



Goobang Junction Upgrade Scoping Report

ARTC

Australian
Rail Track
Corporation

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Document Control

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Acknowledgement of Country

GHD and ARTC acknowledge Aboriginal and Torres Strait Islander peoples as the Traditional Custodians of the land, water and sky throughout Australia on which we do business. We recognise their strength, diversity, resilience and deep connections to Country. We pay our respects to Elders of the past, present and future, as they hold the memories, knowledges and spirit of Australia. GHD and ARTC are committed to learning from Aboriginal and Torres Strait Islander peoples in the work we do.



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1. Introduction

1.1 Background

Goobang Junction is located approximately two kilometres west of Parkes, within the Parkes local government area (LGA) (see Figure 2.1). The junction comprises the intersection of Australian Rail Track Corporation (ARTC) east/west Interstate line and both the Parkes to Narromine and Stockinbingal to Parkes branch lines. The Goobang Junction has a number of existing signalling safety and track infrastructure capacity limitations that pose operational constraints on existing, and future planned operations through this area. These current infrastructure limitations mean that Goobang Junction requires upgrading to meet future operational requirements.

The Goobang Junction Upgrade Project ('the project') aims to rectify the safety, operational and condition issues identified at the Goobang Junction. The project would involve upgrade of existing rail infrastructure (branch lines, loops and sidings) at Goobang Junction, and upgrade of existing signalling infrastructure at Goobang Junction and along the Stockinbingal to Parkes branch line, Parkes to Narromine branch line, Parkes to Broken Hill main line and Parkes North-West Link (see Figure 3.1).

While the project would not result in a direct increase in train numbers, it would allow for the efficient and effective passage of both east-west Interstate traffic and Inland Rail services and facilitate future growth. Train speeds within the project site are currently constrained by existing track arrangements and signalling infrastructure and as such, the project would result in minor changes to train speeds throughout the project site.

Potential impacts associated with Inland Rail operations within parts of the project site have been considered in the environmental assessments for Parkes to Narromine, and where there is no change due to the project, would be excluded from the assessment for this project.

1.2 Purpose of this report

The project is State Significant Infrastructure (SSI) under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The Minister for Planning is the approval authority, and the project is to be assessed in accordance with the provisions of Division 5.2 of the EP&A Act. As such, an environmental impact statement (EIS) must be prepared, and approval sought from the Minister for Planning.

This scoping report has been prepared by GHD Pty Ltd (GHD) on behalf of ARTC to support the application for Secretary's environmental assessment requirements (SEARs). The SEARs will be issued by the NSW Department of Planning and Environment (DPE). The SEARs will form the basis of an EIS prepared in accordance with the EP&A Act and the Environmental Planning and Assessment Regulation 2021 (EP&A Regulation). The report has been prepared in accordance with the SSI guidelines – preparing a scoping report (DPIE, 2022).

The document provides a brief description of the project; its statutory and strategic context; stakeholder and community engagement undertaken to date; and a preliminary assessment of environmental impacts and how they will be appropriately assessed, proportionate to their scale and impact, within the EIS.

1.3 The proponent

ARTC, as the proponent, would undertake and deliver the project. The proponent details are as follows:

- Australian Rail Track Corporation Ltd
- ABN: 75 081 455 754
- Address: 11 Sir Donald Bradman Drive, Keswick Terminal, South Australia 5035.

Future operator

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

1.4 Structure of this report

The structure and content of this report is as follows:

- **Chapter 1 – Introduction:** outlines the key elements of the project, identifies the proponent and the purpose of this report.
- **Chapter 2 – Strategic context:** provides an outline of the justification of the project and alternatives that were considered.
- **Chapter 3 – Project description:** provides an outline of the project.
- **Chapter 4 – Statutory context:** provides an outline of the statutory approvals framework, including applicable legislation and planning policies.
- **Chapter 5 – Stakeholder engagement:** outlines the consultation which has been undertaken to date and the consultation strategy that is proposed during the preparation of the EIS.
- **Chapter 6 – Proposed assessment of impacts:** provides a preliminary assessment of the potential impacts of the project on the environment and outlines the proposed scope of the EIS for each of the identified key and other environmental issues.
- **Chapter 7 – Conclusion:** outlines the key conclusions of this report.
- **Chapter 8 – References:** lists references used in preparation of this report.

1.5 Scope and limitations

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The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

2. Strategic context

2.1 Project need and objectives

Project need and justification

The project is required to allow for the efficient and effective passage of both east-west Interstate traffic and Inland Rail services. This will be achieved by rectifying the operational and condition issues which include:

- Existing signalling and track infrastructure are approaching end of service life and do not meet current ARTC safety and design standards.
- Existing signalling and track infrastructure constrains future growth in freight movements.
- Current infrastructure arrangements do not meet Inland Rail performance specifications in particular, transit time.
- Current track side clearances do not allow for the passage of double stacked container freight.

The track and civil upgrades proposed as part of the project are required to facilitate efficient transit through the junction and to bring this existing infrastructure up to standard with ARTC's current design requirements. However, the primary need for the project relates to the signalling infrastructure as follows:

- The existing interlocking (i.e. arrangement of signals and switch rail points) was never designed with the intention of controlling a complex rail hub and are no longer suited to the current application, nor are they compliant to current ARTC standards.
- The existing interlocking has reached the end of its serviceable life and has exceeded its intended capacity, meaning that the interlocking cannot be modified or expanded in its current state.
- The Goobang Relay Room layout has several work Occupational Health and Safety (OHS) issues that will hinder on-going maintenance.

Project objectives

The primary objective of the project is to address safety, operational and condition issues identified in the Goobang Junction area, with these issues to be rectified prior to the commissioning of Inland Rail.

The secondary objectives include:

- Increase rail freight capacity
- Meet projected growth in demand for container transport by rail
- Improve reliability for freight customers
- Provide operational efficiency
- Decrease road and rail congestion
- Grow rail market share
- Minimise impacts on existing operations during construction, to ensure impacts to supply chains are minimised
- Minimise environmental and community impacts during construction, and ongoing operations

2.2 Consistency with strategic policy and plans

This section describes how the project aligns with strategic policies. The EIS will provide further information on relevant strategies and the relationship to the project.

2.2.1 Commonwealth policy

National Freight and Supply Chain Strategy

The *National Freight and Supply Chain Strategy* (Commonwealth of Australia, 2019) details a national approach to Australia's freight and supply chains. The strategy notes that Australia's freight task is growing and changing, with the volume of freight expected to grow by over 35% between 2018 and 2040. It also specifically notes that regional and remote Australia will play an important role in meeting the demand, both domestically and internationally. The strategy identifies a number of goals that will be achieved by taking national action across four critical areas, one of which is improved supply chain efficiency.

The project is consistent with the strategy through improving rail infrastructure to support future growth of freight rail.

2021 Australian Infrastructure Plan

The *2021 Australian Infrastructure Plan* (Infrastructure Australia, 2021) provides a practical and actionable roadmap for infrastructure reform. The plan delivers on the goals of the *National Freight and Supply Chain Strategy* (Commonwealth of Australia, 2019) and *Australian Infrastructure Audit 2019* (Infrastructure Australia, 2019). One of the recommendations of the plan is to improve the liveability and economic sustainability of regional, rural and remote areas by developing, maintaining and operating integrated freight and passenger transport networks that meet end-to-end access needs.

The project is consistent with the plan through improving rail infrastructure to support future growth of freight rail.

Australian Infrastructure Audit 2019

The *Australian Infrastructure Audit 2019* (the Audit) (Infrastructure Australia, 2019) identified that the continued population growth will drive a significant rise in the demand for infrastructure and freight services. The Audit mentioned that underinvestment in the maintenance of Australia's infrastructure networks, notably in regional Australia, could reduce the ability of those networks to provide reasonable levels of service in the future. The most significant risks are in regional rail infrastructure carrying volumes of grain or general freight. The national land freight task is growing rapidly. Rail operations will be required to play a major role in the movement of goods between ports and inland freight terminals to support the expected growth in freight tasks.

The project aligns with the Audit through improving rail infrastructure to support future growth of freight rail. The project is located at Parkes, which is at the crossroads of the national rail network that links to all capital cities in Australia. It allows for freight rail distribution of goods and services regionally, nationally and internally. The project will improve overall rail infrastructure within a major freight service area further supporting the Audit.

2.2.2 State policy

20-Year Economic Vision for Regional NSW

The *20-Year Economic Vision for Regional NSW* (NSW Government, 2021) is to accelerate economic growth in key sectors or 'engine industries', such as: agribusiness; tertiary education; health care; resources and mining, freight and logistics; advanced manufacturing; renewable energy; and technology enabled primary industries. Parkes LGA has been identified as a growth centre and is recognised as a service area for surrounding areas. A focus for growth centres is to build efficiency and redundancy in freight networks to improve supply, reduce disruptions and lower costs.

The project is consistent with the vision through improving rail infrastructure to support future growth of regional economies by providing improved access to markets by improving freight rail access and capacity.

NSW 2040 Economic Blueprint

The *NSW 2040 Economic Blueprint* (NSW Treasury, 2019) is designed to help chart a course for the NSW economy with one of the focuses on growing regions with improved transport links and resource security. The goal is by 2040 to have a more efficient state transport infrastructure to allow more agricultural products to reach more overseas markets quicker. This will be achieved by improving freight networks from regional NSW, such as Parkes, to global gateways to increase exports.

The project is consistent with this blueprint through improving rail infrastructure which is heavily used for freight of goods and services to ports and capital cities.

NSW Freight and Ports Plan, 2018-2023

The *NSW Freight and Ports Plan 2018-2023* (NSW Government, 2018) sets out the NSW Government's priorities for freight. The NSW government and the freight industry collaborated together to set clear targets for delivery and initiatives to make the freight task in NSW safer and more efficient. The objectives set include:

- Driving economic growth by delivering more than \$5 billion worth of infrastructure
- Increasing efficiency, connectivity and access
- Investing and enabling regional growth
- Improving safety and sustainability.

The project is consistent with the plan by improving rail safety and supporting regional growth through the rail industry.

Agriculture Industry Action Plan

The *Agriculture Industry Action Plan* (NSW Government, 2014) primed for growth, investing locally and connecting globally. The Action Plan sets out priorities to assist the sector to capitalise on emerging opportunities and drive long-term growth and productivity improvements. While agriculture in NSW has a strong domestic market, it maintains an emphasis on export and has built a reputation as a supplier of high-quality commodities. The Action Plan has identified targets to improve agricultural productivity. One of Parkes LGA's major economic sources is through its agricultural industry which is then majority transported on the rail lines from Parkes to capital cities. The rail operations at Parkes play a key role in supporting the agricultural industry.

The project is consistent with the objectives set out by the Action plan by providing a safe and reliable means of freight transportation.

Staying Ahead: State Infrastructure Strategy 2022-2042

The *Staying Ahead: State Infrastructure Strategy 2022-2042* (Infrastructure NSW, 2022) recognises that ongoing infrastructure investment is required to keep pace with population growth. The strategy identifies a number of objectives and strategic directions including to boost economy-wide productivity and competitiveness by improving freight efficiency, security and capacity to support NSW's industries and supply chains.

The project would improve rail infrastructure on major lines which connect Parkes to Sydney, Adelaide and Perth and is a major link for freight operations. The project is consistent with the strategy by improving the reliability and safety of the rail network.

Future Transport Strategy

The *Future Transport Strategy* (Transport for NSW, 2022) is part of a suite of strategies, policies and plans that integrate and guide long-term land use, transport planning and the design, delivery and management of transport. It underpins the *NSW State Infrastructure Strategy 2022-2042* (Infrastructure NSW, 2022). As the population grows, there will be more demand for goods. This will require improved freight connections in regions and cities.

As noted above, the project would improve rail infrastructure that forms a major link for freight operations. The project is consistent with the strategy by improving the reliability and safety of the rail network.

Central West and Orana Regional Plan 2041

The *Central West and Orana Regional Plan 2041* (NSW Government, 2022) is a blueprint that will guide planning and land use decision until 2041. It identifies five priority growth sectors which are transport and logistics, agribusiness and value-added manufacturing, tourism, mining and renewable energy and services. Investment in roads and logistics facilities provide a more efficient freight network. The region is recognised as a nationally significant focal point for freight supporting productive and diversified agribusiness, mining and manufacturing industries and enabling distribution of products domestically and around the world.

The project is consistent with the plan through improving rail infrastructure to support future growth of freight rail.

Draft Central West and Orana Regional Transport Plan

The *Draft Central West and Orana Regional Transport Plan 2021* (Transport for NSW, 2021) outlines specific actions to address the unique challenges of the region with a focus of improving movements of freight. The growing demand for additional freight tasks for heavy haulage will require delivery of the right network capacity and configuration to enable efficient freight movements, meet capacity and complexity needs, support productivity and operation in a safe manner. There is a focus on investing in rail freight facilities and infrastructure, replace or upgrade existing rail lines and supporting economic development through freight infrastructure.

The project is consistent with the plan as it provides investment into improving the existing rail infrastructure which is used for freight movement in regional NSW.

NSW Regional Development Framework

For inland areas, such as the Central West, agribusiness is identified as a key industry sector that could drive regional development but will require investment in infrastructure to create efficient freight networks that will increase the sectors competitiveness.

The rail line is used by agribusinesses to export and import goods and services. The project is consistent with the objectives of this framework through improving rail infrastructure to support future growth of freight rail.

Mid-Lachlan Regional Economic Development Strategy, 2018-2022

In support of the *20-Year Economic Vision for Regional NSW* (NSW Government, 2021), the NSW Government and local councils developed 38 regional strategies. The *Mid-Lachlan Regional Economic Development Strategy* (NSW Government, 2018) was developed to identify economic development opportunities that capitalise on the existing endowments of its functional economic region. Endowments are strengths that a regional economy possesses and can capitalise on. A region seeking to encourage economic development must concentrate on factors that enable the growth of endowment-based industries. A main feature for Parkes is the rail line which links Sydney, Adelaide and Perth, and is the first point west of Sydney where trains can double stack containers.

The project is consistent with the strategy through improving rail infrastructure to support future growth of freight rail.

Mid-Lachlan Regional Economic Development Strategy – 2023 Update

Since publication of the 38 regional strategies in 2018, regional NSW has endured bushfires, floods, COVID-19 and the mouse plague, and significant new economic opportunities have emerged, and as a result a series of updates were prepared. The *Mid-Lachlan Regional Economic Development Strategy – 2023 Update* (Department of Regional NSW, 2023) was prepared as an update to the 2018 strategy. The strategy update recognises that key strategies for the region include:

- Optimise and grow agriculture by improving supply chain efficiency and quality, market access and communication.
- Improve access to markets for agriculture, mining and manufacturing by investing in intermodal network resilience and reliability.

As noted above, the project is consistent with the strategy through improving rail infrastructure to support future growth of freight rail.

2.2.3 Local policy

Parkes Shire 2035+ Community Strategic Plan

The *Parkes Shire 2035+ Community Strategic Plan* (Parkes Shire Council, 2017) sets out the community's collective vision highlight priorities and aspirations. As a rural area, Parkes Shire's economy is strongly dependent on the road network and quality transport infrastructure, which helps local industries access regional, national and global markets. Maintaining and improving these networks is a strong focus to ensure continual community growth.

The project is consistent with the strategic plan through improving the rail infrastructure that is used for transporting goods and services regionally, nationally and globally.

Parkes Shire Local Strategic Planning Statement

The *Parkes Local Strategic Planning Statement* (Parkes Shire Council, 2020) provides a high-level land-use based strategic plan for the whole of Parkes Shire. It outlines how growth and change will be managed into the future whilst maintaining and enhancing strong and diverse economy, areas of environmental and heritage value and the country lifestyle and character that is Parkes Shire. A focus is to enhance road and rail freight links throughout Parkes by investing in rail improvement projects throughout the shire. This project focuses on improving rail infrastructure which is used for major freight distribution throughout Australia. Therefore, the project supports this Planning statement.

2.2.4 Other strategies

Parkes SAP – Master Plan and Delivery Plan

Special Activation Precincts (SAP) are dedicated areas identified by the NSW Government to bring together planning and investment to drive jobs and economic activity. The Parkes SAP was the first of six SAP's to be introduced in NSW. The Parkes SAP will become an inland port, transferring export ready goods to every major city and freight centre in Australia. It will provide opportunities for new industries in agriculture, freight and logistics, manufacturing, energy and resource recovery and transport to co-locate. The benefits of the Parkes SAP will be focused on stimulating economic development and employment, create a hub that will enhance the local and regional community.

Guiding principles for the SAP are defined in the Parkes SAP Master Plan (DPIE, 2020), and focus on economic development, environment and sustainability, community, place and landscape and infrastructure. The Parkes SAP Master Plan is supported by the Parkes SAP Delivery Plan (Regional Growth NSW Development Corporation, 2021), which sets out criteria for precinct design, infrastructure planning and delivery and landscaping.

Most of the project site is located within the Parkes SAP boundary (see Figure 2.2) and is consistent with the Parkes SAP Master Plan and Parkes SAP Delivery Plan as the rail lines serve as a major distribution link of freight products regionally, nationally and globally.

2.3 Regional context

The study area is located in central north-west NSW, which covers an area of over 63,000 square kilometres (see Figure 2.1). This starts on the western side of the Blue Mountains in the temperate, elevated central tablelands and extends to the semi-arid central west plains. The study area is situated within the Parkes LGA with the main local industries being agriculture and mining.

Parkes is close to the geographical centre of NSW and is about 290 kilometres west of Sydney. Parkes is located on the Newell Highway and has a total population of over 14,000 people (Census 2021). Parkes is a central hub for freight industries and service providers due to its central location in NSW and being located on a major highway and rail corridor, as such is an important part of transportation of goods and services. The main towns surrounding Parkes are Forbes, approximately 30 kilometres south-west, and Orange, approximately 85 kilometres east.

The project site, at its closest point, is approximately two kilometres from Parkes town centre.

2.3.1 Regional history

The project site is located on the country of the Wiradjuri people, and they are the traditional landowners of the Parkes Region. The Wiradjuri people lived in these lands for more than 40,000 years and are considered the largest tribe in the State, ranging from Albury in the South to Coonabarabran in the North covering approximately one fifth of NSW. The earliest historical records of Aboriginal people in the Parkes area are from 1817, when Oxley and Cunningham camped on the Bogan River. Prior to the effects of European land use, such as agriculture, there were large numbers of archaeological sites throughout the region ranging from occupation sites indicated by flaked stone artefact scatters, carved trees, art sites and burial sites (Umwelt, 2017a).

European exploration of the Parkes region began in 1817 when John Oxley explored the Lachlan district on a geographical survey for the colonial administration. This was followed on by Charles Sturt in 1829 and in 1833, further investigation was being undertaken of the Bogan River area by Surveyor Robert Dixon (Umwelt, 2017b). These early forays into the interior were followed by Thomas Mitchell in 1835. In April 1835 Mitchell's party entered the area of modern Parkes where he encountered an Aboriginal group. Mitchell relied heavily upon the knowledge of the local Aboriginal people during his expedition, particularly on their knowledge of the location of reliable water sources. The settlers were exploring the region in search of rich agricultural land by travelling along the main watercourses.

2.4 Site context

2.4.1 Existing environment

The project site is primarily located within the existing rail corridor, which has been heavily disturbed from ongoing rail construction, operations and maintenance works. The surrounding land is a rural landscape that is used mainly for agricultural purpose with scattered rural properties and industrial areas. However, all land surrounding the rail corridor within the Parkes SAP has recently been acquired by the NSW Government for future development (see Section 2.2.4). A majority of the scattered rural dwellings are set back from the existing roads. The closest residence is approximately 150 metres away from the project site.

The project site holds minimal environmental significance due to previous and ongoing land use activities. The majority of vegetation in the rail corridor consists of exotic weed species or vegetation that has been heavily modified, cleared or slashed. Parts of the project site were subject to recent construction activities associated with the Parkes to Narromine section of Inland Rail. The rail line is predominantly built up with imported fill materials.

Henry Parkes Way, a State road, that connects Parkes with Condobolin runs through the northern proportion of the project site. Transport for NSW are currently constructing the Newell Highway Bypass around the western edge of Parkes. The bypass provides a grade separation (road over rail) over the project near Blaxland Street (see Figure 6.1).

2.4.2 Site details

The project site is located in Parkes LGA and is subject to zoning under the State Environmental Planning Policy (Precincts-Regional) 2021 (for land within the Parkes SAP boundary) and the Parkes Local Environmental Plan 2012 (Parkes LEP). The following land zones apply to the project site:

- SP2 – Rail infrastructure facilities
- REZ – Regional Enterprise Zone

The land surrounding the project site is mainly zoned REZ – Regional Enterprise and RU1 – Primary Production. Transport for NSW are currently constructing the Newell Highway Bypass around the western edge of Parkes. The bypass provides a grade separation (road over rail) over the project near Blaxland Street (see Figure 2.2).

The majority of the project site is located within the existing rail corridor, with the exception of the main construction compound which is proposed to be located on private land (Lot 2 DP1063136 and Lot 51 DP859392) and subject to a lease agreement with the landowner.

2.4.3 Land ownership

The existing rail corridor is owned by the NSW Government (Transport for NSW) and leased to ARTC. Land surrounding the project site is dominated by public land recently acquired by the NSW Government for the Parkes SAP and private land used for agriculture and freight purposes (including three intermodal terminals run individually by Linfox, Pacific National and SCT Logistics).



Paper Size ISO A4
0 2 4 6 8 10
Kilometres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

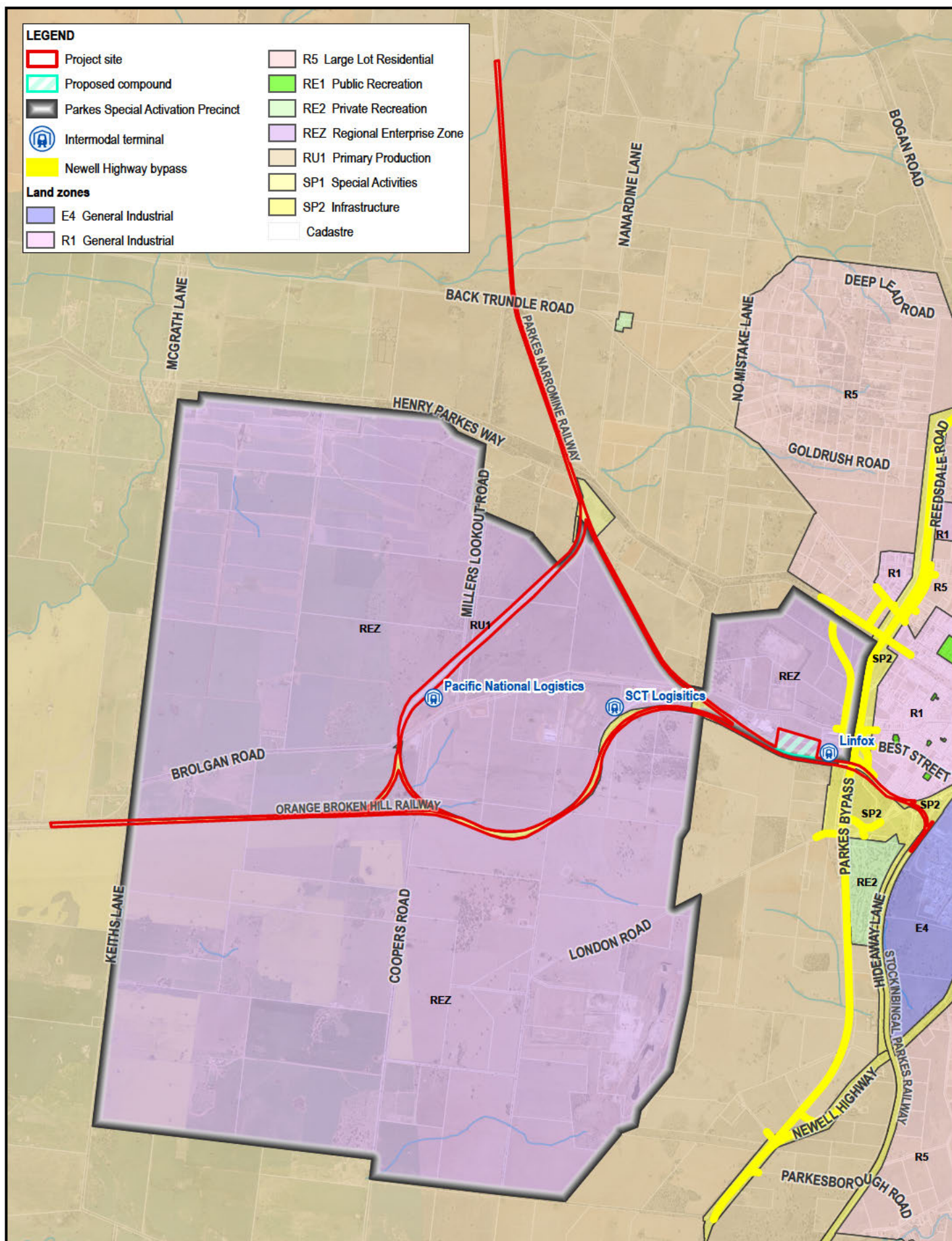


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Goobang Junction Upgrade Works
Scoping Report - State Significant Infrastructure

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Regional locality

FIGURE 2.1



Paper Size ISO A4
0 500 1,000 1,500 2,000
Metres



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Goobang Junction Upgrade Works
Scoping Report - State Significant Infrastructure

Project No. 12610980
Revision No. 0
Date 15/08/2023

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

Site context

FIGURE 2.2

3. Project description

3.1 Overview

The project would involve upgrade of existing rail infrastructure (branch lines, loops and sidings) at Goobang Junction, and upgrade of signalling infrastructure at Goobang Junction and along the Stockinbingal to Parkes branch line, Parkes to Narromine branch line, Parkes to Broken Hill main line and Parkes North-West Link (see Figure 3.1).

Subject to ongoing feasibility design, these works are described in the following sections. Further details will be provided in the EIS.

3.2 Key features of the project

3.2.1 Design considerations

Key design considerations for the project include meeting the combined Interstate and Inland Rail performance specifications (for the junction upgrade), which include:

- Minimum train length of 1800 metres
- Double stacked container freight
- Minimum train speeds of 40 km/h
- Minimum 25 tonne axle loads

Other key design considerations include:

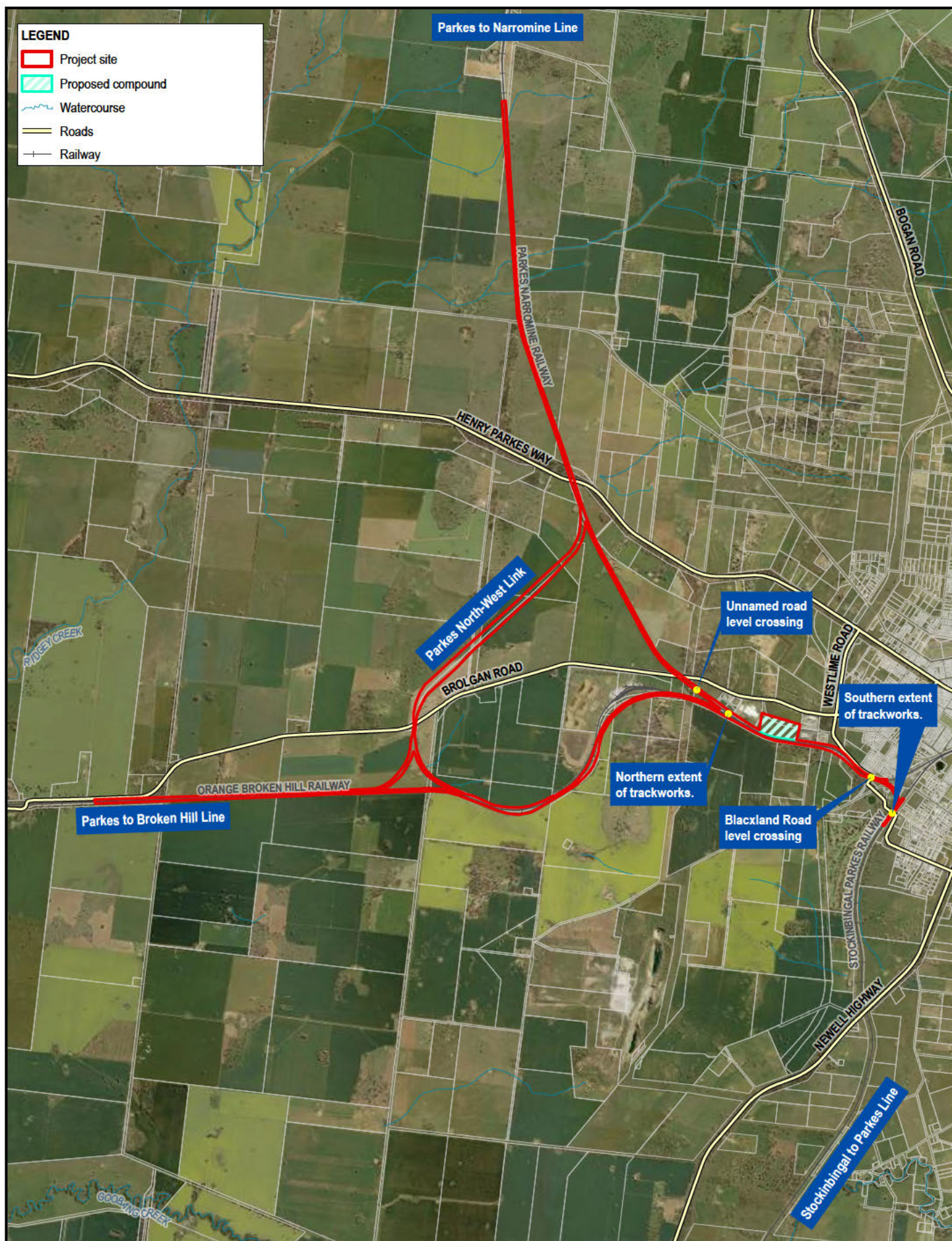
- Maintaining existing operations at rail connections for third party tracks.
- Allowance for possible future rail connections (e.g. additional SCT Logistics and Pacific National connections).

3.2.2 Main corridor works

Track works

The project would involve track works over approximately three kilometres between Saleyards Road in the south, and the northern extent of Goobang Junction (see Figure 3.1). Subject to feasibility design and ongoing investigations track works could include:

- New / upgraded formation
- Siding relocation and extension
- New / reconditioned track ballast
- New heavy duty concrete sleepers
- New 60 kilogram rail tracks
- New / upgraded turnouts and catchpoints



Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56



Australian Rail Track Corporation Ltd
Goobang Junction Upgrade Works
Scoping Report - State Significant Infrastructure

Project No. 12610980
Revision No. 0
Date 15/08/2023

Project overview

FIGURE 3.1

Track formations, earthworks and drainage

Bulk earthworks associated with track works would be required. Subject to the outcomes of the feasibility design process, the earthworks required could range from relatively minor improvements to total reconstruction of the existing track formation, to new track formation for the relocated siding.

Existing drainage (including culverts) within the rail corridor would be upgraded as required to suit the upgraded track formation.

Signalling, power and communications

New or upgraded signalling, power and communications infrastructure would be provided as required within Goobang Junction and on the Stockinbingal to Parkes branch line, Parkes to Narromine branch line, Parkes to Broken Hill main line and Parkes North-West Link (see Figure 3.1). Signalling works would include, trenching within the rail corridor (with possible under boring of public roads), installation of cabling and new signals and signal huts.

The existing signalling system will be upgraded to computer-based interlocking with control of the system remotely managed by ARTC's Network Control centre.

3.2.3 Other ancillary works and infrastructure

Utilities

Utilities (such as water, sewer, electrical, gas and telecommunications) located within or crossing the rail corridor may need to be relocated in consultation with the relevant utility owner.

Level crossings

The project site includes nine public and one private level crossings. Of these, only the public level crossings at Blaxland Street and an unnamed road (Traveling Stock Reserve (R87509)) (see Figure 3.1) may require minor adjustments to suit the upgraded rail formation. Other level crossings may be affected by signalling works (e.g. trenching) however no adjustments to the level crossings are currently proposed.

Structure Clearance

The works will also include the relocation and configuration of track side structures/equipment and the widening of track centres to provide the required transit space clearance within Goobang Junction for double stacked container freight. This work will include (but is not limited to) relocation of existing signalling equipment, signal buildings, yard lighting and the design of the new track alignment to provide sufficient clearance between adjacent tracks.

3.2.4 Interaction with existing and proposed infrastructure

The project works interface with three intermodal terminals that connect to the ARTC network at Goobang Junction. The three terminals are run individually by Linfox, Pacific National and SCT Logistics (see Figure 2.2). The interface works will involve signal upgrades, track works, earthworks and turnout reconfigurations at the interface points to these terminals.

3.3 Construction of the project

3.3.1 Construction methodology

The construction methodology would vary depending on the specific construction activity, construction contractor and approach to staging however, it would generally involve the following elements.

Mobilisation

- Site preparation including installation of erosion and sediment controls, compounds and security fencing.
- Clearing and stockpiling of vegetation (where present).
- Undertake enabling works, including the excavation, installation and relocation of services.

Track construction and signalling work

- Installation of signalling infrastructure
- Track works including as required:
 - Removal of existing track components and ballast
 - Excavation of unsuitable material and upgrade existing formation
 - Replacement of ballast and formation earthworks
 - Installation of new track and track components
- Utility and drainage work
- Road and pavement work

Demobilisation and rehabilitation work

- Commissioning works
- Site clean-up, rehabilitation and removal of all temporary infrastructure

Further details regarding construction of specific elements will be provided in the EIS.

3.3.2 Construction equipment

Construction plant and equipment that could be used during the construction of the project is listed in Table 3.1. The type and quantity of plant and equipment may vary depending on the construction staging and construction methods and would be determined by the construction contractor(s).

Table 3.1 Indicative construction equipment

Construction equipment		
Excavators	Water cart	Cable trencher
Trucks	Tamper	Concrete agitators
Dozers	Front end loaders	Generators
Cranes	Turnout installation machines	Graders
Rollers	Rail laying machine	Ballast regulator

3.3.3 Construction schedule

Construction of the project is expected to take about 26 months (including about five months for commissioning) and is expected to be completed in mid to late 2026.

3.3.4 Construction compounds

Construction compounds and laydown areas could include stockpiles, materials laydown, offices, parking and other general support activities. The delivery of materials and equipment to the work sites would be staged as required. The proposed location for the main construction compound is shown on Figure 3.1. Access to the main compound would be via an existing track off Brolgan Road and from within the rail corridor. A lease agreement with the private landowner for the proposed construction compound would be required. The location for all compounds and laydown areas will be defined in the EIS.

3.3.5 Construction workforce

It is anticipated that a work force of approximately 40 people would be required during the construction phase of the project.

3.3.6 Construction traffic

Access to the rail corridor and construction areas would be via existing ARTC access roads located off public roads. Should access through private property be required, then this would only be undertaken with permission of the landowner. It is currently estimated that an average of approximately 50 heavy vehicle and 60 light vehicle movements (two way) per day would be required. These numbers would vary throughout the construction period dependent on the construction activities being undertaken.

Some construction materials (such as rail and sleepers) may also be delivered to the project site by rail.

3.3.7 Construction hours

Proposed standard construction hours

It is currently envisaged that the majority of construction would be undertaken within the recommended standard construction hours in accordance with the *Interim Construction Noise Guideline* (DECC, 2009) as follows:

- Monday to Friday: 7:00 am to 6:00 pm
- Saturday: 8:00 am to 1:00 pm
- No work on Sundays or public holidays

Work outside the standard construction hours

Some construction activities will be undertaken outside the recommended standard construction hours, which may include safety critical works or works required to be carried out during track possessions.

The project would utilise scheduled rail corridor possession periods (that is, the times that the movement of trains along the rail corridor are stopped for maintenance) for connections/interactions with existing infrastructure. This could include, for example, connecting tracks and some finishing works. Rail corridor possessions are typically for a 72-hour period, four times a year however, other possession periods may be utilised where they become available. During possessions, works may need to be carried out on a 24-hour basis to make the most use of this available track access.

The need for any work outside the recommended standard construction hours would be confirmed in the EIS. The proposed assessment process for noise and vibration is described in Section 6.2.1.

3.3.8 Property acquisition

Subject to further property survey, minor adjustments to property boundaries within Goobang Junction may be required. Property acquisition in other parts of the project site is not expected to be required. The need for any adjustments will be detailed in the EIS.

3.4 Operation of the project

3.4.1 Train operations

While the project would not result in a direct increase in train numbers, it would allow for the efficient and effective passage of both east-west Interstate traffic and Inland Rail services and facilitate future growth. Train speeds within the project site are currently constrained by existing track arrangements and signalling infrastructure and as such, the project would result in minor changes to train speeds throughout the project site.

Potential impacts associated with Inland Rail operations within parts of the project site have been considered in the environmental assessments for Parkes to Narromine and Stockinbingal to Parkes, and where there is no change due to the project, would be excluded from the assessment for this project.

Existing and forecast average train numbers and speeds vary across the line sections within the project site, with key forecast changes being:

- Average train movements (both directions) in the vicinity of the Goobang Junction are forecast to grow from 7.76 in 2022 to 17.78 in 2039 (inclusive of Inland Rail trains).
- Train tonnages within the Goobang Junction will increase from 22 to at least 25 tonne axle load (with a potential increase to 30 tonne axle load).
- Train speeds within the Goobang Junction will increase from 25 to at least 40 km/h.

Further detailed information on changes due to the project will be provided in the EIS.

3.4.2 Maintenance activities

Standard ARTC maintenance activities would be undertaken during operations. Typically, these activities include minor maintenance works, such as culvert inspections, rail grinding and track tamping, through to major maintenance, such as limited sleeper replacement, reconditioning of track formation and ballast cleaning as required.

3.4.3 Traffic and access

During operation, road traffic would be minimal and primarily associated with routine inspections, junction operations and maintenance activities. The project would not result in any changes to traffic movements at level crossings within the project site.

3.5 Capital investment value

The capital investment value of the project is approximately \$65 million.

3.6 Options considered

The options assessment process has occurred across two distinct phases as summarised below.

3.6.1 Pre-feasibility phase

During this phase five options were considered (see Figure 3.2) as follows:

- Option 1 – Re-signal
- Option 2 – Re-signal, track rectification and reconfiguration
- Option 3 – Re-signal, full track upgrade and realignment
- Option 4 – Re-signal and at grade junction bypass road via the Parkes North-West Link
- Option 5 – Grade separated bypass road.

Options 1 and 2 were discounted as they did not fully address the existing infrastructure issues at the junction. Similarly, option 5 was discounted due to the high capital cost in comparison to the other options. Options 3 and 4 were considered feasible and following further work a hybrid option (referred to as option 3a) was developed. Option 3a included a section of the bypass track that was included in option 4 and an at-grade track crossing through the middle of the existing Goobang Junction.

During initial stakeholder consultation and following further review, it was subsequently identified that the layout proposed under option 3a would adversely impact on the efficient operations of the East-West Interstate and the Inland Rail lines. This was due to the option crossing the Interstate loop around its midpoint, which would result in conflicts in train movements. As a result, option 3a was discounted from further consideration.

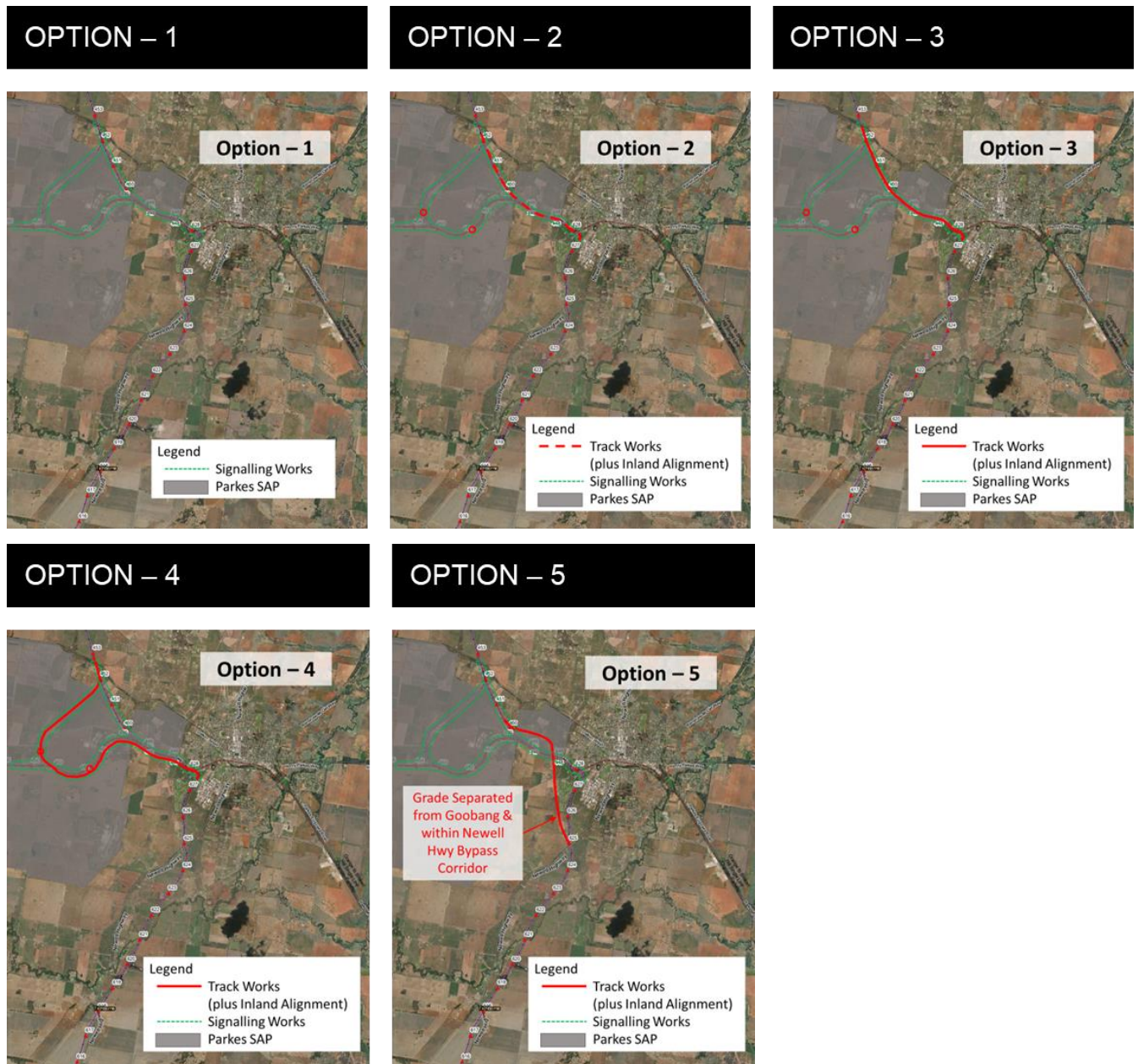


Figure 3.2 Pre-feasibility phase options

3.6.2 Feasibility phase

Options description

Three options (see Figure 3.3) were subsequently developed and considered during this phase as follows:

- Option A – Re-signal, full track upgrade and realignment (option 3 from the pre-feasibility phase).
- Option B – Re-signal, full track upgrade with north-south transit via the Parkes North-West Link (a new option).
- Option C – Re-signal, new southern alignment with north-south transit also via the Parkes North-West Link (a new option).

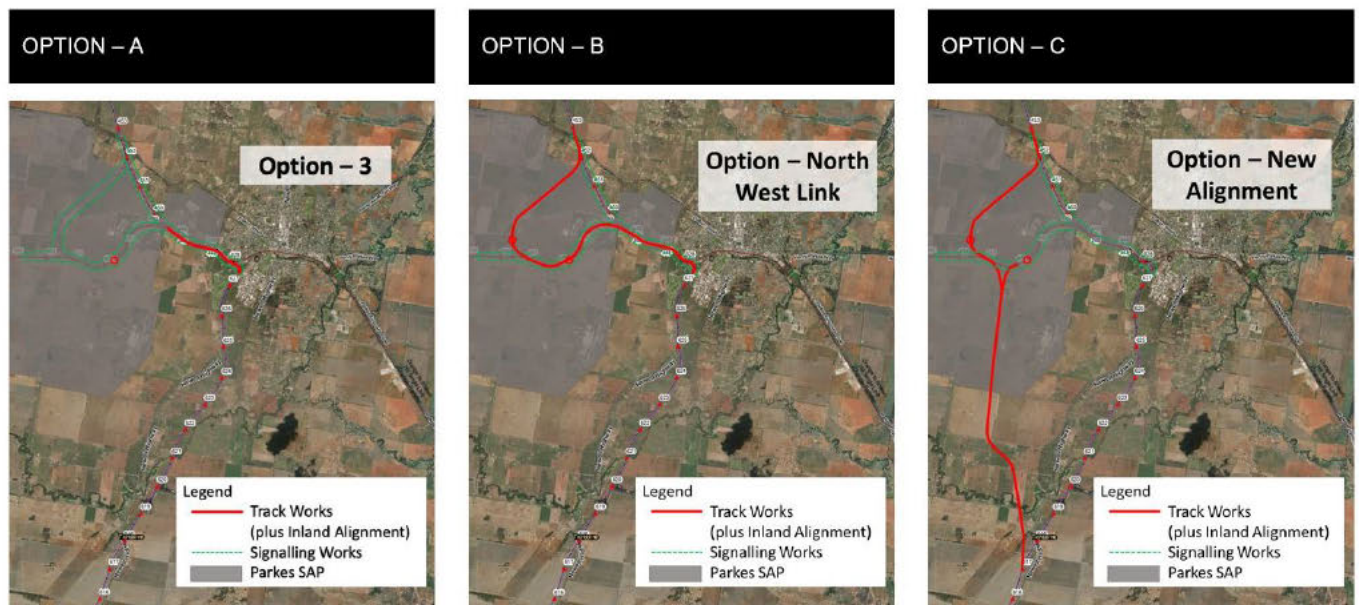


Figure 3.3 Feasibility phase options

A brief description of each option, and their key benefits and risks is provided in Table 3.2.

Table 3.2 Feasibility phase options

Feature	Option A Pre-feasibility option 3	Option B New NW link alignment	Option C New southern alignment
Description	– Re-signalling the junction (upgrading the signalling to Advanced Train Management System (ATMS) ready Centralised Train Control (CTC) and extending the CTC boundary to include the Parkes North West Link). – Track/turnout upgrades for the Goobang Junction along the Stockinbingal and Narromine Branch lines (and via the Parkes North West Link). – Rectification of all known track formation and junction drainage issues.	– Re-signalling the junction (upgrading the signalling to ATMS ready CTC and extending the CTC boundary to include the Parkes North West Link). – Track/turnout upgrades for the Goobang Junction via the Parkes North West Link. – Rectification of all known track formation and junction drainage issues.	– Re-signalling the junction (upgrading the signalling to ATMS ready CTC and extending the CTC boundary to include the Parkes North West Link). – Construct a new alignment from the south (near Tichborne) up to the Parkes North West Link.

Feature	Option A Pre-feasibility option 3	Option B New NW link alignment	Option C New southern alignment
Benefits	- Resolves all existing signalling issues, brings signalling equipment up to current standards and is ATMS ready. - Supports the required 25TAL for Inland Rail's service offering.	- Resolves all existing signalling issues, brings signalling equipment up to current standards and is ATMS ready. - Supports the required 25TAL for Inland Rail's service offering. - Reduces the requirement for upgrading the southern end of the Parkes to Narromine Line for Inland Rail traffic.	- Resolves junction signalling issues and is ATMS ready. - Supports the required 25TAL for Inland Rail's service offering. - Eliminates the need to upgrade the junction track structure for Inland Rail traffic. - Eliminates a Newell Highway level crossing. - Provides more potential rail connection opportunities for the Parkes SAP.
Risks	- Full option may not be deliverable within previously identified timeframes. - Operation of adjacent Linfox intermodal facility may impact turnout reconfiguration plans for this option.	- Introduces an extended potential conflict between North-South and East-West movements (when compared to Option A). - Operation of adjacent Pacific National intermodal facility may impact this option.	- This option requires significant property acquisition and may result in substantial environmental impacts. - Operation of adjacent Pacific National intermodal facility may impact this option.

Options assessment

These options were subject to assessment in a workshop attended by representatives from ARTC Major Construction Projects, Interstate and Inland Rail personnel. The options were assessed via multi criteria analysis (MCA) using the following criteria:

- Safety (during operation and maintenance)
- Key technical (minimum performance specifications)
- Environmental (ecology and noise and vibration)
- Community and property (community impacts and property acquisition)
- Capital cost
- Schedule (delivery timeframe)
- Operations (complexity of Interstate and Inland Rail interfaces, complexity of alignment (grades and curves))
- Non-key technical (other non-key performance specifications)

Overall the MCA assessment ranked option A first, option B second and option C third, with key findings as follows:

- All options met the minimum safety requirements.
- Option A performed the best for key technical requirements. Options B and C scored lower as they would have a negative impact on Pacific National's terminal operations and that by not upgrading the southern end of the Parkes to Narromine branch line would negatively impact on Goobang Junction.
- Options A and B scored highest for environmental and community and property.
- Option A performed the best for complexity of Interstate and Inland Rail interfaces while option C performed best for complexity of alignment.

Further sensitivity testing was undertaken whereby capital costs were excluded from the scoring. In this scenario the ranking behind the three options remained the same with option A first, option B second and option C third.

Preferred option

The outcome of the MCA is that option A scored the highest across the nominated criteria and was selected as the preferred option for further development.

4. Statutory context

This section provides a review of the legislation and environmental planning instruments that are relevant to the environmental assessment and approval process for the project.

4.1 NSW legislation

The key requirements of the EP&A Act and the EP&A Regulation in relation to the approval and assessment of the project are summarised in Table 4.1.

Table 4.1 Statutory requirements of the project

Matter	Guidance
Power to grant approval	The EP&A Act is the principal legislation regulating development in NSW. It establishes a regime for the making of development applications, assessment of their environmental impacts, and the determination of those applications. It also allows for the making of environmental planning instruments such as the state environmental planning policies and local environmental plans discussed below. Part 5, Division 5.2 of the EP&A Act provides for declaration, assessment and approval of State Significant Infrastructure (SSI) including Critical State Significant Infrastructure (CSSI). The project is SSI under Part 5, Division 5.2 of the EP&A Act and will therefore be subject to the environmental assessment and approval process outlined above including the preparation of an environmental impact statement (EIS) for the project. The Minister for Planning (or delegate) would be the approval authority.
Permissibility	State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP) provides for the declaration of State significant development and State significant infrastructure including Critical state significant infrastructure. Section 2.13 of the Planning Systems SEPP provides that development specified in Schedule 4 of the policy is SSI. Clause 2.91 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 (Transport and Infrastructure SEPP) identifies that development for the purpose of a railway or rail infrastructure facilities may be carried out by or on behalf of a public authority without consent on any land. Most of the project site is located within the Parkes SAP and is subject to zoning under the State Environmental Planning Policy (Precincts-Regional) 2021 (Precincts-Regional SEPP). Clause 3.4(3) of the Precincts-Regional SEPP states that Chapter 2 of the Planning Systems SEPP does not apply to land within an Activation Precinct. However, Clause 3.4(4) of the Precincts-Regional SEPP states that Clause 3.4(3) does not apply to development carried out on land that is partly within and partly outside an Activation Precinct. Therefore, the project is permissible without consent on any land.
Other approvals <i>Not required for an approved SSI</i>	Under section 5.23 of the EP&A Act, certain other approvals are integrated into the SSI approval process and are not required to be separately obtained for the project. Such approvals are as follows: – A permit under section 201, 205 or 219 of the <i>Fisheries Management Act 1994</i>. – An approval under Part 4, or an excavation permit under section 139, of the <i>Heritage Act 1977</i>. – An Aboriginal heritage impact permit under section 90 of the <i>National Parks and Wildlife Act 1974</i>. – A bush fire safety authority under section 100B of the <i>Rural Fires Act 1997</i>. – A water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the <i>Water Management Act 2000</i>.
Other approvals <i>Approvals required and that should be consistent with approved SSI</i>	Under section 5.24 of the EP&A, certain other approvals are still required for SSI, but must be substantially consistent with the SSI approvals. Such approvals are as follows: – An environment protection licence under Chapter 3 of the <i>Protection of Environment Operations Act 1997</i> (POEO Act). – A consent under section 138 of the <i>Roads Act 1993</i>.

Matter	Guidance
Other applicable legislation	<u><i>Protection of the Environment Operations Act 1997</i></u> The POEO Act aims to protect, restore and enhance the quality of the environment. It prescribes offences mainly regarding pollution of the environment and establishes a regime for the licensing of certain scheduled activities. The POEO Act provides for an integrated system of licensing and contains a core list of activities in Schedule 1 which require an Environment Protection Licence (EPL). These activities are called 'scheduled activities' and are listed in Schedule 1 of the POEO Act. There are a number of relevant scheduled activities listed under Schedule 1 of the POEO Act relating to railway activities, including Clause 33 (Railway activities–railway infrastructure construction) and Clause 33a (Railway activities–railway infrastructure operations). The need for an EPL during construction will be identified in the EIS when the volume of earthworks is confirmed. ARTC currently holds an EPL to carry out railway systems activities on the NSW rail network (EPL no. 3142), which includes the project site.
	<u><i>Roads Act 1993</i></u> The <i>Roads Act 1993</i> (Roads Act) provides for the operation, maintenance and use of roadways in NSW including managing authorities, rites of passage and classification of roads. Section 138 of the Roads Act requires that a person must not carry out work in, on or over a public road or dig up or disturb the surface of a public road without the prior consent of the appropriate road's authority. The proponent would seek the necessary approvals under the Roads Act. As noted above, section 5.24 of the EP&A Act provides that a permit under section 138 of the Roads Act cannot be refused if it is necessary to carry out an approved SSI project.
	<u><i>National Parks and Wildlife Act 1974</i></u> The <i>National Parks and Wildlife Act 1974</i> (NPW Act) provides for the protection of Aboriginal objects (sites, objects and cultural material) and Aboriginal places. It is an offence under Section 86 of the NPW Act to harm or desecrate an object the person knows is an Aboriginal object. It is also a strict liability offence to harm an Aboriginal object or harm or desecrate an Aboriginal place, whether knowingly or unknowingly. Section 87 of the NPW Act provides a series of defences against the offences listed in Section 86 which includes if the harm was authorised by and conducted in accordance with the requirements of an Aboriginal Heritage Impact Permit (AHIP) under Section 90 of the NPW Act. The project site is predominantly heavily disturbed however, parts may have potential for heritage items (refer to Section 6.3.2). Potential impacts upon Aboriginal cultural heritage will be considered through preparation of an Aboriginal Cultural Heritage Assessment Report (ACHAR). Further, under section 5.23 of the EP&A Act, an AHIP permit under Section 90 of the NPW Act is not required for an approved SSI project.
	<u><i>Heritage Act 1977</i></u> The <i>Heritage Act 1977</i> (Heritage Act) is concerned with all aspects of heritage conservation ranging from basic protection against indiscriminate damage and demolition of buildings and sites, through to restoration and enhancement. Heritage places and items of particular importance to the people of NSW are listed on the State Heritage Register. An application for approval under Section 59, Part 4 of the Heritage Act is required for any direct impacts on an item on the register. An application for a permit from the NSW Heritage Council under Section 139 of the Heritage Act is required to be made prior to disturbance or excavation likely to discover, expose, move, damage or destroy a relic. The potential for the project to impact a heritage item or relic is discussed in Section 6.3.1. Under Section 5.23 of the EP&A Act, approval under Part 4 or an excavation permit under Section 139 of the Heritage Act is not required for an approved SSI project.
	<u><i>Crown Lands Management Act 2016</i></u> The <i>Crown Land Management Act 2016</i> provides the legislative framework for the administration and management of Crown land. If the project would impact on Crown land, approval must be sought under the Act. The unnamed road, which is classified as a Traveling Stock Reserve (R87509) is Crown Land in NSW, crosses the project site near Brolgan Road. The project is not likely to impact other Crown lands.

Matter	Guidance
Pre-conditions to exercising the power to grant approval <i>EP&A Act Objects</i>	The objects of the EP&A Act are guiding principles that need to be considered by planning authorities when making decisions under the Act.
<i>EP&A Act Division 5.2</i>	Section 5.14 provides that the Ministers approval is required for SSI. Section 5.16 provides that the proponent must submit an EIS to meet the environmental assessment requirements in the form prescribed by the Minister
<i>Biodiversity Conservation Act 2016</i>	Under Section 7.9 of the <i>Biodiversity Conservation Act 2016</i> (BC Act) an application to carry out SSI, under the EP&A Act is to be accompanied by a Biodiversity Development Assessment Report (BDAR) unless the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values. Refer to Section 6.3.1 for further information about the biodiversity values of the project site.
Mandatory matters for consideration	The objects of the EP&A Act are guiding principles that need to be considered by planning authorities when making decisions under the Act. Section 5.14 of the EP&A Act provides that the Ministers approval is required for SSI. Section 5.16 of the EP&A Act provides that the proponent must submit an EIS to meet the environmental assessment requirements in the form prescribed by the Minister.
Environmental planning instruments	<u><i>State Environmental Planning Policy (Planning Systems) 2021</i></u> The Planning Systems SEPP provides for the declaration of State significant development and State significant infrastructure including Critical state significant infrastructure. Section 2.13 of the Planning Systems SEPP provides that development specified in Schedule 4 of the policy is SSI. The proposed works is defined in Clause 4 of Schedule 3 of the Planning Systems SEPP as a “development for the purpose of rail infrastructure by or on behalf of the Australian Rail Track Corporation that has a capital investment value of more than \$50 million.” As such, the project is SSI. <u><i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i></u> The Transport and Infrastructure SEPP aims to facilitate the effective delivery of infrastructure across the State. The project meets the definition of rail infrastructure facilities, which are defined by clause 2.91 of the Transport and Infrastructure SEPP as including ‘railway tracks, associated track structures, cuttings, drainage systems, fences, tunnels, ventilation shafts, emergency accessways, bridges, embankments, level crossings and roads, pedestrian and cycleway facilities’. Clause 2.3(2) of the Transport and Infrastructure SEPP defines public authority as having the same meaning as the EP&A Act and in respect of development connected with rail corridors or railway infrastructure facilities, includes the Australian Rail Track Corporation Limited. Clause 2.91 of the Transport and Infrastructure SEPP identifies that development for the purpose of a railway or rail infrastructure facilities may be carried out by or on behalf of a public authority without consent on any land. <u><i>State Environmental Planning Policy (Resilience and Hazards) 2021</i></u> State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) sets the regulatory framework for hazard and offensive development, and remediation of land within NSW. <u><i>Chapter 3 – Hazardous and offensive development</i></u> Chapter 3 aims to regulate, amongst other matters, the determination of development applications to carry out development for the purposes of a potentially hazardous industry or potentially offensive industry. Hazard and risk is discussed in Section 6.3.1 of this report, as well as how it would be addressed in the EIS. <u><i>Chapter 4 – Remediation of land</i></u> Chapter 4 aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment and provide a statewide planning approach to the remediation of contaminated land. Contamination is discussed in Section 6.2.3 of this report, as well as how it would be addressed in the EIS.

Matter	Guidance
	<u>State Environmental Planning Policy (Precincts-Regional) 2021</u> The Precincts-Regional SEPP aims to facilitate the development, redevelopment or protection of important urban, coastal and regional sites of economic, environmental or social significance to the State so as to facilitate the orderly use, development or conservation of those State significant precincts for the benefit of the State. The Parkes Activation Precinct is identified in Schedule 1 of the Precincts-Regional SEPP. Schedule 1, clause 11A identifies that the relevant provisions of the Transport and Infrastructure SEPP applies to land within the Parkes Activation Precinct. Most of the project site is located within the Parkes SAP and is subject to zoning under the Precincts-Regional SEPP. Clause 3.4(3) of the Precincts-Regional SEPP states that Chapter 2 of the Planning Systems SEPP does not apply to land within an Activation Precinct. However, Clause 3.4(4) of the Precincts-Regional SEPP states that Clause 3.4(3) does not apply to development carried out on land that is partly within and partly outside an Activation Precinct.
	<u>Parkes Local Environmental Plan 2012</u> Parkes Local Environmental Plan 2012 (Parkes LEP) sets out the environmental planning provisions administered by Parkes Shire Council within the Parkes LGA. Parts of the project site that are located outside the Parkes SAP are subject to zoning under the Parkes LEP. Clause 5.12(1) of the Parkes LEP states that '...this Plan does not restrict or prohibit, or enable the restriction or prohibition of, the carrying out of any development, by or on behalf of a public authority, that is permitted to be carried out with or without development consent, or that is exempt development, under State Environmental Planning Policy (Transport and Infrastructure) 2021'.

4.2 Commonwealth legislation

4.2.1 Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is administered by the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) and provides a legal framework to protect and manage nationally important flora, fauna, ecological communities and heritage places defined as matters of national environmental significance (MNES). Part 9 of the EPBC Act provides that an action that has, will have or is likely to have a significant impact on MNES may not be undertaken without prior approval from the Commonwealth Environment Minister. Approval under the EPBC Act may also be required for actions carried out by Commonwealth agencies or impacting on Commonwealth land.

A search using the Protected Matters Search Tool (PMST) with a 10-kilometre buffer from the project was undertaken on 6 July 2023. Table 4.2 provides a summary of the results.

An assessment of whether the project will have a significant impact on these MNES will be undertaken as part of the environmental assessment process, however, based on the preliminary assessment, a referral to DCCEEW under the EPBC Act is not considered necessary. If biodiversity investigations indicate a potential to impact upon a MNES, then a Referral to the Commonwealth Minister for the Environment will be undertaken.

Table 4.2 EPBC protected matters search results

Protected matter	Matter located within search radius	Comments	Potential impact
Matters of national environmental significance			
World Heritage Property	None	N/A	N/A
National Heritage Places	None	N/A	N/A
Wetlands of International Importance	4	Not impacted.	
Great Barrier Reef Marine Park	None	N/A	N/A
Commonwealth Marine Areas	None	N/A	N/A

Protected matter	Matter located within search radius	Comments	Potential impact
Threatened Ecological Communities	4	Discussed further in Section 6.2.3	
Threatened Species	41	Discussed further in Section 6.2.3	
Migratory species	12	Discussed further in Section 6.2.3	
Other matters			
Commonwealth Land	10	Not impacted.	
Commonwealth Heritage Places	None	N/A	N/A
Marine Species	19	Discussed further in Section 6.2.3	
Whales and Other Cetaceans	None	N/A	N/A
Critical Habitats	None	N/A	N/A
Commonwealth Reserves Terrestrial	None	N/A	N/A
Australian Marine Parks	None	N/A	N/A

4.2.2 Native Title Act 1993

The *Native Title Act 1993* provides a legislative framework for the recognition and protection of common law native title rights. Native title is the recognition by Australian law that Indigenous people had a system of law and ownership of their lands before European settlement. Where that traditional connection to land and waters has been maintained and where government acts have not removed it, the law recognises this as native title.

A search of the Register of Native Title Claims for Parkes LGA on the 22 June 2023 did not yield any results for any registered claimant applications.

4.3 Confirmation of statutory requirements

The project has been declared SSI under section 5.12 of the EP&A Act. The project is to be assessed in accordance with the provisions of Division 5.2 of the EP&A Act. In accordance with section 5.17 of the EP&A Act, applications for SSI must be accompanied by an EIS.

The Minister for Planning (or delegate) is the determining authority for SSI projects in NSW. The process for environmental assessment and approval of SSI is set out as follows:

- Application for determination of the Minister to carry out development
- Development of project specific SEARs
- Preparation of an EIS
- Public exhibition of the EIS
- Response to submission(s) received during public exhibition of the EIS
- Preparation of Planning Secretary's Assessment Report
- Determination regarding the development by the Minister

5. Stakeholder engagement

5.1 Consultation approach and strategy

ARTC's values commit the organisation to active engagement with stakeholders and the community. A Communications Plan has been prepared by ARTC for the project that outlines key stakeholders and the approach for communication, and this has guided the initial engagement for the project.

A project website www.artc.com.au/goobang has also been established, containing an overview of the project, planning process and community information. Future consultation and planning documents will be published on this website.

ARTC recognises that the main concerns for the community and stakeholders will be related to the impacts of the works and access to project related information. As such, the focus of the community engagement is to provide clear, effective information and to engage stakeholders to identify and respond to concerns, providing feedback where relevant. The consultation approach will:

- Build project awareness, understanding and support among stakeholders and the community by providing detailed information on the design, locations, proposed works and methodologies. The information is to be accessible and easily understood to those that may potentially be impacted or have interest in the project.
- Proactively communicate with communities and relevant stakeholders by providing a diverse and robust consultation timetable and a variety of communications channels to reach a diverse range of stakeholders.
- Provide opportunities for feedback, to ensure stakeholder and community views are effectively recorded and can be considered as the project is developed.

A stakeholder engagement plan will be prepared for the next phases of the project, and this will guide the future consultation activities for the project. The ARTC's values will be documented within the plan, committing the organisation to active engagement with stakeholders and the community.

5.2 Consultation undertaken to date

ARTC's staff have undertaken initial consultation with a range of stakeholders as summarised in Table 5.1. The consultation addressed a range of matters including discussion of design options, the preferred option and design features, and allowed each stakeholder to raise and discuss key issues.

Table 5.1 Consultation to date

Stakeholder	Key matters discussed
Transport for NSW (21/6/22 and 30/5/23)	– Level crossings are a key focus for maintaining safety at these interfaces. – Proposed infrastructure development within Parkes SAP – Noted that naturally occurring asbestos had been encountered during works for the Newell Highway Bypass project
Regional Growth Development Corporation (1/7/22, 18/7/22 and 23/5/23)	– Proposed development within Parkes SAP – Discussion of design options – Identified that current works being undertaken as part of the Parkes SAP on Brolgan Road is due for completion by October 2023 (with bridges finished March 2023) – Noted community concerns regarding cumulative vegetation loss in the region
Linfox (17/3/23)	– Discussion of design options – Discussion of general site activities and operations – Potential impacts to Linfox operations during construction – Potential need for minor property adjustments
Pacific National (28/3/23, 27/4/23)	– Discussion of design options – Discussion of general site activities and operations
UGL Linx (17/4/23)	– Discussion of design processes

Stakeholder	Key matters discussed
Parkes Shire Council (30/5/23)	– Potential constraints for disposal of waste at the Council waste facility – Potential impacts to traffic, in particular road trains, at Blaxland Street level crossing – Noted that haulage of asbestos waste was an issue for the community following recent media – Opportunities for Council to upgrade services under the rail line during construction
Mayor of Parkes (31/5/23)	– Noted that construction of the project may commence after other major projects in the area are completed – Discussion of proposed design features
SCT Logistics (30/6/23)	– Discussion of proposed design features – Discussion of general site activities and operations

A Goobang Junction Upgrade community notification was delivered to residents in streets close to the project footprint on 31 May 2023, providing information and a location map for the project and asking for feedback on the project and any issues which they wanted assessed. The notification was delivered to properties in Best Street, Hartigan Avenue, Warragrah Place, Wescott Crescent, Close Street, Blaxland Street, Rosewood Avenue, Cedar Crescent, Alder Avenue Willow Place, Jacaranda Road, Brolgan Road and Ballerdee Lane, requesting feedback by 14 June 2023. No feedback was received.

ARTC would continue to communicate relevant information to key stakeholders and the community before and during construction. Consultation would focus on environmental assessments and the commencement of construction, as well as informing the community of any future works to be completed outside standard working hours.

5.3 Consultation to be undertaken during the EIS

ARTC has identified the following stakeholders who will need to be consulted during the EIS process. The type and frequency of consultation will be targeted to each stakeholder group, taking into account level of interest and involvement:

- Government, including Parkes Shire Council, Regional Growth NSW Development Corporation (RGDC) and Country Regional Network (NSW rail network).
- State and Australian government elected representatives.
- Indigenous groups, including Peak Hill Local Aboriginal Land Council.
- Customers, including Linfox, Pacific National, SCT (Southern Cross Transport).
- Community/neighbours, in the areas surrounding the project alignment – including, but not limited to: Best Street, Hartigan Avenue, Warragrah Place, Wescott Crescent, Close Street, Blaxland Street, Rosewood Avenue, Cedar Crescent, Alder Avenue, Willow Place, Jacaranda Road, Brolgan Road and Ballerdee Lane.
- Business/neighbours, including Parkes Waste Facility, A & R Magill Pty Ltd, Fishers Big Bird Farm and Buckwheat.
- Agricultural stakeholders.
- Environmental stakeholders.
- Service providers, including community, medical, emergency services.
- Landowners – any not identified in the above groups.

5.4 Public exhibition of the EIS

Public exhibition of the EIS would be for a minimum of 28 days. During the exhibition period, government agencies, stakeholders and the community would be able to review the EIS and would have the opportunity to make a written submission to DPE for consideration in its assessment of the project.

To ensure a high level of awareness of the EIS and provide ample opportunities for feedback, ARTC will provide information through a range of channels, including but not limited to:

- Project website **www.artc.com.au/goobang**
- Briefings with key stakeholders
- Notifications to community
- Face-to-face discussions with community members
- Social media posts targeted to the project area
- Information to local media

6. Proposed assessment of impacts

6.1 Overview

The identification of issues to be addressed in the EIS has been undertaken through a risk-based approach in accordance with the State significant infrastructure guidelines – preparing a scoping report (DPIE, 2021). Key potential issues are those environmental aspects that will require project specific assessments to assess the potential impacts and develop measures to avoid, mitigate and/or offset those impacts, where necessary. The key assessment issues were identified with consideration of a range of factors including:

- The existing environmental context of the project and its surrounding locality.
- The proposed project activities.
- The regulatory framework applicable to the project.
- The outcomes of consultation undertaken to date.
- The project team's experience with developing and delivering freight rail projects and managing potential environmental impacts.
- The project team's experience from previous environmental approvals for projects in NSW.

Key issues and the proposed level and scope of assessments were documented using DPE's Scoping Worksheet, a copy of which is provided in Appendix A. In accordance with the Scoping Worksheet, each issue has been categorised as either a 'Key' issue, 'Other' issue, or 'Scoping only' issue. Further details regarding the identified issues and the proposed level and scope of assessment are presented in the following sections.

Table 6.1 Issues scoping

Key issues		Other issues		Scoping only issues	
Aspect	Section	Aspect	Section	Aspect	Section
Noise and Vibration	6.2.1	Biodiversity	6.3.1	Soils and geology	6.4.1
Traffic and Transport	6.2.2	Aboriginal Heritage	6.3.2	Landscape character and visual amenity	6.4.2
Contaminated lands and hazardous materials	6.2.3	Air quality	6.3.3	Hazards and risks	6.4.3
Cumulative impact	6.2.4	Hydrology and water quality	6.3.4	Greenhouse gas	6.4.4
		Social, economic, land use and property	6.3.5	Sustainability	6.4.5
		Non-Aboriginal heritage	6.3.6		
		Waste	6.3.7		

6.2 Key issues

6.2.1 Noise and vibration

Existing environment

The majority of the project site passes through agricultural and rural land. Sensitive receivers are mainly concentrated in Parkes, with the remaining residential receivers scattered on rural properties surrounding the project site. The closest residential receivers are approximately 150 metres from the project site. New residences are currently being constructed near Blaxland Street.

There are several industries near the project site including the Parkes Waste Facility and three existing intermodal terminals (owned and operated by Linfox, Pacific National and SCT Logistics) that are located within or immediately adjacent to the project site. Future commercial / industrial sensitive receivers may also be developed as part of the Parkes SAP project. Key sensitive receivers are displayed in Figure 6.1.

The background noise would predominantly be characterised from the land use activities mainly from the current rail line and minor influences from the surrounding agricultural and rural land uses, therefore ambient noise levels are considered to be low. Noise surrounding the project site would be consistent with farming and agricultural activities, road traffic, intermodal terminal activities and rail operations.

Transport for NSW are currently constructing the Newell Highway Bypass around the western edge of Parkes. The bypass provides a grade separation (road over rail) over the project near Blaxland Street (see Figure 6.1). When open to traffic (estimated late 2024), this will result in a change to the existing noise environment in this area.

Issues for consideration

Potential impacts associated with Inland Rail operations within parts of the project site have been considered in the environmental assessment for Parkes to Narromine, and where there is no change due to the project, would be excluded from the assessment for this project.

Construction

Construction works will generally require the use of heavy machinery, which has the potential to generate noise and vibration that would be noticeable at sensitive receivers. The potential impacts and severity would vary depending on the intensity and location of construction activities, duration, type of equipment used, existing background levels, intervening terrain and weather conditions. The potential noise impacts during construction include:

- Operation of mobile and stationary construction equipment and plant
- Construction vehicle movements
- Construction and operation of site compounds and other ancillary facilities
- Site establishment, earthworks and track works

Construction activities for the project are anticipated to be undertaken during standard working hours in accordance with the *Interim Construction Noise Guideline* (DECC, 2009) where possible. Some construction activities will be undertaken outside the recommended standard construction hours, which may include safety critical works or works required to be carried out during track possessions. During possessions, works may need to be carried out on a 24-hour basis to make the most use of this available track access.

The operation of construction plant and equipment has the potential to generate vibration at a level that could result in structure damage to buildings and items located nearby the project site. General construction activities that typically generate vibration include, but not limited to, excavation, topsoil stripping and compactor works. The expected magnitude of ground vibration from general construction activities and the safe working distances mean vibration impacts are unlikely. Despite this the EIS would include an assessment of potential vibration impact in regard to structural damage and human discomfort.

Operation

The operation of a railway would result in the generation of noise including:

- Wheel rail interactions also known as rail squeal.
- Airborne noise from diesel engines (whether stationary at idle or mobile under load) and various other components including the exhaust system, traction motors and gearboxes, cooling system and brakes.
- Structure-borne noise from trains moving over reinforced concrete structures such as culverts.
- High frequency tonal noise from curve squeal on tight radius curves and brake squeal from freight wagons at low speed.
- Bunching at wagon couplings (braking and acceleration at signals).
- Noise at some track components such as turnouts.

- Locomotive horn noise.
- Maintenance activities (e.g. rail grinding and vegetation maintenance).
- Ground vibration during the movement of trains.
- Vibration transmitted to building structures resulting in low frequency regenerated noise.

Proposed method of assessment

A detailed assessment of construction and operation noise and vibration impacts will be undertaken as part of the EIS. The noise and vibration impact assessment will include:

- Identifying noise and vibration sensitive receivers and other places (including structures and heritage items), particularly those in built up areas and close to the rail corridor.
- Documenting key design, construction, operating and modelling assumptions.
- Assessment of noise impacts from construction, including all stationary and mobile sources, construction traffic and blasting (if required).
- Developing a strategy for managing construction noise and vibration, including any proposed out of hours activities.
- Assessment of noise impacts from rail operations and maintenance activities, including consideration of all reasonable and feasible options to mitigate the impacts of operational rail noise and vibration, and any impacts from fixed plant items.
- Developing a strategy for managing operation noise and vibration.

The noise and vibration impact assessment will be undertaken with consideration of relevant legislation and guidelines including:

- *Interim Construction Noise Guideline* (DECC, 2009)
- *Assessing Vibration – a technical guideline* (DECC, 2006)
- *Rail Infrastructure Noise Guideline* (EPA, 2013)
- *NSW Industrial Noise Policy* (EPA, 2000)
- *Road Noise Policy* (DECCW, 2011)

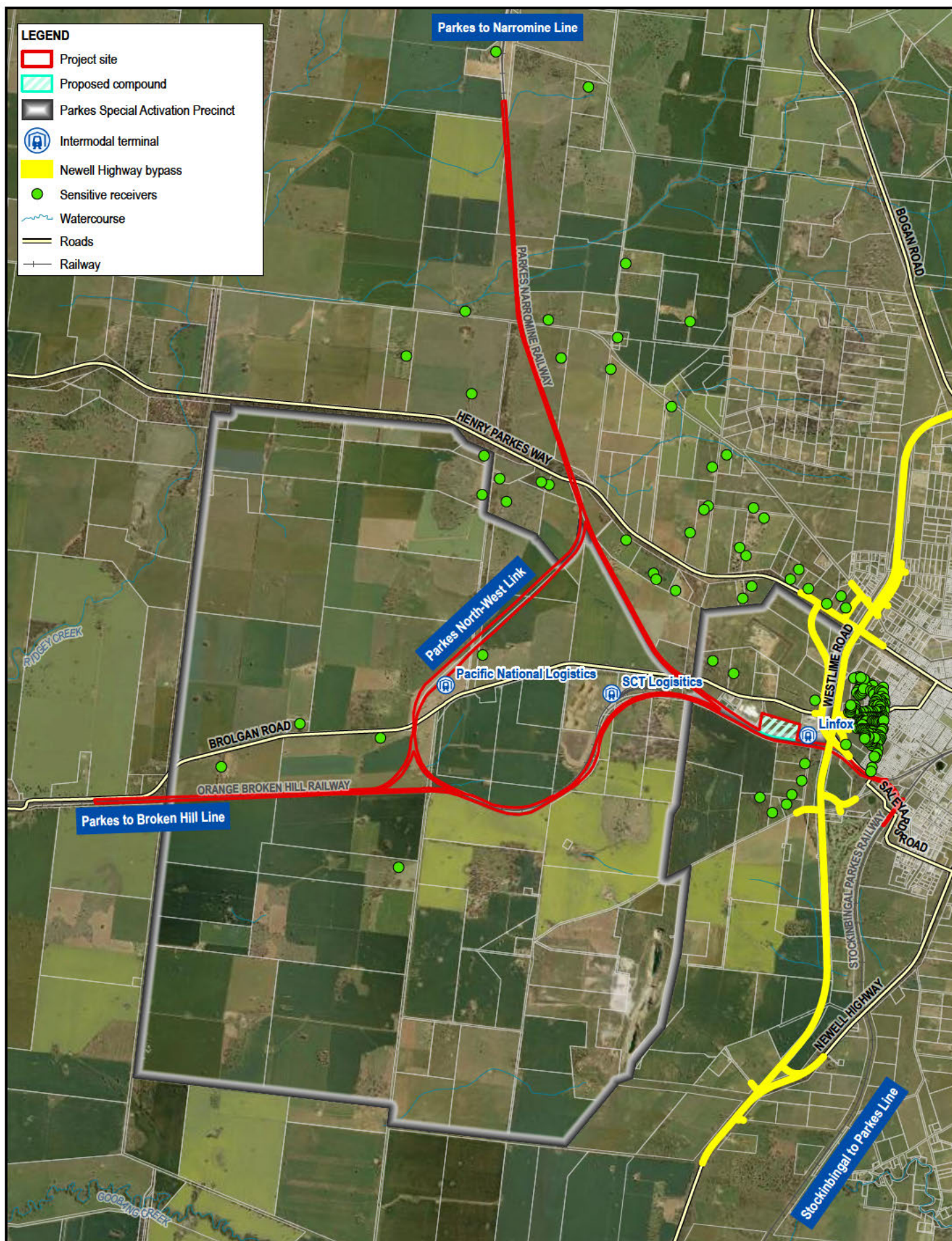
6.2.2 Traffic and transport

Existing environment

The road network in the vicinity of the project site consists mainly of local roads and private rural roads. The major roads include Henry Parkes Way and the Newell Highway, which are State roads managed by Transport for NSW. Henry Parkes Way is a regional transport corridor that runs in an east to west alignment between Orange and Condobolin. The project site crosses Henry Parkes Way about six kilometres north-west of Parkes. At this location, Henry Parkes Way comprises a single lane of travel in each direction on a single carriageway, with a posted speed limit of 100 kilometres per hour.

Transport for NSW are currently constructing the Newell Highway Bypass around the western edge of Parkes. The bypass provides a grade separation (road over rail) over the project near Blaxland Street (see Figure 6.1). Regional Growth Development Corporation are also currently constructing a grade separation that will take Brolgan Road over the Parkes to Narromine line and again over the Parkes North West Link to provide access to the Parkes SAP.

There are no dedicated active transport or parking facilities near the project site. The project site includes nine public and one private level crossings.



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Kilometres



Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56



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Key sensitive receptors

FIGURE 6.1

Issues for consideration

Potential impacts from Inland Rail operations at most level crossings within the project site have been considered in the environmental assessment for Parkes to Narromine, and where there is no change due to the project, would be excluded from the assessment for this project.

Construction

Construction activities will generate additional vehicle movements, including light and heavy vehicles. Light vehicles would generally be generated by construction workers and contractors moving to and from the construction work areas and/or site compounds. Heavy vehicles would include trucks delivering materials and equipment. The impacts from construction activities would be short term due to the temporary nature of construction activities. It is currently estimated that an average of approximately 50 heavy vehicle and 60 light vehicle movements (two way) per day would be required. These numbers would vary throughout the construction period dependent on the construction activities being undertaken. Parking for the construction workforce would be provided within the construction compound. The proposed location for the main construction compound is shown on Figure 3.1. Access to the main compound would be via an existing track off Brolgan Road and from within the rail corridor.

Proposed works on level crossings at Blaxland Street and an unnamed road (Traveling Stock Reserve (R87509)) (see Figure 3.1) may require minor adjustments to suit the upgraded rail formation. Other level crossings may be affected by signalling works (e.g. trenching) however no adjustments to the level crossings are currently proposed. This may result in disruptions to local traffic and short-term access restrictions to private property. Where this occurs, alternative access arrangements would be provided and/or appropriate traffic controls implemented.

Operation

During operation there would be minimal impacts to transport, traffic and access as the project would not change existing road arrangements.

There would be traffic delay impacts at the level crossings at Blaxland Street and an unnamed road (Traveling Stock Reserve (R87509)) associated with train movements.

Proposed method of assessment

A traffic and transport assessment will be undertaken and will:

- Identify construction haulage routes.
- Include information on the number, frequency and size of construction related vehicles (passenger, commercial and heavy vehicles, including spoil management movements).
- Assess impacts to road network, road closures and detours during construction.
- Consider access impacts to public transport and active transport facilities.
- Consider access impacts to property or surrounding facilities.
- Assessment of directly impacted level crossings with consideration to safety assessments and the operation of level crossings with regard to interaction of local traffic and train operations.
- Consider safety considerations during operation.

6.2.3 Contaminated lands and hazardous materials

Existing environment

The NSW EPA record of notices is a searchable database of (22 June 2023):

- Orders made under Part 3 of the *Contaminated Land Management Act 1997* (CLM Act).
- Notices available to the public under section 58 of the CLM Act.
- Approved voluntary management proposals under the CLM Act that have not been fully carried out and where EPA approval has not been revoked.

- Site audit statements provided to the EPA under section 53B of the CLM Act that relate to significantly contaminated land.
- Where practicable, copies of anything formerly required to be part of the public record.
- Actions taken by the EPA (or the previous State Pollution Control Commission) under sections 35 or 36 of the Environmentally Hazardous Chemicals Act 1985 (NSW) (EHC Act).

The EPA also publishes a list of contaminated land notified under section 60 of the CLM Act. The sites assessed by the EPA as being potentially contaminated but may not always require regulation under the CLM Act.

A search of the NSW EPA record of notices under section 58 of the CLM Act and list of notified sites under section 60 of the CLM Act was carried out in June 2023. The search only identified one contaminated site, which is the Former Parkes Gasworks located at 129 Woodward Street, approximately 2.5 kilometres east of the project.

The ARTC contaminated land register identifies a locomotive depot at Parkes as a potential contaminated site, which is adjacent to the project. Based on the land uses for areas surrounding the project, potential sources of contamination for the study area include:

- Agricultural activities leading to soil, surface water and groundwater contamination from the discharge of agrochemicals and organic matter.
- Unknown and/or imported fill material along the rail corridor, which may contain asbestos material, hydrocarbons, heavy metals, agrichemicals and other contaminants.
- Rail activities (especially from diesel trains and transport of coal), which may discharge polycyclic aromatic hydrocarbons, heavy metals and other hydrocarbons.
- Nearby industrial activities, which may contain hazardous materials, including chemical storage, agrochemicals, heavy metals, polycyclic aromatic hydrocarbons and asbestos.

Railway corridors have the potential to contain various contaminated materials from historical and operational sources. Such sources relate to the long-term operation of the railway and the history of nearby contaminating activities. Possible sources of contamination may include fill materials, hazardous materials from structures, leaks and spills of fuels or chemicals, historical use of pesticides and asbestos dust from train brake pads.

Transport for NSW has also advised that during construction of the Newell Highway Bypass naturally occurring asbestos in soils has been encountered.

Issues for consideration

Construction

While no contaminated material has been confirmed within the project site, potential contamination impacts may include:

- Poor management of contaminated waste and hazardous materials (e.g. asbestos) leading to their escape into the environment.
- Use of contaminated material for fill or other purposes, allowing contaminants to migrate into the environment.
- Disturbance of contaminated soils, including rail contaminants, which may disperse them into local waterways through runoff or reduce air quality through dust accumulation.
- Accidental leaks or spills of petrol, chemicals or hazardous materials could contaminate nearby waterways and ecosystems if uncontrolled.

Incorrect management of contaminated waste or hazardous materials could pollute nearby ecosystems and waterways, as well as put site workers at risk of exposure to hazardous substances. Fuel and chemicals from vehicles and heavy machinery may also enter nearby receiving environments if not maintained appropriately.

Disturbance of contaminants in the soil during construction may put site workers at risk (through direct contact or inhalation when soil is dispersed into the air) or enter receiving environments (including waterways and surrounding ecosystems). Contaminated or hazardous fill material and spoil intended to be reused on site may disperse contaminants into the environment if not adequately detected.

Operation

Potential contamination impacts attributable to operational activities may include:

- Accidental fuel and chemical leaks/spillage due to rail operations.
- Fuel spillage during maintenance and repair activities.
- Uncovering unexpected contamination during minor earthworks.
- Accidental leaks or spills of fuel, chemicals or hazardous materials could contaminate nearby waterways and ecosystems if uncontrolled.

Proposed method of assessment

An assessment will be undertaken to assess the potential contamination impacts of construction and operation of the project, as well as providing the necessary management measures. The assessment proposed is a Stage 1 Preliminary Site Investigation that will determine the likelihood that current or previous site operation may have contaminated the site, and the need for more detailed investigations.

If the preliminary assessment identifies no known or potential contamination, potential impacts during construction would be managed in accordance with an unexpected finds procedure.

6.2.4 Cumulative impact

Existing environment

A search on the major projects planning portal identified the following major developments within the close proximity of the project site. These include Parkes SAP, Newell Highway Bypass and Ridgely Creek Battery Energy Storage System. Figure 6.2 displays location of these major projects relative to the project.

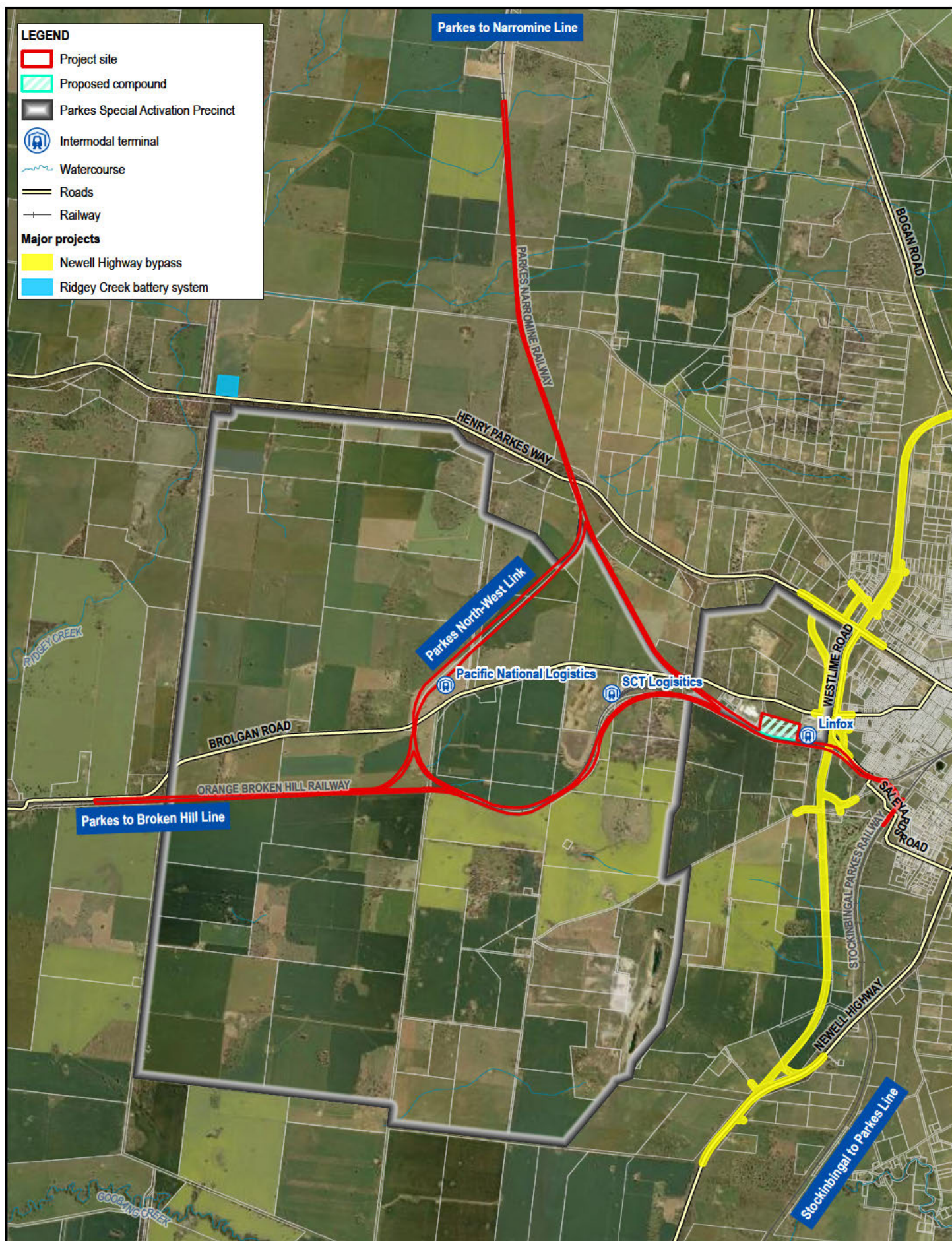
Issues for consideration

Potential cumulative impacts may occur as a result of construction occurring simultaneously or consecutively with the construction of other major projects in the vicinity of the project, particularly those within the wider Parkes LGA. These impacts are expected to be minor and temporary in nature. Any potential cumulative impacts will be reduced through the application of individual project-specific environmental mitigation measures.

Proposed method of assessment

The EIS will include a cumulative impact assessment component. The cumulative impact assessment will:

- Take into consideration past, present and reasonably foreseeable planned developments that are relevant due to their proximity and/or potential to interact with the identified project impacts.
- Include a cumulative assessment of hazards and risks associated with projects on adjoining sites or where adjoining project risk contours have the potential to overlap the project site.
- Assess relevant cumulative impacts such as air, noise, water and traffic.
- Outline how cumulative impacts may be managed through strategic planning or policy.
- Document how cumulative impacts have been considered and, to the fullest extent possible, the project's relative contribution to those cumulative impacts.



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Kilometres



Map Projection: Transverse Mercator
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Location of major projects

FIGURE 6.2

6.3 Other issues

6.3.1 Biodiversity

A desktop assessment was undertaken in 22 June 2023 to identify known and recorded threatened species, populations, communities and associated habitat listed under the BC Act, EPBC Act and NSW *Fisheries Management Act 1994* (FM Act) by reviewing published Commonwealth and State ecological records including; Office of Environment and Heritage's BioNet Atlas of NSW Wildlife, Department of the Environment's EPBC Protected Matters Search Tool (PMST), PlantNET – NSW FloraOnline and existing vegetation mapping.

A visual site inspection was conducted in June 2023 to confirm the extent of vegetation within the project site. The likely ecological constraints within the project site were able to be refined from the site inspection.

Existing environment

The project site is mainly surrounded by rural land which has been predominantly disturbed and modified for agricultural activities. Clearance and maintenance of the existing rail corridor has resulted in fragmentation, a high level of disturbance, and degradation of native vegetation. The majority of the project site consists of exotic vegetation species or cleared land. Refer to Figure 6.3 to Figure 6.6 for site photographs taken on 15 June 2023.

While database searches indicated that a number of biodiversity values are mapped as being potentially present near the project site (as discussed below), the site inspection confirmed that there is limited vegetation within the project site as follows:

- Scattered pockets of grasses are present in the rail corridor at the southern end of the project site near Saleyards Road and along the main line to the west of Goobang Junction.
- A few remnant mature trees are present along the project site.
- The proposed construction compound site is comprised of grasses with no mature trees.
- Grasses are present along the Parkes to Narromine line to the north of Goobang Junction however, this section was subject to high levels of disturbance during construction of Inland Rail which was completed in September 2020. Similarly, the Parkes North-West Link was also constructed as part of the Inland Rail Parkes to Narromine project.

Based on the database searches, Figure 6.7 displays the biodiversity features located near the project site. The search area includes the project site and a 10-kilometre buffer zone.

Flora

Database searches identified the following Plant Community Types (PCT) which are likely to occur within or adjacent to the project site:

- PCT_76: Western Grey Box tall grassy woodland on alluvial loam and clay soils in the NSW South Western Slopes and Riverina Bioregions.
- PCT_45: Plains Grass grassland on alluvial mainly clay soils in the Riverina Bioregion and NSW South Western Slopes Bioregion.
- PCT_76: Western Grey Box tall grassy woodland on alluvial loam and clay soils in the NSW South Western Slopes and Riverina Bioregions.
- PCT_267: Western Grey Box tall grassy woodland on alluvial loam and clay soils in the NSW South Western Slopes and Riverina Bioregions.

Ecological communities

The desktop assessment search results identified four threatened ecological communities listed under the EPBC Act that may be present within or near the project site:

- Grey Box (*Eucalyptus macrocarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia is a listed endangered ecological community (EEC). It is located from central NSW, through northern/central Victoria and into eastern South Australia and occurs in two forms, a grassy woodland or a derived native grassland.

- Poplar Box Grassy Woodland on Alluvial Plains is a listed EEC. It typically consists of a grassy woodland with a canopy dominated by *Eucalyptus populnea* and understorey most of grasses and other herbs. The EEC mainly is located in central NSW and south-eastern Queensland.
- Weeping Myall Woodlands is a listed EEC that generally occurs on the inland alluvial plains west of the Great Dividing Range in NSW and QLD. The Weeping Myall Woodlands range from open woodlands to woodlands, generally 4 to 12 metres high. The overstorey is dominated by weeping myall (*Acacia pendula*) trees and in some cases this species may be the only tree canopy species.
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland is a listed critically EEC. They were formerly widespread along the western slopes and tablelands of the Great Dividing Range, throughout southern QLD, western NSW, the Australian Capital Territory and Victoria. Now less than five per cent remains in condition and much of this occurs in small, isolated patches.

Threatened flora species

The PMST desktop review undertaken on the 6 July 2023 identified 10 threatened species (refer to Appendix B) within the search area. Of these, six were identified as having the potential to occur within or near the project site.

The BioNet search undertaken on the 22 June 2023 identified 3 threatened flora species listed under the NSW BC Act and 1 threatened flora species under the Commonwealth BC Act. None of the identified threatened flora species are anticipated to be impacted from the project.

Fauna

The PMST desktop review undertaken on the 6 July 2023 identified 31 threatened fauna species (19 birds, 3 fish, 1 frog, 6 mammals and 2 reptile species) within the search area (refer to Appendix B). As described above there is limited fauna habitat present within the project site.

The BioNet undertaken on the 22 June 2023 identified 225 fauna species under the NSW BC Act and 14 fauna species under the Commonwealth BC Act. None of the identified fauna species are anticipated to be impacted from the project.

Threatened aquatic species

No rivers occur within the project site and all watercourses are relatively undefined and considered unmapped or first order streams. Goobang Creek runs east/west to the south of the project site area whilst Ridgely Creek drains north/south to the west. There are a number of minor drainage lines that cross the project site. A review of DPI Fisheries NSW Spatial Data Portal on 3 July 2023 indicated that there are no threatened fish species listed under the FM Act within the vicinity of the project site. A tributary to Ridgely Creek, that is mapped as key fish habitat, crosses the project site to the north of Henry Parkes Way.

Other biodiversity values

No national parks or other conservation land occurs within or adjacent to the project site.

Other matters of National Environmental Significance

No wetlands of International Importance (Ramsar Wetlands) are located near the project site. The closest listed wetland (Hattah-kulkyne Lakes) is more than 500 kilometres south-west of Parkes and would not be impacted by the project.

Twelve migratory bird species were identified within the search area using the PMST however, the project site is unlikely to constitute important habitat for these species.



Figure 6.3 *Project site looking north from Saleyards Road*



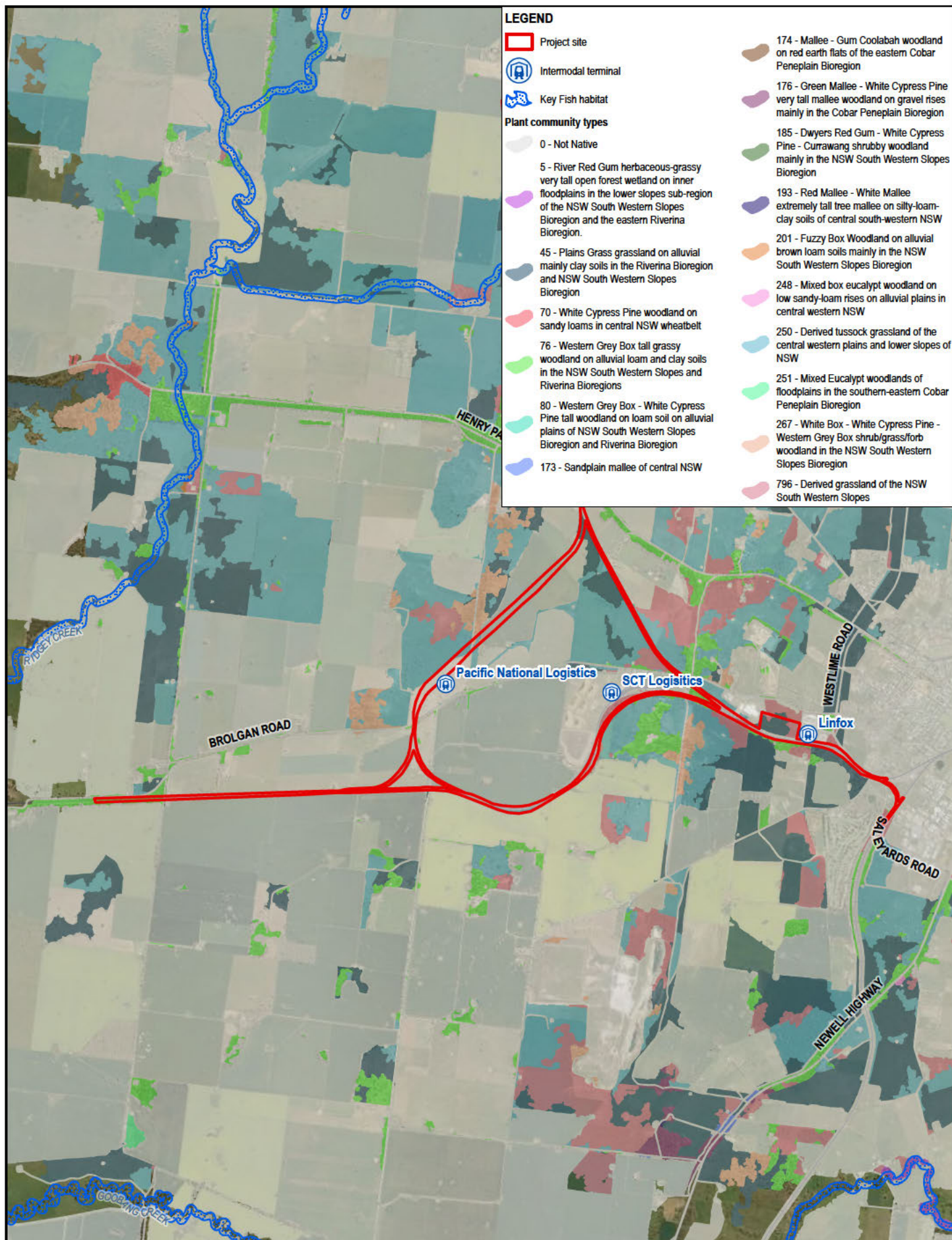
Figure 6.4 *Goobang Junction looking west*



Figure 6.5 *Proposed compound site looking north*



Figure 6.6 *Goobang Junction looking east*



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Kilometres

Map Projection: Transverse Mercator
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Key biodiversity features

FIGURE 6.7

Issues for consideration

Potential impacts associated with Inland Rail within parts of the project site have been considered in the environmental assessment for Parkes to Narromine, and where there is no change due to the project, would be excluded from the assessment for this project.

Construction

Direct impacts of the project during construction activities include:

- Clearing of vegetation within the rail corridor and compound site.
- Potential introduction of weeds and pathogens.
- Potential loss of fauna habitat and impacts on threatened species and endangered populations.

The proposed construction activities will be predominantly in the rail corridor which is heavily disturbed and contains limited vegetation.

Operation

The main direct impacts of the project during operation include:

- Potential for wildlife to be struck by operating trains.
- Encouraged growth of weeds from exposing soil and clearing vegetation.

Proposed method of assessment

Given the lack of biodiversity values, the risk of significant impacts is considered unlikely and a BDAR waiver may be appropriate for this project. A preliminary ecology assessment would be undertaken to confirm the biodiversity values of the project site and determine the potential impact of the project on threatened species and communities listed under the BC Act, FM Act and EPBC Act.

If the preliminary assessment identifies no known or potential significant biodiversity values, potential impacts during construction would be managed in accordance with an unexpected finds procedure.

In the event a BDAR is required it will be prepared in accordance with the requirements of the BC Act and *Biodiversity Assessment Method* (DPIE, 2020), including detailed site surveys.

6.3.2 Aboriginal heritage

The following section provides a preliminary assessment of Aboriginal heritage for the project. The assessment includes a review of archaeological literature, Aboriginal Heritage Information Management System (AHIMS) searches and relevant database searches to determine if Aboriginal sites have been previously identified within the study area.

Existing environment

Aboriginal historical context

The project site is mostly within the existing rail corridor that passes through large areas of land disturbed by existing agricultural practices, including dryland grazing and cropping. At the time of European settlement, the survey area was situated within the territory of people belonging to the Wiradjuri tribal and linguistic group (Tindale 1974). The Wiradjuri tribal area is situated within the Murray Darling Basin, covering three primary physiographic divisions: the riverine plains in the west, the transitional western slopes in between and the highlands or central tablelands in the east (White 1986).

Early contact between Indigenous and European cultures from the nearby Lachlan Valley (around 30 kilometres south) were documented by the explorers Oxley and Cunningham in May 1817. Later in 1835 came accounts of contact with native groups by Surveyor Mitchell on his expedition, which had set out to explore the Bogan River (Unger nd: 3; Kass 2003: 6). In April 1835, Mitchell's party encountered a group of natives on the outskirts of what is today the town of Parkes. From this meeting, Mitchell learned that what had been named the Hervey Range by Oxley in 1817 was in fact known to the locals as 'Goobang', which derived from the Aboriginal word Coleong Coobung, which meant place of many wattles (Kass 2003: 9).

Aboriginal sites and potential

A search was conducted of the AHIMS on 8 June 2023 with the results being displayed in Figure 6.8. The AHIMS search identified 47 Aboriginal sites however, none are located within the project site.

The Goobang Junction and associated rail lines have been subject to heavy modification over a long period of time. Parts of the project site were subject to survey as part of the EIS for the Parkes to Narromine section of Inland Rail with no sites recorded. In addition, the Parkes to Narromine line (north of Goobang Junction) and the Parkes North-West Link were subject to high levels of disturbance during construction of Inland Rail which was completed in September 2020. The proposed compound site is currently comprised of a grassed paddock, and while this has been subject to disturbance may still contain some Aboriginal heritage potential.

Issues for consideration

Potential impacts associated with Inland Rail within parts of the project site have been considered in the environmental assessment for Parkes to Narromine, and where there is no change due to the project, would be excluded from the assessment for this project.

Construction

The main risks relating to Aboriginal heritage would occur during construction of the project. No previously recorded Aboriginal heritage sites have been identified within the project site. The majority of the works would be undertaken within the previously disturbed rail corridor where the archaeological potential is low.

Operation

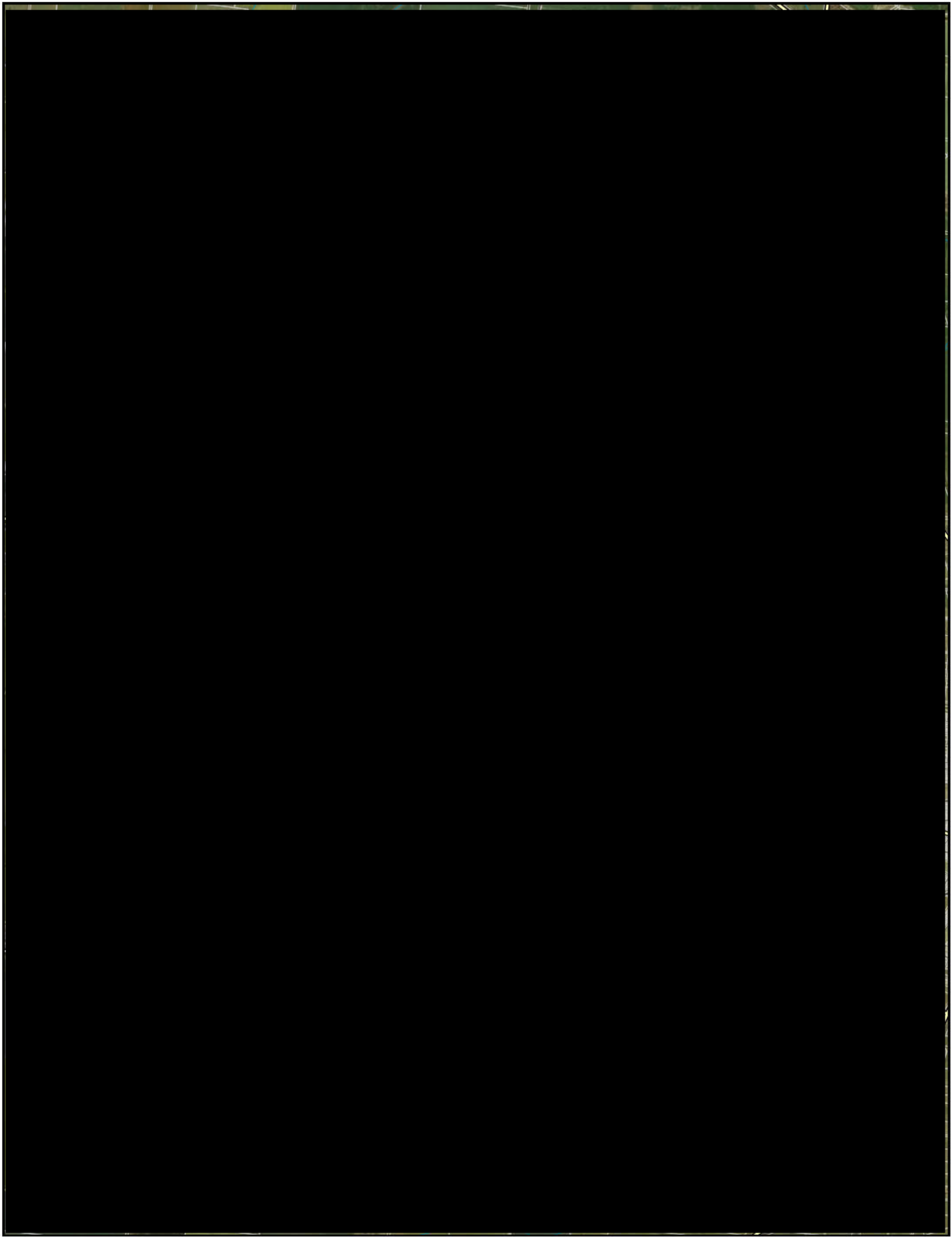
There would be limited risks to Aboriginal heritage during operation.

Proposed method of assessment

Given the Aboriginal heritage potential is likely to be low, a due diligence assessment (including Aboriginal community consultation) of the impact to Aboriginal cultural heritage items will be conducted in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) and the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010).

If the preliminary assessment identifies no known or potential heritage sites/items, potential impacts during construction would be managed in accordance with an unexpected finds procedure.

****Note** - sensitive information has been redacted from Figure 6.8



Paper Size ISO A4
0 0.5 1 1.5 2
Kilometres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56



Australian Rail Track Corporation Ltd
Goobang Junction Upgrade Works
Scoping Report - State Significant Infrastructure

Project No. 12610980
Revision No. 0
Date 15/08/2023

Aboriginal Heritage

FIGURE 6.8

6.3.3 Air quality

Existing environment

Existing air quality may be impacted by a number of pollutants, each of which has different emission sources and effects on human health and the environment. The existing air quality is largely characterised by rural activities, vehicle emissions, mining and exploration and industrial activities. The National Pollution Inventory lists three sources of emissions within a 2.5 kilometres radius of the study area. The industries include a rail yard, petroleum wholesaling and storage facility and wool scouring plant. The primary emissions from these industries include particulate matter, volatile organic compounds, carbon monoxides and nitrogen oxides.

There is no publicly available air quality monitoring data for the study area. The nearest air quality monitoring station that provides publicly available data is operated by OEH at Bathurst which is located approximately 135 kilometres east of Parkes.

Sensitive receivers in relation to the potential health and amenity impacts of dust are considered to be residences, schools, sports facilities, hospitals and wetlands. No wetlands are located in the vicinity of the project site. The project would generally be located more than 100 metres from sensitive receivers. Key sensitive receivers are displayed in Figure 6.1.

Issues for consideration

Potential impacts associated with Inland Rail within parts of the project site have been considered in the environmental assessment for Parkes to Narromine, and where there is no change due to the project, would be excluded from the assessment for this project.

Construction

During construction the following processes have the potential to generate particulate matter:

- Mechanical disturbance: dust emissions as a result of the operation/movement of construction vehicles and equipment, including disturbance associated with the excavation, handling and transport of spoil.
- Wind erosion – dust emissions from exposed, disturbed soils surfaces under high wind speeds, including erosion associated with the on-site storage of waste.

Emissions from vehicles and plant equipment during construction will also impact the existing air quality.

Operation

Diesel locomotives, like trucks and cars, emit nitrogen oxides and particulate matter to the air. Air quality impacts from busy rail corridors are generally only an issue in densely populated areas, with poor outdoor air circulation. Development near rail corridors and busy roads – interim guideline (Department of Planning, 2008), suggests that air quality should be a design consideration within 20 metres of a freeway or main road with moderate congestion levels. The guideline provides no specific reference to a distance from rail corridors. However, it is noted that air pollution from transport corridors decreases significantly with distance.

Proposed method of assessment

A qualitative air quality assessment will be undertaken for the EIS which will include:

- Quantitative assessment during construction including:
 - Identifying sensitive receivers and places with potential for impact
 - Documenting key design, construction, operating and modelling assumptions
 - Identifying relevant meteorological conditions
 - Justifying the modelling approach
 - Documenting the characteristics of emissions and their effect on local and regional air quality conditions
- Qualitative assessment during operation

The assessment will be undertaken with consideration of the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (DEC 2005), the *National Environment Protection Measures for Ambient Air Quality* (DSEWPAC 2001) and *Guidance on the assessment of dust from demolition and construction* (Institute of Air Quality Management, 2014) (IAQM guidance).

6.3.4 Hydrology and water quality

Existing environment

The project site is located in the Lachlan River basin and approximately 27 kilometres north of the Lachlan River. The Lachlan River starts as a chain of lakes formed by the confluence of the Hannans Creek and Mutmutbilly Creek catchments. Travelling west, the river system passes south of Parkes. Ridgely Creek, the closest significant tributary of the Lachlan River, is located about one kilometre west of the project site. Goobang Creek, which forms part of the Lachlan River basin and is the nearest watercourse to the site flowing through Parkes. Except during major floods, the Lachlan River terminates in the west as a large, expansive system of wetlands known as the Great Cumbung Swamp. During major floods, the Lachlan River flows into the Murray Darling Basin. There are a number of minor drainage lines and streams that cross the project site.

Existing flooding is characterised by shallow overland flow paths and minor drainage lines that ultimately flow to Ridgely Creek (to the west) or Goobang Creek (to the south). The Parkes SAP Flood and Water Quality Management Study Report (WSP, 2019b) modelling indicated under the existing conditions flood depths, velocities and hazards remain relatively low across the SAP site up to and including the 1% annual exceedance probability (AEP) event. Flood modelling undertaken for Inland Rail Parkes to Narromine also confirmed that flooding is generally restricted to the immediate vicinity of ephemeral drainage lines near Parkes.

In the Parkes LGA, flooding is reported as occurring in any season and is generally contained within the creek lines and adjacent flat areas. The project site is generally flat and is generally elevated at a level of between 260 and 330 metres Australian Height Datum (AHD).

The project is underlain by fractured rock associated with the Lachlan Fold Belt. Groundwater bores within the vicinity of the project site have identified groundwater at depths greater than 40 metres below ground level, with groundwater levels expected to rise following rainfall events.

The *National Water Quality Assessment 2011* classified the water quality of the Lachlan River catchments as being relatively poor and exceeding the Australian and New Zealand 2000 water quality guidelines for a number of criteria.

Issues for consideration

Potential impacts associated with Inland Rail within parts of the project site have been considered in the environmental assessment for Parkes to Narromine, and where there is no change due to the project, would be excluded from the assessment for this project.

Construction

Temporary and short-term impacts to the behaviour of local surface water system may result from construction activities including:

- Changes to local flow regimes
- Increase sediment loads from exposed soil transported off-site during rainfall events
- Spills and leakages from plant and equipment

Operation

Potential operational impacts include:

- Overtopping of the railway during flood events
- Spills and leakages from trains or during maintenance activities

Proposed method of assessment

Given the project site is not subject to widespread flooding from any major waterways the flooding assessment will consider potential impacts associated with local overland flows and drainage. The hydrology and flooding assessment will include:

- A literature review and targeted consultation to identify the historical locations and extents of flooding along the project site.
- A quantitative assessment of the potential flood impacts (including climate change scenarios) of the project.

6.3.5 Social, economic, land use and property

This initial scoping of social impacts has been prepared in accordance with DPE's Social Impact Assessment Guideline for State significant projects (DPE, 2023).

Existing environment

The project site is located within the suburb of Parkes, along the existing railway line near Goobang Junction Station. The existing railway line is a part of Australia's major freight rail lines, connecting Parkes to Brisbane, Melbourne, Adelaide, Sydney and Perth. Parkes is located within Parkes Local Government Area (LGA) in the Central West Region of NSW. The Wiradjuri people are the Traditional Custodians of the area.

As discussed in Section 2.4.1, the land surrounding the project is characterised by agricultural and industrial land. Most of the project is located within the Parkes SAP which is a dedicated area identified by the NSW Government to bring together planning and investment to drive jobs and economic activity (see Section 2.2.4). The agricultural and mining industries were the largest industries by value added in the Parkes LGA generating a combined \$247.7 million in 2021/22 (id, 2023).

In 2021, the population of Parkes was 11,324 people and 14,361 people in Parkes LGA. The residents of Parkes and Parkes LGA were characterised by similarly high levels of Aboriginal and/or Torres Strait Islander people (12.6% or 1,425 people) and (13.1% or 1,887 people) respectively, compared to NSW (3.4%). Parkes had a slightly younger population with a median age of 39 years compared to 41 years in Parkes LGA. In 2021, unemployment was slightly lower in Parkes (4.9%) compared to Parkes LGA (5.1%), however both areas also had high rates of disadvantage (ABS, 2023).

Overall, key findings relevant to this project include that agriculture is an important industry, and there are higher proportions of vulnerable people in the local and regional communities.

Issues for consideration

The potential social impacts and benefits that may result from construction and operation of the project have been identified through a review of the information presented in this Scoping Report, the understanding of the social locality, and based on previous professional experience undertaking social impact assessments for state significant projects in NSW. The potential social impacts have been evaluated according to the characteristics of magnitude as defined in DPE's Social Impact Assessment Guideline for State significant projects (DPE, 2023).

Potential impacts associated with Inland Rail within parts of the project site have been considered in the environmental assessment for Parkes to Narromine, and where there is no change due to the project, would be excluded from the assessment for this project.

Construction

The initial evaluation found there may be minor social impacts and benefits that have the potential to occur during the construction of the project.

Dust, noise, and vibration from construction activities including staff movements, haulage of materials, and delivery of machinery and equipment may reduce amenity for any community members in close proximity to these activities. Heavy vehicle movements would be required throughout the construction phase and there would be additional light traffic movements along the local road network.

During construction, there may be minor property adjustments and changes to access for commercial properties located near Goobang Junction, which is subject to further surveying and approvals.

There is potential for a small number of local and regional skilled and semi-skilled workers to benefit from the estimated 40 construction employment opportunities during construction. A small number of local and regional businesses may benefit from procurement opportunities while some local businesses (e.g., food outlet and accommodation providers in Parkes) may also benefit from construction workers spending wages and staying overnight.

Operation

During operation, there may be minor changes to local amenity, however this is not expected to affect most community members. While trains using the railway would emit noise, it is not expected to affect most community members given the existing environment is already subject to railway operations.

Proposed method of assessment

The outcomes of this section indicate that the potential social impacts and benefits that may occur during construction would likely be managed through standard construction measures to manage construction impacts such as increased noise and vibration, dust, and traffic.

The key potential social impacts relate to property impacts for adjacent landowners / landholders, which may require a minor level of assessment in the EIS. A minor level of assessment for this potential impact would include a summary of EIS consultation outcomes with relevant stakeholders (e.g., affected landholders, Parkes Shire Council).

If other social impacts are identified, a desktop review of relevant secondary data sources including population and economic data and research may be required.

It is anticipated that a minor level of assessment could be documented in a chapter in the EIS rather than a standalone technical report, and would primarily focus on potential impacts to landholders, as well as any other social impacts that are identified during preparation of the EIS.

6.3.6 Non-Aboriginal heritage

The preliminary assessment for non-Aboriginal heritage involved reviewing the following heritage databases:

- ARTC's section 170 heritage register
- Australian Heritage database (including Commonwealth and National heritage lists)
- Parkes Local Environmental Plan 2012
- State heritage register
- Australian Heritage Places Inventory

Existing environment

A search of the above databases indicated that there are no heritage sites/items with a statutory heritage listing, located within or in the immediate vicinity of the project site. The closest local heritage listing is Parkes Railway Station Group located one kilometre east of the project. A review of historic literature and previous studies (including the historic heritage assessment undertaken for the Parkes to Narromine section of Inland Rail) indicated the following items which may potentially have heritage significance in relations with the construction of pioneer rail lines in rural NSW that had a role in settlement and agricultural development in Parkes:

- Existing rail infrastructure (however, majority has been altered or replaced previously)
- Culverts and bridges
- Former station – Goobang Junction

Issues for consideration

Potential impacts associated with Inland Rail within parts of the project site have been considered in the environmental assessment for Parkes to Narromine, and where there is no change due to the project, would be excluded from the assessment for this project.

Construction

The project will result in the removal and / or upgrade of the existing rail line and associated infrastructure to comply with performance specifications. Retaining all evidence of the existing railway line and associated potential heritage items (if present) is not feasible. In addition, since the rail lines original construction upgrades have occurred with limited original features likely to still remain.

The main potential for impacts during construction relates to vibration generated during construction activities. These impacts will be assessed and considered in the noise and vibration assessment. Given there are no statutory heritage listing items/site located near the project site the impacts will likely be negligible.

Operation

The main potential for impacts during operation relates to vibration generated by the movement of trains, and a change in the visual setting and/or character associated with the presence of new infrastructure. However, as there are no statutory heritage listing items/site located within the project site the impacts will likely be negligible. The potential for structural vibration impacts will be considered and assessed in the noise and vibration assessment.

Proposed method of assessment

Given the low potential for impacts to any heritage sites/items a preliminary assessment will be undertaken by a qualified heritage practitioner to identify if further assessment is required. If further assessment is required it will be prepared in accordance with relevant standards and guidelines, including the NSW Heritage Manual 1996, Archaeological Assessments and Assessing Heritage Significance and with consideration of the principles contained in the Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance.

If the preliminary assessment identifies no known or potential heritage sites/items, potential impacts during construction would be managed in accordance with an unexpected finds procedure.

6.3.7 Waste

Existing environment

The site is currently used for railway operations. The waste streams that are generally generated are based upon the maintenance activities that occur and any general waste from the removal of redundant equipment or materials.

Issues for consideration

Construction

During the construction phase there is the potential for waste to be generated from undertaking construction activities. Waste would be generated during site preparation which may include vegetation, unsuitable or contaminated spoil and general rubbish and debris.

Site compounds would be established which would have office facilities and temporary amenities. The site compounds would generate some construction material waste such as metals, woods, concrete. The greywater and sewerage that is generated from construction staff would be temporarily stored onsite and transported for offsite disposal by an appropriately licenced contractor.

Operation

The main operational waste generating activity would be during track maintenance. Small quantities of green waste may be generated during maintenance activities as a result of vegetation control, herbicide use, and maintenance of the entire rail corridor. Other general debris and litter are also expected to be collected during maintenance. These waste streams already occur under existing operational conditions. This project will not increase or alter the existing waste streams during operation.

Proposed method of assessment

Construction waste would be managed through the waste hierarchy established under the *Waste Avoidance and Recovery Act 2001* (i.e. avoidance of waste, resource recovery, disposal of waste). All waste generated by the project would be assessed, classified, managed and disposed of in accordance with the *Waste Classification Guidelines* (DECCW 2009). Standard environmental management measures would be prepared (based on the *Waste Classification Guidelines*) prior to construction.

6.4 Scoping only issues

6.4.1 Soils and geology

Existing environment

The project site is located in the Central Lachlan Fold Belt with near surface materials including Tertiary to Quaternary aged red silty alluvium over intermittently outcropping folded and faulted Silurian and Ordovician aged sedimentary and minor metamorphic sequences. The soils within the project site consist of thick red and brown sandy and silty clay soils.

Issues for consideration

Any potential impacts such as erosion and sedimentation will be managed through the implementation of appropriate management measures and environmental management plans. The use of engineering controls, such as retaining walls and foundation treatment, will be considered and incorporated into the design where applicable. Potentially contaminated soil and naturally occurring asbestos in soils (if present) would be managed as described above.

Proposed method of assessment

Assessment of impacts to soils will be included as part of the EIS and will include:

- Assessment of the existing soils by utilising available regional mapping and any available records of fill brought to the site.
- Assessment of potential erosion and sedimentation impacts from the project.
- Identification of proposed sediment and erosion controls for the project.
- Identification of any other necessary mitigation measures.

6.4.2 Landscape character and visual amenity

Existing environment

The project site is generally characterised by rural and agricultural land activities, with areas of more concentrated urban development located in the central areas surrounding Parkes. The landscape surrounding the project site is scattered with development, dwellings, buildings, road and rail infrastructure, agricultural infrastructure (e.g. grain silos) and industrial areas. The existing rail corridor passes through mainly open rural land that has dwellings sparsely scattered, therefore, the number of sensitive receivers with potential views of the project site are limited. Majority of the visual receivers will be in the south-eastern portion of the project, closer to Parkes and developed areas. The closest residential receivers are approximately 150 metres from the project site.

Issues for consideration

Construction

During construction the positioning of plant and equipment within view of properties and existing road users would result in temporary visual impacts. The establishment of site compound, laydown areas and stockpile sites would result in a visible impact to the character of the landscape. However, this would be short term in nature. The existing railway and associated infrastructure already form a visual feature in the landscape, meaning that any visual modification associated with construction activities would be low level and difficult to perceive from the wider road network or any public viewpoints. If lighting is required for works outside standard working hours this may result in light spill impacting sensitive receivers.

Operation

Operational impacts would generally be low-negligible. The project would result in minor changes to the existing infrastructure, which is currently in line with the surrounding landscape character.

Proposed method of assessment

A qualitative landscape and visual impact assessment will be undertaken to identify the potential visual impacts of the project on the nearest sensitive receivers, such as public roads and places of residence, work and recreation.

6.4.3 Hazards and risks

Existing environment

The land surrounding the project site is predominantly used for agricultural and rural activities therefore there is a relatively low density of sensitive receivers. The majority of residential, commercial and industrial receivers are located in the eastern portion of the study, with majority of the sensitive receivers being in excess of 100 metres from the project site. Industrial receivers surrounding the project site, particularly intermodal terminals, potentially store hazardous material or fuel on site.

Bushfires are a common occurrence within parts of Australia. The risk to public safety and environmental (biodiversity) values can be considered in terms of environmental factors that increase the risk of fire (fuel quantity and type, weather patterns and topography), as well as special activities or infrastructure that may exacerbate ignition risks. The major ignition sources in the Parkes LGA are lightning (large storm events predominantly in summer), farm and road maintenance machinery, road traffic, railways and arson.

Bushfire prone land is land that can support a bushfire or is likely to be subject to a bushfire attack. Mapping has been prepared by most local Councils across NSW, in conjunction with NSW Rural Fire Service, to identify vegetation with LGAs that have the potential to support a bushfire. The project site is not located within a bushfire prone area. However, the presence of long grass would have the potential for grass fires near the project site, particularly in the drier summer months.

Issues for consideration

Construction

Hazards and risks associated with construction activities would include:

- Potential bushfire caused by ignition sources (e.g. rail welding)
- Working within or adjacent to an operating rail corridor
- Use of heavy machinery and construction equipment
- Potential exposure to contaminants such as hydrocarbons and asbestos
- The potential rupture of underground utilities during excavation
- Collision of plant and equipment with above ground services
- Fuel leaks and spills from plant and machinery
- Emergency vehicle movement disruptions.

Operation

Hazards and risks associated during operation would include potential derailment of trains, and fuel leaks and spills from trains or maintenance vehicles/plant equipment.

Proposed method of assessment

A qualitative assessment of the potential hazard and risks impacts of the project on the surrounding community and the environment. The assessment will involve:

- Review the relevant regulatory framework and applicable standards/guidelines.
- Identifying construction and operational activities with the potential to impact sensitive receivers.
- Assessing the potential impacts associated with hazardous materials, as defined by the guidelines to *State Environmental Planning Policy (Resilience and Hazards) 2021*.
- Reviewing bushfire prone land maps for the project site, where available.
- Outline mitigation and management measures.

6.4.4 Greenhouse gas

Existing environment

The project site is currently used for rail operations with majority of greenhouse gas (GHG) emissions being generated from the burning of fuels.

Issues for consideration

Construction

During construction activities for the project there is the potential to generate additional GHG emissions. GHG emissions sources during construction include the burning of fuels from the use of equipment and plant, materials used, clearance of any vegetation and any waste disposal required.

Operation

The operational greenhouse gas emissions will be consistent with the existing emissions.

Proposed method of assessment

The EIS will include a qualitative assessment of the potential scope 1 GHG emissions of the project during construction. ARTC does not operate trains and as such, an assessment of potential impacts during operation would not be undertaken.

6.4.5 Sustainability

ARTC are committed to ensuring that its projects are implemented in a manner that is consistent with the principles of Ecologically Sustainable Development (ESD). ESD is defined as using, conserving and enhancing the community's resources so that ecological processes, on which life depends are maintained and the total quality of life, now and in the future can be increased. ARTC are committed to achieving this through application of ESD principles. As such, ESD principles will be applied to the project throughout the development and assessment phases.

Proposed method of assessment

As the project involves upgrade of existing rail infrastructure no specific sustainability assessment will be undertaken. The EIS will document how the project is consistent with the principles of ESD.

7. Conclusion

The project is subject to environment assessment under Part 5 of the EP&A Act. The capital value for the project is estimated to be in excess of \$50 million, and as a result the project is State Significant Infrastructure under the Planning Systems SEPP. The project requires assessment and determination by the NSW Minister for Planning under Division 5.2 of the EP&A Act.

The project is required to allow for the efficient and effective passage of both east-west Interstate traffic and Inland Rail services through Goobang Junction. This will be achieved by rectifying the operational and condition issues including existing signalling and track infrastructure. The project aligns with Commonwealth, State and Local policies and is shown to provide significant improvements in safe rail movements through Parkes Shire and will support the economic growth of the rail industry at Parkes.

This document comprises the first step in the approval process through supporting application to DPE, seeking the SEARs for the EIS. The document has provided a brief description of the project; its statutory and strategic context; stakeholder and community engagement undertaken to date; and a preliminary assessment of environmental impacts and how they will be appropriately assessed, proportionate to their scale and impact, within the EIS.

The next stage in the environmental assessment would be progressing to an EIS, which would be prepared in accordance with the EP&A Act and would meet the minimum form and content requirements set out in Division 5 of the EP&A Regulation.

8. References

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Appendix A

Scoping worksheet

Environmental Impact Statement (EIS) scoping worksheet for:				Goobang Junction Upgrade - ARTC					hh	Date:			18-Aug-23		
What matters might be impacted?			What activities might cause an impact?		What are the characteristics of the impact?				How will the impact be managed?	What are the community and other stakeholder views?	What level of assessment and engagement is required in the EIS preparation phase?				
Social and environmental matters I.e. natural or human assets or values aggregated at the level most appropriate for informing management and assessment requirements Click on the matter for a description, or the link above for full glossary			Without any mitigation, is the proposal likely to impact on the matter? (Select from list)	If there is a 'likely' impact: 1. list the activities expected to cause the impact; and 2. if applicable, list the receptor being impacted and its status. E.g. construction noise will be heard at nearby school If 'unlikely', briefly explain why. Has the impact been actively avoided through project design or site location? (Manual entry)	Is the impact, without mitigation, expected to cause a material effect with regard to its... (Answer 'Y', 'N' or '?') Click on characteristic for description, or the link above for further detail				Does the impact need assessment in the EIS? (Auto fills)	Is the impact, without mitigation, expected to have a material cumulative effect with other impacts (including from other projects)? (Select from list)	What safeguards and management measures are expected to be required to address the impact? (Select from list)	Are there community or other stakeholder concerns regarding the impact or activity? (Based on engagement with community and other stakeholders) (Select from list)	Expected level of assessment and/or engagement required (Auto fills)	Relevant section in Scoping Report (Manual entry)	
					extent?	duration?	severity?	sensitivity?							
What does the proposal mean for people?	AMENITY	acoustic	Likely	Increased construction noise emissions within proximity to the project site related to noise associated with the plant, equipment and work activities. Potential increases in operational noise	Y	Y	Y	Y	Yes	Yes	Project Specific	No	Key Issue + CIA	6.2.1	
		visual	Likely	Temporary visual impacts during construction for places with view of work sites.	N	N	N	N	No	No	Standard	No	Other Issue	6.4.2	
		odour	n/a									No	No assessment necessary - Worksheet only		
		microclimate	n/a										No assessment necessary - Worksheet only		
		other - please specify													
	ACCESS	access to property	Unlikely	Potential minor impacts during construction activities. Works is primarily within the existing rail corridor No impacts to site access during operation	N	N	N	N	No	No	Standard	No	Other Issue	6.2.2	
		utilities	Likely	Construction activities require upgrading signalling. Connection to utilities for any new signalling.	N	N	N	N	No	No	Standard	No	Other Issue		
		road and rail network	Likely	Minor impacts on traffic movements/flows during construction due to minor increase in traffic and minor works at level crossings. Potential impacts during operation associated with increased delays at level crossings	Y	Y	N	Y	Yes	Yes	Project Specific	No	Key Issue + CIA	6.2.2	
		offsite parking	n/a	Parking areas will be confined to the project site during construction. No change to existing conditions during operation	N	N	N	N	No	No	Standard	No	No assessment necessary - Worksheet only	6.2.2	
		other - please specify													
	BUILT ENVIRONMENT	public domain	n/a	Works will be primarily within rail corridor. No impacts expected	N	N	N	N	No	No	Standard	No	No assessment necessary - Worksheet only		
		public infrastructure	n/a	Works will be primarily within rail corridor. No impacts expected	N	N	N	N	No	No	Standard	No	No assessment necessary - Worksheet only		
		other built assets	n/a	Works will be primarily within rail corridor. No impacts expected	N	N	N	N	No	No	Standard	No	No assessment necessary - Worksheet only		
		other - please specify													
	HERITAGE	natural	n/a	Works will be primarily within rail corridor. No listed natural heritage items or places would be affected.	N	N	N	N	No	No		No	No assessment necessary - Worksheet only		
		cultural	n/a	Works will be primarily within rail corridor. No listed sites within the project site.								No	No assessment necessary - Worksheet only		
		Aboriginal cultural	Unlikely	Works will be primarily within rail corridor. No listed sites within the project site.	N	N	N	N	No	No	Standard	No	Other Issue	6.3.2	
		built	Unlikely	Works will be primarily within rail corridor. No listed sites within the project site.	N	N	N	N	No	No	Standard	No	Other Issue	6.3.6	
		other - please specify													
	COMMUNITY	health	Unlikely	Construction activities, work sites and the movement of plant, machinery, spoil and traffic are unlikely to affect public health and safety through the implementation of standard management measures	N	N	Y	N	No	No	Standard	No	Other Issue		
		safety	Unlikely	Construction activities, work sites and the movement of plant, machinery, spoil and traffic are unlikely to affect public health and safety through the implementation of standard management measures	N	N	Y	N	No	No	Standard	No	Other Issue		
		services and facilities	n/a	Works will be primarily within rail corridor.										No assessment necessary - Worksheet only	
		cohesion, capital and resilience	n/a	Works will be primarily within rail corridor.										No assessment necessary - Worksheet only	
housing		n/a	Works will be primarily within rail corridor.										No assessment necessary - Worksheet only		
other - please specify															
ECONOMIC	natural resource use	n/a	Construction will involve minor use of natural resources										No assessment necessary - Worksheet only		
	livelihood	n/a	Project supports long term growth due to improve rail infrastructure, direct and indirect employment										No assessment necessary - Worksheet only		
	opportunity cost	n/a	Project would result in positive feedback from capital costs.										No assessment necessary - Worksheet only		
	other - please specify														
the natural environment?	AIR	particulate matter	Unlikely	Dust generated by construction (vehicle movements on unsealed tracks, earth works, spoil transport) and erosion could affect nearby receptors and the environment.	Y	N	N	Y	Yes	Yes	Standard	No	Other Issue + CIA	6.3.3	
		gases	Unlikely	Localised exhaust emissions from construction vehicles and plant.	Y	N	N	Y	Yes	No	Standard	No	Other Issue	6.3.3	
		atmospheric emissions	Unlikely	Localised exhaust emissions from construction vehicles and plant.	Y	N	N	Y	Yes	No	Standard	No	Other Issue	6.3.3	
		other - please specify													
	BIODIVERSITY	native vegetation	Unlikely	The project site is within the existing rail corridor which is heavily disturbed with limited vegetation (majority exotic species)	N	N	N	N	No	Yes	Standard	Yes	Other Issue + CIA + Focussed Engagement	6.3.1	
		native fauna	Unlikely	The project site is within the existing rail corridor - highly limited habitat for native fauna	N	N	N	N	No	Yes	Standard	Yes	Other Issue + CIA + Focussed Engagement	6.3.1	
		other - please specify													

[illegible]

Appendix B

Database searches



AHIMS Web Services (AWS)

Search Result

Your Ref/PO Number : Goobang Junction

Client Service ID : 789301

Sam Brandley

Date: 07 June 2023

24 Honeysuckle Drive
Newcastle New South Wales 2300

Attention: Sam Brandley

Email: sam.brandley@ghd.com

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -33.1672, 148.0554 - Lat, Long To : -33.0953, 148.179, conducted by Sam Brandley on 07 June 2023.

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



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

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

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

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

Important information about your AHIMS search

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



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 06-Jul-2023

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	4
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	41
Listed Migratory Species:	12

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	10
Commonwealth Heritage Places:	None
Listed Marine Species:	19
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	4
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands)		[Resource Information]
Ramsar Site Name	Proximity	Buffer Status
Banrock station wetland complex	700 - 800km upstream from Ramsar site	In feature area
Hattah-kulkyne lakes	500 - 600km upstream from Ramsar site	In feature area
Riverland	600 - 700km upstream from Ramsar site	In feature area
The coorong, and lakes alexandrina and albert wetland	800 - 900km upstream from Ramsar site	In feature area

Listed Threatened Ecological Communities	[Resource Information]
For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps. Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.	

Community Name	Threatened Category	Presence Text	Buffer Status
Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	Endangered	Community likely to occur within area	In feature area
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Community likely to occur within area	In feature area
Weeping Myall Woodlands	Endangered	Community likely to occur within area	In feature area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community likely to occur within area	In feature area

Listed Threatened Species			[<u>Resource Information</u>]
Status of Conservation Dependent and Extinct are not MNES under the EPBC Act. Number is the current name ID.			
Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Aphelocephala leucopsis Southern Whiteface [529]	Vulnerable	Species or species habitat known to occur within area	In feature area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Callocephalon fimbriatum Gang-gang Cockatoo [768]	Endangered	Species or species habitat may occur within area	In feature area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat may occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat may occur within area	In feature area
Lophochroa leadbeateri leadbeateri Major Mitchell's Cockatoo (eastern), Eastern Major Mitchell's Cockatoo [82926]	Endangered	Species or species habitat known to occur within area	In feature area
Melanodryas cucullata cucullata South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat likely to occur within area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Polytelis swainsonii Superb Parrot [738]	Vulnerable	Species or species habitat known to occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat known to occur within area	In feature area
FISH			
Maccullochella macquariensis Trout Cod [26171]	Endangered	Species or species habitat may occur within area	In buffer area only
Maccullochella peelii Murray Cod [66633]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Macquaria australasica Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area	In feature area
FROG			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Crinia sloanei Sloane's Froglet [59151]	Endangered	Species or species habitat may occur within area	In feature area
MAMMAL			
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area	In feature area
Nyctophilus corbeni Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat likely to occur within area	In feature area
Pseudomys novaehollandiae New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area	In feature area
PLANT			
Androcalva procumbens [87153]	Vulnerable	Species or species habitat may occur within area	In feature area
Austrostipa metatoris [66704]	Vulnerable	Species or species habitat may occur within area	In feature area
Austrostipa wakoolica [66623]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Lepidium aschersonii Spiny Peppercress [10976]	Vulnerable	Species or species habitat may occur within area	In feature area
Lepidium monoplacoides Winged Pepper-cress [9190]	Endangered	Species or species habitat may occur within area	In feature area
Prasophyllum petilum Tarengo Leek Orchid [55144]	Endangered	Species or species habitat may occur within area	In buffer area only
Prasophyllum sp. Wybong (C.Phelps ORG 5269) a leek-orchid [81964]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
Swainsona murrayana Slender Darling-pea, Slender Swainson, Murray Swainson-pea [6765]	Vulnerable	Species or species habitat may occur within area	In feature area
Swainsona recta Small Purple-pea, Mountain Swainson-pea, Small Purple Pea [7580]	Endangered	Species or species habitat may occur within area	In feature area
Vincetoxicum forsteri listed as Tylophora linearis [92384]	Endangered	Species or species habitat may occur within area	In feature area
REPTILE			
Aprasia parapulchella Pink-tailed Worm-lizard, Pink-tailed Legless Lizard [1665]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Hemiaspis damelii Grey Snake [1179]	Endangered	Species or species habitat known to occur within area	In feature area
Listed Migratory Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area	In feature area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Species or species habitat likely to occur within area	In buffer area only

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State	Buffer Status
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Communications, Information Technology and the Arts - Australian Postal Corporation

Commonwealth Land - Australian Postal Commission [15115]	NSW	In buffer area only
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Communications, Information Technology and the Arts - Telstra Corporation Limited

Commonwealth Land - Australian Telecommunications Commission [15112]	NSW	In buffer area only
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Commonwealth Land - Australian Telecommunications Commission [15113]	NSW	In buffer area only
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Commonwealth Land - Australian Telecommunications Commission [15117]	NSW	In buffer area only
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Commonwealth Land - Australian Telecommunications Commission [15641]	NSW	In buffer area only
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Defence

Defence - PARKES TRAINING DEPOT ; PARKES ACS LAND [11198]	NSW	In buffer area only
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Defence - PARKES TRAINING DEPOT ; PARKES ACS LAND [11197]	NSW	In buffer area only
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Education, Science and Training - CSIRO

Commonwealth Land - Commonwealth Scientific & Industrial Research Organisation [15114]	NSW	In buffer area only
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Commonwealth Land - Commonwealth Scientific & Industrial Research Organisation [15116]	NSW	In buffer area only
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Transport and Regional Services - Airservices Australia

Commonwealth Land - Airservices Australia [15111]	NSW	In buffer area only
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Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text	Buffer Status
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Bird

[Actitis hypoleucos](#)

Common Sandpiper [59309]		Species or species habitat likely to occur within area	In feature area
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[Apus pacificus](#)

Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
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Scientific Name	Threatened Category	Presence Text	Buffer Status
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area overfly marine area	In feature area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat may occur within area overfly marine area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat likely to occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Species or species habitat likely to occur within area overfly marine area	In buffer area only

Extra Information

EPBC Act Referrals			[Resource Information]	
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
Parkes to Narromine Section Inland Rail, NSW	2016/7731	Controlled Action	Post-Approval	In feature area
Not controlled action				
Construction of Single Circuit 132 kV Transmission Line between existing substations	2009/4741	Not Controlled Action	Completed	In feature area

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Referral decision				
Northparkes Mines Step Change Project - development of further mining operations, NSW	2012/6651	Referral Decision	Completed	In buffer area only

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact us](#) page.

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