moderate impact on the overall heritage significance of the</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
		<p>associated with the broad-gauge railway.</p> <p>Accidental impact—The proposal have the potential to accidentally impact heritage items located in close proximity to the works, including:</p> <ul style="list-style-type: none"> the north and south signal huts the signal boxes 1b, 2a, and 2b the station building the platform the transhipment shed. <p>The likelihood of accidental impact to these items can be mitigated in accordance with the procedures discussed in Chapter 7.1.</p>		<p>Albury Railway Station and Yard Group. This takes into account the impacts to the following individual items:</p> <ul style="list-style-type: none"> Albury railway station (Albury LEP 2010 I206)—Minor Signal box and footbridge (Albury LEP 2010 I207)—Major Transhipment shed (Albury LEP 2010 I208)—Negligible Railway workers' hut (Albury LEP 2010 I210)—Negligible Railway turntable (Albury LEP 2010 I209)—Negligible Signal boxes (unregistered potential heritage item)—Major Remnant broad-gauge railway track—Major <p>To mitigate this, the new pedestrian bridge has been designed and would be installed in a manner that would be in keeping with the appearance of the existing footbridge, reducing the visual impact of a new structure within the historic character of the yard landscape. The design and installation would further be refined during detailed design. Opportunities to repurpose removed original fabric would be identified during detailed design phase. Opportunities to relocate signal box 1a would also be identified during detailed design phase, which would mitigate the impact of its demolition.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>
<p>Railway Conservation Area</p> <p>Significance—Local Listings:</p>	<p>The conservation area comprises the Albury Railway Station and Yard. Impacts to the conservation area are associated with the proposed works to the railway precinct, described above.</p>	-	<p>Viewshed and aesthetic—The visual characteristics of the conservation area are the setting of the railway station and yards. These overall characteristics</p>	<p>The proposal would have a moderate impact to the heritage significance of the conservation area. This impact is associated with proposed works to the Albury Railway Station and Yard Group, described above.</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
<ul style="list-style-type: none"> Albury LEP 2010 C13 <p>The details of this heritage item are in Chapter 4.3.3 and its significance is discussed in Chapter 4.5.1.</p>			would not be changed by the proposal, which would visually continue the primary function of the conservation area.	Mitigation management measures are discussed in Chapter 7.
Riverina Highway bridge enhancement site				
There are no registered or potential heritage items within the enhancement site.				
Billy Hughes bridge enhancement site				
There are no registered or potential heritage items within the enhancement site				
Table Top Yard clearances enhancement site				
There are no registered or potential heritage items within the enhancement site				
Culcairn pedestrian bridge and Culcairn Yard clearances enhancement sites				
<p>Street trees along Walbrundie Road, Holbrook Road, and Balfour Street</p> <p>Significance—Local Listings:</p> <ul style="list-style-type: none"> Greater Hume LEP 2012 I54 <p>The details of this heritage item are in Chapter 4.3.6 and its significance is discussed in Chapter 4.5.1.</p>	The proposal would occur in close proximity to four of the street trees, which are located within 5 to 15 metres away.	Accidental impact —The proposal has the potential to accidentally impact the four trees located in close proximity to the works. The likelihood of accidental impact to the trees can be mitigated in accordance with the procedures discussed in Chapter 7.1.	Aesthetic —The visual aesthetic of the street trees is associated with the formal arrangement of the plantings on the verges and median strip of Balfour Street. This would not be altered by the proposal.	There are no proposed works to the four street trees associated with the Walbrundie Road, Holbrook Road, and Balfour Street trees. The proposal would have a negligible impact on the four trees. Mitigation management measures are discussed in Chapter 7.
<p>Culcairn Railway Station and Yard Group</p> <p>Significance—State Listings:</p>	The existing footbridge does not provide sufficient vertical clearance for the proposed freight trains. The footbridge would be demolished and not replaced.	Demolition —The proposal would result in the loss of the footbridge. This would have a major impact on the significance	Vibration —During construction, vibration intensive works would occur within safe working distances, such as	The proposal would modify the existing track, level crossing, and associated overhead structures to a sufficient height and width to support the safe running of double-stacked freight trains.

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
<ul style="list-style-type: none"> SHR 01126 Greater Hume LEP 2012 I44 ARTC and TfNSW s170 4280282 <p>The details of this heritage item are in Chapter 4.3.6 and its significance is discussed in Chapter 4.5.1.</p>	<p>Proposed works to the yard clearances would include:</p> <ul style="list-style-type: none"> slewing a section of the railway track for approximately 460 metres a signal gantry would be modified modification of the level crossing. <p>Temporary site compounds and material laydowns would be located within the yard away from the station building and platform.</p>	<p>of the footbridge, which is identified as a contributing factor to the citation and as a vanishing characteristic of the wider heritage landscape.</p> <p>The signal gantry is not a contributory element of the heritage values of the precinct.</p> <p>Temporary construction compound—Ground surface protection (consisting of gravel material or similar) would be applied to the entire ground surface area of the compound prior to the construction of demountable buildings and laydown storage of materials. Gravel would be applied to all vehicle parking spaces and high traffic pedestrian areas. Ground anchors may be required.</p> <p>Accidental impact—The proposal has the potential to accidentally impact heritage items located in close proximity to the works, including:</p> <ul style="list-style-type: none"> the station building and the platform. 	<p>vibratory compaction. This has assumed a more stringent criterion (three mm/s), noting that heritage buildings should not be assumed as being structurally unsound, and that these structures would typically be exposed to high vibration levels on a daily basis (due to the movement of trains). Mitigation measures have been identified to manage these risks. This includes the selection of equipment and construction methods, pre-construction condition surveys and monitoring of these structures, where risk remains. Operational vibration at these structures would not alter as a result of the proposal.</p> <p>Viewshed—The viewshed of the group is largely concentrated within the yard and its associated structures. Within this viewshed, the footbridge is located to the south of the yard on its perimeter. Although the footbridge is a prominent feature for heritage items outside of the station yard (discussed in Section 5.2.3), it is not a focal point within the yard. Its</p>	<p>The proposed demolition of the footbridge would enable double-stacked freight trains to pass through the yard. At its current dimensions, it does not have sufficient clearance for the intended outcomes of the proposal. The removal of the disused bridge was selected as the preferred option as an existing at-grade and shorter alternative is available.</p> <p>As discussed in Chapter 6 of the EIS, other options were identified but not considered technically feasible as:</p> <ul style="list-style-type: none"> reinstatement would not meet current design requirements without substantial structural modifications. track lowering would have impacted the adjacent Balfour Street (Olympic Highway) level crossing and could also potentially impact the station platforms. <p>Gifting of the removed bridge would be further explored with Greater Hume Shire Council prior to its removal.</p> <p>The proposal would have a moderate impact on the overall heritage significance of the Culcairn Railway Station and Yard Group. The presence and position of the footbridge within the yard has been identified as a key contributing item to the significance of the group. Opportunities to repurpose removed original fabric would be identified during detailed design.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
		The likelihood of accidental impact to these items can be mitigated in accordance with the procedures discussed in Chapter 7.1.	<p>removal would have a minor impact on the viewshed.</p> <p>Aesthetic—The visual aesthetics of the group are associated with its historical and ongoing use for passenger and freight transport. This would be moderately impacted by the proposal. The removal of the footbridge would alter the visual appearance and distribution of the railway structures through the yard. The proposed works to the yard clearances would be in keeping with the primary function of the yard and its visual display.</p> <p>Increase in train size—The heritage values of the group are intrinsically linked to the railway network and its use by passing railway traffic. Due to this, the adaptation of the existing railway corridor—whilst to support trains of an increased size—would not impact on the heritage values of the group.</p>	
Henty Yard clearances enhancement site				
Henty Railway Station and Yard Group Significance—State	Proposed works to the yard clearances would include:	Temporary construction compound — Ground surface protection	Vibration — During construction, vibration-intensive works would	The proposal would modify the existing track and associated overhead structures to a sufficient

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
<p>Listings:</p> <ul style="list-style-type: none"> SHR 01169 Greater Hume LEP 2012 I78 ARTC and TfNSW s170 4280285 <p>The details of this heritage item are in Chapter 4.3.7 and its significance is discussed in Chapter 4.5.1.</p>	<ul style="list-style-type: none"> slewing a section of the railway track for approximately 600 metres removal of several redundant sidings modification of the level crossing at Sladen Street to facilitate safer pedestrian access existing signalling infrastructure would be replaced modification to existing drainage lines. <p>Temporary site compounds and material laydowns would be located within the yard away from the station building, platform, and goods shed.</p>	<p>(consisting of gravel material or similar) would be applied to the entire ground surface area of the compound prior to the construction of demountable buildings and laydown storage of materials. Gravel would be applied to all vehicle parking spaces and high traffic pedestrian areas. No excavation of the ground surface would occur during the construction of the demountable buildings. Ground anchors may be required.</p> <p>Accidental impact— The proposal has the potential to accidentally impact heritage items located in close proximity to the works, including:</p> <ul style="list-style-type: none"> the station building the platform the goods shed. <p>The likelihood of accidental impact to these items can be mitigated in accordance with the procedures discussed in Chapter 7.1.</p>	<p>occur within safe working distances, such as vibratory compaction. This has assumed a more stringent criterion (three mm/s), noting that heritage buildings should not be assumed as being structurally unsound, and that these structures would typically be exposed to high vibration levels on a daily basis (due to the movement of trains). Mitigation measures have been identified to manage these risks. This includes the selection of equipment and construction methods, pre-construction condition surveys and monitoring of these structures, where risk remains. Operational vibration at these structures would not alter as a result of the proposal.</p> <p>Viewshed—The viewshed of the group is largely concentrated within the yard and its associated structures. This would not be altered by the proposal.</p> <p>Aesthetic—The visual aesthetics of the group are associated with its historical and ongoing use for passenger and freight transport. This would not</p>	<p>height and width to support the safe running of double-stacked freight trains.</p> <p>There are no proposed works to the structures associated with the Henty Railway Station and Yard Group citation. The proposal has been designed in a manner that prevents impact to the goods shed.</p> <p>The proposal would have a negligible impact on the overall heritage significance of the Railway Station and Yard Group.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
			<p>be impacted by the proposal, which would be in keeping with the primary function of the yard and its visual display.</p> <p>Increase in train size— The heritage values of the group are intrinsically linked to the railway network and its use by passing railway traffic. Due to this, the adaptation of the existing railway corridor—whilst to support trains of an increased size—would not impact on the heritage values of the group.</p>	
Yerong Creek Yard clearances enhancement site				
<p>Yerong Creek Railway Station archaeological site</p> <p>Potential significance— Local</p> <p>The details of this heritage item are in Chapter 4.3.8 and its significance is discussed in Chapter 4.5.2.</p>	<p>Proposed works to the yard clearances would include:</p> <ul style="list-style-type: none"> slewing a section of the railway track for approximately 1.2 kilometres removal of the 1880 platform and modern hut removal of redundant sidings modification of the level crossing at Plunkett Street and Cole Street. <p>The removal of the 1880 platform would disturb any subsurface archaeological materials (e.g. footings, other structural features, and occupational deposits) associated with the Yerong Creek Railway Station.</p>	<p>Temporary construction compound— Ground surface protection (consisting of gravel material or similar) would be applied to the entire ground surface area of the compound prior to the construction of demountable buildings and laydown storage of materials. Gravel would be applied to all vehicle parking spaces and high traffic pedestrian areas. No excavation of the ground surface would occur during the construction of the demountable buildings. If</p>	-	<p>The proposal would modify the existing track and associated overhead structures to a sufficient height and width to support the safe running of double-stacked freight trains.</p> <p>While the proposal would require the demolition of the remaining structures of the station (which has been partially demolished), it was selected as the preferred option as it provided improved operational and construction benefits compared to the available alternative (refer to Chapter 6 of the EIS).</p> <p>Opportunities to minimise the impact would be considered during detailed design.</p> <p>The proposal could have a major impact to the potential heritage significance of the Yerong Creek Railway Station archaeological site. The proposal would result in the disturbance of archaeological material.</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
		<p>ground anchors would be required, these would be in the form of concrete blocks.</p> <p>Disturbance of archaeological material—The proposal would have a major impact on the heritage significance of the archaeological remains, which are part of the development of the NSW railway network in the twentieth century.</p>		Mitigation management measures are discussed in Chapter 7.
<p>Yerong Creek Urban Conservation Area</p> <p>Significance—Local</p> <p>Listings:</p> <ul style="list-style-type: none"> Lockhart LEP 2012 C3 <p>The details of this heritage item are in Chapter 4.3.8 and its significance is discussed in Chapter 4.5.1.</p>	<p>The conservation area predominantly comprises of streetscapes located outside of the railway corridor, with a small portion that overlaps the railway tracks. Impacts to the conservation area are associated with proposed works to the railway yard, described above.</p>	-	<p>Viewshed and aesthetic—The visual characteristics of the conservation area are the intact nature of the streetscape. These overall characteristics would not be changed by the proposal. Moreover, the visual character of the conservation area is partially influenced by the presence of the railway corridor, as the much of the streetscape was constructed following the establishment of the railway network. The remnant 1880s platform is not included within the conservation area, as the demolition of the original railway station building has resulted in it not</p>	<p>The proposal would have a negligible impact on the heritage significance of the conservation area. This impact is associated with proposed works to the level crossing at Plunkett Street and Cole Street.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
			representing an intact characteristic of the area.	
The Rock Yard clearances enhancement site				
<p>The Rock Station and Yard Group</p> <p>Significance—State</p> <p>Listings:</p> <ul style="list-style-type: none"> SHR 01268 Lockhart LEP 2012 I10 ARTC and TfNSW s170 4280256 <p>The details of this heritage item are in Chapter 4.3.9 and its significance is discussed in Chapter 4.5.1.</p>	<p>Proposed works to the yard clearances would include:</p> <ul style="list-style-type: none"> existing signalling infrastructure would be modified. 	<p>Accidental impact— The proposal has the potential to accidentally impact heritage items located in close proximity to the works, including:</p> <ul style="list-style-type: none"> the station building the platform the gantry crane. <p>The likelihood of accidental impact to these items can be mitigated in accordance with the procedures discussed in Chapter 7.1.</p>	<p>Viewshed—The viewshed of the group is largely concentrated within the yard and its associated structures. This would not be altered by the proposal.</p> <p>Aesthetic—The visual aesthetics of the group are associated with its historical and ongoing use for passenger and freight transport. This would not be impacted by the proposal, which would be in keeping with the primary function of the yard and its visual display.</p> <p>Increase in train size—The heritage values of the group are intrinsically linked to the railway network and its use by passing railway traffic. Due to this, the adaptation of the existing railway corridor—whilst to support trains of an increased size—would not impact on the heritage values of the group.</p>	<p>The proposal would modify one overhead structure to a sufficient height and width to support the safe running of double-stacked freight trains.</p> <p>There are no proposed works to the structures associated with The Rock Station and Yard Group citation. The proposal would have a negligible impact on the overall heritage significance of the Railway Station and Yard Group.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>
<p>The Rock Urban Conservation Area</p> <p>Significance—Local</p>	<p>The conservation area predominantly comprises of streetscapes located outside of the railway corridor, with a small</p>	-	<p>Viewshed and aesthetic—The visual characteristics of the conservation area are the</p>	<p>The proposal would have a negligible impact to the heritage significance of the conservation area. This impact is associated with proposed works to</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
<p>Listings:</p> <ul style="list-style-type: none"> Lockhart LEP 2012 C2 <p>The details of this heritage item are in Chapter 4.3.9 and its significance is discussed in Chapter 4.5.1.</p>	<p>portion that overlaps the railway tracks. Impacts to the conservation area are associated with proposed works to the signal gantry, described above.</p>		<p>intact nature of the streetscape. These overall characteristics would not be changed by the proposal. Moreover, the visual character of the conservation area is partially influenced by the presence of the railway corridor, as the much of the streetscape was constructed following the establishment of the railway network.</p>	<p>The Rock Station and Yard Group, described above.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>
Uranquinty Yard clearances enhancement site				
<p>Uranquinty Silos</p> <p>Significance—Local</p> <p>Listings:</p> <ul style="list-style-type: none"> Wagga Wagga LEP 2010 I296 <p>The details of this heritage item are in Chapter 4.3.10 and its significance is discussed in Chapter 4.5.1.</p>	<p>A portion of the brownfield adjacent to the silos is located within the enhancement site. This area would be used to support construction and to provide access to the railway corridor during construction.</p>	<p>Accidental impact—The proposal has the potential to accidentally impact heritage items located in close proximity to the works, including:</p> <ul style="list-style-type: none"> the silos. <p>The likelihood of accidental impact to these items can be mitigated in accordance with the procedures discussed in Chapter 7.1.</p>	<p>Aesthetic—The visual aesthetics of the group are the intact nature of the silos and the economic and social significance to the community. These would not be impacted by the proposal, as no alterations would be made to the structures.</p> <p>Increase in train size—The heritage values of the silos are intrinsically linked to the railway network and its use by passing railway traffic. Due to this, the adaptation of the existing railway corridor—whilst to support trains of an increased size—would not impact on the heritage values of the group.</p>	<p>There are no proposed works to the Uranquinty Silos.</p> <p>The proposal would have a negligible impact on the silos.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>
Pearson Street bridge enhancement site				

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
<p>Wagga Wagga Showground, 'Kyeamba Smith' Hall, and grandstand</p> <p>Significance—Local</p> <p>Listings:</p> <ul style="list-style-type: none"> Wagga Wagga LEP 2010 I246 <p>The details of this heritage item are in Chapter 4.3.11 and its significance is discussed in Chapter 4.5.1.</p>	<p>A portion of the showground on its northwestern edge adjacent to the railway corridor would be used as a temporary construction compound. This area is used as a campground.</p>	<p>Temporary construction compound—Ground surface protection (consisting of gravel material or similar) would be applied to the entire ground surface area of the compound prior to the construction of demountable buildings and laydown storage of materials. Gravel would be applied to all vehicle parking spaces and high traffic pedestrian areas. No excavation of the ground surface would occur during the construction of the demountable buildings. Ground anchors may be required.</p> <p>Accidental impact—The location of the proposal is over 200 metres west of the identified heritage structures within the showground citation. There is unlikely to be any accidental impacts to heritage items.</p>	<p>Viewshed—The viewshed of the group is largely concentrated within the showground and its associated structures. This would be impacted temporarily by the proposal while the construction compound and materials laydown is present. There would be no ongoing operational impacts from the proposal.</p> <p>Aesthetic—The visual aesthetics of the group are the intact nature of the buildings and social significance to the community. These would not be impacted by the proposal, as no alterations would be made to any of the structures.</p> <p>Increase in train size—The heritage values of the showground are not directly characterised by the railway network, although its location adjacent to the railway corridor capitalised on the passing railway traffic. As a result, although the proposal would result in trains of an increased height, this would not impact on the heritage significance of the showground.</p>	<p>The proposal would be located in a portion of the showground currently being used as a campground.</p> <p>There are no proposed works to the structures associated with the Wagga Wagga Showground, 'Kyeamba Smith' Hall, and grandstand citation.</p> <p>The proposal would have negligible impact on the overall heritage significance of the showground, which would be short term only.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
Cassidy Parade pedestrian bridge, Edmondson Street bridge, Wagga Wagga Station pedestrian bridge, and Wagga Wagga Yard clearances enhancement sites				
<p>Cassidy Parade and Brookong Avenue footbridge</p> <p>Significance—Local (potential State)</p> <p>Listings:</p> <ul style="list-style-type: none">• ARTC s170 ID 4280661 <p>The details of this heritage item are in Chapter 4.3.12 and its significance is discussed in Chapter 4.5.1.</p>	<p>The existing footbridge does not provide sufficient vertical clearance for the proposed freight trains. The footbridge would be demolished and replaced with a new pedestrian bridge.</p> <p>The new structure would be a single steel truss span with concrete desk. Warren truss details would be used on the deck that spans the railway corridor.</p>	<p>Demolition—The proposal would result in the loss of the footbridge, which is a unique element of the wider heritage landscape.</p> <p>Addition of new fabric—All original fabric would be removed during the demolition of the footbridge. The new pedestrian bridge would comprise of new fabric.</p> <p>Curtilage—The curtilage of the footbridge is restricted to the physical boundary of the item. As such, the demolition of the footbridge would result in the complete removal of the curtilage.</p>	<p>Viewshed—The replacement of the footbridge with a higher structure would alter the visual setting of the surrounding area. This is discussed above for impacts to the Wagga Wagga Conservation Area.</p> <p>Aesthetic—The visual aesthetic of the footbridge is a key component of its heritage significance. This would be majorly impacted by its demolition.</p>	<p>The proposal would modify the existing track and associated overhead structures to a sufficient height and width to support the safe running of double-stacked freight trains.</p> <p>The proposed demolition of the footbridge would enable double-stacked freight trains to pass through the yard. At its current dimensions, it does not have sufficient clearance for the intended outcomes of the proposal. The demolition and replacement of the bridge was selected as the preferred option as minimised interaction with the rail corridor and avoided impacts to overland flow paths across the rail corridor while delivering a DDA-compliant bridge.</p> <p>While a track lowering solution would have avoided direct impacts to the heritage item, it was reliant on track lowering at Edmondson Street bridge and into the Wagga Wagga Yard. Track lowering was not selected as the preferred option at these sites as discussed in Chapter 6 of the EIS. Further, reinstatement of the bridge is not technically feasible due to the need to raise the bridge deck and ramps to achieve the required clearances. It would also result in a non DDA-compliant ramp arrangement.</p> <p>The proposal would have a major impact on the overall heritage significance of the Cassidy Parade and Brookong Avenue footbridge as the bridge would be demolished. The design of the footbridge has been identified as a unique feature of the NSW railway heritage landscape, with no comparable examples known.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>
Wagga Wagga Conservation Area	The conservation area predominantly comprises	-	Viewshed and aesthetic —The visual	The proposal would have a minor impact to the heritage significance of the conservation area. This

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
<p>Significance—Local</p> <p>Listings:</p> <ul style="list-style-type: none"> Wagga Wagga LEP 2010 <p>The details of this heritage item are in Chapter 4.3.13 and its significance is discussed in Chapter 4.5.1.</p>	<p>streetscapes located outside of the railway corridor and the Wagga Wagga Railway Station and Yard. Impacts to the conservation area are associated with proposed works to the Cassidy Parade and Brookong Avenue footbridge, Edmondson Street bridge, Mount Erin convent complex, and the Wagga Wagga Railway Station and Yard. These works and the impact to individual heritage items are discussed in the relevant section.</p>		<p>characteristics of the conservation area are the intact nature of the streetscape and railway precinct. These overall characteristics would not be changed by the proposal.</p> <p>Moreover, the visual character of the conservation area is partially influenced by the presence of the railway corridor, as much of the streetscape was constructed following the establishment of the railway network.</p> <p>The proposed works to the Cassidy Parade and Brookong Avenue footbridge would have a minor impact on registered items and streetscapes associated with the conservation area. While the footbridge is a mid-twentieth century addition to a predominantly nineteenth century heritage landscape, it sits within its landscape and does not impede on the earlier features. The new pedestrian bridge would change the character of the conservation area, however, many of the surrounding heritage</p>	<p>impact is associated with proposed works to the Cassidy Parade and Brookong Avenue footbridge, Edmondson Street bridge, Mount Erin convent complex, and the Wagga Wagga Railway Station and Yard. While the construction of new pedestrian bridges and road bridge would change the overall characteristics of the conservation area, both structures sit within largely obscured locations in the landscape.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
			<p>items do not have direct views of the pedestrian bridge.</p> <p>The proposed works to the Edmondson Street bridge would have a minor impact on registered items and streetscapes associated with the conservation area. While the bridge contributes to the nineteenth century landscape of the conservation area, views towards it are restricted to immediately within the railway corridor. The new bridge would change the character of the conservation area, however, many of the surrounding heritage items do not have direct views of the bridge.</p> <p>The proposed works to the Mount Erin convent complex would have a negligible impact on registered items and streetscapes associated with the conservation area. The convent complex is a significant component of the conservation area. The vegetation on the perimeter of the complex provides screening of views to and from the convent in the immediate</p>	

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
			<p>area of the Edmondson Street bridge. Views to and from items beyond this area are restricted by other intervening structures. While the vegetation provides screening, it does not directly contribute to the significance of the conservation area. The proposed works comprise the removal of a number of mature plantings, which would not change the overall character of the conservation area.</p> <p>The proposed works to the Wagga Wagga Railway Station and Yard precinct would have a minor impact on registered items and streetscapes associated with the conservation area. The railway precinct is a significant component of the conservation area. Views of the station are predominantly restricted to Station Place and Railway Street. Views to and from items beyond this area are restricted by other intervening structures.</p> <p>The proposed works comprise the replacement of the existing footbridge and construction of a taller pedestrian bridge. Whilst</p>	

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
			this would raise the viewpoint and alter the aesthetic within the railway complex, it would not change the overall character of the conservation area.	
<p>Edmondson Street bridge</p> <p>Significance—Local</p> <p>Listings:</p> <ul style="list-style-type: none"> part of the Wagga Wagga Conservation Area, Wagga Wagga LEP 2010 <p>The details of this heritage item are in Chapter 4.3.13 and its significance is discussed in Chapter 4.5.2.</p>	<p>The existing the bridge does not provide sufficient vertical clearance for the proposed freight trains. The bridge would be demolished and replaced with a new structure.</p> <p>The new structure would be 2.9 metres higher than the existing bridge and would be constructed from reinforced concrete with abutments faced with concrete panels.</p>	<p>Demolition—The proposal would result in the loss of the bridge, which is part of the Wagga Wagga Conservation Area and a vanishing characteristic of the wider heritage landscape.</p> <p>Addition of new fabric—The fabric that would be used in the new bridge would not be reflective of the material that it would replace. Opportunities to repurpose salvaged materials (such as the red brick) would be explored during detailed design.</p>	<p>Viewshed—The viewshed of the bridge is largely confined to the north–south view along Best Street and Edmondson Street and through the railway corridor. The new bridge would raise the viewpoint over the surrounding streetscapes by approximately 2.9 metres. In addition to changing views from the bridge, views to the bridge would be altered. The new bridge would sit above the surrounding landscape and become a prominent feature.</p> <p>Aesthetic—The design of the bridge is a key component of its heritage significance. This would be majorly impacted by its demolition.</p>	<p>The proposal would demolish and rebuild the bridge to a sufficient height and width to support the safe running of double-stacked freight trains.</p> <p>At its current dimensions, it does not have sufficient clearance for the intended outcomes of the proposal.</p> <p>The replacement of the road bridge was selected as the preferred option as it provided improved operational and construction outcomes in comparison to the possible alternatives (including track lowering) (refer to Chapter 6 of the EIS). This included avoidance of impacts to overland flow paths (and the need for a mechanical drainage solution) and direct impacts into the Wagga Wagga Yard and station.</p> <p>The proposal would have a major impact on the heritage significance of the Edmondson Street bridge.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>
<p>Mount Erin Convent, Chapel, High School, and Grounds</p> <p>Significance—Local</p> <p>Listings:</p>	<p>Proposed works to the convent complex would include:</p> <ul style="list-style-type: none"> removal of a number of mature plantings on the northeastern edge of the complex. 	<p>Accidental impact—The proposal has the potential to accidentally impact a number of mature plantings located in close proximity to the proposal works. The likelihood of</p>	<p>Vibration—During construction, vibration intensive works would occur within safe working distances, such as vibratory compaction. This has assumed a more</p>	<p>The proposal would remove a number of mature plantings on the northeastern extent of the Mount Erin Convent, chapel, high school, and grounds. A new easement for an overhead powerline would also be created within the northeastern extent. The removal of the mature plantings in addition to the</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
<ul style="list-style-type: none"> Wagga Wagga LEP 2010 I260 <p>The details of this heritage item are in Chapter 4.3.13 and its significance is discussed in Chapter 4.5.1.</p>	<ul style="list-style-type: none"> adjustment to an existing overhead powerline that runs alongside Edmondson Street bridge to run across the northeastern corner of the complex. This would also require the creation of an easement within the curtilage. <p>The convent complex would also be impacted by the proposed works to the Edmondson Street bridge.</p>	<p>accidental impact to the plantings can be mitigated in accordance with the procedures discussed in Chapter 7.1.</p>	<p>stringent criterion (three mm/s), noting that heritage buildings should not be assumed as being structurally unsound, and that these structures would typically be exposed to high vibration levels on a daily basis (due to the movement of trains). Mitigation measures have been identified to manage these risks. This includes the selection of equipment and construction methods, pre-construction condition surveys and monitoring of these structures, where risk remains. Operational vibration at these structures would not alter as a result of the proposal.</p> <p>Noise—The convent complex may qualify for at-property acoustic treatment. Eligibility would be confirmed during detailed design and in consultation with the school. Should at-property treatment be required, this would be done in such a way to minimise heritage impacts, while preserving owner amenity. Any treatment would be sympathetic to the heritage values of the item and would be carried out</p>	<p>increased height of the new Edmondson Street bridge would alter the viewshed of the complex.</p> <p>The proposal would have a minor impact on the complex. Although these plantings screen views both to and from the convent complex, their removal and addition of the new easement would not change the overall character of the complex.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
			<p>in accordance with best practice heritage management (i.e. any alterations to the fabric of a structure should be immediately identifiable and reversible). If noise treatment within the heritage structure is required, the advice of a conservation architect would be sought.</p> <p>Viewshed and aesthetic—The aesthetic of the convent complex is associated with the intactness of the buildings and the private, enclosed nature created by the screening of mature plantings. The removal of a number of these plantings, while it would impact the sheltered aesthetic of that part of the convent complex, would not change its overall character.</p> <p>The proposed works to the Edmondson Street bridge would have a moderate impact on the viewshed of the convent complex. The new bridge would sit above the surrounding landscape, altering both views to and from the bridge. The viewshed from the convent complex would be</p>	

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
			<p>altered to include the new structure, and the new structure would also increase views into the complex.</p> <p>Increase in train size— The heritage values of the convent complex are not directly characterised by the railway network, although its location adjacent to the railway corridor and proximity to passing traffic has been a consistent feature of its history. As a result, although the proposal would result in trains of an increased height, this would not impact on the heritage significance of the convent complex.</p>	
<p>Wagga Wagga Railway Station and Yard Group</p> <p>Significance—State Listings:</p> <ul style="list-style-type: none"> SHR 01279 Multiple Wagga Wagga LEP 2010 items, refer to Table 4.2 ARTC and TfNSW s170 4280250 <p>The details of this heritage item are in Chapter 4.3.13 and its</p>	<p>The footbridge would be demolished and replaced with a new pedestrian bridge. This bridge would be a single steel truss span with a concrete deck.</p> <p>Proposed works to the yard clearances would include:</p> <ul style="list-style-type: none"> slewing a section of the railway track for approximately 700 metres extant signal gantry would be removed and replaced temporary construction compound associated with the Edmondson Street bridge enhancement site 	<p>Demolition—The proposal would result in the loss of the footbridge. The footbridge has not been identified as having any individual heritage significance or as a contributing factor to the railway precinct. Its removal would have a negligible impact to the heritage significance of the railway group.</p> <p>Addition of new fabric— The new pedestrian bridge would be a standard concrete and</p>	<p>Vibration—During construction, vibration intensive works would occur within safe working distances, such as vibratory compaction. This has assumed a more stringent criterion (three mm/s), noting that heritage buildings should not be assumed as being structurally unsound, and that these structures would typically be exposed to high vibration levels on a daily basis (due to the movement of</p>	<p>The proposal would modify the existing track and associated overhead structures to a sufficient height and width to support the safe running of double-stacked freight trains.</p> <p>The proposed demolition of the existing footbridge would enable for the installation of a pedestrian bridge with sufficient clearance for the passing of double-stacked freight trains. The replacement of the footbridge was selected as the preferred option as it avoided potentially more significant impacts on the station (such as more significant excavation adjacent to the station platforms) and provides a DDA-compliant bridge solution. Reinstatement of the footbridge is not technically feasible as it would not meet current design requirements without substantial structural modifications.</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
significance is discussed in Chapter 4.5.1.	<ul style="list-style-type: none"> works associated with the Edmondson Street bridge. <p>Construction compounds would be located within the yard away from the station building, platform and former gatehouse.</p>	<p>steel footbridge and is both taller and longer than the existing footbridge. It would not directly impact any registered items, although it would be a more visually prominent feature in the railway precinct. The new pedestrian bridge would be designed and installed in a manner that would reduce the visual impact of a new structure within the historic character of the yard landscape. Further detail on the urban design of the bridge, including photomontages of the new structure is provided in Technical Paper 10.</p> <p>Temporary construction compound—Ground surface protection (consisting of gravel material or similar) would be applied to the entire ground surface area of the compound prior to the construction of demountable buildings and laydown storage of materials. Gravel would be applied to all vehicle parking spaces and high traffic pedestrian areas. No excavation of the ground surface would occur during the</p>	<p>trains). Mitigation measures have been identified to manage these risks. This includes the selection of equipment and construction methods, pre-construction condition surveys and monitoring of these structures, where risk remains. Operational vibration at these structures would not alter as a result of the proposal.</p> <p>Viewshed—The viewshed of the station building is largely concentrated within the yard and its associated structures. The new pedestrian bridge would be approximately 10 metres tall at its highest point and would raise the viewpoint over the yard. While this offers a greater vantage over the railway station and yard, this would not change the character of the viewshed. The viewshed of the former gatehouse has views directly to Edmondson Street bridge. The similarity in building materials and construction style of the bridge enhances the heritage outlook of the gatehouse. The demolition and replacement of the Edmondson Street bridge</p>	<p>There are no proposed works to the stationmaster's residence or Best Street railway gatehouse.</p> <p>The proposal would have a minor impact on the overall heritage significance of the Wagga Wagga Railway Station and Yard Group. This takes into account the impacts to the following individual items:</p> <ul style="list-style-type: none"> Wagga Wagga railway station (Wagga Wagga LEP 2010 I98)—Minor Stationmaster's residence (former) (Wagga Wagga LEP 2010 I99)—Minor Best Street railway gatehouse (former) (Wagga Wagga LEP 2010 I254)—Major <p>To mitigate this, the new pedestrian bridge has been designed and would be installed in a manner that is sensitive to the heritage character of the railway precinct, reducing the visual impact of a new structure within the historic character of the yard landscape. The design and installation would be further refined during detailed design.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
		<p>construction of the demountable buildings. Ground anchors may be required.</p> <p>Accidental impact—The proposal has the potential to accidentally impact heritage items located in close proximity to the works, including:</p> <ul style="list-style-type: none"> the station building; the platform; and the former Best Street gatehouse. <p>The likelihood of accidental impact to these items can be mitigated in accordance with the procedures discussed in Chapter 7.1.</p> <p>Curtilage—Works in the form of a temporary construction compound would occur within the curtilage of the Best Street railway gatehouse. However, these works would not alter the boundaries of the curtilage or impact the gatehouse.</p>	<p>would have a major impact on this. The new pedestrian bridge would also be a substantial change to the south view from the railway precinct. The stationmaster's residence is situated on the northern aspect of the railway station and has a view over the yard. While the new pedestrian bridge would be a more prominent feature in the viewshed, existing landscape screening would obscure views to the pedestrian bridge.</p> <p>Aesthetic—The visual aesthetics of the group are associated with its historical and ongoing use for passenger and freight transport. This would be impacted by the proposal. The new pedestrian bridge would be designed and installed in a manner that would reduce the visual impact of a new structure within the historic character of the yard landscape. The works would largely be in keeping with the primary function of the yard and its visual display. The construction of a new Edmondson Street bridge would impact the overall</p>	

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
			<p>aesthetic of the gatehouse, which shares similar building materials and style to the existing bridge.</p> <p>Increase in train size— The heritage values of the group are intrinsically linked to the railway network and its use by passing railway traffic. Due to this, the adaptation of the existing railway corridor—whilst to support trains of an increased size—would not impact on the heritage values of the group.</p>	
Bomen Yard clearances enhancement site				
<p>Bomen Railway Station</p> <p>Significance—State Listings:</p> <ul style="list-style-type: none"> SHR 01093 Wagga Wagga LEP 2010 l8 ARTC s170 4280278 <p>The details of this heritage item are in Chapter 4.3.14 and its significance is discussed in Chapter 4.5.1.</p>	<p>Proposed works to the yard clearances would include:</p> <ul style="list-style-type: none"> slewing a section of the railway track for approximately 1.1 kilometres slewing a section of the loop line for approximately 250 metres reinstatement of signalling modification to existing drainage line conversion of the closed level crossing at Dampier Street to a ballast track. <p>A temporary construction compound would be located within</p>	<p>Temporary construction compound—Ground surface protection (consisting of gravel material or similar) would be applied to the entire ground surface area of the compound prior to the construction of demountable buildings and laydown storage of materials. Gravel would be applied to all vehicle parking spaces and high traffic pedestrian areas. No excavation of the ground surface would occur during the construction of the demountable buildings.</p>	<p>Vibration—During construction, vibration intensive works would occur within safe working distances, such as vibratory compaction. This has assumed a more stringent criterion (3 mm/s), noting that heritage buildings should not be assumed as being structurally unsound, and that these structures would typically be exposed to high vibration levels on a daily basis (due to the movement of trains). Mitigation measures have been identified to manage these</p>	<p>The proposal would modify the existing track and associated overhead structures to a sufficient height and width to support the safe running of double-stacked freight trains.</p> <p>There are no proposed works to the structures associated with the Bomen Railway Station citation..</p> <p>The proposal would have a negligible impact on the overall heritage significance of the railway station.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
	the yard away from the station building and platform.	<p>Ground anchors may be required</p> <p>Accidental impact— The proposal has the potential to accidentally impact heritage items located in close proximity to the works, including:</p> <ul style="list-style-type: none"> the station building the platform the well. <p>The likelihood of accidental impact to these items can be mitigated in accordance with the procedures discussed in Chapter 7.1.</p>	<p>risks. This includes the selection of equipment and construction methods, pre-construction condition surveys and monitoring of these structures, where risk remains. Operational vibration at these structures would not alter as a result of the proposal.</p> <p>Viewshed—The viewshed of the station is largely concentrated within the yard and its associated structures. This would not be altered by the proposal.</p> <p>Aesthetic—The visual aesthetics of the station is associated with its historical and ongoing use for passenger and freight transport. This would not be impacted by the proposal, which would be in keeping with the primary function of the yard and its visual display.</p> <p>Increase in train size— The heritage values of the group are intrinsically linked to the railway network and its use by passing railway traffic. Due to this, the adaptation of the existing railway corridor—whilst to support trains of an increased size—would not impact on</p>	

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
			the heritage values of the group.	
Harefield Yard clearances enhancement site				
There are no registered or potential heritage items within the enhancement site				
Kemp Street bridge, Junee Station pedestrian bridge, Junee Yard clearances and Olympic Highway underbridge enhancement sites				
<p>Kemp Street bridge</p> <p>Potential significance—Local</p> <p>The details of this heritage item are in Chapter 4.3.16 and its significance is discussed in Chapter 4.5.2.</p>	<p>The existing the bridge does not provide sufficient vertical clearance for the proposed freight trains. The bridge would be demolished and replaced with a new structure.</p> <p>The new structure would be 2.9 metres higher than the existing bridge and would be constructed from reinforced concrete with abutments faced with concrete panels.</p>	<p>Demolition—The proposal would result in the loss of the bridge, which has been identified as a vanishing characteristic of the wider heritage landscape.</p> <p>Addition of new fabric—The fabric that would be used in the new bridge would not be reflective of the material that it would replace. Opportunities to re-use salvaged material would be considered during detailed design. Further detail on the urban design of the bridge, including photomontages of the new structure is provided in Technical Paper 10.</p>	<p>Viewshed—The viewshed of the bridge is across all cardinal directions. The new bridge would raise the viewpoint over the surrounding streetscapes by approximately 2.9 metres. In addition to changing views from the bridge, views to the bridge would be altered. The new bridge would sit above the surrounding landscape and become a prominent feature; however, as the surrounding streetscapes have not been identified as a sensitive heritage area, the impact would be negligible.</p> <p>Aesthetic—The design of the bridge is a key component of its heritage significance. Its demolition would have a major impact on this.</p>	<p>The proposal would modify the existing track and associated overhead structures to a sufficient height and width to support the safe running of double-stacked freight trains.</p> <p>The proposed demolition of the bridge would enable double-stacked freight trains to pass through the yard. At its current dimensions, it does not have sufficient clearance for the intended outcomes of the proposal.</p> <p>As outlined in Chapter 6 of the EIS, the construction of a new road bridge was selected as the preferred option as it performed better in comparison to a track lowering solution (which would have avoided the demolition of the bridge). This included safety, drainage/flooding, operational (including future proofing) and constructability outcomes.</p> <p>The proposal would have a major impact on the heritage significance of the Kemp Street bridge.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>
<p>Junee Railway Station, Yard, and Locomotive Depot</p> <p>Significance—State</p>	<p>The existing footbridge does not provide sufficient vertical clearance for the proposed freight trains. The footbridge would be demolished and not replaced.</p>	<p>Demolition—The proposal would result in the loss of the footbridge, which is identified as a vanishing characteristic of</p>	<p>Vibration—During construction, vibration-intensive works may occur within safe working distances, such as</p>	<p>The proposal would modify the existing track and associated overhead structures to a sufficient height and width to support the safe running of double-stacked freight trains.</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
<p>Listings:</p> <ul style="list-style-type: none"> SHR 01173 Multiple Junee LEP 2012 listings, refer to Table 4.2 ARTC and TfNSW s170 4280760 <p>The details of this heritage item are in Chapter 4.3.16 and its significance is discussed in Chapter 4.5.1.</p>	<p>Proposed works to the yard clearances would include:</p> <ul style="list-style-type: none"> slewing a section of the railway track for approximately 150 metres removal of existing ballast and replacement with new material to a depth of no less than 200 millimetres modification to existing signalling gantry. <p>Temporary site compounds and material laydowns would be located within the yard away from the station building and platform.</p> <p>Signalling adjustments would require alterations to existing overhead wiring within the station curtilage.</p>	<p>the wider heritage landscape.</p> <p>The footbridge demolition would also directly impact a small area of the platform where the footbridge footings would be removed.</p> <p>Addition of new fabric—The proposed alterations to overhead wiring within the station curtilage would not impact the heritage items if installed in an unobtrusive manner.</p> <p>Accidental impact—The proposal has the potential to accidentally impact heritage items located in close proximity to the works, including:</p> <ul style="list-style-type: none"> the station building the platform the refreshment rooms. <p>The likelihood of accidental impact to these items can be mitigated in accordance with the procedures discussed in Chapter 7.1.</p>	<p>vibratory compaction. This has assumed a more stringent criterion (3 mm/s), noting that heritage buildings should not be assumed as being structurally unsound, and that these structures would typically be exposed to high vibration levels on a daily basis (due to the movement of trains). Mitigation measures have been identified to manage these risks. This includes the selection of equipment and construction methods, pre-construction condition surveys and monitoring of these structures, where risk remains.</p> <p>Viewshed—The viewshed of the group is largely concentrated within the yard and its associated structures. The existing outlook would not be altered by the increased frequency and size of the double stacked trains. This would not be altered by the proposal.</p> <p>Aesthetic—The visual aesthetics of the group are associated with its historical and ongoing use for passenger and freight transport. This would be moderately impacted by</p>	<p>The proposed demolition of the footbridge would enable double-stacked freight trains to pass through the yard. At its current dimensions, it does not have sufficient clearance for the intended outcomes of the proposal.</p> <p>The removal of the disused bridge was selected as the preferred option as there is no longer the need for ongoing access and it would have a minimal physical impact on the station platforms. As outlined in Chapter 6 of the EIS, alternatives would have had an increased potential impact on the station platforms and buildings, or, in the case of reinstatement, would not meet current design requirements without substantial modifications.</p> <p>Gifting of the removed bridge would be further explored with Junee Shire Council prior to its removal.</p> <p>The proposal would have a moderate impact on the overall heritage significance of the Junee Railway Station, Yard, and Locomotive Depot. This takes into account the impacts to the following individual items:</p> <ul style="list-style-type: none"> Junee railway station (Junee LEP 2012 I8)—Minor Junee railway refreshment rooms (Junee LEP 2012 I10)—Negligible Footbridge (unregistered potential heritage item)—Major <p>Mitigation management measures are discussed in Chapter 7.</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
			<p>the proposal. The removal of the footbridge would alter the visual appearance and distribution of the railway structures through the yard. The proposed works to the yard clearances would be in keeping with the primary function of the yard and its visual display.</p> <p>Increase in train size— The heritage values of the group are intrinsically linked to the railway network and its use by passing railway traffic. Due to this, the adaptation of the existing railway corridor—whilst to support trains of an increased size—would not impact on the heritage values of the group.</p>	
<p>Junee Railway Station Moveable Relics</p> <p>Significance—State Listings:</p> <ul style="list-style-type: none"> SHR 01172 <p>The details of this heritage item are in Chapter 4.3.16 and its significance is discussed in Chapter 4.5.1.</p>	<p>The proposal would occur in close proximity to the moveable relics, which are stored across the railway precinct. There are no works proposed to the relics.</p>	<p>Accidental impact—The proposal has the potential to accidentally impact moveable relics located on the platform. The likelihood of accidental impact to the relics can be mitigated in accordance with the procedures discussed in Chapter 7.1.</p>	<p>Vibration—Moveable relics are susceptible to vibration occurring in close proximity. Vulnerable items (e.g. mirrors, glassware, ceramics) should be monitored during the proposal.</p> <p>Aesthetic—The visual aesthetic of the relics is associated with their connection to the railway station and intactness.</p>	<p>There are no proposed works to the Junee Railway Station moveable relics. The proposal would have a negligible impact on the relics.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>

Heritage item	Proposed works	Impact type		Summary statement
		Direct	Indirect	
			This would not be altered by the proposal.	
<p>Junee Heritage Conservation Area</p> <p>Significance—Local Listings:</p> <ul style="list-style-type: none"> Junee LEP 2012 C1 <p>The details of this heritage item are in Chapter 4.3.16 and its significance is discussed in Chapter 4.5.1.</p>	<p>The conservation area predominantly comprises of streetscapes located outside of the railway corridor, with a small portion that overlaps the railway tracks. Impacts to the conservation area are associated with proposed works to the railway yard. These works and the impact to individual heritage items are discussed above.</p>	-	<p>Viewshed and aesthetic—The visual characteristics of the conservation area are the intact nature of the streetscape. These overall characteristics would not be changed by the proposal. Moreover, the visual character of the conservation area is partially influenced by the presence of the railway corridor, as much of the streetscape was constructed following the establishment of the railway network. The railway station footbridge, while forming part of this intact area, is largely screened from view by intervening structures. As a result, its demolition would not be visually prominent in the context of the conservation area.</p>	<p>The proposal would have a negligible impact on the heritage significance of the conservation area. This impact is associated with proposed works to the Junee Railway Station, Yard, and Locomotive Depot, described above.</p> <p>Mitigation management measures are discussed in Chapter 7.</p>
Junee to Illabo clearances enhancement site				
There are no registered or potential heritage items within the enhancement site				

5.2 Impacts to other heritage items

There are 86 registered heritage items located within 200 metres of the 24 enhancement sites (Table 4.3). The following section discusses the impacts of the proposal on the heritage items located outside of the 24 discrete enhancement sites. These items would not be directly impacted by the proposal but have the potential to be impacted by effects caused by vibrations and changes to viewsheds.

5.2.1 Subsidence

No extensive subsurface excavation or tunnelling would be undertaken as part of the proposal. This is highly unlikely to result in subsidence; therefore, no identified heritage items would likely be impacted by subsidence.

5.2.2 Vibration

Damage to heritage structures from ground vibrations generally occurs when the structure has a similar natural vibration frequency as the frequency of the ground vibrations.⁵² Materials used in historic buildings—such as brickwork and stone—tend to be vulnerable to vibrations due to an inability to deform without rupturing.⁵³

All heritage items located within close proximity to the enhancement sites may be vulnerable to the effects of vibration from the proposal; however, heritage structures should not be assumed to be structurally unsound. To provide a conservative assessment of the potential impacts of vibration a stringent criterion—three millimetres per second—has been applied. For this, set distances have been identified for certain vibration-intensive construction work, being:

- radiant vibration from general construction impacts—20 metres.
- radiant vibration from bridge piling works—up to 15 metres. The upper limit is for vibratory piling.

Heritage items that are susceptible to impacts caused by vibration are identified in Table 5.3. Due to extensive coverage of conservation areas and the varying condition of items included within their curtilages, vibration impacts to items within heritage curtilages have not been individually assessed and would be managed according to standard construction practices (including monitoring, and condition assessments as required).

Impacts to heritage items would be mitigated in accordance with the Construction Noise and Vibration Management Plan (CNVMP). As there are few heritage items located within the safe work zone, these can be managed through general construction practices.

Ongoing operational impacts are largely restricted to lasting impacts caused by the vibration of passing trains. These are anticipated to be negligible, as items located in close proximity to the railway corridor are already subject to continuous vibration as a result of the railway track. Where there is risk of impact to identified heritage items during maintenance works, these would be considered according to the nature of the works and managed through standard mitigation measures.

Table 5.3 Vibration impacts to registered heritage items outside of the enhancement sites.

Enhancement site	Type of works	Registered heritage item	Vibration risk
Murray River bridge enhancement site	General construction impact	No registered heritage items	-
Albury Station pedestrian bridge and Albury Yard clearances enhancement sites	Piling, general construction impact	No registered heritage items	-

Enhancement site	Type of works	Registered heritage item	Vibration risk
Riverina Bridge enhancement site	General construction impact	No registered heritage items	-
Billy Hughes bridge enhancement site	General construction impact	No registered heritage items	-
Table Top Yard clearances enhancement site	General construction impact	No registered heritage items	-
Culcairn pedestrian bridge and Culcairn Yard clearances enhancement sites	General construction impact	'Culcairn Hotel' (Greater Hume LEP 2012 I43)	Yes
		'London Bank' (Greater Hume LEP 2012 I46)	Yes
		Culcairn Post Office (Greater Hume LEP 2012 I50)	Yes
		'Scholz's Corner' (Greater Hume LEP 2012 I51)	Yes
Henty Yard clearances enhancement site	General construction impact	'Doodle Cooma Arms' Hotel (Greater Hume LEP 2012 I73)	Yes
		Former Methodist Church (Greater Hume LEP 2012 I82)	Yes
Yerong Creek Yard clearances enhancement site	General construction impact	No registered heritage items	-
The Rock Yard clearances enhancement site	General construction impact	No registered heritage items	-
Uranquinty Yard clearances enhancement site	General construction impact	Memorial Avenue (Wagga Wagga LEP 2010 I304)	Yes
Pearson Street bridge enhancement site	General construction impact	No registered heritage items	-
Cassidy Parade pedestrian bridge, Edmondson Street bridge, Wagga Wagga Railway Station pedestrian bridge, and Wagga Wagga Yard clearances enhancement sites	Piling, general construction impact	South Wagga Wagga Primary School (Wagga Wagga LEP 2010 I97)	Yes
		Former Corner Store (Wagga Wagga LEP 2010 I262)	Yes
		House (Wagga Wagga LEP 2010 I303)	Yes
Bomen Yard clearances enhancement site	General construction impact	Bomen Station Master's Residence (Wagga Wagga LEP 2010 I9)	Yes
Harefield Yard clearances enhancement site	General construction impact	No registered heritage items	-
Kemp Street bridge enhancement site	Piling	No registered heritage items	-
Junee Station pedestrian bridge and Junee Yard clearances enhancement sites	General construction impact	No registered heritage items	-
Olympic Highway underbridge enhancement site	General construction impact	No registered heritage items	-
Junee to Illabo clearances enhancement site	General construction impact	No registered heritage items	-

At property treatment

The South Wagga Public School (Wagga Wagga LEP 2010 I97) may qualify for at-property acoustic treatment. Eligibility would be confirmed during detailed design and in consultation with the school. Should at-property treatment be required, this would be done in such a way to minimise heritage impacts, while preserving owner amenity. Any treatment would be sympathetic to the heritage values of the item and would be carried out in accordance with best practice heritage management (i.e. any alterations to the fabric of a structure should be immediately identifiable and reversible). If noise treatment within the heritage structure is required, the advice of a conservation architect would be sought.

5.2.3 Viewsheds and vistas

Significant views or references to significant view lines were not identified during the register searches (Section 4.2). As such, the following section discusses the general viewsheds associated with heritage items located within 200 metres of the enhancement sites.

The impact of the proposal on viewsheds and vistas is generally considered to be low to moderate. The railway stations have been built into and largely obscured by the surrounding urban landscape; whilst they do represent important civic buildings, they are often not visible from great distances away. Many of the nearby heritage items were established in conjunction with, or following the construction of, the railway network and have heritage values that have been influenced by the railway (e.g. increased wealth for more elaborate construction and design, increased population density, increased foot traffic). Where urban infill and density has not obscured the railway station precincts, items located within 200 metres of the railway corridor have views that wholly or partially overlook the precincts or the corridor. The existing outlooks from these nearby heritage items towards the railway corridor would not be altered by the increased frequency and size of the double stacked trains.

Impacts to viewsheds and vistas would occur to items and conservation areas located in areas where there are existing views to bridges and footbridges that would be demolished and replaced by taller structures. In these instances, these impacts are more concerned with aesthetics and general viewsheds, rather than specific view lines or corridors. These are discussed in Table 5.4. Other alterations made through the proposal would likely be absorbed into the general character of the railway corridor.

Viewsheds from heritage items located beyond the 200 metre zone are unlikely to be impacted, as many of the items do not have direct views to or from the railway corridor due to intervening structures or landscape features (Chapter 4.3.1). Where views to the railway corridor are present, the increased frequency and size of the double stacked trains would intensify the visual presence of the railway corridor, however, as they are not permanent fixed features of the landscape, this impact would be transitory.

Table 5.4 Impacts to viewsheds and vistas of registered heritage items outside of the enhancement sites

Enhancement site	Affected registered heritage items	Summary statement
Murray River bridge enhancement site	No registered heritage items	There are no heritage items in the vicinity that have views directed towards the bridge.
Albury Station pedestrian bridge enhancement site	Streetscape and heritage items associated with the Dean Street Conservation Area (Albury LEP 2010 C6)	Viewsheds to the Albury Railway Station and Yard Group (SHR 01073) would not be altered by the installation of the taller pedestrian bridge and more substantial ramp structure. Works are predominantly occurring within the railway station precinct and yard, which is obscured due to existing landscape screening and the distance of the heritage items from the enhancement site.

Enhancement site	Affected registered heritage items	Summary statement
	Streetscape and heritage items associated with the Hanel Street Conservation Area (Albury LEP 2010 C8)	<p>Viewsheds to the Albury Railway Station and Yard Group (SHR 01073) would be altered by the installation of the taller pedestrian bridge and more substantial ramp structure. The visual catchment to the footbridge would be increased to the north, east, and south.</p> <p>However, the impact of the increased views would be minor. This is due to the distance of the heritage items from the enhancement site and oblique view the majority of the heritage items have of the footbridge.</p>
	Streetscape and heritage items associated with the Kenilworth Street Conservation Area (Albury LEP 2010 C9)	<p>Viewsheds to the Albury Railway Station and Yard Group (SHR 01073) would not be altered by the installation of the taller pedestrian bridge and more substantial ramp structure. The visual catchment to the pedestrian bridge is limited due to existing road barrier structures.</p> <p>The impact of the increased views would be minor. The heritage items are situated immediately adjacent to the enhancement site, some with direct views of the footbridge.</p>
	Heritage items located on Smollett Street (e.g. Commercial Hotel and Cottage [SHR 00538], Albury Public School [Albury LEP 2010 I19, I114, I360])	<p>Viewsheds to the Albury Railway Station and Yard Group (SHR 01073) would not be altered by the installation of the taller pedestrian bridge and more substantial ramp structure.</p> <p>Works are predominantly occurring within the railway station precinct and yard, which is obscured due to existing landscape screening and the distance of the heritage items from the enhancement site.</p>
Culcairn pedestrian bridge enhancement site	Culcairn Hotel (Greater Hume LEP 2012 I43)	<p>Viewsheds to the Culcairn Railway Station and Yard Group (SHR 01126) would be altered by the removal of the footbridge. The footbridge is a prominent structure in a central location, and the views from the heritage item are directed towards it.</p> <p>The impact of the changed view would be minor. Although the removal of the footbridge would create an absence in the landscape, the views are currently predominantly screened by mature plantings.</p>
	'London Bank' (Greater Hume LEP 2012 I46)	<p>Viewsheds to the Culcairn Railway Station and Yard Group (SHR 01126) would be altered by the removal of the footbridge. The footbridge is a prominent structure in a central location and can be seen from the heritage item.</p> <p>The impact of the changed view would be moderate. The removal of the footbridge would create an absence in the landscape.</p>
	Culcairn Post Office (Greater Hume LEP 2012 I50)	<p>Viewsheds to the Culcairn Railway Station and Yard Group (SHR 01126) would be altered by the removal of the footbridge. The footbridge is a prominent structure in a central location and can be seen from the heritage item.</p> <p>The impact of the changed view would be moderate. The removal of the footbridge would create an absence in the landscape.</p>

Enhancement site	Affected registered heritage items	Summary statement
	'Scholz's Corner' (Greater Hume LEP 2012 I51)	<p>Viewsheds to the Culcairn Railway Station and Yard Group (SHR 01126) would be altered by the removal of the footbridge. The footbridge is a prominent structure in a central location, and the views from the heritage item are directed towards it.</p> <p>The impact of the changed view would be minor. Although the removal of the footbridge would create an absence in the landscape, the views are currently predominantly screened by mature plantings.</p>
Pearson Street bridge enhancement site	Former Docker Street Railway Gatehouse (Wagga Wagga LEP 2010 I257)	<p>Viewsheds to the Former Docker Street Railway Gatehouse (Wagga Wagga LEP 2010 I257) would not be altered by the removal and replacement of the Docker Street gantry.</p> <p>Whilst the gantry would be replaced with a taller structure, this could not change the existing view from the former railway gatehouse.</p>
Edmondson Street bridge and Wagga Wagga Station pedestrian bridge enhancement sites	South Wagga Public School (Wagga Wagga LEP 2010 I97)	<p>Viewsheds to the Edmondson Street bridge (Wagga Wagga Conservation Area, Wagga Wagga LEP 2010) and Wagga Wagga Railway Station and Yard Group (SHR 01279) would be altered by the installation of a taller bridge and pedestrian bridge.</p> <p>The height of the current Edmondson Street bridge is complementary within the level of the surrounding landscape and views. The new bridge would be raised above existing vegetation and surrounding landscape, allowing views to the elevated sections of the bridge and ramps. The new pedestrian bridge would extend the visual catchment to the north.</p> <p>The impact of the changed view would be minor. This is due to the oblique view the heritage item has of the enhancement sites.</p>
Bomen Yard clearances enhancement site	Bomen Station Master's Residence (Wagga Wagga LEP 2010 I9)	<p>Viewsheds to the Bomen Station Master's Residence (Wagga Wagga LEP I9) would not be altered by slewing, signage, or level crossing works.</p> <p>These works will predominantly occur at ground level. These impacts would be negligible.</p>
Kemp Street bridge, Junee Station pedestrian bridge, Junee Yard clearances and Olympic Highway underbridge enhancement sites	Junee Post Office (CHL ID 105500)	<p>Viewsheds to the Junee Railway Station, Yard, and Locomotive Depot (SHR 01173) would not be altered by slewing, ballast replacement, signal modification, or demolition of the footbridge.</p> <p>These works are predominantly occurring within the railway station precinct and yard, which is obscured from the view of the post office due to intervening structures and vegetation screening. As such, these impacts would be negligible.</p>

5.2.4 Curtilages

Impacts to the heritage environment from the proposal do not affect the curtilage of any of the registered items identified in this assessment. Impacts from the proposal—including the demolition of the Albury, Culcairn, Wagga Wagga, and Junee Station footbridges—would occur entirely within or entirely outside of the heritage curtilage for each item.

Unregistered potential heritage items (e.g. Kemp Street bridge, Yerong Creek Railway Station archaeological site) do not have established curtilages. However, unregistered potential heritage items that are included within conservation areas (e.g. Edmondson Street bridge) are technically included within this wider curtilage boundary. The Cassidy Parade and Brookong Avenue footbridge has no defined curtilage; its boundary and curtilage are essentially defined by the bridge structure itself. The demolition of the footbridge therefore would not specifically result in a change to a defined heritage curtilage, but would result in the requirement to remove the bridge from the Section 170 register.

5.3 Consistency with conservation management plans

SEAR 2 (c) required that the proposal be assessed for its consistency against conservation policies of any relevant conservation management plan.

Of the registered heritage items identified within the enhancements sites only the Albury Railway Station has a set of prepared conservation policies. These policies were set out in:

- Sheedy, D, 1990 *Albury Railway Station: A Heritage Assessment and Conservation Guidelines*, for the State Rail Authority of New South Wales.

Since the date of preparation of these conservation guidelines, substantial change has occurred at the railway station and its precinct, such that these guidelines are no longer relevant. The surrounding built environment has been substantially altered, and the guidelines refer to items no longer in existence. They also reference a management structure that is now out of date.

6 Cumulative impacts

Cumulative harm relates to the impact the proposed activity would have on the entire representative heritage and archaeological resource of Australia through the accumulation of multiple impacts over a period of time. The consideration of cumulative harm is a recent development. Prior to the implementation of heritage legislation in NSW in the 1970s (Chapter 2.1.2) and more broadly across the Commonwealth in the 1980s and 1990s (Chapter 2.1.1), an unknown quantity of heritage items, places and archaeological deposits were unsympathetically altered or lost through infrastructure construction, end-of-use demolition and other development.

6.1 Proposal impact

The following section discusses the level of impact to individual items and the overall cumulative impact the proposal would have on the wider heritage landscape.

A number of potential and registered items, and items located within the curtilages of other registered heritage items, have been proposed for demolition (Chapter 5). These items are discussed in the table below.

Table 6.1 Summary of proposed impacts.

Item name	Significance	Impact type	Level of impact
Albury rail bridge over the Murray River (known as Murray River bridge)	State	Direct—Alteration	Moderate
Albury Railway Station and Yard Group	State	-	Minor
<i>Albury Railway Station</i>	-	<i>Indirect—Vibration, etc.</i>	<i>Negligible</i>
<i>Signal boxes and huts</i>	-	<i>Direct—Aesthetics (north signal hut) and demolition (signal box 1a)</i>	<i>Major</i>
<i>Footbridge</i>		<i>Direct—Demolition</i>	<i>Moderate (possible)</i>
<i>Transshipment shed</i>	-	<i>Indirect—Vibration, etc.</i>	<i>Negligible</i>
<i>Railway worker's hut</i>	-	<i>Indirect—Vibration, etc.</i>	<i>Negligible</i>
<i>Railway turntable</i>	-	<i>Indirect—Vibration, etc.</i>	<i>Negligible</i>
<i>Remnant broad-gauge railway track archaeological site</i>	State (potential)	<i>Direct—Demolition</i>	<i>Major</i>
Street trees (Culcairn)	Local	Indirect—Vibration, etc.	Negligible
Culcairn Railway Station and Yard Group	State	-	Moderate
<i>Culcairn Railway Station</i>	-	<i>Indirect—Vibration, etc.</i>	<i>Negligible</i>
<i>Footbridge</i>	-	<i>Direct—Demolition</i>	<i>Major</i>
Henty Railway Station and Yard Group	State	-	Negligible
<i>Henty Railway Station</i>	-	<i>Indirect—Vibration, etc.</i>	<i>Negligible</i>
<i>Goods Shed</i>	-	<i>Indirect—Vibration, etc.</i>	<i>Negligible</i>
Yerong Creek Railway Station archaeological site	Local (potential)	Direct—Demolition	Major
The Rock Station	State	Indirect—Vibration, etc.	Negligible
Uranquinty silos	Local	Indirect—Vibration, etc.	Negligible

Item name	Significance	Impact type	Level of impact
Wagga Wagga Showground, 'Kyeamba Smith' Hall, and grandstand	Local	Indirect—Vibration, etc.	Negligible
Cassidy Parade and Brookong Avenue footbridge	s170 (State potential)	Direct—Demolition	Major
Edmondson Street bridge	Local	Direct—Demolition	Major
Wagga Wagga Railway Station and Yard Group	State	-	Minor
<i>Wagga Wagga Railway Station</i>	-	<i>Indirect—Vibration, etc.</i>	<i>Negligible</i>
<i>Station Master's residence</i>	-	<i>Indirect—Vibration, etc.</i>	<i>Negligible</i>
<i>Footbridge ('Mothers Footbridge')</i>	-	<i>Direct—Demolition</i>	<i>Negligible</i>
<i>Former Best Street railway gatehouse</i>	-	<i>Indirect—Vibration, views, etc.</i>	<i>Negligible</i>
Junee Railway Station, Yard, and Locomotive Depot Group	State	-	Moderate
<i>Junee Railway Station</i>	-	<i>Indirect—Vibration, etc.</i>	<i>Negligible</i>
<i>Junee Railway refreshment rooms</i>	-	<i>Indirect—Vibration, etc.</i>	<i>Negligible</i>
<i>Footbridge</i>	-	<i>Direct—Demolition</i>	<i>Major</i>
Junee Railway Station moveable relics	State	Indirect—Vibration, etc.	Negligible
Kemp Street bridge	Local (potential)	Direct—Demolition	Major

Cumulatively, these items represent approximately 140 years of railway heritage in NSW. They are associated with the establishment of the railway stations, the agricultural and commercial purposes of the railway network, and vehicle and pedestrian access over and within the railway precincts. Overall, the proposal would have a minor impact on the heritage items located within the enhancement sites and the significance of the NSW railway network more broadly.

However, the proposal would have a major impact on a particular subset of these heritage items. The proposed works to demolish the footbridges at Albury, Culcairn and Junee Stations, the Edmondson Street and Kemp Street bridges (potential unregistered items), and the Cassidy Parade and Brookong Avenue footbridge have the potential to cause major cumulative impact to the bridges and footbridges of the NSW railway. These items have all been identified as either having their own individual heritage values or contributing to the heritage value of the landscape in which they are situated (Section 4.5).

- During a 1996 study of the railway footbridges located in NSW, 36 Warren truss footbridges were identified.⁵⁴ Of this number, approximately 10 (equalling 27.8 per cent) have been subsequently demolished. As a result, the footbridges at Albury, Culcairn and Junee Stations represent 36.1 per cent of the original assemblage of 36 footbridges and 11.5 per cent of the remaining examples.
- The design used for the Edmondson Street and Kemp Street bridges has been identified in one other railway bridge in NSW.⁵⁵ It is unknown whether this design was a standard used across the NSW railway network or whether it was a specialised design implemented in a select number of locations. It is unknown how many other bridges that share this design are still extant.
- The Cassidy Parade and Brookong Avenue footbridge has been identified as a one-of-a-kind example.⁵⁶ There are no comparable footbridges known to exist in NSW.

The Wagga Wagga footbridge ('Mothers Footbridge') has been assessed as not having heritage value. The proposed works to the footbridge would not contribute to the cumulative impact of the proposal.

With regards to the ARTC Section 170 register, there are 10 items located within the proposal that are identified on the register. Nine of these items would be subject to direct impact. These items largely consist of the railway station precincts, although several individual items are also recognised. One Section 170 item is proposed for demolition (the Cassidy Parade and Brookong Avenue footbridge), whilst five items located within broader Section 170 citations are proposed for demolition (the footbridges located at the Albury, Culcairn, Wagga Wagga and Junee Stations, and signal box 1a at Albury Station). Cumulatively, these items represent 5.5 per cent of the total ARTC Section 170 register. Due to the rarity of particular items (e.g. the Cassidy Parade and Brookong Avenue footbridge and signal box 1a at Albury Station), the proposal has the potential to cause minor cumulative impact to the representativeness of the total Section 170 register.

In summary, the proposal would have:

- an overall minor impact on heritage items located within the enhancement sites
- a major impact on the subset group of bridges and footbridges
- a minor impact on the representativeness of the ARTC Section 170 register

6.2 Nearby projects

Projects in the vicinity of the proposal considered to have the potential for cumulative impacts with the proposal are discussed in Table 6.2 and shown in Figure 6.1. The cumulative impact of the nearby proposals is low, as many are being undertaken away from heritage items.

Table 6.2 Projects in the vicinity of the proposal.

Project	Location	Impact
Inland Rail—Tottenham to Albury (T2A)	Adjacent to Murray River bridge enhancement site	<p>The Inland Rail T2A proposal concerns upgrading 350 kilometres of railway track and the existing infrastructure between Tottenham and Albury.</p> <p>A number of heritage items are located in close proximity to the project area and there may be additional unidentified heritage items within this area. The heritage impact assessments undertaken as part of the planning process are ongoing and currently not publicly available.</p> <p>The project area does not overlap with the proposal assessed in this SoHI. Therefore, there are no cumulative impacts to the registered and unregistered potential heritage items discussed in this SoHI.</p>
Thurgoona link road	Adjacent to Billy Hughes bridge enhancement site	No heritage items would be impacted
Nexus industrial precinct	Adjacent to Billy Hughes bridge enhancement site	<p>The Nexus Industrial Precinct concerns the subdivision and development of a variety of business sites within a 187 hectare area.</p> <p>A number of heritage items are located in close proximity to the project area and there may be additional unidentified heritage items within this area. The heritage impact assessments undertaken as part of the planning process are ongoing and currently not publicly available.</p>

Project	Location	Impact
		The project would not have an impact on the Billy Hughes bridge enhancement site. No registered or unregistered potential heritage items have been identified within this enhancement site. Therefore, there are no cumulative impacts to the registered and unregistered potential heritage items discussed in this SoHI.
Jindera Solar Farm	About 10 kilometres northwest of Table Top Yard clearances enhancement site	No heritage items would be impacted
Glenellen Solar Farm	About 14 kilometres northwest of Table Top Yard clearances enhancement site	No heritage items would be impacted
Walla Walla Solar Farm	About 6 kilometres southwest of Culcairn Yard clearances enhancement site	No heritage items would be impacted
Culcairn Solar Farm	About 10 kilometres southwest of Culcairn Yard clearances enhancement site	No heritage items would be impacted
Uranquinty Solar Farm	About 14 kilometres northwest of Uranquinty Yard clearances enhancement site	No heritage items would be impacted
Sandy Creek Solar Farm	Directly north of Uranquinty Yard clearances enhancement site	No heritage items would be impacted
Gregadoo Solar Farm	About 12 kilometres east of Uranquinty Yard clearances enhancement site	No heritage items would be impacted
Solar farm (five MW)—Uranquinty	About 1.5 kilometres south east of Uranquinty Yard clearances	No heritage items would be impacted
Solar farm (five MW)—Bomen	About 800 metres south of Bomen Yard clearances	No heritage items would be impacted
Wagga Wagga Special Activation Precinct	Surrounding Bomen Yard clearances enhancement site	<p>The Wagga Wagga Special Activation Precinct would expand on the existing Bomen Business Park.</p> <p>Heritage assessments for the project area identified:</p> <ul style="list-style-type: none"> • eight Aboriginal heritage sites that may be impacted • one Aboriginal Place that may be impacted • two historical heritage items (Bomen Railway Station [SHR 01093] and Bomen Station Master's Residence (Wagga Wagga LEP 2010 I9) that may be impacted • two unidentified heritage items • the probability that further unidentified heritage values may be impacted <p>The type and degree of impacts to these items would be determined by area-specific impact assessments as development progresses.</p> <p>The Bomen Yard clearances enhancement site is inclusive of the Bomen Railway Station (SHR 01093). It is unknown what</p>

Project	Location	Impact
		impact the Wagga Wagga Special Activation Precinct would have on the Bomen Station. However, as the proposal would have no impact on the Bomen Station, there would be no cumulative impact.
Riverina Intermodal Freight and Logistics Hub	About 1 kilometre north of the Bomen Yard clearances enhancement site	The Riverina Intermodal Freight and Logistics Hub is included within the Wagga Wagga Special Activation Precinct. Heritage impacts that may be associated with the project area discussed as part of the Wagga Wagga Special Activation Precinct. The Riverina Intermodal Freight and Logistics Hub is 1 kilometres from the Bomen Railway Station (SHR 01093). However, as the proposal would have no impact on the Bomen Station, there would be no cumulative impact.
Olympic Highway intersection upgrades	About 3 kilometres to the west of Bomen Yard clearances. About 4 kilometres north of Wagga Wagga Station and Yard clearances	No heritage items would be impacted
EnergyConnect (NSW—Eastern Section)	About 7 kilometres south of Wagga Wagga Station pedestrian bridge and yard clearances enhancement sites About 3 kilometres to the south west of Uranquinty Yard clearances.	The EnergyConnect project concerns installing a new 900 kilometre electricity transmission line between Wagga Wagga, NSW, and Robertstown, South Australia, with a connection to Red Cliffs, Victoria. A number of heritage items are located in close proximity to the project. Heritage items that would be directly impacted (full or partial) by EnergyConnect (NSW—Eastern Section) are located approximately 100 kilometres to the west of Uranquinty. These items relate to historical homesteads (and structures), burials, and historical survey marker trees. The project area does not overlap with the proposal assessed in this SoHI. Therefore, there are no cumulative impacts to the registered and unregistered potential heritage items discussed in this SoHI.
HumeLink	About 14 kilometres south of Wagga Wagga Station and Yard clearances About 18 kilometres to the south west of Uranquinty Yard clearances.	HumeLink involves the construction of a new transmission line that would connect Wagga Wagga, Bannaby, and Maragle. The heritage impact assessment for this project is ongoing and is currently not publicly available. The impact of this project is unknown. It does not directly overlap with the proposal assessed in this SoHI.
Junee Station upgrade	At Junee Railway pedestrian bridge and Yard clearances enhancement sites	The Junee Station upgrades concern improving a number of existing facilities, installing new amenities, and repairing and restoring heritage aspects of the station building. This work would occur within the Junee Railway Station, Yard, and Locomotive Depot (SHR 01173) curtilage. The heritage impact assessments undertaken as part of the planning process are currently not publicly available.

Project	Location	Impact
		The impact of the project is unknown. It does overlap with the proposal assessed in this SoHI, however, the majority of the works are concerned with the internal spaces of the station building and with the forecourt. There is the potential for cumulative impact to the Junee Station, however, this is likely to be minor.
Junee to Griffith (J2G) line upgrade	Adjacent to Junee Railway Pedestrian Bridge and Yard clearances enhancement site	<p>The J2G proposal concerns upgrading 175 kilometres of railway track and the existing infrastructure between Junee and Griffith.</p> <p>A number of heritage items are located in close proximity to the project area.</p> <p>Heritage assessments for the project area identified the project would have minimal impact, as works would be contained to the existing railway corridor and no heritage items would be subject to direct works. Although it is in close proximity to the Junee Railway Station, Yard, and Locomotive Depot (SHR 01173), it does not overlap with the proposal assessed in this SoHI, so there would be no cumulative impact.</p>
Illabo Solar Farm	About 6 kilometres southeast of Junee to Illabo clearances enhancement site	<p>The Illabo Solar Farm concerns the installation of solar energy infrastructure across an area of 210 hectares.</p> <p>The preliminary heritage assessment did not identify any registered heritage items within the study area, but did note additional unregistered potential heritage items may be present and further assessment is required.</p> <p>The project area does not overlap with the proposal assessed in this SoHI. Therefore, there are no cumulative impacts to the registered and unregistered potential heritage items discussed in this SoHI.</p>
Inland Rail—Illabo to Stockinbingal	Adjacent to Junee to Illabo clearances enhancement site	No heritage items would be impacted
Inland Rail—Grade separating road interfaces	Within and adjacent to Junee and Illabo clearances enhancement site, north of Illabo	<p>This proposal includes the grade separation of the Olympic Highway at Harris Gates. The impact assessment for this proposal (including heritage) is ongoing and is currently not publicly available. The impact of this proposal is unknown.</p> <p>However, there are no registered heritage items within the study area defined for the proposal.</p>

The majority of nearby projects would not impact any identified heritage items or values, however, several projects have the potential to cause impacts to both registered and unregistered potential heritage items. The level of these impacts is unknown, as assessments are either still ongoing or information is not publicly available. It is unknown what the cumulative impact of these projects and those that would be caused by proposal would have on the wider heritage landscape.

However, where nearby projects may impact known heritage values, they largely do not overlap with those caused by the proposal. In one instance, Junee Railway Station, Yard, and Locomotive Depot (SHR 01173), would be the subject of impacts from the Junee Station and the J2G upgrade projects, in addition

to impacts that would be caused by the proposal. The impact of the J2G upgrade project has been assessed as being minimal, as the works would be occurring north of the identified heritage curtilage. The impact of the Junee Station upgrade project is unknown, however, largely concerns the internal spaces of the station building and forecourt, whilst the proposal is concentrated within the yard. Although there is potential for cumulative impact to the Junee Railway Station, Yard, and Locomotive Depot (SHR 01173), the mitigation measures outlined in Chapter 7 would manage the impacts that would be caused by the proposal. As a result, the cumulative impacts would likely be minor.

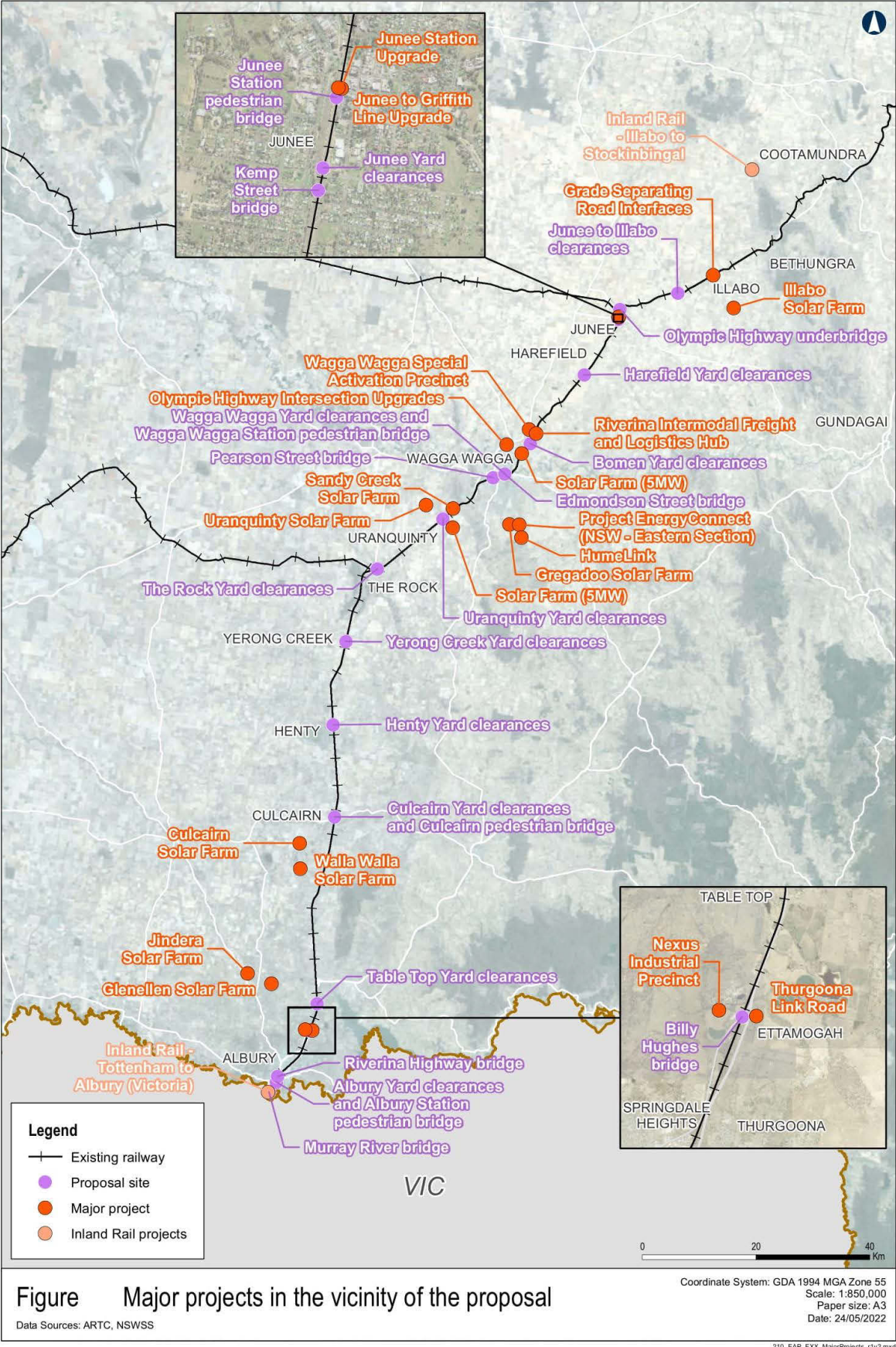


Figure 6.1 Major projects in the vicinity of the proposal

7 Mitigation and management measures

7.1 Approach to mitigation and management

Environmental management for the proposal would be undertaken in accordance with the approach outlined in Chapter 27 and Appendix H of the EIS.

This would include a heritage sub-plan, prepared as part of the Construction Environmental Management Plan (CEMP). This sub-plan should comply with the proposal conditions of approval, relevant regulatory requirements, and ARTC heritage management plans and/or agreements as applicable. The sub-plan would detail the measures to be implemented during construction to minimise the potential for impacts (such as through the selection of equipment or alternative construction methods), manage heritage values, and outline the procedures for any unexpected finds in accordance with the relevant ARTC protocols. The sub-plan would include (but is not limited to) the following management measures for impacts to historical heritage values:

- requirements for site induction, training, heritage monitors, inspections, audits, corrective actions, notification and classification of environmental incidents, record keeping, monitoring, and performance objective for handover on completion of works
- heritage management actions to be undertaken by suitably qualified persons
- specific requirements for items that cannot be avoided during construction
- an heritage unexpected finds protocol, including assessment by a suitably qualified person, notification obligations under the applicable heritage legislation, and steps to be followed when if potential burials or human skeletal material is encountered, including notification obligations to NSW Police Force
- any other requirements necessary to comply with conditions of approval, subsequent approvals, regulatory requirements, or ARTC heritage management requirements.

7.2 Summary of mitigation and management measures

The mitigation measures to manage impacts to historical heritage from the proposal are outlined in Table 7.1. Mitigation measures as outlined in Technical Paper 6—Construction noise and vibration provides mitigation concerning vibration risk.

Table 7.1 Mitigation measures

Impact type	Mitigation management measure	Phase
Demolition or alteration	The condition of the original top bracing framework of the Albury rail bridge over the Murray River (SHR 01020) would be investigated during detailed design to determine if this material can be re-purposed in the modified structure. If this cannot be re-purposed, a suitably qualified heritage professional would be consulted concerning the design and installation of the new bracing framework to ensure that it is appropriate to the existing fabric and style of the bridge.	Detailed design
Demolition or alteration	The relocation of signal box 1a in the Albury Railway Station and Yard (SHR 01073) would be further investigated during detailed design and documented through a Statement of Heritage Impact. If practicable, the new location would be identified in consultation with a heritage specialist and positioned in the	Detailed design

Impact type	Mitigation management measure	Phase
	yard so that maintains its proximity and visual relationship with the Albury Station, signal box 1b, and tracks.	
Demolition or alteration	<p>Where possible, the gifting of elements of the following items for the purpose of reuse elsewhere would be investigated during detailed design:</p> <ul style="list-style-type: none"> pedestrian bridge (footbridge) at Culcairn Railway Station and Yard Group (SHR 01126) pedestrian bridge (footbridge) at Junee Railway Station, Yard and Locomotive Group (SHR 01173). <p>The gifting would be subject to the relevant council making appropriate arrangements to receive and site the elements of the pedestrian bridge.</p>	Detailed design
Demolition or alteration	<p>The re-purposing of salvaged materials within the design of new road bridges for the following unregistered potential heritage items would be investigated during detailed design:</p> <ul style="list-style-type: none"> Edmondson Street bridge—red brick Kemp Street bridge—red brick and street lights. 	Detailed design
Non-Aboriginal heritage impacts	<p>Detailed design and construction planning would seek to identify refinements that further minimise impacts on heritage items and areas of archaeological potential as far as reasonably practicable. This includes:</p> <ul style="list-style-type: none"> remnant broad-gauge railway track archaeological sites in the Albury Railway Station and Yard Group (SHR 01073) the Yerong Creek Railway Station archaeological site. 	Detailed design
Heritage interpretation	<p>A heritage interpretation strategy for non-Aboriginal heritage would be prepared. This would provide a framework for interpreting the heritage items (listed and unregistered potential) impacted by the proposal, set out the key interpretative themes and identify communication strategies.</p> <p>The strategy would include interpretation requirements for specific parts of the proposal, and incorporation into the urban design of the new structures, particularly where heritage items are proposed to be removed or archaeological sites are proposed to be excavated. This includes:</p> <ul style="list-style-type: none"> new structural components at the Albury rail bridge over the Murray River (SHR 01020) new pedestrian bridge in the Albury Railway Station and Yard Group (SHR 01073) removed footbridge in the Culcairn Railway Station and Yard Group (SHR 01126) new pedestrian bridge at the Cassidy Parade and Brookong Avenue site new Edmondson Street bridge new pedestrian bridge in the Wagga Wagga Railway Station and Yard Group (SHR 01173) new Kemp Street bridge removed footbridge in the Junee Railway Station, Yard and Locomotive Depot Group (SHR 01173). <p>These may include approaches such as interpretive signage at heritage items that have been removed or excavated, historical/artefact displays at local museums or visitor centres, and online media about heritage items and history in the vicinity of the proposal.</p> <p>The strategy would be prepared with regard to <i>Interpreting Heritage Places and Items: Guidelines</i> (NSW Heritage</p>	Detailed design

Impact type	Mitigation management measure	Phase
	Office, 2005), and the NSW Heritage Council's <i>Heritage Interpretation Policy</i> (NSW Heritage Office, 2005).	
Demolition or alteration	<p>Archival photographic recording of buildings to be removed and/or altered would be carried out prior to removal in accordance with <i>Photographic Recording of Heritage Items Using Film or Digital Capture</i> (Heritage Council of NSW, 2006) and <i>How to prepare archival records of heritage items</i> (NSW Heritage Office, 1998a) at the following sites:</p> <ul style="list-style-type: none"> Albury rail bridge over the Murray River (SHR 01020) external lever system adjacent to the North Signal Hut in the Albury Railway Station and Yard Group (SHR 01073) pedestrian bridge (footbridge) in the Albury Railway Station and Yard Group (SHR 01073) Signal box 1a in the Albury Railway Station and Yard Group (SHR 01073) slewed track in the Albury Railway Station and Yard Group (SHR 01073) pedestrian bridge (footbridge) in the Culcairn Railway Station and Yard Group (SHR 01126) slewed track in the Culcairn Railway Station and Yard Group (SHR 01126) slewed track in the Henty Railway Station and Yard Group (SHR 01169) Cassidy Parade and Brookong Avenue footbridge (ARTC s170 ID 4280661) Edmondson Street bridge in the Wagga Wagga Conservation Area (Wagga Wagga LEP 2010) Wagga Wagga (Mothers) footbridge in the Wagga Wagga Railway Station and Yard Group (SHR 01173) slewed track in the Wagga Wagga Railway Station and Yard Group (SHR 01173) slewed track in the Bomen Railway Station (SHR 01093) Kemp Street bridge Pedestrian bridge (footbridge) in the Junee Railway Station, Yard, and Locomotive Depot (SHR 01173). 	Pre-construction
Disturbance of archaeological material	<p>Where impacts cannot be avoided on areas of archaeological potential, test excavation would be carried out prior to the commencement of works that disturb these areas in accordance with the ARD. Any items would be salvaged. Test excavation would be carried out by an appropriately qualified Excavation Director, in accordance with the NSW Heritage Council's Excavation Director criteria.</p> <p>This applies to:</p> <ul style="list-style-type: none"> Remnant broad gauge railway track archaeological sites in the Albury Railway Station and Yard Group (SHR 01073); and the Yerong Creek Railway Station archaeological site. 	Pre-construction
Accidental Impact	<p>Exclusion zones for retained heritage items or structures within the proposal site will be marked on the environmental control maps, site plans and avoided.</p> <p>Prior to the commencement of construction, retained heritage items will be inspected by a suitably qualified person to demarcate the exclusion measures (such as fencing). Items vulnerable to vibration or damage associated with the Junee Railway Station Moveable Relics (SHR 01172) would be</p>	Pre-construction and construction

Impact type	Mitigation management measure	Phase
	temporarily relocated or alternative measures implemented to avoid impact. Exclusion measures would be inspected regularly during construction to ensure protection of these heritage items.	
Unexpected Finds	If at any time during the proposal, any items of potential historical heritage significance or human remains are discovered they would be managed in accordance with the heritage unexpected finds protocol. The heritage unexpected finds protocol would be included in the heritage sub-plan of the CEMP and would detail notification obligations to the NSW Police and Heritage NSW according to the nature of the unexpected find.	Construction

7.3 Predicted effectiveness of the mitigation and management measures proposed

The mitigation measures specified above are anticipated to reduce the likelihood and/or consequence of the identified risk. Where an identified issue or risk is reduced but not eliminated, it would be assessed further through all project stages to determine if further action is required.

During development of the design, impacts on listed and potential heritage items were avoided where reasonably practical. The detailed design phase would involve preparing an urban design and landscape plan by a suitable qualified consultant to guide urban design responses for key infrastructure (e.g. Edmondson Street and Kemp Street bridges, and Albury and Wagga Station pedestrian bridges) and landscaping approaches for the proposal. It would build upon urban design and landscaping objectives and opportunities. New items within the corridor would be designed to be sympathetic with heritage items in the near area. This process would include review of similar materials and styles so that new elements do not detract from the general visual amenity of the surrounding heritage items. By doing so, this would reduce the overall impact of change within and adjacent to the curtilages of heritage items. Discussion of these design options are presented in Technical Paper 10—Landscape and Visual.

Where direct impacts cannot be avoided, the measures provided in Table 7.1 have been identified as best-practice approaches to managing potential impacts. Measures such as archival recording and public interpretation of heritage values serves as a means of recording and transmitting those values to the public.

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Appendices

Appendix A—Survey photographs

Appendix B—Archaeological research design

TECHNICAL PAPER 03

Non-Aboriginal heritage

Appendix A Survey photographs

ALBURY TO ILLABO ENVIRONMENTAL IMPACT STATEMENT



Survey Photographs

Murray River Bridge Enhancement Site



Figure 1 The Murray River Underbridge (SHR 01020).



Figure 2 The underside of the bridge.

Albury Railway Station Shared User Bridge Enhancement Site and Albury Yard Clearances Enhancement Site



Figure 3 The Albury Railway Station (SHR 01073).



Figure 4 The Albury North Signal Hut (Albury City LEP 2010 I207) and the two extensions to the rear.



Figure 5 The timber work shows signs of deterioration.

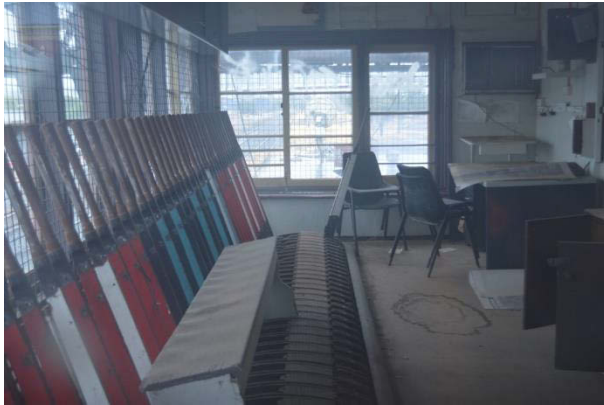


Figure 6 The switching gear housed in the operating level and its external connection to the railway tracks appears to be intact.



Figure 7 The pedestrian footbridge (Albury City LEP 2010 I207).



Figure 8 The Albury South Signal Hut.



Figure 9 The internal space of the transshipment shed.



Figure 10 Albury Signal Box 1a.



Figure 11 Albury Signal Box 1b.



Figure 12 Albury Signal Box 2a.



Figure 13 Albury Signal Box 2b.

Culcairn Railway Station Pedestrian Bridge Enhancement Site and Culcairn Yard Clearances Enhancement Site



Figure 14 The Culcairn Railway Station (SHR 01126).



Figure 15 The Station Master's residence.



Figure 16 The pedestrian footbridge.

Henty Yard Clearances Enhancement Site



Figure 17 The Henty Railway Station (SHR 01169).



Figure 18 The Goods Shed.



Figure 19 The track side platform has deteriorated.



Figure 20 The loading platform at the northern end.



Figure 21 The roof truss.



Figure 22 The wire mesh storage cage.



Figure 23 Two of the four sliding doors. Note the slight difference in construction and castors.



Figure 24 The original corrugated iron roof sheets have been stored beneath the loading platform.



Figure 25 The original corrugated iron sheets have been stamped with a trademark.

Yerong Creek Yard Clearances Enhancement Site



Figure 26 The exposed brick footings of the old railway station.



Figure 27 The original 1880 platform.

The Rock Yard Clearances Enhancement Site



Figure 28 The Rock Railway Station (SHR 01268).



Figure 29 The gantry crane.



Figure 30 The Station Master's residence.



Figure 31 A sample of the buildings located on the main street and included in The Rock Urban Conservation Area (Lockhart LEP 2012 C2).

Uranquinty Yard Clearances Enhancement Site



Figure 32 The Uranquinty Silos (Wagga Wagga LEP 2010 I296).

Pearson Street Bridge Enhancement Site



Figure 33 The 'Neil Skeers' Grandstand and adjoining shed, located within the Wagga Wagga Showground (Wagga Wagga LEP 2010 I246).



Figure 34 The 'Kyeamba Smith' Hall, located within the Wagga Wagga Showground (Wagga Wagga LEP 2010 I246).

Cassidy Parade and Brookong Avenue Shared User Bridge Enhancement Site



Figure 35 The Cassidy Parade and Brookong Avenue pedestrian footbridge (ARTC s170 ID 4280661).



Figure 36 The main building of the former Best Street Railway Gatehouse (Wagga Wagga LEP 2010 I254).



Figure 37 The external water closet and laundry of the former Best Street Railway Gatehouse (Wagga Wagga LEP 2010 I254).

Edmondson Street Bridge Enhancement Site, Wagga Wagga Railway Station Shared User Bridge Enhancement Site, and Wagga Wagga Yard Clearances Enhancement Site



Figure 38 The Edmondson Street bridge at Wagga Wagga.



Figure 39 The Wagga Wagga Railway Station (SHR 01279).



Figure 40 'Mother's Bridge' footbridge within the Wagga Wagga Railway Station yard.

Bomen Yard Clearances Enhancement Site



Figure 41 The Bomen Railway Station (SHR 01093).

Kemp Street Bridge Enhancement Site



Figure 42 The Kemp Street Bridge at Junee.

Junee Railway Station Pedestrian Bridge Enhancement Site and Junee Yard Clearances Enhancement Site



Figure 43 The Junee Railway Station (right) and refreshment rooms (left) (SHR 01173).



Figure 44 The Junee Locomotive Depot/Roundhouse.



Figure 45 The pedestrian footbridge.



Figure 46 The additional platform.



Figure 47 The Junee North Signal Hut.



Figure 48 The Junee South Signal Hut.



Figure 49 The two brick buildings in the southwestern edge of the Junee Railway Station yard.



Figure 50 Both buildings are in poor condition, with evidence of vandalism and squatting.



Figure 51 The office (now museum) at the Junee Locomotive Depot/Roundhouse.



Figure 52 Another office building at the Junee Locomotive Depot/Roundhouse.



Figure 53 A two-winged brick building located northwest of the Junee Locomotive Depot/Roundhouse.



Figure 54 A house (now an office) located northwest of the Junee Locomotive Depot/Roundhouse.

Appendix B

Archaeological Research Design

TECHNICAL PAPER 03

Non-Aboriginal heritage

Appendix B Archaeological research design

ALBURY TO ILLABO ENVIRONMENTAL IMPACT STATEMENT





Inland Rail—Albury to Illabo

Historical Archaeological Research Design

2-0008-210-EAP-00-RP0005

Report prepared for ARTC

July 2021

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1 Introduction

The Australian Government has committed to delivering a significant piece of national transport infrastructure by constructing a high performance and direct interstate freight rail corridor between Melbourne and Brisbane, via central-west New South Wales (NSW) and Toowoomba in Queensland. Inland Rail is a major national project that would enhance Australia's existing national rail network and serve the interstate freight market.

The Inland Rail route, which is about 1,700 kilometres long, would involve:

- using the existing interstate rail line through Victoria and southern NSW;
- upgrading about 400 kilometres of existing track, mainly in western NSW; and
- providing about 600 kilometres of new track in northern NSW and south-east Queensland.

Inland Rail has been divided into 13 projects, seven of which are located in NSW. Each of these projects can be delivered and operated independently with tie-in points on the existing railway.

Australian Rail Track Corporation Ltd (ARTC) ('the proponent') is seeking approval to construct and operate the Albury to Illabo section of Inland Rail ('the proposal').

The proposal is Critical State Significant Infrastructure and is subject to approval by the NSW Minister for Planning and Public Spaces under Division 5.2, Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). WSP Australia Pty Ltd (WSP), on behalf of ARTC, has engaged GML to prepare a Statement of Heritage Impact (SoHI) for the project as part of the environmental impact statement (EIS) for the proposal. The EIS has been prepared to support the application for approval of the proposal, and address the environmental assessment requirements of the Secretary of the NSW Department of Planning, Industry and Environment (the SEARs), dated 9 September 2020. A requirement of the SEARs is for the SoHI to include an Archaeological Research Design (ARD) to provide a methodology to guide management of the historical archaeological resource during works.

1.1 The Proposal

The proposal involves enhancement works to structures and sections of track along 185 kilometres of the existing operational standard gauge railway between Albury and Illabo. Enhancement works are required to provide the increased vertical and horizontal clearances required for double-stacked freight trains.

The proposal is generally within the existing active rail corridor between the town of Albury on the Victorian-NSW border and the NSW town of Illabo. The alignment passes through two major regional towns, Albury and Wagga Wagga, NSW, and several smaller regional towns. Works are proposed at 24 locations along the 'Main South Line' corridor, described as 'enhancement sites' (Figure 1.1).

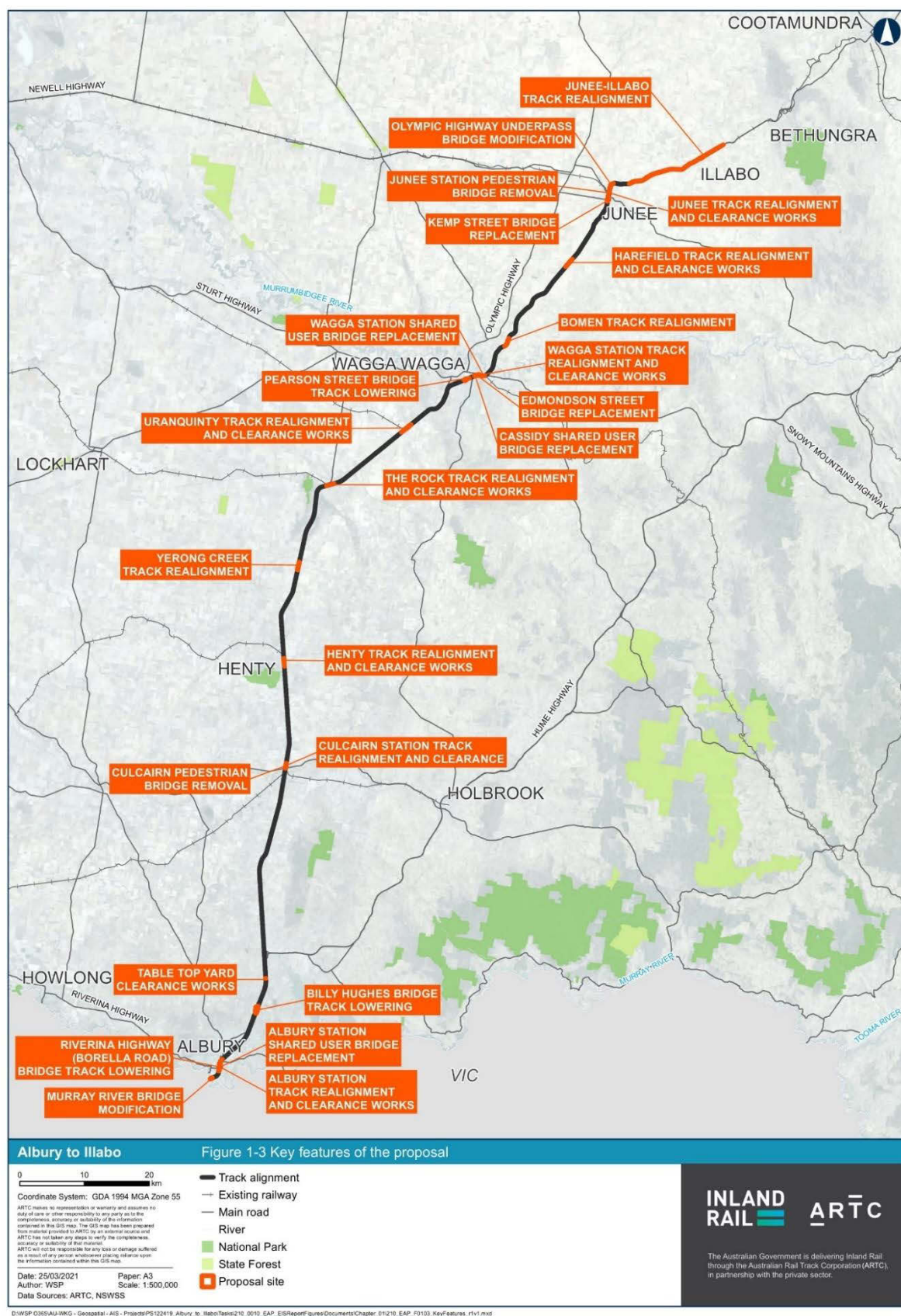


Figure 1.1 Locations and key features of the proposal.

1.2 Heritage Listings

Searches of the following heritage registers were undertaken on 23 February 2021:

- Australian Heritage Database, which includes results from the World Heritage List, Commonwealth Heritage List (CHL), and National Heritage List (NHL);
- NSW State Heritage Inventory (SHI), which includes results from the State Heritage Register (SHR) and the *Heritage Act 1977* s170 registers;
- Albury City Local Environmental Plan (LEP) 2010;
- Greater Hume LEP 2012;
- Junee LEP 2012;
- Lockhart LEP 2012; and
- Wagga Wagga LEP 2010.

No registered archaeological sites were identified on any of the above heritage registers.

2 Legislation and Policy Context

This ARD has been prepared in accordance with the following statutory controls and guidelines:

- *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth) (EPBC Act);
- *Heritage Act 1977* (NSW) (the Heritage Act);
- *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act);
- Heritage Office and Department of Urban Affairs and Planning, 1996, *NSW Heritage Manual*;
- Heritage Council of NSW, 2009, *Assessing Significance for Historical Archaeological Sites and 'Relics'*; and
- Australia ICOMOS, 2013, *The Burra Charter—The Australia ICOMOS Charter for Places of Cultural Significance* (the Burra Charter).

2.1 Legislation

2.1.1 Commonwealth Legislation

Environment Protection and Biodiversity Conservation Act 1999

The objective of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is to protect and manage prescribed Matters of National Environmental Significance (MNES). Under the EPBC Act, proposed 'actions' that have the potential to significantly impact on MNES, the environment of Commonwealth land, or that are being carried out by a Federal Government agency, must be referred to the Federal Minister for the Environment for assessment.

As a result of the potential for impacts on protected matters, the proposal was referred to the (then) Australian Minister for the Environment in June 2018 (EPBC Referral No 2020/8670). On 29 June 2020, the Australian Government Department of the Environment and Energy notified that the proposal is not a controlled action.

Commonwealth Heritage List (CHL)

Under Section 324A of the EPBC Act, a place that is located on land or in waters directly owned by the Crown or under control of the government can be included on the Commonwealth Heritage List (CHL) if it is found to be 'significant' at a local, state, or national level under one or more of the following criteria:

- a) *the place has significant heritage value because of the place's importance in the course, or pattern, of Australia's natural or cultural history;*
- b) *the place has significant heritage value because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history;*
- c) *the place has significant heritage value because of the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history;*
- d) *the place has significant heritage value because of the place's importance in demonstrating the principal characteristics of:*
 - i. *a class of Australia's natural or cultural places; or*

- ii. a class of Australia's natural or cultural environments.
- e) the place has significant heritage value because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- f) the place has significant heritage value because of the place's importance in demonstrating a high degree of creative or technical achievement at a particular period;
- g) the place has significant heritage value because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- h) the place has significant heritage value because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history; or
- i) the place has significant heritage value because of the place's importance as part of Indigenous tradition.

National Heritage List (NHL)

A 2003 amendment to the EPBC Act introduced the National Heritage List (NHL), which provides protection to places identified as having 'outstanding' heritage value to the nation. Items are assessed against the following criteria:

- a) the place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history;
- b) the place has outstanding heritage value to the nation because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history;
- c) the place has outstanding heritage value to the nation because of the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history;
- d) the place has outstanding heritage value to the nation because of the place's importance in demonstrating the principal characteristics of:
 - i. a class of Australia's natural or cultural places; or
 - ii. a class of Australia's natural or cultural environments;
- e) the place has outstanding heritage value to the nation because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- f) the place has outstanding heritage value to the nation because of the place's importance in demonstrating a high degree of creative or technical achievement at a particular period;
- g) the place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- h) the place has outstanding heritage value to the nation because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history; or
- i) the place has outstanding heritage value to the nation because of the place's importance as part of Indigenous tradition.

2.1.2 NSW State Legislation

Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) and Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) establish a framework for the assessment and approval of developments in NSW. They also provide for the making of environmental planning instruments, including state environmental planning policies (SEPPs) and local environmental plans (LEPs), which determine the permissibility and approval pathway for development proposals and form a part of the environmental assessment process. In accordance with the provisions of the EP&A Act, the proposal is State Significant Infrastructure),

SSI may also be declared to be Critical State significant infrastructure (CSSI) in accordance with section 5.13 of the EP&A Act, if it is of a category that, in the opinion of the Minister for Planning and Public Spaces, is essential for the State for economic, environmental or social reasons. The proposal was declared as CSSI in 2021.

Under section 5.14 of the EP&A Act, the approval of the Minister for Planning and Public Spaces is required for State significant infrastructure (including CSSI), and an EIS has been prepared under Division 5.2 of the EP&A Act.

Subject to section 5.23 of the EP&A Act, the requirement for approvals under other legislation, including permits in accordance with the Heritage Act 1977, do not apply where planning approval is granted for the project.

The proposal has been declared as Critical State Significant Infrastructure. The proposal therefore becomes subject to the assessment and approval process in accordance with Division 5.2 of the EP&A Act.

Under Division 5.2 of the EP&A Act, the planning and approvals process includes the preparation and submission of an EIS addressing the requirements of the EP&A Act and regulations, and the SEARs—outlined above in Section 1.2.

Local Environmental Plans

Under the EP&A Act, each LEP is required to include a schedule of environmental heritage. These schedules include all places identified as having local heritage significance identified within an LGA. The LEPs provide guidelines for the development of land that is in close proximity to a heritage item, partially or wholly within a heritage curtilage (such as a conservation area), or contains a heritage item.

Heritage Act 1977

All environmental heritage located in NSW is protected under the *Heritage Act 1977* (NSW) (Heritage Act). The Heritage Act regulates the impact of proposed works on places, buildings, relics, and other heritage items.

Heritage Act also affords automatic statutory protection to relics which form part of archaeological deposits. The Heritage Act defines a 'relic' as:

Any deposit, artefact, object, or material evidence that:

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

(b) is of State or local heritage significance.

Under Section 140, a person must not disturb or excavate any land knowing or having reasonable cause to suspect that a historical archaeological deposit will be moved, damaged, or destroyed during the proposed works. Authorisation for activities that harm historical archaeological deposits can be given under a Section 140 permit. However, as the proposal has been declared a CSSI, the proposal is subject to the assessment and approval process in accordance with Division 5.2 of the EP&A Act, and approvals under the Heritage Act are not applicable.

State Heritage Register

The State Heritage Register (SHR) is established under Section 22 the Heritage Act and is a list of identified heritage items of significance to NSW. The SHR includes items and places (such as buildings, works, archaeological relics, moveable objects, or precincts) determined to be of State heritage significance.

The SHR is pursuant to Section 57(1) of the Heritage Act, which states that approval from the Heritage Council of NSW is required:

When an interim heritage order or listing on the State Heritage Register applies to a place, building, work, relic, moveable object, precinct, or land, a person must not do any of the following things except in pursuance of an approval granted by the approval body under Subdivision 1 of Division 3:

- (a) demolish the building or work;*
- (b) damage or despoil the place, precinct, or land, or any part of the place, precinct, or land;*
- (c) move, damage, or destroy the relic or moveable object;*
- (d) excavate any land for the purpose of exposing or moving the relic;*
- (e) carry out any development in relation to the land on which the building, work, or relic is situated, the land that comprises the place, or land within the precinct;*
- (f) alter the building, work, relic, or moveable object,*
- (g) display any notice or advertisement on the place, building, work, relic, moveable object, or land, on in the precinct; and*
- (h) damage or destroy any tree or other vegetation on or remove any tree or other vegetation from the place, precinct, or land.*

Section 57 (2) of the Heritage Act establishes Standard Exemptions for works requiring Heritage Council approval.

Section 170 Register

The Heritage Act also established the Section 170 Heritage and Conservation Register (Section 170 Register). Section 170 requires all government agencies in NSW to identify, conserve, and manage the heritage assets it owns, occupies, or manages. Under Section 170, each government agency is responsible for ensuring the items on its register are maintained with due diligence in accordance with the Heritage Act.

2.2 Guidelines

2.2.1 NSW Heritage Manual 1996

The *NSW Heritage Manual* (Heritage Office [now Heritage NSW] and Department of Urban Affairs and Planning, 1996) provides a complete series of guidelines for undertaking a variety of heritage identification, assessment, and management processes within NSW. Each of the guidelines has been designed to work through the three steps of the NSW heritage management system, which are:

- Investigate significance—The heritage significance of an item should be investigated through: thorough research regarding its historical context and place within the wider heritage landscape; community consultation; and its fabric.
- Assess significance—The results of the investigation should be: summarised (including a description of its history, its historical themes, archaeological potential, and contemporary community values); assessed against the NSW heritage assessment criteria, and its significance evaluated in a local, regional, or state context; and developed into a statement of significance.
- Manage significance—Considerations should be made regarding the: management implications of the context (local, regional, or state) of the item; constraints and opportunities, such as sensitivity to change and ongoing owner and user requirements; and conservation and management recommendations, including those that must be discounted due to unsuitability.

2.2.2 Assessing Significance for Historical Archaeological Sites and ‘Relics’ 2009

The Heritage Council of NSW (now Heritage NSW) *Assessing Significance for Historical Archaeological Sites and ‘Relics’* (2009) provides a re-evaluation of the way significance is assessed for historical archaeological sites and relics. It states the need for archaeological research to add to the knowledge of the past in an important way, rather than duplicating information that is known or could be gained from other archaeological sites, documentary records, or oral history. The following points should be considered when providing assessment for archaeological sites:

- Intactness—An archaeological site may need to retain sufficient intactness in order to yield well-provenanced archaeological deposits, more accurately conveying its significance.
- Lifeways—An archaeological site may be assessed for significance in terms of its ability to demonstrate a way of life, taste, function, custom, or process. This may be realised by identifying or interpreting the site as the location of a historical event or demolished structure.
- The challenge of potential—The experience and knowledge of the archaeological practitioners may influence the interpreted significance of an archaeological site.
- Changes in significance—An archaeological site may have its significance altered through subsequent phases of development, where earlier deposits were either preserved or completely eradicated by later disturbance events. Another instance of changing significance may be through poor post-excavation recording, analysis, reporting, or conservation.
- Multiple heritage values—An archaeological site may have conflicting heritage values. For example, a cemetery may have significance for its research potential, but also for its social values to the descendants and community members who do not want it to be disturbed.

2.2.3 The Burra Charter

The *Burra Charter—The Australia ICOMOS Charter for Places of Cultural Significance* (Australia ICOMOS, 2013) (Burra Charter) provides a best practice standard for managing and conserving cultural heritage places in Australia.

The Charter recognises that conservation is integral to the sustainable management of culturally significant places and is an ongoing responsibility. It sets out key principles, processes, and practices for the management of heritage places, to guide those who provide advice, make decisions about, or undertake works to places of cultural significance, including owners, managers, and custodians. The Burra Charter provides specific guidance for physical and procedural actions that should occur in relation to significant places.

3 Archaeological Potential

3.1 Historical Context

The historical context for the proposal has been discussed in depth in the SoHI. The following section presents a summary of this context.

3.1.1 The NSW Railway Network

The NSW railway network began from two centres—Sydney in 1855 and Newcastle in 1857.¹ The impetus for the construction of the networks was largely driven by the burgeoning pastoral industry.

Construction on the Main Southern Railway Line had initially begun in 1853 at the original Sydney station—an area known as ‘Cleveland Fields’ at the time, now Central Station.² The station opened on 26 September 1855 in conjunction with stations at Newtown, Ashfield, Burwood, and Homebush to create the first NSW railway line.³ Before Whitton’s appointment to the NSW railway network, a further two stops were added to the line at Fairfield and Liverpool.⁴

Despite Whitton’s vision for the NSW railway network, the advancement of the lines was excruciatingly slow. By 1863—seven years after his appointment—the Main Southern Railway Line comprised only 85 kilometres between Sydney and Picton. This was largely due to the economic downturn of the 1860s, which resulted in strict budgets:

Whitton had to adopt every money saving idea he could ... [This included] the stripping of every conceivable disposable feature from his building plan while still leaving a basically substantial mainline ... Iron rails were substituted for steel, ... line-side buildings reduced or eliminated, cutting and road-bed widths narrowed, timber for sleepers and stonework for viaducts to be obtained locally.⁵

Brick became the preferred building material following Whitton’s appointment. Whitton argued that ‘if we put up buildings of any kind for the Government, they should be respectable buildings ... substantial and fit to look at’.⁶ Between 1858 and 1884, wherever brick was readily available it was used, even at small stations.⁷ Larger or more prestigious stations were often then dressed in stone or plastered with stucco and lined to appear like stone.⁸ An additional cost-saving method employed by Whitton was to avoid commissioning new architectural designs for new railway stations. This resulted in a restricted number of station building ‘types’.

With the economic climate of NSW taking a turn for the better by the early 1870s, the fortunes of the Main Southern Railway Line increased too. In quick succession the line was extended 290 kilometres from Goulburn (1869) to:

- 1875—Yarra, Breadalbane, Fish River, and Gunning.
- 1876—Jerrawa, Yass, and Bowning.
- 1877—Rocky Ponds, Galong, Cunningar, Harden, Wallendbeen, Jindalee, and Cootamundra.
- 1878—Frampton, Bethungra, Illabo, Junee, Harefield, and Bomen.
- 1879—Wagga Wagga.
- 1880—Uranquinty, The Rock, Yerong Creek, Henty, Culcairn, and Gerogery.⁹

The opening of the Murrumbidgee River railway bridge at Wagga Wagga in 1881 allowed the Main South Railway Line to be extended further south. That same year, the railway line arrived at Table Top, Ettamogah, and Albury.¹⁰

The enthusiasm the people of NSW had for the railway network had worn off by the mid-twentieth century. This was, in large part, due to the sudden boom in the manufacturing of motor vehicles following the end of World War II, which shifted the focus towards truck freight rather than railway.

Between 1941 and 1977 no new route kilometres of railway were constructed.¹¹ Numerous branch railway lines and less popular stations were also closed and demolished. A number of stations on the Main Southern Railway Line between Albury and Illabo were casualties from the decline, including:

- Illabo, 1878—demolished c1980s;
- Bomen, 1878—unknown;
- Yerong Creek, 1880—demolished c1980s;
- Gerogery, 1880—closed 1984, relocated to Lockhart 2003;
- Table Top, 1880—demolished c1980s;
- Ettamogah, 1881—demolished c1975; and
- Albury Racecourse, 1881—closed 1962, demolition date unknown.¹²

Out of the 20 stations originally constructed between 1878 and 1943 on the line between Albury and Illabo, only seven were still operational by the end of the twentieth century.

3.2 Archaeological Survey

A targeted survey of the 24 enhancement sites was undertaken on 22–23 March 2021. The aim of the survey was to undertake a visual assessment of the enhancement sites that were identified through the desktop assessment as containing registered heritage items and areas of archaeological potential.

A preliminary assessment of significance of potential unregistered and/or unrecorded items was undertaken during field survey based on visual observations.

The archaeological survey involved inspecting the ground surface for evidence of archaeological items or possible features. Five areas of archaeological potential were identified during the survey. These are discussed below. The historical context for these five sites is also discussed below.

Figures 3.1 and 3.2 show the locations.

3.2.1 Albury Yard Clearances Enhancement Site

Remnant Broad Gauge Railway Archaeological Sites 1 and 2

The Albury Railway Station occupied the liminal space between the NSW and Victorian railway systems and operated as the terminus for the Main Southern Railway Line until 1962. This location was significant, as the railway yard contained both the standard gauge (4 foot 8 inches) railway track used by the NSW network and the broad gauge (5 foot 3 inches) railway track used by Victoria.

The use of two different gauges was representative of the competition between the two states, rather than any advantages gained by the gauges. Appointed in 1845, the NSW Gauge Commission debated

the merits of numerous different gauges, before concluding that they ‘consider standard gauge as that which should be preferred for general convenience’ rather than any technical benefit.¹³ The result of the selection meant that ‘transshipment’ facilities had to be constructed at the ‘break of gauge’ at the NSW and Victorian border, at Albury Railway Station, enabling for the transfer of goods and passengers from one train to another.¹⁴

The disadvantages of two gauges including increased costs, inconvenience and delays born out of the necessity of transshipment facilities, became even more acutely apparent during World War II. Military planners understood the importance of the railway as a major transport and freight corridor as coastal shipping was increasingly threatened by enemy ships and submarines, and as fuel became more rationed. As both military and civilian traffic increased through Albury, a number of changes were made to the station precinct and goods yard at Albury including the addition of a timber transshipment platform, lengthening of the station platform by 66m, and expansion of the goods yard on the western side of Parkinson Street.¹⁵

The introduction of the standard gauge rail in Victoria in 1961 reduced the need for the transshipping facilities and made the broad gauge rail lines at Albury redundant. By the 1970s and 1980s some of the transshipment facilities at Albury were demolished (including the goods shed, wool depot and engine house).

Several areas of extant, unused railway track are visible within the State Heritage Register curtilage of the Albury Railway Station and Yard Group (SHR 01073). Additional sections of track are likely to be present subsurface. Some of this track may be remnant broad gauge rail, particularly around the location of the North Signal Hut and demolished 1884 goods shed.

1884 Goods Shed Archaeological Site

The 1884 Goods Shed occupied an area to the north of the railway station, also within the State Heritage Register curtilage of the Albury Railway Station and Yard Group (SHR 01073), prior to its demolition in the 1980s. The Goods Shed comprised two parallel goods sheds with a transshipping platform at the southern end and a NSW platform at the northern end. Both the NSW and Victorian gauge railways lines sat either side of the sheds and the transshipping platform to facilitate the storage and movement of goods. The structures were mainly timber and steel with the transshipping platform being concrete, and the two small offices having brick chimneys.

This brownfield site is currently a level vacant area with a gravel and broken bitumen surface, with a large remnant brick footing pad and areas of crushed brick area present throughout the area.

Bunge Flour Mill Archaeological Site

Prior to the rail, grain handling was undertaken in bags on loaded wagons. The advent of the rail in rural NSW theoretically meant greater opportunity for convenient movement of grain around and from rural Australia to coastal ports. While rail increased the convenient linkages, the grain was still being handled in bags and started to end up being stacked and store at rail sidings in the open air. Grain sheds, constructed by NSW Railways couldn’t keep up with the expansion of the industry. Bulk handling was seen as the answer and the NSW Grain Elevator Act 1916 was passed.¹⁶ The Grain Elevator Board of NSW constructed their first public silos in 1918, at Peak Hill, near Parkes. However, well before this occurred, private companies were already looking at the feasibility of bulk grain storage and handling. NSW Firm Stone and Siddley developed a new method of constructing bulk grain silos using a reinforced

concrete design. Early examples include two-near identical designs for private clients in Melbourne in 1910 and Albury (1912) at the John Burrows Hume Flour Mill (the Bunge Flour Mill site).

The Mill site was intrinsically linked to the Albury Railway station. In 1909-1910, the John Burrows Hume Flour mill was relocated from its Dean St site to Young St adjacent to the rail line, and within the expanding rail precinct. There were two sidings that led to mill site – one of NSW rail gauge and one with combined NSW and Vic rail gauge. “These rail connections were central to the siting of the mill as the Mill could now buy and sell grain directly with Victoriana and NSW”.¹⁷ It was built from bricks from the Dean St site – it was a “four-storey brick building with the steam engine in a skillion-roofed annex and an adjacent brick chimney”¹⁸ but also included a group of 9 reinforced concrete silos, and a number of other smaller buildings possibly for admin and management etc

Bunge was private company, founded in Amsterdam, but expanded into Argentina with the Bunge and Born families. They had international business in wheat and flour exports. They acquired the John Burrows Hume Flour Mill in 1946 and ran it until 1994, processing wheat, oats, maize as well as feedstock, and later also soybeans and rye. By the late 1980s the increase in industrial action on the railways meant that rail transport was becoming less reliable, and Bunge turned to road freight fleets – largely abandoning its ties to the Albury rail yards. Various changes to the technology and ownership of the site and the mill are detailed by Bogle.¹⁹ Bogle’s study notes, in relation to the site silos on the site, that “their unexplored underground mixing and transport chambers have not been studied and they provide the only known opportunity in NSW to do so”²⁰ and are therefore of exceptional significance under Criterion E—the potential to yield information that will contribute to an understanding of NSW’s cultural or natural history. The site was included on the Albury LEP 2010 as item I213. Part of the boundary of this item overlaps with the SHR boundary for the Albury Railway Station and Yard Group (SHR 01073).

The original 4-storey brick building remained standing on site until the whole facility as demolished in 2012.

During the recent site survey, an area of archaeological potential was identified at this site. The area comprises a large brownfield site, with areas of mounding and crushed brick are present throughout.

Yerong Creek Yard Clearances Enhancement Site

One area of archaeological potential was identified at the former Yerong Creek Railway Station site, which was demolished c1980s. The site comprises an area of exposed brick footings and surface artefacts (eg small sherds of ceramic) adjacent to the nineteenth century brick railway platform. The platform is of brick construction—stretcher bond capped with four corbelled courses. This site has not been identified on either the SHR or the LEP.



Figure 3.1: Albury enhancement sites showing heritage items, including zones of archaeological potential for the Flour Mill, Goods Shed and Victorian gauge railway remains.

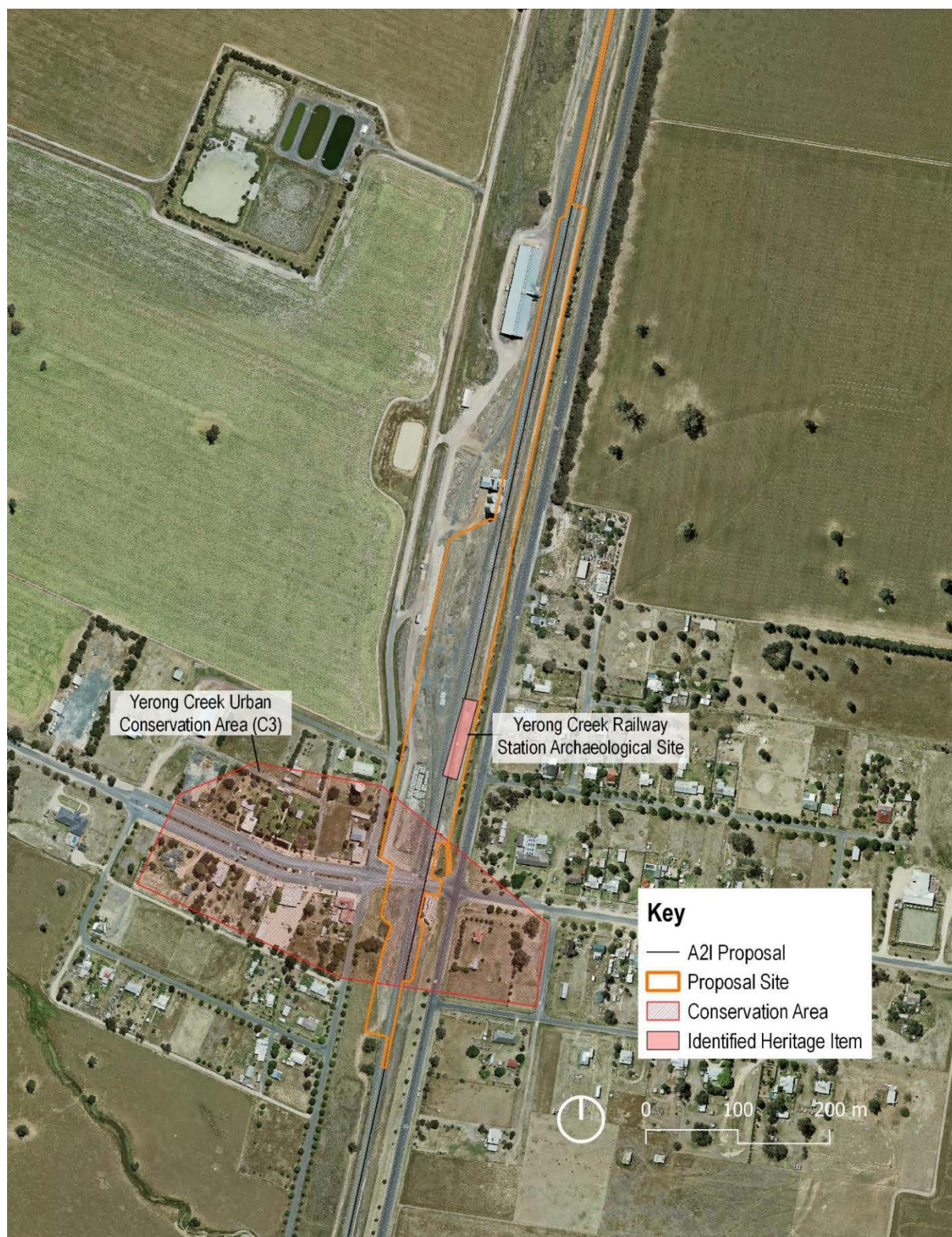


Figure 3.2 Yerong Creek enhancement site showing the location of the railway station archaeological site.

3.3 Endnotes

- ¹ Sharp, SA 1982, *The Railway Stations of New South Wales 1855–1980*, Masters Thesis, Department of Economic History, University of Sydney, Part 4.1, p 4.
- ² The Railway Commissioners of NSW, 1897, *New South Wales—Its Railway System, Holiday Resorts, &c*, William Applegate Gullick, Sydney, p 15; Heritage NSW, 'Central Railway Station and Sydney Terminal Group', NSW State Heritage Inventory, viewed 26 February 2021, <<https://apps.environment.nsw.gov.au/dpcheritageapp/ViewHeritageItemDetails.aspx?ID=4801296>>
- ³ NSWrail.net, 'Main South Line', viewed 26 February 2021, <https://www.nswrail.net/lines/show.php?name=NSW:main_south>
- ⁴ NSWrail.net, 'Main South Line', viewed 26 February 2021, <https://www.nswrail.net/lines/show.php?name=NSW:main_south>
- ⁵ Sharp, SA 1982, *The Railway Stations of New South Wales 1855–1980*, Masters Thesis, Department of Economic History, University of Sydney, Part 4.1, p 5.
- ⁶ Sharp, SA 1982, *The Railway Stations of New South Wales 1855–1980*, Masters Thesis, Department of Economic History, University of Sydney, Part 3, p 256.
- ⁷ Sharp, SA 1982, *The Railway Stations of New South Wales 1855–1980*, Masters Thesis, Department of Economic History, University of Sydney, Part 3, p 257.
- ⁸ Sharp, SA 1982, *The Railway Stations of New South Wales 1855–1980*, Masters Thesis, Department of Economic History, University of Sydney, Part 3, p 259.
- ⁹ NSWrail.net, 'Main South Line', viewed 26 February 2021, <https://www.nswrail.net/lines/show.php?name=NSW:main_south>
- ¹⁰ NSWrail.net, 'Main South Line', viewed 26 February 2021, <https://www.nswrail.net/lines/show.php?name=NSW:main_south>
- ¹¹ Sharp, SA 1982, *The Railway Stations of New South Wales 1855–1980*, Masters Thesis, Department of Economic History, University of Sydney, Part 3, p 81–82.
- ¹² NSWrail.net, 'Main South Line', viewed 26 February 2021, <https://www.nswrail.net/lines/show.php?name=NSW:main_south>
- ¹³ Mills, J A 2007, *The Myth of the Standard Gauge—Rail Gauge Choice in Australia, 1850–1901*, PhD thesis, Department of Accounting, Finance and Economics, Griffith Business School, Griffith University, p 47.
- ¹⁴ Rowland, E. The Story of the New South Wales Railways, Royal Australian Historical Society Journal and Proceedings 1954, Vol40 Part 5.
- ¹⁵ NSW State Heritage Inventory, "Albury Railway Station and Yard Group"
- ¹⁶ Bogle, M, "Heritage Assessment: The Allied Mill & Associated Structures, young Street, Albury NSW, April 2010
- ¹⁷ Bogle, M, "Heritage Assessment: The Allied Mill & Associated Structures, young Street, Albury NSW, April 2010: 22
- ¹⁸ Bogle, M, "Heritage Assessment: The Allied Mill & Associated Structures, young Street, Albury NSW, April 2010: 22
- ¹⁹ Bogle, M, "Heritage Assessment: The Allied Mill & Associated Structures, young Street, Albury NSW, April 2010
- ²⁰ Bogle, M, "Heritage Assessment: The Allied Mill & Associated Structures, young Street, Albury NSW, April 2010: 87

4 Archaeological Research Design

The archaeological survey found that there are four areas of moderate to high archaeological potential at the Albury Yard Clearances Enhancement Site and one area of high archaeological potential at the Yerong Creek Yard Clearances Enhancement Site.

The following section outlines the aims, research framework, and methodology for the investigation and management of the identified archaeological values to mitigate the impact of the proposal.

4.1 Investigation Aims

The results of the archaeological investigation would be used to inform how any archaeological remains would be managed during the construction phase of the proposal. The archaeological investigation would aim to:

- determine the nature and extent of the archaeological remains at each of the enhancement sites;
- assess the significance of any archaeological materials identified; and
- inform any necessary archaeological conservation planning.

The archaeological investigation would comprise three stages:

- test excavation;
- open area salvage excavation, where required; and
- post-excavation analysis of the materials and data collected.

4.2 Research Framework

4.2.1 Research Themes

The research potential of a site should be considered in both broad and site-specific contexts. Archaeological investigation of each site should evaluate the physical evidence of its historical development and use within the wider heritage landscape and thematic context. The Heritage Council of NSW (now Heritage NSW) has composed a table of NSW Historical Themes to ensure that any archaeological information recovered from a site can be understood within the broader NSW research framework. The historical themes that are relevant to each site's potential archaeological resource are outlined in Table 4.1 below.

Table 4.1: Identified Archaeological Sites within the Proposal site and their relationship to NSW Historical Themes

Archaeological Site	NSW Historical Theme	Explanatory Note
Remnant Broad Gauge Railway Archaeological Sites 1 and 2	Transport	Activities associated with the moving of people and goods from one place to another, and systems for the provision of such movements
1884 Goods Shed Archaeological Site	Transport and Industry	Activities associated with the moving of people and goods from one place to another, and systems for the provision of such movements

Archaeological Site	NSW Historical Theme	Explanatory Note
		Activities associated with the manufacture, production, and distribution of goods
Bunge Flour Mill Archaeological Site	Industry	Activities associated with the manufacture, production, and distribution of goods
Yerong Creek Railway Station Archaeological Site	Transport	Activities associated with the moving of people and goods from one place to another, and systems for the provision of such movements

4.2.2 Research Questions

One of the main objectives of the proposed archaeological investigation is to recover information from the site that is not available through any other source. The types of broad questions that might be asked of the site include:

- What is the nature and extent of the surviving archaeological evidence at any of these sites?
- What physical evidence of former activities survives on the site?
- What is the date of the identified elements?
- What can the archaeological evidence and the material culture contribute to our knowledge about this site or other sites?
- Can the remaining evidence provide new information about the configuration and operation of these facilities?
- Can the artefact assemblages associated with these sites provide insight into the people who worked at them, and used them?
- How does the archaeological evidence contribute to our understanding of the sites in a regional context?
- What is the significance of the deposits and features?
- What additional mitigation actions—archival recording, conservation—might be required for the deposits and features?

Further questions will be formulated as archaeological investigation develops.

4.3 Archaeological Management Strategy

4.3.1 Personnel

The whole program of archaeological investigation works would be directed by an Excavation Director who meets the NSW Heritage Division requirements for directing locally or state significant archaeological investigations. The Excavation Director would be assisted by a team of suitably qualified archaeologists to undertake investigation, recording and site planning tasks as required.

4.3.2 Scope of Archaeological Program

Archaeological investigation would occur prior to any ground disturbance works associated with the proposal works in areas of archaeological potential.

To mitigate the impacts to the sites' potential archaeological resources and to adequately realise the sites' archaeological potential, a program of test excavation and recording is proposed. If required, further detailed open area salvage excavation would be undertaken if warranted by the nature, extent and significance of the archaeological remains. The decision to undertake open area salvage excavation in any parts of the sites would be made during the test excavation program.

Open area excavation would be undertaken in accordance with archaeological best practice.

4.3.3 Test Excavation

The Excavation Director and the archaeological team would commence preliminary investigation by using a machine excavator to expose buried archaeological features and deposits.

During this preliminary investigation process, archaeological features and deposits would be revealed, cleaned by hand and recorded to the extent required to reveal relationships between features and deposits, and to understand their nature, extent and potential significance. Significant features and deposits would not be removed at this stage but would be earmarked for salvage excavation at the completion of the preliminary investigation phase.

Once the preliminary investigation has occurred across the areas of archaeological potential, a strategy for salvage excavation would be prepared to encompass all areas considered to have archaeological remains of potentially local and state significance.

4.3.4 Open Area Salvage Excavation

Open area excavation refers to detailed excavation and recording of deposits and features to identify stratigraphic and spatial relationships between site elements. This excavation would be undertaken manually by a team of archaeologists led by the Excavation Director. The size of the team would be determined by the needs of the project. The extent of the open area salvage excavation would be determined on site as a result of the preliminary investigation phase.

4.3.5 Site Recording

All archaeological deposits, features and structural remains would be assigned a unique context number and written descriptions would be made of each context, and its relationship together contexts and other relevant features on the site in general.

Once cleaned, the archaeological deposits, structural remains and features would be recorded in detail in line with archaeological best practice.

Where any archaeological structural remains or features are exposed, measured drawings would be drafted, including relative levels and GPS location. Photographic recording of all phases of the work on site would be undertaken.

4.3.6 Artefact Management

Artefact management would be undertaken as follows:

- Artefacts found during excavation would be bagged and tagged with excavation date, site and context number.
- An artefact database would be established in an appropriate electronic format to record artefact attributes and characteristics in line with standard archaeological practice in NSW.
- Basic descriptive data would be recorded for all artefacts, and an assessment of their significance along with the significance of their context would be made.
- Artefacts from high significance contexts would be retained.
- A representative sample of artefacts from moderate significance contexts would be retained.
- Artefacts from contexts of low significance would be discarded unless determined to have significance in and of themselves (as determined in the field).
- Artefacts to be discarded would be recorded prior to discard on context sheets and in the artefact database established for the site. This will enable valid statistical assessments to be made.
- All artefacts to be retained would be appropriately cleaned, bagged and labelled for storage in an appropriate repository, preferably on site. This includes the use of archival-quality boxes, bags, paper and inks to ensure the ongoing suitability of storage conditions. The artefacts would remain the property of the proponent, ARTC.

4.3.7 Post-excavation Reporting

Post-excavation analysis of the findings, artefacts and samples would be undertaken following completion of the archaeological excavation. A final report would be prepared and include the following:

- detailed description of the fieldwork program;
- detailed description and analysis of the archaeological findings, phasing, and interpretation;
- photographs, scale drawings/surveys and interpretive graphics;
- results of artefact analysis including a catalogue;
- results of building material and environmental sample analysis;
- response to the research questions; and
- reassessment of archaeological significance and identification of any remaining resource within the site.