



Bylong East Duplication

Preliminary Environmental Assessment

October 2012



**Hyder Consulting Pty Ltd**

ABN 76 104 485 289

Level 5, 141 Walker Street

Locked Bag 6503

North Sydney NSW 2060

Australia

Tel: +61 2 8907 9000

Fax: +61 2 8907 9001

www.hyderconsulting.com

AUSTRALIAN RAIL TRACK CORPORATION

BYLONG EAST DUPLICATION

Preliminary Environmental Assessment

Author *A Warskitt*
Environmental Consultant, Hyder
Consulting Alliance
Environmental Officer

Checker *N Hattingh*
Associate Business Director,
Hyder Consulting

R Dodd
Senior Environmental Consultant,
Hyder Consulting
Alliance Environmental Manager

Approver *L Rodrigues*
Alliance Manager

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This report has been prepared for Australian Rail Track Corporation in accordance with the terms and conditions of the Ulan Network Alliance contract dated 31 July 2009. Hyder Consulting Pty Ltd (ABN 76 104 485 289) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

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Hyder Consulting Pty Ltd
 ABN 76 104 485 289
 Level 5, 141 Walker Street
 Locked Bag 6503
 North Sydney NSW 2060
 Australia
 Tel: +61 2 8907 9000
 Fax: +61 2 8907 9001
 www.hyderconsulting.com



Prepared by

On behalf of

Australian Rail Track Corporation

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GLOSSARY AND ABBREVIATIONS

The following definitions have been adopted.

Naming Convention	Comment
ARTC	Australian Rail Track Corporation (the proponent)
At grade junction	A railway junction that has a track configuration in which merging or crossing railroad lines provide track connections with each other that require trains to cross over in front of opposing traffic at grade (i.e. on the same level).
Background noise level	Is the noise level measured in absence of noise from the development under consideration. It is also referred to as the ambient or residual noise. Statistically the LA90 value is often used to describe background noise levels and is defined as the level exceeded for 90% of the measured time.
CBR	California Bearing Ratio test is a penetration test used for the evaluation of subgrade strength of rock based material. This test can determine the quality, thickness and component layer of the material.
Contract of Sale	A formal contract by which the seller transfers or agrees to transfer the property in goods to the buyer for a money consideration, called the price, under certain terms of conditions spelled out within the contract.
Country End	The end closest to 'Country' or looking in the direction of <u>increasing</u> chainage.
City End	Refer to 'Sydney End'.
Crossover	A portion of line which is used to divert trains from one continuing line to another.
Crossing Loop	A running line in single-line territory, with entry and exit ends connected to a main line, which is used to hold a train or track vehicle to allow other rail traffic to cross or pass.
dB(A)	A measure of A-weighted sound levels.
Decibel (dB)	Is a logarithmic unit of measurement that expresses difference or ratio in power or intensity, usually between two acoustic signals relative to a specified or implied reference level. A ratio in decibels is ten times the logarithm to base 10 of the ratio of two power quantities.
Deed of Lease	A written lease which is signed and recorded in a registry of deeds to confirm an exchange.
DGR's	Director General's Requirements are environmental assessment requirements developed for the Proponent after lodgement of this application (PEA) and as a result may require further information or requirements within the EIS.
DoPI	Department of Planning and Infrastructure supports sustainable growth in NSW. The Departments work includes long term planning for the State's region and assessing state significant infrastructure proposals.

Down Side	Facing towards Ulan/Werris Creek (country) or in the direction of increasing chainage, the Down side of the line is the left side of the Main Line heading towards Ulan/Werris Creek.
EEC	Endangered Ecological Community means an endangered population within the meaning of the <i>Threatened Species Conservation Act 1995</i> or (subject to section 5C) Part 7A of the <i>Fisheries Management Act 1994</i> .
EIS	Environmental Impact Statement is a document required under the EP&A Act by law to certain actions 'significantly affecting the environment'. It is a tool for decision making and describes the positive and negative environmental effects of a proposed action.
EP&A Act	The NSW Environmental Planning and Assessment Act 1979 provides the legislative framework for land use planning, development and assessment in NSW.
EP&A Regulation	The NSW Environmental Planning and Assessment Regulation 2000
EPL	Environmental Protection Licence under the <i>Protection of the Environment Operations Act 1997</i> . This licence is required for all scheduled activities of work.
EPA	Environmental Protection Authority. The EPA is responsible for environmental regulation, particularly the regulation of air emissions, contaminated sites, dangerous goods and hazardous materials, noise, pesticides, forestry activities, waste and water quality.
EPBC Act	The Commonwealth Environmental Protection and Biodiversity Conservation Act 1999. Provides for the protection of the environment, especially matters of national environmental significance, and provides a national assessment and approvals process.
Home Signal	A signal which protects an interlocking area, for example a junction, crossing or yard.
IGANRIP	Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects
Kilometerage	Distance measured from Sydney Central railway station in kilometres.
LALC	Local Aboriginal Land Council. The LALC for the Proposal is Wanaruah.
Level Crossing	These are where roads or pedestrian walkways cross the tracks at the same level as the running surfaces of the rails.
Licence Agreement	A license that is granted by a party (licensor) to another party (licensee) as an agreement between those parties.
L _{A10} (15 min)	The A-weighted sound pressure level that is exceeded for 10% of the 15- minute measurement period. That is, the loudest 90 seconds.
L _{A90} (15 min)	The A-weighted sound pressure level that is exceeded for 90% of the 15- minute measurement period, when measured in the absence of the construction works under consideration and excluding extraneous noise. This is considered to represent the background noise. That is, the quietest 90 seconds.

L_A (max)	The A-weighted maximum noise level.
L_{Aeq} (15 min)	The A-weighted equivalent continuous (energy average) A-weighted sound pressure level over a 15-minute
LGA	Local Government Area.
MTPA	Million Tonnes Per Annum.
MLGA	Muswellbrook Local Government Area.
OEH	Office of Environment and Heritage. The OEH and the EPA supports the Premier, the Minister for the Environment and the Minister for Heritage in performing their executive and statutory functions. OEH develops and leads policy, reform and education in sustainability, biodiversity and native vegetation, coastal protection and Aboriginal cultural heritage.
'Outer' Home Signal	A signal which protects the region outside a home signal.
Passing Loop	Refers to a passing Loop or continuous siding that connects into the Main Line at both ends to allow trains to pass or cross on single track railways.
PEA	Preliminary Environmental Assessment (this application).
Points	See 'Turnout' definition.
Proposal	Is the proposed project area within which the proposed project would operate and be constructed.
Rail Corridor	Land dedicated to the ARTC for rail purposes.
RAMSAR Convention	An intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and use of wetlands of international importance and their resources.
RING	Rail Infrastructure Noise Guideline (still currently in Draft) is the guideline used to consider noise mitigation measures for areas impacted by rail infrastructure.
Sectional Running Times	The time it takes for a train to travel the distance between two passing loops on a single line track.
SEPP Infrastructure	State Environmental Planning Policy (Infrastructure) 2007.
SEPP State and Regional	Development State Environmental Planning Policy (State and Regional Development) 2011.
Siding	An operating line which is not the main or loop line.
SSI	State Significant Infrastructure. . Major infrastructure proposals in particular linear infrastructure will generally be considered as SSI and assessed by the NSW DoPI.
Standing Room	The train standing room is normally measured between Starter Signals within the Loop (aka Standing Distance).
Strategy	Hunter Valley Corridor 2012-2021 Capacity Strategy June 2012.

Sydney End	The end of the Crossing loop closest to Sydney or looking in the direction of <u>decreasing</u> chainage.
TfNSW	Transport for NSW is responsible for planning, program administration, policy, regulation, procuring transport services, infrastructure and freight.
TOTP	Turnout Transition Point.
TOC	Total Out-turn Cost. An agreement of the contractual cost of achieving the agreed level of performance of the works including all risks.
Turnout	A device that splits a single track into two routes; also referred to as a connection. Kilometrage for the location of a turnout is taken from the TOTP. The Switch Blades which allow the routes to be altered within the turnout are referred to as the 'Points'.
Up Side	Facing towards Sydney or in the direction of decreasing chainage, the Up Side of the line is the left side of the Main line heading towards Sydney.

EXECUTIVE SUMMARY

This Preliminary Environmental Assessment (the application) has been prepared by Hyder Consulting as part of the Ulan+ Alliance on behalf of the Australia Rail Track Corporation (ARTC). Hyder Consulting is a sub- Alliance partner and is responsible for track, civil and structures design, environmental assessments and planning and environmental management.

Schedule 3 of the *State Environmental Planning Policy 2011 (SEPP State and Regional Development)*, declares the Proposal as State Significant Infrastructure (SSI) for the purpose of the *Environmental Planning and Assessment Act 1979 (EP&A Act)*. The Bylong East Duplication Project (the Proposal) is *'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.'*

This preliminary assessment has been prepared to satisfy provisions under *Part 5.1 of the Environmental Planning and Assessment Act 1979 (EP& A Act)*, and the Minister for Planning and Infrastructure, Department of Planning NSW, is the determining authority. This preliminary assessment shall be used by the Department of Planning to brief Government agencies and other stakeholders about the Proposal, and will form the basis for requirements during the preparation of an Environmental Impact Statement (EIS).

ARTC is seeking approval under Part 5.1 of the EP& A Act for the construction of a track duplication along a modified vertical and horizontal alignment between the existing Bylong Loop and the western portal of the Bylong Tunnel, which forms part of the ARTC-managed Hunter Valley Coal Network.

Coal demand is forecast to increase rapidly for both export coal and domestic coal to Hunter Valley power stations. Thus, with the continuing growth from both the Ulan and Gunnedah basin lines, the capacity of the Bylong Tunnel (Tunnel Number 3) will become stretched.

Subsequently, to cater for this increase, ARTC is undertaking a number of Proposals to upgrade the rail network to increase coal throughput, and to maintain track capacity ahead of the industry demand requested by the coal producers (ARTC 2012). The Proposal has been identified as a means to assist in this increased track capacity and improve the transit times. Hence, the Proposal will aid in meeting the projected increase in coal haulage requirements for the Hunter Valley Coal Network.

The Proposal would comprise the construction of a new single line track and formation on the Upside of the existing main line from the existing passing loop at Bylong, and will involve the reconfiguration of the Ulan line, providing approximately 5.3km of additional track to reduce section run times between Murrumbo Passing Loop and Bylong Passing Loop.

In summary, the key components of the Proposal comprise:

- Clearing, grubbing and earthworks to allow for track formation, drainage and minor structures;
- Construction and formation of a new rail corridor and track on the Up side of the existing main line at a different vertical alignment to existing mainline;
- Approximately 5.3km of additional track on the Upside of the existing mainline (from approximately rail kilometerage 377.180km to 382.445km);
- Connection of the existing loop turnout with the existing mainline and reconnection of new track with the existing mainline via a tangential turnout at the existing grade;
- Construction of new culverts and bridge/s where required. Currently the viability of bridges is dependent on the assessment of cost and geotechnical and hydrological investigations. If a bridge is required, this will be further documented in the EIS;

- Installation of new signalling infrastructure with trenching between approximately rail kilometerage 382.545km and 377.080km (including signal location cases and huts, new signals and underbores);
- Ancillary infrastructure that includes vehicle access tracks, temporary construction compounds and stockpile sites; and
- Land acquisition and upgrading of existing rail infrastructure and public utilities.

The Proposal is located in the Mid-Western Regional Local Government Area (LGA), in the Bylong Valley, located approximately 55 kilometres north-east of Mudgee and approximately 70 kilometres west of Muswellbrook. Industry in the Mid-Western Regional Shire is characterised by agriculture, viticulture, coal mining activities, retail and tourism (RDA 2011). As a result of these land uses, native vegetation has been extensively cleared through much of the locality.

The Proposal transects rural land which is forested to the north and dominated by pastures to the south. Surrounding land uses include agriculture, State forest to the north and Bylong village located approximately 3.3km north-west of the Proposal site. Bylong River runs along a portion of the Down side of the Proposal and is located amongst cleared rural land.

This Preliminary Environmental Assessment provides a preliminary description of the Proposal, the planning context and gives an overview of key issues that will be addressed in the Environmental Impact Statement. The likely key issues associated with the Proposal, based on the concept engineering design and the information available at the time of this publication, include the following:

- Flora and Fauna - Potential to impact on threatened and endangered communities, remnant vegetation and aquatic environments;
- Aboriginal Heritage - Potential to impact upon Aboriginal heritage items;
- Erosion, surface water quality and groundwater - Potential impacts on water quality as a result of soil erosion and sedimentation during construction, with possible impacts on surrounding ecological systems including riparian zones; and
- Land Use and Property - It is likely that some adjacent farm land would need to be permanently acquired to accommodate the Proposal. Although very localised, this has the potential to impact on both property ownership and use in the long term.

Key issues will be fully investigated during the environmental assessment process, many by means of site-specific technical investigations, to identify potential impacts of the Proposal and mitigation measures to minimise any impacts.



1

INTRODUCTION

1 INTRODUCTION

This Preliminary Environmental Assessment (PEA) has been prepared by Hyder Consulting as part of the Ulan+ Alliance on behalf of the Australian Rail Track Corporation (ARTC) for submission to the Department of Planning and Infrastructure to satisfy provisions under Part 5.1 of the *Environmental Planning and Assessment Act 1979*. ARTC is seeking infrastructure approval for the construction of a track duplication along the eastern side of the existing Bylong Loop (the 'Proposal').

This section explains why the site was chosen for the proposal and briefly discusses the alternatives considered. The strategic context for the proposal is also provided, including the benefits to the region and State.

1.1 PURPOSE OF THIS PEA

The purpose of this PEA is to inform the Minister for Planning of the nature, scale and extent of the Proposal to support a declaration by the Minister that the Proposal is State Significant Infrastructure (SSI) under section 5.1 of the *Environmental Planning and Assessment Act 1979*, and that the Proposal falls within the ambit of clause 3 of Schedule 3 (Rail Infrastructure) of the State Environmental Planning Policy (State and Regional Development) 2011.

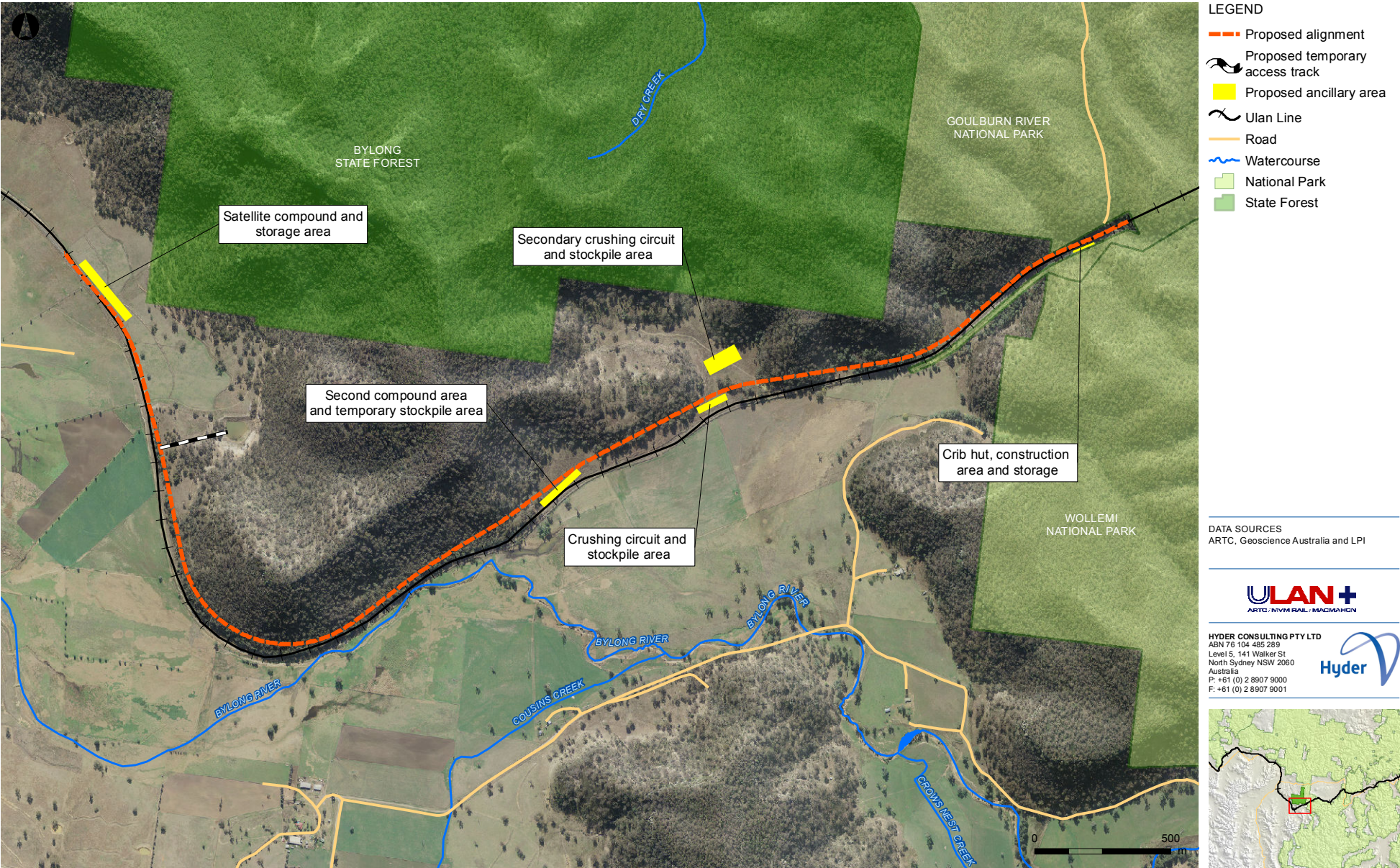
Under Section 115V of the EP&A Act, SSI may be declared to be Critical State Significant Infrastructure (Critical SSI) if it is of a category that, in the opinion of the Minister, is essential for the State for economic, environment or social reasons. Provisions of the EP&A Act provide a more streamlined assessment process and include restrictions on various appeals. An opinion will be sought during the preparation of the EIS as to whether the Proposal would be considered Critical SSI.

This PEA has been prepared in accordance with the provisions of the *Environmental Planning and Assessment Act 1979* and the Supporting Document requirements (Section 10) outlined within the *State Significant Infrastructure Application (NSW Department of Planning and Infrastructure)*. This PEA provides a preliminary assessment of the key issues associated with the Proposal and outlines broad methodologies for subsequent detailed environmental assessment.

The site layout is identified in Figure 1 and discussed further in Section 2.

The purpose of this PEA is to describe the key elements of the Proposal, with the view to seek the Director General's Requirements from the Department of Planning and Infrastructure (DoPI) as the basis for the detailed Environmental Assessment (EA) and further design development.

Figure 1 – Site layout



1.2 THE PROPONENT

In 2004, The Australian Rail Track Corporation (ARTC) commenced a 60-year lease of the interstate and Hunter Valley Coal Network in New South Wales from the Transport for NSW (TfNSW).

The ARTC is owned by the Commonwealth Government and has the responsibility for the management of over 8,500 kilometres of standard gauge interstate track in South Australia, Victoria, Western Australia, Queensland and New South Wales including the Hunter Valley Coal Network.

1.3 STRATEGIC CONTEXT AND NEED FOR THE PROPOSAL

The Hunter Valley Coal Chain exports the largest volume of coal offshore in the world and is expanding (HVCC 2012). A large proportion of the coal produced in the Hunter Valley is transported via ARTC's Hunter Valley rail network to Newcastle for export from one of its two ports; Carrington (Port Waratah) or Kooragang Island.

The Ulan Line is a bi-directional single line track within the Hunter Valley, NSW network extending approximately 170km between Muswellbrook in the Upper Hunter Valley and Gulgong, west of the Dividing Range (ARTC 2012). The rail network is predominantly used by coal trains and services long-standing mines and coal loaders located along the Ulan line.

Coal mining is an important part of the economy of the Hunter Valley and New South Wales. Coal demand on the Ulan line is forecast to increase rapidly for both export coal and domestic coal to Hunter Valley power stations. Growth in coal mining along the Ulan line is likely to produce significant changes in coal demand and traffic patterns over the next few years. A prospective capacity increase in coal demand in excess of 200mtpa by 2014 has been forecast (ARTC 2012).

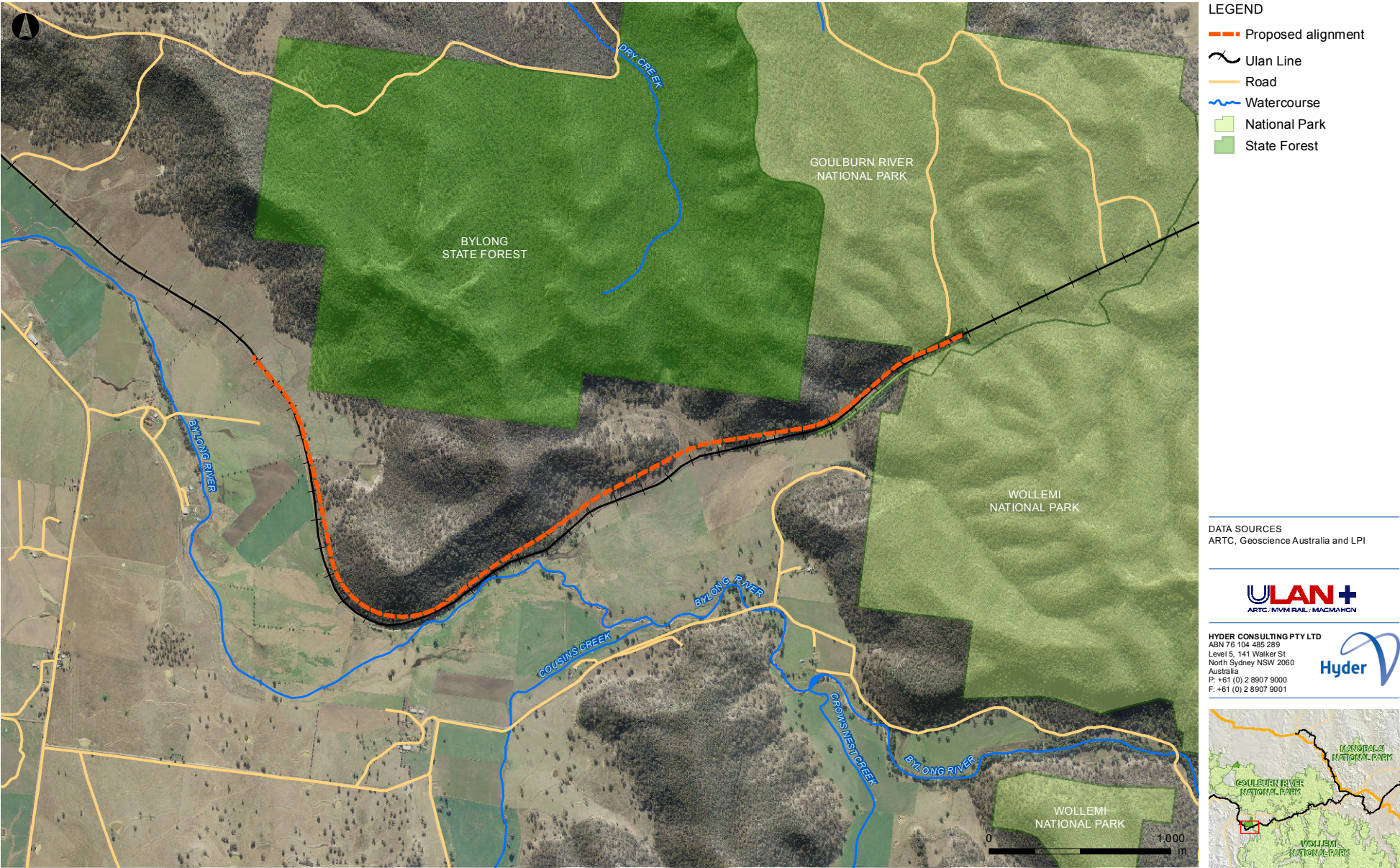
To cater for this increase in global coal demand, ARTC is undertaking a number of projects to upgrade the rail network, to maintain track capacity ahead of the industry demand requested by the coal producers. Full details of these projects are outlined in the *ARTC's Hunter Valley Corridor 2012-2021 Capacity Strategy, June (ARTC 2012)*.

Approximately 85% of Hunter export coal goes to Japan, Korea and Taiwan. Coal equates to 81% of the total value of mineral production in NSW. Coal is NSW's primary merchandise export in value terms, worth \$14.1billion in 2010-2011 (HVCC 2011).

The main objective of the proposed Bylong East Duplication project is to provide track capacity ahead of industry demand by creating a passing lane. In addition, this Proposal shall provide sufficient improvement of operational performance along the Ulan line to meet coal demand forecasts, by reducing train conflicts at the existing Murrumbo-Bylong Section. These improved efficiencies would be created through:

- Reduced impacts on coal traffic due to track maintenance activities;
- Reduced loss of train paths as the result of shadow path effects from grain services; and
- Reduced loss of available train paths as a result of train breakdowns.

Figure 2 – Location and regional context of the proposal



Bylong East Duplication Preliminary Environmental Assessment

ARTC initially considered two rail infrastructure options which were identified in the ARTC Murrumbo – Bylong Loop (378km Loop) Options Report, May 2011 (Ulan+ 2011) that would provide sufficient pathing capacity to meet coal demand forecasts, by reducing train conflicts at the existing Murrumbo-Bylong Section.

Environmental, engineering and economic constraints and benefits were considered in the selection of the preferred option. Criteria used in the selection of the preferred option included operating ahead of industry demand, operational flexibility and capital cost. The preferred option (Option A) was selected based upon the following;

- Satisfied contracted volumes;
- Operationally it provided reduced run times between passing loops (sectional running times).

The first option which was considered was the Murrumbo Loop Extension Project (Option A), which involved the track duplication from the existing loop at Murrumbo to the eastern portal of the Bylong Tunnel (Tunnel Number 3). This option was expected to have an indicative cost of around \$45 million.

Following the Project Feasibility stage (Phase 2) of Option A however, the project was placed on hold pending further information regarding contracted and prospective volumes of trains and whether Option A would sufficiently meet prospective train volumes.

If ARTC were to build for contracted volumes only then Option A was adequate. However, a review of the Ulan Line and modelling results showed Option A was borderline with providing for prospective train capacity and it would only take 1.7 mtpa of prospective volume of coal to exceed capacity (ARTC 2012b).

Considering this, ARTC was then required to consider developing the alternative solution of the Bylong East Duplication Project (Option B) as there is no case for both projects (ARTC 2012b).

Option B, which requires track duplication between the existing Bylong Loop and the western portal of Bylong Tunnel (Tunnel Number 3), satisfies both contracted and prospective train volumes however it is significantly more expensive (indicative cost around \$106 million) due to additional infrastructure enhancements.

The outcome of the Bylong Tunnel Ventilation Investigation Project (ULAN+ 2010) remains critical to the implementation of these solutions. The Bylong Tunnel Ventilation Investigation Project has recently confirmed headways can be reduced with further studies being complete to determine the minimum headway achievable.

If Bylong East Duplication is not progressed, ARTC will be at risk of not being able to meet industry demand post first quarter 2016 if prospective volumes are realised (ARTC 2012b).



2

**PROPOSAL
DESCRIPTION**

2 PROPOSAL DESCRIPTION

The following section provides a clear and concise summary of the proposal and describes the types of activities that will be undertaken during each stage of construction.

2.1 REGIONAL CONTEXT, SITE LOCATION AND SURROUNDING LAND USES

The Proposal is located in the Mid-Western Regional Shire, in Bylong Valley, approximately 3.3 kilometres south east of Bylong Village and 70 kilometres west of Muswellbrook. The main subregional centre of Mudgee is also located 55 kilometres south west of the Proposal.

Figure 2 outlines the local and regional context of the Proposal.

The Mid-Western Regional LGA is characterised by agriculture, viticulture, coal mining, retail and tourism, with tourism being a particularly important industry to the regional economy (RDA 2011).

Land use in the vicinity of the Proposal is characterised by agricultural land uses (primarily grazing) and has been largely cleared for agricultural purposes. Rural residential development associated with Bylong village and scattered trees also persist throughout the valley floor.

The valley is also surrounded by the ridges and escarpments of the Great Dividing Range and the dissected landforms of the Goulburn River National Park and Bylong State Forest. Intact native vegetation is generally restricted to these upper slopes and rocky escarpments that are less suited to agricultural productivity.

The surrounding region has expanses of conservation areas, including Goulburn River and Wollemi National Parks which both support a diversity of vegetation communities that in turn provide habitat for a variety of threatened flora and fauna species (NPWS 2003, DEC 2006). Wollemi National Park is the largest area of wilderness in NSW and forms part of the Greater Blue Mountains Area (GBMA) which is World and National Heritage listed under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Proposal is located in proximity to the north-western boundary of Wollemi National Park and the south-western boundary of the Goulburn River National Park but neither of these areas will be impacted.

The Proposal is located within the Bylong River catchment, with a portion of the rail corridor running parallel to the Bylong River.

Figure 4, Figure 5 and Figure 6 outline key environmental features recorded via desktop searches including threatened flora and fauna species.

2.2 OVERVIEW OF THE PROPOSAL

The Proposal is a duplication of track between the existing Bylong Passing Loop connecting into the main line prior to the western portal of the Bylong Tunnel (Tunnel number 3). The new track will diverge from the existing mainline and follow a different vertical and horizontal alignment (refer to Figure 2).

The Proposal would comprise the construction of a new single line track on the Up side of the existing mainline. The Proposal would stretch from the existing Bylong Passing Loop at

382.445km to approximately 100 metres on the country side of the Bylong Tunnel No. 3 portal at 377.180km.

The Proposed new track would be constructed approximately 60 metres on the Up side of the existing main line. The proposed rail line would form the new 'Up' main for trains and the existing mainline would serve as the 'Down' main. The new track would be on a new horizontal alignment, up to 60metres from the existing mainline and through a series of fill embankments, cuttings and structures, the new line would be on a different vertical alignment to the existing mainline.

The estimated cost of the Proposal is approximately \$106 million and is expected to take approximately 19 months to construct.

Key components of the proposed project comprise:

- Land acquisition on the Up side of the existing track from approximately 377.957km to 382.523km;
- Approximately 5.3km of additional track on the Up side and parallel to the existing mainline (offset approximately 60 metres from the existing track formation), but on a different vertical alignment (from approximately 377.180km to 382.445km);
- Slewing of the existing mainline to the Up side to form the new track at approximately 382.445km;
- The removal of a turnout at approximately 382.269km along the existing mainline and the extension and replacement of the line with plain line to maintain as the 'Down' track;
- The connection of the new Up track to the existing mainline via a connecting track (known as a tangential turnout) at approximately 377.180km;
- Clearing and grubbing, topsoil removal and stockpiling;
- Establishment of temporary facilities including site compound/s, spoil fills, demountable site offices, stockpiles/lay down areas, car parking areas, waste facilities, toilets, signs, fences and crushing circuits;
- Earthworks including the construction of a series of fill embankments and cuttings to accommodate the proposed vertical alignment of the new section of track;
- Extension of all existing drainage systems and structures and the construction of new drainage structures, to maintain positive flow away from and in some cases, underneath the railway line;
- Construction of new culverts and bridge/s where required. Currently the viability of bridges is dependent on the assessment of cost and geotechnical and hydrological investigations. If a bridge is required, this will be further documented in the EIS;
- Installation of new signalling infrastructure between 377.080km and 382.545km (including signal location cases and huts, new signals and underbores); and
- New vehicular maintenance access tracks on the Down side of the Proposal.

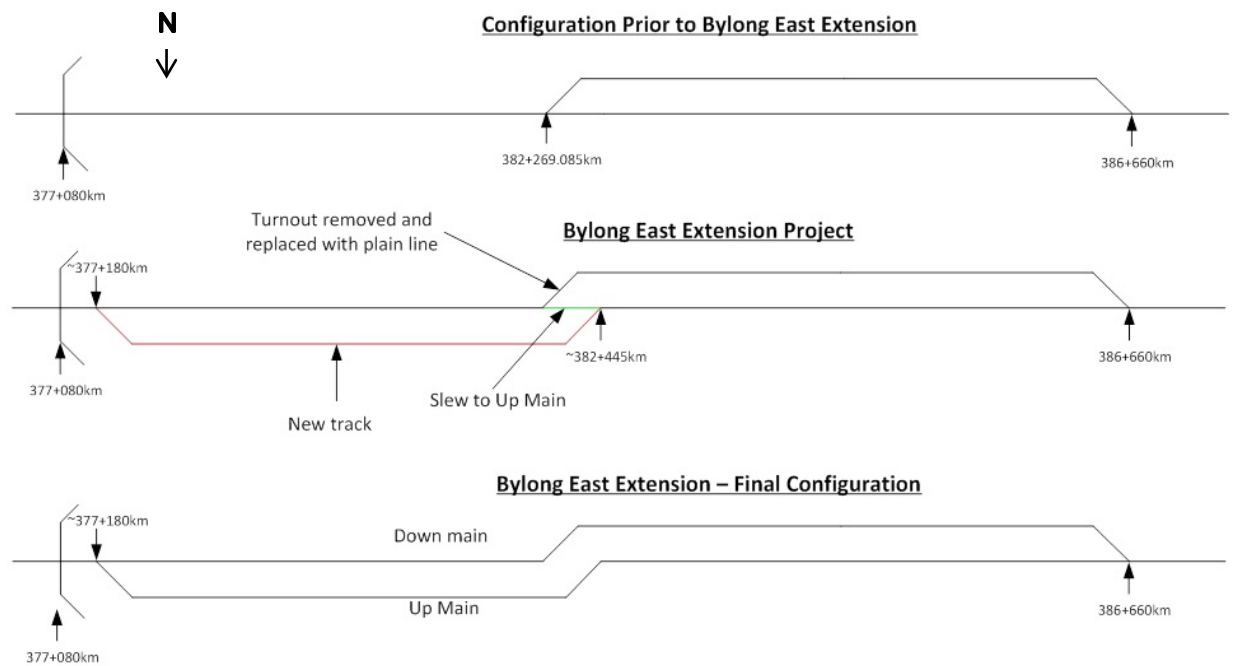


Figure 3 Proposed Design Layout

2.3 CONSTRUCTION PHASE

2.3.1 CONSTRUCTION METHODOLOGY

The construction period for the Proposal would be approximately 19 months. The likely sequence and outline of key construction components can be seen in Table 1.

Table 1 Key construction phases of the Proposal

Works	Activities
Mobilisation / Enabling works	<ul style="list-style-type: none"> • Install Environmental Controls • Power and service relocations • Construct site access and signage (safety and traffic) • Site Fencing • Establishment of main and satellite compounds
Earthworks	<ul style="list-style-type: none"> • Strip vegetation and topsoil • Bulk earthworks • Crushing • Place structural and capping • Potential slope stability works • Reconditioning for track slews and turnouts during possessions
Drainage and Structures	<ul style="list-style-type: none"> • Extension of existing culverts and installation of new culverts • Potential retaining works in cuttings • Installation of new underbridges

Works	Activities
Track-works	<ul style="list-style-type: none"> • Installation of bottom ballast • Installation of new sleepers and rail • Installation of top ballast • Tamp and profile new track • Installation of new turnout at city end of the works • Removal of redundant material equipment
Signalling	<ul style="list-style-type: none"> • Trenching, installation and connection of signal cable routes including installation of signal huts and cabinets. • Removal of redundant material equipment
Rehabilitation and Demobilisation	<ul style="list-style-type: none"> • Rehabilitation of excavated and fill areas as well as stockpile locations • Removal of any asset protection • Realignment of any fencing required • Demobilisation of site compounds • Removal of environmental controls

2.3.2 PROPERTY ACQUISITION

Construction of the Proposal and associated infrastructure would require acquisition of land on the Up side of the existing rail corridor between 377.957km and 382.523km for both temporary leasing and permanent acquisition. Permanent and temporary land acquisition will be on private property only and will not impact protected areas (National Parks or State Forest). Three landowners have been identified as potentially being affected. Negotiations will be conducted with relevant landowners during preparation of the EIS.

Land that is acquired for permanent use (earthworks for access road, new track, signalling infrastructure and drainage) will form part of the 'NSW Deed of Lease' between ARTC and Transport for NSW. Land required for compound areas, stockpiles and access tracks on a temporary basis during construction will be occupied under a 'License Agreement' between ARTC and the landowner and thus will be under the 'management and control of ARTC' (see Section 4.1.4).

2.3.3 ANCILLARY FACILITIES

A primary and secondary compound area would be established during the concept design, EIS phase of the works and after landholder negotiations. The primary location would be the current compound area at Bylong Loop Extension and the secondary location would be adjacent to the new railway corridor once earthworks have been carried out (see Figure 1).

Various locations have been considered for the compound, stockpile and turnaround areas and these shall be further documented within the EIS. The compound would be used for the site office, amenities, storage of equipment and parking. Truck and vehicle access options are identified in Figure 1.

2.3.4 UTILITY ADJUSTMENT

Railway signalling and minor drainage works would be required. It is also expected that overhead power lines will require relocating.

2.3.5 MAJOR EARTHWORKS

Where feasible, construction material for the rail earthworks would be sourced from within the existing rail corridor boundary i.e. balancing earthwork quantities with cut to fill. In the event that excess material is generated, this material would be disposed of off-site or stockpiled on site during construction at temporary stockpiles (see Figure 1), or at the completion of the Proposal at permanent stockpiles (locations to be confirmed during the EIS). Any material disposed of off-site will be tested for contaminants and disposed of at an appropriately licenced facility. Where the quantity and quality of the excavated material is not adequate for construction, material shall be imported from licensed facilities or local quarries.

It has been identified that material within cut areas may be excavated, depending on the suitability of the rock, for structural and capping fill. Re-using this rock will reduce the amount of imported fill required for the project. If this material is suitable, it shall be crushed on site. See Section 3.3 for EPL requirements.

2.3.6 CONSTRUCTION ACCESS

Existing access tracks (primarily within the rail corridor) will need upgrading and new access tracks will be constructed, to provide appropriate access to and within the construction works area (refer to Figure 1).

Construction would be sequenced and timing of deliveries including oversized loads planned to minimise the impact on local traffic.

2.3.7 CONSTRUCTION PLANT AND EQUIPMENT

It is expected that the following plant and equipment would be required for the construction of the Proposal.

Table 2 General plant and equipment used during construction

Construction Plant and Equipment		
Front end loaders	Dump trucks	Truck and Dogs
Water carts	Dozers	Scrapers
Generators	Pumps	Concrete Vibrators
Cranes	Concrete Pumps	Excavators
Rock Hammers	Backhoes	Graders
Vibratory rollers	Rail grinders	Tamping machines
Wacker packers	Bob cats	Hand tools
Crusher	Ballast regulator	Semi- trailers
Vibrating plates	Drill Rig (for piling)	Drill and blast
Milling machines	Stabilisers	

2.3.8 DRAINAGE

During construction, temporary erosion and sediment control measures would be established to manage stormwater runoff and capture sediment, in order to minimise impacts on

adjacent waterways and drainage lines. Erosion and sediment control during construction will be undertaken in accordance with the *Blue Book Guideline, Soil and Construction Managing Urban Stormwater, 4th Edition 2004 (Blue Book 2004)*.

2.3.9 CONSTRUCTION HOURS AND TRACK POSSESSIONS

Construction work will be undertaken during standard working hours being 07:00hrs until 18:00hrs Monday to Friday and 08:00hrs until 13:00hrs on Saturday, in accordance with the applicable EPL.

Works conducted outside of standard working hours may include delivery of oversized materials and machinery, safety critical works or works during track possessions. Track possessions are scheduled track shut downs where no trains run on the closed section of track during a scheduled period of time. Possessions are generally 36-60 hours in duration. Any construction work that directly impacts the running of trains on the existing line is usually completed during a track possession.

Noise and vibration impacts related to out of hours works and works during possessions are discussed further in section 4.2.1.

2.4 PROJECT PROGRAM

Subject to obtaining planning approval, the proposed delivery strategy requires the commencement of construction in August 2014 and the commencement of operations in March 2016. Key milestone dates are outlined in Table 3 below.

Table 3 Project program- key events and milestones (preliminary dates only; subject to change)

Event or Milestone	Date
Community consultation commencement	October 2012
Submission of project application and Preliminary Environmental Assessment	November 2012
Environmental Impact Statement Exhibition and community consultation	November 2013
Planning Approval	May 2014
Construction commences	August 2014
Construction complete	March 2016

2.5 CAPITAL COSTS

The capital cost of the project is estimated to be approximately \$106,300,000. This cost was calculated at a pre-feasibility level based upon a limited design, with inclusion of a 25% contingency to cater for unforeseen variability. The initial cost estimate will be refined as concept designs are completed through a Total Out-turn Cost (TOC) process.



3

**PLANNING
FRAMEWORK**

3 PLANNING FRAMEWORK

3.1 APPROVAL PROCESS

This section identifies strategic planning documents, environmental planning instruments and key development standards that may apply to the Proposal, including any development standards not being met.

Environmental planning instruments such as State Environmental Planning Policies (SEPP's) and Local Environmental Plans are legal documents that regulate land use and development in NSW.

3.1.1 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

The primary instruments of environmental legislation which establish statutory planning context for assessment and approval of the Proposal includes: *The Environmental Planning and Assessment Act 1979 (EP&A Act)* and the *Environmental Planning and Assessment Regulation 2000*.

As stated under Part 4, section 76 (1) of the EP&A Act, *if an environmental planning instrument provides that specified development may be carried out without the need for development consent, a person may carry the development out, in accordance with the instrument, on land to which the provision applies.*

In accordance with section 115 U (2) of the EP&A Act, *A State environmental planning policy may declare any development, or any class or description of development, to be State significant infrastructure.*

As outlined in section 3.1.2 and 3.1.3 below, the Proposal is permissible without development consent under Part 4 of the EP&A Act, as it is development for the purpose of rail infrastructure and the estimated capital investment value is more than \$50million. The Proposal will therefore be assessed under Part 5.1 of the EP&A Act.

Part 5.1 of the EP&A Act provides a streamlined and integrated development assessment and approval approach for government infrastructure projects of State Significance. The Minister for Planning and Infrastructure in NSW (the Minister) is the determining authority under Part 5.1 of the EP&A Act.

Subsequently, ARTC is required to submit a project application and supporting document, which will be used by the Department of Planning and Infrastructure to brief Government agencies about the Proposal and assist the Department to determine if all key environmental aspects shall be considered during the preparation of an EIS. As a result, Director General's Requirements (or DGRs) are released to the Proponent to ensure the Minister's aspects of recommendation are considered.

This Preliminary Environmental Assessment forms the supporting document to The Minister for Planning and Infrastructure in NSW.

3.1.2 STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE) 2007

The SEPP (Infrastructure) 2007 provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. This SEPP facilitates the development of State infrastructure, including telecommunication facilities, sewerage works and storm water management, and specifies when development consent is (and is not) required for such development when carried out in certain zones.

Under clause 79 (1) of the SEPP Infrastructure, “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.”

3.1.3 STATE ENVIRONMENTAL PLANNING POLICY (STATE AND REGIONAL DEVELOPMENT) 2011

This State Environmental Planning Policy (SEPP) repeals the previous State Environmental Planning Policy (Major Projects) 2005. The State and Regional Development SEPP, declares State Significant Infrastructure (SSI) to which development assessment and approval processes under Part 5.1 of the EP&A Act apply.

Development within a category specified in Schedule 3 of the State and Regional Development SEPP is not SSI unless it is development that may be carried out without development consent under Part 4 of the EP&A Act (see section 115U (3) of the Act and clause 13).

The following category is specified in Schedule 3 of the State and Regional Development SEPP:

Rail Infrastructure

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.”

3.1.4 STATE ENVIRONMENTAL PLANNING POLICY 44 – KOALA HABITAT PROTECTION

This SEPP aims to encourage “the proper conservation and management of areas of natural vegetation that provide habitat for koalas to ensure a permanent free-living population over their present range and reverse the current trend of koala population decline.”

Both Mudgee and Muswellbrook LGA’s are listed under Schedule 1 of SEPP 44 as LGA’s to which this policy applies. SEPP 44 gives consideration to the species and number of native eucalypts within an area, and whether these represent potential or core koala habitat.

Under the SEPP, “potential koala habitat” is defined as “areas of native vegetation where the trees of the types listed in Schedule 2 constitute at least 15% of the total number of trees in the upper or lower strata of the tree component.” “Core koala habitat” is defined under SEPP 44 as areas of land that contain “a resident population of koalas, evidenced by attributes such as breeding females and recent sightings of historical records of a population”. The presence of potential or core koala habitat will be determined during the Flora and Fauna Assessment and addressed further in the EIS.

3.1.5 REGIONAL ENVIRONMENTAL PLANS AND LOCAL ENVIRONMENTAL PLANS

The Proposal is located within the Mid-Western Regional Shire on RU1 Primary Production zoned land outside the rail corridor (MWRLEP 2012).

Mid-Western Regional Council regulates land use within the LGA through the provisions of the *Mid-Western Regional Local Environmental Plan (LEP) 2012*.

Planning approval from Mid-Western Regional Council is not required under the LEP as the Proposal is subject to assessment under Part 5.1 of the EP&A Act and provisions of the SEPP (State and Regional Development) 2011, which prevails over local planning instruments. Consideration will be given to the LEP in the preparation of the EIS.

Mid-Western Regional Council has however been identified as a key stakeholder that will be consulted with early and often during the environmental assessment process for the Proposal.

3.2 COMMONWEALTH LEGISLATION

The following table outlines commonwealth legislative considerations for the Proposal.

Table 4 Commonwealth Legislative Considerations

Legislation/Act	Objective of Legislation	Analysis of project application
Environment Protection and Biodiversity Conservation Act 1999	<p>The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) is the primary environmental legislation at the federal level. The EPBC Act provides a legal framework to protect and manage national and international important flora, fauna, ecological communities and heritage places, defined under the EPBC Act as matters of national environmental significance (MNES). The EPBC Act also confers jurisdiction over actions that have a significant impact on the environment where the actions affect, or are taken on, Commonwealth land.</p> <p>Actions that are likely to have a significant impact on a MNES or are likely to have a significant impact on environment on Commonwealth land, must be referred to the Department of Sustainability, Environment, Water, Population and Communities (SEWPAC) for assessment.</p> <p>Hence, under Part 9 of the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC), approval is required from the Commonwealth Minister for the Environment for any action that has, or is likely to have:</p> <ul style="list-style-type: none"> • A significant impact on 'matters of national environmental significance'; • A significant impact on the environment if the action is on Commonwealth land; or • Is undertaken by a Commonwealth agency and is likely to have a significant impact on behalf of the Commonwealth. <p>MNES identified under the Act include:</p> <ul style="list-style-type: none"> • World Heritage properties; • National Heritage places; • Ramsar wetlands; • threatened species and ecological 	<p>Preliminary consideration has been given to whether the Proposal will involve any controlled actions for which an EPBC referral to SEWPAC is required.</p> <p>The Protected Matters Search Tool is managed by SEWPAC and is used to identify MNES within the proximity of a Proposal. A co-ordinate search was undertaken (-32.453056, 150.158056) to determine protected matters records listed under the EPBC Act to within 10 kilometres of the study area (Appendix A).</p> <p>Database searches indicate that MNES occur in the locality, including threatened flora and fauna species and Endangered Ecological Communities. The northern boundary of Wollemi National Park is located in proximity to the eastern extent of the Proposal. Wollemi National Park is part of the Greater Blue Mountains Area (GBMA), a World and National Heritage Property listed under the EPBC Act. A small part of the Proposal transects native vegetation that may support habitat for MNES. A greater proportion of the Proposal is located in cleared and highly modified land that is unlikely to support habitat for MNES.</p>

	<p>communities;</p> <ul style="list-style-type: none"> • migratory bird species; • Nuclear activities (including uranium mines); • Commonwealth marine areas; and • The Great Barrier Reef Marine Park. <p>Under the EPBC Act, actions that have, or are likely to have, a significant impact on a MNES require approval from the Australian Government Minister for Sustainability, Environment, Water, Population and Communities (the Minister). The Minister will decide whether assessment and approval is required under the EPBC Act.</p>	<p>At this early stage of assessment, it is considered that approval for the proposal is unlikely to significantly impact MNES. As a result, a referral to the Commonwealth Minister for the Environment, Water, Heritage and the Arts is unlikely to be required.</p> <p>However, this would be considered further during the preparation of the EIS when detailed property, flora and fauna and heritage investigations are undertaken.</p> <p>If the Proposal was likely to result in a 'significant' impact, direct or indirect, upon these MNES, concurrent Commonwealth approval under the EPBC Act would be required.</p>
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3.3 ENVIRONMENTAL PROTECTION LICENCE

In accordance with the *Protection of the Environment Operations Act 1997* (POEO Act), Chapter 3, Section 43, Environmental Protection Licences (EPL) may be issued for the following purposes:

- (a) *To authorise the carrying out of scheduled development work at any premises, as required under section 47,*
- (b) *To authorise the carrying out of scheduled activities at any premises as required under section 48,*
- (c) *To authorise the carrying out of scheduled activities not related to premises, as required under section 49,*
- (d) *To control the carrying out of non-scheduled activities for the purpose of regulating water pollution resulting from any such activity, as referred to in section 122.*

Scheduled activities

Under Section 48 of the POEO Act, an EPL is required for “premises” at which “scheduled activities” are carried out. Scheduled activities are listed under Schedule 1 of the POEO Act and those activities that are applicable to the Proposal include:

Clause 33 - Railway system activities, meaning:

- (a) the installation, on site repair, on-site maintenance or on site upgrading of track, including the construction or significant alteration of any ancillary works, or
- (b) the operation of rolling stock on track

In this clause:

ancillary works means any of the following:

- (a) over track structures
- (b) earthworks
- (c) cuttings
- (d) drainage works
- (e) track support
- (f) fencing
- (g) tunnels
- (h) bridges
- (i) level crossings

track means railway track that forms part of, or consists of, a network of more than 30km of track, other than railway track that is used solely by railway vehicles that are themselves used solely for heritage purposes.

Clause 16 - Crushing, grinding or separating

This clause applies to “crushing, grinding or separating”, meaning the processing of materials (including sand, gravel, rock or minerals, but not including waste of any description) by crushing, grinding or separating them into different sizes.

The activity to which this clause applies is declared to be a scheduled activity if it has a capacity to process more than 150 tonnes of materials per day or 30,000 tonnes of materials per year.

Non-scheduled activities

This Act permits (but does not require) a licence to be issued for a non-scheduled activity. Compliance with the conditions of the licence provides a defence to the offence of polluting waters under section 120 of the Act. Under section 122 of the Act, it is a defence in proceedings against a person for an offence under Part 5.3 of the Act if the person establishes that:

- (a) the pollution was regulated by an environment protection licence held by the person or another person, and
- (b) the conditions to which that licence was subject relating to the pollution of waters were not contravened.

An EPL is therefore likely to be required to permit the carrying out of the above scheduled and non-scheduled activities.

The ARTC hold an existing EPL Number 3142. The licence applies to all land and infrastructure provided in the Deed of Lease between ARTC, the State Rail Authority and Rail Infrastructure Corporation as per EPL Clause A2.2 (1).

For most ARTC projects, land that is acquired for permanent use (earthworks for access road, new track, signalling infrastructure and drainage) will usually form part of the ‘NSW Deed of Lease’ between ARTC and Transport of NSW (Section 2.3.2). Land required (Section 2.3.3) for compound areas, stockpile and or access tracks on a temporary basis during construction will be occupied under a ‘License Agreement’ between ARTC and the landowner and thus will be under the ‘management and control of ARTC’.

It shall be considered further within the EIS as to whether the Proposal and associated activities would be licenced under the existing ARTC EPL 3142, through a variation, or whether a new project/construction EPL will be sought. The most appropriate licencing approach will be identified and followed in consultation with ARTC, relevant government agencies and the Department of Planning and Infrastructure during the environmental assessment process and will be documented within the EIS.

3.4 NSW LEGISLATION

In accordance with the EP&A Act Part 5.1 section 115ZG, authorisations under certain NSW legislation (Acts) are not required for approved State Significant Infrastructure (SSI) projects. However, it is important that enough information is included in the EIS to address the impacts that would otherwise be assessed when applying for these other authorisations.

Table 5 below outlines applicable legislation that **does not** apply to SSI projects. If during the SSI application process, the Proposal was determined by the Minister to be critical SSI, then certain orders and notices prescribed under various NSW Acts cannot be made or given, so as to prevent or interfere with the carrying out of approved critical SSI. Further discussion on these orders and notices that would not apply to the Proposal will be included in the EIS, if the Proposal was determined to be critical SSI.

Table 6 outlines further relevant NSW legislation which **applies** to SSI projects and is therefore not captured in Table 5 below.

Table 5 Legislation that does not apply to SSI

Legislation/Act that does not apply to SSI	Objective of Legislation	Relevant authorisations including Section in PEA demonstrating appropriate assessment
<i>Fisheries Management Act 1994</i>	<p>The objectives of this Act are to conserve, develop and share the fisheries resources of NSW for the benefit of present and future generations.</p> <p>Various notifications and permits are required for certain activities, including those captured under sections 199, 201, 205 and 209, that have the potential to impact waterways and associated fishery resources.</p>	<p>In accordance with the EP&A Act Part 5.1 section 115ZG, a permit under section 201, 205 or 219 of the FM Act is not required for approved State Significant Infrastructure (SSI) projects.</p> <p>Although a permit is not required under sections 201, 205 or 219 of the FM Act, notification of the Minister would still be required under section 199 of the FM Act for dredging and reclamation works. There is the potential for activities associated with the construction of the Proposal to impact on aquatic habitats, species and water quality. Impacts of the Proposal on the Aquatic environment will be assessed as discussed in Sections 4.1.1 and 4.2.4 will be reported on in the EIS.</p>
<i>Heritage Act 1977</i>	<p>The purpose of this Act is to conserve environmental heritage which includes places, buildings, work, relics, movable objects and precincts of State or local heritage significance.</p> <p>Section 57 specifies that approval is required to demolish, damage, excavate, carry out development, alter buildings, display any notice on or damage or destroy any tree or other vegetation in relation to buildings, places, precinct or land, relic or moveable object which has an interim heritage order or listing on the State Heritage Register.</p> <p>Section 139 also specifies that an excavation permit is required to disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed.</p> <p>Division 8 of Part 6 which involves controlling and restricting harm to buildings, works, relics and places not subject to interim heritage orders or State Heritage Register listing.</p>	<p>In accordance with the EP&A Act Part 5.1 section 115ZG, an approval or permit under section 57 and/or 139 of the Heritage Act is not required for approved State Significant Infrastructure (SSI) projects.</p> <p>No heritage items or groups of heritage items are known to exist within the Proposal's disturbance footprint (see Appendix B) and therefore the potential to impact on heritage items that fall within the ambit of the Heritage Act is unlikely. Further investigations will be undertaken to establish whether any unknown heritage items are located within the disturbance footprint as discussed in Section 4.1.2 and 4.2.2 and will be further reported on in the EIS.</p>

Legislation/Act that does not apply to SSI	Objective of Legislation	Relevant authorisations including Section in PEA demonstrating appropriate assessment
<i>National Parks and Wildlife Act 1974</i>	<p>The objective of this Act is to conserve objects, places or features (including biological diversity) of cultural value. This includes places, objects and features of significance to Aboriginal people.</p> <p>If any identified Aboriginal object or place needs to be removed or destroyed during construction, an approval will be required from the Director-General of the NPWS under section 87(1) of the National Parks and Wildlife Act, prior to commencement. Under section 90 of the same Act, approvals from the Director-General will be required for an 'Aboriginal Heritage Impact' permit.</p>	<p>In accordance with the EP&A Act Part 5.1 section 115ZG, an Aboriginal heritage impact permit under section 90 of the National Parks and Wildlife Act is not required for approved State Significant Infrastructure (SSI) projects.</p> <p>However during the environmental assessment process, further investigations will be undertaken to identify and assess any impacts on potential items of indigenous heritage value, as discussed in Section 4.1.2.</p>
<i>Native Vegetation Act 2003</i>	<p>The objects of this Act are:</p> <ul style="list-style-type: none"> (a) to provide for, encourage and promote the management of native vegetation on a regional basis in the social, economic and environmental interests of the State; (b) to prevent broadscale clearing unless it improves or maintains environmental outcomes; (c) to protect native vegetation of high conservation value having regard to its contribution to such matters as water quality, biodiversity, or the prevention of salinity or land degradation; (d) to improve the condition of existing native vegetation, particularly where it has high conservation value; and (e) to encourage the revegetation of land, and the rehabilitation of land, with appropriate native vegetation, in accordance with the principles of ecologically sustainable development <p>Section 12 of the Act stipulates the requirements and authorisations that apply to the clearing of native vegetation or State protected land in</p>	<p>In accordance with the EP&A Act Part 5.1 section 115ZG, an authorisation referred to in section 12 of the Native Vegetation Act is not required for the clearing of native vegetation or State protected land in NSW.</p> <p>However, consideration of other requirements and authorisations under the Native Vegetation Act as well as potential impacts of the Proposal on native vegetation will be considered and assessed as discussed in Section 4.1.1.</p>

Legislation/Act that does not apply to SSI	Objective of Legislation	Relevant authorisations including Section in PEA demonstrating appropriate assessment
	NSW.	
<i>Water Management Act 2000</i>	<p>A water management works approval is required under section 90 of the Water Management Act for flood works and drainage works.</p> <p>Drainage works include pumps, pipes and sluice gates; but not sewage works. Flood works; include cuttings or embankments that are likely to have an effect on the flow of water or on flood waters.</p> <p>A water use approval under section 89 and an activity approval (other than an aquifer interference approval) under section 91 are also required.</p> <p>Under section 91(E) a person must not carry out a controlled activity in, on or under waterfront land otherwise than in accordance with a controlled activity proposal. A controlled activity includes:</p> <ul style="list-style-type: none"> ▪ the erection of a building or the carrying out of a work; ▪ the removal of material or vegetation from land; ▪ the deposition of material on land, whether by way of landfill operations or otherwise; ▪ the carrying out of any other activity that affects the quantity or flow of water in a water source. <p>Waterfront land is defined as land within 40m of both sides of the river bed, including the bed itself.</p>	<p>In accordance with the EP&A Act Part 5.1 section 115ZG 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 Water Management Act 2000, are not required for SSI projects.</p> <p>Clause 38 of the Water Management (General) Regulations 2011 states that a public authority is exempt from section 91E (1) of the Act in relation to all controlled activities that it carries out in, on or under waterfront land.</p> <p>However, the Proposal involves construction works (earthworks, drainage works and potentially a new bridge/s) within or in close proximity to minor drainage lines such as Bylong River. The potential impacts of the Proposal on hydrology, drainage, and water quality will be assessed as discussed in Section 2.3.8, 4.1.3 and Section 4.2.4 and reported on in the EIS.</p>

The following table outlines other New South Wales legislative considerations and approvals applicable to SSI projects and the Proposal.

Table 6 Relevant NSW Legislation and approvals

Legislation/Act	Objective of Legislation	Relevance to Project including Section in PEA demonstrating appropriate consideration
<i>Threatened Species Conservation Act 1995</i>	The objectives of this Act are to prevent the extinction and promote the recovery of threatened species, populations and ecological communities.	Further investigations will be undertaken during the environmental assessment (as detailed in Section 4.1.1) to ascertain the presence of threatened species, populations and ecological communities within the disturbance footprint and to assess the potential direct and indirect impacts on both fauna and flora species as a result of the Proposal.
<i>Protection of the Environment Operations Act 1997</i>	<p>This Act aims to protect, restore and enhance the quality of the environment in the context of ecologically sustainable development and to reduce risks to human health and prevent degradation of the environment.</p> <p>Clause 48 of the Act outlines that an Environmental Protection Licence is required for any scheduled activities to be undertaken at a premise at which Schedule 1 of the Act indicates that a licence is required.</p> <p>For the purpose of section 48 of the POEO Act, any activity that is declared by this Part to be a 'scheduled activity' is taken to be an activity for which a licence is required for the premises at which it is carried out (the activity is "premises-based").</p> <p>Clause 33 of Schedule 1 relates to 'railway system activities', which is defined as:</p> <p><i>"(a) the installation, on site repair, on-site maintenance or on site upgrading of track, including the construction of significant alteration of any ancillary works, or</i></p> <p><i>(b) the operation of rolling stock on track"</i></p> <p><i>(5) "ancillary works" means any of the following:</i></p>	<p>All Scheduled activities undertaken as part of the Proposal will be licenced under an applicable EPL, as discussed in detail in Section 3.3.</p> <p>A Pollution Incident Response Management Plan shall be prepared and tested for each licensed activity that occurs on site.</p>

Legislation/Act	Objective of Legislation	Relevance to Project including Section in PEA demonstrating appropriate consideration
	<p>(a) over track structures</p> <p>(b) earthworks</p> <p>(c) cuttings</p> <p>(d) drainage works</p> <p>(e) track support</p> <p>(f) fencing</p> <p>(g) tunnels</p> <p>(h) bridges</p> <p>(i) level crossings</p> <p>“track” means railway track that forms part of, or consists of, a network of more than 30km of track, other than railway track that is used solely by railway vehicles that are themselves used solely for heritage purposes.</p> <p>Clause 16 of Schedule 1 relates to ‘crushing, grinding or separating’, which is defined as:</p> <ol style="list-style-type: none"> 1. <i>This clause applies to “crushing, grinding or separating”, meaning the processing of materials (including sand, gravel, rock or minerals, but not including waste of any description) by crushing, grinding or separating them into different sizes.</i> 2. <i>The activity to which this clause applies is declared to be a scheduled activity if it has a capacity to process more than 150 tonnes of materials per day or 30,000 tonnes of materials per year.</i> <p>Part 7.5A of the POEO Act requires a Pollution Incident Response Management Plan (PIRMP) to be prepared and tested for each licensed activity that occurs on site. The PIRMP must present information on:</p> <ul style="list-style-type: none"> • description and likelihood 	

Legislation/Act	Objective of Legislation	Relevance to Project including Section in PEA demonstrating appropriate consideration
	<p>of hazards</p> <ul style="list-style-type: none"> • pre-emptive actions to be taken • inventory of pollutants • safety equipment • communicating with neighbours and the community • minimising harm to persons on the premises • actions to be taken during or immediately after a pollution incident • staff training. 	
<i>Native Title Act NSW 1994</i>	The main objective of this Act is to provide for recognition of native titles, establish procedures and standards for future dealings affecting native titles, establish a mechanism for determining claims to native titles and providing for, or permitting, the validation of past Acts, and intermediate period Acts, invalidated because of the existence of native titles.	A search by the National Native Title Tribunal (Appendix B) of the National Native Title Register, Register of Native Title Claims, Unregistered Claimant Applications register and Register of Indigenous Land Use Agreements pursuant to Division 3 of the Aboriginal Land Rights Act 1983 identified no Aboriginal Native Title claimant within the Mid-Western LGA.
<i>Land Acquisition Act 1991</i>	This Act Applies to acquisition of land by an authority of the State (by agreement or compulsory process), which is authorised to acquire the land by compulsory process.	The Rail Infrastructure Corporation (RIC), acting as a State Authority and on behalf of ARTC would acquire land affected by the Proposal in accordance with the statutory requirements of this Act. Once acquired by RIC, the property would be incorporated into the ARTC deed of lease (see Section 2.3.2 for further discussion on the impacts of the Proposal on adjacent properties).
<i>Environmentally Hazardous Chemicals Act 1985</i>	This Act regulates the use and storage of environmentally hazardous chemicals. It provides the OEHL with assessment and control mechanisms for chemicals and chemical wastes.	Minimal quantities of hazardous materials such as chemicals and fuels will be stored and used on-site during the construction process. Appropriate storage and management measures will be identified in site specific Environmental Management Plans and will be implemented on site to reduce the risk of environmental impacts from hazardous materials and chemicals (see Section 4.2.6 for further discussion).
<i>Noxious Weeds Act 1993</i>	The Act aims to provide a framework for the State-wide	It is likely that noxious weeds will occur within the Proposal's disturbance footprint. Noxious

Legislation/Act	Objective of Legislation	Relevance to Project including Section in PEA demonstrating appropriate consideration
	control of noxious weeds by the Minister and local control authorities. The Act identifies noxious weeds for which particular control measures need to be taken, in addition to specifying the duties of public and private landholders.	Weeds will be identified and mapped during the Flora and Fauna Assessment (see Section 4.1.1 for further discussion) and will be reported on in the EIS. A Noxious Weed Management Plan will be implemented during the construction of the Proposal to aid in the management and control of identified noxious weeds.
<i>Roads Act 1993</i>	<p>The objects of this Act are:</p> <ul style="list-style-type: none"> • to set out the rights of members of the public to pass along public roads, and • to set out the rights of persons who own land adjoining a public road to have access to the public road, and • to establish the procedures for the opening and closing of a public road, and • to provide for the classification of roads, and • to provide for the declaration of the RTA and other public authorities as roads authorities for both classified and unclassified roads, and • to confer certain functions (in particular, the function of carrying out road work) on the RTA and on other roads authorities, and • to provide for the distribution of the functions conferred by this Act between the RTA and other roads authorities, and • to regulate the carrying out of various activities on public roads. <p>Under section 138 of the Act, consent is required to:</p> <ol style="list-style-type: none"> erect a structure or carry out a work in, on or over a public road, or dig up or disturb the surface of a public road, or remove or interfere with a structure, work or tree on a public road, or pump water into a public road from any land adjoining the road, or connect a road (whether 	There is the potential that a RMS (former RTA) or Council owned road may be affected during the construction phase of the Proposal e.g. increased traffic, detours, additional signage, minor modifications to allow for abnormal loads. Consent may therefore be required from RMS or Mid-Western Regional Council under Section 138 of the Roads Act (see Section 4.2.3 for further discussion).

Legislation/Act	Objective of Legislation	Relevance to Project including Section in PEA demonstrating appropriate consideration
	private or public) to a classified road	
<i>Soil Conservation Act 1938</i>	<p>The purpose of this Act is to conserve soil and water resources and mitigate soil erosion.</p> <p>Section 15A of the Act provides for Notices that will allow OEH to prescribe measures for erosion and sediment control that must be adopted. Notices can be issued before construction begins or can be issued to halt an offending activity until proper erosion and sediment controls are instituted. The OEH can also undertake the specific works if it finds that the Section 15A Notice is not complied with.</p>	<p>Potential impacts from erosion and sedimentation of local water bodies will be fully considered during the environmental assessment process (see Section 4.1.3).</p> <p>During the construction phase of the project, a site specific Soil and Water Management plan shall be adopted in accordance with the <i>Blue Book Guideline, Soil and Construction: Managing Urban Stormwater, 4th Edition, 2004</i> (Blue Book 2004).</p>
<i>Contaminated Land Management Act 1997</i>	<p>This Act establishes a process for investigating, and where required, remediating contaminated lands, that pose a risk to human health and the environment.</p>	<p>During preliminary database searches, no record has been found of known contaminated sites within the proposed construction footprint. In the event that previously unidentified contaminated land is located during further investigations that will be undertaken during the EIS (see Section 4.2.6), or during construction, requirements of this Act would need to be considered and complied with.</p>
<i>Waste Avoidance and Resource Recovery Act 2001</i>	<p>The Purpose of this Act is to minimise the consumption of waste resources and to control the management and disposal of any waste materials on site through reusing and recycling.</p>	<p>The Proposal would generate waste, primarily during the construction phase. Requirements of this Act including the waste management hierarchy will therefore be applicable to the Proposal. An assessment of the potential impacts of waste generated primarily during the construction phase is included in Section 4.2.11.</p>

4

Preliminary Environmental Risk Analysis



A preliminary environmental risk analysis was undertaken to identify the key potential environmental issues or impacts associated with the Proposal.

This section identifies and prioritises these expected environmental risks (positive and negative) associated with the Proposal. Strategies to address the identified impacts are briefly outlined.

The assessment will remain 'preliminary' until specialist investigations into the potential environmental effects of the Proposal are undertaken and all aspects of the concept design are confirmed.

The proposed study area for the Proposal is the operational and construction footprint for the options being considered in the concept design phase and detailed engineering design phase of the project.

4.1 KEY ENVIRONMENTAL ISSUES AND RISK RATING

This section details key issues of the Proposal, which may be associated with a higher risk rating based on potential environmental impacts. This section identifies areas where further investigation and assessment is recommended and shall be provided within the EIS.

Evaluation of the construction and operating characteristics of development projects and the baseline environment assists in deriving important information on potential issues, and further assessment needs. Where relevant, existing assessments and desktop based searches within the Proposal area, provide useful background information that aids the environmental risk process.

The environmental risk analysis has adopted an iterative evaluation process. This enables environmental risk issues to be incorporated into the project design. The priority matrix illustrated below was the guiding tool in identifying priorities for the assessment. Each environmental factor was ranked between one and three based on the likelihood of occurring and for the perceived consequence of effects if left unmanaged. It however does not consider the application of mitigation measures to manage the environmental factor. In most cases, suitable mitigation measures would minimise any potential impacts. These mitigation measures would be further considered and detailed in the subsequent EIS.

A number of non-key issues that could largely be addressed using management measures have also been identified and are addressed in Section 4.2 as 'Other Environmental Aspects'.

Risk Rating Assessment

The allocation of risk is based on the following considerations:

Table 7 Allocation of risk based on likelihood of occurrence

Definition	Likelihood of Occurrence Risk Rating
High probability of occurring	High
Potential to occur	Medium
Unlikely to occur	Low

Table 8 Allocation of risk based on consequence of unmanaged effects

Definition	Consequence of Unmanaged Effects Risk Rating
Adverse environmental change; inter-regional implications; serious or long term cumulative impacts, offsets not readily available.	High
Moderate adverse environmental change; regional implications; modest or medium term cumulative impacts; offsets available.	Medium
Minor environmental change; localised implications; imperceptible or short term cumulative impacts; offsets readily available.	Low

Table 9 Environmental Factors Priority Matrix

Likelihood of Occurrence	Consequence of Unmanaged Effects		
	3 High	2 Medium	1 Low
1 Low	4 (Medium)	3 (Low)	2 (Low)
2 Medium	5 (High)	4 (Medium)	3 (Low)
3 High	6 (High)	5 (High)	4 (Medium)

The information provided in the Table below provides a summary of the environmental factors addressed in this PEA and the associated risk rating based on potential impacts.

Table 10 Risk Rating for Environmental Factors

Environmental Factor	Risk Rating	Comments
Flora and Fauna	High	Potential to impact on threatened and endangered communities and remnant vegetation.
Aboriginal Heritage	High	Potential to impact upon Aboriginal heritage items as the disturbance footprint extends outside of the existing rail corridor.
Erosion, sedimentation and surface water quality	High	Potential impacts on water quality as a result of soil erosion and sedimentation during construction, as well as potential bridge construction, with possible impacts on surrounding ecological systems including riparian zones.
Land use and Property	High	It is highly likely that some areas of neighbouring rural properties would need to be permanently acquired to accommodate the Proposal. Although very localised, this has the potential to impact on both property ownership and use in the long term.
Noise and Vibration	Medium	Potential for both construction and operational noise and short term construction vibration impacts associated with a significant freight rail line upgrade in a rural noise setting, in close proximity to existing individual residences.
European Heritage	Medium	Direct or indirect disturbance to European heritage items, such as the Munghorn Gap Nature Reserve (30km west of Proposal) and Bylong Church of England (5km north-west of Proposal), listed as significant for historical values under the Heritage Act s.170 NSW State Agency Heritage Register and significant heritage value under the NSW Heritage Act.
Traffic and Transport	Medium	Potential to increase traffic congestion on existing roads primarily during the construction phase. Potential for heavy vehicles to impact on the condition of the local road network during the construction phase.
Hydrology and Flooding	Medium	As the majority of the site is elevated, it is unlikely that groundwater will be intercepted other than possibly in localised areas. There is limited potential for the Proposal, once operational, to impact on flooding patterns as the majority of the Proposal does not fall within flood prone land. However, parts of the Proposal in lower lying areas and in proximity to drainage lines and Bylong River will be at risk of localised flooding and damage, including erosion and sedimentation.
Social and Economic	Low	Potential to create positive economic benefits to the region. Potential to result in minor long term impacts associated with visual amenity, noise, vibration and air quality and therefore potential minor negative impacts on surrounding rural properties and residences.

Environmental Factor	Risk Rating	Comments
Land Contamination	Low	<p>Potential to encounter or disturb areas of contamination are low with historical land uses within the construction footprint being primarily agriculture.</p> <p>A DECCW (OEH) Contaminated Land Record search was undertaken in September 2012 and no sites were recorded within the Mid-Western Regional LGA.</p>
Air Quality	Low	<p>There is the potential that the Proposal will result in minor increases in diesel emissions from freight train locomotives, if train numbers increase as a result of the Proposal. Dust impacts will be restricted to the construction phase and are unlikely to be significant as the earthworks footprint is narrow and localised.</p>
Visual Amenity	Low	<p>Potential minor short and long term visual amenity impacts as a result of construction activities and the completed new rail infrastructure being elevated higher than the existing rail line and therefore being more visible to local residents.</p>
Greenhouse Gases	Low	<p>There is the potential that the Proposal will result in minor increases in diesel emissions from freight train locomotives, if train numbers increase as a result of the Proposal, which in turn may result in a minor increase in greenhouse gas emissions.</p>
Waste Management and Minimisation	Low	<p>The Proposal is unlikely to generate an unusually large volume of waste or to generate types of waste that are hazardous to both store, manage, transport and dispose.</p>

Linear infrastructure which requires a substantial amount of earthworks may have the potential to impact on species, populations and communities listed under the *Threatened Species Conservations Act* (TSC Act) and or the *Environmental Protection and Biodiversity Conservation Act* (EPBC Act).

EXISTING ENVIRONMENT

Desktop searches were undertaken from the following databases to identify existing records of threatened entities and Matters of National Environmental Significance:

- The NSW Wildlife Atlas, which is managed by the NSW Office of Environment and Heritage (OEHS 2011). A co-ordinate search was undertaken in September 2012 to determine threatened species records listed under the TSC Act within 10km of the study area;
- The Protected Matters Search Tool, which is managed by DSEWPC (2011). A co-ordinate search was undertaken in September 2012 to determine protected matters records listed under the EPBC Act within 10km of the study area; and
- Threatened and Protected Species Records Viewer, which is managed by NSW Department of Primary Industries (DPI). A search of the Hunter/Central Rivers Catchment Management Authority was undertaken in September 2012 to determine records of threatened fish species in the CMA.

A preliminary investigation involving broad flora and fauna observations on site was undertaken on 10th October 2012 by a qualified ecologist from Hyder Consulting.

Threatened Flora Habitat

A search of the National Parks and Wildlife Services (NPWS) Atlas of NSW Wildlife and the EPBC Protected Matters Search Tool identified the potential for 32 threatened flora species including two critically endangered (EPBC Act) and thirteen endangered (13 TSC Act and 3 threatened flora populations under the TSC Act) (Table 11 and Figure 4).

Table 11 Threatened flora entities identified from database search

Scientific Name	Common Name	Status under TSC Act	Status under EPBC Act
<i>Cynanchum elegans</i>	White-flowered Wax Plant	Endangered	Endangered
<i>Olearia cordata</i>	-	Vulnerable	Vulnerable
<i>Ozothamnus tessellatus</i>	-	Vulnerable	Vulnerable
<i>Senecio linearifolius</i> var. <i>dangarensis</i>	-	Endangered	-
<i>Kennedia retrorsa</i>	-	Vulnerable	Vulnerable
<i>Pultenaea</i> sp. <i>Olinda</i>	-	Endangered	-

Scientific Name	Common Name	Status under TSC Act	Status under EPBC Act
<i>Acacia ausfeldii</i>	Ausfeld's Wattle	Vulnerable	-
<i>Acacia dangarensis</i>	-	Endangered	-
<i>Acacia flocktoniae</i>	Flockton Wattle	Vulnerable	Vulnerable
<i>Acacia pendula</i>	Acacia pendula population in the Hunter catchment	Endangered	-
<i>Prostanthera cryptandroides subsp. cryptandroides</i>	Wollemi Mint-bush	Vulnerable	Vulnerable
<i>Prostanthera discolor</i>	-	Vulnerable	Vulnerable
<i>Prostanthera stricta</i>	Mount Vincent Mint-bush	Vulnerable	Vulnerable
<i>Eucalyptus camaldulensis</i>	Eucalyptus camaldulensis population in the Hunter catchment	Endangered	-
<i>Eucalyptus cannonii</i>	Capertee Stringybark	Vulnerable	Vulnerable
<i>Homoranthus darwinioides</i>	-	Vulnerable	Vulnerable
<i>Melaleuca groveana</i>	Grove's Paperbark	Vulnerable	-
<i>Cymbidium canaliculatum</i>	Cymbidium canaliculatum population in the Hunter Catchment	Endangered	-
<i>Diuris pedunculata</i>	Small Snake Orchid	Endangered	Endangered
<i>Diuris tricolor</i>	Pine Donkey Orchid population in the Muswellbrook local government area	Endangered	-
<i>Diuris tricolor</i>	Pine Donkey Orchid	Vulnerable	-
<i>Prasophyllum sp. Wybong</i>	-	-	Critically Endangered
<i>Bothriochloa biloba</i>	Lobed Bluegrass	-	Vulnerable
<i>Persoonia marginata</i>	Clandulla Geebung	Vulnerable	Vulnerable

Scientific Name	Common Name	Status under TSC Act	Status under EPBC Act
<i>Pomaderris queenslandica</i>	Scant Pomaderris	Endangered	-
<i>Pomaderris reperta</i>	Denman Pomaderris	Endangered	Critically Endangered
<i>Pomaderris sericea</i>	Silky Pomaderris	Endangered	Vulnerable
<i>Philotheca ericifolia</i>	-	-	Vulnerable
<i>Derwentia blakelyi</i>	-	Vulnerable	-
<i>Commersonia rosea</i>	-	Endangered	Endangered
<i>Lasiopetalum longistamineum</i>	-	Vulnerable	Vulnerable
<i>Rulingia procumbens</i>	-	Vulnerable	Vulnerable

Vegetation and Endangered Ecological Communities

The preliminary assessment involved only broad vegetation observations and did not include targeted surveys, or the compilation of a flora species inventory. Much of the study area supports woodland communities, including woodland with a grassy understory and woodland with a shrubby understory. A diversity of eucalypts dominated the canopy and *Callitris sp.* (Cypress pine) was scattered throughout. There is a low occurrence of noxious weeds throughout the study area.

Broad-scale vegetation mapping of Wollemi National Park (Bell 1998) identifies that the following vegetation communities are distributed within or in close proximity to the study area:

- Permian Widden Talus Woodland;
- Narabeen Arid Acacia Woodland;
- Narabben Goulbrun Valley Sheltered Forest;
- Narrabeen Bylong Arid Woodland;
- Permian Grey Box Woodland.

A search of the NPWS Wildlife Atlas and the EPBC Protected Matters Search Tool identified the potential for 7 Endangered Ecological Communities to occur within 10km of the Proposal (see Table 12 and Figure 5). Cleared areas, some of which are currently grazed by cattle, are likely to support a mixture of exotic and native grasses.

Table 12 Threatened Ecological Communities identified from database search

Scientific and Common Name	Status under TSC Act	Status under EPBC Act
Central Hunter Grey Box-Ironbark Woodland in the New South Wales North Coast and Sydney Basin Bioregions	Endangered	-

Scientific and Common Name	Status under TSC Act	Status under EPBC Act
Hunter Floodplain Red Gum Woodland in the NSW North Coast and Sydney Basin Bioregions	Endangered	-
Hunter Valley Foothills Slaty Gum Woodland in the Sydney Basin Bioregion	Vulnerable	-
Hunter Valley Vine Thicket in the NSW North Coast and Sydney Basin Bioregions	Endangered	-
Hunter Valley Weeping Myall Woodland of the Sydney Basin Bioregion	Endangered	Critically Endangered
Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	Endangered	-
White Box Yellow Box Blakely's Red Gum Woodland	Endangered	Critically Endangered

Threatened Fauna Habitat

A search of the NPWS Wildlife Atlas and the EPBC Protected Matters Search Tool identified the potential for 54 threatened fauna species to occur within 10km of the Proposal (see Table 13 and Figure 6).

Investigation of the Department of Primary Industries Threatened and Protected Species Records Viewer for the Hunter/Central Rivers Catchment Management Authority (CMA) did not return any records of threatened fish species in the CMA.

Table 13 Threatened Fauna species identified from database searches

Scientific Name	Common Name	Status under TSC Act	Status under EPBC Act
<i>Anthochaera phrygia</i>	Regent Honeyeater	Endangered	Endangered
<i>Aprasia parapulchella</i>	Pink-tailed Legless Lizard	Vulnerable	Vulnerable
<i>Burhinus grallarius</i>	Bush Stone-curlew	Endangered	-
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	Vulnerable	-
<i>Calyptorhynchus lathamii</i>	Glossy Black-Cockatoo	Vulnerable	-
<i>Cercartetus nanus</i>	Eastern Pygmy-possum	Vulnerable	-
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	Vulnerable	Vulnerable
<i>Chthonicola sagittata</i>	Speckled Warbler	Vulnerable	-

Scientific Name	Common Name	Status under TSC Act	Status under EPBC Act
<i>Circus assimilis</i>	Spotted Harrier	Vulnerable	-
<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (eastern subspecies)	Vulnerable	-
<i>Daphoenositta chrysoptera</i>	Varied Sittella	Vulnerable	-
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	Vulnerable	Endangered
<i>Epthianura albifrons</i>	White-fronted Chat	Vulnerable	-
<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	Vulnerable	-
<i>Glossopsitta pusilla</i>	Little Lorikeet	Vulnerable	-
<i>Grantiella picta</i>	Painted Honeyeater	Vulnerable	-
<i>Heleioporus australiacus</i>	Giant Burrowing Frog	Vulnerable	Vulnerable
<i>Hieraaetus morphnoides</i>	Little Eagle	Vulnerable	-
<i>Hoplocephalus bitorquatus</i>	Pale-headed Snake	Vulnerable	-
<i>Hoplocephalus bungaroides</i>	Broad-headed Snake	Endangered	Vulnerable
<i>Hoplocephalus stephensii</i>	Stephens' Banded Snake	Vulnerable	-
<i>Lathamus discolor</i>	Swift Parrot	Endangered	Endangered
<i>Leipoa ocellata</i>	Malleefowl	Endangered	Vulnerable
<i>Lophoictinia isura</i>	Square-tailed Kite	Vulnerable	-
<i>Macropus parma</i>	Parma Wallaby	Vulnerable	-
<i>Melanodryas cucullata cucullata</i>	Hooded Robin (south-eastern form)	Vulnerable	-
<i>Melithreptus gularis gularis</i>	Black-chinned Honeyeater (eastern subspecies)	Vulnerable	-
<i>Miniopterus australis</i>	Little Bentwing-bat	Vulnerable	-
<i>Miniopterus schreibersii oceanensis</i>	Eastern Bentwing-bat	Vulnerable	-
<i>Mixophyes iteratus</i>	Giant Barred Frog	Endangered	Endangered

Scientific Name	Common Name	Status under TSC Act	Status under EPBC Act
<i>Mormopterus norfolkensis</i>	Eastern Freetail-bat	Vulnerable	-
<i>Myotis macropus</i>	Southern Myotis	Vulnerable	-
<i>Neophema pulchella</i>	Turquoise Parrot	Vulnerable	-
<i>Ninox connivens</i>	Barking Owl	Vulnerable	-
<i>Ninox strenua</i>	Powerful Owl	Vulnerable	-
<i>Nyctophilus corbeni</i>	Corben's Long-eared Bat	Vulnerable	Vulnerable
<i>Petalura gigantea</i>	Giant Dragonfly	Endangered	-
<i>Petaurus australis</i>	Yellow-bellied Glider	Vulnerable	-
<i>Petaurus norfolcensis</i>	Squirrel Glider	Vulnerable	-
<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	Endangered	Vulnerable
<i>Petroica boodang</i>	Scarlet Robin	Vulnerable	-
<i>Petroica phoenicea</i>	Flame Robin	Vulnerable	-
<i>Phascolarctos cinereus</i>	Koala	Vulnerable	Vulnerable
<i>Pomatostomus temporalis temporalis</i>	Grey-crowned Babbler (eastern subspecies)	Vulnerable	-
<i>Pseudomys novaehollandiae</i>	New Holland Mouse	Protected	Vulnerable
<i>Pseudophryne australis</i>	Red-crowned Toadlet	Vulnerable	-
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	Vulnerable	Vulnerable
<i>Saccolaimus flaviventris</i>	Yellow-bellied Sheath-tail-bat	Vulnerable	-
<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	Vulnerable	-
<i>Stagonopleura guttata</i>	Diamond Firetail	Vulnerable	-
<i>Tyto novaehollandiae</i>	Masked Owl	Vulnerable	-
<i>Tyto tenebricosa</i>	Sooty Owl	Vulnerable	-
<i>Varanus rosenbergi</i>	Rosenberg's Goanna	Vulnerable	-

Scientific Name	Common Name	Status under TSC Act	Status under EPBC Act
<i>Vespadelus troughtoni</i>	Eastern Cave Bat	Vulnerable	-

Migratory Species

A search of the EPBC Protected Matters Search Tool identified the potential for 13 migratory fauna species to occur within 10km of the Proposal. The results of the EPBC Act Protected Matters Search are outlined below.

Table 14 Migratory species identified from database search

Scientific Name	Common Name	Status under EPBC Act	Type of Presence
<i>Apus pacificus</i>	Fork-tailed Swift	-	Species or species habitat may occur within area
<i>Ardea alba</i>	Great Egret	-	Species or species habitat may occur within area
<i>Ardea ibis</i>	Cattle Egret	-	Species or species habitat may occur within area
<i>Gallinago hardwickii</i>	Latham's Snipe	-	Species or species habitat may occur within area
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	-	Species or species habitat may occur within area
<i>Hirundapus caudacutus</i>	White-throated Needletail	-	Species or species habitat known to occur within area
<i>Leipoa ocellata</i>	Malleefowl	Vulnerable	Species or species habitat may occur within area
<i>Merops ornatus</i>	Rainbow Bee-eater	-	Species or species habitat may occur within area
<i>Monarchmelanopsis</i>	Black-faced Monarch	-	Species or species habitat may occur within area

Scientific Name	Common Name	Status under EPBC Act	Type of Presence
<i>Myiagracyanoleuca</i>	Satin Flycatcher	-	Breeding likely to occur within area
<i>Rhipidururufifrons</i>	Rufous Fantail	-	Breeding may occur within area
<i>Rostratulabenghalensis (sensu lato)</i>	Painted Snipe	Vulnerable	Species or species habitat may occur within area
<i>Xanthomyzaphrygia</i>	Regent Honeyeater	Endangered	Species or species habitat likely to occur within area

Fauna Habitat

The preliminary assessment involved only broad fauna habitat observations and did not include targeted surveys or habitat searches.

A large proportion of the study area supports intact woodland vegetation, which is continuous with vegetation of Bylong State Forest (to the north) and Goulburn River National Park (to the east). Woodland vegetation in the study area offers a variety of habitat resources; canopy trees and tall shrubs provide nesting, roosting and sheltering habitat to birds and arboreal mammals; an abundance of myrtaceous species provides foraging habitat (nectar, pollen, eucalypt sap and acacia gum) to birds and arboreal mammals and ground layer features such as grasses, leaf litter and woody debris provide foraging and sheltering habitat to terrestrial mammals, birds and reptiles. Large conglomerate boulders are scattered throughout the study area. These rocky features and associated slabs, cracks and crevices offer potential foraging and sheltering habitat to reptiles and small mammals. Few hollow-bearing trees were observed in the study area, limiting available nesting habitat for hollow-dependent fauna species.

Open grassy areas of the study area, some of which are currently grazed by cattle, were generally cleared of native vegetation with the exception of canopy trees that have been retained. Several wombat burrows were located within open grassy areas.

Aquatic Habitat

A lack of permanent water sources within the study area limits available habitat for amphibians and other fauna species that favour permanent water, with the exception of a dam located in cleared land at approximately rail kilometerage 381.750km. Bylong River flows east in proximity to the study area and supports aquatic and riparian habitats. Bylong River is located south of the existing Ulan Line and Bylong Valley Way and is within 50 metres of the study area at its closest point at approximately rail kilometerage 380 km.

Bylong River is likely to be classified as Class 2 (Moderate Fish Habitat) or, Class 3 (Minimal Fish Habitat) (Fairfull and Witheridge 2003).

POTENTIAL IMPACTS

Activities associated with the Proposal that may adversely impact ecological values within and in proximity to the study area include:

- Vegetation clearing and grubbing and stripping of topsoil;

- Earthworks, drainage and utility installation;
- Rail construction within rail corridor.

Potential impacts that may result from the activities include:

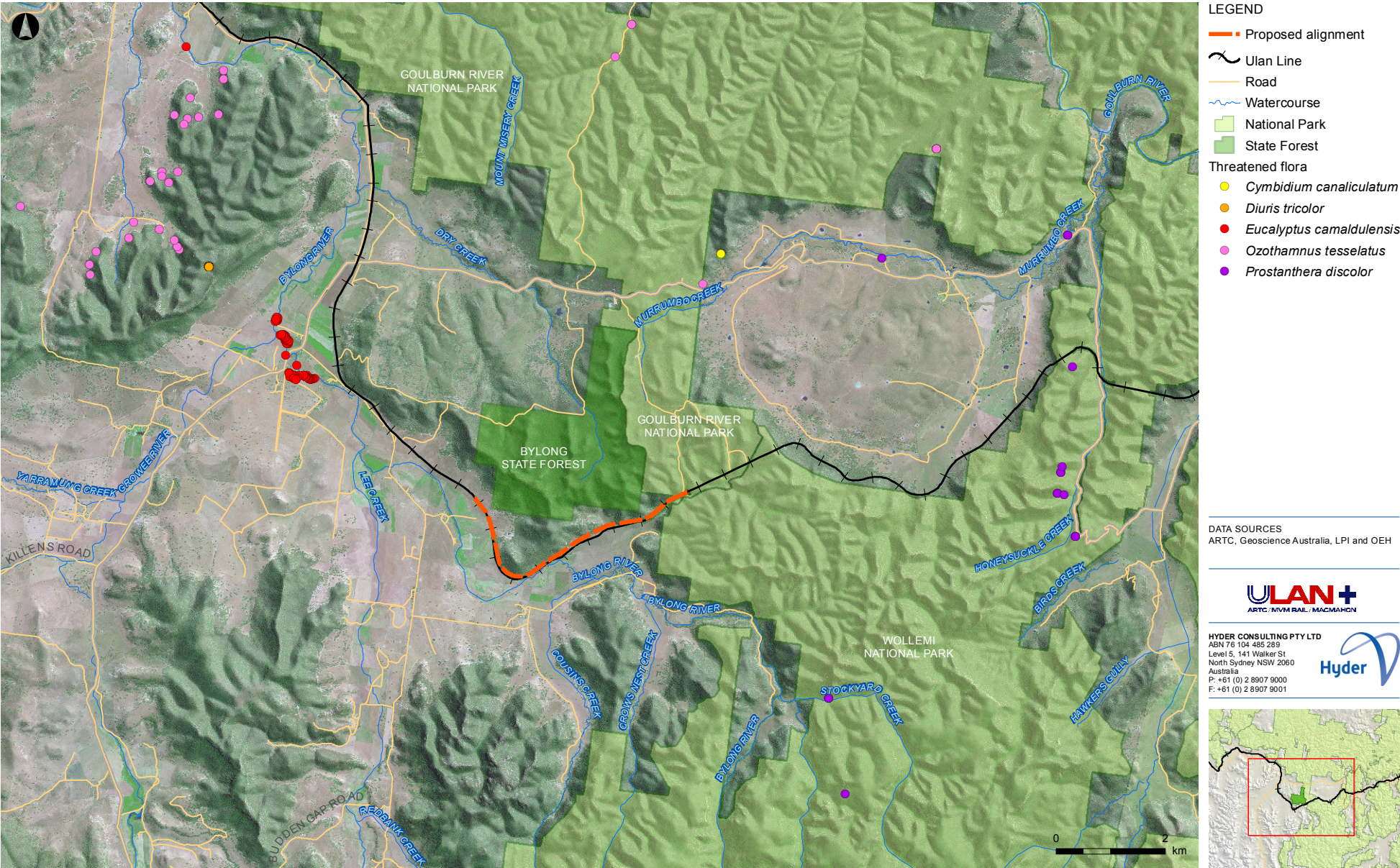
- Loss of native vegetation, including Endangered Ecological Communities and threatened flora species;
- Spread of noxious weeds via plant and contaminated fill;
- Loss of fauna habitat including that of threatened and migratory species;
- Alteration and degradation of aquatic habitats;
- Edge effects and weed invasion of vegetation communities in proximity to the Proposal.

FURTHER ASSESSMENT

A detailed flora and fauna assessment is recommended to assess the potential impacts of the proposed works in accordance with relevant State and Commonwealth legislation. The assessment would take into account the *Draft Guidelines for Threatened Species Assessment (DEC and DPI, 2005)*, *Threatened Biodiversity Survey and Assessment* and *Guidelines for Developments and Activities (DEC, 2004)* and would include the following:

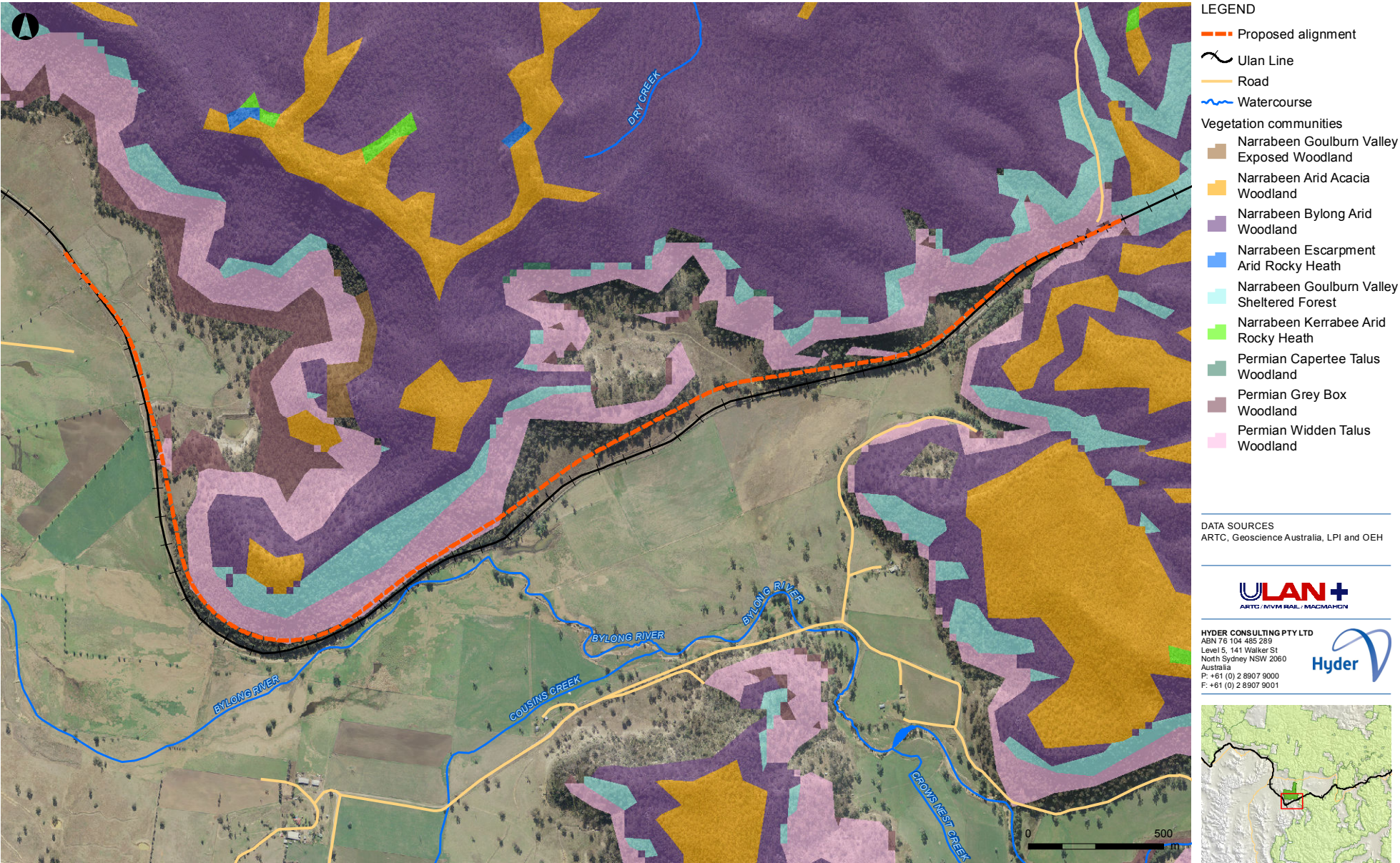
- A desktop review of databases, reports, aerial photographs and vegetation and habitat mapping relevant to the study area;
- Description of the existing environment, including native and exotic plant species, vegetation communities, fauna species and habitats;
- Undertake targeted flora and fauna survey within and adjacent to the study area for threatened and migratory entities listed under the TSC Act and/or EPBC Act;
- Identification of threatened species, populations or their habitats, Endangered Ecological Communities and/or critical habitat,
- Assessment of likelihood for threatened species, population and ecological communities to occur within the study area;
- Assessment of potential impacts of the Proposal, including direct, indirect and cumulative impacts;
- Significance assessments for all threatened species, populations and ecological communities in accordance with *Section 5A of the EP&A Act*; and
- Recommendations for mitigating the Proposal impacts using the hierarchical approach of avoid, safeguard and compensate.

Figure 4 – Threatened flora species in the locality (OEH 2012)



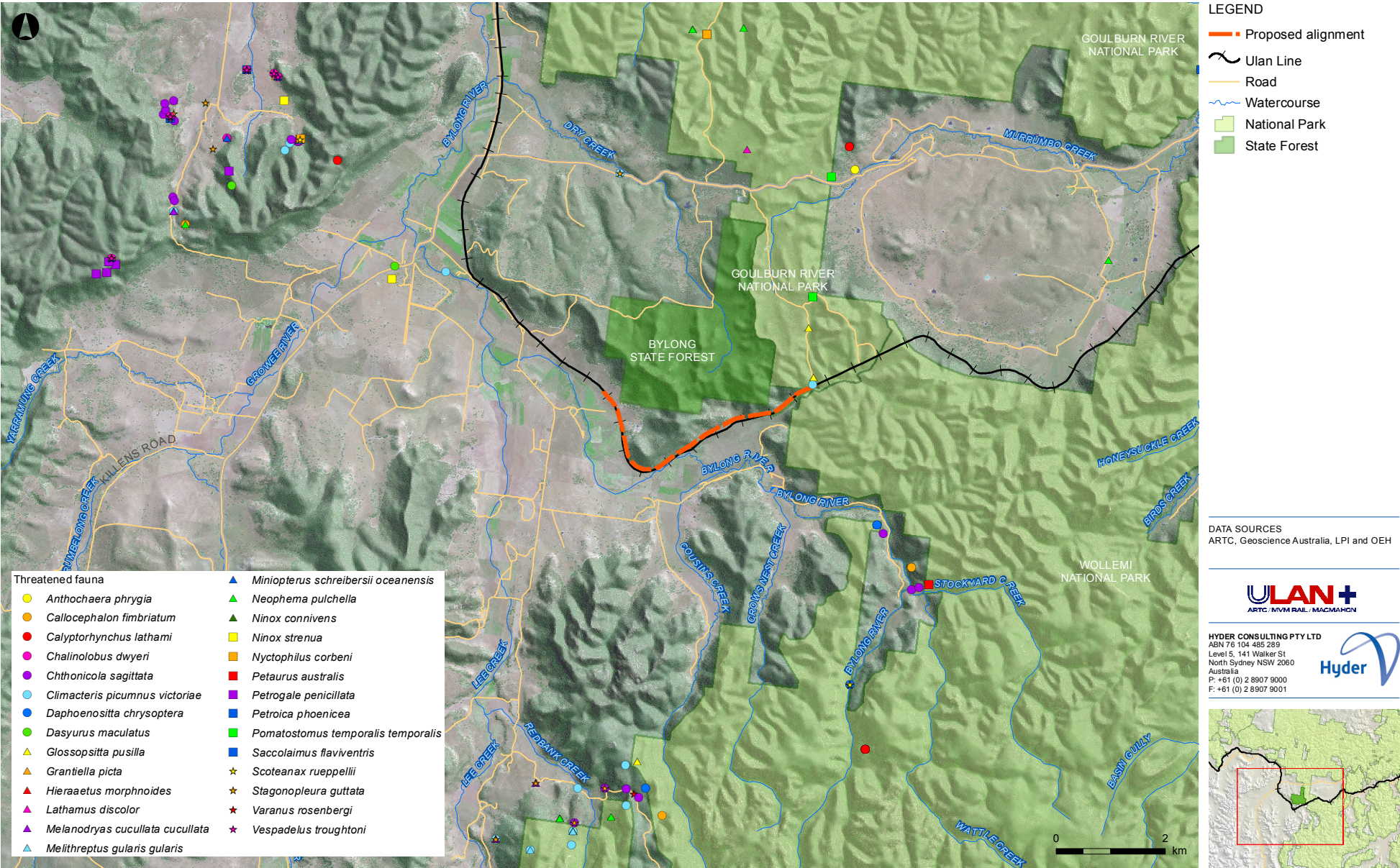
Bylong East Duplication Preliminary Environmental Assessment

Figure 5 - Vegetation communities in the locality (Bell 1998)



Bylong East Duplication Preliminary Environmental Assessment

Figure 6 – Threatened fauna species in the locality (OEH 2012)



Bylong East Duplication Preliminary Environmental Assessment

4.1.2 ABORIGINAL HERITAGE

Linear infrastructure projects, which require a substantial amount of earthworks, have the potential to impact on archaeological items of aboriginal and cultural heritage value, especially where it results in ground surface disturbance where limited historic disturbance has occurred.

EXISTING ENVIRONMENT

A preliminary search of the Aboriginal Heritage Information Management System (AHIMS) undertaken in September 2012 identified no records of Aboriginal sites (Aboriginal objects or declared Aboriginal places) within proximity of the study area (Appendix B).

Further assessment of the existing environment and cultural history of the Proposal area will be undertaken in the EIS.

POTENTIAL IMPACTS

The existing rail corridor and surrounding land use has been substantially modified and disturbed by rail infrastructure, railway operations and agricultural activities, however the Proposal area supports undisturbed woodland with a grassy understory and woodland with a shrubby understory. This woodland vegetation within the Proposal area may require clearing and potential interference with unknown items of Aboriginal heritage.

The AHIMS search is not generally conclusive as to the potential level of impact which may result as the location of potential archaeological deposits (PADs) and or other indigenous sites/objects, and thus sites and places may be unknown.

FURTHER ASSESSMENT

As part of the environmental assessment, an Aboriginal heritage survey and assessment would be conducted. The assessment would include detailed site surveys and comprehensive consultation with registered local Aboriginal groups to determine the significance of potential impacts and where necessary provide appropriate mitigation and management measures. The assessment will be undertaken in accordance with NSW Government guidelines including the *OEH Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)* and *OEH Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DECCW, 2005)* and involve the following key tasks:

- Identifying and mapping locally known Aboriginal and historical heritage sites and constraints through a search of the heritage registers and databases;
- Undertake a literature review which would include all other Aboriginal and historical archaeological assessments, which are relevant to the Proposal;
- Identify Aboriginal stakeholders with an interest in the Proposal;
- Conduct field surveys of the Proposal by a suitably qualified Archaeologist and representative/s of the registered Aboriginal stakeholders; and
- Determine the significance of locally known and or identified Aboriginal relics, objects or places through effective consultation with the Aboriginal community in determining and assessing impacts with recommended mitigation measures.

The Aboriginal people are the primary determinants of cultural heritage and thus the cultural significance of the Proposal area will be sought from registered Aboriginal stakeholders.

The construction of the Proposal involves bulk earthworks, which may result in significant soil disturbance. There is the potential for these soils to be mobilised in stormwater runoff during high rainfall events and be deposited in neighbouring waterways.

There is also the potential for construction activities that involve excavations below natural ground level to encounter and impact on groundwater.

EXISTING ENVIRONMENT

The Proposal is located upon the margins of the flat, alluvial floodplains associated with Bylong River, within the Bylong Valley.

A review of the Soil Landscape of the Singleton and Newcastle 1:250,000 Sheets (Kovac and Lawrie 1991) found that the geological soil profile of the corridor is characterised by Solodic soils within the Benjang group deposit, comprising Permian shale, sandstone and conglomerates on rounded rolling hills with some benches and cliffs (SSLS 1991).

Solodic soils include red, yellow and brown solodic soils on imperfectly drained benched slopes, with Brown Podzolic soils on upper slopes and non-calcic Brown soils on lower parts of flatter slopes. Siliceous Sands are found on midslopes on quartz sandstone. Yellow solodic soils are most common in the maximum lower slopes and depressions in the west and centre of the region. Surface horizons of yellow solodics are hardsetting and top soils have a sandy loam to loam fine sandy texture. They may be structureless (massive) or have a weakly to moderately developed structure. The soils have a neutral to alkaline soil reaction trend and have a low to moderate fertility mainly used for unimproved pastures. Gully erosion is common in yellow solodic soils (Kovac and Lawrie 1991).

A search of the NSW Natural Resource Atlas database of groundwater works maintained by the Department of Infrastructure, Planning and Natural Resources was undertaken to gather information pertaining to bore water extraction from the Hunter River Basin. Ten boreholes were located within 400m of the Proposal either side of the rail corridor. The depth of bores varied between 3.70m and 18.00m with a minimum depth of 2.40m.

An Acid Sulphate Soil (ASS) desktop search via the Australian Soil Resource Information System was conducted in September 2012. There is low probability of ASS occurring within the Bylong area. ASS generally occurs in low lying areas in and around coastal swamps, estuaries, and other coastal water bodies. Acid can run off these soils during rainfall, scalding vegetation and killing aquatic fauna. ASS can also react with concrete and steel infrastructure.

POTENTIAL IMPACTS

The majority of the proposed works would be located on the Upside of the existing rail corridor where the natural soil landscape has not been previously disturbed. Earthworks and piling operations required to construct the new track formation would result in exposure of soils within the Proposal area, which could result in sediment-laden runoff entering local waterways.

Temporary and or permanent stockpiles within the Proposal area could also become an erosion hazard as there is potential for erosion to occur from uncovered stockpiles created during the earthworks or mobilisation of fill material, if not properly managed.

The potential therefore exists, especially during heavy rainfall events and while undertaking construction activities that result in significant soil disturbance, for the mobilisation of sediment and other pollutants in stormwater runoff and the deposition of this sediment in

surrounding drainage systems. Sedimentation of waterways and surface water bodies can result in a negative impact on the water quality of these systems and their associated aquatic life, while also reducing their capacity and subsequently impacting on irrigation and livestock usage.

Mapping (MWRC 2011) indicates that the Proposal overlays an area of low groundwater vulnerability however it is surrounded by groundwater vulnerable area. The eastern portion of the Proposal area is also situated over this groundwater vulnerable area.

Minor vegetation clearing may also be required to undertake the geotechnical investigation however, the volume and type of vegetation which may be cleared is unknown at this early stage and will be further discussed during the EIS process.

FURTHER ASSESSMENT

A detailed geotechnical investigation would be undertaken to inform both the environmental assessment as well as the design and would include the following:

- Excavation of test pits and the drilling of boreholes at regular intervals and appropriate locations along the alignment of the Proposal. Geotechnical information will be captured at each sample site including descriptions of:
 - Subsurface conditions at the site, including depth to groundwater;
 - Physical and chemical characteristics of geology and soils including levels of salinity, erodibility and presence of acid sulphate soils;
 - Subgrade conditions along the proposed alignment (i.e. depths of topsoil);
 - Existing formation composition and layering;
 - Design California Bearing Ratio (CBR) values for existing subgrade conditions;
 - Site drainage;
 - Excavation conditions, including along the proposed signalling cable route; and
 - Suitability of materials for re-use as controlled filling on site.
- Structural and earthwork recommendations to accommodate the unique ground characteristics of the Proposal site including minimising impacts on natural groundwater movement;
- Geotechnical Design parameters for site drainage including the proposed culvert extensions and any required bridges. Currently the viability of bridges is dependent on the cut/fill balance and cost. If a bridge is required, this will be further documented in the EIS; and
- Mitigation measures to manage the following soil and geotechnical related aspects during construction:
 - Soil instability, erosion and sedimentation;
 - Identification and management of Acid Sulphate Soils or Potential Acid Sulphate Soils (in the unlikely event that these are encountered); and
 - Dewatering of works and the appropriate capture, treatment (if necessary) and discharge of groundwater where the interception of groundwater is unavoidable.

In addition to the above, information will be obtained from the projects professional team with experience in erosion and sediment control (hydrologists, civil engineers, construction superintendents and environmental scientists) to identify other appropriate and practical

management and mitigation measures that can be implemented during the construction phase. This information will ultimately be captured within a Soils and Water Management Plan that would be prepared prior to the commencement of construction in accordance with *Managing Urban Stormwater: Soils and Construction (Landcom) Guidelines* as well as other relevant industry standards. In addition, consideration as to whether sediment basins are required to manage surface water flow and quality during the works shall be detailed within the site Soil and Water Management Plan (see Section 4.1.3 for further detail).

4.1.4 LAND USE AND PROPERTY

EXISTING ENVIRONMENT

The Proposal alignment is located adjacent to the existing rail corridor which is land owned by Country Rail Infrastructure Authority (CRIA) and leased to ARTC. The existing rail corridor is zoned Infrastructure within the area covered by the Mid-Western LEP however because the Proposal is located outside the existing rail corridor, it falls within RU1 Primary Production zoned land under the Mid-Western LEP (MWRLEP 2012).

In addition to clusters of properties within Bylong township, there are at least 3 rural residential properties located within 700m of the existing track (Figure 7).

POTENTIAL IMPACTS

As the Proposal alignment is intended to be located up to a maximum of approximately 60 metres on the Upside of the existing rail corridor, it is likely that land adjoining the existing rail corridor will need to be permanently acquired and temporarily leased to accommodate the new rail line and associated earthworks as well as access tracks, drainage improvement works and ancillary areas. Land that is permanently required to accommodate the Proposal would need to be acquired and incorporated into the rail corridor through a land acquisition process that will involve in-depth consultation with the affected landowners. The table below outlines the approximate acquisition area required per lot or parcel of land. Preliminary acquisition plans (Appendix D) are subject to final survey and design approval.

Temporary lease agreements will be entered into with adjacent landowners for the use of land that is temporarily required during the construction phase.

Table 15 Lot Identification for permanent acquisition

Lot/DP	Total Area of Parcel	Approximate acquisition area required for the Proposal	Property Owner
60/755420	45.800ha	0.457ha	Brown & Others
59/755420	15.222ha	2.925ha	Brown & Others
Road Corridor	-	0.674ha	State of New South Wales
10/755420	99.476ha	10.701ha	Andrews
09/755420	47.753ha	6.071ha	Andrews
02/755420	47.753ha	6.851ha	Andrews
01/755420	90.820ha	7.773ha	Andrews

FURTHER ASSESSMENT

Land that is acquired for permanent use (earthworks for access road, new track, signalling infrastructure and drainage) will form part of the 'NSW Deed of Lease' between ARTC and Transport for NSW. Land required for compound areas, stockpile and or access tracks on a temporary basis during construction will be occupied under a 'License Agreement' between ARTC and the landowner and thus will be under the 'management and control of ARTC' (Section 2.3.2 and Section 3.3).

ARTC's intention is to acquire land by way of private treaty and every effort will be made to negotiate an agreement with land owners. If negotiations with the land owners are unsuccessful then ARTC will seek to acquire the land via compulsory processes as outlined under the *Land Acquisition (Just Terms Compensation) Act, 1991*.

A final, permanent acquisition and temporary lease agreement plan will be presented in the EIS, as well as a record of the land owner consultation process that was undertaken.

4.2 OTHER ENVIRONMENTAL ASPECTS

This section details 'other' environmental aspects related to the Proposal that have been identified in the preliminary environmental risk analysis as having a medium to low risk rating. For these medium to low risk environmental aspects, indepth specialist investigation and assessment is unlikely to be required. A qualitative assessment approach will be taken for the assessment of potential impacts from these environmental aspects, with related risks being managed predominantly through the adoption of standard environmental mitigation measures.

4.2.1 NOISE AND VIBRATION

Major rail operations generate noise and vibration, and people living and working near these major transport corridors can be adversely affected.

The impact from railway operations depends on a range of factors including train type and speed, operational practices, wheel maintenance, line maintenance, the extent of natural shielding or noise barriers, the location of certain rail infrastructure such as cross overs and steel bridges and proximity and design of adjoining development.

The assessment of rail related noise and vibration is therefore required to ascertain the levels of operational noise and vibration from the proposed new rail infrastructure, the significance of these levels and whether any noise attenuation structures or management measures are required.

There is also the potential for construction noise, although temporary, to exceed industry guidelines and therefore an assessment of construction noise is also required to inform the appropriate level of management.

EXISTING ENVIRONMENT

The Proposal is located within a rural area with scattered residences and no significant noise sources. The two closest sensitive receivers, both residences, are located approximately 700m west and south of the Proposal at its closest point (see Figure 7).

The Proposal is located within a rural area, which are generally characterised by low background noise levels. Disturbances may occur from the natural environment (insects and domestic/farm animals) as well as rail and road noise.

POTENTIAL IMPACTS

The project is unlikely to result in construction or operational noise and/or vibration impacts due to the distance to the nearest sensitive receivers (approximately 700m). Potential vibration impacts on the nearest sensitive receivers are highly unlikely to occur as a result of blasting during the construction phase due to the distance between the Proposal and the nearest item of European Heritage (5km to Bylong Church of England), however this will be further investigated in the EIS.

There is the potential for operational noise generated by engine noise and train movements to occur. The impacts of noise associated with wheel squeal may occur as the result of the tight curve of the Proposal however, an impact on receivers is unlikely due to the distance to the nearest sensitive receivers (approximately 700m). This would be addressed in further detail in the EIS to ensure any impacts are minimised.

For reference, the recently completed noise assessment for Nundah Bank Third Track, where the nearest receivers are approximately 700m away, indicated that the project would comply with noise management levels during both the construction and operational phase. This part of the network has significantly higher train numbers than the Bylong East Duplication Proposal, suggesting that the Proposal is likely to result in lower operational noise levels at the closest sensitive receivers. The closest residents are not located along a drainage line that intercepts the Proposal and therefore funnelling noise is not anticipated.

FURTHER ASSESSMENT

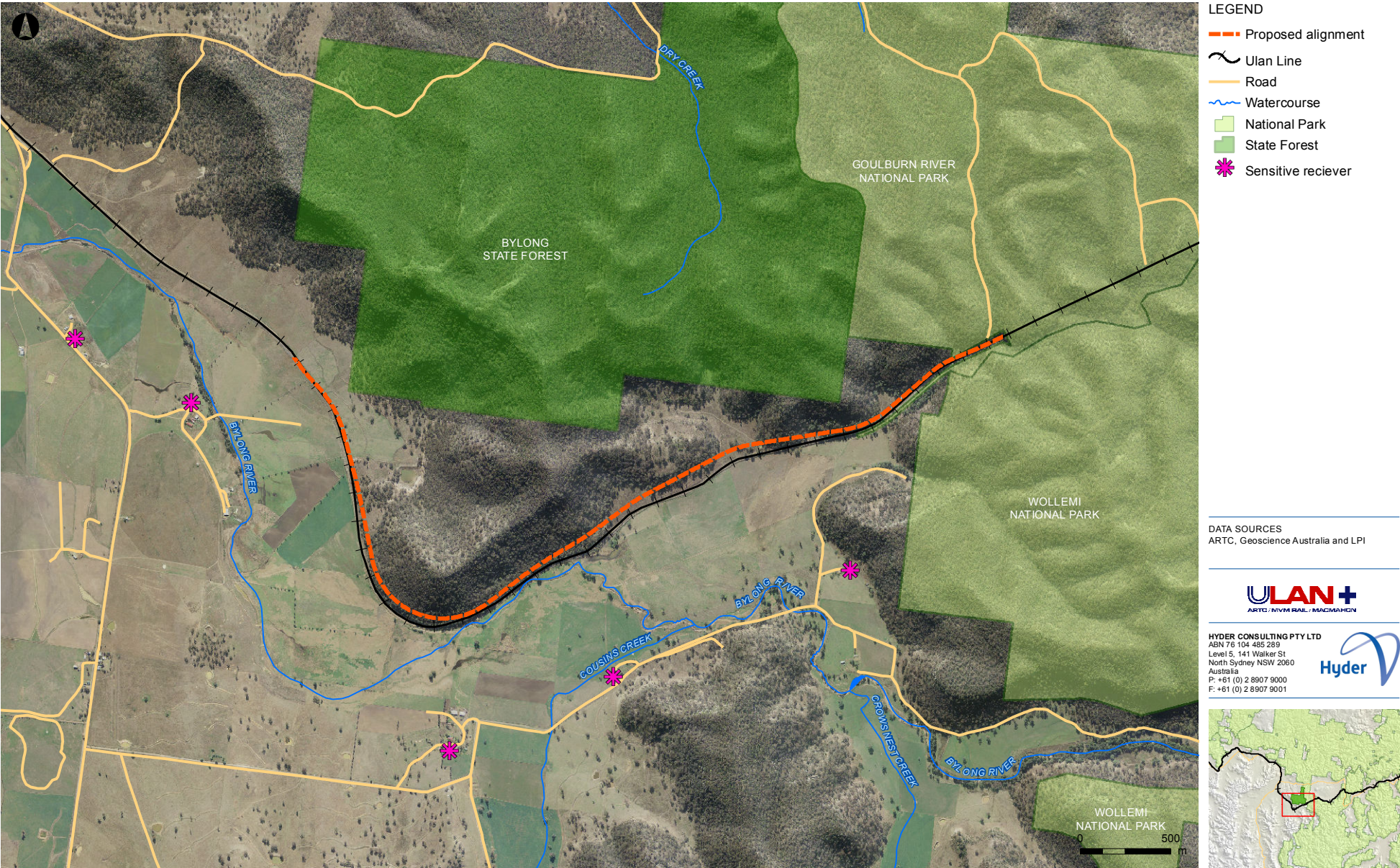
In order to validate the assumptions made above, a detailed noise and vibration assessment will be undertaken by an appropriately qualified and experienced specialist consultant and would assess the potential noise and vibration impacts of the Proposal on sensitive receivers during both construction and operation. The noise and vibration assessment would include the following key tasks:

- Initial literature review to identify key environmental noise and vibration catchment areas and sensitive receivers;
- A site visit to ascertain appropriate noise monitoring locations to undertake unattended monitoring for a period of one week to determine pass by rail noise and vibration levels at the closest receivers;
- Identify the likely key noise and vibration sources during construction and operation and their potential impacts on noise sensitive receivers;
- Include predictive modelling of noise levels for the year of opening and an indicative time in the future based on published data within the Hunter Valley Capacity Strategy;
- Consideration will be given to the potential noise and vibration impacts from the Proposal in isolation and in a cumulative context;
- Identify mitigation measures for those receivers acutely affected by the Proposal, and investigate potential in-principle noise and vibration attenuation measures if the assessment suggests that project specific noise goals may be exceeded at certain receivers;
- Identify all reasonable and feasible construction noise management measures in line with the Interim Construction Noise Guideline (DECCW, 2009);
- The assessment would essentially be undertaken in accordance with the recognised standards and guidelines, including the following:
 - *NSW OEH, Draft Rail Infrastructure Noise Guideline (RING), draft Feb 2012;*
 - *DECCW, Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (April 2007);*
 - *DECCW, Industrial Noise Policy (January 2000);*

- *DECCW, Interim Construction Noise Guideline (July 2009);*
- *DECCW, Environmental Noise Management- Assessing Vibration: A Technical Guideline (February 2006); and*
- *DECCW, Assessing Vibration: a Technical Guideline (2006).*

The Rail Infrastructure Noise Guideline (RING) will replace the Interim Guideline for Assessing Noise from Rail Infrastructure projects (IGNARIP) and was released in draft form for consultation in February 2012. If RING comes into effect prior to undertaking the Noise and Vibration Assessment, the assessment will be undertaken in accordance with RING. If, however RING comes into effect after the Noise and Vibration Assessment for the EIS is completed, the assessment will be undertaken in accordance with IGNARIP.

Figure 7 – Closest sensitive receivers



Bylong East Duplication Preliminary Environmental Assessment

4.2.2 EUROPEAN HERITAGE

Rail infrastructure is often some of the oldest transport infrastructure and as a result is often associated with other built structures or items that are significant and therefore have potential heritage value.

EXISTING ENVIRONMENT

A database search was undertaken of the following sources to identify non-indigenous heritage items potentially occurring within or in proximity to the Proposal. The following sources were searched:

- NSW Office of Environment and Heritage State Inventory;
- Department of Sustainability, Environment, Water, Population and Communities Australian Heritage Database;
- The Mid-Western Regional Local Environmental Plan 2012; and
- Department of Sustainability, Environment, Water, Population and Communities EPBC Act Protected Matters Report.

State significant heritage items

There are 13 recorded sites listed by the Heritage Council under the NSW Heritage Act (State Heritage Register and the Australian Heritage Places Inventory) that occur in the Mid-Western LGA, none of which are located within 1 kilometre of the Proposal site (see Table 16). The closest recorded site to the Proposal area is the Lue Railway Station Group which is approximately 36km south west of the Proposal site. These searches were conducted in September 2012.

Table 16 NSW Heritage Act items within the Mid-Western Regional LGA (source: www.heritage.nsw.gov.au)

Item Name (sort)	Address (sort)	Suburb (sort)	LGA (sort)	Listed Under Heritage Act	Approximate Distance to Proposal
Binnawee Homestead and Outbuildings	111 Lester's Lane	Mudgee	Mid-Western Regional	Yes	55km south west
Bridge View Inn	28-30 Louee Street	Rylstone	Mid-Western Regional	Yes	42km south west
Gold Mining Water Race	Old Hargraves Road	Windeyer	Mid-Western Regional	Yes	-
Gulgong railway bridge over Wialdra Creek	Wallerawang-Gwabegar railway	Gulgong	Mid-Western Regional	Yes	60km west
Gulgong Railway Station and yard group	Wallerawang-Gwabegar railway	Gulgong	Mid-Western Regional	Yes	60km west

Item Name (sort)	Address (sort)	Suburb (sort)	LGA (sort)	Listed Under Heritage Act	Approximate Distance to Proposal
Hobsons Shops Golden West Trading Post	Herbert Street	Gulgong	Mid-Western Regional	Yes	60km west
Lue Railway Station Group	Wallerawang-Gwabegar railway	Lue	Mid-Western Regional	Yes	36km south west
Mudgee Post Office & Quarters	80 Market Street	Mudgee	Mid-Western Regional	Yes	55km south west
Mudgee Railway Station, yard and locomotive yard	Wallerawang-Gwabegar railway	Mudgee	Mid-Western Regional	Yes	55km south west
Mudgee Town Hall	64 Market Street	Mudgee	Mid-Western Regional	Yes	55km south west
Quartz Roasting Pits Complex	10km North	Hill End	Mid-Western Regional	Yes	95km south west
Rylstone Railway Station and yard group	Wallerawang-Gwabegar railway	Rylstone	Mid-Western Regional	Yes	42km south west
St.Mary's Roman Catholic Church, Presbytery Convent & Hall	13 Church Street	Mudgee	Mid-Western Regional	Yes	55km south west

Locally significant heritage items

There are a total of 483 locally significant heritage items listed by the Local Government and State agencies occurring within the Mid-Western Regional Shire. Of these registered sites it is unlikely that any will be impacted by the Proposal. Only one site is located within the Bylong township area and the next closest locally listed site is in Wollar approximately 20km north west of the Proposal.

A full list of statutory items within the Mid-Western Regional Shire has been included in Appendix B.

The Bylong Church of England, listed under the NSW Heritage Act, is located approximately 5 kilometres north-west of the Proposal.

No direct impact is anticipated to occur to these items, however further investigations as part of the EIS shall be undertaken to assess the significance of the potential impact on these heritage items.

National Australian Heritage

A database search of the Department of Sustainability, Environment, Water, Population and Communities Australian Heritage Database, carried out September 2012 yielded 32 items of

significance. Munghorn Gap Nature Reserve is located approximately 30km west of the Proposal area and is therefore unlikely to be impacted by the Proposal.

POTENTIAL IMPACTS

The only identified item of built heritage value that falls within proximity to the Proposal, outside of the disturbance footprint, but close enough to potentially be impacted by vibration from blasting includes:

- Bylong Church of England (located approximately 5km from the Proposal)

During operation, the greatest risk to heritage items is likely to be from vibration caused by the passing of freight trains and ongoing maintenance activities. However, there is no identified heritage items located close enough to the Proposal to have the potential to be impacted by vibration from operational activities.

FURTHER ASSESSMENT

Although highly unlikely, the impact of potential blasting vibration on the closest item of European Heritage will be further investigated in the EIS. If it is confirmed that heritage items will be impacted by blasting vibration then a detailed European (non-indigenous) Heritage Assessment would be undertaken to investigate the potential impacts to European heritage items due to the Proposal. This assessment would include:

- Review of existing data (such as the State Heritage Inventory) for records of known heritage sites and issues;
- An analysis of the potential impacts of the Proposal to the values, settings and integrity of the heritage items and archaeology, including the preparation of statements of heritage impacts and significance assessments taking into account the NSW Heritage Manual (NSW Heritage Office, 1996); and Assessing Heritage Significance Guidelines (NSW Heritage Office, 2001);
- Field investigations of the proposed development footprint and immediate surrounds by a suitably qualified Archaeologist; and
- Preparation of a report assessing the significance of the impacts on known and identified heritage items including recommendations to avoid, minimise or at least mitigate the potential impacts.

4.2.3 TRAFFIC AND TRANSPORT

In order to establish appropriate vehicular access to the rail corridor during the construction phase of the project, it is likely that local Council roads will need to be used. These roads do not always have the appropriate capacity (geometry, load bearing capacity, traffic capacity) to accommodate the construction traffic that is generated during the construction of a major linear infrastructure project such as Bylong East Duplication.

New rail projects that tie into existing rail networks also have the potential to impact on existing rail operations.

EXISTING ENVIRONMENT

The Proposal is located approximately 5.3km south of Bylong Valley Way, the only public road that transects Bylong Valley. Bylong Valley Way provides a sealed link between the Golden Highway at Sandy Hollow and the Castlereagh Highway at Ilford.

The Proposal can be accessed via Upper Bylong Road, a local road, and a four wheel drive access track on the Down side of the existing mainline which runs from the loop at Bylong to

the western portal of the Bylong Tunnel. A new access track will be created on the Down side of the proposed new track when construction works commence.

POTENTIAL IMPACTS

Potential traffic, transport and access related issues during the construction phase of the project include:

- Safety and capacity issues associated with the movement of construction related materials (including imported fill, ballast, personnel etc.) and equipment, including oversized loads by trucks along the regional and local road network;
- Congestion issues caused by construction traffic accessing the construction site from the local road network, exacerbating existing traffic;
- Damage to the local road network from regular use by large, oversized vehicles, for which the local roads may not be appropriately designed for; and
- Disturbance to train operations on the existing rail lines.

Following construction, the operation of the Proposal is not expected to impact local road traffic. Additional permanent access points may however need to be established along the rail corridor for maintenance and operational access.

FURTHER ASSESSMENT

A Traffic, Transport and Access Assessment would be undertaken to identify and fully assess the potential construction related traffic, transport and access impacts, while consideration will also be given to future operational and maintenance access requirements. The assessment would include the following as a minimum:

- Identification of all potential haulage routes and access points that could be used during construction and an assessment of their capacity to accommodate the proposed number, frequency and size of road deliveries proposed;
- Identification of potential “problem areas” within the road network that would require avoidance or where this is not possible, upgrades or temporary traffic management measures to accommodate the construction traffic;
- Requirements for road and/or lane closure and the identification of temporary alternative routes and appropriate notification of road users including signage;
- A dilapidation survey (if required) of Council local roads (before and after construction) focusing on the primary road haulage routes for construction traffic, especially those used for oversized vehicles;
- Reasonable and feasible modifications to road crossings/intersections to facilitate the movement of large construction vehicles, improve safety and to avoid and/or minimise traffic disruptions;
- Demonstration of how construction will be undertaken without impacting on the operation of train services and the integrity of the rail corridor; and
- Development of a practical and robust Traffic Management Plan that covers all aspects of construction vehicle movements to and from the construction site.

The Roads and Maritime Service (RMS); previously RTA, Mid-Western Regional Council and local farmers and land owners, will be consulted during the EIS to identify and assess any other traffic, transport and access related impacts that require assessment and presentation in the EIS.

If it is identified that modifications to RMS roads are required, these will be undertaken in accordance with *RMS (RTA) Guidelines for Traffic Control and Work Sites and Guide to Traffic Generating Developments (RTA, 2002)*. Traffic Control measures will be installed in accordance with *RMS (RTA) Guidelines for Traffic Control at Work Sites*.

Modification of land and the construction of elevated linear infrastructure across natural drainage pathways, as well as within floodplains or flood prone areas, have the potential to alter or exacerbate flooding regimes and/or natural drainage patterns.

EXISTING ENVIRONMENT

Catchment

The Bylong River, part of the Hunter River catchment, lies approximately 14km south west of the Goulburn River and runs parallel with the existing rail corridor on the Down side of the Proposal area.

The Proposal lies within the Hunter- Central Rivers Catchment Management area. The Hunter River drains the largest coastal catchment in NSW, covering approximately 22,000km² (CMA 2012).

Urban and industrial development in the Hunter Valley has impacted on the health of the Hunter catchment in various ways. Reduced water quality and water availability, declining native fish populations, reduced riparian vegetation cover, and stream bank erosion are some of the issues that are currently being managed (CMA 2012).

The Hunter catchment is unique in its diversity and includes the Barrington Top alpine rainforests in the north-west, dissected sandstone of the Great Dividing Range in the south-west, and undulating hills and rich flats of alluvial floodplains to the coastal fringe.

Downstream of the Rouchel Brook confluence, the river heads inland towards Muswellbrook and Denman, where the land begins to flatten out. Just south of Denman is where the Goulburn River joins the Hunter River, connecting it to the western part of the Hunter catchment. The geology in this part of the catchment is characterised by softer rocks of conglomerate, shale, sandstone and coal from the Permian period (245- 286 million years old). Soils in this area are softer, have a higher salt content and are highly erodible (CMA 2006).

Local Drainage

The existing rail corridor runs roughly along the base of a moderately steep hill to the north and flat grazing land to the south. This hill comprises many gullies that collect and transport water through culverts within the existing rail corridor, forming a number of sub-catchments. There are 31 existing culverts located in the Proposal area between 377.180km and 382.300km (Ulan+ 2011), indicative of the large number of drainage lines that traverse the rail corridor.

Flooding

The Bylong East Duplication Proposal area is located on a steep slope north of the Bylong River. The area surrounding the Proposal is not flood-prone land.

POTENTIAL IMPACTS

There is limited potential for the Proposal, once operational, to impact on flooding patterns as the Proposal does not fall within flood prone land. The formation and construction works for the new rail corridor would include drainage improvement infrastructure works. Culverts within the existing rail corridor are to be extended and possibly additional culverts constructed to maintain the existing drainage patterns and improve the overall drainage system that traverses the rail corridor.

During construction, local drainage systems that traverse the rail corridor will be temporarily disturbed while they are extended and in some cases upgraded. During this period, parts of the Proposal in proximity to drainage lines and the Bylong River will be at risk of localised flooding and damage, including erosion and sedimentation.

FURTHER ASSESSMENT

A hydrology and flooding investigation would be undertaken during the design and environmental assessment process and would assess the potential impact of the Proposal on hydrological and flooding patterns. This would include the following:

- Review of the existing local council Floodplain Management Plans and any available existing flood studies for the area covered by the Proposal;
- Determine the extent of encroachment of the Proposal into potential floodway areas and estimate potential impacts due to the encroachment;
- Obtain photogrammetric, topological data (survey, ALS) to analyse and determine catchment characteristics for modelling purposes;
- Obtain survey cross sections of the waterways and rail embankment. Cross sections of the waterway will be taken both upstream and downstream of the existing hydraulic structures (bridges) including detailed survey of existing hydraulic structures;
- Undertake catchment analysis (hydrologic assessment) to estimate peak runoff at the proposed and existing drainage crossings using Probabilistic Rational Method (PRM) in accordance with Book IV of AR&R (2001) for peak flow estimation of XP-RATFS software;
- Comment on the potential hydrological and hydraulic impact of the Proposal on adjacent properties and land during both construction (temporary) and operational (permanent);
- Determine any requirements for flood impact mitigation measures that need to be incorporated into the design and construction of the permanent infrastructure as well as temporary measures required during the construction phase;
- Provide recommendations on the likely requirements for any further investigations that result from the above assessment.

4.2.5 SOCIAL AND ECONOMIC IMPACT

As the Proposal is located in a rural area dominated by agricultural land uses, it is unlikely that the Proposal will have both construction and operational impacts on the local community and businesses.

EXISTING ENVIRONMENT

The Proposal will be supporting the economy and ensure continued economic development of the coal industry in the region. The Proposal will assist in the productivity and competitiveness of NSW, at a national and regional level, through the provisions of efficient transportation of coal on the Hunter Valley Coal Line.

The Proposal is located in the Mid-Western Regional LGA and characterised by agriculture, viticulture, coal mining, retail and tourism, with tourism being particularly important to the regional economy (RDA 2011).

The Mid-Western Region covers 8752.8km² and is located about 260km north north-west of Sydney and 150km north-west of Newcastle. Mid-Western Regional Shire is bounded by Warrumbungle Shire and Upper Hunter Shire in the north, Muswellbrook Shire and Singleton Council in the east, Lithgow City, the Bathurst Regional Council area and Cabonne Council in the south and Wellington Council area in the west. The original inhabitants of the Mid-Western Regional area were the Wiradjuri Aboriginal people (Dubbo City Council 2012).

The Mid-Western Regional Shire provides employment for a skilled labour force of over 9000 people and also provides a broad range of businesses and services to support the residents (RDA 2011).

The estimated population for Mid-Western Regional Shire in 2011 was 22,318 (ABS, 2011) and is expected to grow to approximately 26,220 by 2031 with most of this growth in Mudgee, the largest town in the region and district centre (Elton Consulting 2012).

Mid-Western Regional Shire consists of four larger towns, Mudgee, Gulgong, Rylstone and Kandos, as well as a number of outlying rural communities including Bylong, Ulan, Birriwa and Hargraves.

POTENTIAL IMPACTS

Some potential adverse socio-economic impacts associated with the Proposal would be the disruptions caused by construction traffic making use of the local road network, dust generation and deposition on neighbouring land, and accessibility issues to residents, primarily during the construction phase and especially if local public access routes are blocked and traffic diversion is required. There is also the potential for increased noise impacts in some areas during both construction and operation of the Proposal, which could be perceived as a nuisance to local residents and other local business enterprises.

The Proposal is anticipated to generate direct employment opportunities and moderate economic contribution to the surrounding community during construction. The Proposal may have significant long-term economic benefits associated with the reduction of unnecessary transport costs, damage to roads, efficient transport of raw materials and the efficient and cost effective supply of energy to communities and businesses throughout NSW through the efficient delivery of coal to domestic power stations. The Proposal will assist in the productivity and competitiveness of NSW, at a national and regional level, through the provisions of efficient transportation of coal on the Hunter Valley Coal Line.

FURTHER ASSESSMENT

Further consideration will be given during the environmental assessment process to potential adverse socio-economic impacts on the local community and businesses, related to both the construction and operation of the Proposal. This will be achieved by:

- Community and stakeholder consultation to identify both construction and operational impacts related to the Proposal;
- Identification of controls in consultation with the local community and stakeholders that could be incorporated into the design, operation and construction management that would avoid, minimise or at least mitigate identified negative socio-economic impacts;
- Assessment of impacts on the local community relating to noise and vibration and traffic, transport and access through a thorough Traffic Impact Assessment and a Noise and Vibration Impact Assessment (see Section 4.2.3 and Section 4.2.1);
- Assessment of impacts on the Aboriginal and built heritage value of the local area both through specialist investigations and consultation with relevant Aboriginal and other heritage stakeholders (see Section 4.1.2 and 4.2.2);
- Appropriate management of the land acquisition process, where it is identified that adjacent land is required, outside the existing rail corridor, to accommodate the Proposal (see Section 2.3.2 and Section 4.1.4); and
- Identifying good construction management practices and environmental controls to minimise fugitive dust.

Failure to identify contaminated soils or materials, and manage and dispose of contaminated materials and waste appropriately, can result in negative impacts on the receiving environment.

EXISTING ENVIRONMENT

A search of the DECCW (now OEH) Contaminated Land Record was conducted on 30 August 2012 (Appendix A) to determine whether any contaminated sites were present in the Proposal area. There was only one area of concern in the Mid-Western Regional Council area; the Mudgee Mobil Depot located on the corner of Inglis Street and Douro Street in Mudgee. This site is located approximately 56km south west of the Bylong East Duplication project and will therefore not be impacted by the Proposal.

A search of the ARTC Contaminated Land Database was also conducted on 31 August 2012 to determine whether any contaminated sites were present in the Proposal area. There were no contaminated site records near the Bylong East Duplication Project (377-382km).

POTENTIAL IMPACTS

There is potential for residual contaminants to occur in railway ballast materials and soils within and adjacent to the rail corridor from historic railway operations and maintenance activities.

As the Proposal would require the realignment of a section of the rail line to the north of the existing main line, there is the potential for disturbance to unknown contaminated sites to occur. Potential contaminants from historical and surrounding land uses could include pesticides, hydrocarbons and asbestos cement pipes for irrigation.

Contact with contaminated soil and/or materials poses a health risk to those directly exposed as well as having a potential wider affect if the contaminant is spread. Contamination entering waterways can pose a significant threat to aquatic ecology, water quality as well as livestock and the wider community if used to irrigate agricultural land. It is an offence under the PEOA Act to cause contamination or spread contaminated material.

Waste material will also be generated during construction of the Proposal and may include:

- Excess and unsuitable (for construction) spoil;
- Vegetation;
- Waste oils and liquids from construction machinery and equipment;
- General construction waste e.g. steel, concrete (from wash down areas), packaging (including plastic and paper) and wood; and
- Contaminated material, which may occur from hydrocarbon spillages.

Failure to appropriately classify, store, manage, transport and dispose of waste can result in negative environmental impacts as well as severe penalties.

FURTHER ASSESSMENT

As the likelihood of encountering unknown contaminated land, during the construction of the Proposal to the north of the existing rail corridor is low, it is considered acceptable to adopt a precautionary approach to managing potential contamination issues, which will be further discussed in the EIS.

Minimal quantities of hazardous materials such as chemicals and fuels will be stored and used on-site during the construction process. Appropriate storage and management

measures will be identified in site specific Environmental Management Plans and will be implemented on site to reduce the risk of environmental impacts from hazardous materials and chemicals.

Once the full disturbance footprint of the project has been ascertained, further investigations will however be undertaken to identify any additional known or potential areas of contamination both within and outside of the rail corridor, as part of the environmental assessment process, as follows:

- Further review of information on the Proposal site and surrounds including various contaminated land databases as well as previous studies of the area, including Council records, to identify areas of concern and or the need for remediation of contaminated land;
- Visual assessment of the rail corridor to identify areas of potential or existing contamination;
- Identify the need for any further contaminated land investigations requiring soil sampling, testing and analysis;
- If any contamination is identified then consideration will be given in consultation with OEH and the EPA on the need for the preparation and implementation of a Remedial Action Plan in accordance with relevant EPA/OEH Guidelines or for a removal and disposal plan to an appropriate, registered landfill site.

Any material to be removed off-site must be classified according to the *Waste Classification Guidelines* (the chemical assessment in Step 5) and disposed of accordingly. If the material is to be re-used, then it must meet the requirements of the relevant *Resource Recovery Exemption*, OEH.

4.2.7 AIR QUALITY

Construction activities that involve bulk earthworks (soil disturbance) have the potential to result in short term negative impacts on local air quality as a result of windblown dust and fine particulate matter, as well as from emissions from construction machinery. There is also the potential for longer term impacts on local air quality as a result of emissions from train locomotives. This is due to the possible increase in freight trains that traverse the area.

EXISTING ENVIRONMENT

Air quality within the vicinity of the Proposal is typical of a rural environment dominated by grazing lands.

No air quality monitoring is currently being undertaken near the Proposal site however, as shown in the Upper Hunter Air Quality Monitoring Network Interim performance report (December 2010-August 2011) (UHAQM 2011), monitoring of regional air quality by OEH using the Regional Air Quality Index (RAQI) shows that the recorded pollutants for the Muswellbrook region are 'good', between 34-66 parts per hundred million (pphm). The AQI is based on measured concentrations of ozone, carbon monoxide, sulphur dioxide, nitrogen dioxide and air particles.

Monitoring results for Muswellbrook were not completed for a full year to achieve an accurate average. From this incomplete data set, daily average dust particles (PM10) levels at Muswellbrook Central were below the dust particle concentration (50ug/m3) benchmark throughout the reporting period.

Assuming the region surrounding the Proposal area has similar or less significant recorded pollutants than the Muswellbrook data, and taking into account the significant distance

between Muswellbrook and the Proposal (70 kilometres), no significant health impacts are expected in the Proposal area.

POTENTIAL IMPACTS

Potential air quality impacts may occur during the Proposal's construction and operation. During construction/upgrade of the railway line, the main potential impacts on air quality would be dust generated during earthworks, exhaust emissions from diesel powered equipment and vehicles transporting materials to and from the project site. Although, the degree of impact would depend on the level of activity being undertaken at any given time and the current weather condition's prevailing at the time.

During operation, exhaust emissions from diesel locomotives and the fugitive dust emissions from locomotive loads, have the potential for minor impacts on local air quality due to the future growth in rail traffic.

FURTHER ASSESSMENT

Construction dust emissions would be controlled through the application of standard mitigation measures on site.

A qualitative desktop air quality assessment would be undertaken as follows:

- Review of past studies and relevant database searches to establish existing air quality and meteorological conditions of the region;
- Identification of all potential sources of air pollutants during both the construction and operation of the Proposal;
- The identification of receptors that may be sensitive to changes in air quality and/or will be the most effected by dust deposition;
- Qualitative assessment of construction and operational impacts on air quality from the Proposal on the basis of proposed activities, meteorological conditions, receptor locations and any previous air quality assessments;
- Greenhouse Gas Assessment defined by the Greenhouse Gas Protocol taking into account the Australian Greenhouse Office Factors and Methods Workbook (AGO 2006) and the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC, 2005);
- Identification and development of appropriate mitigation, monitoring and management measures; and
- A pilot particulate monitoring program (ppmp) has recently been undertaken by ARTC in an effort to reduce operational coal dust emissions from locomotive loads. A review of this ppmp report shall be undertaken as part of the EIS and any potential operational controls to reduce fugitive coal dust emissions will be considered.

4.2.8 LANDSCAPE AND VISUAL AMENITY

EXISTING ENVIRONMENT

The visual surrounds of the Proposal area are characterised by expanses of open rural land on the Down side of the existing track and forested rural land on the Up side. Coal trains travelling along the existing track within the rail corridor are a dominant feature in the rural landscape and township of Bylong area.

POTENTIAL IMPACTS

The Proposal will require the construction of a new rail line on the Up side of the existing Main Line, a portion of which will be outside of the existing rail corridor. These works will

require the clearing of relatively narrow strip of native bushland and will therefore have a minor visual impact at the Proposal site. However, due to the rural/remote location of the Proposal and distance from populated areas, with only a few residences in the vicinity, the Proposal is not anticipated to result in a significant visual impact on surrounding landowners or significantly transform the visual amenity of the area.

Temporary potential visual amenity impacts may arise from the construction of the Proposal and would include the presence of the site amenities, construction equipment, moving machinery or plant and temporary stockpiles.

Should night work be required during the scheduled track possessions, artificial lighting would be required to illuminate the rail corridor and this may impact nearby residents.

FURTHER ASSESSMENT

Further consideration will be given during the environmental assessment process to potential adverse visual and amenity impacts on the local community, related to both the construction and operation of the Proposal. This will be achieved by:

- Community and stakeholder consultation to identify both construction and operational visual amenity impacts related to the Proposal;
- Identification of controls in consultation with the local community and stakeholders that could be incorporated into the design, operation and construction management that would avoid, minimise or at least mitigate identified negative visual and amenity impacts.

4.2.9

CLIMATE CHANGE AND GREENHOUSE GASES

Climate change is a change in the average pattern of weather over a long period of time. The Fourth Assessment Report (2007), states global warming is 'unequivocal' and 'most of the observed increases in global-average temperatures since the mid-20th century is very likely due to the observed increase in greenhouse gas concentrations' (The Fourth Assessment Report 2007). Hence, there is overwhelming evidence for human-made global warming.

Greenhouse gases include *carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, a hydrofluorocarbon, a perfluorocarbon*, a prescribed gas (NGER Act 2007). These atmospheric gases contribute to the greenhouse effect by absorbing infrared radiation produced by solar warming of the Earth's surface. Although greenhouse gases occur naturally in the atmosphere, the elevated levels especially of carbon dioxide and methane have been observed in recent decades.

The Australian government introduced a price on carbon on 1 July 2012, which is an incentive for businesses (entities operating large facilities that emit more than 25,000 tonnes of CO₂-e emissions each year) to use or generate renewable energy; reduce energy consumption; implement technologies that will improve energy efficiency; and invest in renewable energy, such as solar and wind (DCCEE 2010).

EXISTING ENVIRONMENT

Australia produces around 1.8% of total world greenhouse gas emissions, which is approximately 28 tonnes of carbon dioxide equivalent per person per year, making Australia among the highest emitters for its population in the world (DCC 2008).

In 2010, Australia's total carbon dioxide emissions were approximately 560,773Gg (Giga-grams) of which 157,435Gg were produced by NSW. In NSW, Transport (including Road, Railway, Domestic Water, Domestic Air and Space and Other Transport Services) accounted

for 5,169Gg. Rail Transport contributed approximately 595Gg of the total transport emissions, which is relatively minor in comparison to other services in NSW. Road transport continues to dominate this Transport sector equating for 2,336Gg emissions. Of the total amount of emissions within NSW, the 'Electricity, Gas and Water Supply' Sector emits the majority of carbon emissions per year in NSW, equating to approximately 60,139Gg (DCCEE 2010).

POTENTIAL IMPACTS

Current contracted coal sources supplying the NSW power stations are declining. The Proposal would enable these power stations to source competitive and reliable coal. Current levels of emissions from these power stations would change only by the difference in transport emissions from this Proposal.

Key sources of greenhouse gas emission during the Proposal's construction phase would include the following:

- Fuel consumption by site construction machinery and site vehicles;
- Fuel consumption during road and rail transportation of materials to and from the construction sites; and
- Embodied emissions associated with the production of substantial quantities of concrete, steel and crushed aggregates for the Proposal's sleepers, rail, ballast and bridges.

Key sources of greenhouse gas emissions during the Proposal's operational phase would include the following:

- Fuel consumed by coal trains; and
- Electricity consumed by signalling, lighting and other trackside infrastructure would result in relatively low greenhouse gas emissions.

FURTHER ASSESSMENT

The Environmental Assessment would consider various energy and greenhouse elements as defined by the *Greenhouse Gas Protocol, Australian Greenhouse Office Factors and Methods Workbook (AGO, 2006)*, and the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC 2005)*, including:

- An assessment of predicted greenhouse gas emissions, limited to the Proposal during construction of the Project and operation of locomotives;
- Evaluating and reporting on the feasibility of measures to reduce greenhouse emissions associated with the Proposal during construction and operation of locomotives; and
- Potential impacts of climate change on the Proposal, and impacts of the Proposal on climate change.

4.2.10 SUSTAINABILITY

The provision of adequate, reliable and affordable energy is essential to meeting the needs of people in both developed and developing countries. Access to energy remains a critical development need. Therefore, a balance is required between the promotion and co-ordination of the orderly and economic use and development of land, the proper management and development of our resources and the protection of the environment and the effective integration of economic, social and environmental considerations as defined by the requirements of ecologically sustainable development.

EXISTING ENVIRONMENT

Ecologically sustainable development (ESD) describes the principles used to undertake development to maintain and improve the total quality of life, in a way that maintains ecological processes to support current and future generations.

ESD requires a combination of sound planning and an effective and environmentally sensitive approach to design, operations and management of a proposal. The principles of ESD are defined in Schedule 2 of the Environmental Planning and Assessment Regulation (2000):

“The reasons justifying the carrying out of the development or activity in the manner proposed, having regard to biophysical, economic and social considerations, including the following principles of ecologically sustainable development:

- (a) the precautionary principle,*
- (b) inter-generational equality,*
- (c) conservation of biological and ecological integrity,*
- (d) improved valuation, pricing and incentive mechanisms”.*

POTENTIAL IMPACTS

The Proposal involves the formation and construction of track on the Upside of the existing line requiring the clearing of vegetation to establish a new rail line. Under the *Native Vegetation Act 2003 (NCA)*, Section 25(g) provides that any clearing that is, or is part of an activity carried out by a determining authority (ARTC) within the meaning of Part 5.1 of the EP&A Act does not require approval for the clearing of native vegetation.

Despite ARTC's exclusion from requiring an NCA approval, appropriate environmental management controls would be in place to ensure the Proposal is undertaken in an ecologically sustainable manner that complies with the relevant legislation and assessment requirements.

The Proposal will assist in the productivity and competitiveness of NSW, at a national and regional level, through the provisions of efficient transportation of coal.

An integrated approach to planning and managing rail transport is key to enabling ARTC to achieve sustainability and environmental protection. From conception to operation, recommendations are posed to provide safe, efficient and cost-effective rail systems that deliver benefits.

FURTHER ASSESSMENT

The environmental assessment would consider various elements of sustainability including:

- ESD and how the Proposal and its elements address the principles of ESD.
- Environmental impacts for the Proposal shall be reviewed and assessed pursuant to *Part 5.1 of the Environmental Planning and Assessment Act*.
- The principles of the waste hierarchy shall be applied in relation to resource management and life-cycle assessment in relation to the design and materials selection, energy and water demand management, and site management policies and strategies for the Proposal considering both cost and environmental impacts. This process will recognise the inter-relationships between sustainable development and would contribute to minimising the Proposals ecological footprint.

- A broad range of sustainable development factors shall be assessed. Some of these factors include construction dust, visual amenity, changes in flood characteristics of the area, traffic, and noise.
- Regional ESD benefits associated with the Proposal include a shift toward rail freight over current road vehicle transportation, and reducing traffic conflicts and idling. It is a commitment of the Proposal to consult with the community at every stage of the planning process and as such, further discussions would be held with stakeholders and the broader community to develop and refine some of the proposed ESD options.

4.2.11 WASTE MINIMISATION

Failure to collect, separate and store waste or transport and dispose of waste appropriately, can result in negative impacts on the receiving environment.

EXISTING ENVIRONMENT

The existing land use pattern is predominantly rural with forested agricultural land on the Up side of the rail corridor and State forest further north. Negligible amounts of windblown litter and waste generated from general track maintenance and repair activities would be found within the Proposal area.

POTENTIAL IMPACTS

It is expected that the majority of the waste would be generated during the construction phase and limited amounts of waste would be generated during operation of the Proposal.

Waste streams generated during the construction phase will be classified according to the *Waste Classification Guidelines (DECCW, 2009)* and may include general solid waste (non-putrescible) such as glass, plastic, rubber, garden waste, wood waste, paper and cardboard; general solid waste (putrescible) such as food waste, manure, and general waste from litter bins; hazardous such as coal tar or coal tar pitch waste, lead-acid or nickel-cadmium batteries, lead paint waste or containers, having previously contained a substance of Class 1, 3, 4, 5, or 8 within the meaning of the *Transport of Dangerous Goods Code*.

The main operational activities resulting in waste generation would be track maintenance and repair activities (steel and timber), vegetation clearing, and replacement of spare parts (packaging).

FURTHER ASSESSMENT

The relevant requirements of the following Acts, Regulations and Guidelines will be fully investigated in the environmental assessment. Appropriate methods to collect, separate, store, transport and dispose of waste during the construction phase of the project, that are in line with the following statutory requirements, will be considered and reported on in the EIS:

- *Waste Classification Guidelines, Department of Environment and Climate Change and Water (now OEH) (Dec 2009);*
- *Waste Avoidance and Resource Recovery Act, 2001 (NSW);*
- *Protection of the Environment and Operations Act (POEO Act), 1997 (NSW); and*
- *Protection of the Environment Operations (Waste) Regulation 2005 (NSW).*

Ways to avoid, reduce, reuse and recycle waste during the construction of the Proposal will also be considered during the environmental assessment and reported on in the EIS.

4.2.12 CUMULATIVE IMPACTS

The Proposal does not involve a change to the current use of the rail corridor i.e. for the transport of predominantly freight trains. The Proposal will result in a minor increase in the number and frequency of trains that use the line. The Proposal therefore has the potential to result in an increase in noise, vibration and air quality related impacts, although the change is anticipated to be minor. Design and operation mitigation measures and safeguards would be considered to minimise potential cumulative impacts that may arise from the operation of the Proposal.

Due to the short term and temporary nature of many construction related activities and associated impacts, such as noise and traffic, the cumulative impacts related to the construction phase of the Proposal are predicted to be minimal and will be further considered in the environmental assessment and reported on in the EIS.

5

**Consultation & Stakeholder
Engagement**



This section outlines any consultation (with the community, local councils, other Government agencies) already undertaken and proposed to be carried out for the Proposal.

Stakeholder Consultation

A communications strategy plan is currently being developed to identify key objectives and outcomes of consultation activities with the community, stakeholders and government agencies. A well planned and implemented consultation plan will enable ARTC to build sustainable relationships with various stakeholders.

Community and stakeholder engagement will commence prior to and during the preparation of the EIS, to ensure that all issues are determined and considered. This would ensure that stakeholder requirements are accurately captured and or considered within the concept and detailed design and appropriate mitigation measures are developed.

The ARTC plans to consult with relevant communities and stakeholders including (but not limited to) the following:

- Local, State or Commonwealth government authorities, including the:
 - Department of Planning and Infrastructure (including the Hunter Regional Office);
 - Office of Environment and Heritage;
 - NSW Department of Primary Industries (Office of Water and Fisheries NSW);
 - Hunter Central Rivers Catchment Management Authority;
 - Transport for NSW (previously the Rail Infrastructure Authority RIC);
 - Department of Trade and Investment (Primary Industries and Mineral Resources);
 - Department of Sustainability, Environment, Water, Population and Communities;
 - Mid-Western Regional Shire Council; and
 - State and Federal Government Politicians (including the Federal Member for the Hunter and State Member for Upper Hunter).
- Service and Infrastructure providers including the following (but not limited to):
 - Roads and Maritime Services (previously RTA);
 - RailCorp;
 - Hunter Water;
 - Hunter Energy; and
 - Queensland Rail/National Coal/Pacific National.
- Specialist interest groups including the Wanaruah Local Aboriginal Land Council and Aboriginal stakeholder groups; and
- The public, including community groups and adjoining and affected landowners.

Consultation requirements for the Proposal will also be outlined within the Direct-General Requirements post submission of this application. Where additional stakeholders become apparent during the preparation of the EIS, appropriate consultation will be undertaken and documented within the EIS.

Communications materials produced and used to inform the community will aim to maintain stakeholder and community confidence during all phases of the Proposal (approval, construction and commissioning).

To ensure an appropriate level of consultation, the following activities will be undertaken as part of the community consultation plan:

- Confirmation of the aims of community consultation for the EIS as required by the Department of Planning and Infrastructure's Director General's Requirements;
- Development of a consultation database to assist with the management and follow up of any feedback received from stakeholders;
- Identification of affected (directly or indirectly) stakeholders;
- Development of activities and techniques to effectively engage the community and stakeholders to raise awareness and identify issues;
- Education and training of the Project Team on their roles and responsibilities in the implementation of the consultation plan;
- Attendance of and contribution to a planning focus meeting (if required from the Department of Planning and Infrastructure);
- Provision of a website, email address and information line number for public enquiries;
- A letter to stakeholders introducing the Proposal and providing details regarding the provision of the website, email address and information line number for enquiries;
- Facilitation of meetings and focus workshops as well as one on one meetings with impacted owners and key stakeholders where deemed necessary; and
- Establishment of a possible drop in community information centre.

The EIS shall describe the consultation process and the issues raised, and identify where the design of the development has been amended and/or mitigation measures will be implemented in response to these issues. Where amendments have not been made to address an issue, a short explanation shall be provided.

A close-up photograph of a black butterfly with vibrant orange and white markings on its wings, perched on a cluster of green leaves. The butterfly's wings are spread, showing a pattern of white spots and orange bands. The background is a soft-focus green, suggesting a natural habitat.

6

CONCLUSION

6 CONCLUSION

6.1 OVERVIEW

ARTC is seeking approval under *Part 5.1 of the Environmental Planning and Assessment Act 1979 (EP&A Act)*, for the construction of a track duplication along a modified vertical and horizontal alignment between the existing Bylong Loop and the western portal of the Bylong Tunnel, which forms part of the ARTC-managed Hunter Valley Coal Network.

The application and this PEA have been prepared to satisfy provisions under Part 5.1 of the EP&A Act and the Minister for Planning and Infrastructure. The Minister is the determining authority. This PEA shall be used by the Department of Planning and Infrastructure to brief Government agencies and other stakeholders about the Proposal, and to prepare Director General Requirements that will guide the environmental assessment process and the preparation of an Environmental Impact Statement (EIS).

This PEA identifies a number of potential environmental impacts (Section 4.1) during the construction and operational phases of the Proposal that will require further detailed investigations as part of the environmental assessment and will be detailed in the EIS.

In addition, a number of relatively minor impacts (Section 4.2) associated with the Proposal have been identified that could be effectively managed and or adequately mitigated through the design process and application of standard and/or tailored mitigation measures.

During the preliminary environmental assessment process, no environmental factors have been identified that would cause the Proposal to result in significant and/or unacceptable environmental impacts, once practical design modifications and/or mitigation measures have been implemented.

6.2 PROPOSED SCOPE OF THE DETAILED EIS

The EIS will be prepared in accordance with *Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (the Regulation)*, as well as the Director-General's Requirements for development.

The table below summarises the proposed scope of the detailed EIS, having regard to the issues identified through this report.

Table 17 Proposed content of the EIS

Content of the EIS:
Ensure that the EIS complies with any environmental assessment requirements issued by the Director General (DG) under section 115Z of the EP&A Act.
The information required by clause 6 of Schedule 2 of the Regulation, including, but not limited to: <ul style="list-style-type: none">(a) The name, address and professional qualifications of the person by whom the statement is prepared;(b) The name and address of the responsible person/company;(c) The address of the land:<ul style="list-style-type: none">(i) In respect of which the Proposal application is to be made, or(ii) On which the activity or infrastructure to which the statement relates is to

Content of the EIS:

be carried out,

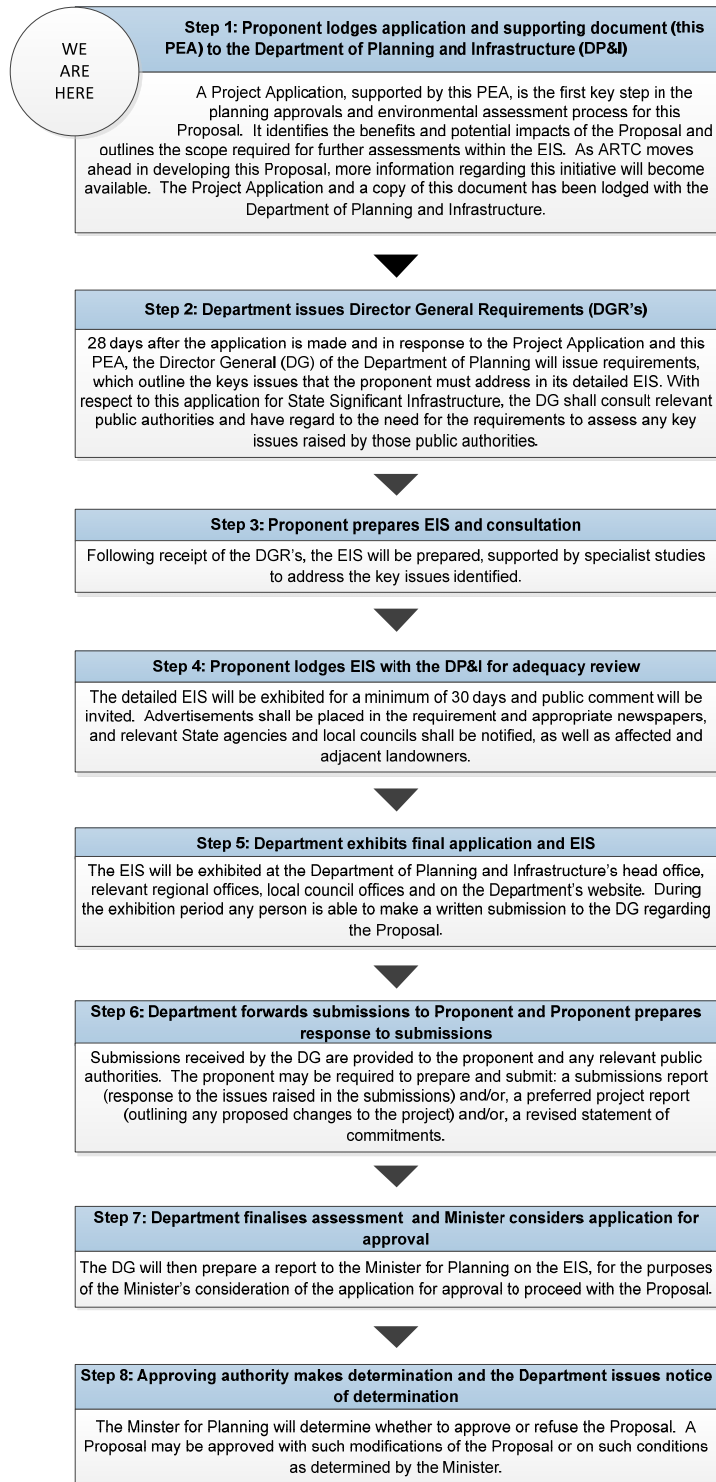
- (d) A description of the Proposal to which the statement relates;
- (e) An assessment by the person by whom the statement is prepared of the environmental impact of the Proposal to which the statement relates;
- (f) A declaration by the person by whom the statement is prepared to the effect ;

The content listed in clause 7 of Schedule 2 of the Regulation, including but not limited to:

- (g) A summary of the environmental impact statement;
- (h) A statement of the objectives of the Proposal, activity or infrastructure;
- (i) An analysis of any feasibility alternatives to the carrying out of the Proposal, having regard to its objectives, including the consequence of not carryout out the development.
- (j) An analysis of the Proposal including:
 - A full description of the Proposal;
 - A general description of the environment likely to be affected by the Proposal, together with a detailed description of those aspects of the environment that are likely to be significantly affected;
 - The likely impact on the environment of the Proposal
 - A full description of the measures proposed to mitigate any adverse effects of the Proposal
 - A list of any approvals that must be obtained under any other Act or law before the Proposal may lawfully be carried out
- (k) An analysis of the Proposal, including an assessment, with particular focus on the requirements of the listed key issues above (clause 7(1)(d) of Schedule 2 of the Regulation) were relevant, including an identification of how relevant planning, land use and development matters have been considered in the impact statement and or in developing mitigation measures;
- (l) The reasons justifying the carrying out of the development in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development (ESD).

Should any additional key issues be identified within the EIS, an appropriately detailed impact assessment will be included.

A draft list of the measures to avoid, minimise, manage, mitigate, offset and or monitor impacts shall be submitted as a Statement of Commitments.



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APPENDIX

Appendix A Flora and Fauna desktop searches

NSW Wildlife Atlas

Protected Matters Search Tool EPBC

Threatened and protected Species Records Viewer

Appendix B Heritage desktop searches

AHIMS

National Native Search Results of Mid-Western Regional Local Government Area

NSW Heritage Act

Australian Heritage Places Inventory

Appendix C Soils and Contaminated land searches

OEH Contaminated land search Mid-Western Regional Shire Council

Appendix D Acquisition plans

Permanent acquisition preliminary plans

APPENDIX A

FLORA AND FAUNA DESKTOP SEARCHES



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.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 29/08/12 12:12:34

[Summary](#)

[Details](#)

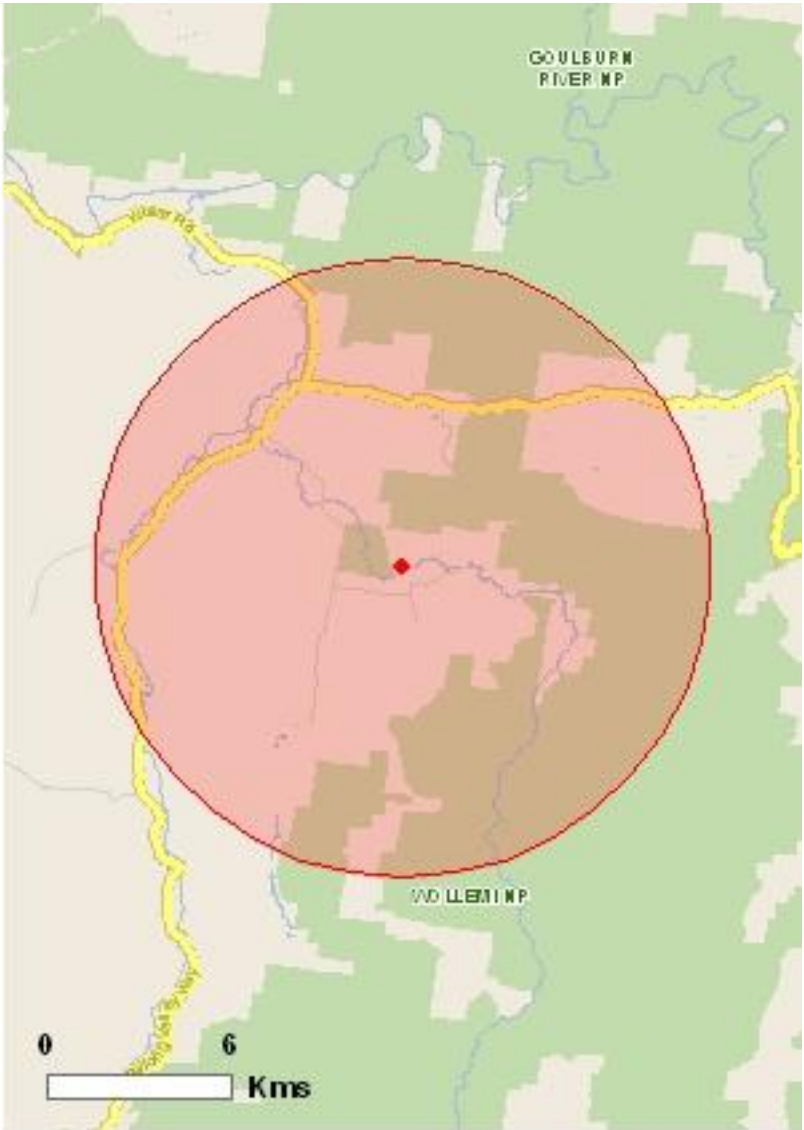
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



This map may contain data which are
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[Coordinates](#)

Buffer: 10.0Km



Summary

Matters of National Environmental 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:	1
National Heritage Places:	1
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Areas:	None
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	26
Listed Migratory Species:	15

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 and the heritage values of a place on the Register of the National Estate.

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.

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 Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	12
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves:	None

Extra Information

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

Place on the RNE:	3
State and Territory Reserves:	2
Regional Forest Agreements:	1
Invasive Species:	12
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

World Heritage Properties		[Resource Information]
Name	State	Status
The Greater Blue Mountains Area	NSW	Declared property
National Heritage Properties		[Resource Information]
Name	State	Status
Natural		
The Greater Blue Mountains Area	NSW	Listed place
Wetlands of International Importance (RAMSAR)		[Resource Information]
Name		Proximity
Hunter estuary wetlands		Upstream from Ramsar

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.		
Name	Status	Type of Presence
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community may occur within area

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Endangered	Species or species habitat likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Lathamus discolor Swift Parrot [744]	Endangered	Species or species habitat likely to occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat may occur within area
Polytelis swainsonii Superb Parrot [738]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Vulnerable	Species or species

Name	Status	Type of Presence
		habitat may occur within area
Frogs		
Litoria booroolongensis Booroolong Frog [1844]	Endangered	Species or species habitat may occur within area
Mammals		
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat may occur within area
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
Nyctophilus corbeni South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat likely to occur within 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]	Vulnerable	Species or species habitat likely to occur within area
Pseudomys novaehollandiae New Holland Mouse [96]	Vulnerable	Species or species habitat likely to occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Plants		
Eucalyptus macrorhyncha subsp. cannonii Cannon's Stringybark [10353]	Vulnerable	Species or species habitat likely to occur within area
Euphrasia arguta [4325]	Critically Endangered	Species or species habitat may occur within area
Ozothamnus tesselatus [56203]	Vulnerable	Species or species habitat likely to occur within area
Pelargonium sp. Striatellum (G.W.Carr 10345) Omeo Stork's-bill [84065]	Endangered	Species or species habitat may occur within area
Philothea ericifolia [64942]	Vulnerable	Species or species habitat likely to occur within area
Pomaderris sericea Bent Pomaderris [9597]	Vulnerable	Species or species habitat likely to occur within area
Prasophyllum sp. Wybong (C.Phelps ORG 5269) a leek-orchid [81964]	Critically Endangered	Species or species habitat may occur within area
Prostanthera cryptandroides [18732]	Vulnerable	Species or species habitat likely to occur within area
Prostanthera discolor [17756]	Vulnerable	Species or species habitat likely to occur within area

Name	Status	Type of Presence
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area
Wollemia nobilis Wollemi Pine [64545]	Endangered	Species or species habitat likely to occur within area
Reptiles		
Hoplocephalus bungaroides Broad-headed Snake [1182]	Vulnerable	Species or species habitat likely to occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat may occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat may occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Migratory Terrestrial Species		
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat likely to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Breeding likely to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Breeding may occur within area
Xanthomyza phrygia Regent Honeyeater [430]	Endangered*	Species or species habitat likely to occur within area
Migratory Wetlands Species		
Ardea alba Great Egret, White Egret [59541]		Species or species habitat may occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species

Name	Threatened	Type of Presence
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Vulnerable*	habitat may occur within area Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species	[Resource Information]	
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat may occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat may occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Endangered	Species or species habitat likely to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat likely to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Breeding likely to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Breeding may occur

Name	Threatened	Type of Presence
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Vulnerable*	within area Species or species habitat may occur within area

Extra Information

Places on the RNE	[Resource Information]
-------------------	--------------------------

Note that not all Indigenous sites may be listed.

Name	State	Status
Natural		
The Blue Mountains	NSW	Indicative Place
Goulburn River National Park	NSW	Registered
Wollemi National Park (1980 boundary)	NSW	Registered

State and Territory Reserves	[Resource Information]
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Name	State
Goulburn River	NSW
Wollemi	NSW

Regional Forest Agreements	[Resource Information]
----------------------------	--------------------------

Note that all areas with completed RFAs have been included.

Name	State
North East NSW RFA	New South Wales

Invasive Species	[Resource Information]
------------------	--------------------------

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Mammals		
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species

Name	Status	Type of Presence
Lycium ferocissimum		habitat may occur within area
African Boxthorn, Boxthorn [19235]		Species or species habitat may occur within area
Nassella trichotoma		
Serrated Tussock, Yass River Tussock, Yass Tussock, Nassella Tussock (NZ) [18884]		Species or species habitat likely to occur within area
Pinus radiata		
Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate		
Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii		
Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area

Coordinates

-32.45298 150.15821

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World Heritage and Register of National Estate properties, Wetlands of International Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

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.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

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

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

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

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:

- [-Department of Environment, Climate Change and Water, New South Wales](#)
- [-Department of Sustainability and Environment, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment and Natural Resources, South Australia](#)
- [-Parks and Wildlife Service NT, NT Dept of Natural Resources, Environment and the Arts](#)
- [-Environmental and Resource Management, Queensland](#)
- [-Department of Environment and Conservation, Western Australia](#)
- [-Department of the Environment, Climate Change, Energy and Water](#)
- [-Birds Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-SA 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, Atherton and Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [-State Forests of NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- 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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[Department of Sustainability, Environment, Water, Population and Communities](#)
GPO Box 787
Canberra ACT 2601 Australia
+61 2 6274 1111

- HOME
- ATLAS SEARCH
- VIS FLORA SURVEY

Search results



Search criteria: Public Report of all Valid Records of Threatened (listed on TSC Act 1995) or Commonwealth listed Entities in selected area [North: -32.36 West: 150.06 East: 150.28 South: -32.54] returned a total of 444 records of 126 species.

Report generated on 11/09/2012 10:48 AM.

http://www.environment.nsw.gov.au/atlaspublicapp/UI_Modules/ATLAS_/atlasreport.aspx














[Show paged species](#)

Displaying 1-126 of 126 species below


To **map records for individual species**, select up to 5 species then click "view map".




To **map all records**, click on "view map" (without selecting any species first).
















	Common name	Scientific name	Map [Clear all]	NSW status	Comm. status	No. of records	
Animalia Amphibia Myobatrachidae	Giant Burrowing Frog	Heleioporus australiacus		V,P	V	K	
	Giant Barred Frog	^Mixophyes iteratus		E1,P,2	E	K	
	Red-crowned Toadlet	Pseudophryne australis		V,P		K	
Reptilia Pygopodidae	Pink-tailed Legless Lizard	Aprasia parapulchella		V,P	V	K	
Varanidae	Rosenberg's	Varanus rosenbergi	<input type="checkbox"/>	V,P		2	

	Goanna						
Elapidae	Pale-headed Snake	Hoplocephalus bitorquatus		V,P		P	
	Broad-headed Snake	^Hoplocephalus bungaroides		E1,P,2	V	K	
	Stephens' Banded Snake	Hoplocephalus stephensii		V,P		P	
Aves Megapodiidae	Malleefowl	Leipoa ocellata		E1,P	V	K	
Accipitridae	Spotted Harrier	Circus assimilis		V,P		K	
	Little Eagle	Hieraaetus morphnoides	<input type="checkbox"/>	V,P		2	
	Square-tailed Kite	^^Lophoictinia isura		V,P,3		K	
Burhinidae	Bush Stone-curlew	Burhinus grallarius		E1,P		K	
Cacatuidae	Gang-gang Cockatoo	^^Callocephalon fimbriatum	<input type="checkbox"/>	V,P,3		8	
	Glossy Black-Cockatoo	^Calyptorhynchus lathami	<input type="checkbox"/>	V,P,2		10	
Psittacidae	Little Lorikeet	Glossopsitta pusilla	<input type="checkbox"/>	V,P		22	
	Swift Parrot	^^Lathamus discolor	<input type="checkbox"/>	E1,P,3	E	1	
	Turquoise Parrot	^^Neophema pulchella	<input type="checkbox"/>	V,P,3		15	
Strigidae	Barking Owl	^^Ninox connivens	<input type="checkbox"/>	V,P,3		1	
	Powerful Owl	^^Ninox strenua	<input type="checkbox"/>	V,P,3		3	









Tytonidae	Masked Owl	^^Tyto novaehollandiae	<input type="checkbox"/>	V,P,3		1	
	Sooty Owl	^^Tyto tenebricosa		V,P,3		K	
Climacteridae	Brown Treecreeper (eastern subspecies)	Climacteris picumnus victoriae	<input type="checkbox"/>	V,P		37	
Acanthizidae	Speckled Warbler	Chthonicola sagittata	<input type="checkbox"/>	V,P		25	
Meliphagidae	Regent Honeyeater	Anthochaera phrygia	<input type="checkbox"/>	E4A,P	E	5	
	White-fronted Chat	Epthianura albifrons		V,P		P	
	Painted Honeyeater	Grantiella picta	<input type="checkbox"/>	V,P		2	
	Black-chinned Honeyeater (eastern subspecies)	Melithreptus gularis gularis	<input type="checkbox"/>	V,P		10	
Pomatostomidae	Grey-crowned Babbler (eastern subspecies)	Pomatostomus temporalis temporalis	<input type="checkbox"/>	V,P		3	
Neosittidae	Varied Sittella	Daphoenositta chrysoptera	<input type="checkbox"/>	V,P		5	
Petroicidae	Hooded Robin (south-eastern form)	Melanodryas cucullata cucullata	<input type="checkbox"/>	V,P		5	
	Scarlet Robin	Petroica boodang	<input type="checkbox"/>	V,P		1	
	Flame Robin	Petroica phoenicea	<input type="checkbox"/>	V,P		2	
Estrildidae	Diamond Firetail	Stagonopleura guttata	<input type="checkbox"/>	V,P		20	










Mammalia Dasyuridae	Spotted-tailed Quoll	Dasyurus maculatus	<input type="checkbox"/>	V,P	E	2	
Phascolarctidae	Koala	Phascolarctos cinereus		V,P	V	K	
Burramyidae	Eastern Pygmy-possum	Cercartetus nanus		V,P		K	
Petauridae	Yellow-bellied Glider	Petaurus australis	<input type="checkbox"/>	V,P		2	
	Squirrel Glider	Petaurus norfolcensis	<input type="checkbox"/>	V,P		1	
Macropodidae	Parma Wallaby	Macropus parma		V,P		K	
	Brush-tailed Rock-wallaby	Petrogale penicillata	<input type="checkbox"/>	E1,P	V	3	
Pteropodidae	Grey-headed Flying-fox	Pteropus poliocephalus		V,P	V	K	
Emballonuridae	Yellow-bellied Sheath-tail-bat	Saccolaimus flaviventris	<input type="checkbox"/>	V,P		3	
Molossidae	Eastern Freetail-bat	Mormopterus norfolkensis		V,P		K	
Vespertilionidae	Large-eared Pied Bat	Chalinolobus dwyeri	<input type="checkbox"/>	V,P	V	13	
	Eastern False Pipistrelle	Falsistrellus tasmaniensis	<input type="checkbox"/>	V,P		1	
	Little Bentwing-bat	Miniopterus australis	<input type="checkbox"/>	V,P		2	
	Eastern Bentwing-bat	Miniopterus schreibersii oceanensis	<input type="checkbox"/>	V,P		11	







	Southern Myotis	Myotis macropus		V,P		P	
	Corben's Long-eared Bat	Nyctophilus corbeni		V,P	V	3	
	Greater Broad-nosed Bat	Scoteanax rueppellii		V,P		9	
	Eastern Cave Bat	Vespadelus trouhntoni		V,P		7	
Muridae	New Holland Mouse	Pseudomys novaehollandiae		P	V	K	
Insecta Petaluridae	Giant Dragonfly	Petalura gigantea		E1		P	
Plantae Flora Apocynaceae	White-flowered Wax Plant	Cynanchum elegans		E1,P	E	K	
Asteraceae		Olearia cordata		V,P	V	P	
		Ozothamnus tessellatus		V,P	V	34	
		Senecio linearifolius var. dangarensis		E1,P		K	
Fabaceae (Faboideae)		Kennedia retrorsa		V,P	V	K	
		^^Pultenaea sp. Olinda		E1,P,3		K	
Fabaceae (Mimosoideae)	Ausfeld's Wattle	Acacia ausfeldii		V,P		K	
		^^Acacia dangarensis		E1,P,3		K	









	Flockton Wattle	Acacia flocktoniae		V,P	V	K	
	Acacia pendula population in the Hunter catchment	^^Acacia pendula		E2,3		K	
Lamiaceae	Wollemi Mint-bush	Prostanthera cryptandroides subsp. cryptandroides		V,P	V	K	
		Prostanthera discolor		V,P	V	19	
	Mount Vincent Mint-bush	Prostanthera stricta		V,P	V	K	
Myrtaceae	Eucalyptus camaldulensis population in the Hunter catchment	Eucalyptus camaldulensis		E2		66	
	Capertee Stringybark	Eucalyptus cannonii		V,P	V	K	
		Homoranthus darwinioides		V,P	V	K	
	Grove's Paperbark	Melaleuca groveana		V,P		P	
Orchidaceae	Cymbidium canaliculatum population in the Hunter Catchment	^Cymbidium canaliculatum		E2,P,2		35	
	Small Snake Orchid	^Diuris pedunculata		E1,P,2	E	K	
	Pine Donkey Orchid population in the Muswellbrook local	^Diuris tricolor		E2,V,P,2		K	

	government area						
	Pine Donkey Orchid	[^] Diuris tricolor	<input type="checkbox"/>	V,P,2		53	
		Prasophyllum sp. Wybong		P	CE	K	
Poaceae	Lobed Bluegrass	Bothriochloa biloba		P	V	K	
Proteaceae	Clandulla Geebung	Persoonia marginata		V,P	V	K	
Rhamnaceae	Scant Pomaderris	Pomaderris queenslandica		E1,P		K	
	Denman Pomaderris	Pomaderris reperta		E4A,P	CE	K	
	Silky Pomaderris	Pomaderris sericea		E1,P	V	K	
Rutaceae		Philotheca ericifolia		P	V	K	
Scrophulariaceae		Derwentia blakelyi		V,P		K	
Sterculiaceae		Commersonia rosea		E1,P	E	K	
		Lasiopetalum longistamineum		V,P	V	K	
		Rulingia procumbens		V,P	V	K	
Community	Central Hunter Grey Box-Ironbark Woodland in the New South Wales North Coast and Sydney Basin Bioregions	Central Hunter Grey Box-Ironbark Woodland in the New South Wales North Coast and Sydney Basin Bioregions		E3		K	


	Hunter Floodplain Red Gum Woodland in the NSW North Coast and Sydney Basin Bioregions	Hunter Floodplain Red Gum Woodland in the NSW North Coast and Sydney Basin Bioregions		E3		K	
	Hunter Valley Foothills Slaty Gum Woodland in the Sydney Basin Bioregion	Hunter Valley Foothills Slaty Gum Woodland in the Sydney Basin Bioregion		V2		K	
	Hunter Valley Vine Thicket in the NSW North Coast and Sydney Basin Bioregions	Hunter Valley Vine Thicket in the NSW North Coast and Sydney Basin Bioregions		E3		K	
	Hunter Valley Weeping Myall Woodland of the Sydney Basin Bioregion	Hunter Valley Weeping Myall Woodland of the Sydney Basin Bioregion		E3	CE	K	
	Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions		E3		K	
	White Box Yellow Box Blakely's Red Gum Woodland	White Box Yellow Box Blakely's Red Gum Woodland		E3	CE	P	
Threat	Alteration of habitat following subsidence due to longwall mining	Alteration of habitat following subsidence due to longwall mining		KTP		P	
	Alteration to the natural flow	Alteration to the natural flow		KTP		P	

	regimes of rivers and streams and their floodplains and wetlands	regimes of rivers and streams and their floodplains and wetlands					
	Anthropogenic Climate Change	Anthropogenic Climate Change		KTP		P	
	Bushrock removal	Bushrock removal		KTP		P	
	Clearing of native vegetation	Clearing of native vegetation		KTP		P	
	Competition and grazing by the feral European Rabbit, <i>Oryctolagus cuniculus</i> (L.)	Competition and grazing by the feral European Rabbit, <i>Oryctolagus cuniculus</i> (L.)		KTP		P	
	Competition and habitat degradation by Feral Goats, <i>Capra hircus</i> Linnaeus 1758	Competition and habitat degradation by Feral Goats, <i>Capra hircus</i> Linnaeus 1758		KTP		P	
	Competition from feral honey bees, <i>Apis mellifera</i> L.	Competition from feral honey bees, <i>Apis mellifera</i> L.		KTP		P	
	Forest eucalypt dieback associated with over-abundant psyllids and Bell Miners	Forest eucalypt dieback associated with over-abundant psyllids and Bell Miners		KTP		P	
	Herbivory and environmental degradation caused by feral deer	Herbivory and environmental degradation caused by feral deer		KTP		P	
	High frequency fire resulting in the	High frequency fire resulting in the		KTP		P	

	disruption of life cycle processes in plants and animals and loss of vegetation structure and composition	disruption of life cycle processes in plants and animals and loss of vegetation structure and composition					
	Importation of Red Imported Fire Ants <i>Solenopsis invicta</i> Buren 1972	Importation of Red Imported Fire Ants <i>Solenopsis invicta</i> Buren 1972		KTP		P	
	Infection by Psittacine Circoviral (beak and feather) Disease affecting endangered psittacine species and populations	Infection by Psittacine Circoviral (beak and feather) Disease affecting endangered psittacine species and populations		KTP		P	
	Infection of frogs by amphibian chytrid causing the disease chytridiomycosis	Infection of frogs by amphibian chytrid causing the disease chytridiomycosis		KTP		P	
	Infection of native plants by <i>Phytophthora cinnamomi</i>	Infection of native plants by <i>Phytophthora cinnamomi</i>		KTP		P	
	Introduction of the Large Earth Bumblebee <i>Bombus terrestris</i> (L.)	Introduction of the Large Earth Bumblebee <i>Bombus terrestris</i> (L.)		KTP		P	
	Invasion and establishment of exotic vines and scramblers	Invasion and establishment of exotic vines and scramblers		KTP		P	

	Invasion and establishment of Scotch Broom (<i>Cytisus scoparius</i>)	Invasion and establishment of Scotch Broom (<i>Cytisus scoparius</i>)		KTP		P	
	Invasion and establishment of the Cane Toad (<i>Bufo marinus</i>)	Invasion and establishment of the Cane Toad (<i>Bufo marinus</i>)		KTP		P	
	Invasion of native plant communities by African Olive <i>Olea europaea</i> L. subsp. <i>cuspidata</i> (Wall ex G. Don Cirferri)	Invasion of native plant communities by African Olive <i>Olea europaea</i> L. subsp. <i>cuspidata</i> (Wall ex G. Don Cirferri)		KTP		P	
	Invasion of native plant communities by <i>Chrysanthemoides monilifera</i>	Invasion of native plant communities by <i>Chrysanthemoides monilifera</i>		KTP		P	
	Invasion of native plant communities by exotic perennial grasses	Invasion of native plant communities by exotic perennial grasses		KTP		P	
	Invasion of the Yellow Crazy Ant, <i>Anoplolepis gracilipes</i> (Fr. Smith) into NSW	Invasion of the Yellow Crazy Ant, <i>Anoplolepis gracilipes</i> (Fr. Smith) into NSW		KTP		P	
	Invasion, establishment and spread of Lantana (<i>Lantana camara</i> L. sens. Lat)	Invasion, establishment and spread of Lantana (<i>Lantana camara</i> L. sens. Lat)		KTP		P	
	Loss and degradation of native plant and	Loss and degradation of native plant and		KTP		P	

	animal habitat by invasion of escaped garden plants, including aquatic plants	animal habitat by invasion of escaped garden plants, including aquatic plants					
	Loss of Hollow-bearing Trees	Loss of Hollow-bearing Trees		KTP		P	
	Loss or degradation (or both) of sites used for hill-topping by butterflies	Loss or degradation (or both) of sites used for hill-topping by butterflies		KTP		P	
	Predation and hybridisation by Feral Dogs, Canis lupus familiaris	Predation and hybridisation by Feral Dogs, Canis lupus familiaris		KTP		P	
	Predation by Gambusia holbrooki Girard, 1859 (Plague Minnow or Mosquito Fish)	Predation by Gambusia holbrooki Girard, 1859 (Plague Minnow or Mosquito Fish)		KTP		P	
	Predation by the European Red Fox Vulpes Vulpes (Linnaeus, 1758)	Predation by the European Red Fox Vulpes Vulpes (Linnaeus, 1758)		KTP		P	
	Predation by the Feral Cat Felis catus (Linnaeus, 1758)	Predation by the Feral Cat Felis catus (Linnaeus, 1758)		KTP		P	
	Predation, habitat degradation, competition and disease transmission by Feral Pigs, Sus scrofa Linnaeus	Predation, habitat degradation, competition and disease transmission by Feral Pigs, Sus scrofa Linnaeus		KTP		P	

	1758	1758					
	Removal of dead wood and dead trees	Removal of dead wood and dead trees		KTP		P	



Close

Commonwealth status

C Listed on China Australia Migratory Bird Agreement

CD Conservation Dependent (Commonwealth EPBC Act 1999)

CE Critically Endangered (Commonwealth EPBC Act 1999)

E Endangered (Commonwealth EPBC Act 1999)

J Listed on Japan Australia Migratory Bird Agreement

K Listed on Republic of Korea Australia Migratory Bird Agreement

V Vulnerable (Commonwealth EPBC Act 1999)

X Extinct (Commonwealth EPBC Act 1999)

XW Extinct in the Wild (Commonwealth EPBC Act 1999)

Records viewer

Records for this map are from I&I NSW research surveys, they do not indicate the entire distribution of the species and there may be errors and omissions.

To view the records using Google Earth you must download and install the Google Earth Plugin.



Records search

Step 1

Select an area type to search by:

- ☐ Statewide
- ☐ Catchment Management Authority
- ☐ Local Government Area

CMA:

Step 2

Select a species:

There are no records

Step 3

Select a time period:

- ☐ pre 1980
- ☐ post 1980
- ☐ all records

APPENDIX B

HERITAGE DESKTOP SEARCHES

<u>SiteID</u>	<u>SiteName</u> <u>Contact</u>	<u>Datum</u> <u>Recorders</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status</u>	<u>SiteFeatures</u> <u>Permits</u>	<u>SiteTypes</u>	<u>Reports</u>
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There are no sites found for given search criteria.

Report generated by AHIMS Web Service on 06/09/2012 for Abbee Warskitt for the following area at Lot : 59, DP:DP755420 with a Buffer of 1000 meters. Additional Info : In a Preliminary Environmental Assessment. Number of Aboriginal sites and Aboriginal objects found is 0

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AUSTRALIAN HERITAGE PLACES INVENTORY

[[New Search](#)]

-
- | | |
|---|---|
| 1. <u>Binnawee Homestead</u>
Lesters La, Mudgee, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 2. <u>Bridgeview Hotel (former)</u>
28-30 Louee St, Rylstone, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 3. <u>Burrundulla</u>
Sydney Rd, Mudgee, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 4. <u>Chinese Cemetery and Oven</u>
Clarks Creek Rd, Windeyer, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 5. <u>Dabee Homestead and Outbuildings,
including Woolshed</u>
Narango Rd, Dabee, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 6. <u>Eurunderee Public School Complex</u>
Henry Lawson Dr, Mudgee, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 7. <u>Gulgong Conservation Area</u>
Gulgong, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 8. <u>Gulgong Opera House</u>
99 Mayne St, Gulgong, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 9. <u>Guntawang Homestead, Garden and
Stables</u>
Wellington Rd, Gulgong, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 10. <u>Havilah</u>
Lue Rd, Havilah, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 11. <u>Havilah Chapel</u>
Lue Rd, Havilah, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 12. <u>Havilah Extensions</u>
Lue Rd, Havilah, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 13. <u>Havilah Group</u>
Lue Rd, Havilah, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |

- | | |
|--|---|
| 14. <u>Havilah Woolsheds</u>
Lue Rd, Havilah, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 15. <u>Hill End Historic Site</u>
Clarke St, Hill End, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 16. <u>Indigenous Place</u>
Dunedoo, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 17. <u>Indigenous Place</u>
Ulan, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 18. <u>Kandos Bicentennial Industrial Museum</u>
22 Buchanan St, Kandos, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 19. <u>Mudgee Courthouse</u>
96 Market St, Mudgee, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 20. <u>Mudgee Post Office</u>
80 Market St, Mudgee, NSW | LGA: Mid-Western Regional
Source: Commonwealth
Heritage List |

Query matched 32 records.

[1][2] [Next Page]>>

Report produced : 6/9/2012
AHPI URL : <http://www.environment.gov.au/heritage/ahpi/index.html>

- | | |
|--|---|
| 21. <u>Mudgee Post Office</u>
80 Market St, Mudgee, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 22. <u>Mudgee Post Office Group</u>
Market St, Mudgee, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 23. <u>Mudgee Railway Station</u>
Inglis St, Mudgee, NSW | LGA: Mid-Western Regional
Source: Register of the
National Estate |
| 24. <u>Munghorn Gap Nature Reserve (1978)</u> | LGA: Mid-Western Regional |

	<u>boundary)</u> Mudgee Wollar Rd, Wollar, NSW	Source: Register of the National Estate
25.	<u>Police Station and Residence</u> 61 Medley St, Gulgong, NSW	LGA: Mid-Western Regional Source: Register of the National Estate
26.	<u>Police Station Including Stables</u> 82 Market St, Mudgee, NSW	LGA: Mid-Western Regional Source: Register of the National Estate
27.	<u>Public School</u> 44 Perry St, Mudgee, NSW	LGA: Mid-Western Regional Source: Register of the National Estate
28.	<u>Sofala Settlement</u> Barkly St, Sofala, NSW	LGA: Mid-Western Regional Source: Register of the National Estate
29.	<u>St Marys Catholic Church</u> 13 Church St, Mudgee, NSW	LGA: Mid-Western Regional Source: Register of the National Estate
30.	<u>Talbragar Reserve</u> Wonga Roo Rd, Ulan, NSW	LGA: Mid-Western Regional Source: Register of the National Estate
31.	<u>Wishing Well</u> Mudgee Rd, Running Stream, NSW	LGA: Mid-Western Regional Source: Register of the National Estate
32.	<u>Yamble and Woolshed</u> Wellington Rd, Gulgong, NSW	LGA: Mid-Western Regional Source: Register of the National Estate

Query matched 32 records.



National
Native Title
Tribunal



16 January 2012

Georgia Roberts
Archaeologist
Niche Environment & Heritage
PO Box 231
Concord NSW 2137

**South-East & Central
Registry –Sydney Office**

Level 25, 25 Bligh Street
Sydney NSW 2000
GPO Box 9973
Sydney NSW 2001
Telephone (02) 9227 4000
Facsimile (02) 9227 4030

Our Reference: 4675/12kl

Your Reference: 1175

Dear Ms Roberts

**Native Title Search Results of Murrumbo within Mid-Western Regional Council Local
Government Area**

Thank you for your search request received on 6 January 2012 in relation to the above area.

Search Results

The results provided are based on the information you supplied and are derived from a search of the following Tribunal databases:

Register Type	NNTT Reference Numbers
Schedule of Applications (unregistered claimant applications)	Nil.
Register of Native Title Claims	Nil.
National Native Title Register	Nil.
Register of Indigenous Land Use Agreements	Nil.
Notified Indigenous Land Use Agreements	Nil.

At the time this search was carried out, there were **no relevant entries** in the above databases.

Please note: There may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed with the Federal Court may not appear on the Tribunal's databases.

Tribunal accepts no liability for reliance placed on enclosed information



The enclosed information has been provided in good faith. Use of this information is at your sole risk. The National Native Title Tribunal makes no representation, either express or implied, as to the accuracy or suitability of the information enclosed for any particular purpose and accepts no liability for use of the information or reliance placed on it.

If you have any further queries, please do not hesitate to contact me on the number below or on the free call number 1800 640 501.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'N. Thorpe'.

Nakari Thorpe
Senior Case Management Assistant
Telephone: (02) 9227 4004
Facsimile: (02) 9227 4030
Email: Nakari.thorpe@nntt.gov.au



Searching the NNTT Registers in New South Wales

Search service

On request the National Native Title Tribunal will search its public registers for you. A search may assist you in finding out whether any native title applications (claims), determinations or agreements exist over a particular area of land or water.

In New South Wales native title cannot exist on privately owned land including family homes or farms.

What information can a search provide?

A search can confirm whether any applications, agreements or determinations are registered in a local government area. Relevant information, including register extracts and application summaries, will be provided.

In NSW because we cannot search the registers in relation to individual parcels of land we search by local government area.

Most native title applications do not identify each parcel of land claimed. They have an external boundary and then identify the areas not claimed within the boundary by reference to types of land tenure e.g., freehold, agricultural leasehold, public works.

What if the search shows no current applications?

If there is no application covering the local government area this only indicates that at the time of the search either the Federal Court had not received any claims in relation to the local government area or the Tribunal had not yet been notified of any new native title claims.

It does not mean that native title does not exist in the area.

Native title may exist over an area of land or waters whether or not a claim for native title has been made.

Where the information is found

The information you are seeking is held in three registers and on an applications database.

National Native Title Register

The National Native Title Register contains determinations of native title by the High Court, Federal Court and other courts.

Register of Native Title Claims

The Register of Native Title Claims contains applications for native title that have passed a registration test.

Registered claims attract rights, including the right to negotiate about some types of proposed developments.

Register of Indigenous Land Use Agreements

The Register of Indigenous Land Use Agreements contains agreements made with people who hold or assert native title in an area.

The register identifies development activities that have been agreed by the parties.

Application summaries

An application summary contains a description of the location, content and status of a native title claim.

This information may be different to the information on the Register of Native Title Claims, e.g., because an amendment has not yet been tested.

How do you request a search?

A search request form is available on the Tribunal's web site at:



<http://www.nntt.gov.au/registers/search.html>

Mail, fax or email your request to the

Tribunal's Sydney registry, identifying the local government area/s you want searched.

Email: SydneySearch@nntt.gov.au

Fax: (02) 9227 4030

Address: GPO Box 9973, Sydney NSW 2001

Phone: (02) 9227 4000

You are here: [Home](#) > [Heritage sites](#) > [Searches and directories](#) > NSW heritage search

Search for NSW heritage

[Return to search page where you can refine/broaden your search.](#) ItemName 0

Statutory listed items

Information and items listed in the State Heritage Inventory come from a number of sources. This means that there may be several entries for the same heritage item in the database. For clarity, the search results have been divided into two sections.

Section 1. contains items listed by the **heritage council** under the NSW Heritage Act. This includes listing on the state heritage register, an interim heritage order or protected under section 136 of the NSW Heritage Act. This information is provided by the Heritage Branch.

Section 2. contains items listed by **local councils & shires and state government agencies**. This section may also contain additional information on some of the items listed in the first section.

Section 1. Items listed under the NSW Heritage Act.

Your search returned 13 records.

Item name ^	Address	Suburb	LGA	Listed under Heritage Act
Binnawee Homestead and Outbuildings	111 Lester's Lane	Mudgee	Mid-Western Regional	Yes
Bridge View Inn	28-30 Louee Street	Rylstone	Mid-Western Regional	Yes
Gold Mining Water Race	Old Hargraves Road	Windeyer	Mid-Western Regional	Yes
Gulgong railway bridge over Wialdra Creek	Wallerawang-Gwabegar railway	Gulgong	Mid-Western Regional	Yes
Gulgong Railway Station and yard group	Wallerawang-Gwabegar railway	Gulgong	Mid-Western Regional	Yes
Hobsons Shops Golden West Trading Post	Herbert Street	Gulgong	Mid-Western Regional	Yes
Lue Railway Station group	Wallerawang-Gwabegar railway	Lue	Mid-Western Regional	Yes
Mudgee Post Office & Quarters	80 Market Street	Mudgee	Mid-Western Regional	Yes
Mudgee Railway Station, yard and locomotive yard	Wallerawang-Gwabegar railway	Mudgee	Mid-Western Regional	Yes
Mudgee Town Hall	64 Market Street	Mudgee	Mid-Western Regional	Yes
Quartz Roasting Pits Complex	10km North	Hill End	Mid-Western Regional	Yes
Rylstone Railway Station and yard group	Wallerawang-Gwabegar railway	Rylstone	Mid-Western Regional	Yes
St. Mary's Roman Catholic Church, Presbytery, Convent & Hall	13 Church Street	Mudgee	Mid-Western Regional	Yes

ItemName 0

Section 2. Items listed by Local Government and State Agencies.

Your search returned 483 records.

Item name ^	Address	Suburb	LGA	Information source
Courthouse & Police Station	Branksome Street	Cassilis		GAZ

			Mid-Western Regional	
Police Residence	Branksome Street	Cassilis	Mid-Western Regional	GAZ
Royal Hotel	Branksome Street	Cassilis	Mid-Western Regional	GAZ
Woolshed	Munamurra Road	Cassilis	Mid-Western Regional	GAZ
Farmhouse & Cottage Group	Merriwa Road	Cassilis	Mid-Western Regional	GAZ
Dalkeith	Merriwa Road	Cassilis	Mid-Western Regional	GAZ
Cassilis Conservation Area		Cassilis	Mid-Western Regional	GAZ
Hotel - Lawson Park - Mudgee	1 Church Street	Mudgee	Mid-Western Regional	LGOV
Theatre - Regent	5-7 Church Street	Mudgee	Mid-Western Regional	LGOV
Church Catholic - Mudgee	13 Church Street	Mudgee	Mid-Western Regional	LGOV
Church Catholic - Mudgee - Convent - St Marys	13 Church Street	Mudgee	Mid-Western Regional	LGOV
Church Catholic - Mudgee - Presbytery - St Marys	59 Market Street	Mudgee	Mid-Western Regional	LGOV
Church Catholic - Mudgee - Hall	13 Church Street	Mudgee	Mid-Western Regional	LGOV
Shops - Town Centre Store	19-41 Church Street	Mudgee	Mid-Western Regional	LGOV
Shop	22 Church Street	Mudgee	Mid-Western Regional	LGOV
Shop	26 Church Street	Mudgee	Mid-Western Regional	LGOV
Shop	47 Church Street	Mudgee	Mid-Western Regional	LGOV
Hotel - Waratah - Mudgee	49-51 Church Street	Mudgee	Mid-Western Regional	LGOV
Hotel - Waratah - Mudgee	49-51 Church Street	Mudgee	Mid-Western Regional	LGOV
Shop	58-62 Church Street	Mudgee	Mid-Western Regional	LGOV
House - Afton	63 Church Street	Mudgee	Mid-Western Regional	LGOV
House - Dental Surgery	71 Church Street	Mudgee	Mid-Western Regional	LGOV
House	89 Church Street	Mudgee	Mid-Western Regional	LGOV
House	93 Church Street	Mudgee	Mid-Western Regional	LGOV
House	95 Church Street	Mudgee	Mid-Western Regional	LGOV
Shop	96 Church Street	Mudgee	Mid-Western Regional	LGOV
Shop	98 Church Street	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	110-112 Church Street	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	125-127 Church Street	Mudgee	Mid-Western Regional	LGOV

House	129 Church Street	Mudgee	Mid-Western Regional	LGOV
Shop and Residence	131 Church Street	Mudgee	Mid-Western Regional	LGOV
Fire Station - Former	136 Church Street	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	150-152 Church Street	Mudgee	Mid-Western Regional	LGOV
House	154 Church Street	Mudgee	Mid-Western Regional	LGOV
House	182 Church Street	Mudgee	Mid-Western Regional	LGOV
House	184 Church Street	Mudgee	Mid-Western Regional	LGOV
House - Cranford	195 Church Street	Mudgee	Mid-Western Regional	LGOV
House - Maxwellton	4 Clifton Avenue	South Mudgee	Mid-Western Regional	LGOV
House	8 Cox Street	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	8-10 Court Street	Mudgee	Mid-Western Regional	LGOV
House	14 Court Street	Mudgee	Mid-Western Regional	LGOV
House	48 Court Street	Mudgee	Mid-Western Regional	LGOV
House	64 Court Street	Mudgee	Mid-Western Regional	LGOV
Technical College	74-76 Court Street	Mudgee	Mid-Western Regional	LGOV
House	78 Court Street	Mudgee	Mid-Western Regional	LGOV
House	30 Denison Street	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	32 - 34 Denison Street	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	41&41A Denison Street	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	50-52 Denison Street	Mudgee	Mid-Western Regional	LGOV
House	53 Denison Street	Mudgee	Mid-Western Regional	LGOV
House - Ludgate	56 Denison Street	Mudgee	Mid-Western Regional	LGOV
House	58 Denison Street	Mudgee	Mid-Western Regional	LGOV
House - Mooltan	63 Denison Street	Mudgee	Mid-Western Regional	LGOV
House	97 Denison Street	Mudgee	Mid-Western Regional	LGOV
House	109 Denison Street	Mudgee	Mid-Western Regional	LGOV
House	116 Denison Street	Mudgee	Mid-Western Regional	LGOV
House	9 Douro Street	Mudgee	Mid-Western Regional	LGOV
Houses - Duplex	11-13 Douro Street	Mudgee	Mid-Western Regional	LGOV

Houses - Duplex	15-17 Douro Street	Mudgee	Mid-Western Regional	LGOV
House - Rexton	18 Douro Street	Mudgee	Mid-Western Regional	LGOV
House	28 Douro Street	Mudgee	Mid-Western Regional	LGOV
House	82 Douro Street	Mudgee	Mid-Western Regional	LGOV
House - Carinya	17 Gladstone Street	Mudgee	Mid-Western Regional	LGOV
Shop and Residence	30 Lewis Street	Mudgee	Mid-Western Regional	LGOV
House	44 Gladstone Street	Mudgee	Mid-Western Regional	LGOV
House	54 Gladstone Street	Mudgee	Mid-Western Regional	LGOV
House	55 Gladstone Street	Mudgee	Mid-Western Regional	LGOV
House	61 Gladstone Street	Mudgee	Mid-Western Regional	LGOV
House	68 Gladstone Street	Mudgee	Mid-Western Regional	LGOV
House	69 Gladstone Street	Mudgee	Mid-Western Regional	LGOV
House	79 Gladstone Street	Mudgee	Mid-Western Regional	LGOV
House	83 Gladstone Street	Mudgee	Mid-Western Regional	LGOV
House - Avon	104 Gladstone Street	Mudgee	Mid-Western Regional	LGOV
House	106 Gladstone Street	Mudgee	Mid-Western Regional	LGOV
House	156 Gladstone Street	Mudgee	Mid-Western Regional	LGOV
House	176 Gladstone Street	Mudgee	Mid-Western Regional	LGOV
House	210 Gladstone Street	Mudgee	Mid-Western Regional	LGOV
House	44 Horatio Street	Mudgee	Mid-Western Regional	LGOV
House	67 Horatio Street	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	81-83 Horatio Street	Mudgee	Mid-Western Regional	LGOV
House	99 Horatio Street	Mudgee	Mid-Western Regional	LGOV
House	105 Horatio Street	Mudgee	Mid-Western Regional	LGOV
House - Hillsborough	141-143 Horatio Street	Mudgee	Mid-Western Regional	LGOV
House	149 Horatio Street	Mudgee	Mid-Western Regional	LGOV
School - Mudgee High	41 Douro Street	Mudgee	Mid-Western Regional	LGOV
House	7 Inglis Street	Mudgee	Mid-Western Regional	LGOV
House	8 Inglis Street	Mudgee	Mid-Western Regional	LGOV

Houses - Terrace	9-15 Inglis Street	Mudgee	Mid-Western Regional	LGOV
Railway Buildings - Mudgee	Inglis Street	Mudgee	Mid-Western Regional	LGOV
Railway Station - Mudgee	Inglis Street	Mudgee	Mid-Western Regional	LGOV
House	25 Inglis Street	Mudgee	Mid-Western Regional	LGOV
Hotel - Federal - Mudgee	34-36 Inglis Street	Mudgee	Mid-Western Regional	LGOV
House - Beverley Cottage	3 Lawson Street	Mudgee	Mid-Western Regional	LGOV
House - Bleak House	5-7 Lawson Street	Mudgee	Mid-Western Regional	LGOV
House - Shenstone	24 Lawson Street	Mudgee	Mid-Western Regional	LGOV
House	25 Lawson Street	Mudgee	Mid-Western Regional	LGOV
House	45 Lawson Street	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	48 Lawson Street	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	49-51 Lawson Street	Mudgee	Mid-Western Regional	LGOV
House	50 Lawson Street	Mudgee	Mid-Western Regional	LGOV
House	55 Lawson Street	Mudgee	Mid-Western Regional	LGOV
House	64 Lawson Street	Mudgee	Mid-Western Regional	LGOV
House	65 Lawson Street	Mudgee	Mid-Western Regional	LGOV
House - Whitton Lodge	76 Lawson Street	Mudgee	Mid-Western Regional	LGOV
Commercial Building - Mudgee	1 Lewis Street	Mudgee	Mid-Western Regional	LGOV
Hotel - Oriental Tavern	6 Lewis Street	Mudgee	Mid-Western Regional	LGOV
Hotel - Oriental Tavern	6 Lewis Street	Mudgee	Mid-Western Regional	LGOV
Shop and Cafe	13 Lewis Street	Mudgee	Mid-Western Regional	LGOV
House - Mandalay	14 Lewis Street	Mudgee	Mid-Western Regional	LGOV
House - Narraway Cottage	16 Lewis Street	Mudgee	Mid-Western Regional	LGOV
House - Koolabah	18 Lewis Street	Mudgee	Mid-Western Regional	LGOV
House - Lauralla	25 Lewis Street	Mudgee	Mid-Western Regional	LGOV
Shop and Residence	52 Lewis Street	Mudgee	Mid-Western Regional	LGOV
Houses	69-71 Lewis Street	Mudgee	Mid-Western Regional	LGOV
House	73 Lewis Street	Mudgee	Mid-Western Regional	LGOV
House	83 Lewis Street	Mudgee	Mid-Western Regional	LGOV

Club - Mudgee	5 Lovejoy Street	Mudgee	Mid-Western Regional	LGOV
House	25 Madeira Road	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	17-19 Market Street	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	21-25 Market Street	Mudgee	Mid-Western Regional	LGOV
House - Kojinup	26 Market Street	Mudgee	Mid-Western Regional	LGOV
House	27 Market Street	Mudgee	Mid-Western Regional	LGOV
Shop - Wine Bar	30 Market Street	Mudgee	Mid-Western Regional	LGOV
Shop and Residence	42-44 Market Street	Mudgee	Mid-Western Regional	LGOV
Shops	43-45 Market Street	Mudgee	Mid-Western Regional	LGOV
Shop and Residence	46 Market Street	Mudgee	Mid-Western Regional	LGOV
Shops	52-54 Market Street	Mudgee	Mid-Western Regional	LGOV
Commercial Building - Mudgee	54 Market Street	Mudgee	Mid-Western Regional	LGOV
Shop	56 Market Street	Mudgee	Mid-Western Regional	LGOV
Item			Mid-Western Regional	LGOV
Bank - Westpac	59 Market Street	Mudgee	Mid-Western Regional	LGOV
Hotel - Woolpack - Mudgee	67 Market Street	Mudgee	Mid-Western Regional	LGOV
Commercial Building - Mudgee	70 Market Street	Mudgee	Mid-Western Regional	LGOV
Shop	73 Market Street	Mudgee	Mid-Western Regional	LGOV
Shops	81-83 Market Street	Mudgee	Mid-Western Regional	LGOV
Court House - Mudgee - Annex	96 Market Street	Mudgee	Mid-Western Regional	LGOV
Shop	97 Market Street	Mudgee	Mid-Western Regional	LGOV
Shop	97 Perry Street	Mudgee	Mid-Western Regional	LGOV
Bandstand	Market Street	Mudgee	Mid-Western Regional	LGOV
Guesthouse - Parkview	99 Market Street	Mudgee	Mid-Western Regional	LGOV
Hotel - Couthouse - Mudgee	111 Market Street	Mudgee	Mid-Western Regional	LGOV
House	141 Market Street	Mudgee	Mid-Western Regional	LGOV
House - Ivanhoe	144 Market Street	Mudgee	Mid-Western Regional	LGOV
Stables - Former	146 Market Street	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	155-159 Market Street	Mudgee	Mid-Western Regional	LGOV

House	177 Market Street	Mudgee	Mid-Western Regional	LGOV
Homestead - Heaton Lodge	18 Mortimer Street	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	63-69 Mortimer Street	Mudgee	Mid-Western Regional	LGOV
House	64 Mortimer Street	Mudgee	Mid-Western Regional	LGOV
Residential Building	70-72 Mortimer Street	Mudgee	Mid-Western Regional	LGOV
House	82A Mortimer Street	Mudgee	Mid-Western Regional	LGOV
Theatre - Civic	84 Mortimer Street	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	100-106 Mortimer Street	Mudgee	Mid-Western Regional	LGOV
Church Presbyterian - Mudgee - St Paul's	103 Mortimer Street	Mudgee	Mid-Western Regional	LGOV
House	112 Mortimer Street	Mudgee	Mid-Western Regional	LGOV
Church Uniting - Mudgee	85 - 89 Mortimer Street	Mudgee	Mid-Western Regional	LGOV
Shop	131 Mortimer Street	Mudgee	Mid-Western Regional	LGOV
House - Doone	133 Mortimer Street	Mudgee	Mid-Western Regional	LGOV
House	152 Mortimer Street	Mudgee	Mid-Western Regional	LGOV
House	185 Mortimer Street	Mudgee	Mid-Western Regional	LGOV
Mudgee Guardian	9 Perry Street	Mudgee	Mid-Western Regional	LGOV
Masonic Temple Former	16 Perry Street	Mudgee	Mid-Western Regional	LGOV
Salvation Army Citadel	19 Perry Street	Mudgee	Mid-Western Regional	LGOV
House	24 Perry Street	Mudgee	Mid-Western Regional	LGOV
House	26 Perry Street	Mudgee	Mid-Western Regional	LGOV
House	28-30 Perry Street	Mudgee	Mid-Western Regional	LGOV
Shops	37-39 Perry Street	Mudgee	Mid-Western Regional	LGOV
Mechanic's Institute Former	40 Perry Street	Mudgee	Mid-Western Regional	LGOV
Hotel - Paragon - Mudgee	38 Perry Street	Mudgee	Mid-Western Regional	LGOV
Houses - Terrace	47-49 Perry Street	Mudgee	Mid-Western Regional	LGOV
School - Mudgee Public - Headmaster's Residence	48 Perry Street	Mudgee	Mid-Western Regional	LGOV
House - Onohan	55 Perry Street	Mudgee	Mid-Western Regional	LGOV
House	57 Perry Street	Mudgee	Mid-Western Regional	LGOV
House - Forgandenny	19 Short Street	Mudgee	Mid-Western Regional	LGOV

House - Willows, The	29 Short Street	Mudgee	Mid-Western Regional	LGOV
Robertson Park	Market Street	Mudgee	Mid-Western Regional	LGOV
Park Memorial - Mudgee	Douro Street	Mudgee	Mid-Western Regional	LGOV
Tree - River Red Gum	Perry Street (Corner)	Mudgee	Mid-Western Regional	LGOV
Tree - River Red Gum	Short Street	Mudgee	Mid-Western Regional	LGOV
Tree - River Red Gum	Short Street	Mudgee	Mid-Western Regional	LGOV
Clock Tower	Church Street	Mudgee	Mid-Western Regional	LGOV
Postal Pillar Box	Church Street	Mudgee	Mid-Western Regional	LGOV
Postal Pillar Box	Moufarriage Mall	Mudgee	Mid-Western Regional	LGOV
Kern and Gutter Pitched Stone	Court Street	Mudgee	Mid-Western Regional	LGOV
Tomb Memorial	Park Street	Mudgee	Mid-Western Regional	LGOV
House	16 Bayly Street	Gulgong	Mid-Western Regional	LGOV
House	29 Bayly Street	Gulgong	Mid-Western Regional	LGOV
Flour Mill - Former	31 Bayly Street	Gulgong	Mid-Western Regional	LGOV
House	32 Bayly Street	Gulgong	Mid-Western Regional	LGOV
House	42 Bayly Street	Gulgong	Mid-Western Regional	LGOV
Church Presbyterian - Gulgong	46 Bayly Street	Gulgong	Mid-Western Regional	LGOV
Church Catholic - Gulgong - School	49 Bayly Street	Gulgong	Mid-Western Regional	LGOV
House	53 Bayly Street	Gulgong	Mid-Western Regional	LGOV
Church Anglican - St Lukes Gulgong	55 Bayly Street	Gulgong	Mid-Western Regional	LGOV
House	23 Belmore Street	Gulgong	Mid-Western Regional	LGOV
House	35 Belmore Street	Gulgong	Mid-Western Regional	LGOV
House	47 Belmore Street	Gulgong	Mid-Western Regional	LGOV
House	63 Belmore Street	Gulgong	Mid-Western Regional	LGOV
Houses - row of four	68-74 Belmore Street	Gulgong	Mid-Western Regional	LGOV
House	73 Belmore Street	Gulgong	Mid-Western Regional	LGOV
House	84 Belmore Street	Gulgong	Mid-Western Regional	LGOV
House	85 Belmore Street	Gulgong	Mid-Western Regional	LGOV
House	86 Belmore Street	Gulgong	Mid-Western Regional	LGOV

House	88 Belmore Street	Gulgong	Mid-Western Regional	LGOV
Church Uniting - Gulgong	89 Belmore Street	Gulgong	Mid-Western Regional	LGOV
House	90 Belmore Street	Gulgong	Mid-Western Regional	LGOV
House	104 Belmore Street	Gulgong	Mid-Western Regional	LGOV
House	9 Bowman Street	Gulgong	Mid-Western Regional	LGOV
House	8 Bowman Street	Gulgong	Mid-Western Regional	LGOV
House	6 Bulga Street	Gulgong	Mid-Western Regional	LGOV
House	Bulga Street	Gulgong	Mid-Western Regional	LGOV
House	18 Cainbil Street	Gulgong	Mid-Western Regional	LGOV
House	2 Cainbil Street	Gulgong	Mid-Western Regional	LGOV
House	24 Cainbil Street	Gulgong	Mid-Western Regional	LGOV
House	26 Cainbil Street	Gulgong	Mid-Western Regional	LGOV
House	Caledonian Street	Gulgong	Mid-Western Regional	LGOV
House	Canadian Street	Gulgong	Mid-Western Regional	LGOV
House - Tarrawonga	Canadian Lead Road (Corner)	Gulgong	Mid-Western Regional	LGOV
House - Tarrawonga	Homer Street	Gulgong	Mid-Western Regional	LGOV
House	5 Cooyal Street	Gulgong	Mid-Western Regional	LGOV
House	22 Cooyal Street	Gulgong	Mid-Western Regional	LGOV
House - Red Hill	Cooyal Street	Gulgong	Mid-Western Regional	LGOV
House	10 Fitzroy Street	Gulgong	Mid-Western Regional	LGOV
House	17 Herbert Street	Gulgong	Mid-Western Regional	LGOV
House	20 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - Gulgong	25 Herbert Street	Gulgong	Mid-Western Regional	LGOV
House	27 Herbert Street	Gulgong	Mid-Western Regional	LGOV
House	26 Herbert Street	Gulgong	Mid-Western Regional	LGOV
House	32 Herbert Street	Gulgong	Mid-Western Regional	LGOV
House	50 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Museum - Gulgong Pioneer	57-73 Herbert Street	Gulgong	Mid-Western Regional	LGOV
House	57 Herbert Street	Gulgong	Mid-Western Regional	LGOV

Shop and Residence	62 Herbert Street	Gulgong	Mid-Western Regional	LGOV
House	70 Herbert Street	Gulgong	Mid-Western Regional	LGOV
House	74 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - Gulgong	74A Herbert Street	Gulgong	Mid-Western Regional	LGOV
Shop - Golden West Trading Post	75 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Shop - Gulgong Dry Cleaners	77 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - Gulgong	78 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - Gulgong	79-83 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Farmers and Graziers Co-op	85 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - Mudgee	87 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Shop	89 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Hotel - Post Office	97 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Bank - Australian Joint Stock	101 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Fire Station	102 Herbert Street	Gulgong	Mid-Western Regional	LGOV
House	105 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Wyaldra Shire Hall	109 Herbert Street	Gulgong	Mid-Western Regional	LGOV
House	115 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Silos and House	Homer Street	Gulgong	Mid-Western Regional	LGOV
Cottage - Haleys	Little Belmore Street	Gulgong	Mid-Western Regional	LGOV
House	4 Loftus Street	Gulgong	Mid-Western Regional	LGOV
House	8 Lynne Street	Gulgong	Mid-Western Regional	LGOV
House	10 Lynne Street	Gulgong	Mid-Western Regional	LGOV
House	11 Lynne Street	Gulgong	Mid-Western Regional	LGOV
House	24 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	27 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	38 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	45 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	46 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	49 Mayne Street	Gulgong	Mid-Western Regional	LGOV

House	51 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	56 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	59 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	74 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	76 ? Mayne Street ?	Gulgong	Mid-Western Regional	LGOV
House	78 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	80 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Shop	88 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	89 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - Gulgong Jas Loneragan	90-100 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Shop and Residence	91 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	97 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Hotel - Prince of Wales	97 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Bank - CBC - Gulgong	101-103 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - Gulgong	102 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - Gulgong	104 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Opera House - Prince of Wales	99 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - Gulgong	107 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Shop - Greatest Wonder of the World	123 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - American Tobacco Warehouse	125 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - Gulgong	127 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - Gulgong	128-132 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - Gulgong	131-133 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Shop - The Coffee House	137 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - Gulgong	139 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Hotel - Centennial - Gulgong	145 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Henry Lawson Centre, The	147 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	149 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	148 Mayne Street	Gulgong	Mid-Western Regional	LGOV

House	153 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	155 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House - Cullengoral	156 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	161 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	162 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	164 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Shop	165 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	166 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	167 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Motel - Ten Dollar Town	Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	169 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	192 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	200 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Hospital - Gulgong District	206 Mayne Street	Gulgong	Mid-Western Regional	LGOV
House	55 Main Road	Gulgong	Mid-Western Regional	LGOV
House	33 Medley Street	Gulgong	Mid-Western Regional	LGOV
House	35 Medley Street	Gulgong	Mid-Western Regional	LGOV
House	37 Medley Street	Gulgong	Mid-Western Regional	LGOV
House	39 Medley Street	Gulgong	Mid-Western Regional	LGOV
House	44 Medley Street	Gulgong	Mid-Western Regional	LGOV
House	45 Medley Street	Gulgong	Mid-Western Regional	LGOV
House	51 Medley Street	Gulgong	Mid-Western Regional	LGOV
House	56 Medley Street	Gulgong	Mid-Western Regional	LGOV
House	58-60 Medley Street	Gulgong	Mid-Western Regional	LGOV
Police Station - Gulgong	61 Medley Street	Gulgong	Mid-Western Regional	LGOV
House	62 Medley Street	Gulgong	Mid-Western Regional	LGOV
Church Uniting - Gulgong - Hall	64 Medley Street	Gulgong	Mid-Western Regional	LGOV
House - Albury	68 Medley Street	Gulgong	Mid-Western Regional	LGOV
House - Albury	Bayly Street	Gulgong	Mid-Western Regional	LGOV

House	75 Medley Street	Gulgong	Mid-Western Regional	LGOV
Museum - Phonograph	78 Medley Street	Gulgong	Mid-Western Regional	LGOV
House	86 Medley Street	Gulgong	Mid-Western Regional	LGOV
House - Merry	100 Medley Street	Gulgong	Mid-Western Regional	LGOV
House	104 Medley Street	Gulgong	Mid-Western Regional	LGOV
House	108 Medley Street	Gulgong	Mid-Western Regional	LGOV
House	110 Medley Street	Gulgong	Mid-Western Regional	LGOV
House	5 Moonlight Street	Gulgong	Mid-Western Regional	LGOV
House	4 Nandoura Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - Gulgong	33 Queen Street	Gulgong	Mid-Western Regional	LGOV
Commercial Building - Gulgong	35 Queen Street	Gulgong	Mid-Western Regional	LGOV
House	40 Queen Street	Gulgong	Mid-Western Regional	LGOV
House	56 Queen Street	Gulgong	Mid-Western Regional	LGOV
House	60 Queen Street	Gulgong	Mid-Western Regional	LGOV
House	62 Queen Street	Gulgong	Mid-Western Regional	LGOV
House	Railway Street	Gulgong	Mid-Western Regional	LGOV
Reef Street	Reef Street	Gulgong	Mid-Western Regional	LGOV
House	1 Robinson Street	Gulgong	Mid-Western Regional	LGOV
House	3 Robinson Street	Gulgong	Mid-Western Regional	LGOV
School - Gulgong Former	Robinson Street	Gulgong	Mid-Western Regional	LGOV
House	Robinson Street (Corner)	Gulgong	Mid-Western Regional	LGOV
House	Loftus Street	Gulgong	Mid-Western Regional	LGOV
House	Scully Street (Corner)	Gulgong	Mid-Western Regional	LGOV
House	Cooyal Street	Gulgong	Mid-Western Regional	LGOV
Railway Station and Stationmaster's House	Saleyards Lane	Gulgong	Mid-Western Regional	LGOV
Flour Mill - Loneragans	2 Station Street	Gulgong	Mid-Western Regional	LGOV
House	9 Station Street	Gulgong	Mid-Western Regional	LGOV
House	Lot 66 Station Street	Gulgong	Mid-Western Regional	LGOV
House	23 Tallawang Street	Gulgong	Mid-Western Regional	LGOV

House	Prince Street	Gulgong	Mid-Western Regional	LGOV
House	29 Tallawang Street	Gulgong	Mid-Western Regional	LGOV
House	Prince Street	Gulgong	Mid-Western Regional	LGOV
House	Tallawang Street (Corner)	Gulgong	Mid-Western Regional	LGOV
House	Bligh Street	Gulgong	Mid-Western Regional	LGOV
House	11 White Street	Gulgong	Mid-Western Regional	LGOV
House	Lynne Street	Gulgong	Mid-Western Regional	LGOV
House	Wilbertree Street	Gulgong	Mid-Western Regional	LGOV
House	McDonald Street	Gulgong	Mid-Western Regional	LGOV
House	Main Road 233	Gulgong	Mid-Western Regional	LGOV
Gulgong Grandstand	Victoria Park	Gulgong	Mid-Western Regional	LGOV
Showground - Gulgong		Gulgong	Mid-Western Regional	LGOV
Homestead - Lue Station	Lue Road	Lue	Mid-Western Regional	LGOV
Homestead - Lue Station - John Riley's Grave	Lue Road	Lue Station	Mid-Western Regional	LGOV
Railway Station and Stationmaster's House	Swanston Street	Lue	Mid-Western Regional	LGOV
Hotel and Residence - Lue	Cox Street	Lue	Mid-Western Regional	LGOV
Shop	Cox Street	Lue	Mid-Western Regional	LGOV
Railway Viaduct	Lue Road	Lue	Mid-Western Regional	LGOV
Homestead - Morrow Olga	Goolma Road	Biraganbil	Mid-Western Regional	LGOV
Item			Mid-Western Regional	LGOV
House - Putta Bucca House	Putta Bucca Road	Putta Bucca	Mid-Western Regional	LGOV
Cottage - Gawthorne	Lue Road		Mid-Western Regional	LGOV
Homestead - Wilgowra	499 Lue Road	Milroy	Mid-Western Regional	LGOV
Brickworks - Mudgee	89 Henry Lawson Drive	Bombira	Mid-Western Regional	LGOV
Homestead - Melrose Park	227 Melrose Road	Mount Frome	Mid-Western Regional	LGOV
Winery - Erudgere	Hargraves-Hill End Road	Erudgere	Mid-Western Regional	LGOV
Henry Lawson Memorial	Henry Lawson Drive	Eurundury	Mid-Western Regional	LGOV
Trees - Avenue of	Cassilis Road	Bumberra	Mid-Western Regional	LGOV
Inn - Loaded Dog		Eurundury	Mid-Western Regional	LGOV

Winery - Craigmoor	815 Craigmoor Road	Eurundury	Mid-Western Regional	LGOV
Shop - Budgee Budgee		Eurundury	Mid-Western Regional	LGOV
Homestead - Spring Ridge	1817 Spring Ridge Road	Tallawang	Mid-Western Regional	LGOV
Homestead - Beragoo	1719 Hill End Road	Grattai	Mid-Western Regional	LGOV
Railway Dam and Pump Shed		Gulgong	Mid-Western Regional	LGOV
Homestead - The Lagoon	Dunedoo Road	Guntawang	Mid-Western Regional	LGOV
Gold Mine - Former		Guntawang	Mid-Western Regional	LGOV
School - National School Building	Bowen Street	Hargraves	Mid-Western Regional	LGOV
Church Anglican - Hargraves - St Stephen's	Merinda Street	Hargraves	Mid-Western Regional	LGOV
House	Merinda Street	Hargraves	Mid-Western Regional	LGOV
Houses - Terrace	Merinda Street	Hargraves	Mid-Western Regional	LGOV
Church Catholic - Hargraves	Merinda Street	Hargraves	Mid-Western Regional	LGOV
House	Bowen Street	Hargraves	Mid-Western Regional	LGOV
Cemetery - Catholic		Hargraves	Mid-Western Regional	LGOV
Homestead - Wallinga	Wallinga Lane	Spring Flat	Mid-Western Regional	LGOV
Homestead - Carleon Park	273 Castlereagh Highway	Mudgee	Mid-Western Regional	LGOV
Redbank Dam		South Mudgee	Mid-Western Regional	LGOV
Brickworks - Kenny's	Sawpit Road	South Mudgee	Mid-Western Regional	LGOV
Homestead - Menah		Munna	Mid-Western Regional	LGOV
Tree - Camping	Wilbertree Road	Munna	Mid-Western Regional	LGOV
Tree - River Red Gum	Wilbertree Road	Munna	Mid-Western Regional	LGOV
School - Cullenbone Former	1346 Castlereagh Highway	Cullenbone	Mid-Western Regional	LGOV
Cemetery - Catholic - Pyramul	Prices Lane	Pyramul	Mid-Western Regional	LGOV
Tambaroora - Hill End Cemetary		Tambaroora	Mid-Western Regional	LGOV
Item			Mid-Western Regional	LGOV
Church Anglican - Windeyer	Browne Street	Windeyer	Mid-Western Regional	LGOV
School - Windeyer	Mudgee Street	Windeyer	Mid-Western Regional	LGOV
Hotel - Gold and Fleece	319 Mudgee Street	Windeyer	Mid-Western Regional	LGOV
Church Anglican - St Luke's Wollar	13 Barigan Road	Wollar	Mid-Western Regional	LGOV

School - Residence - Home Rule		Wyaldra	Mid-Western Regional	LGOV
Homestead - Yamble & Woolshed	Goolma Road	Gulgong	Mid-Western Regional	LGOV
Homestead - Guntawang - Including Garden and Stables	Goolma Road	Gulgong	Mid-Western Regional	LGOV
House - Loyola	77 Mayne Street	Gulgong	Mid-Western Regional	LGOV
Ulan County Council	Herbert Street	Gulgong	Mid-Western Regional	LGOV
Post Office - Gulgong	94 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Court House - Gulgong	98 Herbert Street	Gulgong	Mid-Western Regional	LGOV
Police Station - Courthouse	Merinda Street	Hargraves	Mid-Western Regional	LGOV
Council Chambers - Former	90 Market Street	Mudgee	Mid-Western Regional	LGOV
Post Office - Mudgee	80 Market Street	Mudgee	Mid-Western Regional	LGOV
Court House - Mudgee	96 Market Street	Mudgee	Mid-Western Regional	LGOV
Town Hall - Mudgee	64 Market Street	Mudgee	Mid-Western Regional	LGOV
School - Mudgee Public	44 Perry Street	Mudgee	Mid-Western Regional	LGOV
Police Residence - Former	88 Market Street	Mudgee	Mid-Western Regional	LGOV
Museum - Pioneers - Mudgee	126 Market Street	Mudgee	Mid-Western Regional	LGOV
Stables Complex	82 Market Street	Mudgee	Mid-Western Regional	LGOV
Church Anglican - St John The Baptist Mudgee	Market Street	Mudgee	Mid-Western Regional	LGOV
Hotel - Niven's Spring Ridge	Cobbora Road	Spring Ridge	Mid-Western Regional	LGOV
Cemetery - Mudgee General and Lawn	Ulan Road	Buckaroo	Mid-Western Regional	LGOV
Kandos Uniting Church	Dunn Street	Kandos	Mid-Western Regional	LGOV
Band Rotunda	Angus Avenue	Kandos	Mid-Western Regional	LGOV
Police Residence	Louee Street	Rylstone	Mid-Western Regional	LGOV
Police Station	Louee Street	Rylstone	Mid-Western Regional	LGOV
Court House	Louee Street	Rylstone	Mid-Western Regional	LGOV
Post Office	79-81 Louee Street	Rylstone	Mid-Western Regional	LGOV
Shire Office	77 Louee Street	Rylstone	Mid-Western Regional	LGOV
Hall Group	Louee Street	Rylstone	Mid-Western Regional	LGOV
Railway Station Rylstone	Dabee	Rylstone	Mid-Western Regional	LGOV
Railway Station Clandulla		Clandulla	Mid-Western Regional	LGOV

St. Lawrence Anglican Church	Angus Avenue	Kandos	Mid-Western Regional	LGOV
Kandos Post Office	Angus Avenue	Kandos	Mid-Western Regional	LGOV
Kandos Bicentennial Industrial Museum	Buchanan Street	Kandos	Mid-Western Regional	LGOV
Court House	Ilford Road	Kandos	Mid-Western Regional	LGOV
Kandos School	Fleming Street	Kandos	Mid-Western Regional	LGOV
Kandos Railway Station	Davies Road	Kandos	Mid-Western Regional	LGOV
St. Dominic's Church Group	Dangar Street	Kandos	Mid-Western Regional	LGOV
Ilford Uniting Church	Ilford Hall Road	Ilford	Mid-Western Regional	LGOV
St. Paul's Church of England	Sofala Road	Ilford	Mid-Western Regional	LGOV
Ilford Catholic Church	Mudgee Road	Ilford	Mid-Western Regional	LGOV
Church of England	Bylong Road	Bylong	Mid-Western Regional	LGOV
Crudine School		Crudine	Mid-Western Regional	LGOV
Ilford Cemetery	Cafe's Road	Ilford	Mid-Western Regional	LGOV
Running Stream Cemetery	Mudgee Road	Running Stream	Mid-Western Regional	LGOV
St. James' Rectory	Mudgee Street	Rylstone	Mid-Western Regional	LGOV
St. James' Anglican Church	Mudgee Street	Rylstone	Mid-Western Regional	LGOV
St. Malachy's Catholic Church	Louee Street	Rylstone	Mid-Western Regional	LGOV
Ilford School	Mudgee Road	Ilford	Mid-Western Regional	LGOV
Wishing Well	Castlereagh Highway	Road Reserve Cherry Tree Hill	Mid-Western Regional	LGOV
Union Church	Mudgee Road	Running Stream	Mid-Western Regional	LGOV
Crudine Cemetery	Crudine Road	Ilford	Mid-Western Regional	LGOV
Goulburn Courthouse and Residence	Montague Street	Goulburn	Mid-Western Regional	SGOV
Gulgong Courthouse	Herbert Street	Gulgong	Mid-Western Regional	SGOV
Mudgee Courthouse and Residence	Market Street	Mudgee	Mid-Western Regional	SGOV
Rylstone Courthouse	Louee Street (Cnr Cox St)	Rylstone	Mid-Western Regional	SGOV
Gulgong Ambulance Station	Robinson,medley Streets	Gulgong	Mid-Western Regional	SGOV
Original building	Wellington Road	Gulgong	Mid-Western Regional	SGOV
Original Buildings	MEARES and LEWIS STREETS	Mudgee	Mid-Western Regional	SGOV
Quartz Roasting Pits Complex	10km North	Hill End	Mid-Western Regional	SGOV

Gulgong Police Station and Official Residence	61 Medley Street	Gulgong	Mid-Western Regional	SGOV
Gulgong Official Residence 3	63 Medley Street	Gulgong	Mid-Western Regional	SGOV
Mudgee Police Station	94 Market Street	Mudgee	Mid-Western Regional	SGOV
Rylstone Police Station and Official Residence 2	89 Louee Street	Rylstone	Mid-Western Regional	SGOV
Rylstone Official Residence 1	85 Louee Street	Rylstone	Mid-Western Regional	SGOV
Goulburn Academy Residence 31	56 Montague Street	Goulburn	Mid-Western Regional	SGOV
Goulburn Police Station Office	276 Sloane Street	Goulburn	Mid-Western Regional	SGOV
Goulburn Police Station	274 Sloane Street	Goulburn	Mid-Western Regional	SGOV
Gulgong Railway Station	Railway Street	Gulgong	Mid-Western Regional	SGOV
Lue Railway Station		Lue	Mid-Western Regional	SGOV
Mudgee Railway Precinct	Inglis Street	Mudgee	Mid-Western Regional	SGOV
Rylstone Railway Precinct	Dabee Street	Rylstone	Mid-Western Regional	SGOV
Kandos Railway Station	Davies Road	Kandos	Mid-Western Regional	SGOV
Clandulla Railway Station		Clandulla	Mid-Western Regional	SGOV
Munna, Cudgegong River Underbridge	railway location: 318.087 km, Between Mudgee and Gulgong	Munna	Mid-Western Regional	SGOV
Lue Road Underbridge	Timber Bridge Over Rylstone-mudgee Road	Lue	Mid-Western Regional	SGOV
Thornes Bridge Over Mulwaree River		Goulburn	Mid-Western Regional	SGOV
Lansdowne Bridge Over Mulwaree Ponds	Goulburn-bungonia Road	Goulburn	Mid-Western Regional	SGOV
Gulgong Fire Station	104 Herbert Street	Gulgong	Mid-Western Regional	SGOV

There was a total of 496 records matching your search criteria.

Key:

LGA = Local Government Area

GAZ= NSW Government Gazette (statutory listings prior to 1997), HGA = Heritage Grant Application, HS = Heritage Study, LGOV = Local Government, SGOV = State Government Agency.

Note: The Heritage Branch seeks to keep the State Heritage Inventory (SHI) up to date, however the latest listings in Local and Regional Environmental Plans (LEPs and REPs) may not yet be included. Always check with the relevant local council or shire for the most recent listings.

APPENDIX C

SOILS AND CONTAMINATED LAND SEARCHES



Contaminated land

- + [Management of contaminated land](#)
- + [Consultants and site auditor scheme](#)
- + [Underground petroleum storage systems](#)
- + [Guidelines under the CLM Act](#)
- [Further guidance](#)
- [Record of notices](#)
- [About the record](#)
- [Search the record](#)
- [Search tips](#)
- [Disclaimer](#)
- [List of NSW contaminated sites notified to EPA](#)
- [Frequently asked questions](#)
- [Forms](#)
- + [Other contamination issues](#)

You are here: [Home](#) > [Contaminated land](#) > [Record of notices](#)

Search results

Your search for: LGA: Mid-Western Regional Council

Matched 2 notices relating to 1 site.

[Search Again](#)[Refine Search](#)

Suburb	Address	Site Name	Notices related to this site
Mudgee	Corner Inglis Street and Douro Street	Mudgee Mobil Depot	2 current

Page 1 of 1

29 August 2012

APPENDIX D

ACQUISITION PLANS

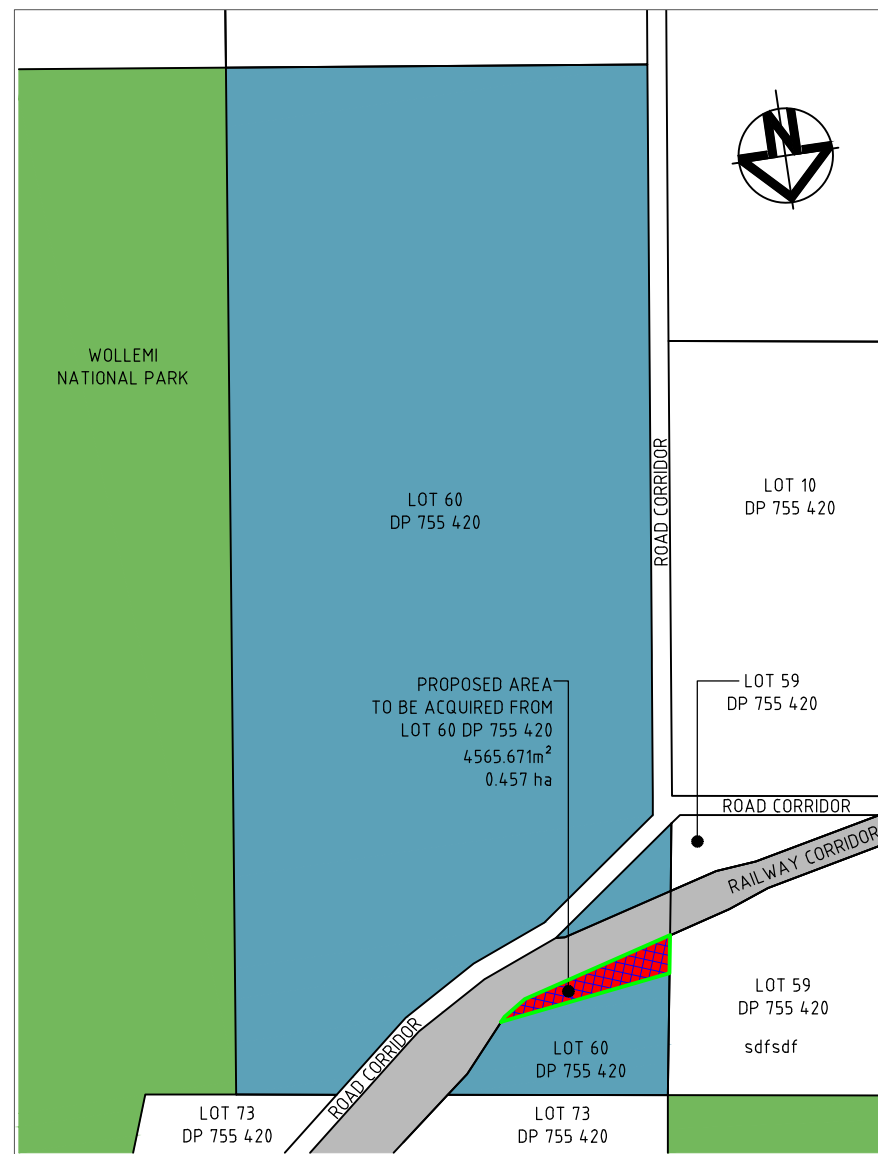
PRELIMINARY ACQUISITION PLAN

PROPERTY OWNER : BROWN & OTHERS

LOT 60 DP 755 420

EXISTING PARCEL AREA: 45.800 ha
APPROXIMATE ACQUISITION AREA : 0.457 ha

ACQUISITION SUBJECT TO FINAL SURVEY AND DESIGN APPROVAL

PLAN
1: 8000

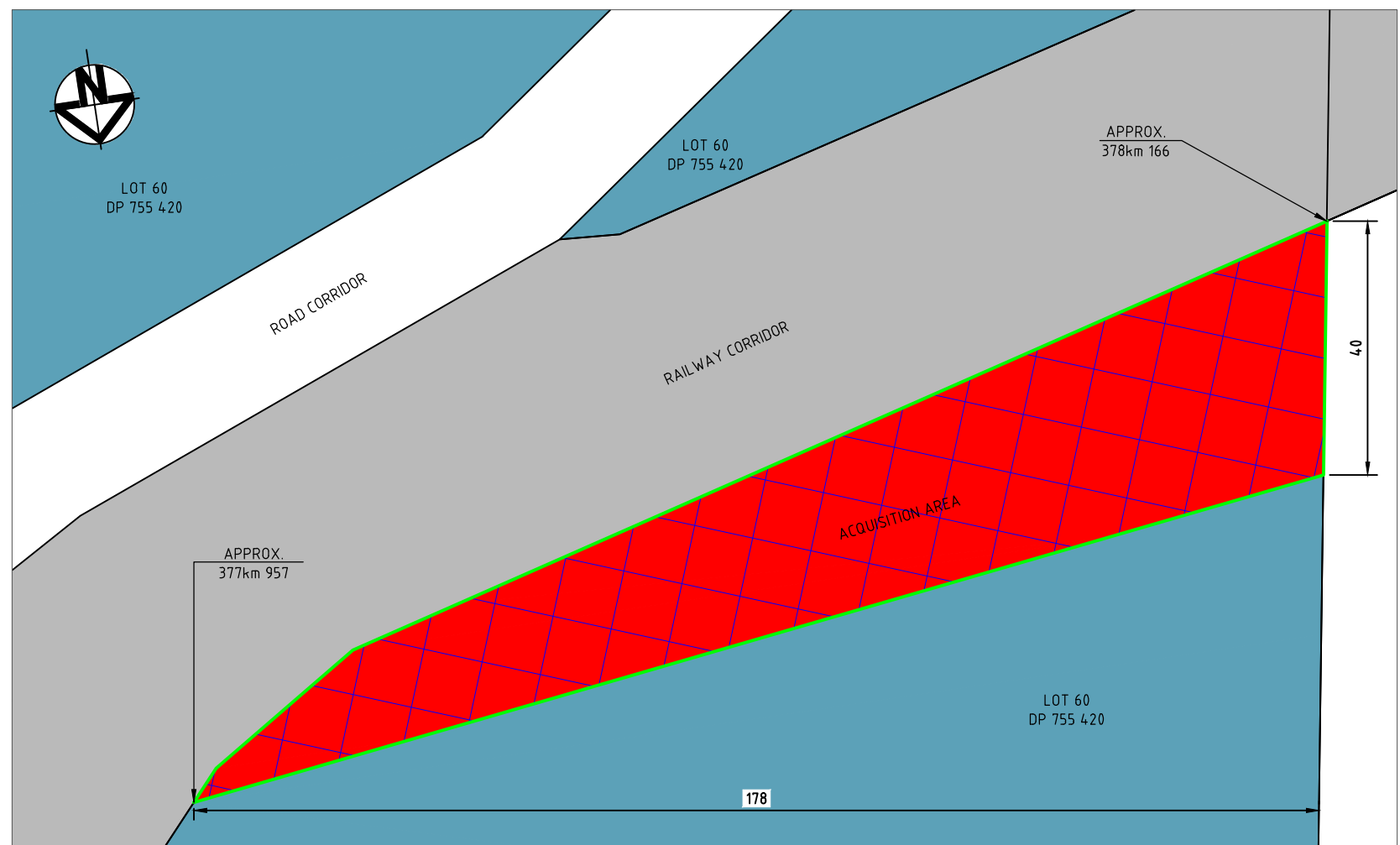
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	RAILWAY CORRIDOR
	PROPOSED AREA TO BE ACQUIRED
	EXISTING PROPERTY AREA

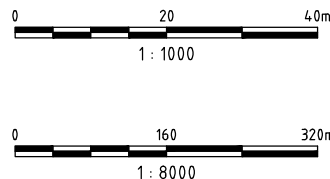
PROPOSED PRELIMINARY ACQUISITION AREA		
DP No.	AREA	
LOT 60 DP 755 420	4565.671 m ²	0.457 ha
TOTAL	4565.671 m ²	0.457 ha

NOTE:

- ALL DIMENSIONS SUBJECT TO FINAL DESIGN & SURVEY

PLAN
1: 1000

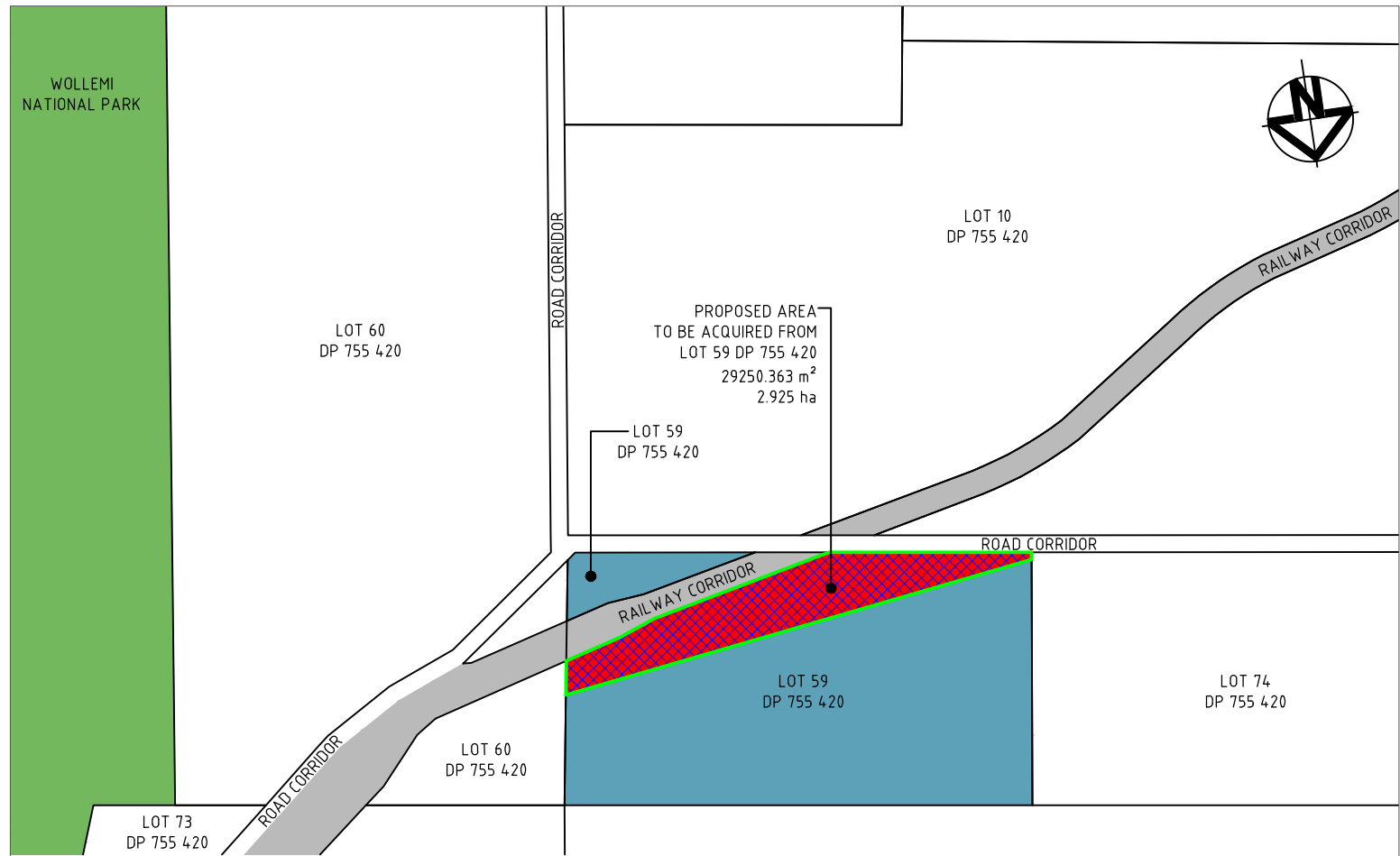
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Issue	Description	Date



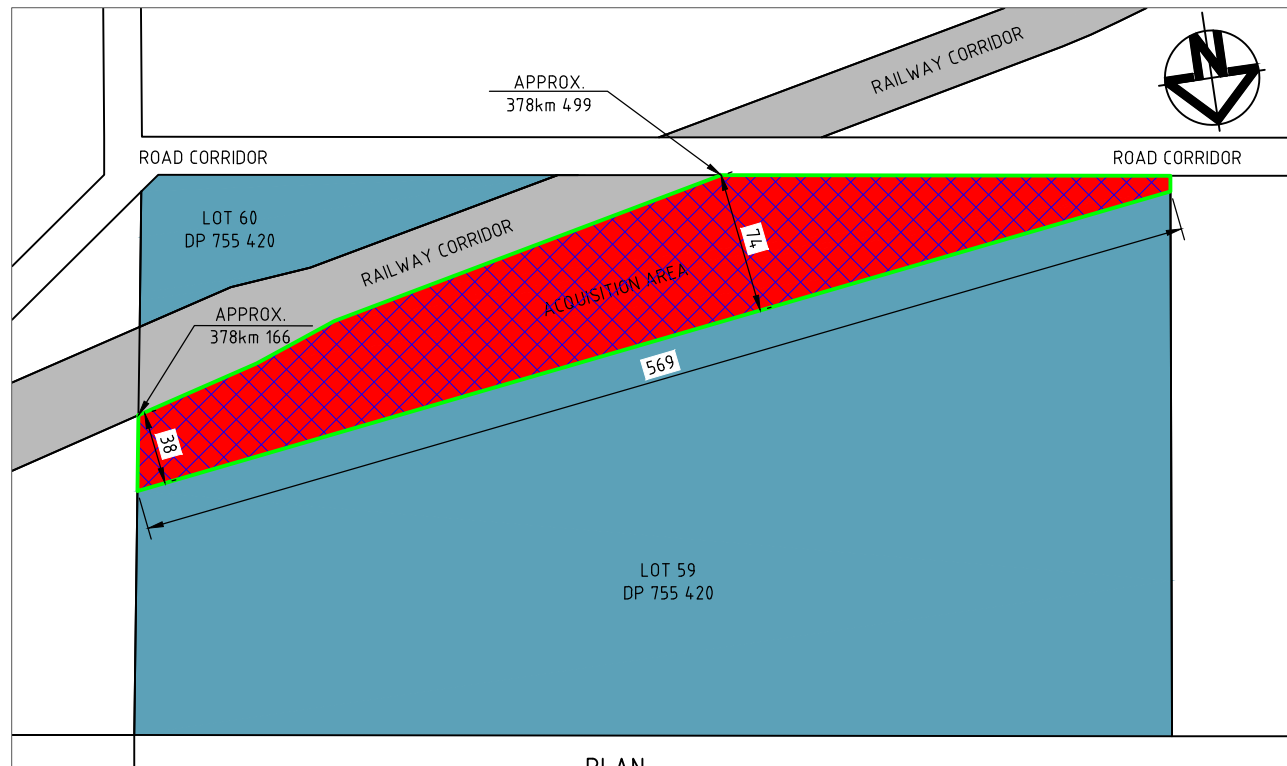
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Datum	AHD	Checked	K. TASESKI
Grid		Approved	L. PALMER
Filename:	P-003-a3-aa002708-nsk-00.dwg		

Project		ULAN + ALLIANCE
Title		PRELIMINARY ACQUISITION PLAN LOT 60 - DP 755 420

HYDER CONSULTING PTY LTD		
ABN 76 104 485 289 Level 5, 141 Walker St North Sydney NSW 2060 Australia		
Tel: +61 (0)2 8907 9000 Fax: +61 (0)2 8907 9001 www.hyderconsulting.com © Copyright reserved		
Drawing No.	Project No.	Issue
P-003	AA002708	P1



PLAN
1: 8000



PLAN
1: 4000

PRELIMINARY ACQUISITION PLAN

PROPERTY OWNER : BROWN & OTHERS

LOT 59 DP 755 420

EXISTING PARCEL AREA: 15.222 ha
APPROXIMATE ACQUISITION AREA : 2.925 ha

ACQUISITION SUBJECT TO FINAL SURVEY AND DESIGN APPROVAL

LEGEND

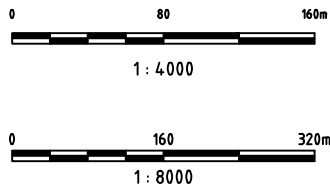
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	RAILWAY CORRIDOR
	PROPOSED AREA TO BE ACQUIRED
	EXISTING PROPERTY AREA

PROPOSED PRELIMINARY ACQUISITION AREA		
DP No.	AREA	
LOT 59 DP 755 420	29250.363 m ²	2.925 ha
TOTAL	29250.363 m ²	2.925 ha

NOTE:

- ALL DIMENSIONS SUBJECT TO FINAL DESIGN & SURVEY

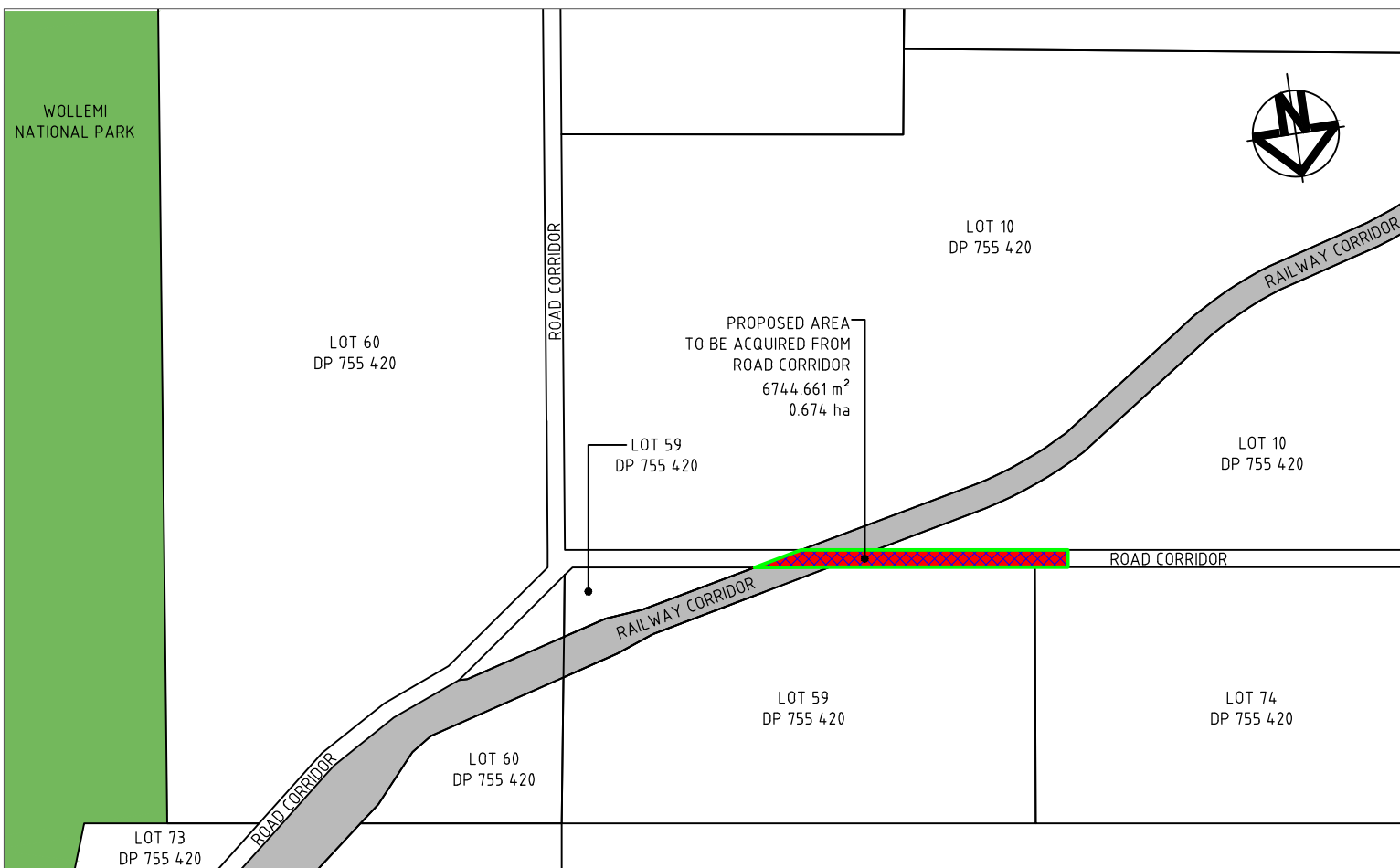
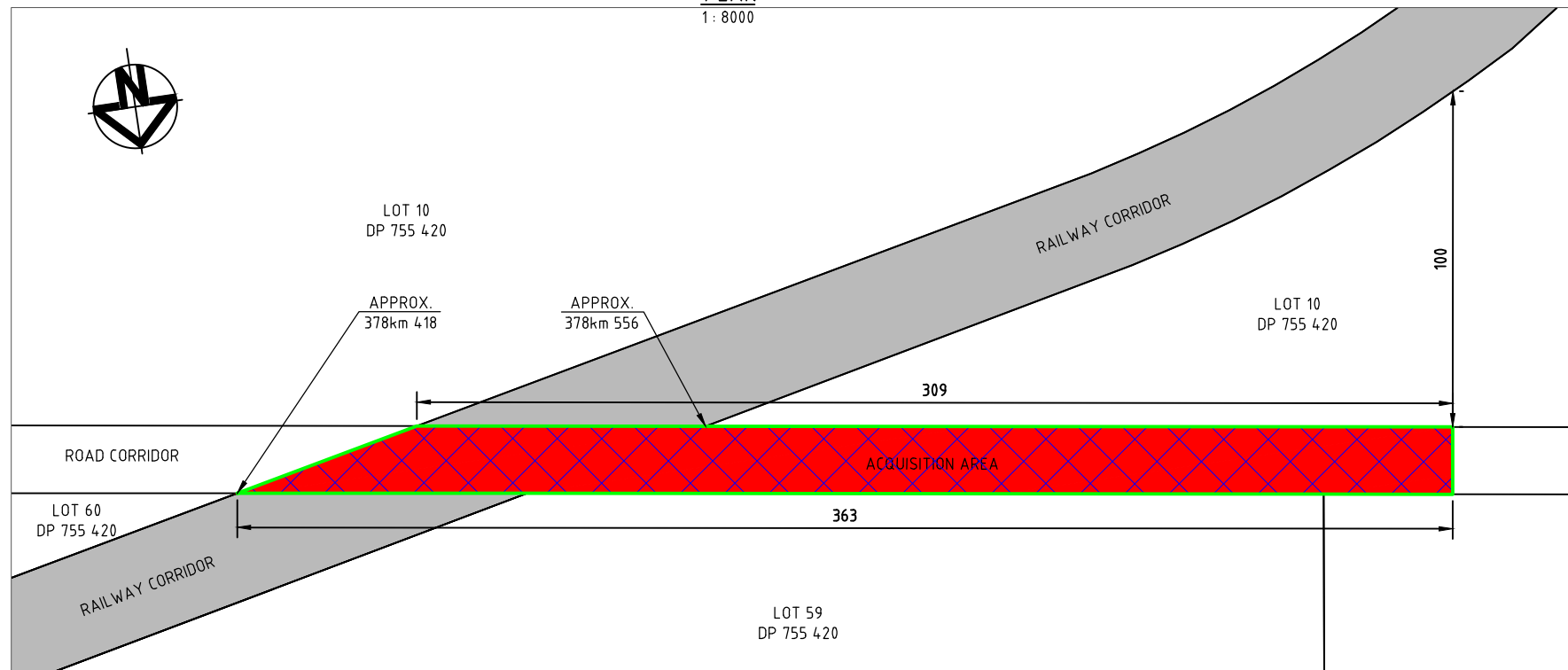
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Issue	Description	Date



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Filename:	P-004-a3-aa002708-nsk-00.dwg	

Project ULAN + ALLIANCE	
Title PRELIMINARY ACQUISITION PLAN LOT 59 - DP 755 420	

HYDER CONSULTING PTY LTD ABN 76 104 485 289 Level 5, 141 Walker St North Sydney NSW 2060 Australia Tel: +61 (0)2 8907 9000 Fax: +61 (0)2 8907 9001 www.hyderconsulting.com © Copyright reserved		
Drawing No. P-004	Project No. AA002708	Issue P1

PLAN
1: 8000PLAN
1: 2000

LEGEND

—	EXISTING PARCEL BOUNDARY
■	RAILWAY CORRIDOR
■	PROPOSED AREA TO BE ACQUIRED
■	EXISTING PROPERTY AREA

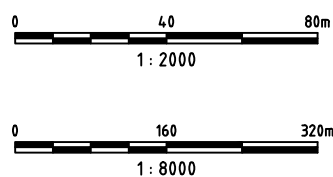
PROPOSED PRELIMINARY ACQUISITION AREA

DP No.	AREA	
ROAD CORRIDOR	6744.661 m ²	0.674 ha
TOTAL	6744.661 m ²	0.674 ha

NOTE:

- ALL DIMENSIONS SUBJECT TO FINAL DESIGN & SURVEY

P1	FOR INFORMATION ONLY	20/08/12
Issue	Description	Date



Status	PRELIMINARY NOT FOR CONSTRUCTION	
Scales	1:2000	Current Issue Signatures
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Height Datum	AHD	Designed V.NGUYEN
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Filename:	P-005-a3-aa002708-nsk-00.dwg	

Project	ULAN + ALLIANCE	
Title	PRELIMINARY ACQUISITION PLAN ROAD CORRIDOR	

HYDER CONSULTING PTY LTD		
ABN 76 104 485 289 Level 5, 141 Walker St North Sydney NSW 2060 Australia		
Tel: +61 (0)2 8907 9000 Fax: +61 (0)2 8907 9001 www.hyderconsulting.com © Copyright reserved		
Drawing No.	Project No.	Issue
P-005	AA002708	P1



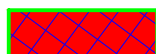

PRELIMINARY ACQUISITION PLAN

PROPERTY OWNER : ANDREWS

LOT 10 DP 755 420

EXISTING PARCEL AREA: 99.476 ha
APPROXIMATE ACQUISITION AREA : 10.701 haACQUISITION SUBJECT TO FINAL
SURVEY AND DESIGN APPROVAL

LEGEND

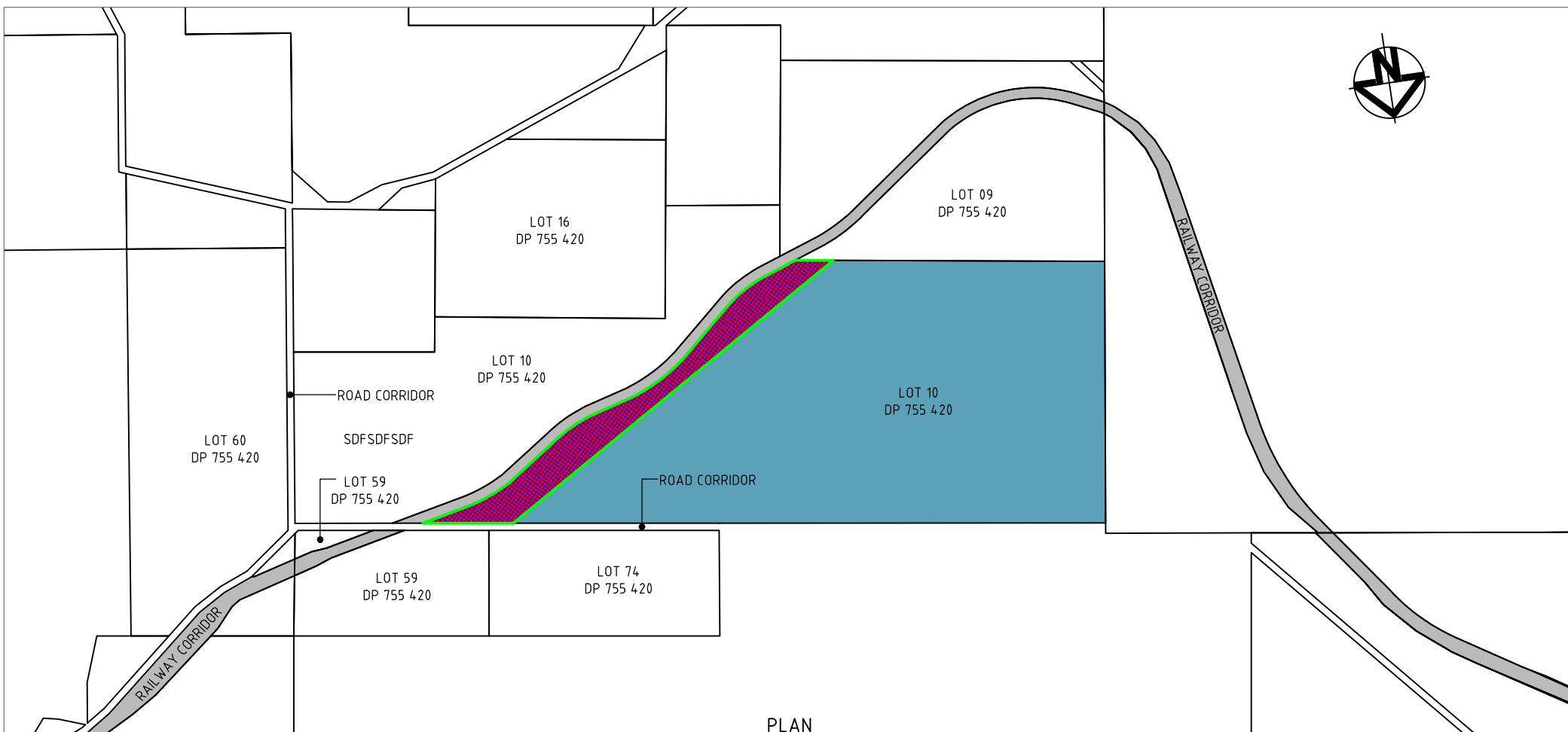
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	RAILWAY CORRIDOR
	PROPOSED AREA TO BE ACQUIRED
	EXISTING PROPERTY AREA

PROPOSED PRELIMINARY ACQUISITION AREA

DP No.	AREA	
LOT 59 DP 755 420	100700.900 m ²	10.701 ha
TOTAL	100700.900 m ²	10.701 ha

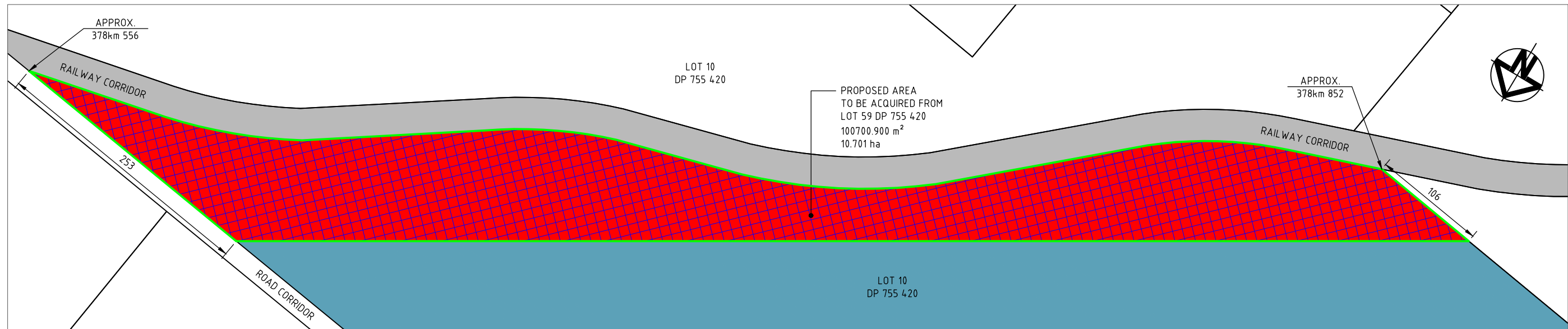
NOTE:

- ALL DIMENSIONS SUBJECT TO FINAL DESIGN & SURVEY



PLAN

1 : 16000



PLAN

1 : 4000

SCALE AS SHOWN

P1	FOR INFORMATION ONLY	20/08/12
Issue	Description	Date

Client



Status

PRELIMINARY
NOT FOR CONSTRUCTION

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Project

ULAN + ALLIANCE

Title

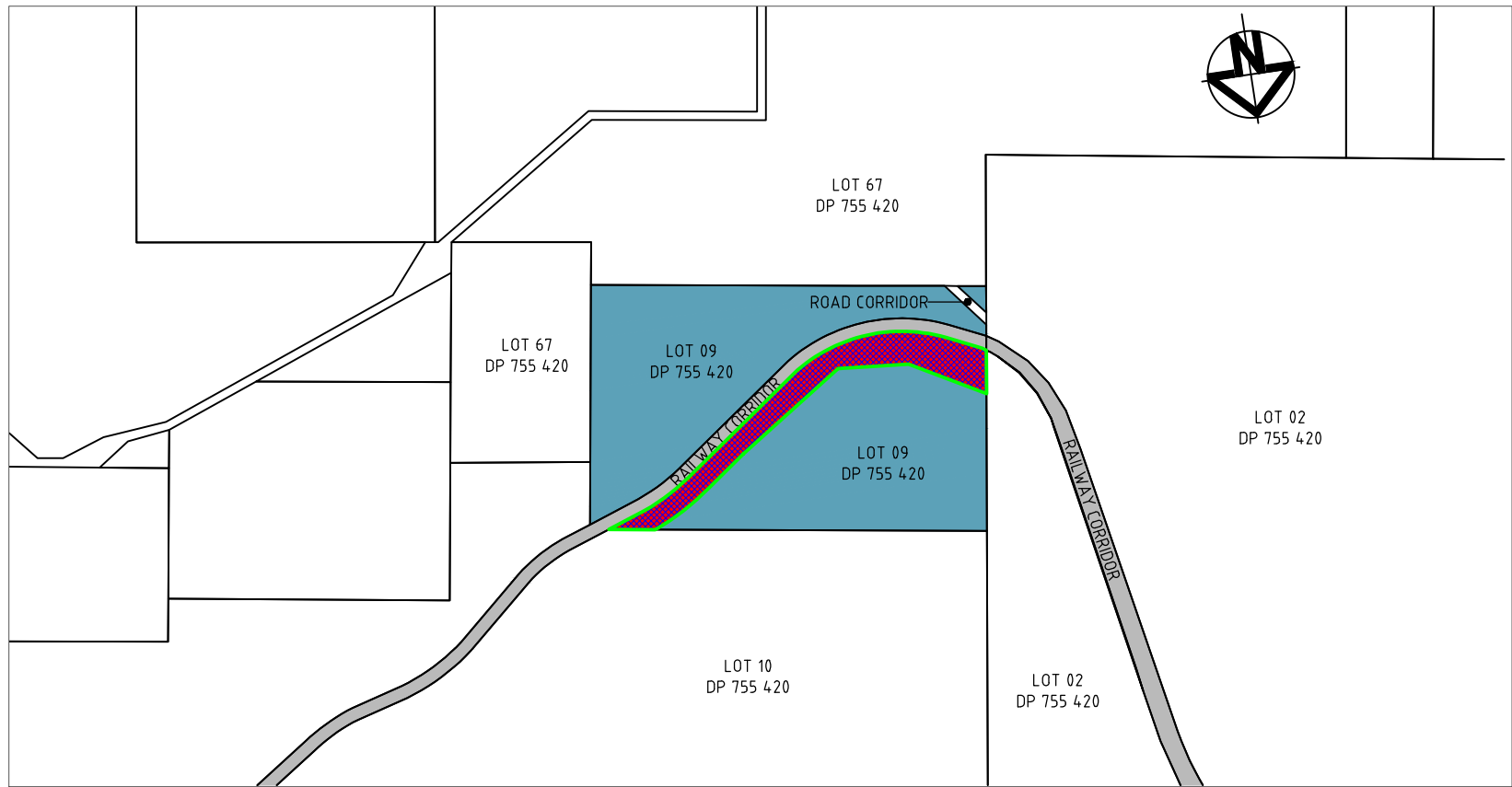
PRELIMINARY
ACQUISITION PLAN
LOT 10 DP 755 420

HYDER CONSULTING PTY LTD

ABN 76 104 485 289
Level 5, 141 Walker St
North Sydney NSW 2060
AustraliaTel: +61 (0)2 8907 9000
Fax: +61 (0)2 8907 9001
www.hyderconsulting.com
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Drawing No. Project No. Issue

P-006 - AA002708 - P1



PLAN
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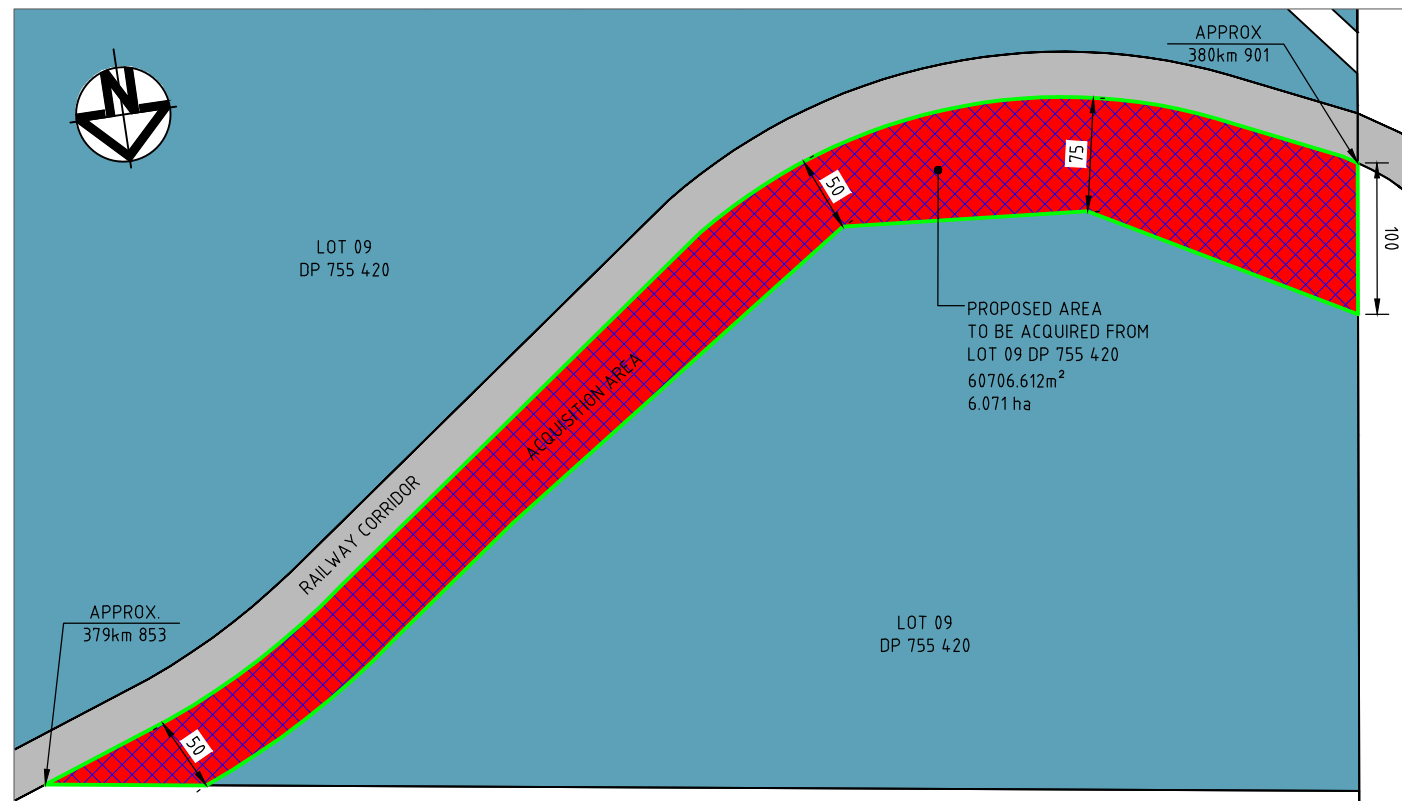
PRELIMINARY ACQUISITION PLAN

PROPERTY OWNER : ANDREWS

LOT 09 DP 755 420

EXISTING PARCEL AREA: 47.753 ha
APPROXIMATE ACQUISITION AREA : 6.071 ha

ACQUISITION SUBJECT TO FINAL SURVEY AND DESIGN APPROVAL



PLAN
1: 5000

LEGEND

- EXISTING PARCEL BOUNDARY
- RAILWAY CORRIDOR
- PROPOSED AREA TO BE ACQUIRED
- EXISTING PROPERTY AREA

PROPOSED PRELIMINARY ACQUISITION AREA

DP No.	AREA	
LOT 09 DP 755 420	60706.612 m ²	6.071 ha
TOTAL	60706.612 m ²	6.071 ha

NOTE:

- ALL DIMENSIONS SUBJECT TO FINAL DESIGN & SURVEY

SCALE AS SHOWN



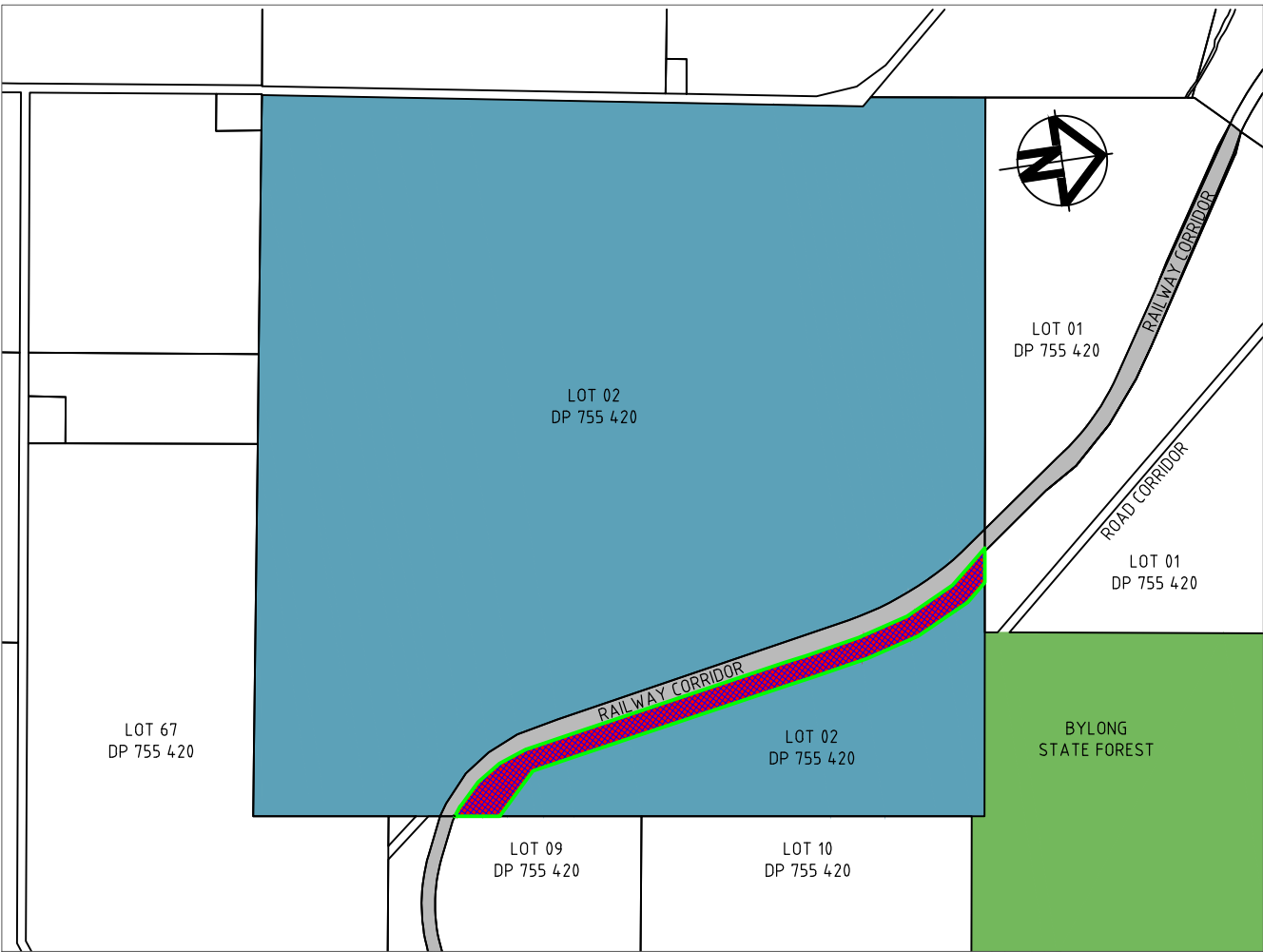
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Datum		Checked	K. TASESKI
Grid		Approved	L. PALMER
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Title PRELIMINARY ACQUISITION PLAN LOT 09 DP 755 420	

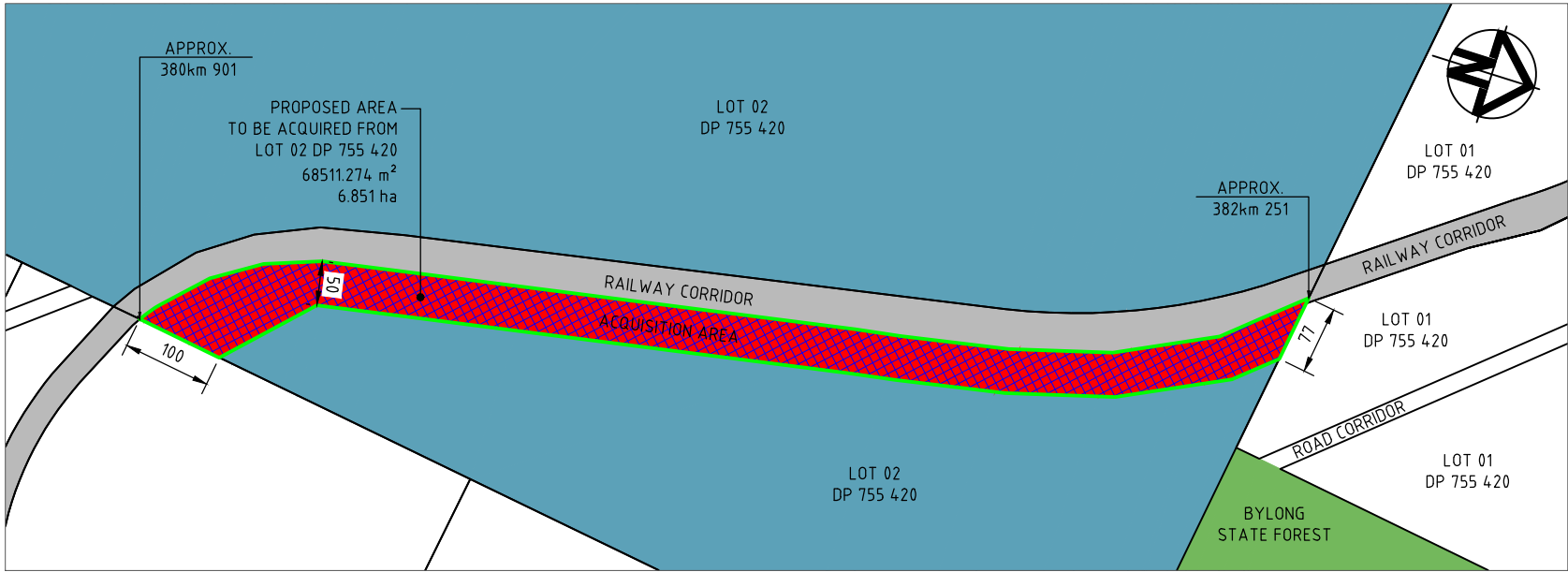


Drawing No.	Project No.	Issue
P-007	AA002708	P1

P1	FOR INFORMATION ONLY	20/08/12
Issue	Description	Date



PLAN
1: 16000



PLAN
1: 8000

PRELIMINARY ACQUISITION PLAN

PROPERTY OWNER : ANDREWS

LOT 02 DP 755 420

EXISTING PARCEL AREA: 47.753 ha
APPROXIMATE ACQUISITION AREA : 6.851 ha

ACQUISITION SUBJECT TO FINAL SURVEY AND DESIGN APPROVAL

LEGEND

- EXISTING PARCEL BOUNDARY
- RAILWAY CORRIDOR
- PROPOSED AREA TO BE ACQUIRED
- EXISTING PROPERTY AREA

PROPOSED PRELIMINARY ACQUISITION AREA		
DP No.	AREA	
LOT 02 DP 755 420	68511.274 m ²	6.851 ha
TOTAL	68511.274 m ²	6.851 ha

NOTE:

- ALL DIMENSIONS SUBJECT TO FINAL DESIGN & SURVEY

SCALE AS SHOWN



Status		PRELIMINARY NOT FOR CONSTRUCTION	
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Grid		Approved L.PALMER	
Filename:		P-008-a3-aa002708-nsk-00.dwg	

Project		ULAN + ALLIANCE	
		Title	
		PRELIMINARY ACQUISITION PLAN LOT 02 DP 755 420	



Drawing No.	Project No.	Issue
P-008	AA002708	P1

P1	FOR INFORMATION ONLY	20/08/12
Issue	Description	Date



PLAN
1 : 16000

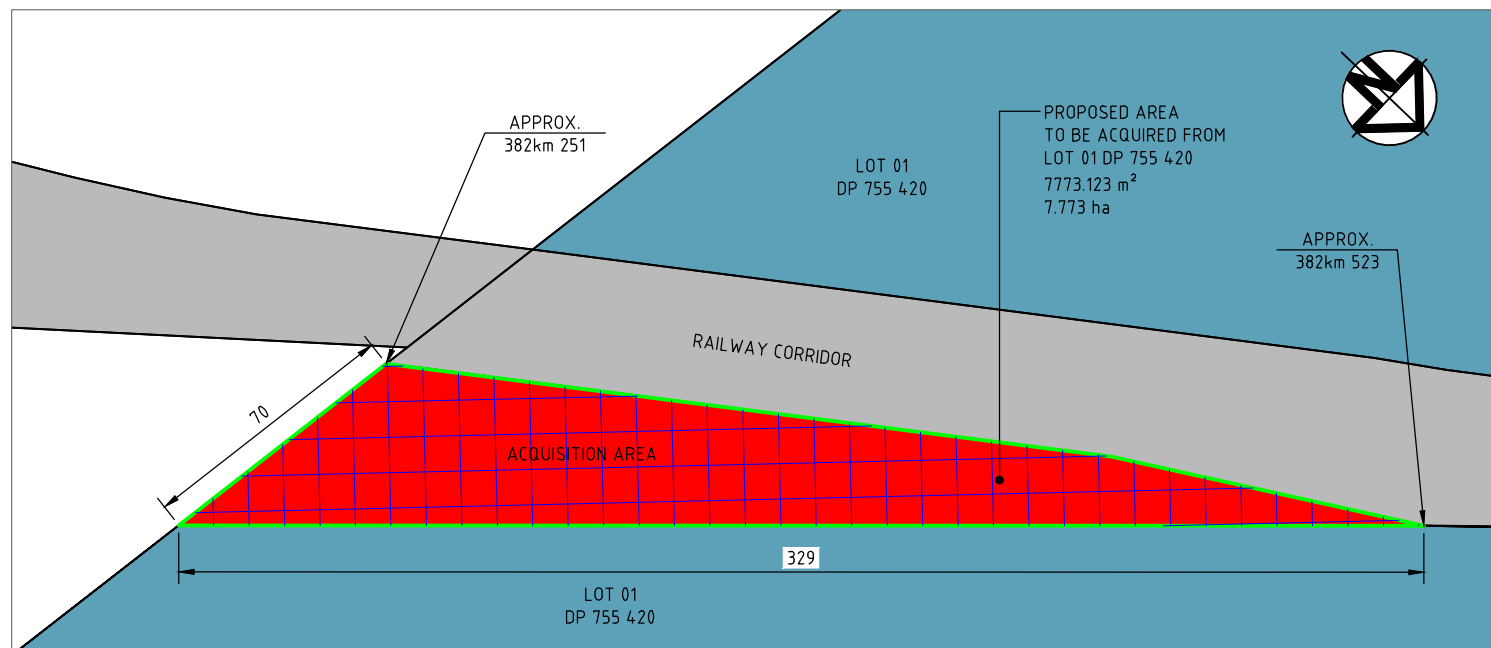
PRELIMINARY ACQUISITION PLAN

PROPERTY OWNER : ANDREWS

LOT 01 DP 755 420

EXISTING PARCEL AREA: 90.820 ha
APPROXIMATE ACQUISITION AREA : 7.773 ha

ACQUISITION SUBJECT TO FINAL SURVEY AND DESIGN APPROVAL



PLAN
1 : 2000

LEGEND

- EXISTING PARCEL BOUNDARY
- RAILWAY CORRIDOR
- PROPOSED AREA TO BE ACQUIRED
- EXISTING PROPERTY AREA

PROPOSED PRELIMINARY ACQUISITION AREA		
DP No.	AREA	
LOT 01 DP 755 420	7773.123 m ²	7.773 ha
TOTAL	7773.123 m ²	7.773 ha

NOTE:

- ALL DIMENSIONS SUBJECT TO FINAL DESIGN & SURVEY

SCALE AS SHOWN



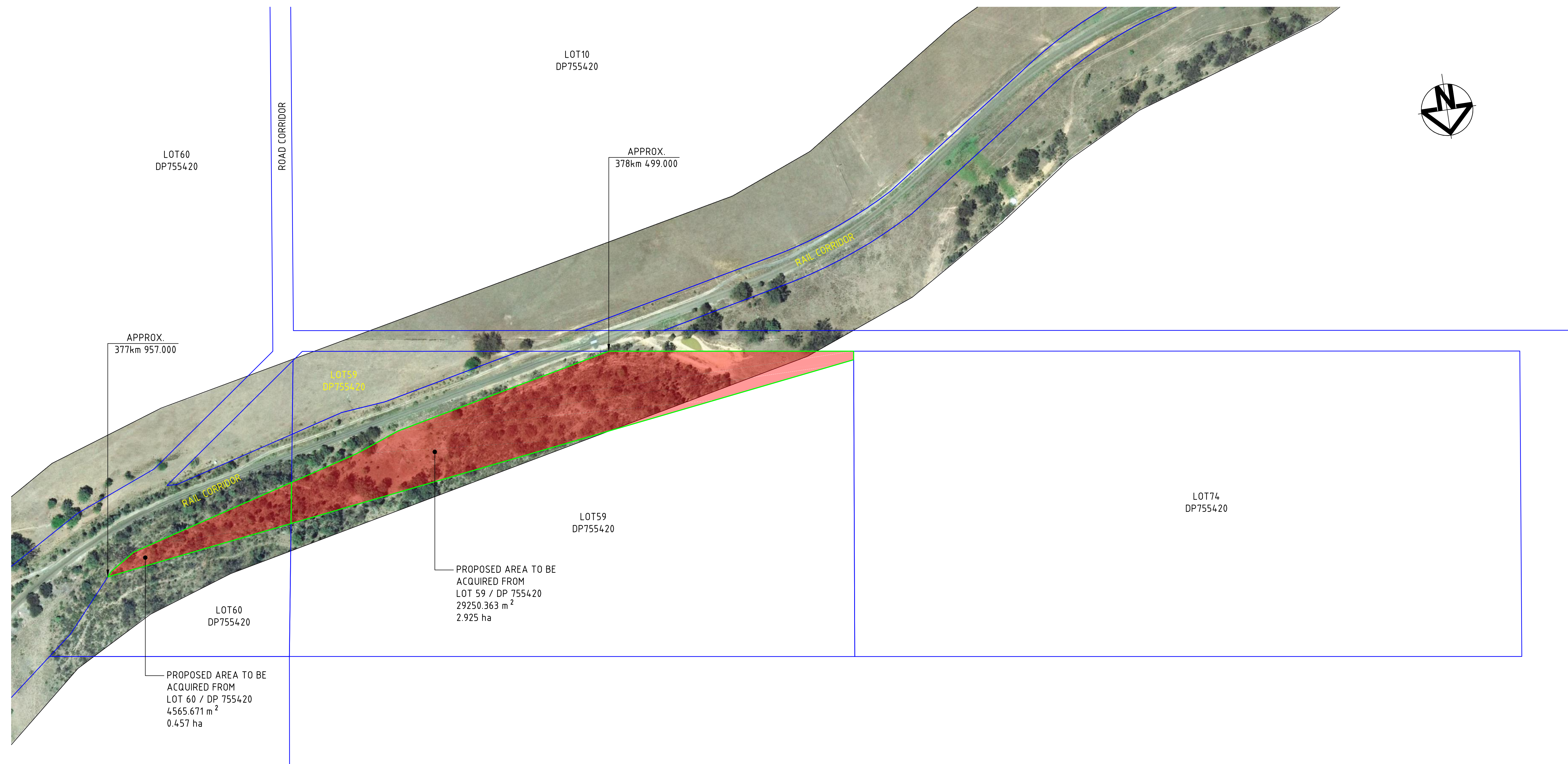
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Grid		Approved L.PALMER	
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Project ULAN + ALLIANCE	
Title PRELIMINARY ACQUISITION PLAN LOT 01 DP 755 420	



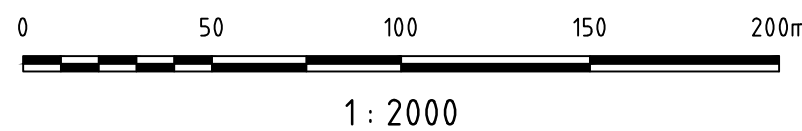
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P-009	AA002708	P1

P1	FOR INFORMATION ONLY	20/08/12
Issue	Description	Date



PLAN
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P1	FOR INFORMATION	06.09.2012
Issue	Description	Date




Client



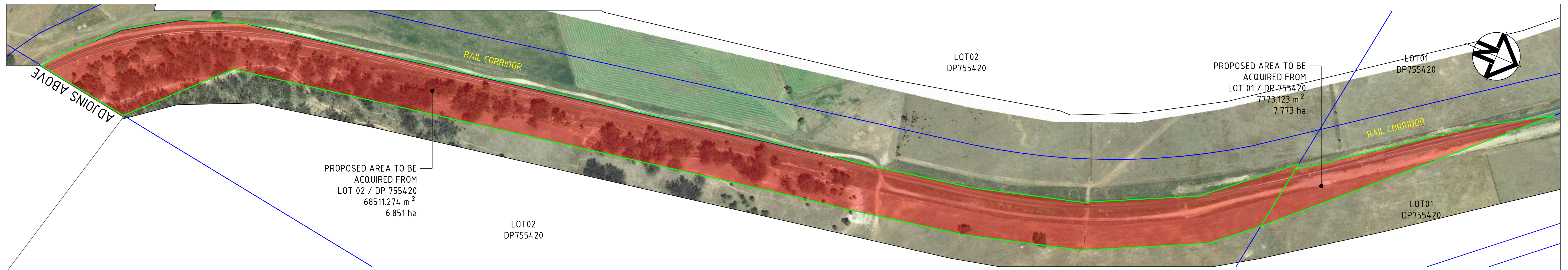
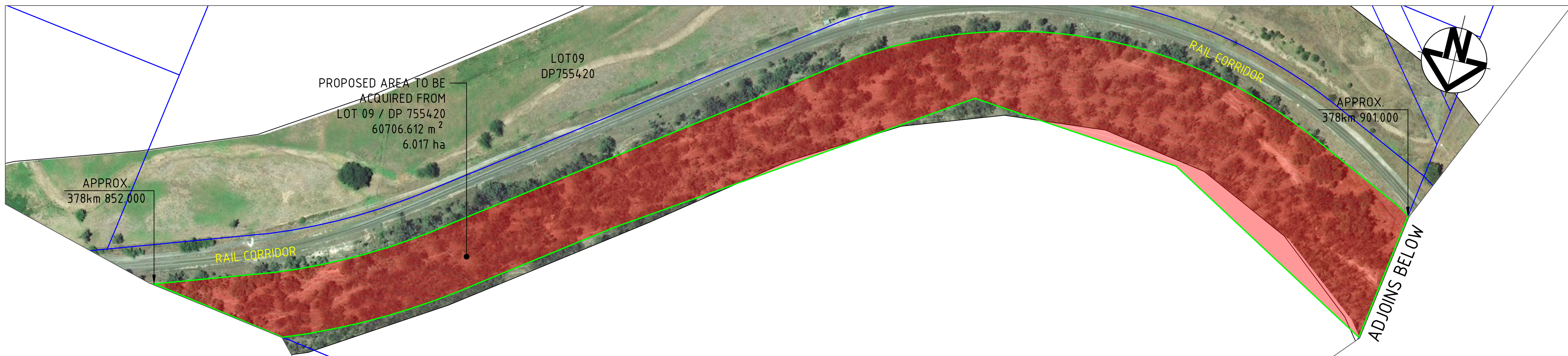
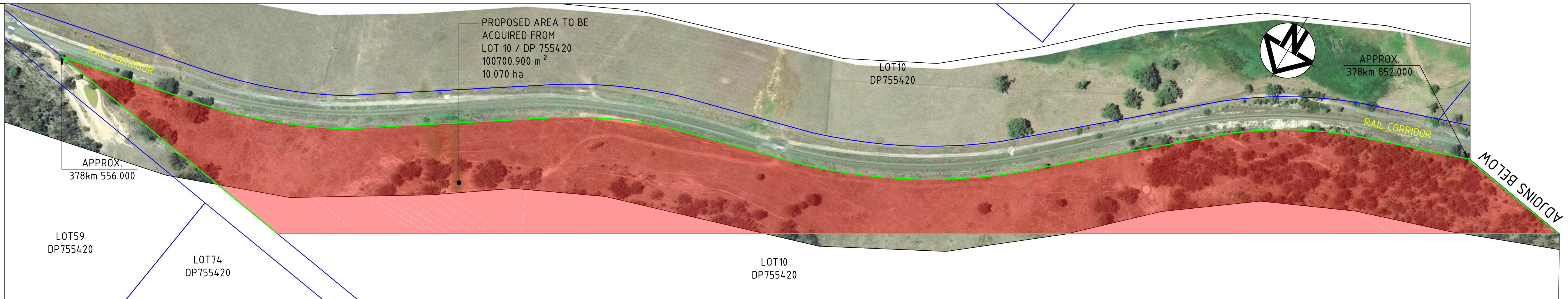
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Height Datum	AHD
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Filename	SK0911-aa002708-nsk-00.dwg

Project ULAN + ALLIANCE	
Title BYLONG EAST PRELIMINARY ACQUISITION PLAN LOT 59 & LOT 60 / DP 755420	



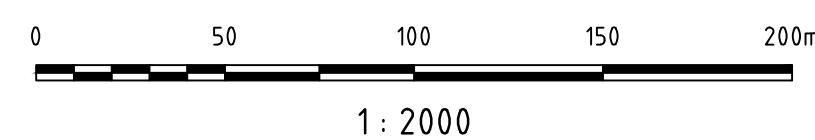
HYDER CONSULTING PTY LTD
ABN 76 104 485 289
Level 5, 141 Walker St
North Sydney NSW 2060
Australia
Tel: +61 (0)2 8907 9000
Fax: +61 (0)2 8907 9001
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Drawing No.	Project No.	Issue
SK0911	AA002708	P1



PLAN
1 : 2000

P1	FOR INFORMATION	06.09.2012
Issue	Description	Date



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Grid		Checked LP
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	Approved	

Project	ULAN + ALLIANCE	
Title	BYLONG EAST PRELIMINARY ACQUISITION PLAN - ANDREWS LOT 01, 02, 09, 10 / DP 755420	

HYDER CONSULTING PTY LTD		
ABN 76 104 485 289 Level 5, 141 Walker St North Sydney NSW 2060 Australia		
Tel: +61 (0)2 8907 9000 Fax: +61 (0)2 8907 9001 www.hyderconsulting.com © Copyright reserved		
Drawing No.	Project No.	Issue
SK0912	AA002708	P1