EIS CONSISTENCY ASSESSMENT REPORT (MINOR) JUNEE TO ILLABO – SUPPORTING WORKS (477.000)

Albury to Illabo | A2I

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Glossary

Specific terms and acronyms used throughout this strategy are listed and described in the table below.

TERM	DEFINITION
A2I	Albury to Illabo
ACHAR	Technical Paper 2: Aboriginal Cultural Heritage Assessment Report of the EIS
AEP	Annual Exceedance Probability
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System service by Heritage NSW
ARTC	Australia Rail Track Corporation
ASS	Acid Sulfate Soils
BARM	Biodiversity Assessment Report Memo
CA	Consistency Assessment report
CEMF	Construction Environmental Management Framework
CEMP	Construction Environmental Management Plan
Change	Macquarie Dictionary: A variation, adjustment, alteration, deviation or transformation to the project scope, construction methodology or design.
CIZ	Construction Impact Zone
CNVIS	Construction Noise and Vibration Impact Statement
CoA	Condition(s) of approval
Compatible	Macquarie Dictionary: Capable of existing in harmony. Capable of orderly, efficient integration with other elements in a system.
Consistent	Macquarie Dictionary: Agreeing or accordant; compatible; not self-opposed or self-contradictory; constantly adhering to the same principles, course, etc.
Consistent with	Means that carrying out the project (as approved) will comply with the terms of the approval despite the proposed change. (See Barrick Australia Ltd v. Williams [2009] NSWCA 275)
Construction boundary	As defined in the Division 5.2 approval, the area physically affected by work as defined in the Project Description as described in the documents listed in CoA A1. Referred to as the 'approved CIZ' in this CA.
Division 5.2 Approval	An approval under Division 5.2 of the NSW *Environmental Planning and Assessment Act 1979* for State Significant Infrastructure / Critical State Significant Infrastructure.
EAD	Environmental assessment documentation, as listed in CoA A1.
EIS	Environmental Impact Statement
EP&A Act	Environmental Planning and Assessment Act 1979
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPL	Project's Environment Protection Licence (#21984)
IRPL	Inland Rail Pty Ltd (subsidiary of ARTC)
J2I	Junee to Illabo clearances enhancement site as part of the Project
LGA	Local government area

LoS	Level of Service
MR	Martinus Rail, the principal contractor appointed by IRPL to construct the A2I section of the Inland Rail program.
Modification of an Approval	Section 5.25 *Environmental Planning and Assessment Act 1979*: Means changing the terms of the Division 5.2 approval, including revoking or varying a condition of the approval or imposing an additional condition on the approval.
NCA	Noise Catchment Area
NML	Noise Management Level
NSW	New South Wales
OOH	Out of Hours
PCT	Plant Community Type as described in the vegetation classification system, approved by the NSW Plant Community Type Control Panel and described in the BioNet Vegetation Classification Database
PIR	Preferred Infrastructure Report
PIR RtS	Preferred Infrastructure Report Response to Submissions report
Project	Albury to Illabo project approved under section 5.19 of the EP&A Act on 8 October 2024
Proposed Change	The change to the Project which is the subject of this consistency assessment (extension of the CIZ along the Junee to Illabo clearances enhancement site).
RAPs	Registered Aboriginal Parties for the Project.
RBL	Rating Background Levels
Revised BDAR	Revised Technical Paper 8: Biodiversity Development Assessment Report (WSP, February 2024)
Revised BDAR study area	The wider area assessed in the Revised BDAR, including and surrounding the proposal site, with the potential to be directly or indirectly affected by the proposal. The definition 'study area' used in the Revised BDAR, has the same meaning as 'subject land' as defined under the Biodiversity Assessment Method (Department of Planning, Industry and Environment, 2020).
RMAR	Rail Maintenance Access Road
SLR NPT	SLR Noise Prediction Tool
SSI	State Significant Infrastructure
TSP	Total Suspended Particles
UMMs	Updated Mitigation Measures

1 Introduction

1.1 Background

Australian Rail Track Corporation (ARTC) prepared an environmental impact statement for the Inland Rail – Albury to Illabo project (EIS) which was placed on public exhibition from 17 August 2022 to 28 September 2022. The EIS identified a range of environmental, social and planning issues associated with the construction and operation of the Albury to Illabo project and proposed measures to mitigate and manage those potential impacts.

In accordance with section 5.17(6)(b) of the EP&A Act, on 13 April 2023 the Planning Secretary directed ARTC to submit a Preferred Infrastructure Report (PIR) that provides further assessment of traffic and transport, noise and vibration, and air quality impacts. The PIR was also prepared to consider changes to the exhibited project that have arisen as a consequence of these further assessments and related submissions.

The Inland Rail – Albury to Illabo project was assessed as part of the following environmental assessment documentation (EAD):

- Inland Rail – Albury to Illabo Environmental Impact Statement (ARTC, August 2022);
- Albury to Illabo Response to Submissions (ARTC, November 2023);
- Albury to Illabo Preferred Infrastructure Report (ARTC, November 2023);
- Albury to Illabo Preferred Infrastructure Report Response to Submissions (ARTC, February 2024);
- Inland Rail – Albury to Illabo (SSI-10055) Response to request for additional information – Air Quality Assessment (letter dated 1 May 2024);
- Part 1 - Revised Technical Paper 8: Biodiversity Development Assessment Report (WSP, February 2024);
- Part 2 - Revised Technical Paper 8: Biodiversity Development Assessment Report (WSP, February 2024).

The Minister for Planning and Public Spaces approved the Albury to Illabo project (the Project) under section 5.19 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) on 8 October 2024. The instrument of approval incorporated the Minister's Conditions of Approval.

For the purpose of this consistency assessment, the approval issued by the NSW Minister for Planning and Public Spaces for the Project is referred to as the Division 5.2 approval.

1.1.1 EPBC Act referral

The proposal was referred to the Australian Government Minister for the Environment under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) due to potential for impacts on protected matters on 2 June 2020 (EPBC Referral No 202/8670). On 29 June 2020, the Australian Government Department of Agriculture, Water and Environment (DAWE) notified that the proposal is not a controlled action, and hence approval under the EPBC Act is not required.

1.2 Project changes

The Project has been subject to a modification under section 5.25 of the EP&A Act:

- Inland Rail Albury to Illabo Modification 1 Kemp Street Bridge, Junee (SS-10055-Mod-1)

The following consistency assessments have been prepared to support the undertaking of the Project:

- EIS Consistency Assessment Report (Minor) Kildare Catholic College (MR, April 2025)
- EIS Consistency Assessment Report (Minor) Cassidy Parade and Pearson Cassidy (MR, April 2025)

- EIS Consistency Assessment Report (Small Scale) Wagga Traffic Investigations (MR, May 2025)
- EIS Consistency Assessment Report (Minor) Edmondson Street Timing (MR, July 2025)
- EIS Consistency Assessment Report (Minor) Diver Platforms Stage B (MR, August 2025)
- EIS Consistency Assessment Report (Minor) Junee to Illabo Clearances (MR, September 2025)
- EIS Consistency Assessment Report (Minor) Riverina Highway Site Establishment (MR, September 2025)
- EIS Consistency Assessment Report (Minor) Wagga Wagga Traffic Mitigations (MR, October 2025)
- EIS Consistency Assessment Report (Minor) Bomen Yard Construction Boundary Changes (MR, November 2025)
- EIS Consistency Assessment Report (Small Scale) Albury North Signal Hut (MR, November 2025)
- EIS Consistency Assessment Report (Minor) Signalling Scope Stage B (MR, November 2025)
- EIS Consistency Assessment Report (Minor) Culcairn Site Establishment (MR, November 2025)
- EIS Consistency Assessment Report (Minor) The Rock & Table Top Site Establishment (MR, November 2025)
- EIS Consistency Assessment Report (Minor) Uranquinty Supporting Works (MR, November 2025)
- EIS Consistency Assessment Report (Minor) Billy Hughes Bridge Stage B (MR, January 2026)
- EIS Consistency Assessment Report (Minor) A2I Overhead Wiring Investigations (MR, February 2026)
- EIS Consistency Assessment Report (Minor) Wagga Wagga Precinct Stage B (MR, February 2026)
- EIS Consistency Assessment Report (Minor) Edmondson Street Utilities (MR, February 2026)
- EIS Consistency Assessment Report (Minor) Junee Precinct (MR, February 2026)
- EIS Consistency Assessment Report (Minor) Albury Precinct (MR, February 2026)

1.3 Purpose of consistency assessment

The purpose of this consistency assessment is to:

- Describe the proposed change relative to the Division 5.2 approval
- Assess the environmental impacts associated with the proposed change relative to the Division 5.2 approval
- Determine if the Proposed Change is consistent with the 5.2 approval or whether further approval is required (either for a modification application or a new project).

2 Proposed Change

2.1 Description of proposed change

The EAD identified the indicative proposal sites to enable construction of the reference design for the Albury to Illabo (A2I) section of the Inland Rail program. Further detailed design, construction planning, and site surveys have identified refinements to the construction methodology and resulted in the requirement to adjust the construction boundary as defined in the Division 5.2 approval and described in the EAD.

The Proposed Change relates to the construction impact zone (CIZ) at the Junee to Illabo clearances enhancement site (J2I) which currently aligns with the construction boundary (approved CIZ).

This Consistency Assessment report (CA) considers the Proposed Change, which involves extending the approved CIZ. This includes adjustments to the construction boundary to allow for localised temporary stockpiling, to accommodate additional footprint required for the construction of the permanent design, to allow for use of the rail maintenance access road (RMAR) where it is interrupted by the approved construction boundary, to allow for adjustment of utilities and to provide additional access points to the rail corridor from the public road network. Construction of the permanent design includes, but is not limited to, track slews, shoulder reconstruction, and culvert and bridge works.

For the purpose of this consistency assessment, the CIZ, where areas are proposed to be expanded, are referred to as the 'proposed CIZ extension areas'. The proposed CIZ extension areas generally fall within the rail existing corridor and adjoining yards at Illabo and Marinna. The proposed CIZ extension areas may also extend beyond the immediate rail corridor to connect to utilities or adjacent public roads where access points are proposed.

The proposed CIZ extension areas are shown in relation to key environmental constraints in Appendix A. The proposed CIZ extension areas are required to carry out indicative construction activities for the project as set out in Chapter 8 of the EIS, however example activities for each CIZ extension area are described in Table 2.1.

Table 2.1: Proposed CIZ extension areas at J2I and indicative activities

LABEL	ACTIVITIES	INDICATIVE CHAINAGE	INDICATIVE AREA (HA)	UP/DOWN
J7-001	Site access using existing corridor gate and RMAR	465210 – 466070	0.76	Down
J7-002	Access via existing corridor gate and potential construction footprint for temporary diversion road	468090 – 466070	0.88	Down
J7-003	Potential construction footprint for temporary diversion road and for LX603 associated works	466000 – 466150	0.41	Up
J7-004	Construction footprint for LX603 associated works, including temporary stockpiling and access to culvert on downside	466160 – 467090	1.62	Down
J7-005	Site access/stockpiling using existing RMAR	466350 – 467090	1.42	Up
J7-006	Site access/stockpiling using existing RMAR	467100 – 468280	1.54	Up
J7-007	Site access/stockpiling using existing RMAR	467100 – 468280	0.61	Down
J7-008	Use of entire width of RMAR, temporary footprint required for potential temporary track installation at Illabo Yard, stabling of machinery, siding upgrades, and general use of the yard, including access to turnout, storage and site facilities	468300 – 468490	0.31	Down
J7-009	Site access/stockpiling using existing RMAR, potential construction footprint for temporary diversion road and for LX604 associated works	468480 – 468900	0.24	Up
J7-010	Temporary footprint required for temporary stabling of machinery, siding upgrades, and general use of the yard including access, storage, and site facilities	468550 – 468900	0.87	Down
J7-011	Safe access and manoeuvring	468550 – 468740	0.9	Down
J7-012	Signage, including necessary working space around sign	Throughout	N/A	N/A
J7-013	Site access/stockpiling using existing RMAR, new site access to minimise traffic impacts on Olympic Highway and avoid drainage line	468950 – 469340	0.29	Up
J7-014	Site access/stockpiling using existing RMAR	469130 – 470150	0.91	Down
J7-015	Widen proposed site access/stockpiling to support track and culvert upgrade works	469340 – 469530	0.27	Up
J7-016	Site access/stockpiling using existing RMAR, current CIZ does not include entire width of RMAR	471220 – 471670	0.08	Up

J7-017	Site access/stockpiling using existing RMAR	470960 – 471490	0.1	Down
J7-018	Proposed access gates (no access on downside due to overhead cables)	471460 – 471480 472550 – 472580	0.02	Up
J7-019	Improve safety for vehicles accessing LX605*, access to enable signalling works	472710 – 473080	0.28	Up
J7-019a	Site access/stockpiling and laydown	472650 – 472890	1.29	Down
J7-020	Site access/stockpiling using existing RMAR	474090 – 474290	0.12	Up
J7-020b	Site access	474410 – 474450	0.03	Up
J7-021	Site access/stockpiling using existing RMAR and construction footprint required for pavement works	474970 – 475390	0.42	Down
J7-021a	Site access	474480 – 475500	0.01	Up
J7-021b	Site access	475700 – 475500	0.02	Up
J7-022	Site access/stockpiling using existing RMAR	475880 – 476350	0.08	Up
J7-023	Watermain relocation, removal of redundant infrastructure, enable approved construction activities	476900 - 477060	0.27	Up
J7-023a	Site access	477240 – 477260 478290 – 478330	0.04	Down
J7-023b	Site access/stockpiling using existing RMAR and adjoining area and construction footprint required for drainage works	476980 – 477160	0.57	Down
J7-024	Site access/stockpiling using existing RMAR and construction footprint required for pavement works	477660 – 478620	0.38	Down
J7-025	Site access/stockpiling using existing RMAR, current CIZ does not include entire width of RMAR	477640 – 477930	0.38	Up
J7-026	Site access/stockpiling using existing RMAR	477940 – 478130	0.21	Up
J7-027	Site access/stockpiling using existing RMAR	479210 – 480300	0.14	Down
J7-029	Site access/stockpiling using existing RMAR	480150 – 480690	0.91	Both
J7-030	Allow for rail adjusting, tracking machine stabling (on-track activities)	480690 – 480810	0.33	Both
		Total	16.71	Both

**Subject to design confirmation with Inland Rail*

2.1.1 Methodology

Chapter 8 of the EIS provides an overview of construction activities for the Project and describes construction activities planned for each of the enhancement sites. The Proposed Change would enable these construction activities to occur and would not introduce additional activities at J2I clearances or the Olympic Highway underbridge enhancement sites.

Construction activities, including the required plant and equipment, that would be undertaken within the proposed CIZ (by extension of the approved CIZ) are considered below.

Activities and work plan

The Proposed Change is required to support the following activities associated with the Project:

- Site access
- Construction of access points and roads
- Traffic management
- Signage Installation
- On the public road network
- Along the rail corridor
- Erosion and sediment controls
- Cadastral fieldworks
- Vegetation management
- Clearing
- Tree trimming
- Temporary laydown and stockpiling of materials such as
  - Ballast
  - Capping
  - Culverts
  - Rail for turnouts
- Culvert works
- Temporary track installation at Illabo Yard.

Plant and equipment

- Plant and equipment required for these activities include:
- Plant (general):
  - Hand tools (Manual)
  - Light vehicles
  - Asphalt paver
  - Pavement Profiler
  - Grout Pump
  - Concrete Agitator
  - Non-destructive digging (NDD) Truck
  - Articulated Dump Truck
  - 12T Rigid trucks
  - Welders trucks (Medium Rigid)
  - Pipe welding machine
  - 10T Hydrema Rail
  - FEL (Volvo L120F)
  - RRV Excavator (22T Liebherr A922) – bucket only

- 14KL Water Truck
- 12t Smooth Drum Roller
- 14t Grader
- 8T Excavator
- 14t Excavator
- Skid Steer/Bobcat
- Mobile Crane
- 20T Franna Crane
- 10T Tracked Excavator
- 20T Tracked Excavator
- 30T Moxy
- Truck and Dog
- Generator
- Lighting Tower
- Rail Saw
- Tractor (Slasher)
- Telescopic Handler
- Watercart
- Water Pump
- Hydraulic Power Pack
- Tracked Hydraulic Drill Rig
- Directional Drill / Under Boring Machine
- Positrack
- Plant (rail)
  - Plasser 08-16 4x4 Tamper
  - Jackson (Harsco) Tamper
  - Kershaw Regulator
  - SSP301 Regulator
  - Hi-Rail Crane
  - Hi-Rail Excavator
- Equipment
  - Compactor
  - Grinder
  - Compressor
  - Rail saw
  - Star Picket Driver
  - 18lb Sledge Hammer

.

2.2 Need

The EAD identified the 'Proposal site area' consisting of each of the enhancement sites to enable construction of the reference design, which forms the construction boundary, as defined in the Division 5.2 approval and referred to as the 'approved CIZ' for the purpose of this CA. Further detailed design and site surveys resulted in the requirement to adjust the approved CIZ to better allow for site access from the public road network and within the rail corridor, safe manoeuvring, and sufficient space for temporary stockpiling.

The Proposed Change is required following amendments brought about during detailed design and for constructability of the Project, which is not adequately considered as part of the reference design in the EIS, particularly where the approved CIZ dissects access roads and embankments, which are required to access key components of the rail corridor.

2.3 Location and setting

The Proposed Change relates to the J2I clearances enhancement site within the Junee Precinct (refer to Figure 2.1) in the Junee local government area (LGA).

The Proposed Change falls within the approximate chainages 465500 (to the northeast of Illabo) and 480810 (to the north of Junee) along the Main South Line.

Aspect specific location and setting information as it relates to the Proposed Change is contained in the subsections below.

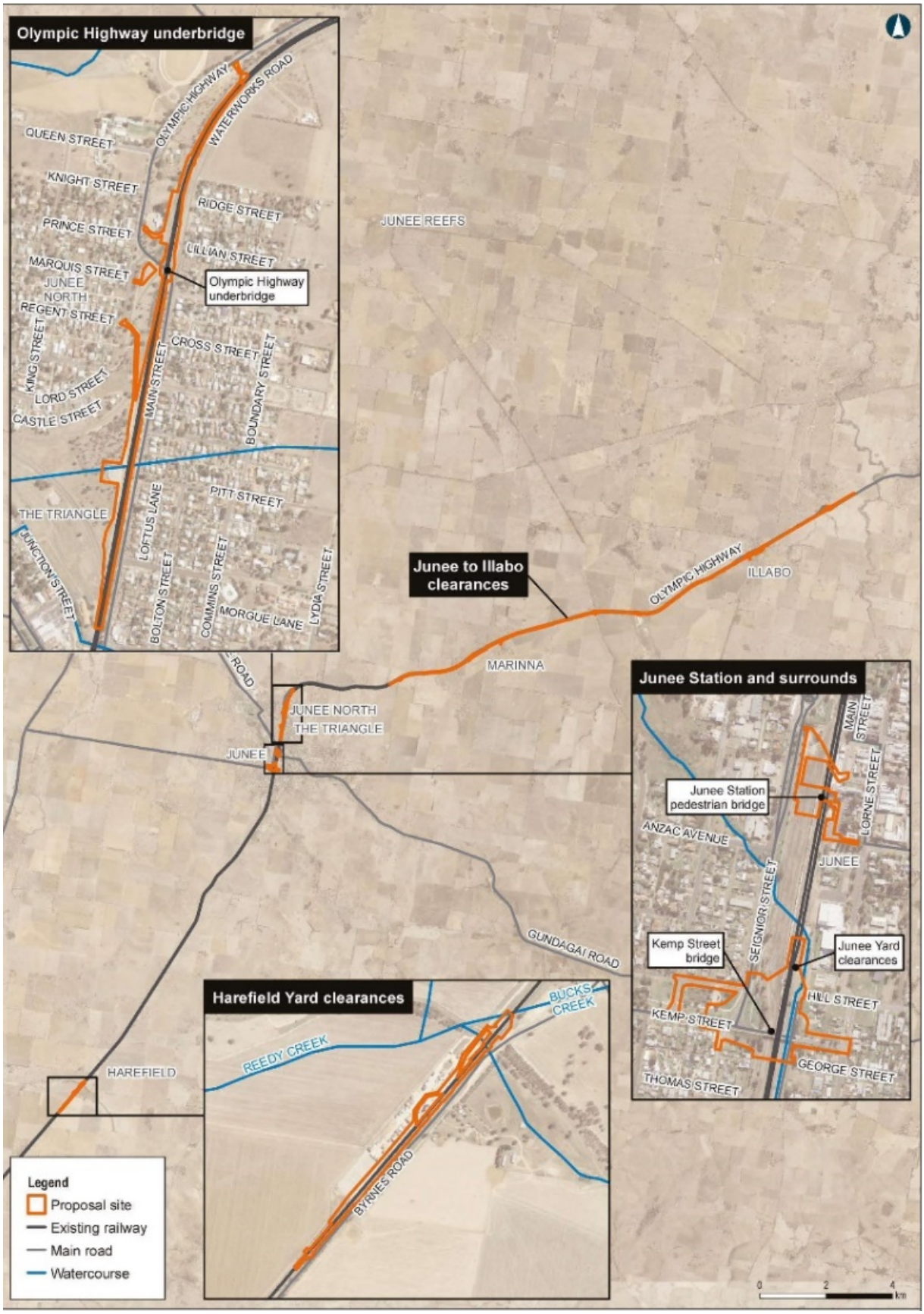

Figure 2.1: Regional context of the Junee Precinct enhancement sites

2.4 Construction hours

Activities within the CIZ permitted by the Proposed Change would be undertaken during the same hours as adjoining areas within the approved CIZ.

The works associated with the Proposed Change will be timetabled to be carried out during the approved standard construction hours as per the Project's Environment Protection Licence #21984 (EPL) and CoA E69, where possible. The standard construction hours are as follow:

- 7:00am to 6:00pm Monday to Friday, inclusive;
- 7:00am to 6:00pm Saturday and
- At no time on Sundays or public holidays.

As outlined in CoA E70, any highly noise intensive works that result in an exceedance of the applicable NML at the same receiver must only be undertaken between:

- 8:00am to 6:00pm Monday to Friday;
- 8:00am to 1:00pm Saturday;
- If continuously, then not exceeding (3) hours, with a maximum cessation of work of not less than an hour.

The Proposed Change activities may occur outside of standard construction hours and the hours approved as part of CoA E69 and EPL condition L4. Any out-of-hours (OOH) works within the extended CIZ would be implemented in accordance with CoA E71 and EPL conditions L4.3, L4.4, L4.5, or L4.6.

The Proposed Change would host pre-construction and construction activities from April 2025 until the completion of construction of the Project.

3 Consultation

Inland Rail does not always carry out consultation for consistency assessments. However, in some cases consultation may be carried out to:

- Help identify the nature and scale of the impacts.
- Involve the community in the options considerations for the Proposed Change.
- Manage community expectations for the Project.
- Provide the best design outcome that minimises environmental impacts.

The community would be notified in accordance with Section 7.1 of the Community Communication Strategy (IRPL, 2024), including where works may be required outside of the approved construction hours for the Project, prior to commencement of works. Any complaints, feedback or enquiries would be handed in accordance with Section 8 of the Community Communication Strategy.

Consultation with each of the affected landowners where works are proposed outside the approved CIZ would be undertaken prior to commencement of works. The proposed CIZ extension areas are located within the rail corridor, adjacent road corridor and associated yards.

Where arrangements such as licences are required for use of land adjacent to the rail corridor for access or construction related activities (such as temporary stockpiling), these arrangements would be made in consultation with the relevant landowner or, in the case of access from the public road network, the relevant road authority.

4 Environmental Assessment

4.1 Environmental risk review

An environmental risk review of the proposed activity has been undertaken and is provided below in Table 4.1. A map series showing environmental constraints in relation to the Proposed Change is provided in Appendix A.

Assessments of potential impacts are provided in greater detail for the following environmental aspects:

- Traffic and transport (Section 4.2)
- Noise and vibration (Section 4.3)
- Aboriginal and Non-Aboriginal heritage (Section 4.4)
- Biodiversity (Section 4.5)
- Surface water, flooding and water quality (Section 4.6)
- Soils and contamination (Section 4.7)
- Air quality (Section 4.8)
- Landscape and visual (Section 4.9), and
- Cumulative impacts (Section 4.10)

Table 4.1: Consistency assessment review

ISSUE	Y/N	NOTES
Are works required outside the IR property acquisition boundary, or land not previously impacted on by project works?	No	The Proposed Change would involve impact outside of the approved CIZ and therefore on land not previously impacted on by Project works, however the proposed CIZ extension areas are immediately adjacent to the approved CIZ and fall within the existing road and rail corridors, and within adjacent railway yards at Illabo and Marinna, which are within the IR property acquisition boundary. Therefore, no additional property acquisition would be required to accommodate the Proposed Change.
Will the works result in any changes to form or functionality of the approved project?	No	The Proposed Change would not impact on the form or functionality of the approved project. The Proposed Change is required to improve constructability of the approved project following detailed design and would involve the same construction activities and operation as specified in the EAD.
Are there any potential impacts on traffic and transport associated with the works?	Yes	The Proposed Change may result in localised and short-term traffic and transport impacts during construction. Potential traffic and transport impacts are considered in greater detail in Section 4.2.
Are there any potential noise and vibration impacts associated with the works?	Yes	The Proposed Change would not generate any new substantial noise impacts as it relates directly to enabling approved construction activities directly adjacent to the approved CIZ. The Proposed Change may result in short-term noise and vibration impacts during construction. Potential noise and vibration impacts are considered in greater detail in Section 4.3.
Are there any potential impacts on known Aboriginal heritage items or sites located in the vicinity of the works?	No	There are no known Aboriginal heritage items or sites located within 200m of the proposed CIZ extension areas as per the extensive AHMIS undertaken on 15 March 2025 Potential impacts to Aboriginal heritage items are considered in greater detail in Section 4.4.

Are there any potential impacts on non-Aboriginal heritage items or sites located in the vicinity of the works?	No	As outlined in the EIS, there are no registered, unregistered or potential non-Aboriginal heritage items or sites located at J2I. The nearest registered non-Aboriginal heritage sites are clustered at Billabong Creek, more than 400m northeast of the Proposed Change. The EAD does not identify any areas of non-Aboriginal archaeological potential at J2I. Potential impacts to non-Aboriginal heritage items are considered in greater detail in Section 4.4.
Are the works within 50m of an EEC or threatened species?	Yes	The Proposed Change is located within 50m of threatened species sighting locations and contains threatened ecological communities. Potential biodiversity impacts are considered in greater detail in Section 4.5.
Do the works require clearing of native vegetation or habitat trees?	Yes	Trimming and clearing of vegetation would be required as part of the Proposed Change. Potential biodiversity impacts are considered in greater detail in Section 4.5.
Are the works within 40m of a waterway or water body?	Yes	Jeralgambeth Creek and 13 minor watercourses are located along J2I. Potential impacts to flood risk and water quality are considered in greater detail in Section 4.6.
Are the works located on flood prone land?	Yes	The Proposed Change is located on land affected by local overland flooding. Potential impacts to flood risk are considered in greater detail in Section 4.6.
Are the works located on bushfire prone land?	No	The Proposed Change is not located on bushfire prone land.
Do the works involve ground disturbance of more than 2 hectares (ha)?	Yes	The proposed CIZ extension areas cover a cumulative area of approximately 17ha. The extent of ground disturbance required for the Proposed Change would be substantially less than the cumulative total area of the proposed CIZ extension areas. Potential impacts to soils and contamination are considered in greater detail in Section 4.7.
Are the works in an area of known salinity hazard risk?	Yes	The Proposed Change is located in an area of moderate salinity hazard. Potential impacts associated with salinity are discussed in greater detail in Section 4.7.
Are the works in an area of known acid sulfate soil risk?	Yes	The Proposed Change is located in an area of low probability for acid sulfate soils (ASS) occurrence. Potential impacts associated with ASS are considered in greater detail in Section 4.7.
Will works require temporary or permanent placement of surplus spoil material?	Yes	The Proposed Change is required for temporary, localised stockpiling, along J2I to reduce hauling distances between ancillary facilities during construction. Therefore, the Proposed Change would require the temporary placement of spoil material, however this can be accommodated within the existing rail corridor and surrounding associated land at Illabo Yard and Marrina Yard. Potential impacts to soils and contamination are considered in greater detail in Section 4.7.
Are the works in an area of known contamination risk?	Yes	The Proposed Change is located in an area noted as a general contamination risk and intersects multiple area of environmental concern (AEC) sites discussed in the EAD. Potential impacts associated with contamination are considered in greater detail in Section 4.7.

Are there any potential air quality impacts associated with the works?	No	The Proposed Change could result in minor, short-term air quality impacts during construction. Potential air quality impacts are discussed in greater detail in Section 4.8.
Are there any potential landscape and visual impacts associated with the works?	Yes	The Proposed Change would result in potential minor and short-term visual impacts during construction. Potential landscape and visual impacts are discussed in greater detail in Section 4.9.
Will works result in any operational impacts further to those detailed in the approved project?	No	The Proposed Change is required to facilitate construction related activities within the rail corridor and adjoining lands. The Proposed Change would not represent an increase in operational impact compared to that which was assessed as part of the approved project.

4.2 Traffic and transport

4.2.1 Existing environment

The following discussion is drawn from Technical Paper 1: Traffic and Transport of the EAD.

The Proposed Change is located on land within and adjacent to the existing rail corridor which forms part of the Main South Line in the NSW rail network.

Construction traffic

The J2I enhancement site is assessed as requiring up to sixty[1] (60) light vehicles and eight (8) heavy vehicle two-way movements per peak hour (EIS, Tech Paper 1). The Olympic Highway travels alongside the J2I enhancement site and is a major arterial road that carries a high volume of traffic in the region. The construction volume for Olympic Highway is assessed as meeting a Level of Service (LoS) A, meaning traffic flow generally remains stable. Key local roads and LoS (including construction traffic) that serve J2I are summarised in Table 4.2.

Table 4.2: Overview of key roads and performance at J2I

KEY ROADS	MAXIMUM AND MINIMUM TRAFFIC VOLUMES FOR NON-ARTERIAL ROADS (DAILY TWO-WAY)	LOCAL ROAD PERFORMANCE
Olympic Highway, Brabins Road, Waterworks Road and Marinna Station Cross Road	Maximum—241, proportion of heavy vehicles not available (Waterworks Road) Minimum—44, proportion of heavy vehicles not available (Brabins Road, Marinna Station Cross Road)	Roads operate with a LoS of B or better.

Construction access points

Construction access points between the public road network and J2I considered in the EAD are detailed in Table 4.3 and shown in the mapping provided in Appendix A.

Table 4.3 Existing access points at J2I

ROAD NAME	TURN TREATMENT	CONSIDERATIONS
33, 34, 53, 47, 54, 55, 56, 57, 58,	Two-way	Left and right turn into and out of site. Opposing movements on public road. High speed environment (≥80km/h).

[1] Three-day possession peak (typically only 20 vehicle movements in a peak period)

70, 59, 60, 71, 62, 63, 64, 65, 66 / Olympic Highway		Current configuration does not meet turn warrant guidance; Road Safety Audit would investigate the need for traffic management of this access.
51, 52, 68, 69 / Waterworks Road	Basic Left-Turn; Basic Right-Turn	Left and right turn into and out of site. Opposing movements on public road. High speed environment (≥80km/h). Current configuration does not meet turn warrant guidance, Road Safety Audit would investigate the need for traffic management of this access.
61 / Brabins Road	Turn warrant methodology is not suitable for assessment due to configuration	Through movement into site. No opposing movements on public road. Low speed environment (≤60km/h). Minimal impact expected.

Pedestrians and active transport

Footpaths are generally not provided along Olympic Highway or Waterworks Road and therefore the proposed additional access points to the rail corridor along J2I would not interrupt or otherwise impact any pedestrian routes.

Travelling stock reserves and emergency vehicle access

The Proposed Change does not intersect any mapped travelling stock reserves.

The Proposed Change forms part of J2I which is listed as an enhancement site which could have the potential to impact emergency vehicle access due to road diversions required to enable level crossing works.

4.2.2 Impact assessment

The Proposed Change would involve adjustments to the approved CIZ to improve access, to allow for grading and maintenance of the RMAR where it is interrupted by the approved CIZ and to provide additional access points to the rail corridor from the public road network. Where possible, construction traffic would utilise the RMAR to travel along J2I.

Construction traffic and parking

The Proposed Change would not introduce any additional construction traffic and therefore would not impact the assessed LoS (B or higher) for Olympic Highway, or any of the local roads that provide access to the enhancement sites.

The Proposed Change would allow for better utilisation of the existing rail corridor for vehicle parking.

Site access points

The Proposed Change would allow for the use of up to 12 access points in addition to those detailed in the EAD. The proposed access points align with existing J2I rail corridor access points from the public road network along either side of the rail corridor. The requirement for access points would be refined during further construction planning and in consultation with the relevant road authority and may be reduced in the lead up to works.

The access point locations that would be included as part of the Proposed Change are existing access points and similar to others along the rail corridor and are not considered suitable to be assessed in accordance with the turn warrant assessment methodology. Any traffic treatments and traffic control requirements would be considered as part of road safety audits and would be subject to traffic management plans where required. Should the requirement to execute a works authorisation deed or other agreement with relevant roads authorities be identified, this requirement would be met.

The proposed access points are shown in relation to the access points considered in the EAD in the map series in Appendix A.

Emergency vehicle access

The Proposed Change would not result in an additional level if impact along J2I for emergency vehicle access and would not impact the Project's ability to manage emergency vehicle access in accordance with the CoA and EAD, including measures relating to consultation with emergency services and traffic control arrangements.

4.2.3 Conclusion

The Proposed Change would not generate any additional construction traffic or parking demand compared with what was assessed in the EAD. Use of additional access points compared with what was assessed in the EAD would utilise existing access points along the rail corridor and any safety requirements would be considered as part of a road safety audit as considered by the EAD. No additional impacts to pedestrian and cycle paths are expected as a result of the Proposed Change.

Potential traffic and transport impacts of the Proposed Change can therefore be adequately managed in accordance with the CoAs and UMMs, and through the implementation of the Project's Construction Environmental Management Plan (CEMP). Therefore, no additional mitigation measures are proposed.

4.3 Noise and vibration

4.3.1 Existing environment

The following discussion is drawn from Technical Paper 6: Noise and vibration (non-rail) of the EAD and the Construction Noise and Vibration Impact Statement (CNVIS) (SLR Consulting Australia, April 2025 Doc No: 6-0052-210-EEC-J7-AS-0002_1) (Appendix B).

Common noise and vibration sources at J2I are train movements along the operational rail corridor, major road traffic and local traffic. Potentially sensitive receivers are those that may be affected by changes in noise and vibration levels within the work area. Consistent with the adopted standards and guidelines, sensitive receivers in the work areas include residential dwellings, schools and education institutions, places of worship, childcare centres, medical facilities, commercial property and industrial premises.

The existing vibration environment in close proximity to the railway line includes vibration from existing freight train movements on the alignment. Additional sources of vibration may be associated with operation of industrial premises, road traffic operations and construction activities typical of the environment.

Construction Noise and Vibration Impact Statement (CNVIS) and CNVIS Addendum were undertaken for the Proposed Change areas as noted below (refer to Appendix B):

- Junee to Illabo CNVIS (SLR, April 2025); Doc No 6-0052-210-EEC-J7-AS-0002_1 (endorsed CNVIS)
- Junee to Illabo CNVIS Addendum 4 (Martinus, March 2026); Doc No 6-0052-210-EEC-J7-AS-0002_ADD4_A (CNVIS Addendum 4).

Noise catchment areas

Noise catchment areas (NCA) were defined in the EIS to classify groups of sensitive receivers that are likely to have a similar existing noise environment and experience similar impacts from construction of the Project. These were determined through reference to aerial imagery and land use maps and verified during background noise monitoring.

The Proposed Change is generally located in proximity to sparsely distributed rural residential receivers, with a cluster of residential and commercial receivers at Illabo. The NCA description, approximate number of sensitive receivers, Rating Background Levels (RBL) and Noise Management Levels (NMLs) for J2I are presented in Table 4.4 and Table 4.5. J2I falls within NCA15, as shown in Figure 4.1.

Given the minor extent of the proposed CIZ extension areas and their location immediately adjacent to the approved CIZ, the RBLs and NMLs set out for the Project are also considered appropriate for assessment of the Proposed Change.

Table 4.4: NCA and background noise information at J2I

NCA ID	APPROXIMATE NUMBER OF RECEIVERS IN NCA	DESCRIPTION	RBL (DBA)		
			Day[1]	Evening[1]	Night[1]
15	154	This NCA covers the township of Illabo and the rural areas surrounding it. This NCA is affected by noise sources including the rail line and the Olympic Highway.	41	41[2] (46)	33

1 Time periods defined as - Day: 7am to 6pm Monday to Saturday, 8am to 6pm Sunday; Evening, 6pm to 10pm; Night 10pm to 7am Monday to Saturday, 10pm to 8am Sunday

2 The evening RBL data has been reduced to the daytime period RBL in this case (bracketed figures indicates the measured value).

Table 4.5: NCA and noise management levels

NCA ID	NOISE MANAGEMENT LEVEL (NML)			
	Approved hours (RBL + 10 dB)	OUT OF HOURS		
		Daytime (RBL + 5 dB) *	Evening (RBL + 5 dB) *	Night-time (RBL + 5 dB) *
NCA 15	51	46	46	38

**Time periods defined as - Day: 7am to 6pm Monday to Saturday, 8am to 6pm Sunday; Evening, 6pm to 10pm; Night 10pm to 7am Monday to Saturday, 10pm to 8am Sunday*

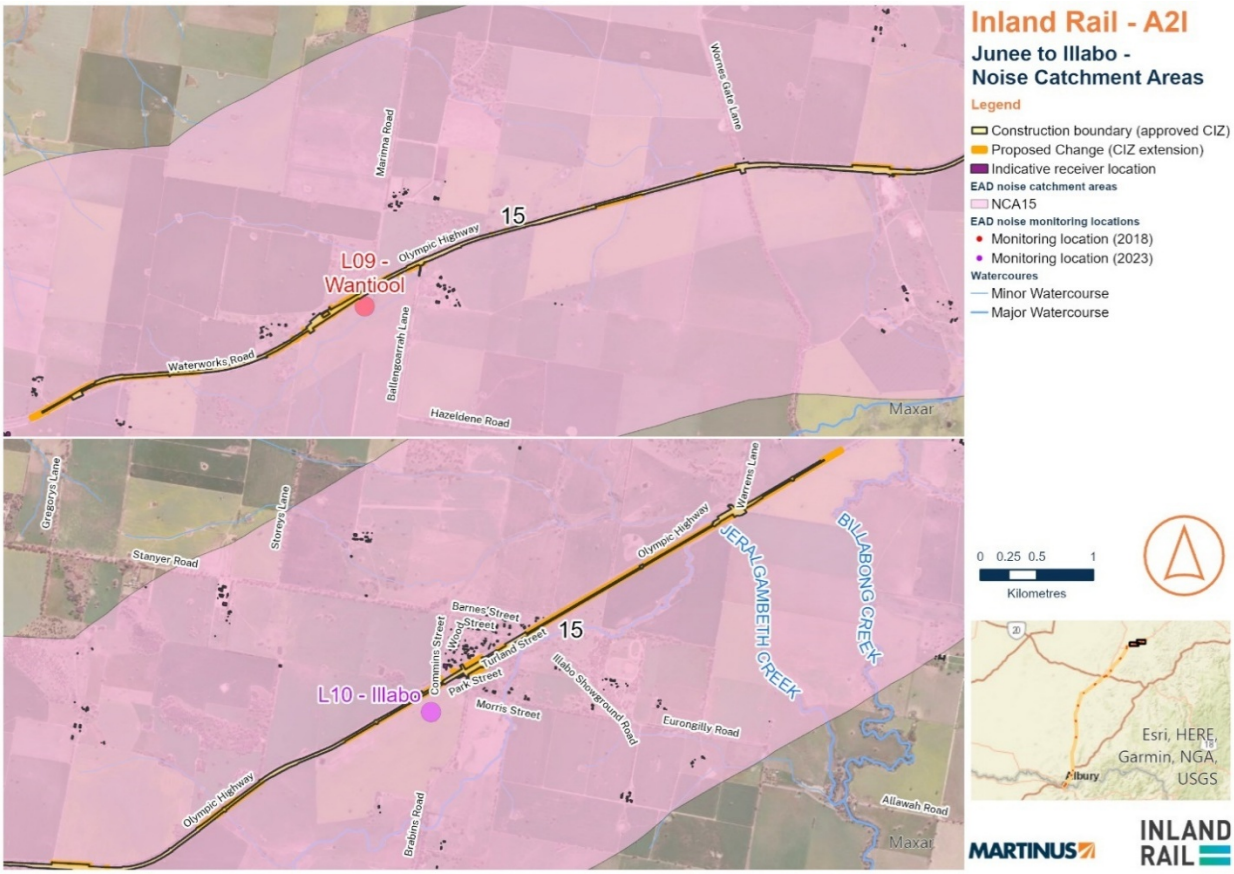

Figure 4.1: EAD mapped NCA 15 in relation to the Proposed Change along the Junee to Illabo enhancement site

4.3.2 Construction hours

Construction hours are discussed in Section 2.4.

Highly noise intensive works

'Highly noise intensive works' as per the Project Approval are defined as:

- use of power saws, such as used for cutting timber, rail lines, masonry, road pavement or steel work
- grinding metal, concrete or masonry
- rock drilling
- line drilling
- vibratory rolling
- bitumen milling or profiling
- jackhammering, rock hammering or rock breaking
- impact piling
- tamping (for rail projects).

Out-of-hours work

In accordance with CoA E73, OOH work will be regulated through the Out of Hours Work Protocol except as permitted by the EPL, where OOH work is required:

- For carrying out work that if carried out during standard hours would result in a high risk to construction personnel or public safety based on a risk assessment carried out in accordance with AS/NZS ISO 31000:2009: "Risk management; or
- Where the relevant roads authority has advised the Proponent in writing that carrying out the work during standard hours would result in a high risk to road network performance and a road occupancy licence will not be issued; or
- Where the relevant utility service operator has advised the Proponent in writing that carrying out the work during standard hours would result in a high risk to the operation and integrity of the utility network; or
- Work undertaken in a rail possession for operational or safety reasons.

This will be regulated through the Out of Hours Work Protocol except as permitted by the EPL.

4.3.3 Impact assessment

Predicted noise impacts

During development of the CNVIS, a comparison of potential noise impacts for works within the approved CIZ with works within the proposed CIZ extension areas was undertaken. The comparison found that the Proposed Change would not result in any increased impact to receivers and that no additional receivers would be impacted due to the minor additional impact footprints of the proposed CIZ extension areas, which are confined to the rail existing corridor, adjoining yards at Illabo and Marinna and connections to adjacent public roads where access points are proposed.

Further to the above, the following discussion is drawn from the endorsed CNVIS and CNVIS Addendum 4, provided in Appendix B. All affected receivers identified in CNVIS Addendum 4 are identified in the endorsed CNVIS. The noise potential impacts identified in CNVIS Addendum 4 would not be greater than those identified in scenarios assessed in the endorsed CNVIS.

The work scenarios relevant to the Proposed Change from the endorsed CNVIS are:

- W.001 Site Establishment/Demobilisation
- W.002 Compound Operation

The work scenarios relevant to the Proposed Change from CNVIS Addendum 4 are:

- W.010A CSR Activities
- W.012A Level Crossing Work
- W.013 Watermain Relocation Work

Residential receivers

Predicted worse-case noise levels for residential receivers:

- 'Clearly Audible' noise impacts are predicted at the closest residential receivers for all scenarios (except signalling work) during the approved daytime hours, and for all scenarios (except signalling work) occurring during all three out-of-hours periods.
- 'Moderately intrusive' noise impacts are predicted at the closest residential receivers to the works for all scenarios (except compound operation, drainage work and signalling work) during approved daytime hours and during the daytime out-of-hours periods, and for scenarios (peak and typical track work, track tamping, crossover removal and peak and typical level crossing work) during the evening, for all scenarios (except site establishment/demobilisation, compound operation and signalling work) during the night-time out-of-hours periods.
- 'Highly intrusive' noise impacts are predicted at the closest residential receivers to the works for the peak track work scenario during approved daytime approved hours, daytime out of-hours and evening out-of-hours. 'Highly intrusive' noise impacts are also predicted for scenarios from (peak and typical track work, track tamping, crossover removal and peak level crossing work) during night-time out-of-hours These activities will be conducted during track possessions and staged progressively along the alignment, rather than simultaneously. Detailed information, including the duration and specific timing of OOH work, will be provided in the corresponding OOH work permit.
- Noise levels are predicted to exceed the sleep disturbance screening level for all work scenarios (except site establishment/demobilisation, compound operation and signalling work) occurring during the night-time period.
- Noise levels are predicted to exceed the 'sleep awakening' criteria for all work scenarios (except site establishment/demobilisation, compound operation, drainage work and signalling work) occurring during the night-time period.
- Sleep disturbance impacts would generally be caused by heavy vehicle movements and more noise intensive equipment. Where reasonable and feasible, these activities should be limited to the less sensitive periods to avoid noise impacts during more sensitive out-of-hours periods. The number of awakening events would depend on several factors, including the equipment being used, the duration of noisy work and the distance of the work to each residential receiver.

Further detail around the specific OOH work, such as duration and justification, would be identified in the relevant OOH work permit.

Other sensitive receivers

Predicted worse-case noise levels for non-residential receivers:

- 'Clearly Audible' noise impacts are predicted at the closest 'other sensitive' receivers for all scenarios (except crossover removal, drainage work and signalling work) during the approved daytime hours, for scenarios (site establishment/demobilisation, peak and typical track work, track tamping and peak level crossing work) during daytime out-of-hours period, for scenarios (peak and typical track work, track tamping and peak level crossing work) during evening out-of-hours period.
- 'Moderately intrusive' noise impacts are predicted at the closest 'other sensitive' receivers for peak and typical track work and track tamping during the approved daytime hours, for peak track work during the daytime out-of-hours period, and for typical track work, track tamping and peak and typical level crossing work during the night-time out-of-hours period.

- 'Highly intrusive' noise impacts are predicted at the closest 'other sensitive' receiver for the peak track work scenario during the night-time out-of-hours period.
- It is noted that other sensitive receivers should only be considered impacted 'when in use'.

Predictions made by the CNVIS show that both the sleep disturbance screening level and sleep awakening reaction level are likely to be exceeded when night work occurs near residential receivers. The receivers which would potentially be affected by sleep awakening impacts are generally the same receivers where 'moderately intrusive' and 'highly intrusive' nighttime impacts have been predicted. These receivers may be eligible for additional respite mitigations. Furthermore, for scenarios where 'highly intrusive' impacts are predicted, noisy activities would be scheduled during standard daytime hours, where feasible, to minimise disruption during OOH periods. It is noted however, that this work would generally occur during rail possessions and would be undertaken within the time limitations of each possession. All appropriate feasible and reasonable construction noise mitigation measures would be applied as part of the Project.

Ground-borne noise

Ground-borne construction noise impacts from the Project and the Proposed Change are not anticipated as vibration intensive work with the potential to generate perceptible ground-borne noise, is not included in the scope of work. Vibration intensive work for the Project (including the Proposed Change) will be completed outdoors, meaning airborne noise levels at the nearest receivers are expected to be higher than the corresponding internal ground-borne noise levels.

Where airborne noise levels are higher than ground-borne noise levels it is not necessary to evaluate potential ground-borne noise impacts and as such, they have not been considered further in the CNVIS assessment.

Vibration impacts

The minimum working distances for vibration intensive work, and as per the listed plant and equipment part of the scope of works, are listed below in Table 4.6 below.

Table 4.6: Recommended minimum working distances from vibration intensive equipment

SCENARIO	RATING/DESCRIPTION	MINIMUM DISTANCE			
		Cosmetic Damage			
		Residential and Light Commercial	Heritage Items	Industrial and Heavy	Human Response (NSW EPA Guideline)
Site establishment / demobilisation Level crossing work	Vibratory Roller <50kN (1-2 tonne)	5m	11m	3m	15-20m
	Vibratory Roller >300kN (>18 tonne)	25m	50m	12m	100m
Track tamping	Ballast tamping	5m	10m	3m	30m

As per the CNVIS, for most construction activities, the vibration emissions are intermittent in nature and for this reason, higher vibration levels occurring over shorter time periods are allowed.

Cosmetic damage assessment

The CNVIS determines that commercial buildings within the railway corridor have the potential to fall within the cosmetic damage minimum working distance.

Offset distances from specific vibration intensive plant to the nearest receivers and building construction would be confirmed before commencing vibration intensive work during construction.

Before commencement of any work, a structural engineer must undertake condition surveys of all building, structures, utilities and the like identified in the documents CoA A1 as being at risk of damage. As per the CNVIS, condition surveys (based on the large vibratory roller) are required for:

- One structure within the Rail Corridor at Wantiool
- Two structures within the Rail Corridor at Illabo Yard

The Proposed Change would not affect the Project's ability to comply with requirements in relation to undertaking pre and post condition survey reports and the implementation of construction vibration mitigation measures. If required, opportunities for compensation would be investigated in consultation with the relevant landowner. Based on the assessment above, the smaller, less vibration intensive vibratory roller will be prioritised where the required works can be feasibly and reasonably completed with the smaller machinery (where works fall within minimum working distances for cosmetic damage).

Human comfort assessment

Receivers within close proximity to the Proposed Change have the potential to fall within the human comfort minimum working distances, and occupants of these buildings may be able to perceive vibration impacts at times when vibratory rollers are in use nearby. Where impacts are perceptible, they would likely only be apparent for relatively short durations when vibration intensive equipment is in use nearby.

One structure located in the Rail Corridor at Wantiool is identified as having the potential to fall within the human comfort minimum working distance, however with the use of the small vibratory roller, all receivers are outside the human comfort minimum working distance.

The following receivers have the potential to fall within the human comfort minimum working distance:

- 36 Turland St, Illabo (residential)
- 21 Wood St, Illabo (residential)
- 81 Wood St, Illabo (residential)
- Illabo Public School (other – educational)
- Illabo Hotel (other – hotel)
- Two structures in the Rail Corridor at Illabo Yard

Where use of vibration intensive plant is restricted to use of the small vibratory roller, impacts would be limited to the two structures in the Rail Corridor at Illabo Yard.

Two structures are identified in the Rail Corridor (one at Wantiool and the other at Illabo Yard) as having the potential to fall within the human comfort minimum working distance for track tamping activities. For the track tamping scenario, commercial structures and residences have been previously exposed to track tamping activities during standard periodic maintenance of the track.

The following receivers have been identified as having with the potential to fall within the human comfort minimum working distance for the peak level crossing work scenario:

- 2-4 Turland St, Illabo (residential)
- 2 Crowther St, Illabo (residential)
- Illabo Hotel (other – hotel)

However, all receivers are outside the human comfort minimum working distance with the use of the small vibratory roller.

Based on the assessment above, the smaller, less vibration intensive vibratory roller will be prioritised where the required works can be feasibly and reasonably be completed with the smaller machinery.

Construction traffic noise

As detailed in Section 4.2.2, the Proposed Change would not introduce any additional construction traffic compared with the approved Project and therefore would not impact the assessed construction traffic noise. The proposed access points locations are reflective of existing access points along the rail corridor off Olympic Highway and Waterworks Road. The routes that construction vehicles would utilise are therefore consistent with the assessment in the EAD.

As discussed in the CNVIS, the EAD found that construction traffic associated with the J2I work stages on public roads complies with the road traffic noise goals. No assessment of night-time construction traffic during was provided as part of the EAD. Therefore, it is conservatively assumed that where night-time construction traffic is required, impacts would be experienced by residences along construction routes on sub-arterial and local roads within close proximity to the work sites. Night-time noise impacts are not anticipated on arterial roads.

The proposed temporary level crossing at Brabins Road LX604 is alongside the existing level crossing. Any differences in distance between the temporary level crossing and receivers would be minor and traffic noise would therefore be negligible compared with the existing environment.

Should diversions be required for construction activities, a more detailed assessment would be undertaken and considered as part of the relevant OOH work process.

Operational noise

The Proposed Change is required to support construction of the Project and would not introduce any additional potential noise and vibration impacts during the operation phase.

4.3.4 Conclusion

The Proposed Change would not generate any new substantial noise or vibration impacts as it relates directly to enabling approved construction activities directly adjacent to the approved CIZ. Noise and vibration impacts are expected to be short-term and minor in nature.

Potential noise and vibration impacts of the Proposed Change can therefore be adequately managed in accordance with the CoAs and UMMs, and through the implementation of the Project's CEMP. Therefore, no additional mitigation measures are proposed.

4.4 Aboriginal and Non-Aboriginal Heritage

4.4.1 Existing environment

Aboriginal heritage

The following discussion is drawn from Revised Technical Paper 2: Aboriginal Cultural Heritage Assessment Report of the EIS (ACHAR) (GML Heritage, 2021) and Appendix E: Detailed Response to Aboriginal Cultural Heritage Matters of the Albury to Illabo Response to Submissions Report (Appendix E of the RtS) (GML Heritage, 2023).

The Proposed Change falls within, and alongside, the existing rail corridor, which is generally heavily disturbed, as considered in the ACHAR and Attachment E of the RtS. The landforms at the enhancement sites relevant to the Proposed Change are detailed in Table 4.7.

Table 4.7: Landform at J2I

SUBJECT TO SURVEY?	LANDFORM
▸ **Yes**	▸ Plain and Creek Terraces

J2I is noted in the ACHAR as having nil archaeological potential. Searches of the Heritage NSW Aboriginal Heritage Information Management System (AHIMS) database undertaken to inform the ACHAR indicate that there are no sites within 200m of the Proposed Change. A basic AHIMS search was undertaken on 7 April 2025, which returned results. An extensive AHIMS search was therefore subsequently undertaken on 15 April 2025 using the same search extent.

The results of the search are mapped in relation to J2I in Figure 4.2 and the results of the basic AHIMS search are provided in Appendix G. The nearest heritage item identified as part of the EAD was isolated artefact (A2I-2), which is more than 2km southwest of the Proposed Change. As demonstrated by Figure 4.2,

the nearest heritage item identified in the AHMIS is more than 400m away from the boundary of the Proposed Change.

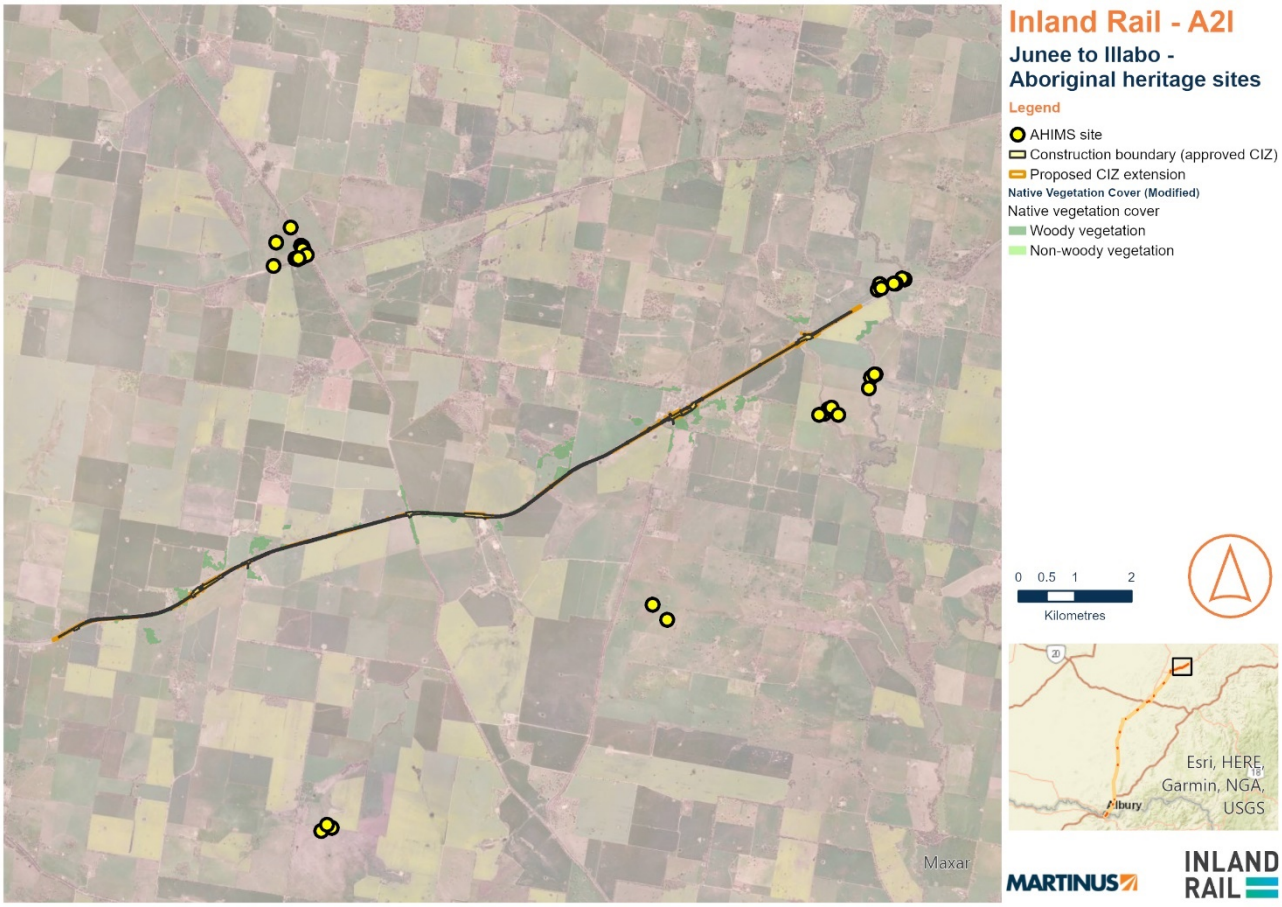

Figure 4.2: AHIMS results in relation to J2I for search undertaken on 15 April 2025 (Martinus, 2025)

Non-Aboriginal heritage

As outlined in the EIS (Technical Paper 3: Non-Aboriginal Heritage), no non-Aboriginal heritage items or areas of archaeological potential were identified within 200m of J2I. The nearest registered non-Aboriginal heritage sites are located at Junee, more than 3.5km southwest of the Proposed Change. No areas of non-Aboriginal potential were identified for Junee Precinct.

4.4.2 Impact assessment

Aboriginal heritage

The Proposed Change is located within the 'Site investigation area at the time of the field survey and the proposal site presented in the EIS', as shown in the map series provided in Attachment 1 of Appendix E of the RtS. In response to information requested by Heritage NSW, Appendix E of the RtS shows the areas subject to survey and provides explanation for an area of track at Illabo which was not subject to further survey or consultation with the Project Registered Aboriginal Parties (RAPs).

The ACHAR notes the presence of Jeralgambeth Creek at J2I and states the primary concern from RAPs for the enhancement site surrounded environmental protection, ensuring that sediments and run off would be controlled to avoid harm to the water quality of downstream environments. Water quality impacts would not be exacerbated by the Proposed Change, as considered in Section 4.6.

The Proposed Change would involve an overall minor impact to native vegetation. The Proposed Change would be implemented in accordance with the CoA, including those relating to vegetation clearing limits and generally in accordance with the UMMs, including those relating to minimisation of impacts to vegetation.

Therefore, the Proposed Change is considered consistent with the level of impact considered as part of the EAD for Aboriginal heritage. In the event any unexpected heritage finds are encountered during the undertaking of the Proposed Change, the discovery will be managed in accordance the Project's Unexpected Finds Procedure for Heritage and Human Remains, as shown in Appendix C.

Non-Aboriginal heritage

No registered or unregistered potential heritage items were identified within 200m of the J2I enhancement site which includes the Proposed Change area. Therefore, no further consideration for the impact of the proposed change on non-aboriginal heritage was required.

The EAD does not identify any areas of non-Aboriginal archaeological potential at J2I. Therefore, there would be no impact to areas of non-Aboriginal potential archaeological as a result of the Proposed Change.

Therefore, the Proposed Change is considered consistent with the level of impact considered as part of the EAD for non-Aboriginal heritage. In the event any unexpected heritage finds are encountered during the undertaking of the Proposed Change, the discovery will be managed in accordance the Project's Unexpected Finds Procedure for Heritage and Human Remains, as shown in Appendix C.

4.4.3 Conclusion

The Proposed Change falls within surveyed areas that have been subject to previous ground disturbance would generally be limited to topsoil. The Proposed Change would be managed as part of the Project to minimise water quality impacts, including for Jeralgambeth Creek.

The Proposed Change scope of works would not result in an increase on the level of impact assessed as part of the EAD and would not impact the Project's ability to comply with relevant conditions of approval or updated management measures. In the event any unexpected heritage finds are encountered during the undertaking of the Proposed Change, the discovery will be managed in accordance the Project's Unexpected Finds Procedure for Heritage and Human Remains, as shown in Appendix C.

Potential Aboriginal heritage impacts of the Proposed Change can therefore be adequately managed in accordance with the CoAs and UMMs, and through the implementation of the Project's CEMP. Therefore, no additional mitigation measures are proposed.

4.5 Biodiversity

4.5.1 Existing environment

The following discussion is drawn from Revised Technical Paper 8: Biodiversity Development Assessment Report of the EAD (Revised BDAR) and a Biodiversity Assessment Report Memo (BARM) (East Coast Ecology) which has been prepared to consider the Proposed Change (referred to as 'Subject Land' within the BARM). The BARM is provided in Appendix F.

The Proposed Change is located in the NSW South-western Slopes bioregion, within the Inland slopes subregion. The Proposed Change is located within or adjacent to the existing rail corridor in areas that have been predominantly cleared. The landscape in the area surrounding the proposal has been heavily fragmented by development, with existing habitat connectivity limited to creek lines and road reserves.

Threatened flora

The Revised BDAR and BARM determined that no threatened flora species individuals were likely to utilise the proposal site (the area within the approved CIZ), or specific vegetation zones within the biodiversity study area. There are therefore no clearing limits established for any threatened flora.

Threatened fauna

The Revised BDAR and BARM noted that the following threatened fauna species were surveyed or assumed present at J2I, with suitable habitat present and clearing limits applied under Condition E20 of the CoA:

- *Crinea sloanei* (Sloane's Froglet)
- *Polytelis swainsonii* (Superb Parrot)
- *Petaurus norfolcensis* (Squirrel Glider).

Crinia sloanei is listed as Vulnerable under *Biodiversity Conservation Act 2016* (NSW) (BC Act) and Endangered under the EPBC Act. The Revised BDAR applied species polygons for *Crinea sloanei* where mapped potential habitat, along with a 15m buffer, occurred in association with native vegetation which was not dissected by a road, rail corridor or urban development. Targeted surveys for *Crinea sloanei* were completed in July and August 2024. No *Crinea sloanei* were identified by the surveys.

Polytelis swainsonii is listed as Vulnerable under both the BC and EPBC Act. The Revised BDAR applied species polygons for *Polytelis swainsonii* at J2I for all Plant Community Type (PCT) 277 patches with the exception of derived and native plantings.

Petaurus norfolcensis is listed as Vulnerable under the BC Act. The Project also interacts with a separate endangered population listing for Squirrel Gliders in the Wagga Wagga LGA, though this would not be impacted by the Proposed Change which only relates to land within the Junee LGA. The Revised BDAR applied species polygons for *Petaurus norfolcensisi* at J2I for all Plant Community Type (PCT) 277 patches with the exception of derived and native plantings.

The Revised BDAR also considered impacts to *Keyacris scurra* (Key's Matchstick Grasshopper), which is listed as Vulnerable under the BC Act, and deemed that habitat was of low quality and determined therefore that *Keyacris scurra* was not a species credit species. Notwithstanding, clearing limits are applied under Condition E20 of the CoA. *Keyacris scurra* habitat is mapped as potentially occurring in small patches of PCT277 along J2I.

Migratory species

The Revised BDAR and BARM considered the potential impact of the Project on one listed migratory species, *Hirundapus caudacutus* (White-throated needletail), and found that a significant impact on the species is unlikely as it is unlikely to rely on the terrestrial habitat within the biodiversity study area in favour of more wooded areas.

Plant community types

The CIZ extension areas contain native vegetation, infrastructure, disturbed areas, non-native vegetation and plantings. One native PCT was identified in varying conditions (clearing limits applied for each under Condition E20 of the CoA) at J2I:

- PCT 277—Blakely's red gum–yellow box grassy tall woodland of the NSW South Western Slopes Bioregion.

Threatened ecological communities

Patches of PCT 277 at J2I conform to threatened ecological community listings under the BC Act (White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions) and EPBC Act (White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grasslands).

The above-mentioned biodiversity considerations are mapped in relation to the Proposed Change in Appendix A.

4.5.2 Impact assessment

Threatened species and communities

The Proposed Change intersects threatened species polygons and threatened ecological communities for which the Project has clearing limits imposed (Condition E20 of the CoA) as described in Table 4.8.

Where possible, consideration would be given to minimise impacts to the above through further construction design. Where the Proposed Change is located outside of the Revised BDAR study area, impacts to native vegetation (PCT277) and threatened species habitat would be avoided.

Table 4.8: Clearing limits established under CoA E20 (relevant to J2I)

NATIVE VEGETATION CONDITION & THREATENED SPECIES	COA AREA OF IMPACT (HA)	PROPOSED CHANGE AREA (HA) WITHIN (BARM)*
Native Vegetation		
PCT277 – *moderate* – Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion	0.5	0.0
PCT277 – *poor* - Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion	1.44	0.94
PCT277 – *derived* - Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion	2.3	0.0
PCT277 – *native plantings* - Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion	0.26	0.0
Threatened fauna species (Inland Slopes IBRA Subregion)		
***Crinea sloanei* (Sloane's Froglet)**	0.23	0.02
***Polytelis swainsonii* (Superb Parrot)**	1.82	0.94
***Petaurus norfolcensis* (Squirrel Glider)**	1.82	0.94
***Keyacris scurra* (Key's Matchstick Grasshopper)**	0.21	0.0

**Cumulative project clearing not to exceed Project clearing limits set out under CoA E20.*

Impacts to PCTs and threatened species habitat must not exceed the impact limits set out under CoA E20. The Proposed Change intersects up to 0.94ha of PCT277 in poor condition, which is also mapped as habitat for *Polytelis swainsonii* and *Petaurus norfolcensisi*.

Where the Proposed Change would result in direct impacts to mapped PCT277 in poor condition, an equivalent (or greater) area of mapped PCT 277 (poor condition) within the approved CIZ (already assessed for impact in the EAD) would be managed throughout the construction phase of the Project to maintain the same condition class following completion of works, meaning this would not contribute toward clearing for the Project. Where the Proposed Change is located outside of the Revised BDAR study area, impacts to PCT 277 would be avoided (these areas have not been included in the proposed CIZ extension areas).

Cumulative impacts are being tracked and reported through the Project's quarterly environmental monitoring reports, as outlined in Section 4 of the Construction Biodiversity Monitoring Program provided in Appendix G of the Construction Biodiversity Management Plan. Therefore, the Proposed Change is consistent with the extent of impact assessed in relation to biodiversity in the EAD.

Protected matters

As discussed in Section 1.1.1, the Project is not a controlled action under the EPBC Act and therefore there are no controlling provisions for the abovementioned protected matters under any EPBC Act approval. In accordance with the Revised BDAR, PCT277 in moderate condition is considered to be consistent with the White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grasslands community listed under the EPBC Act.

The Proposed Change would not affect the Project's ability to comply with the clearing limit of 0.5 ha set out for in condition E20 of the CoA and therefore would not materially increase the Project's impact on the EPBC Act listed White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grasslands.

Furthermore, as stated above, the Proposed Change would not exceed the clearing limits set out for native vegetation as set out under Table 6 of CoA E20. Therefore the Proposed Change is consistent with the impact summary presented in Table 9.12 of the Revised BDAR for nationally threatened fauna.

Therefore, a referral to Commonwealth DCCEEW is not required as a result of the Proposed Change.

4.5.3 Conclusion

The Proposed Change would occur both within and outside the Revised BDAR study area and mapped vegetation areas and would be consistent with the findings for threatened flora and migratory species, as considered in Section 4.5.1.

Although sections of the Proposed Change are located outside of the construction boundary of the Project and were not assessed as part of the Revised BDAR, the biodiversity impacts are considered consistent, and no further offsets (ecosystem or species) would be required. Where the Proposed Change is located outside of the Revised BDAR study area, impacts to PCT 277 would be avoided.

Where the Proposed Change is located within the Revised BDAR study area, impacts to threatened species and ecological communities outside of the approved CIZ would occur, however, the biodiversity impacts are considered consistent with the assessment contained in the Revised BDAR and no further offsets (ecosystem or species credits) would be required.

Where possible, consideration would be given to minimise impacts to the above through further construction design. Predicted clearing for the Proposed Change would be assessed against overall project clearing limits as part of the pre-clearing process. Therefore, the Proposed Change is consistent with the level of impact assessed in relation to biodiversity in the EAD.

Potential biodiversity impacts of the Proposed Change can therefore be adequately managed in accordance with the CoAs and UMMs, and through the implementation of the Project's CEMP. Therefore, no additional mitigation measures are proposed.

4.6 Surface water, flood risk and water quality

4.6.1 Existing environment

Flooding

The Proposed Change is located within the Murrumbidgee catchment of the Murray-Darling Basin. The Murrumbidgee catchment extends from the Kosciuszko National Park in eastern NSW to Balranald in western NSW, with inflows primarily sourced from the Great Dividing Range (EIS, Chapter 18).

The frequency of flood events is generally referred to in terms of their annual exceedance probability (AEP). For example, for a 5% AEP flood, there is a five per cent probability (or a one in 20 chance) that there would be floods of a greater magnitude in any given year. For a 1% AEP flood, there is a one per cent probability (or a one in 100 chance) that there would be floods of greater magnitude each year.The probable maximum flood (PMF) is the largest flood that could be expected to occur at a particular location, usually estimated from probable maximum precipitation.

J2I is affected by local overland flooding, with thirteen hydraulic structures (i.e. culverts and bridges) located along the existing rail alignment within the Junee to Illabo clearances enhancement site. The Proposed Change would not impact any of these hydraulic structures.

Water quality

Jeralgambeth Creek, which is considered to meet the criteria for key fish habitat, and 13 minor ephemeral watercourses intersect the Proposed Change.

The Proposed Change is located within 200m of 19 farm dams and one wetland area, however none of these fall within the proposed CIZ extension areas.

4.6.2 Impact assessment

Flooding

Construction activities on flood-prone land, including earthworks, concrete works, compounds, stockpiles, etc, have the potential to temporarily affect flooding behaviour. Without the implementation of appropriate management measures, potential impacts include:

- cause damage to construction sites, machinery, plant and equipment
- detrimentally impact downstream watercourses through increased flow rates in drainage lines, changes in scour, bank erosion and transport of sediments
- obstruct the passage of floodwater and overland flow, which could exacerbate existing flooding conditions and pose a safety risk to the public.
- The potential construction impacts at the Junee to Illabo clearances enhancement site include:
  - Construction stockpiles, materials and temporary creek crossing at this enhancement site may be impacted in a flood event
  - Temporary redistribution of overland flows and stormwater due to construction infrastructure.

The Proposed Change would not require any major earthworks or other construction activities that would substantially alter the flood regime at J2I beyond the impacts already considered within the EAD.

Water quality

Construction presents a risk to downstream water quality if management measures are not implemented, monitored, and maintained throughout the construction period. If inadequately managed, construction activities could potentially impact water quality if they disturb soil or watercourses, result in the uncontrolled discharges of substances to watercourses, or generate contamination.

The following construction activities as part of the Proposed Change have the potential to impact water quality in downstream watercourses as a result of erosion and sedimentation (EIS, chapter 18):

- stripping topsoils for site preparation
- vegetation removal
- construction of site access roads, crane pads, construction compounds and other site infrastructure
- cut, fill and piling
- ground disturbance for removal of rail infrastructure
- track realignment including removal, treatment and fill of formation
- stockpiling and transport of materials and soils.
- The downstream effects of water quality impacts could potentially include:
- smothering aquatic life and/or inhibiting photosynthesis conditions for aquatic and riparian flora

- impacts on breeding and spawning conditions of aquatic fauna
- changes to water temperature due to reduced light penetration
- increased turbidity levels above the design levels of water treatment infrastructure
- reduced visibility in recreation areas.

The Proposed Change would not require the use of any additional water and therefore would not utilise or impact the operation of nearby farm dams.

4.6.3 Conclusion

The above activities and potential impacts are consistent with level of impact considered as part of the EAD. The Proposed Change would not involve any major earthworks or other construction activities that would substantially alter the flood regime at J2I.

The Proposed Change would not require the use of any additional water and therefore would not utilise or impact the operation of nearby farm dams.

The Proposed Change would be managed in accordance with the Project's obligations with respect to maintaining water quality to minimise potential downstream water quality impacts. The Proposed Change would not require the use of any additional water and therefore would not utilise or impact the operation of nearby farm dams.

Potential hydrological impacts of the Proposed Change can therefore be adequately managed in accordance with the CoAs and UMMs, and through the implementation of the Project's Construction CEMP.

4.7 Soils and contamination

4.7.1 Existing environment

The Proposed Change along J2I varies in elevation from 250m above the Australian Height Datum (AHD) in the east to 360m AHD in the west. Existing soil characteristics within the Proposed Change area are shown in Table 4.9 below.

Table 4.9: Existing soil characteristics at J2I

LANDSCAPE	SOIL	CHARACTERISITICS
Currajong soil landscape in the south **Malebo soil landscape in the south** **Mimosa soil landscape centrally between Junee and Illabo** **Eurongilly soil landscape in the north and beneath Illabo**	Red and brown Chromosols and occasionally red Kurosols on upper, mid and lower slopes Brown and red Dermosols on mid-to-lower slopes Mottled red, brown and yellow Chromosols on lower slopes. Imperfectly drained brown and red Sodosols are often present in lower slopes, in drainage depressions and along creek flats.	Localised salinity, poor drainage, high run-on, sheet, wind and gully erosion hazard, high erodibility of subsoils, acidity of topsoils, and sodicity/dispersibility of subsoil, engineering hazard, low bearing strength and mass movement.

Saline soils

The Proposed Change is located on land mapped as having 'moderate' land salinity hazard.

Acid sulfate soils

The Proposed Change is located within areas described as having a low probability of acid sulfate soils (ASS).

Naturally acidic soil

The Proposed Change is located on land that could be impacted by naturally acidic soils.

Contamination

The Proposed Change is located within an existing rail corridor, which is considered to contain a general level of risk associated with contamination from historical development and activities associated with its operation.

A range of sites adjacent to the rail corridor that would be considered to have associated contaminated risk were identified, including agricultural land. The sources for these general contamination risks include:

- fill used in construction of the existing rail line, which may be contaminated EIS weed-suppression activities
- buildings potentially containing hazardous materials
- rail line ballast potentially containing heavy metals and other contaminants
- contamination from maintenance activities undertaken at sidings and near silos or other areas
- use of chemicals on agricultural land
- machinery storage and maintenance, refuelling and spray rig filling, agricultural sheds and silos

The Proposed Change is located directly adjacent to AEC 47, and AEC 48. Description of the AECs and potential contaminants of concern are provided in Table 4.10 and shown in the mapping provided in Appendix A.

Table 4.10: Description of AEC and potential contaminants of concern

ENHANCEMENT SITE	AEC	DESCRIPTION OF AEC	POTENTIAL CONTAMINANTS OF CONCERN
Junee to Illabo clearances	AEC 47	Illabo RFS - potential historical chemical	▸ TRH, BTEX, and PAHs ▸ The RFS have advised that this site has not been identified as a location where there has been historical use of PFAS. Therefore, this contaminant was not considered further
	AEC 48	Ballast stockpiles	Not applicable

4.7.2 Impact assessment

Excavation and ground disturbance activities would expose and disturb soils. If not adequately managed, this could result in:

- erosion of exposed soil and stockpiled materials
- dust generation
- an increase in sediment loads entering the stormwater system and/or local runoff, and, therefore, nearby receiving waterways
- increase in salinity levels in soil
- ASS conditions
- mobilisation of contaminated sediments, with resultant potential for environmental and human health impacts

Soil erosion

Construction activities associated with the Proposed Change would temporarily expose the natural ground surface and sub-surface through the removal of vegetation, overlying structures and minor excavation. The exposure of soil to runoff and wind can increase soil erosion potential; particularly, where construction activities are undertaken in soil landscapes characterised by dispersive soils, given their susceptibility to erosion. This is consistent with the potential impacts considered as part of the EAD and would be managed in accordance with the Blue Book.

Contamination

There is a general contamination risk present for the Project resultant from the general setting within an existing rail corridor. The risk of the Proposed Change interacting with contaminants is considered to be low with the exception of where it is located immediately adjacent to AEC47 and AEC48.

A pre-construction land condition assessment will be undertaken prior to commencement of works associated with the Proposed Change.

The Project's unexpected finds procedure for contamination would be implemented where unexpected or unidentified contaminants are identified during works.

4.7.3 Conclusion

Construction activities at the Proposed Change area would be short term and would be prepared with consideration of the existing soils and contamination characteristics of the area.

Potential soil and contamination impacts of the Proposed Change can therefore be adequately managed in accordance with the CoAs and UMMs, and through the implementation of the Project's Construction Environmental Management Plan (CEMP).

4.8 Air quality

4.8.1 Existing environment

Regional air quality is mainly influenced by rural activities, industrial activities, vehicle emissions, railway operations, power generation, waste management and extraction activities. Dust from paved and unpaved roads, and domestic solid and liquid fuel burning in the region, also contribute to the local air shed.

As noted in the EIS (Chapter 22), air quality data has been sourced from the Junee monitoring station, with the results summarised in Table 4.11 below, alongside the air quality impact assessment criterion for each pollutant specified in the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (NSW EPA, 2016).

Table 4.11: Background air quality (2016 to 2020)

MONITORING STATION	POLLUTANT	AVERAGING PERIOD	AIR QUALITY IMPACT ASSESSMENT CRITERIA	YEAR*				
				2016	2017	2018	2019	2020
Junee	Total Suspended Particles (TSP) (g/m^3)	Annual	90	**292**	**358**	**1,331**	**3,523**	**9,018**

**The Junee air quality monitoring station only measures TSP (DustTrak). It is not a National Environment Protection Measure (NEPM) performance monitoring station and does not conform to Australian Standards. Levels should be viewed as indicative only (EIS, Chapter 22)*

4.8.2 Impact assessment

The following activities have the potential to generate dust during construction:

- vegetation clearing and grubbing
- construction of access points and roads
- dirt, mud, or other materials tracked onto a paved public roadway by a vehicle leaving a construction site (generally referred to as egress)
- erosion of unsealed surfaces
- materials handling and loading at laydown areas, and vehicle movements on unsealed roads/surfaces

4.8.3 Conclusion

The Proposed Change impacts to air quality have been deemed as negligible to high prior to any mitigation measure implementation (EIS, Chapter 22). Following the implementation of appropriate mitigation measures, the residual air quality impacts would be reduced to negligible to low risk and short-term.

Potential air quality impacts of the Proposed Change can therefore be adequately managed in accordance with the CoAs and UMMs, and through the implementation of the Project's CEMP.

4.9 Landscape and visual

4.9.1 Existing environment

The following discussion is drawn from Technical Paper 10: Landscape and Visual Impact of the EAD.

The landscape between Junee and Illabo is predominantly rural uses on undulating landform. It is largely cleared with corridors of vegetation along the road and rail corridors. The existing rail corridor is aligned generally parallel to the Olympic Highway as it extends through this landscape.

The rail corridor and Olympic Highway pass through the town of Illabo. Illabo has a small centre and some residential properties. Within the town there is a group of concrete grain silos within the rail corridor which are local visual landmarks and characteristic of the region. There is a rest stop and recreational reserve, containing several groups of mature trees, between the highway and rail corridor in the town.

Landscape sensitivity

This area is experienced by local residents, including the town of Illabo, and a moderate number of road users on the Olympic Highway. The grain silos at Illabo are a local visual feature and the highway rest stop at Illabo is a local recreational resource. This area is of neighbourhood landscape sensitivity.

Viewpoints

The following viewpoints were selected as representative of the range of views at J2I. The locations of these viewpoints are shown in Figure 4.3.

Viewpoint 29: View southwest from the Olympic Highway rest stop, Illabo:

This view from the rest stop shows the rail corridor to the east (left of view) and open space to the west (right of view). The rail corridor is generally level with the rest stop and there is a row of mature trees which filter views to the corridor and trains from this location. In the background of the view there is an at grade crossing and there is a glimpse to the undulating, open rural landscape.

This view would be experienced by a moderate number of people including those using the rest stop and open space, and from vehicles travelling along the adjacent highway. This view is of local visual sensitivity.

Viewpoint 30: View south from Wood Street, Illabo:

This view includes the existing concrete gain silos and large storage shed along the rail corridor. The rail corridor includes a row of power poles and wires and there is a backdrop of trees. The Olympic Highway can be seen aligned parallel to the rail corridor in the middle ground of this view. The residential areas of Illabo can be seen to the west (right of view) and are set back from the Highway. There are mature trees which provide screening of the highway, residences and the centre of town which is in the background and out of view.

- This view would be experienced by residents in adjoining residential properties and from vehicles, travelling along this local road. The historic character concrete silo is an important local visual feature in the view. This view is of neighbourhood visual sensitivity.

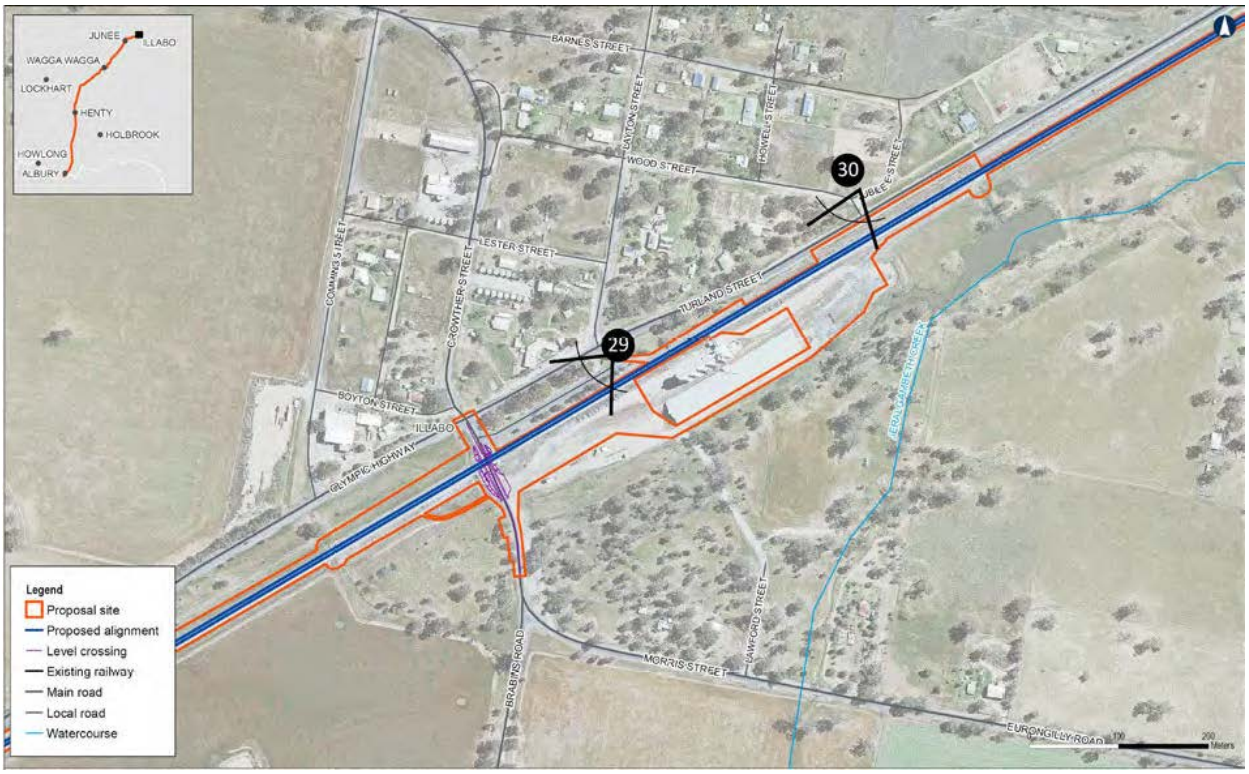

Figure 4.3: Locations of viewpoints

Night-time visual

At night, Illabo and the surrounding rural landscape would have low light levels. There would be lighting in the town from residences and the small commercial area, and lights from rural residences scattered across the surrounding landscape. Vehicles travelling along the Olympic Highway and other local roads, and existing trains travelling along the existing rail corridor would have moving headlights and contribute to the light levels. This landscape is an area of low district brightness and has a moderate visual sensitivity at night.

4.9.2 Impact assessment

Landscape sensitivity

There would be construction undertaken within the rail corridor at several locations along this section of the rail corridor. This work would not substantially alter any publicly accessible areas.

There would be temporary stockpiles, laydown areas and construction work along the corridor. While this construction activity would temporarily alter the character of the rail corridor and adjacent open space, there would not be a direct impact upon the existing open space and trees. Overall, there would be a low magnitude of change to this landscape and a negligible landscape impact during construction.

Viewpoints

Viewpoint 29

Laydown areas would be established within the rail corridor (left of view) and there would be works along the rail corridor. The existing trees would filter the views to this work which would be seen in the context of existing rail corridor activity. Overall, there would be a negligible magnitude of change and a negligible visual impact during construction.

Viewpoint 30

The construction works would occur within the existing rail corridor with laydown areas established to the north of the silos, in the middle ground of this view. The existing trees would screen part of the works from this location and the laydown area would be seen in the context of existing rail corridor activity. Overall, there would be a negligible magnitude of change and a negligible visual impact during construction.

Night-time visual

There is the potential that OOH work would be required, with potential usage of task lighting and headlights from construction vehicles accessing and moving along the rail corridor. Along the rail corridor there may be views of this work from the Highway and from rural dwellings where there is not intervening vegetation. However, due scale of the surrounding rural areas, all residential properties are set back from the rail corridor so that this lighting would not alter views from any sensitive locations. Through the town of Illabo, the rail side vegetation would filter views from the Highway, commercial properties and residences, which are set back from the rail corridor.

Overall, during construction there would be a low magnitude of change and a moderate-minor adverse visual impact at night during construction.

4.9.3 Conclusion

Impacts to landscape sensitivity, viewpoints and night-time visual are expected to be short-term and minor with the implementation of appropriate mitigation measures as outlined in the CoA and UMMs.

Potential landscape and visual impacts of the Proposed Change can therefore be adequately managed in accordance with the CoAs and UMMs, and through the implementation of the Project's CEMP.

4.10 Cumulative impacts

Project changes

The Project has not been the subject of a modification under section 5.25 of the EP&A Act. A modification report has been prepared and is under assessment for revisions to the approved Kemp Street Bridge at Junee, to now provide a single, integrated road and pedestrian bridge (Inland Rail Albury to Illabo Modification 1 Kemp Street Bridge, Junee). For the purpose of this CA, the proposed modification is approximately 4km southwest of the Proposed Change and would not result in any substantial cumulative environmental impacts, should both proposals proceed.

The following CAs have been prepared to support the undertaking of the Project:

- EIS Consistency Assessment Report (Minor) Kildare Catholic College (MR, April 2025)
- EIS Consistency Assessment Report (Minor) Cassidy Parade and Pearson Cassidy (MR, May 2025)
- EIS Consistency Review (Small Scale) Traffic Diversion and Mitigation Measures (MR, May 2025)
- EIS Consistency Assessment Report (Minor) Edmondson Street Utility Adjustments (MR, June 2025)

The above were considered to be consistent with the Minister's Conditions of Approval and the Updated Mitigation Measures. The above CAs were not determined to result in any regional impacts. Therefore, when considered alongside the Proposed Change, the above approved Project changes would not cause the Project to have any substantial cumulative impact on the environment.

Consideration of adjacent proposals and projects

A review of available information on the NSW Major Projects portal for external projects in the Junee locality indicated that the proposal would result in an overall negligible contribution to cumulative environmental impact in the area.

Junee Shire Council does not provide access to an online planning application tracking tool, however as the Proposed Change is considered to be consistent with the Project, the Proposed Change is unlikely to result in a substantial overall impact when considered alongside any potential developments under assessment or recently approved by Junee Shire Council.

Potential cumulative impacts of the Proposed Change can therefore be adequately managed in accordance with the CoAs and UMMs, and through the implementation of the Project's CEMP.

4.11 Matters of national environmental significance

As discussed in Section 1.1.1, the Project was referred to the Australian Government Minister for the Environment under the EPBC Act due to the potential for impacts on protected matters on 2 June 2020 (EPBC Referral No 202/8670). On 29 June 2020, DAWE notified that the proposal is not a controlled action, and hence approval under the EPBC Act is not required.

The Proposed Change is considered against matters of national environmental significance and impacts on Commonwealth land in accordance with the EPBC Act in Table 4.12. The Proposed Change would be consistent with the potential impacts on matters of national environmental significance compared with the Project (including those that were considered in Referral No 202/8670). An indicative shape drawn along the Project alignment from the southern to the northernmost extent of the Proposed Change was entered in to the Australian DCCEEW Protected Matters Search Tool (PMST) on 30 January 2025 and a PMST report was generated to support the below impact descriptions, unless otherwise stated.

Table 4.12: Matters of national environmental significance and impacts on Commonwealth land

FACTOR	IMPACT (YES/NO)	IMPACT DESCRIPTION
Any impact on a World Heritage property?	No	The Proposed Change would not have a direct or indirect impact on any World Heritage property. No World Heritage properties are located within a 5km buffer of the Proposed Change.
Any impact on a National Heritage place?	No	The Proposed Change would not have a direct or indirect impact on any National Heritage place. No National Heritage places are located within a 5km buffer of the Proposed Change.
Any impact on a wetland of international importance?	No	The Proposed Change would not have a direct or indirect impact on any wetlands of international importance (also referred to a Ramsar wetlands). The Proposed Change is located upstream from the following Ramsar Wetlands: ▸ Banrock station wetland complex ▸ Hattah-kulkyne lakes ▸ Riverland ▸ The coorong, and lakes alexandrina and albert wetland. The Proposed Change is not less than 400km upstream of any of the above wetlands and would not have any hydrological impact to the extent that these wetlands would be impacted.
Any impact on a listed threatened species or communities?	No	As part of the Project's EPBC Act referral, the following listed species were determined to be likely directly or indirectly impacted: ▸ Superb Parrot (*Polytelis swainsonii*); ▸ Sloane's Froglet (*Crinia sloanei*); ▸ Grey-headed Flying-fox (*Pteropus poliocephalus*); ▸ White-throated Needletail (*Hirundapus caudacutus*); ▸ Hoary Sunray (*Leucochrysumalbicans* var. tricolor); ▸ Macquarie Perch (*Macquaria australasica*).

FACTOR	IMPACT (YES/NO)	IMPACT DESCRIPTION
		As considered in Section 4.5 of this CA, there would be no additional impact to biodiversity as a result of the Proposed Change in that it would not cause the Project to exceed approved clearing limits and would not result in impacts to any EPBC Act listed threatened species or communities beyond those for which the Project has approved clearing limits. Therefore, there would be no additional impact compared with what was assessed in relation to EPBC Act listed threatened species and communities.
Any impacts on listed migratory species?	No	The Revised BDAR considered the potential impact of the Project on one listed migratory species, *Hirundapus caudacutus* (White-throated needletail), and found that a significant impact on the species is unlikely as it is unlikely to rely on the terrestrial habitat within the biodiversity study area in favour of more wooded areas. The Proposed Change is located entirely within the Revised BDAR study area. As considered in Section 4.5 of this CA, there would be no additional impact to biodiversity as a result of the proposed change and therefore no additional impact compared with what was assessed in relation to listed migratory species.
Any impact on a Commonwealth marine area?	No	The Proposed Change would not have a direct or indirect impact on any Commonwealth marine area.
Does the proposal involve a nuclear action (including uranium mining)?	No	The Proposed Change does not relate to a nuclear action.
Additionally, any impact (direct or indirect) on Commonwealth land?	No	The Proposed Change is not located in proximity to and would not have any direct or indirect impact on, any Commonwealth land, as per a review of the publicly available 'Commonwealth Owned Land' dataset for non-Corporate Commonwealth entities provided by the Commonwealth Department of Finance (dated 30 June 2024).

4.12 Environmental management measures

Potential environmental impacts of the Proposed Change would be managed in accordance with the CoAs and UMMs, and through the implementation of the Project's CEMP. Table 4.13 summarises the environmental aspects considered as part of this CA and provides consideration of any additional control measures to manage potential impacts. There are no proposed additional mitigation measures for the Proposed Change.

Table 4.13: Additional mitigation measures

ASPECT	NATURE AND EXTENT OF IMPACTS (NEGATIVE AND POSITIVE) DURING CONSTRUCTION (IF CONTROL MEASURES IMPLEMENTED) OF THE PROPOSED CHANGE, RELATIVE TO THE APPROVED PROJECT	PROPOSED CONTROL MEASURES IN ADDITION TO PROJECT COA AND UMM	MINIMAL IMPACT YES/NO	ENDORSED	
				Yes/No	Comments
Traffic and transport	No increase in construction traffic is anticipated and any road closure will be temporary and have minimal impact to residents and local traffic.	No additional measures required.	Yes		
Noise and vibration	Noise and vibration impacts are expected to be short-term and minor in nature.	No additional measures required.	Yes		

Aboriginal heritage	The Proposed Change scope of works would not result in an increase on the level of impact assessed as part of the EAD and would not impact the Project's ability to comply with relevant conditions of approval or updated management measures.	No additional measures required.	Yes		
Biodiversity	The Proposed Change is consistent with the level of impact assessed in relation to biodiversity in the EAD in that it would not cause the Project to exceed approved clearing limits and would only impact species habitat and vegetation communities for which the Project has approved clearing limits.	No additional measures required.	Yes		
Surface water, flood risk and water quality	The Proposed Change is consistent with level of impact considered as part of the EAD. The Proposed Change would not involve any major earthworks or other construction activities that would substantially alter the flood regime at J2I.	No additional measures required.	Yes		
Soils and contamination	Construction activities at the Proposed Change area would be short term and would be prepared with consideration of the existing soils and contamination characteristics of the area.	No additional measures required.	Yes		
Air quality	Air quality impacts are expected to be short-term and minor in nature.	No additional measures required.	Yes		
Landscape and visual	Impacts to landscape sensitivity, viewpoints and night-time visual are expected to be short-term and minor in nature.	No additional measures required.	Yes		
Cumulative impacts	No substantial impact is expected.	No additional measures required.	Yes		

5 Consistency Assessment

The factors in Table 5.1 are considered against the Proposed Change as described in this document to determine whether the proposed change can be considered consistent with the Minister's approval.

Table 5.1: Consistency questions

CONSISTENCY QUESTION	DISCUSSION	CONSISTENT
Q1) Are the proposed works being carried out as part of an approved project? E.g. Are works "generally in accordance with" project documents and plans, where relevant?	As considered throughout this document, the Proposed Change is being carried out generally in accordance with the EAD outlined in CoA A1 of the Infrastructure Approval.	Yes
Q2) Is the modification such a radical transformation of the Project as a whole, as to be, in reality, an entirely new Project? Note: If answered Yes, a new project application may be required.	The Proposed Change is not considered to constitute a 'modification' and is not such a radical transformation of the Project that would result in an entirely new project.	Yes
Q3) Are the proposed works a modification that is considered "consistent with" the project as approved? This will require the work in question to have environmental impacts contemplated by the approval (such as EA / EIS, CEMP, spoil management plan, heritage management plan or the like), including documents forming part of the approval, or as a minimum, very few additional impacts.	Yes, the proposed works are considered "consistent with" the project as approved. The Proposed Change aligns with the safeguards outlined in the PIR RtS and the CoA. The Proposed Change has been carefully evaluated and determined to be consistent with the level of environmental impact accounted for in the approval documents and would be implemented in accordance with the approved environmental management plans for the Project.	Yes
Q4) When considering all previous consistency assessments and the potential cumulative impacts, are the proposed works still considered 'consistent with' the project as approved?	Yes, when considering all previous consistency assessments and the potential cumulative impacts, the proposed works are still considered 'consistent with' the project as approved. A list of consistency assessments approved prior to the Proposed Change is provided in Section 1.2. Consideration of potential cumulative impacts is provided in Section 4.10.	Yes

6 Monitoring and Reporting

There is no additional monitoring or reporting required as a result of the Proposed Change.

7 Conclusion

Based on the consistency assessment in this report, the proposed change is considered:

Further to the details provided in Table 5.1 above, the Proposed Change is considered:

☒ Consistent with the Ministers Conditions of Approval, and the Updated Mitigation Measures

☐ ~~Not consistent with the Ministers Conditions of Approval and Revised Environmental Mitigation Measures. A modification to the project approval must be prepared and submitted to the Department of Planning Infrastructure and Environment for approval.~~

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8 Certification

Author

This consistency assessment provides a true and fair review of the proposed change for the Inland Rail – Albury to Illabo (A2I) project.

Name: Chris Standing	**Signature:** DocuSigned by: B00B9622192149F...
Position: Environment, Approvals and Sustainability Manager (A2P)	**Date:** 16/04/2026
Organisation: Martinus Rail	

Inland Rail

The Proposed Change, subject to the implementation of all the environmental requirements of the project, is consistent with the Division 5.2 approval.

Name: Daniel Lumby	**Signature:** Daniel Lumby
Position: Principal Environment Advisor	**Date:** 22/04/2026
Organisation: Inland Rail	

Name: Malcolm Clark	**Signature:**
Position: A2P Project Director (Manager)	**Date:** Mr Malcolm Clark - Australian Rail Track Corporation Apr 23, 2026, 1:54 PM GMT+10:00
Organisation: Inland Rail	

I have examined the proposed changes by reference to the Division 5.2 approval in accordance with Section 5.25(2) of the EP&A Act. I consider that the proposal is consistent with the Division 5.2 approval.

I agree ~~/ do not agree~~ with the recommendations of the ~~[Insert~~ above signatory ~~e.g. PEL]~~ and approve ~~/ do not approve~~ of the carrying out the proposed change in accordance with those recommendations.

Appendix A Construction Boundary Changes and Environmental Constraints Mapping

Inland Rail - A2I

Junee to Illabo - CIZ changes layout and access mapping

Legend

- Construction boundary (approved CIZ)
- Approved Change (CIZ extension)*
- Proposed Change (CIZ extension)
- Cadastral boundary
- Chainage (100m)

Construction access points

- EAD construction site access point
- Proposed construction site access point

Watercourse

- Minor Watercourse
- Major Watercourse

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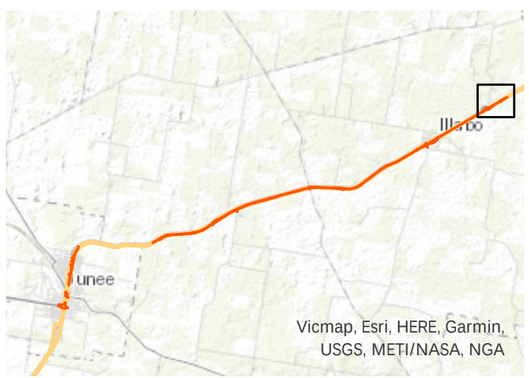
Metres



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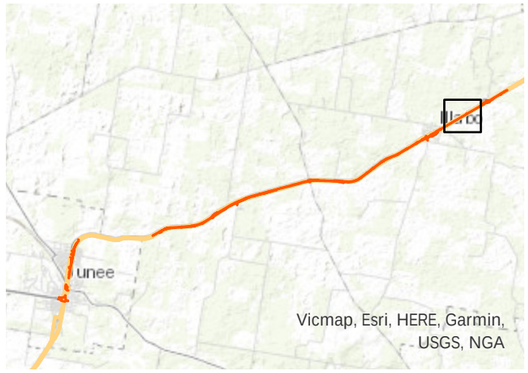

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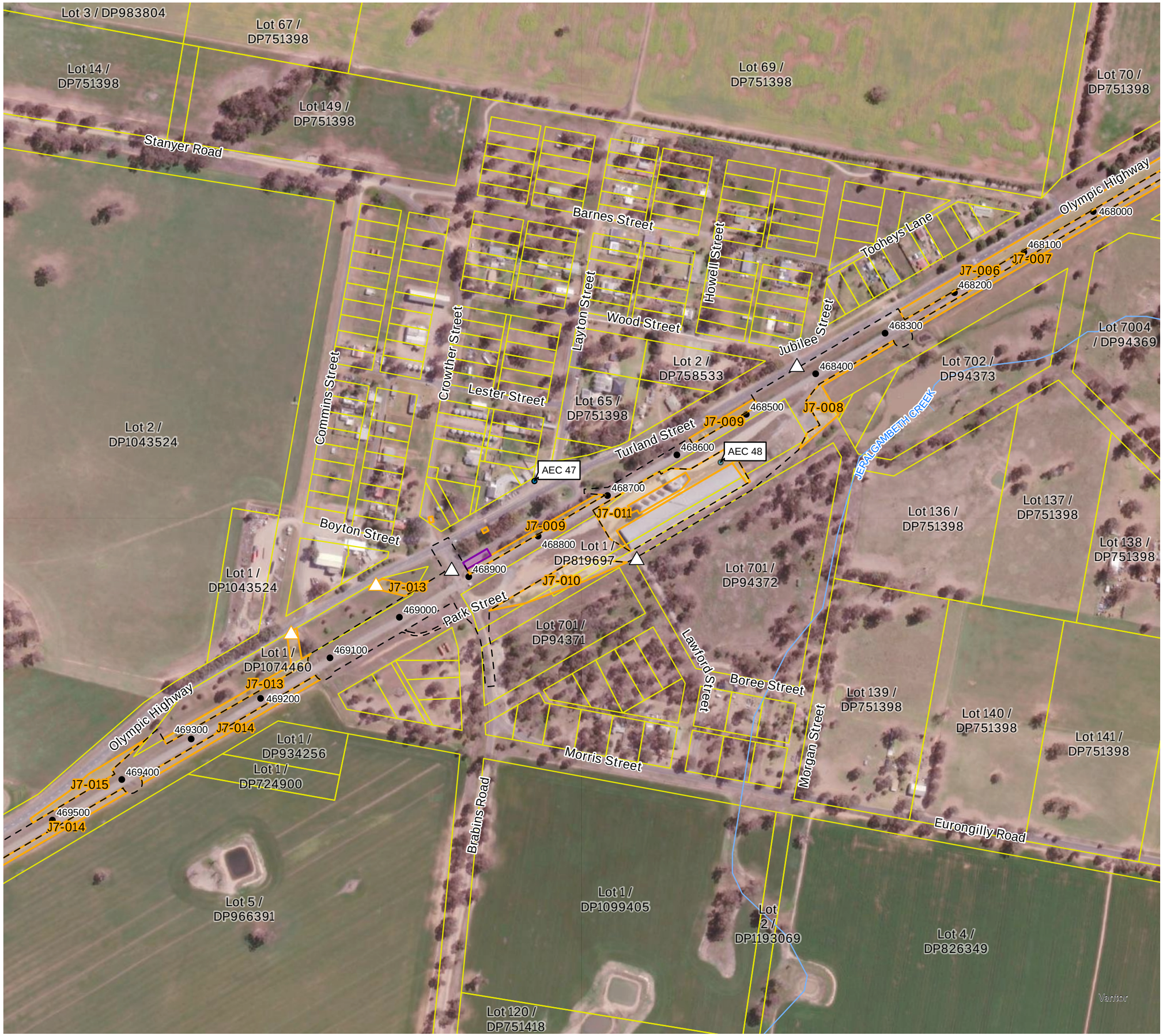

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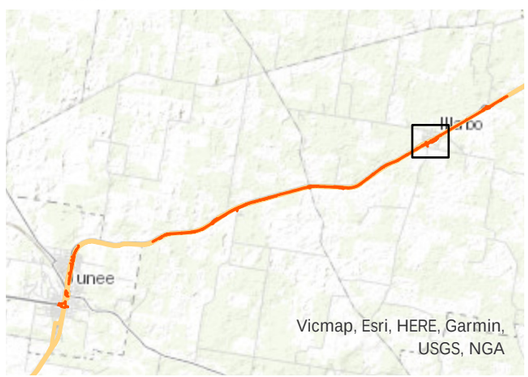

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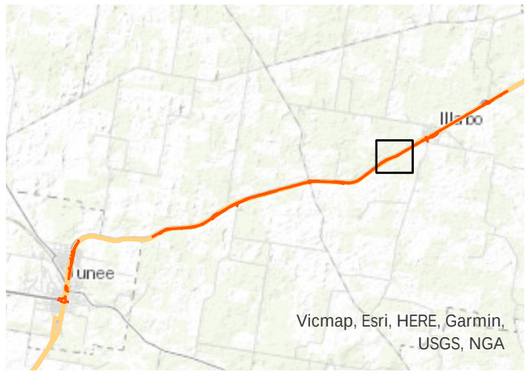

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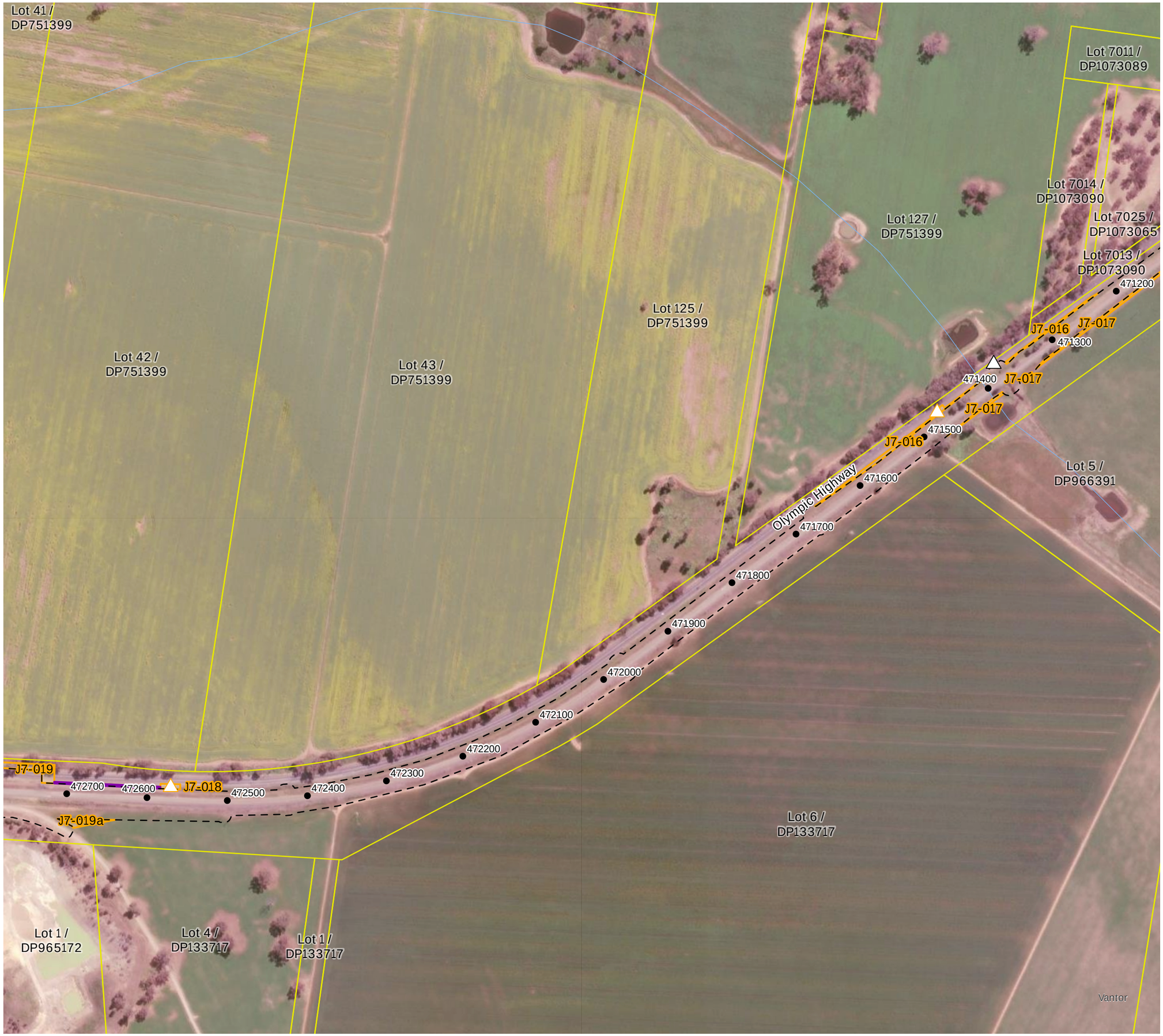

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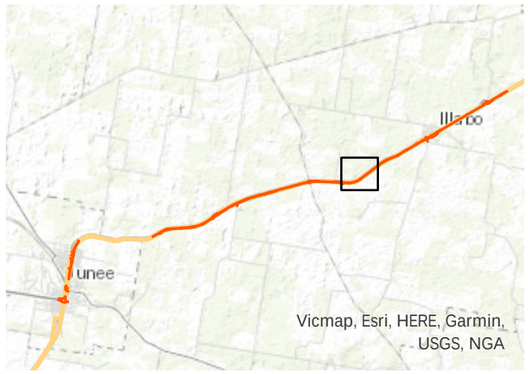

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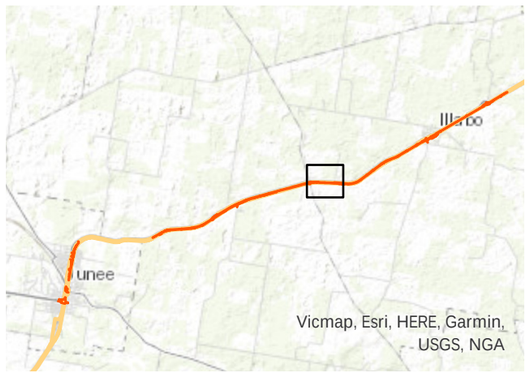

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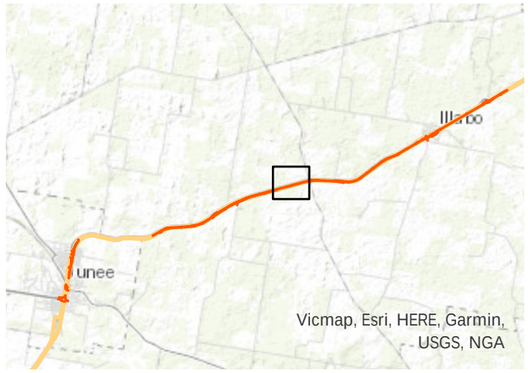

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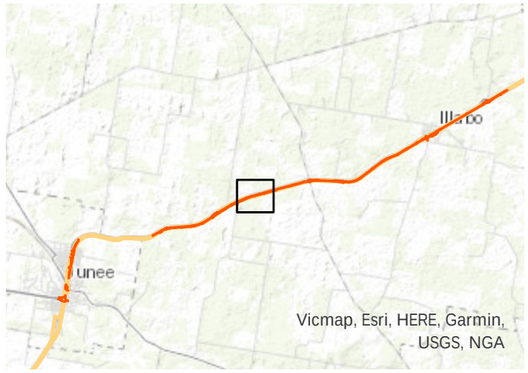

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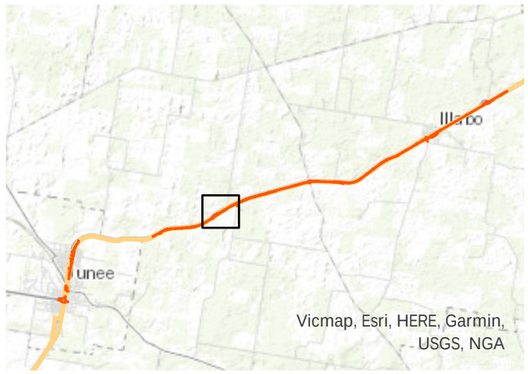

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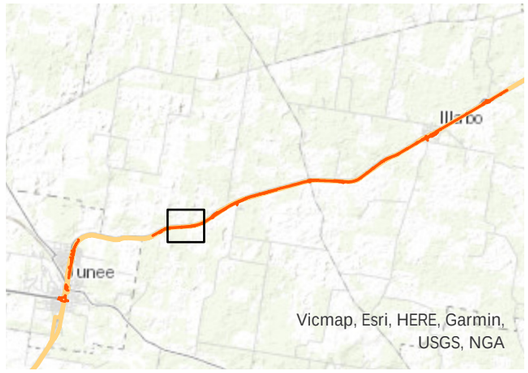

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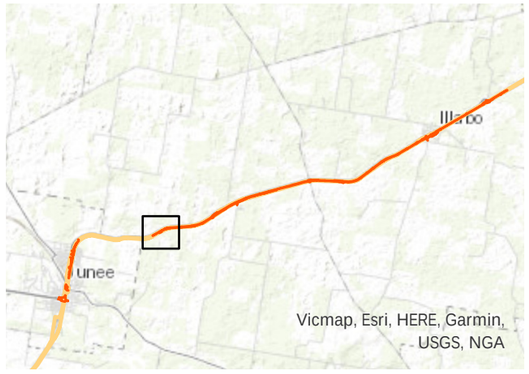

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Junee to Illabo - CIZ changes Environmental mapping

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- PCT277 (native plantings)
- PCT277 (poor condition)

BARM - Plant Community Type (PCT)

- PCT0 (miscellaneous)
- PCT277 (no impact)

BDAR - Threatened Species Habitat polygon

- Sloane's Froglet habitat
- Superb Parrot / Squirrel Glider habitat

BDAR - Threatened Fauna sightings

- Diamond Firetail
- Little Eagle

Dams and Wetlands

- Farm dam
- Wetland

Watercourse

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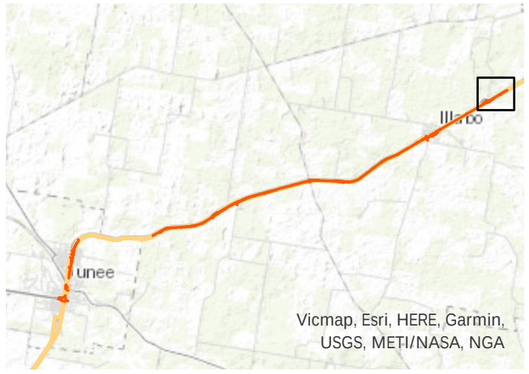

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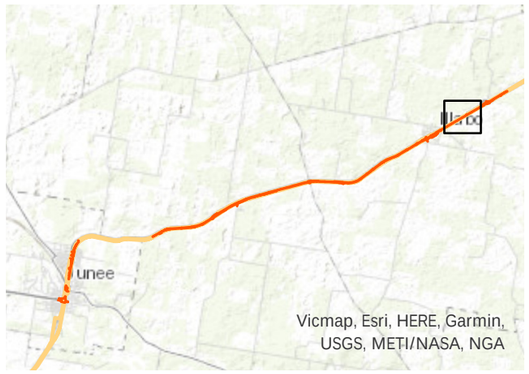

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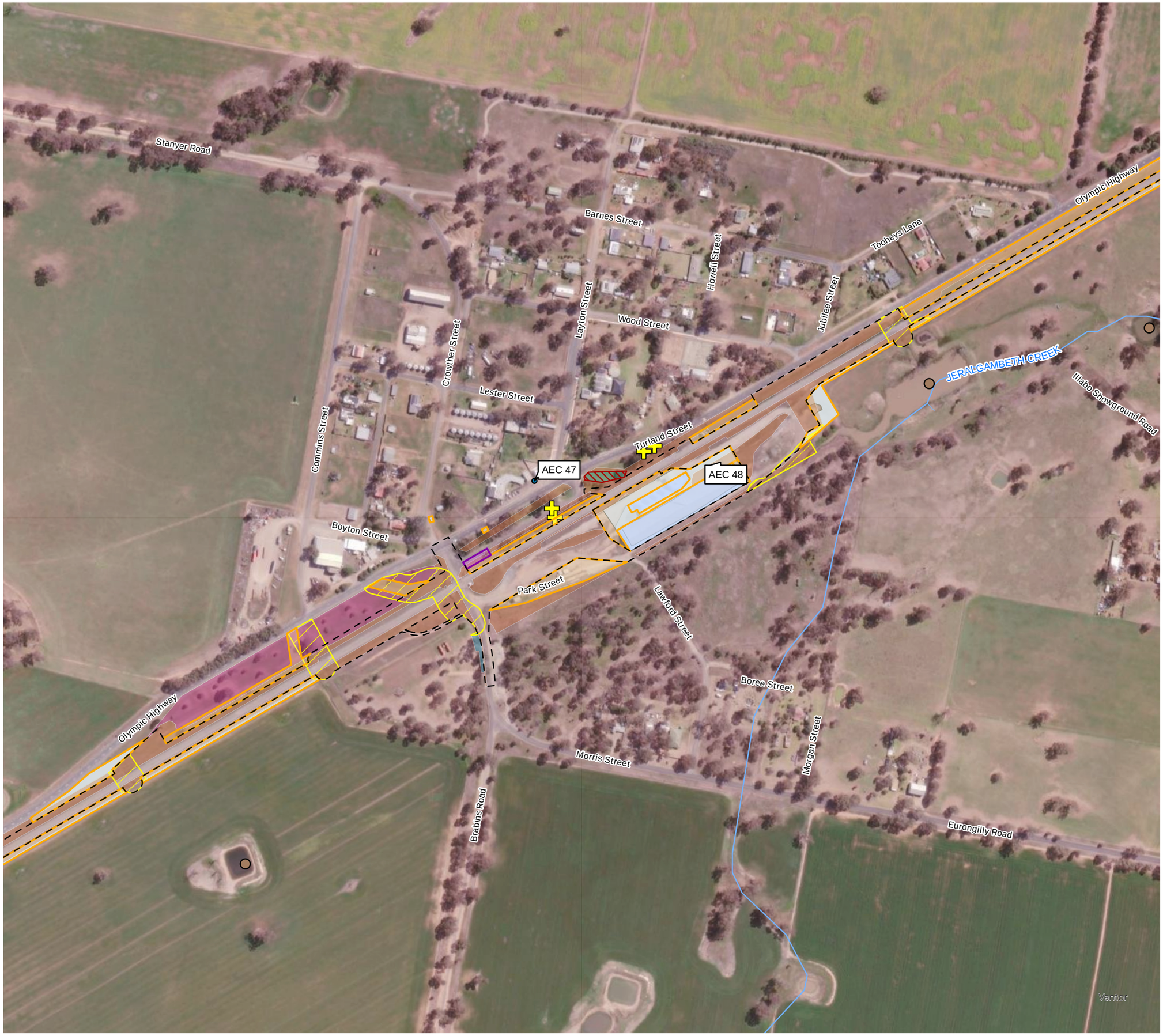

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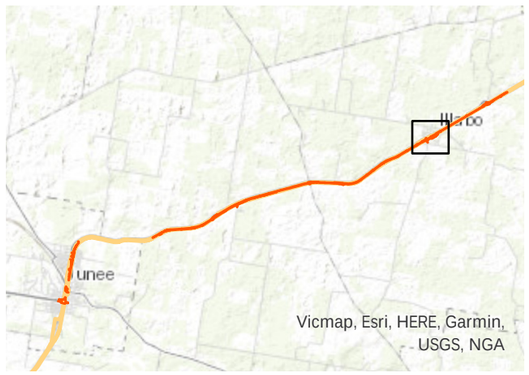

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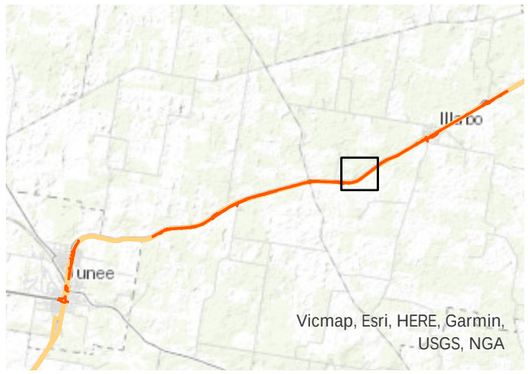

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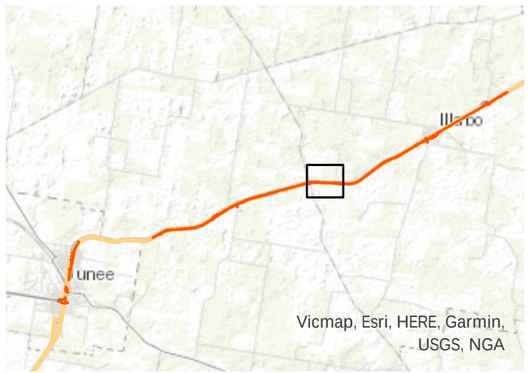

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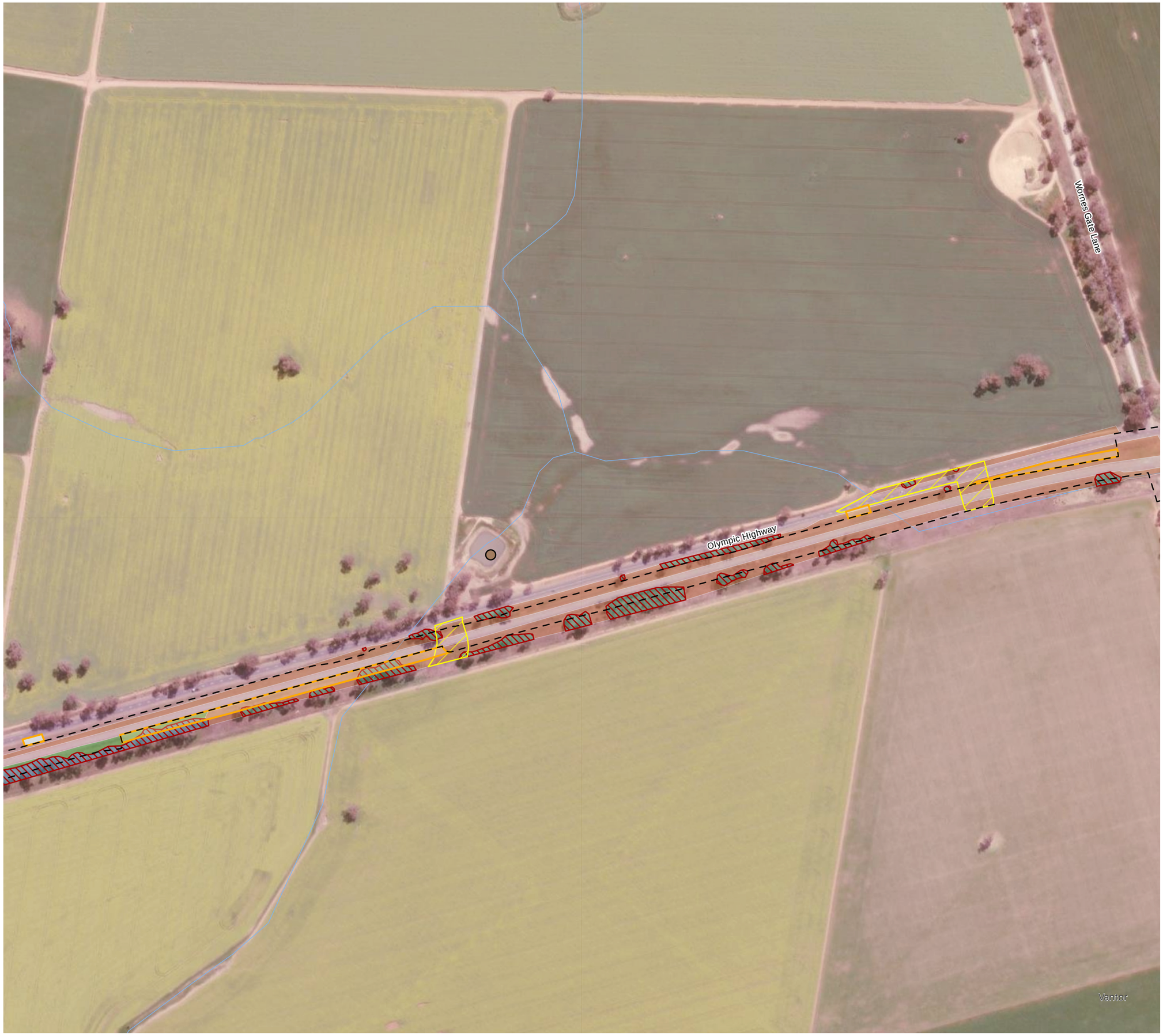

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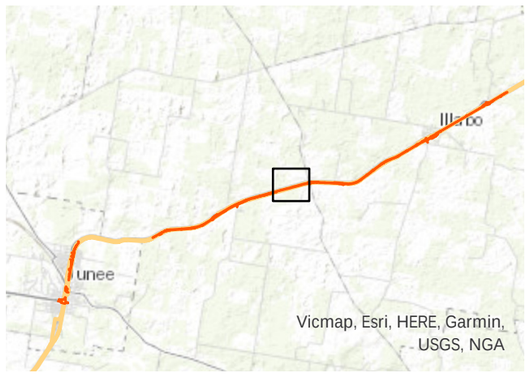

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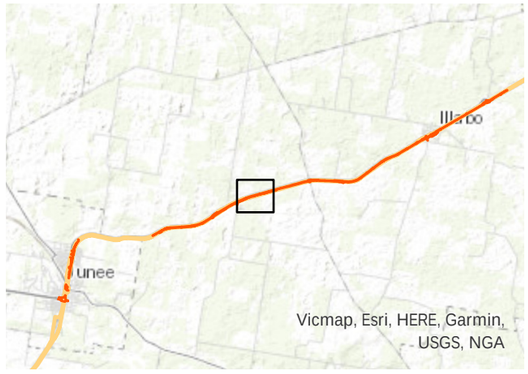

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INLAND RAIL

Inland Rail - A2I

Junee to Illabo - CIZ changes Environmental mapping

Legend

- Construction boundary (approved CIZ)
- Approved Change (CIZ extension)*
- Proposed Change (CIZ extension)

BDAR - Plant Community Type (PCT)

- PCT0 (miscellaneous/non-native vegetation)
- PCT277 (derived condition)
- PCT277 (moderate condition)
- PCT277 (poor condition)

BARM - Plant Community Type (PCT)

- PCT0 (miscellaneous)
- PCT277 (no impact)

BDAR - Threatened Species Habitat polygon

- Sloane's Froglet habitat
- Superb Parrot / Squirrel Glider habitat

BDAR - Threatened Fauna sightings

- SH Spotted Harrier
- Superb Parrot

Dams and Wetlands

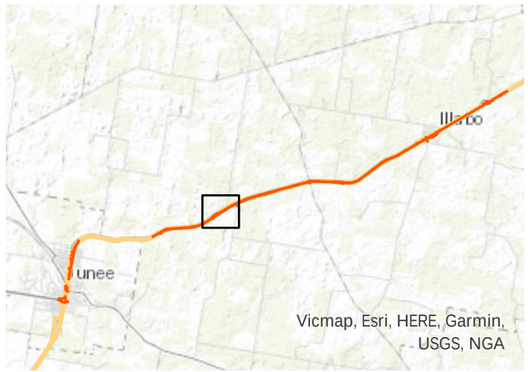
- Farm dam

Watercourse

- Minor Watercourse
- Major Watercourse

*Approved as part of previous document revisions or project changes

0 25 50 100
Metres



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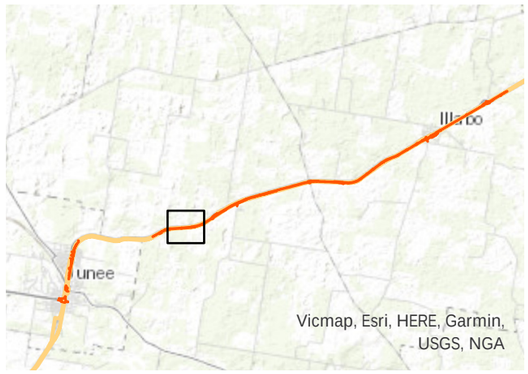

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- PCT277 (no impact)

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- Superb Parrot / Squirrel Glider habitat

Dams and Wetlands

- Farm dam

Watercourse

- Minor Watercourse
- Major Watercourse

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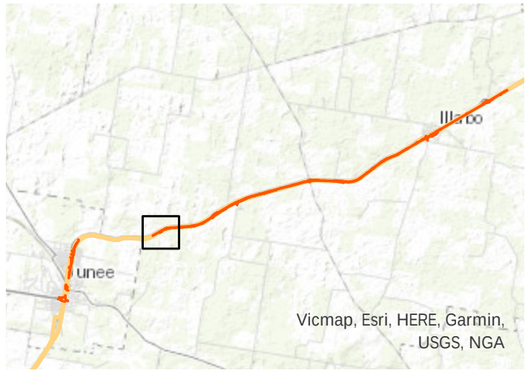
0 25 50 100
Metres



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Appendix B Construction Noise and Vibration Impact Statement

A2I | Albury to Illabo – Junee to Illabo

Construction Noise and Vibration Impact Statement

Martinus Rail

1/23-27 Waratah Street, Kirrawee, NSW 2232

Prepared by:

SLR Consulting Australia

Tenancy 202 Submarine School, Sub Base Platypus, 120 High Street, North Sydney NSW 2060, Australia

SLR Project No.: 610.031317.00001

Client Reference No.: R16

17 April 2025

Revision: v1.3

Making Sustainability Happen

Doc No: 6-0052-210-EEC-J7-AS-0002_1

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
v1.3	17 April 2025	Adam Sirianni	Steven Luzuriaga	
v1.2	10 April 2025	Adam Sirianni	Steven Luzuriaga	
v1.1	5 February 2025	Alex Bian	Steven Luzuriaga	
v1.0	29 January 2025	Alex Bian	Steven Luzuriaga	

Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Martinus Rail (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

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Acronyms and Abbreviations

AA	The Acoustics Advisor for the CSSI approved by the Planning Secretary
A2I	Albury to Illabo section of the Inland Rail project
ARTC	Australian Rail Track Corporation
AS	Australian Standard
AV:ATG	Assessing Vibration: a technical guideline (DEC, 2006)
BS	British Standard
dBA	A-weighted decibel (referenced 20 µPa)
DPHI	Department of Planning, Housing and Infrastructure
CCHMP	Construction Cultural Heritage Management Plan
CEMP	Construction Environmental Management Plan
CNVF	Inland Rail NSW Construction Noise and Vibration Framework
CNVMP	Construction Noise and Vibration Management Plan
CSSI	Critical Stage Significant Infrastructure
DEC	Department of Environment and Conservation
DECC	Department of Environment and Climate Change (now NSW EPA)
DIN	Deutches Institut für Normung (German Institute for Standardisation)
EIS	Environmental Impact Statement
EP&A Act	Environmental Planning and Assessment Act 1979
EPA	Environment Protection Authority
EPL	Environmental Protection Licence
ER	The Environmental Representative(s) for CSSI approved by the Planning Secretary.
HNA	Highly Noise Affected
Hz	Hertz
ICNG	Interim Construction Noise Guideline (DECC, 2009
IR	Inland Rail
ISO	International Standards Organisation
km	Kilometres
km/h	Kilometres per hour
L_{Aeq}	Equivalent continuous noise level, providing a representation of the cumulative level of noise exposure over a defined period.
$L_{Aeq(15hour)}$	The equivalent continuous noise level for the 15-hour daytime period of 7.00 am to 10.00 pm
$L_{Aeq(9hour)}$	The equivalent continuous noise for the 9-hour night-time period of 10.00 pm to 7.00 am
$L_{Aeq(1hour)}$	The equivalent continuous noise for the 1-hour daytime or night-time period that has the potential to result in the greatest noise impact to sensitive receivers.

L_{Amax}	The maximum noise level during the measurement or assessment period. The L_{AFmax} or Fast is averaged over 0.125 of a second and the L_{ASmax} or Slow is averaged over 1-second.
m	Metres
mm	Millimetres
mm/s	Millimetres per second
m/s	Metres per second
MR	Martinus Rail
NCA	Noise Catchment Areas
NML	Noise Management Level
NSW	New South Wales
NPfI	Noise Policy for Industry
OOHW	Out of hours work
PPV	Peak Particle Velocity
RBL	Rating Background Level
TfNSW	Transport for New South Wales
VDV	Vibration Dose Value

Compliance Table

CoA	Requirement	Reference
A1	The Proponent must carry out the CSSI in accordance with the terms of this approval and generally in accordance with the: a) Inland Rail – Albury to Illabo Environmental Impact Statement (ARTC, August 2022) b) Albury to Illabo Response to Submissions (ARTC, November 2023) c) Albury to Illabo Preferred Infrastructure Report (ARTC, November 2023) d) Albury to Illabo Preferred Infrastructure Report Response to Submissions (ARTC, February 2024) e) Inland Rail – Albury to Illabo (SSI-10055) Response to request for additional information – Air Quality Assessment (letter dated 1 May 2024) f) Part 1 - Revised Technical Paper 8: Biodiversity Development Assessment Report (WSP, February 2024) g) Part 2 - Revised Technical Paper 8: Biodiversity Development Assessment Report (WSP, February 2024)	**The CNVMP**
A2	The CSSI must only be carried out in accordance with all procedures, commitments, preventative actions, performance criteria and mitigation measures set out in the documents listed in Condition A1 unless otherwise specified in, or required under, this approval.	**The CNVMP**
C9	The Construction Noise and Vibration Sub-plan must include, but not limited to: a) measures to reduce construction to standard ICNG hours where sensitive land uses are likely to be noise affected for more than 3 months; b) an approach to assess and manage construction fatigue from noise impacts on sensitive receivers on an ongoing basis; c) noise sensitive periods identified by the community, religious, educational institutions, noise and vibration-sensitive businesses and critical working areas and measures to ensure noise levels above the NMLs do not occur during sensitive periods in accordance with Condition E76; d) mitigation for construction traffic noise impacts from additional construction traffic and road diversions; e) the location of all heritage items, non-heritage structures and infrastructure likely to be impacted by vibration and measures to manage vibration impacts at those items and structures; and f) vibration levels at a range of distances from vibration intensive equipment such as excavators and vibratory rollers before undertaking works with the specific type and size of equipment.	**The CNVMP**
E68	A detailed land use survey must be undertaken to confirm sensitive land use(s) (including critical working areas such as operating theatres and precision laboratories) potentially exposed to construction noise and vibration, construction ground-borne noise and operational noise. The survey may be undertaken on a progressive basis but must be undertaken in any one area before the commencement of work which generates construction or operational noise, vibration or ground-borne noise in that area. The results of the survey must be included in the Noise and Vibration CEMP sub-plan required by Condition C8.	**The CNVMP, Section 3.0, Figure 1**
E69	Work must be undertaken during the following hours: a) 7:00am to 6:00pm Mondays to Fridays, inclusive; b) 7:00am to 6:00pm Saturdays; and c) at no time on Sundays or public holidays.	**Section 2.2**

CoA	Requirement	Reference
E70	Except as permitted by an EPL, highly noise intensive works that result in an exceedance of the applicable NML at the same receiver must only be undertaken: a) between the hours of 8:00 am to 6:00 pm Monday to Friday; b) between the hours of 8:00 am to 1:00 pm Saturday; and c) if continuously, then not exceeding three (3) hours, with a minimum cessation of work of not less than one hour. For the purposes of this condition, 'continuously' includes any period during which there is less than one hour between ceasing and recommencing any of the work.	**Section 2.2.1**, **Section 8.2**
E71	Notwithstanding Conditions E69 and E70, work may be undertaken outside the hours specified in the following circumstances (a, b, or c): a) Safety and Emergencies, including: i. for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or ii. where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm. On becoming aware of the need for emergency work in accordance with Condition E71(a), the AA, the ER, the Planning Secretary and the EPA must be notified of the reasons for such work. Best endeavours must be used to notify all noise and/or vibration affected residents and owners/occupiers of properties identified sensitive land use(s) of the likely impact and duration of those work. b) Work, that meets the following criteria: i. construction that causes $L_{Aeq(15\ minute)}$ noise levels: • no more than 5 dB(A) above the rating background level at any residence in accordance with the ICNG, and • no more than the 'Noise affected' NMLs specified in Table 3 of the ICNG at other sensitive land use(s); and ii. construction that causes L_{AFmax} noise levels no more than 15 dB above the rating background level at any residence during the night period as defined in the ICNG. and iii. construction that causes: • continuous or impulsive vibration values, measured at the most affected residence no more than the preferred values for human exposure to vibration, specified in Table 2.2 of *Assessing Vibration: a technical guideline* (DEC, 2006), or • intermittent vibration values measured at the most affected residence no more than the preferred values for human exposure to vibration, specified in Table 2.4 *of Assessing Vibration: a technical guideline* (DEC, 2006). c) By Approval, including: i. where different construction hours, such as those for a rail possession, are permitted under an EPL in force in respect of the CSSI; or ii. works which are not subject to an EPL that are approved under an Out-of-Hours Work Protocol as required by Condition E72; or iii. negotiated agreements with directly affected residents and sensitive land use(s).	**Section 2.3**
E72	An Out-of-Hours Work Protocol must be prepared to identify a process for the consideration, management and approval of work which is outside the hours defined in Conditions E69, and that are not subject to an EPL. The Protocol must be approved by the Planning Secretary before commencement of the	**The CNVMP, Section 2.4**

CoA	Requirement	Reference
	Out-of-Hours Work. The Protocol must be prepared in consultation with the ER, AA and EPA. The Protocol must include: a) identification of low and high-risk activities and an approval process that considers the risk of activities, proposed mitigation, management, and coordination, including where: i. the ER and AA review all proposed out-of-hours activities and confirm their risk levels, ii. low risk activities can be approved by the ER in consultation with the AA, and iii. high risk activities that are approved by the Planning Secretary; b) a process for the consideration of out-of-hours work against the relevant NML and vibration criteria; c) a process for selecting and implementing mitigation measures for residual impacts in consultation with the community at each affected location, including respite periods. The measures must take into account the predicted noise levels and the likely frequency and duration of the out-of-hours works that sensitive land use(s) would be exposed to, including the number of noise awakening events; d) procedures to facilitate the coordination of out-of-hours work including those approved by an EPL or undertaken by a third party, to ensure appropriate respite is provided; and e) notification arrangements for affected receivers for approved out-of-hours work and notification to the Planning Secretary of approved low risk out-of-hours works. This condition does not apply if the requirements of Condition E71 are met.	
E73	Except as permitted by an EPL, out-of-hours work that may be regulated through the Out-of-Hours Work Protocol as per Condition E72, but is not limited to: a) Carrying out work that if carried out during standard hours would result in a high risk to construction personnel or public safety based on a risk assessment carried out in accordance with AS/NZS ISO 31000:2009: "Risk management; or b) where the relevant roads authority has advised the Proponent in writing that carrying out the work during standard hours would result in a high risk to road network performance and a road occupancy licence will not be issued; or c) where the relevant utility service operator has advised the Proponent in writing that carrying out the work during standard hours would result in a high risk to the operation and integrity of the utility network; or d) work undertaken in a rail possession for operational or safety reasons. *Note: Other out-of-hours works can be undertaken with the approval of an EPL, or through the project's Out-of-Hours Work Protocol for works not subject to an EPL.*	**Section 2.3**
E74	Mitigation measures must be implemented with the aim of achieving the following construction noise management levels and vibration objectives: a) construction 'Noise affected' NMLs established using the Interim Construction Noise Guideline (DECC, 2009); b) vibration criteria established using *the Assessing vibration: a technical guideline* (DEC, 2006) (for human exposure); c) Australian Standard AS 2187.2 - 2006 "*Explosives - Storage and Use - Use of Explosives*"; d) BS 7385 Part 2-1993 "*Evaluation and measurement for vibration in buildings Part 2*" as they are "applicable to Australian conditions"; and	**The CNVMP, Section 4.0**, **Section 8.0**

CoA	Requirement	Reference
	e) the vibration limits set out in the *German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures* (for structural damage). Work that exceeds the noise management levels and/or vibration criteria must be managed in accordance with the Noise and Vibration CEMP sub-plan. *Note: The ICNG identifies 'particularly annoying' activities that require the addition of 5 dB(A) to the predicted level before comparing to the construction NML.*	
E75	Mitigation measures must be applied when the following residential ground-borne noise levels are exceeded: a) evening (6:00 pm to 10:00 pm) — internal $L_{Aeq(15\ minute)}$: 40 dB(A); and b) night (10:00 pm to 7:00 am) — internal $L_{Aeq(15\ minute)}$: 35 dB(A). The mitigation measures must be outlined in the Noise and Vibration CEMP sub-plan, including in any Out-of-Hours Work Protocol, required by Condition E72.	**Section 4.2.3**
E76	Noise generating work in the vicinity of community, religious, educational institutions, noise and vibration-sensitive businesses and critical working areas (such as exam halls, theatres, laboratories and operating theatres) resulting in noise levels above the NMLs must not be timetabled during sensitive periods, unless other reasonable arrangements with the affected institutions are made at no cost to the affected institution.	**Section 8.0**
E77	At no time can noise generated by construction exceed the National Standard for exposure to noise in the occupational environment of an eight-hour (8hr) equivalent continuous A-weighted sound pressure level of $L_{Aeq,8h}$ of 85 dB(A) for any employee working at a location near the CSSI.	**Section 8.6**
E78	Construction Noise and Vibration Impact Statements (CNVIS) must be prepared for work that may exceed the noise management levels, vibration criteria and/or ground-borne noise levels specified in Condition E74 and Condition E75 at any residence outside construction hours identified in Condition E69, or where receivers will be highly noise affected. The CNVIS must include specific mitigation measures identified through consultation with affected sensitive land use(s) and the mitigation measures must be implemented for the duration of the works. A copy of the CNVIS must be provided to the AA and ER prior to the commencement of the associated works. The Planning Secretary may request a copy/ies of CNVIS.	**This report** **Section 8.5**
E79	Owners and occupiers of properties at risk of exceeding the screening criteria for cosmetic damage must be notified before work that generates vibration commences in the vicinity of those properties. If the potential exceedance is to occur more than once or extend over a period of 24 hours, owners and occupiers are to be provided a schedule of potential exceedances on a monthly basis for the duration of the potential exceedances, unless otherwise agreed by the owner and occupier. These properties must be identified and considered in the Noise and Vibration CEMP Sub-plan required by Condition C8 and the Community Communication Strategy required by Condition B1.	**Section 8.0**
E80	Vibration testing must be undertaken before and during vibration generating activities that have the potential to impact on heritage items to identify minimum working distances to prevent cosmetic damage. In the event that the vibration testing and attended monitoring shows that the preferred values for vibration are likely to be exceeded, the construction methodology must be reviewed and, if necessary, additional mitigation measures implemented.	**Section 6.1,** **Section 8.0**
E81	Advice from an independent heritage specialist must be sought on methods and locations for installing equipment used for vibration, movement and noise monitoring at heritage-listed structures. *Note: The heritage specialist is to provide advice prior to installing equipment that may impact the heritage significance or structural integrity of the heritage listed structures.*	**Section 8.0**

CoA	Requirement	Reference
E83	All work undertaken for the delivery of the CSSI, including those undertaken by third parties (such as utility relocations), must be coordinated to ensure respite periods are provided. This must include: a) rescheduling work to provide respite to impacted noise sensitive land use(s) so that the respite is achieved; or b) the provision of alternative respite or mitigation to impacted noise sensitive land use(s); and c) the provision of documentary evidence to the AA in support of any decision made in relation to respite or mitigation. The consideration of respite must also include all other CSSI, SSI and SSD projects which may cause cumulative and/or consecutive impacts at receivers affected by the delivery of the CSSI.	**Section 8.0, Section 8.2**
E119	The Proponent must coordinate Work with adjoining Inland Rail Projects, including any work to relocate or connect utilities, to minimise cumulative and consecutive noise and vibration impacts and maximise respite for affected sensitive land uses. Coordination and mitigation measures must be detailed in the Construction Noise and Vibration management Sub-plan required by Condition C9.	**Section 8.0, Section 8.2,** **Section 9.0**
E122	Property damage caused directly or indirectly (for example from vibration or from groundwater change) by the construction or operation must be rectified at no cost to the owner. Alternatively, compensation may be provided for the property damage as agreed with the property owner.	**Section 6.1**

1.0 Introduction

SLR Consulting Australia Pty Ltd (SLR) has been engaged by Martinus Rail (MR) to prepare a construction noise and vibration impact statement (CNVIS) for the work from Junee to Illabo in NSW. These sites form part of the Albury to Illabo (A2I) section of Inland Rail (the Project). The extent of the work area considered in this assessment ranges from approximately 3500m northeast of Junee township and ends approximately 3000m northeast of Illabo township, with works expected to occur through the prior mentioned township. The respective chainages (CH) are CH480 (western) and CH465 (eastern).

This assessment has been prepared in accordance with the Construction Noise and Vibration Management Plan (CNVMP) for the A2I section of the Project.

This report assesses the potential construction noise and vibration impacts for the work associated with the Junee to Illabo enhancement sites. An explanation of the specialist acoustic terminology used in this report is provided in **Appendix A**.

2.0 Project Description

Inland Rail is an approximate 1,600 kilometres (km) freight rail network that will connect Beveridge and Kagaru via regional Victoria, New South Wales and Queensland. The Inland Rail route would involve using approximately 1,000 km of existing track (with enhancements and upgrades where necessary) and 600 km of new track, passing through 30 local government areas. Inland Rail will accommodate double-stacked freight trains up to 1,800 metres (m) long and 6.5 m high.

The Albury to Illabo (A2I) section (the Project) forms a key component of the Inland Rail program. It is a 185 km section of existing rail corridor located in regional NSW between the towns of Albury and Illabo. Works would include track realignment, lowering and/or modification within the existing rail corridor, modification, removal or replacement of bridge structures (rail, road and/or pedestrian bridges), raising or replacing signal gantries, level-crossing modifications and other associated works. This CNVIS is associated with the work from Junee to Illabo enhancement sites located between CH480 (western) and CH465 (eastern) as outlined above.

Relevant noise and vibration conditions from the Conditions of Approval (CoA) are detailed within the compliance table at the beginning of this document and will be complied with during the work.

2.1 Scope of this CNVIS

The focus of this CNVIS is the work from Junee to Illabo. The work at these sites includes:

- Site Establishment / Demobilisation
- Compound Operation
- Geotechnical Investigations
- Track work
- Track Tamping
- Crossover Removal
- Drainage Work
- Level Crossing Work

Further details of work activities are outlined in **Section 5.1**. The work areas are surrounded by a combination of scattered rural residential receivers along Olympic Highway and various receivers within the Illabo township, ancillary buildings within the rail corridor and several

other sensitive receivers including a school and hotel. The Project location, work areas and surrounding receivers are shown in **Figure 1, Figure 2** and **Figure 3**.

2.2 Hours of work

In accordance with the Construction Noise and Vibration Management Plan (CNVMP) and CoA E69 construction work must be undertaken within the approved standard construction hours:

a) 7:00am to 6:00pm Monday to Friday, inclusive;

b) 7:00am to 6:00pm Saturday and

c) At no time on Sundays or public holidays.

2.2.1 Highly Noise Intensive Work

As outlined in the CoA E70, any highly noise intensive works that result in an exceedance of the applicable NML at the same receiver must only be undertaken:

a) Between 08:00am – 06:00pm Monday to Friday;

b) Between 08:00am – 01:00pm Saturday; and

c) If continuously, then not exceeding (3) hours, with a maximum cessation of work of not less than one hour.

The CoA defines 'highly noise intensive works' as those identified as annoying under the Interim Construction Noise Guideline (ICNG) and include:

- Use of power saws, such as used for cutting timber, rail lines, masonry, road pavement or steel work;
- Grinding metal, concrete or masonry;
- Rock drilling;
- Line drilling;
- Vibratory rolling;
- Bitumen milling or profiling;
- Jackhammering, rock hammering or rock breaking;
- Impact piling; and
- Tamping (for rail projects).

2.3 Variation to hours of work

Notwithstanding CoA E69 and E70, work may be undertaken outside the hours specified in the CoA E71 circumstances (a, b, or c):

a) Safety and Emergencies

b) Work, that meets specific criteria

c) By Approval

Note: refer to **Compliance Table** for further detail.

2.4 Justification of Out of Hours Work (OOHW)

Work activities that may be required or proposed to be undertaken outside of standard working hours will be managed in accordance with the OOHW Protocol as defined in CoA E72 and E73, unless the work is regulated by an EPL.

All work on or adjacent to roads would be carried out in accordance with a relevant Traffic Control Plan (TCP), Road Occupancy Licence (ROL) and/or rail possession to facilitate safe work near live road/rail traffic. Where an ROL/rail possession cannot be obtained for the approved project hours and/or proposed works cannot be undertaken safely during these hours, some works will be required to be undertaken outside of standard hours (ie Out of Hours Work, OOHW).

As outlined in the ICNG, work undertaken on public infrastructure may need to be undertaken outside the recommended standard hours. For this project the need is based on a requirement to sustain the operational integrity of public infrastructure, as works to restore operation of the infrastructure provide benefit to the greater community (ie more than just local residents).

Further detail around the specific work tasks, duration and justification of OOHW must be identified in the OOHW permit, required by the OOHW Protocol or EPL.

3.0 Existing Environment

The existing ambient noise environment was described in Environmental Impact Statement (EIS), Technical Paper 6 – Noise and Vibration (Non-Rail) for the Albury to Illabo project. This section provides details of the existing ambient noise environment relevant to the Junee to Illabo utilities work.

The noise catchment areas (NCA) used are consistent with the NCAs described in the EIS and are shown in **Figure 1, Figure 2** and **Figure 3** with the receiver classifications and approximate noise monitoring location.

Sensitive land uses and receiver classifications within the project area were confirmed through a detailed land use survey was undertaken in August 2024. Results of the land use survey have been incorporated into the receiver classifications shown in **Figure 1, Figure 2** and **Figure 3.**

3.1 Background Noise Levels

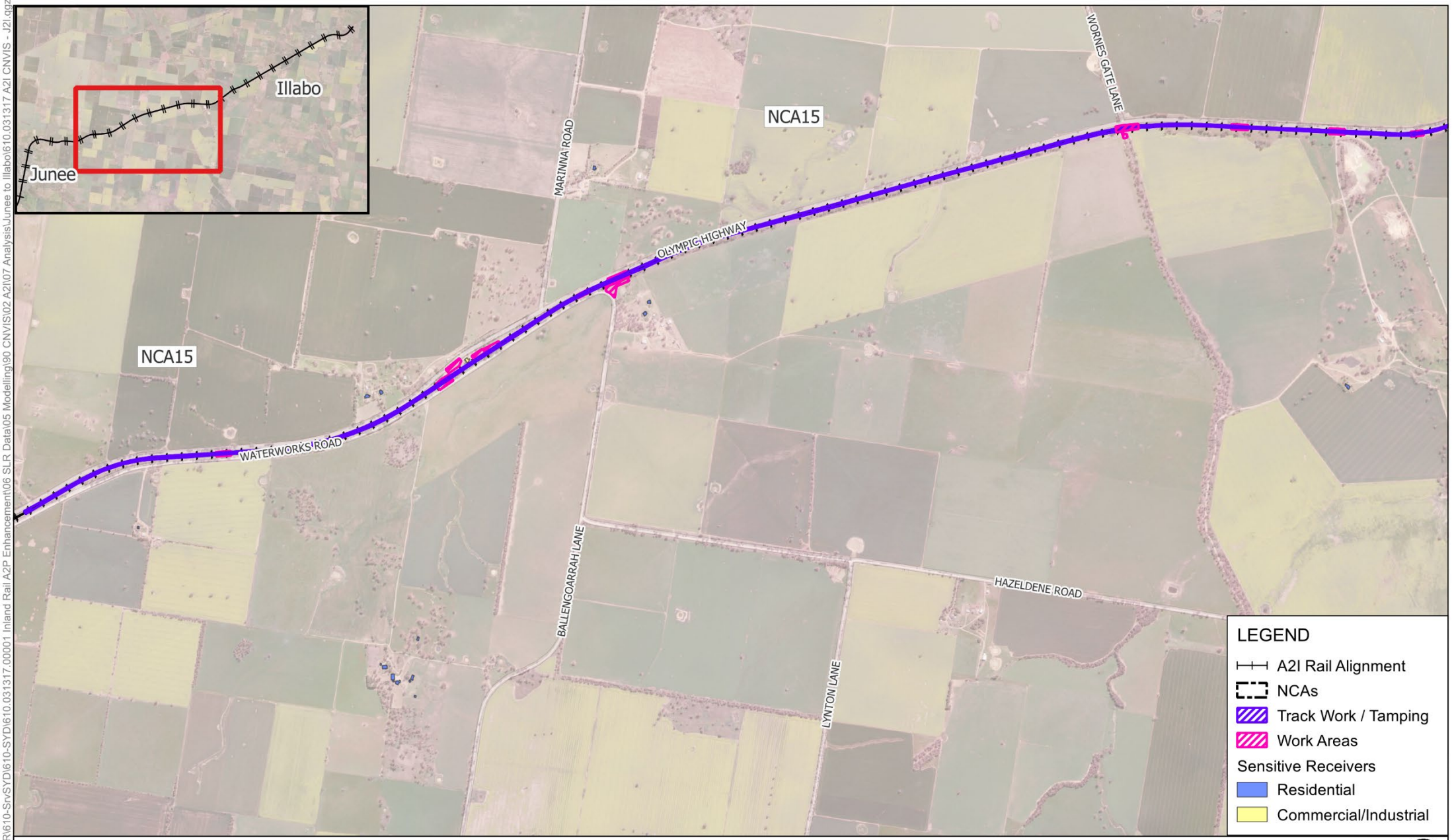
Background noise levels have been referenced from the baseline noise survey undertaken as part of the EIS and reproduced in the CNVMP. The background noise levels relevant to the Junee to Illabo utilities work are summarised in **Table 1**.

Table 1 Background Noise Levels

Noise Monitoring Location	NCA	Rating background Level (RBL) dBA NPfI defined time periods[1]		
		Daytime period	Evening period	Night-time period
15	15	41	41[2] (46)	33

Note 1: The assessment periods are the daytime which is 7 am to 6 pm Monday to Saturday and 8 am to 6 pm on Sundays and public holidays, the evening which is 6 pm to 10 pm, and the night-time which is 10 pm to 7 am on Monday to Saturday and 10 pm to 8 am on Sunday and public holidays. See the NSW EPA Noise Policy for Industry (NPfI).

Note 2: The evening RBL data has been reduced to the daytime period RBL in this case (bracketed figures indicates the measured value).



0 250 500 m

Scale: Scale: 1:28,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 17-Jan-2025
Project Number: 610.031317

SLR

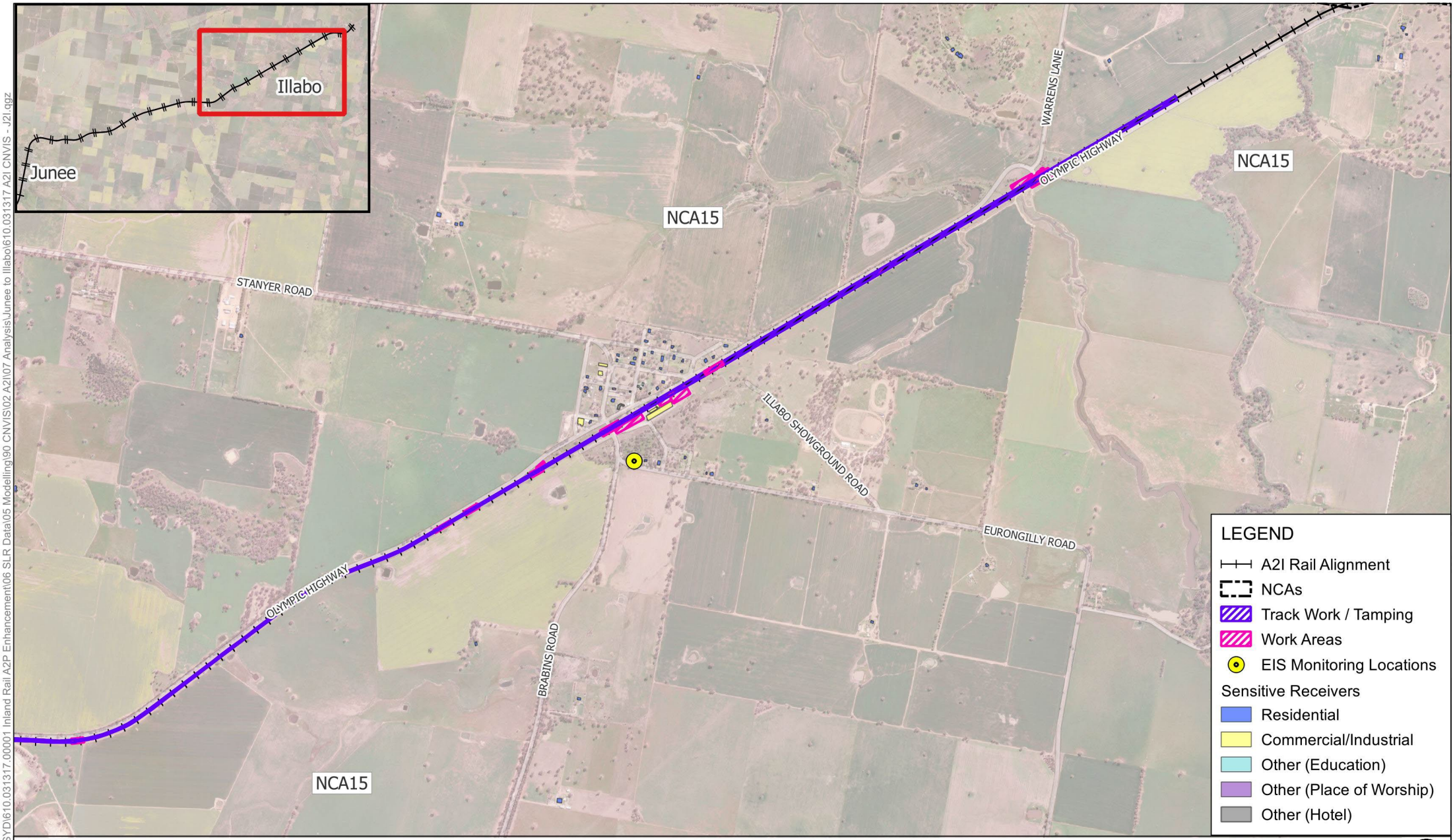
Data Source:
ESRI World Imagery

DISCLAIMER: All information within this document maybe based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose .

Receiver Classifications and Noise Monitoring Locations (West)

FIGURE 1

\\au.slr.local\Corporate\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



0 250 500 m

Scale: Scale: 1:28,028
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 05-Feb-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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Receiver Classifications and Noise Monitoring Locations (East)

FIGURE 2

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

0 250 500 m

Scale: Scale: 1:10,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 05-Feb-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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Receiver Classifications and Noise Monitoring Locations (Illabo Township)

FIGURE 3

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

4.0 Assessment Criteria

4.1 Construction Noise and Vibration Guidelines

The standards and guidelines relevant to the Project are listed in **Table 2**. These guidelines aim to protect the community and environment from excessive noise and vibration impacts during construction of projects.

Table 2 Construction Noise and Vibration Standards and Guidelines

Guideline/Policy Name	Where Guideline Used
Inland Rail NSW Construction Noise and Vibration Framework (CNVF)	Assessment and management protocols for airborne noise, ground-borne noise and vibration impacts for construction of NSW Inland Rail projects
Interim Construction Noise Guideline (ICNG) (DECC, 2009)	Assessment of airborne noise impacts on sensitive receivers
Environmental Criteria for Road Traffic Noise (ECRTN) (EPA, 1999)	Contains guidance for assessing potential sleep disturbance impacts
Road Noise Policy (RNP) (DECCW, 2011)	Assessment of construction traffic impacts
BS 7385 Part 2-1993 Evaluation and measurement for vibration in buildings Part 2, BSI, 1993	Assessment of vibration impacts (structural damage) to non-heritage sensitive structures
DIN 4150:Part 3-2016 Structural vibration – Effects of vibration on structures, Deutsches Institut für Normung, 2016	Screening assessment of vibration impacts (structural damage) to heritage sensitive structures, where the structure is found to be unsound
Assessing Vibration: a technical guideline (DEC, 2006)	Assessment of vibration impacts on sensitive receivers
AS2187.2:2006 Explosives – Storage and use Part 2: Use of explosives	Assessment of impacts from blasting activities
*Construction Noise and Vibration Guideline (Public Transport Infrastructure) (*CNVG-PTI) (Transport for NSW, 2023)	Utilised for minimum working distances for vibration intensive work.

4.2 Noise Management Levels

The noise management levels (NMLs) for residential and other sensitive receivers have been adopted from the CNVMP, as determined in the EIS. Receiver types and locations are shown **Figure 1, Figure 2** and **Figure 3**.

4.2.1 Residential Receivers

Project-specific NMLs for residential receivers were determined for each NCA. NMLs for other sensitive receivers are fixed values adopted from the Interim Construction Noise Guideline (ICNG) (DECC, 2009) and outlined in the CNVMP. Residential NMLs for NCA surrounding the work sites are shown in **Table 3**.

Table 3 Residential Noise Management Levels

NCA	Noise Management Level ($L_{Aeq(15minute)}$ - dB)				Sleep disturbance Screening Level (RBL +15dB or 52 dB)	Sleep Awakening Reaction Level
	Approved Hours (RBL +10dB)	Out of Hours[1]				
		Daytime (RBL +5dB)	Evening (RBL +5dB)	Night-time (RBL +5dB)		
NCA15	51	46	46	38	52	65

Note 1: Approved Construction Hours are Monday to Saturday 7 am to 6 pm, as defined in CoA E69.

Note 2: Work outside of the Approved Hours is defined as OOHW = Out of Hours Work. Daytime out of hours is Sunday and public holidays between 8 am to 6 pm. Evening is 6pm to 10pm Monday – Sunday (including public holidays). Night-time is 10pm to 7am Monday – Saturday and 10pm to 8am Sunday (including public holidays).

Highly Noise Affected

In addition to the NMLs presented above, the ICNG highly noise affected level (>75 dBA) represents the point above which there may be strong community reaction to noise and is applicable to all residential receivers during approved project hours as outlined in the CNVMP and the ICNG.

Sleep Disturbance

Where the sleep disturbance screening level (RBL + 15 dB or 52 dB, whichever is greater, see **Table 3**) is exceeded, further assessment is required to determine whether the 'awakening reaction' level of L_{Amax} 65 dBA (external) would be exceeded and the likely number of these events. The awakening reaction level is the level above which residents are likely to be awoken from sleep.

4.2.2 Other Sensitive Land Uses and Commercial Receivers

The ICNG NMLs for 'other sensitive' non-residential land uses are shown in **Table 4**.

The ICNG references *AS2107:2016 Acoustics – Recommended design sound levels and reverberation times for building interiors* for criteria for 'other sensitive' receivers which are not listed in the guideline. Neither the ICNG nor AS2107 provide criteria for child care centres so the Association of Australian Acoustical Consultants *Guideline for Child Care Centre Acoustic Assessment* (GCCCAA) has been referenced.

Table 4 NMLs for 'Other Sensitive' Receivers

Land Use	Noise Management Level $L_{Aeq(15minute)}$ (dB) (Applied when the property is in use)	
	Internal	External
ICNG 'Other Sensitive' Receivers		
Classrooms at schools and other educational institutions	45	55[1]
Hospital wards and operating theatres	45	65[2]
Places of worship	45	55[1]
Active recreation areas (characterised by sporting activities which generate noise)	-	65
Passive recreation areas (characterised by contemplative activities that generate little noise)	-	60
Commercial	-	70

Land Use	Noise Management Level $L_{Aeq(15minute)}$ (dB) (Applied when the property is in use)	
	Internal	External
Industrial	-	75
Non-ICNG 'Other Sensitive' Receivers		
Hotel – daytime & evening[3]	50	60[1]
Hotel – night-time[3]	35	45[1]
Child care centres – activity areas[4]	40	50[1,5]
Child care centres – sleeping areas[4]	35	45[1]
Library[3]	45	55[1]
Public Building[3]	50	60[1]
Aged Care	Considered as Residential	

Note 1: It is assumed that these receivers have windows partially open for ventilation which results in internal noise levels being around 10 dB lower than the external noise level.

Note 2: It is assumed that these receivers have fixed windows which conservatively results in internal noise levels being around 20 dB lower than the external noise level.

Note 3: Criteria taken from AS2107.

Note 4: Criteria taken from Association of Australian Acoustical Consultants Guideline for Child Care Centre Acoustic Assessment.

Note 5: Some receivers near highways or rail lines may have building façade mitigation and air-conditioning. Where evidence is provided a 20dB reduction from external to internal may be adopted.

4.2.3 Ground-borne Noise

Construction work can cause ground-borne (structure-borne or regenerated) noise impacts in nearby buildings when vibration intensive equipment is in use, such as during tunnelling or excavation work using tunnel boring machines, roadheaders or rockbreakers. Vibration can be transmitted through the ground and into nearby buildings, which can then create audible noise impacts inside the building.

Ground-borne noise NMLs are applicable where ground-borne noise levels are likely to be higher than airborne noise levels, which can occur where work is underground or where surface work is shielded by noise barriers, other structures or façade mitigation at the receiver. Ground-borne noise is generally found to generate impacts during the evening and night-time periods when ambient noise levels are often much lower, and ground-borne noise is more prominent.

The internal ground-borne noise NMLs for residential receivers are shown in **Table 5**.

Table 5 Internal ground-borne NMLs

Receiver Type	Noise Management Level ($L_{Aeq(15minute)}$ – dB)		
	Daytime[1]	Evening[2]	Night-time[2]
Residential	n/a	40	35

Note 1: Daytime ground-borne noise NMLs are not specified in the ICNG of CoA.

Note 2: Specified in the ICNG and CoA E75.

For other sensitive receivers, the ICNG does not provide guidance in relation to acceptable ground-borne noise levels. For the purpose of this CNVIS, the internal airborne NMLs presented in **Table 4** will also be adopted for ground-borne noise.

4.3 Vibration Criteria

The effects of vibration from construction work can be divided into three categories:

- Those in which the occupants of buildings are disturbed (**human comfort**). People can sometimes perceive vibration impacts when vibration generating construction work is located close to occupied buildings. Vibration from construction work tends to be intermittent in nature and the EPA's Assessing Vibration: a technical guideline (2006) (AV:ATG) provides criteria for intermittent vibration based on the Vibration Dose Value (VDV), as shown in **Table 6**. While the construction activities for the proposal are generally not expected to result in continuous or impulsive vibration impacts, corresponding criteria are provided in **Table 7**.
- Those where building contents may be affected (**building contents**). People perceive vibration at levels well below those likely to cause damage to building contents. For most receivers, the human comfort vibration criteria are the most stringent and it is generally not necessary to set separate criteria for vibration effects on typical building contents. Exceptions to this can occur when vibration sensitive equipment, such as electron microscopes or medical imaging equipment, are in buildings near to construction work. No such equipment has been identified in the study area.
- Those where the integrity of the building may be compromised (**structural/cosmetic damage**). If vibration from construction work is sufficiently high it can cause cosmetic damage to elements of affected buildings. Industry standard cosmetic damage vibration limits are specified in British Standard BS 7385 and German Standard DIN 4150. The limits are shown in **Table 8** and **Table 9**.

Table 6 Human Comfort Vibration – Vibration Dose Values for Intermittent Vibration

Building Type	Assessment Period	Vibration Dose Value[1] ($m/s^{1.75}$)	
		Preferred	Maximum
Critical Working Areas (eg operating theatres or laboratories)	Day or night-time	0.10	0.20
Residential	Daytime	0.20	0.40
	Night-time	0.13	0.26
Offices, schools, educational institutions and places of worship	Day or night-time	0.40	0.80
Workshops	Day or night-time	0.80	1.60

Note 1: The VDV accumulates vibration energy over the daytime and night-time assessment periods, and is dependent on the level of vibration as well as the duration.

Table 7 Human Comfort Vibration – Preferred and Maximum Weighted Root Mean Square Values for Continuous and Impulsive Vibration Acceleration (m/s^2) 1–80 Hz

Location	Assessment period	Preferred values		Maximum values	
		z-axis	x- and y-axis	z-axis	x- and y-axis
Continuous vibration					
Residential	Daytime	0.010	0.0071	0.020	0.014
	Night-time	0.007	0.005	0.014	0.010
Offices, schools, educational institutions and places of worship	Day or night-time	0.020	0.014	0.040	0.028
Workshops	Day or night-time	0.04	0.029	0.080	0.058
Impulsive vibration					
Residential	Daytime	0.30	0.21	0.60	0.42
	Night-time	0.10	0.071	0.20	0.14
Offices, schools, educational institutions and places of worship	Day or night-time	0.64	0.46	1.28	0.92
Workshops	Day or night-time	0.64	0.46	1.28	0.92

Table 8 Cosmetic Damage – BS 7385 Transient Vibration Values for Minimal Risk of Damage

Group	Type of Building	Peak Component Particle Velocity in Frequency Range of Predominant Pulse	
		4 Hz to 15 Hz	15 Hz and Above
1	Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
2	Unreinforced or light framed structures. Residential or light commercial type buildings	15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

Note 1: Where the dynamic loading caused by continuous vibration may give rise to dynamic magnification due to resonance, especially at the lower frequencies where lower guide values apply, then the guide values may need to be reduced by up to 50%.

Table 9 Cosmetic Damage – DIN 4150 Guideline Values for Short-term Vibration on Structures

Group	Type of Structure	Guideline Values Vibration Velocity (mm/s)				
		Foundation, All Directions at a Frequency of			Topmost Floor, Horizontal	Floor Slabs, Vertical
		1 to 10 Hz	10 to 50 Hz	50 to 100 Hz	All frequencies	All frequencies
1	Buildings used for commercial purposes, industrial buildings and buildings of similar design	20	20 to 40	40 to 50	40	20
2	Residential buildings and buildings of similar design and/or occupancy	5	5 to 15	15 to 20	15	20

Group	Type of Structure	Guideline Values Vibration Velocity (mm/s)				
		Foundation, All Directions at a Frequency of			Topmost Floor, Horizontal	Floor Slabs, Vertical
		1 to 10 Hz	10 to 50 Hz	50 to 100 Hz	All frequencies	All frequencies
3	Structures that, because of their particular sensitivity to vibration, cannot be classified as Group 1 or 2 **and** are of great intrinsic value (eg heritage listed buildings)	3	3 to 8	8 to 10	8	20[1]

Note 1: It may be necessary to lower the relevant guideline value markedly to prevent minor damage.

4.3.1 Heritage Buildings or Structures

Heritage listed buildings and structures should be considered on a case-by-case basis but BS 7385 notes that buildings of historical value should not be assumed to be more sensitive to vibration, unless structurally unsound. Where a heritage building is deemed to be sensitive, the more stringent DIN 4150 Group 3 guideline values in **Table 9** can be applied.

Heritage Structures

No heritage buildings or structures have been identified around the work sites associated with this CNVIS. Therefore, no additional consideration or assessment has been undertaken in relation to heritage buildings or structures.

4.3.2 Buried Pipework and Utilities

The German Standard DIN 4150-3:1999 “Structural Vibration Part 3: Effects of vibration in structures” provides guideline values for evaluating the effect of vibration on buried pipework. The values are based on the assumption that pipes have been manufactured and laid using current technology. Additional considerations may be required at junctions. The recommended limits for short term vibration to ensure minimal risk of damage are presented numerically in **Table 10**.

Table 10 Guideline Values for Short Term Vibration on Buried Pipework

Line	Pipe Material	Guideline value at the Pipe[1,2] (PPV mm/s)
1	Steel (including welded pipes)	100
2	Clay, concrete, reinforced concrete, pre stressed concrete, metal (with or without flange)	80
3	Masonry, plastic[3]	50

Note 1: Mounting equipment directly onto pipes may not be possible. If the vibration source is not immediately next to the pipework, measurements can be made on the ground surface to obtain an estimate. Generally, this vibration level will be greater than the level measured directly on the pipework.

Note 2: The guideline values may be reduced by 50% without further analysis when evaluating the effects of long-term vibration on buried pipework.

Note 3: Drainpipes shall be evaluated using the values given for Line 3.

Buried Pipework and Utilities

No buried pipework or utilities have been identified in this CNVIS at risk of impact from vibration. Therefore, no additional consideration or assessment has been undertaken in relation to buried pipework and utilities.

4.3.3 Minimum Working Distances for Vibration Intensive Work

Minimum working distances for typical vibration intensive construction equipment have been sourced from the Transport for NSW (TfNSW) Construction Noise and Vibration Guideline (Public Transport Infrastructure) (CNVG-PTI) and are shown in **Table 11**. The minimum working distances are for both cosmetic damage (from BS 7385 and DIN 4150) and human comfort (from the NSW EPA Assessing Vibration: a technical guideline). They are calculated from empirical data which suggests that where work is further from receivers than the quoted minimum distances then impacts are not considered likely.

The minimum working distances listed in the CNVG were used to derive the minimum working distances required for cosmetic damage to industrial and heavy commercial buildings (also reinforced or framed structures). The following pseudo-power law relationship has been used in the derivations:

$$V_2 = V_1 \times \left(\frac{D_1}{D_2}\right)^B$$

where a site exponent value of B = 1.6 is adopted for the calculations, as per AS2187.2:2006

Table 11 Recommended Minimum Working Distances from Vibration Intensive Equipment

Plant Item	Rating/Description	Minimum Distance			
		Cosmetic Damage			Human Response (NSW EPA Guideline)[2]
		Residential and Light Commercial (BS 7385)	Heritage Items[1] (DIN 4150, Group 3)	Industrial and Heavy Commercial (BS 7385)	
Vibratory Roller	<50 kN (1–2 tonne)	5 m	11 m	3 m	15 m to 20 m
	<100 kN (2–4 tonne)	6 m	13 m	3 m	20 m
	<200 kN (4–6 tonne)	12 m	25 m	6 m	40 m
	<300 kN (7–13 tonne)	15 m	31 m	8 m	100 m
	>300 kN (13–18 tonne)	20 m	40 m	10 m	100 m
	>300 kN (>18 tonne)	25 m	50 m	12 m	100 m
Small Hydraulic Hammer	300 kg (5 to 12 t excavator)	2 m	5 m	1 m	7 m
Medium Hydraulic Hammer	900 kg (12 to 18 t excavator)	7 m	15 m	4 m	23 m
Large Hydraulic Hammer	1,600 kg (18 to 34 t excavator)	22 m	44 m	11 m	73 m
Vibratory Pile Driver	Sheet piles	2 m to 20 m	5 m to 40 m	1 to 10 m	20 m
Piling Rig – Bored	≤ 800 mm	2 m (nominal)	5 m	1 m	4 m
Jackhammer	Hand held	1 m (nominal)	3 m	1 m	2 m
Ballast Tamping[2]	N/A	5 m	10 m	3 m	30 m

Note 1: Minimum working distances for heritage items that have been identified as structurally unsound or otherwise particularly sensitive to vibration. These distances have been calculated based on the 2.5 mm/s PPV criteria from DIN 4150 and the cosmetic damage minimum working distances presented in the CNVG-PTI with reference to BS 7385.

Note 2: Based on SLR measurement data. The human response minimum working distance for Ballast Tamping is determined based on a residential night-time preferred VDV criterion.

The minimum working distances are indicative and will vary depending on the particular item of equipment and local geotechnical conditions. The distances apply to cosmetic damage of typical buildings under typical geotechnical conditions.

4.4 Traffic on Surrounding Roads

The potential impacts from project related traffic on the surrounding public roads are assessed using the NSW EPA *Road Noise Policy* (RNP). An initial screening test is first applied to evaluate if existing road traffic noise levels are expected to increase by more than 2.0 dB. Where this is considered likely, further assessment is required using the RNP criteria shown in **Table 12**.

Table 12 RNP/NCG Criteria for Assessing Traffic on Public Roads

Road Category	Type of Project/Land Use	Assessment Criteria (dB)	
		Daytime (7 am – 10 pm)	Night-time (10 pm – 7 am)
Freeway/ arterial/ sub-arterial roads	Existing residences affected by additional traffic on existing freeways/arterial/sub-arterial roads generated by land use developments	$L_{Aeq(15hour)}$ 60 (external)	$L_{Aeq(9hour)}$ 55 (external)
Local roads	Existing residences affected by additional traffic on existing local roads generated by land use developments	$L_{Aeq(1hour)}$ 55 (external)	$L_{Aeq(1hour)}$ 50 (external)

5.0 Noise Assessment

The potential construction noise levels from the Project have been predicted using ISO 9613:2 algorithm in SoundPLAN noise modelling software. The model includes ground topography, buildings and representative noise sources from the Project.

5.1 Work Scenarios

Noise modelling scenarios have been determined based on key Project noise generating stages, supplied by the Project team. A detailed description of each work scenario and the total sound power levels (Lw) are provided in **Table 13**.

A summary of each construction scenario and the indicative work periods required are shown in **Table 14**, as per the working hours defined in the CNVMP.

The locations of the various work scenarios are shown in **Figure 4** and **Figure 5**.

Table 13 Work Scenario Descriptions

ID	Scenario	Description	Total Lw
W.001	Site Establishment / Demobilisation	Site Compound delivery and set up Laydown and haul road construction	115
W.002	Compound Operation	Operation of the site compound Delivery of materials/equipment	114
W.003	Geotechnical Investigation	Surveying the of properties of the ground under work area	116
W.004	Pavement Investigation	Pavement cores at level crossings	117
W.005	Track Work - Peak	Track work including highly noise intensive work	119
W.006	Track Work - Typical	Track work including highly noise intensive work	115
W.007	Track Tamping	Track tamping work following track work	116
W.008	Crossover Removal – Civil Works	Remove crossover	114
W.009	Drainage Work	Drainage Work	119
W.010	Signalling Work	Installation of signalling infrastructure	112
W.011	Level Crossing Work - Peak	Level crossing work including highly noise intensive work	119
W.012	Level Crossing Work - Typical	Level crossing work including highly noise intensive work	114

Table 14 Scenarios and Periods of Work

ID	Scenario	Hours of Work				Indicative Start Date	Likely Duration
		Approved Hours	Out-of-Hours Work [4]				
			Day OOH[1]	Evening[2]	Night[3]		
W.001	Site Establishment / Demobilisation	✓	✓	-	-	May-25	3 months
W.002	Compound Operation	✓	✓	✓	✓	May-25	12 months
W.003	Geotechnical Investigation	✓	✓	-	-	Jul-25	1 month
W.004	Pavement Investigation	✓	✓	-	-	Jun-25	1 month
W.005	Track Work - Peak	✓	✓	✓	✓	Sep-25	5 months
W.006	Track Work - Typical	✓	✓	✓	✓	Sep-25	5 months
W.007	Track Tamping	✓	✓	✓	✓	Sep-25	5 months
W.008	Crossover Removal – Civil Works	✓	✓	✓	✓	Jul-25	12 months
W.009	Drainage Work	✓	✓	✓	✓	Aug-25	11 months
W.010	Signalling Work	✓	✓	✓	✓	Aug-25	6 months
W.011	Level Crossing Work - Peak	✓	✓	✓	✓	Sep-25	11 months
W.012	Level Crossing Work - Typical	✓	✓	✓	✓	Sep-25	11 months

Note 1: Daytime out of hours is 8 am to 6 pm on Sunday and public holidays.

Note 2: Evening is 6 pm to 10 pm Monday – Sunday (including public holidays).

Note 3: Night is 10 pm to 7 am Monday – Saturday and 10pm to 8am Sunday (including public holidays).

Note 4: Where works are expected to occur outside of the standard working hours, further detail around the specific work tasks, duration and justification of OOHW must be identified in the OOHW permit, required by the OOHW Protocol or EPL.

Note 5: Works scenarios may occur simultaneously during enhancement works and all work is expected to be completed across a 12 month period.

Figure 4 Construction Work Locations (West)

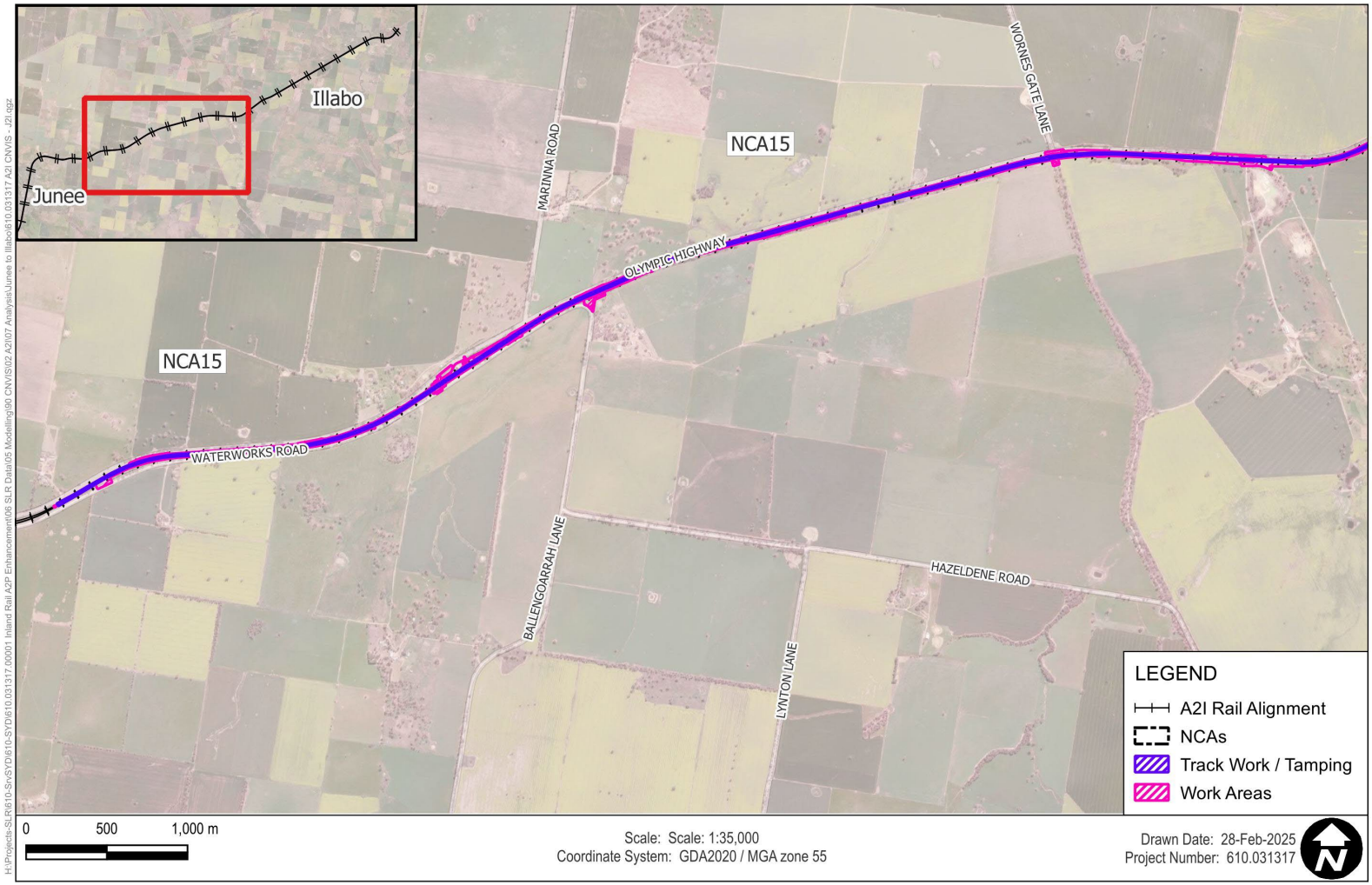
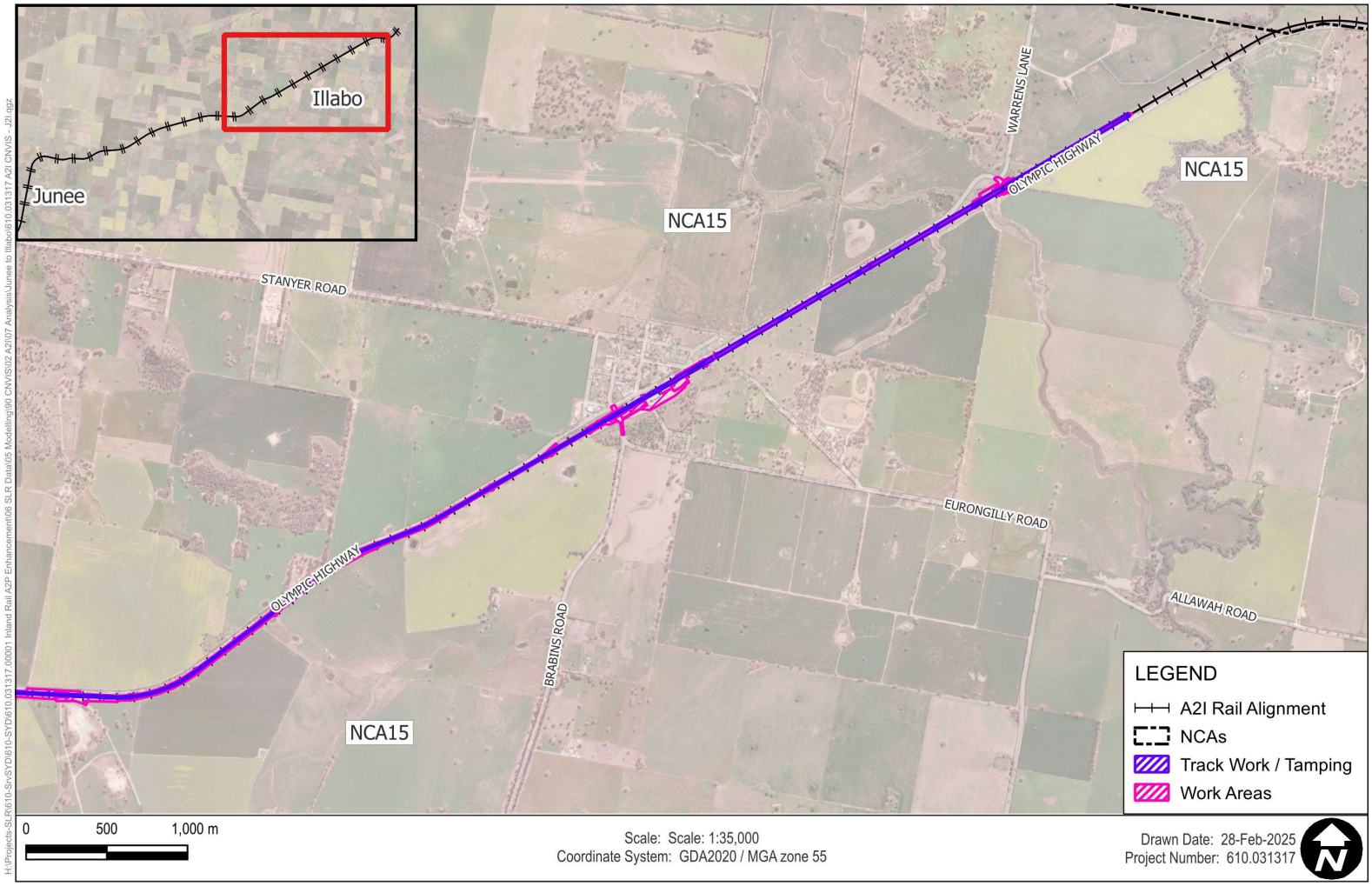


Figure 5 Construction Work Locations (East)



5.1.1 Modelling Scenarios and Equipment

The assessment uses 'realistic worst-case' scenarios to determine the impacts from the noisiest 15-minute period that is likely to occur for each work scenario, as required by the ICNG. Sound power levels (LW) for the construction equipment used in the modelling are listed in **Appendix B**.

5.2 Predicted Noise Levels

The following overview is based on the predicted impacts at the most affected receivers and is representative of the worst-case noise levels that are likely to occur during construction. The predicted noise levels are only applied to receivers while they are in use, further consultation with community maybe required in the future to confirm the non-residential receiver operation time.

The assessment shows the predicted 'mitigated' impacts based on the exceedance of the noise management levels, as per the categories in **Table 15**. The mitigation and management measures adopted for this CNVIS are provided in **Section 8.0**.

Table 15 Exceedance Bands and Impact Colouring

Subjective Classification	Exceedance of Noise Management Level		Impact Colouring
	Daytime	Out of Hours	
Negligible	No exceedance	No exceedance	
Noticeable	-	1 to 5 dB	
Clearly Audible	1 to 10 dB	6 to 15 dB	
Moderately Intrusive	11 to 20 dB	16 to 25 dB	
Highly Intrusive	> 20 dB	> 25 dB	

A summary of the number of buildings where NML exceedances were predicted for the various work scenarios is shown in **Table 16**. The number of receivers above the 'highly noise affected' (HNA) level are also included in the table. Maps of the predicted worst-case noise impacts are presented in **Appendix C**.

The assessment presents the combined predicted noise impacts for each scenario. Meaning, the worst-case result at each receiver is considered from all potential work areas where each scenario is to be undertaken.

The assessment is generally considered conservative as the calculations assume several items of construction equipment are in use at the same time within individual scenarios. As outlined in **Section 5.1.1,** the assessment uses 'realistic worst-case' scenarios to determine the impacts from the noisiest 15-minute period that is likely to occur for each work scenario.

The exceedances shown in **Table 16** are therefore representative of a 'realistic worst-case' 15-minute period, and are unlikely to occur for extended periods of time throughout the entire construction period at any given receiver.

The indicative work durations presented in **Table 14** represent a window of time where the scenarios could occur, and does not represent the entire duration of the exceedances shown in **Table 16**. In reality, there would frequently be periods when construction noise levels are much lower than the worst-case levels predicted as well as times when no equipment is in use and no noise impacts occur.

Table 16 Overview of NML Exceedances

ID	Scenario	HNA[1]	Number of Receivers																	
			With NML exceedance[2]																	
			Approved Hours			Out of Hours														
			Daytime			Daytime OOH				Evening				Night-time				Sleep Disturbance	Sleep Awakening
			1-10 dB	11-20 dB	>20 dB	1-5 dB	6-15 dB	16-25 dB	>25 dB	1-5 dB	6-15 dB	16-25 dB	>25 dB	1-5 dB	6-15 dB	16-25 dB	>25 dB	>Screening Level	>65 dB
Residential Receivers																				
W.001	Site Establishment / Demobilisation	-	23	3	-	12	23	3	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.002	Compound Operation	-	22	3	-	12	22	3	-	12	22	3	-	1	21	17	1	38	4
W.003	Geotechnical Investigation	-	24	11	1	6	24	11	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.004	Pavement Investigation	-	8	2	-	10	8	2	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.005	Track Work - Peak	-	25	12	3	2	25	12	3	2	25	12	3	12	9	24	12	44	22
W.006	Track Work - Typical	-	23	8	-	9	23	8	-	9	23	8	-	4	17	18	7	40	12
W.007	Track Tamping	-	24	10	-	8	24	10	-	8	24	10	-	4	12	23	7	42	15
W.008	Crossover Removal – Civil Works	-	8	2	-	5	8	2	-	5	8	2	-	9	18	4	2	31	6
W.009	Drainage Work	-	3	-	-	8	3	-	-	8	3	-	-	21	12	3	-	20	2
W.010	Signalling Work	-	-	-	-	2	-	-	-	2	-	-	-	3	2	-	-	-	-
W.011	Level Crossing Work - Peak	-	14	3	-	15	14	3	-	15	14	3	-	7	25	9	3	34	5
W.012	Level Crossing Work - Typical	-	6	1	-	9	6	1	-	9	6	1	-	11	20	4	1	22	3
Other Sensitive Receivers																				
W.001	Site Establishment / Demobilisation	n/a	7	-	-	5	2	-	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.002	Compound Operation	n/a	7	-	-	6	1	-	-	1	-	-	-	-	-	1	-	n/a	n/a
W.003	Geotechnical Investigation	n/a	5	4	-	1	6	2	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.004	Pavement Investigation	n/a	1	-	-	1	-	-	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W.005	Track Work - Peak	n/a	4	5	-	2	6	1	-	2	1	-	-	-	-	-	1	n/a	n/a
W.006	Track Work - Typical	n/a	7	1	-	2	6	-	-	1	1	-	-	-	-	1	-	n/a	n/a
W.007	Track Tamping	n/a	6	2	-	2	6	-	-	1	1	-	-	-	-	1	-	n/a	n/a
W.008	Crossover Removal – Civil Works	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n/a	n/a
W.009	Drainage Work	n/a	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	n/a	n/a
W.010	Signalling Work	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n/a	n/a
W.011	Level Crossing Work - Peak	n/a	6	-	-	5	1	-	-	1	1	-	-	-	-	1	-	n/a	n/a
W.012	Level Crossing Work - Typical	n/a	1	-	-	1	-	-	-	1	-	-	-	-	-	1	-	n/a	n/a

Note 1: Highly noise affected, based on ICNG definition (i.e. predicted $L_{Aeq(15minute)}$ noise at residential receiver is greater than 75 dBA).

Note 2: Based on worst-case predicted noise levels

A summary of the predicted worst-case noise levels is shown below for each work area:

Residential Receivers

- 'Clearly Audible' noise impacts are predicted at the closest residential receivers for all scenarios (except *W.010*) during the approved daytime hours, and for all scenarios (except *W.010*) occurring during daytime and evening out-of-hours periods.
- 'Moderately intrusive' noise impacts are predicted at the closest residential receivers to the works for all scenarios (except *W.009*, and *W.010)* during approved daytime, daytime out-of-hours and evening periods, and for all scenarios occurring during the night-time period (except *W.010)*.
- 'Highly intrusive' noise impacts are predicted at the closest residential receivers to the works for scenario *W.005* during all assessment periods. 'Highly intrusive' noise impacts are also predicted for scenario *W.003* during the approved daytime and daytime out-of-hours periods, and for scenarios *W.002, W.005* to *W.008, W.011* and *W.012* during night-time out-of-hours period. These activities will be conducted during track possessions and staged progressively along the alignment, rather than simultaneously. Detailed information, including the duration and specific timing of out-of-hours work (OOHW), will be provided in the corresponding OOHW permit.
    - Compound operations outlined in *W.002* are generally expected to be limited to approved daytime hours. OOHWs presented in **Table 16** are only expected when construction works are being undertaken under a rail possession.
- Noise levels are predicted to exceed the sleep disturbance screening level and sleep awakening level for all work scenarios (except *W.010*) occurring during the night-time period.
- Sleep disturbance impacts would generally be caused by heavy vehicle movements and more noise intensive equipment. Where reasonable and feasible, these activities should be limited to the less sensitive periods to avoid noise impacts during more sensitive out-of-hours periods (refer to **Section 8.0**). The number of awakening events would depend on several factors, including the equipment being used, the duration of noisy work and the distance of the work to each residential receiver. Further detail around the specific OOHW, (eg duration and justification) must be identified in the OOHW permit, refer **Section 2.4**.

Other Sensitive Receivers

- 'Clearly Audible' noise impacts are predicted at the closest 'other sensitive' receivers for all scenarios (except *W.008* to *W.010*) during the approved daytime hours, for scenarios *W.001* to *W.003, W.005 to W.007* and *W.011* during the daytime out-of-hours period and for scenarios *W.005* to *W.007* and *W.011* during the evening period.
- 'Moderately intrusive' noise impacts are predicted at the closest 'other sensitive' receivers for *W.003* and *W.005* to *W.006* during the approved daytime hours, for *W.005* during the daytime out-of-hours period, and for *W.002, W.006*, *W.007*, *W.011* and *W.012* during the night-time out-of-hours period.
- 'Highly intrusive' noise impacts are predicted at the closest 'other sensitive' receiver for scenario *W.005* during the night-time period.
- It is noted that other sensitive receivers should only be considered impacted 'when in use'.

Review of the predictions shows that both the sleep disturbance screening level and sleep awakening reaction level are likely to be exceeded when night work occurs near residential receivers. The receivers which would potentially be affected by sleep awakening impacts are generally the same receivers where ‘moderately intrusive’ and ‘highly intrusive’ night-time impacts have been predicted (refer to **Appendix C**). These receivers may be eligible for respite offers (RO), agreements with owners (AO) or alternative accommodation (AltA), refer to **Section 8.3**. Furthermore, for scenarios where 'highly intrusive' impacts are predicted (ie *W.002, W.005* to *W.008*, *W.011* and *W.012*), noisy activities will be scheduled during standard daytime hours, where feasible, to minimise disruption during OOHW periods. It is noted however, that this work will occur during a rail possession and will be undertaken within the limitations of the possession. All appropriate feasible and reasonable construction noise mitigation measures will be applied to work as outlined in **Section 8.0**.

5.3 Ground-borne Noise

Ground-borne construction noise impacts from the Project are not anticipated as vibration intensive work with the potential to generate perceptible ground-borne noise, is not included in the scope of work. Vibration intensive work for the Project will be completed outdoors meaning airborne noise levels at the nearest receivers are expected to be higher than the corresponding internal ground-borne noise levels.

Where airborne noise levels are higher than ground-borne noise levels it is not necessary to evaluate potential ground-borne noise impacts and as such, they have not been considered further for this assessment.

6.0 Vibration Assessment

Vibration intensive items of equipment that would be required during work assessed in this CNVIS include a vibratory roller and ballast tamper. These items of equipment are required during the work as shown in **Table 17**.

The potential impacts during vibration intensive work have been assessed using the Transport CNVG-PTI minimum working distances for cosmetic damage and human response shown in **Table 17**.

Table 17 Vibration Intensive Equipment

ID	Scenario	Rating/Description	Minimum Distance			
			Cosmetic Damage			Human Response (NSW EPA Guideline)
			Residential and Light Commercial (BS 7385)	Heritage Items (DIN 4150, Group 3)	Industrial and Heavy Commercial (BS 7385)	
W.003	Geotechnical Investigation	Vibratory Roller <50 kN (1–2 tonne)	5 m	11 m	3 m	15 m to 20 m
W.005	Track work – Peak	Vibratory Roller >300 kN (13-18 tonne)	20 m	40 m	10 m	100 m
W.009	Drainage Work	Vibratory Roller >300 kN (13-18 tonne)	20 m	40 m	10 m	100 m
		Large Hydraulic Hammer 1,600 kg (18 to 34 t excavator)	22 m	44 m	11 m	73 m
W.011	Level Crossing Work - Peak	Vibratory Roller >300 kN (13-18 tonne)	20 m	40 m	10 m	100 m
W.007	Track Tamping	n/a	5 m	10 m	3 m	30 m

Vibration offset distances have been determined from the TfNSW CNVG-PTI minimum working distances for cosmetic damage and human comfort (see **Table 11** and the assessment is summarised in **Figure 6** to **Figure 15**). The offset distances are representative of the highest vibration levels that would likely be experienced by the nearest receivers when work occurs nearby.

For most construction activities, vibration emissions are intermittent in nature and for this reason, higher vibration levels occurring over shorter time periods are allowed.

In the event that additional work is undertaken which requires the use of other items of plant identified than those identified in **Table 17**, a vibration impact assessment must be conducted prior to the commencement of work.

Figure 6 Vibratory Roller (1-2 tonne) - Minimum Working Distances W.003 (West)

Figure 7 Vibratory Roller (1-2 tonne) - Minimum Working Distances W.003 (East)

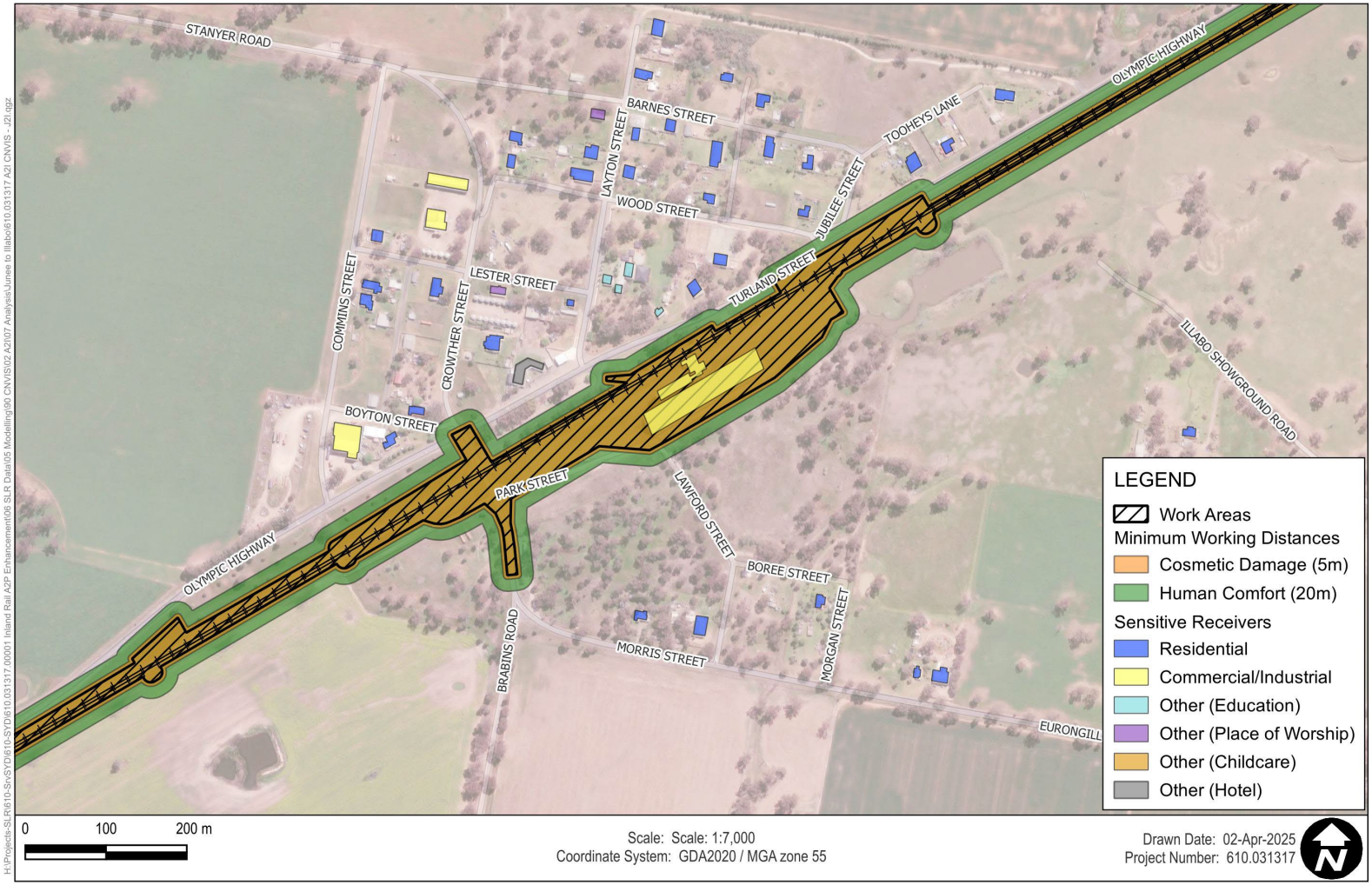


Figure 8 Vibratory Roller (13-18 tonne) - Minimum Working Distances W.005 (West)

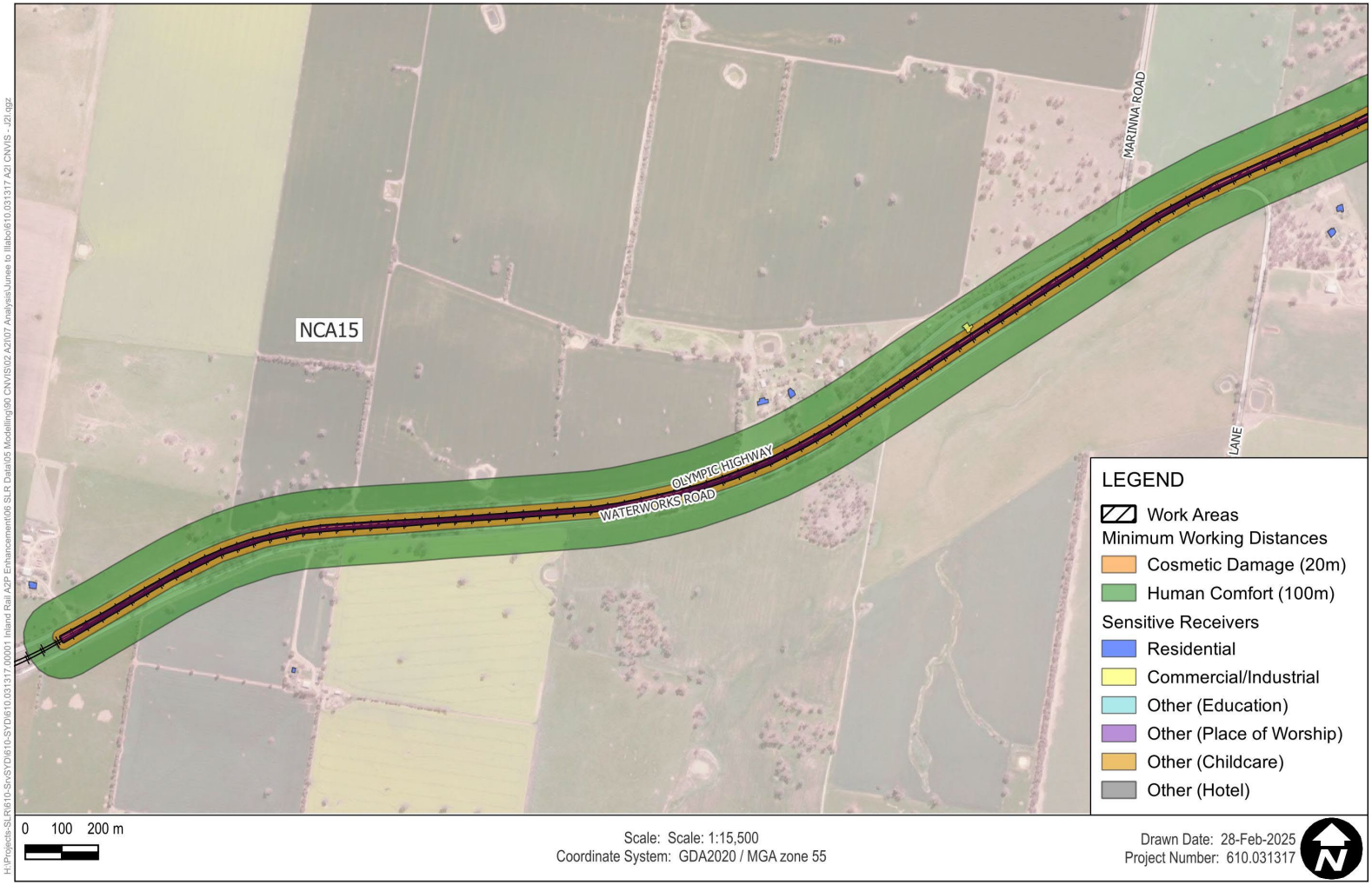


Figure 9 Vibratory Roller (13-18 tonne) - Minimum Working Distances W.005 (East)

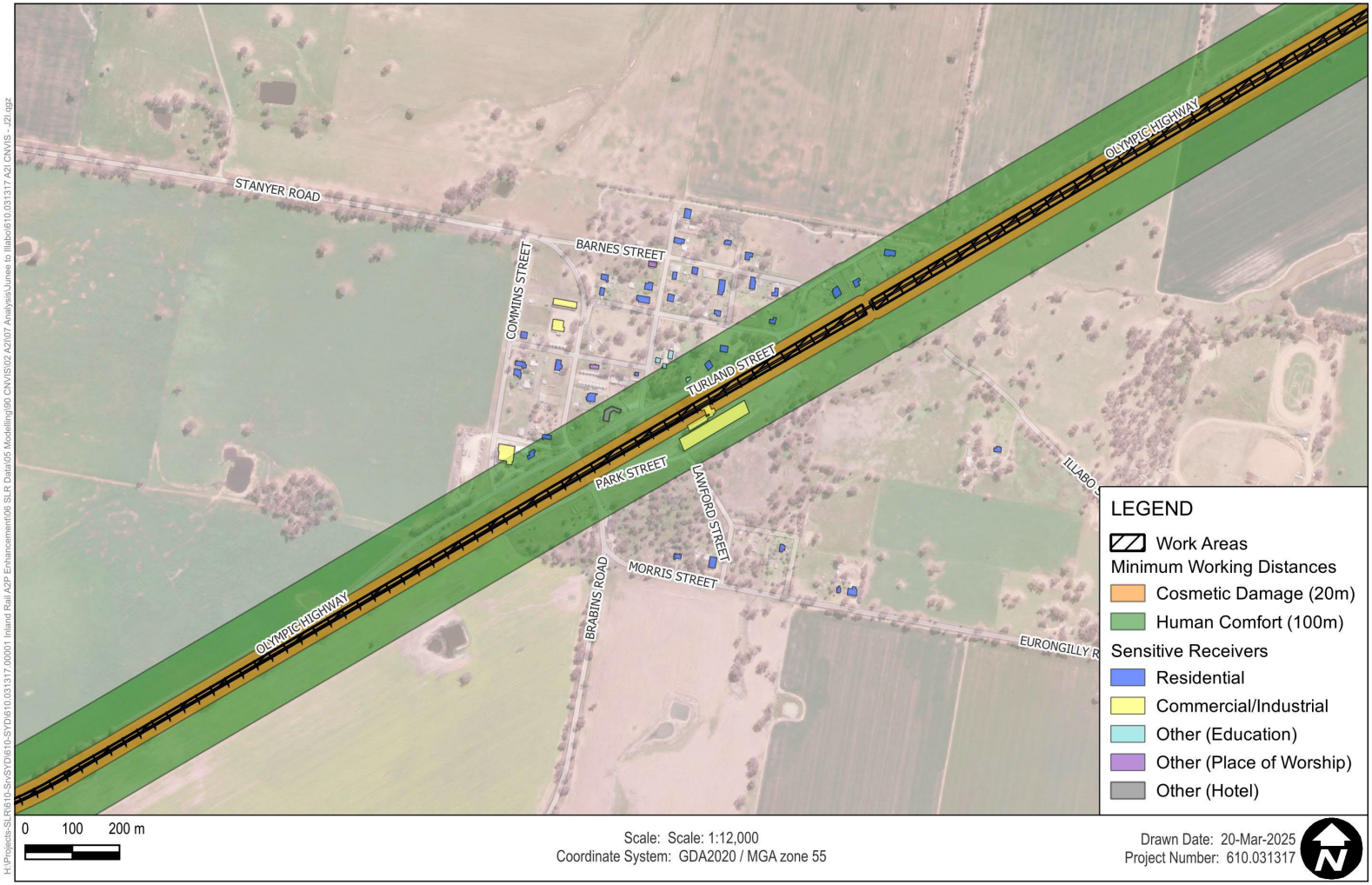


Figure 10 Ballast tamping - Minimum Working Distances W.007 (West)

Figure 11 Ballast tamping - Minimum Working Distances W.007 (East)

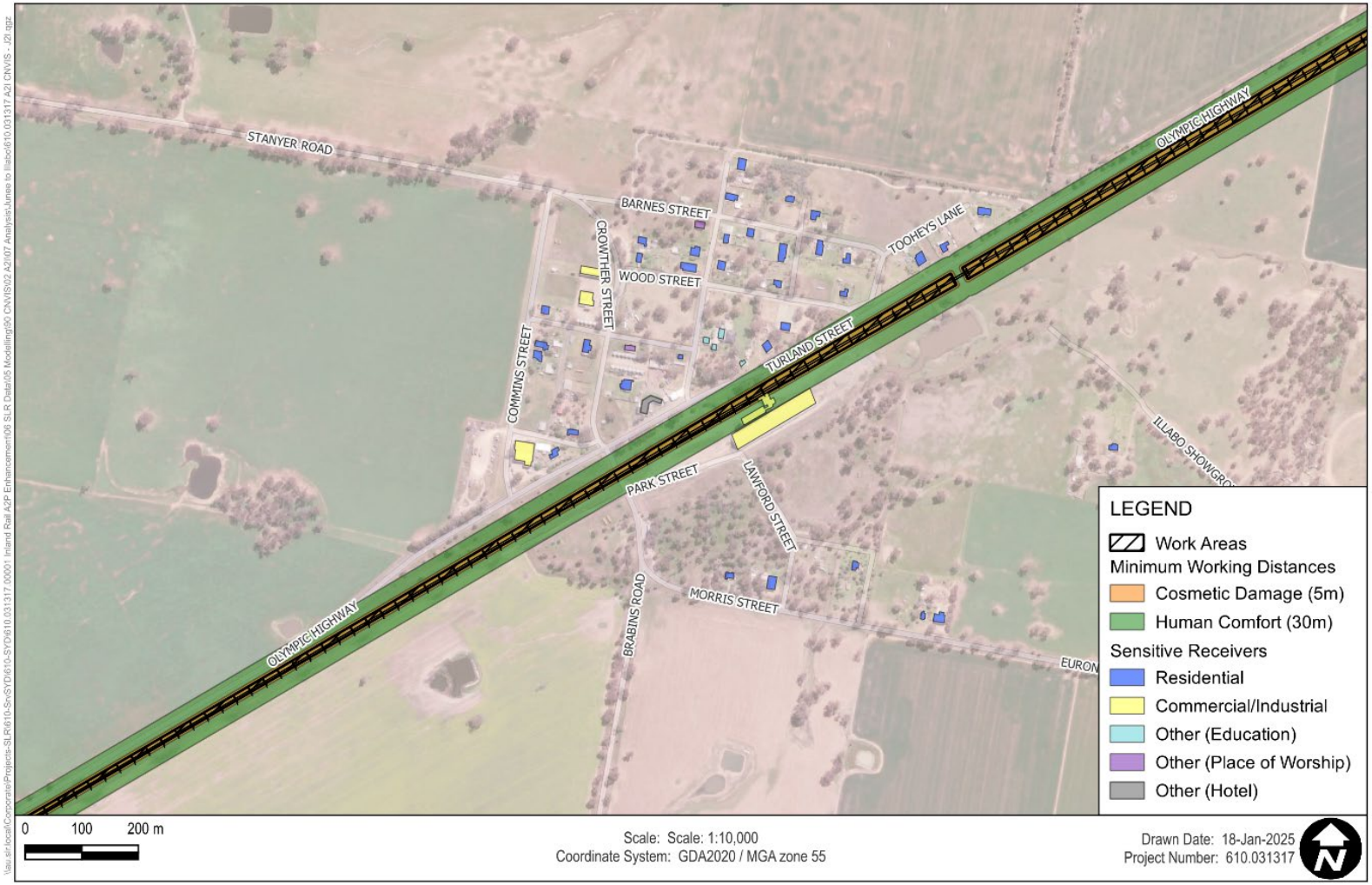
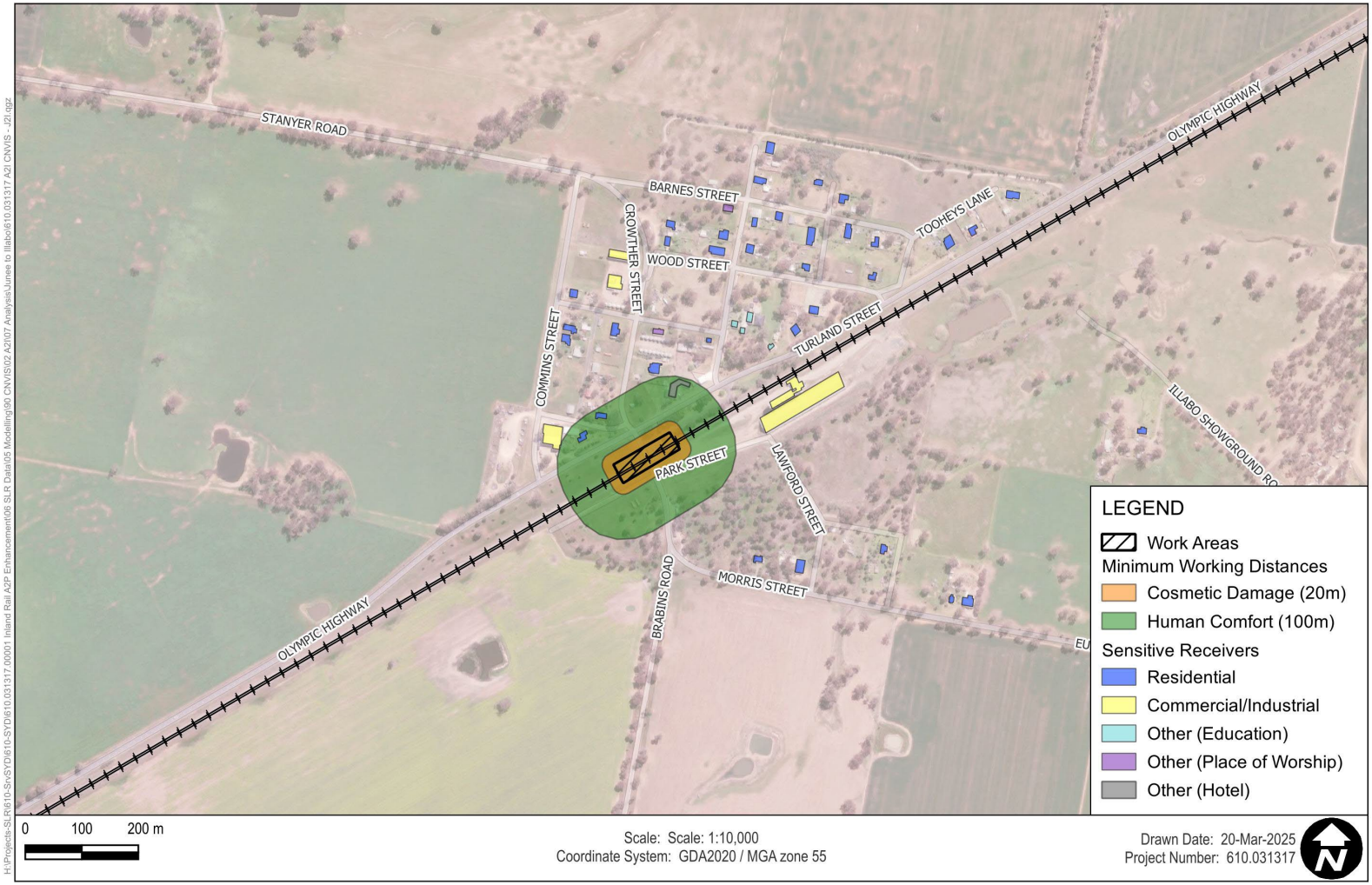


Figure 12 Vibratory Roller (13-18 tonne) + Large Hydraulic Hammer - Minimum Working Distances W.009 (West)

Figure 13 Vibratory Roller (13-18 tonne) + Large Hydraulic Hammer - Minimum Working Distances W.009 (East)

Figure 14 Vibratory Roller (13-18 tonne) - Minimum Working Distances W.011 (West)

Figure 15 Vibratory Roller (13-18 tonne) - Minimum Working Distances W.011 (East)



6.1 Cosmetic Damage Assessment

Figure 6 to **Figure 15** show that some industrial buildings within the railway corridor have the potential to fall within the cosmetic damage minimum working distance when vibratory rollers are in use.

Offset distances from specific vibration intensive plant to the nearest receivers and building construction should be confirmed before commencing vibration intensive work during construction.

Before commencement of any work, a structural engineer must undertake condition surveys of all building, structures, utilities and the like identified as being at risk of damage. For this CNVIS, conditions surveys should be considered for:

- One structure within the rail corridor at Wantiool
- GrainCorp silos within the rail corridor at Illabo Yard

After completion of construction, condition surveys must be undertaken by a structural engineer of all items for which pre-condition surveys were undertaken.

The results of the surveys must be documented in a Condition Survey Report for each item surveyed. Copies of Condition Survey Reports must be provided to the landowners of the items surveyed, and no later than one month before the commencement of construction and three months following the completion of construction.

Feasible and reasonable construction vibration mitigation measures should be applied where vibration intensive work is required within the minimum working distances. Construction vibration mitigation and management measures are discussed in **Section 8.0**.

In accordance with CoA E122, property damage caused directly or indirectly by the construction or operation must be rectified at no cost to the owner. Alternatively, compensation may be provided for the property damage as agreed with the property owner.

6.2 Human Comfort Assessment

It has been determined that receivers within close proximity to the work areas have the potential to fall within the human comfort minimum working distances and occupants of these buildings may be able to perceive vibration impacts at times when vibratory rollers are in use nearby. Where impacts are perceptible, they would likely only be apparent for relatively short durations when vibration intensive equipment is in use nearby.

Figure 9 (*W.004*) demonstrates that the closest sensitive receivers to the works in Illabo have the potential to fall within the human comfort minimum working distances during the use of vibratory rollers.

Figure 10 and **Figure 11** *(W.006)* identify one structure located in the rail corridor at Wantiool and the GrainCorp silos located in the rail corridor at Illabo Yard, with the potential to fall within the human comfort minimum working distance. It is noted that these structures are unoccupied and hence human comfort impacts would not occur. **Figure 15** *(W.010)* identifies the following receivers with the potential to fall within the human comfort minimum working distance:

- 2-4 Turland St, Illabo (residential)
- 2 Crowther St, Illabo (residential)
- Illabo Hotel (other – hotel)

Feasible and reasonable construction vibration mitigation measures should be applied where vibration intensive work is required within the minimum working distances. Construction vibration mitigation and management measures are discussed in **Section 8.0**.

7.0 Construction Traffic Assessment

The EIS identified that during the construction phase of the project, heavy vehicles would be required for materials and equipment delivery while light vehicles will transport workers to and from the site. This additional road traffic may impact receivers along the proposed transport routes.

No additional information has been provided regarding construction road traffic, therefore a summary of the predicted daytime traffic noise levels from the EIS is shown in **Table 18**.

Table 18 Construction Traffic Assessment

Traffic Route	Road Type	Predicted Construction Traffic Noise (Both Directions) LAeq (Period)		Exceed base criterion? Day[1] (7am – 10pm)	Potential Increase > 2dB	Potential Noise Impact
		Existing	Existing + Proposed			
Junee to Illabo Clearances						
Olympic Highway	Arterial	54.3	58.1	No	Yes	No
Brabins Road	Local	34.2	49.7	No	Yes	No
Waterworks Road	Local	42.5	50.2	No	Yes	No
Marinna Station Cross Road	Local	34.2	49.7	No	Yes	No

Note 1: Freeway/arterial/sub-arterial roads: $L_{Aeq(15hour)}$ 60dBA(external)
Local roads: $L_{Aeq(1hour)}$ 55dBA (external)

The EIS found that construction traffic associated with the Junee to Illabo work stages on public roads complies with the road traffic noise goals.

The EIS did not assess construction traffic during the night-time period, and no additional information has been provided regarding construction road traffic. Therefore, it is conservatively assumed that where night-time construction traffic is required, impacts would be experienced by residences along construction routes on sub-arterial and local roads within close proximity to the work sites. Night-time noise impacts are not anticipated on arterial roads.

Traffic diversions are not proposed for the work assessed in this CNVIS. Extended traffic diversions are not expected for these works, and any necessary diversions will be confined to daytime hours. Should night-time diversions be required for construction activities, a more detailed assessment will be undertaken and provided.

Mitigation and management measures to assist in minimising noise impacts from construction traffic are shown in **Section 8.0**.

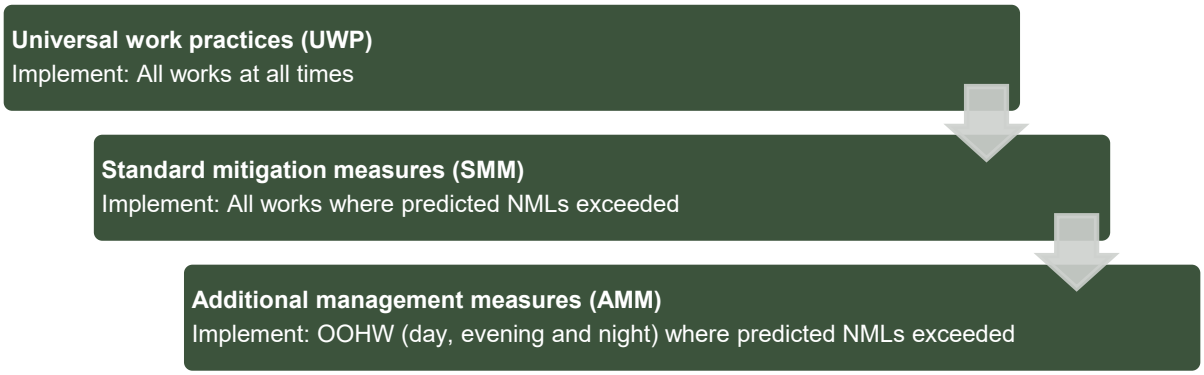
8.0 Mitigation and Management Measures

Noise from the Project may be apparent at the nearest receivers at certain times during the construction of the Project. The Project should apply all feasible and reasonable mitigation measures to minimise the impacts.

In accordance with CoA E74, works that exceed the noise management levels and/or vibration criteria must be managed in accordance with the CNVMP.

The Inland Rail NSW Construction Noise and Vibration Framework (CNVF) has been adopted as a guideline for this project and outlines a hierarchy of work practices and mitigation measures to minimise the impact of construction noise and vibration on the community. This hierarchy is shown in **Figure 16**.

Figure 16 Hierarchy of Work Practices and Mitigation Measures



The universal work practices (UWP) and standard mitigation measures (SMM) for the overall A2I project are outlined in the CNVMP. All mitigation and management measures outlined in the CNVMP will be adopted in accordance with CoA E74. Site specific mitigation measures are also outlined below in **Section 8.1**. These measures have been incorporated into the noise modelling assessment to provide mitigated results. Additional Management Measures (AMM) are outlined in **Section 8.3**.

8.1 Site Specific Mitigation Measures

Table 19 outlines the mitigation and management measures that will be adopted to minimise potential noise and vibration impacts associated with this CNVIS at surrounding sensitive receivers. These measures have been considered in noise modelling based on the total scenario sound power levels, refer **Appendix B**.

Table 19 Site Specific Mitigation Measures

Measure	Reference / Notes
Project Planning	
Use quieter and less vibration emitting construction methods where feasible and reasonable.	Best practice
Works will be completed during the approved daytime construction hours where possible, as outlined in **Section 2.2.** Some unavoidable OOHW will be required due to road and rail traffic management restrictions, as outlined in **Section 2.3**.	Best practice CoA E69 CoA E71
Where OOHW is required, an OOHW Permit will be prepared, as required by the OOHW Protocol or EPL. Further detail around the specific work tasks, duration and justification of OOHW must be identified in the OOHW permit.	Best practice CoA E71 CoA E72 CoA E73

Measure	Reference / Notes
Scheduling	
Highly noise intensive works that result in an exceedance of the applicable NML at the same receiver must only be undertaken: a) Between 08:00am – 06:00pm Monday to Friday; b) Between 08:00am – 01:00pm Saturday; and c) if continuously, then not exceeding three (3) hours, with a minimum cessation of work of not less than one hour. Refer **Section 8.2**.	Best practice CoA E70
Noise generating work in the vicinity of community, religious, educational institutions, noise and vibration-sensitive businesses and critical working areas (such as exam halls, theatres, laboratories and operating theatres) resulting in noise levels above the NMLs will not be timetabled during sensitive periods, unless other reasonable arrangements with the affected institutions can be made at no cost to the affected institution. Refer to Community Consultation in **Section 8.5**.	Best practice CoA E76
All work undertaken for the delivery of the project including those undertaken by third parties (such as utility relocations), must be coordinated to ensure respite periods are provided.	Best practice, CoA E83
Site Layout	
Compounds and worksites have been designed to promote one-way traffic and minimise the need for vehicle reversing.	Best practice
Construction activities must be planned to minimise vehicle movements around the Site.	
Where practicable, work compounds, parking areas, and equipment and material stockpiles would be positioned away from noise-sensitive locations and take advantage of existing screening from local topography.	
Where practicable, equipment that is noisy would be started away from sensitive receivers	
Training	
Training will be provided to all personnel on noise and vibration requirements for the project. Inductions and toolbox talks to be used to inform personnel of the location and sensitivity of surrounding receivers.	Best practice
The induction protocols must include awareness of noise generating activities and mitigation measures and techniques that should be implemented.	
Training must be conducted for appropriate community behaviours when access/egress the Site.	
Plant and Equipment Source Mitigation	
All plant and equipment must be maintained in a proper and efficient condition, operated in a proper and efficient manner, and feature standard noise reduction measures where applicable.	Best practice CNVF
Where possible, plant and equipment must be selected that can be fitted with options to minimise noise such as covers, mufflers, shrouds and other noise suppression equipment. Low noise emission plant and equipment must be selected where available. These considerations have been included in noise modelling based on the equipment sound power levels, refer **Appendix B.**	
Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out-of-hours work, including delivery vehicles.	

Measure	Reference / Notes
Stationary noise sources will be sited behind structures (or temporary screens) that act as barriers, or at the greatest distance from the noise-sensitive area (where practicable). Equipment will be oriented so that noise emissions are directed away from any sensitive areas.	
Noise generating equipment will be regularly checked and effectively maintained, including checking of hatches/enclosures regularly to ensure that seals are in good condition and doors close properly against seals.	
Noise monitoring spot checks of equipment will be completed to ensure individual items are operating as expected	
Dropping materials from a height will be avoided.	
Loading and unloading will be carried out away from noise sensitive areas, where practicable.	
Alternative construction methods will be considered for work scenarios involving a vibration generating equipment (eg static rolling or smaller equipment). Use of these methods will depend on the specific circumstances and therefore the worst-case scenario is included for the purpose of this CNVIS.	Best practice
Construction Traffic	
Construction traffic routes to site will be limited to major roads where possible.	Best practice
Trucks will not queue outside residential properties.	
Truck drivers will be instructed to avoid compression braking as far as practicable.	
Delivery vehicles should be fitted with straps rather than chains for unloading, wherever possible.	
Truck movements will be kept to a minimum where possible (eg trucks are fully loaded on each trip).	
Screening	
Where possible, install purpose-built screening or enclosures around long-term fixed plant that has the potential to impact nearby receivers	Best practice CNVF
The layout of the site will take advantage of existing screening from local topography, where possible. Site huts, maintenance sheds and/or containers will be positioned between noisy equipment and the affected receivers.	
Implementation of temporary noise barriers for highly intensive noise activities, such as saw cutting or rock breaking.	
Community Consultation	
Regular communications on the activities and progress of the proposal shall be provided to the community (eg via newsletter, email and/or website).	Best practice CNVF
A telephone, email and web-based community information service shall be established to allow the community to obtain additional information on construction activities, provide feedback or make a complaint.	Best practice CNVF
Owners and occupiers of properties at risk of exceeding the screening criteria for cosmetic damage (and/or human comfort) must be notified before work that generates vibration commences in the vicinity of those properties. If the potential exceedance is to occur more than once or extend over a period of 24 hours, owners and occupiers are to be provided a schedule of potential exceedances on a monthly basis for the duration of the potential exceedances, unless otherwise agreed by the owner and occupier.	Best practice CoA E79
Notification will be provided to all impacted residences along construction traffic routes (including temporary diversions).	Best practice
Where complaints are received, work practices will be reviewed and feasible and reasonable practices applied to minimise any further impacts.	Best practice

Measure	Reference / Notes
Monitoring	
Noise and/or vibration monitoring will be conducted (as appropriate) when noise/vibration intensive works are being undertaken in close proximity to sensitive receivers.	Best practice CNVF CoA E80 CoA E81
Noise and vibration monitoring will be undertaken in accordance with the CNVMP and Monitoring Program.	
Advice from a heritage specialist must be sought on methods and locations for installing equipment used for vibration, movement and noise monitoring at heritage-listed structures.	
See **Section 8.7** for details of monitoring requirements.	
Vibration	
Where vibration generating works are required within the minimum working distances and considered likely to exceed the criteria: • Different construction methods with lower source vibration levels will be investigated and implemented, where feasible (refer **Table 11**). • Attended vibration measurements will be undertaken at the start of the works to determine actual vibration levels of the item. Vibration intensive works will cease if the monitoring indicates vibration levels are likely to, or do, exceed the relevant cosmetic damage criteria. Work methods will be modified prior to recommencing the activity. Note: Where reasonable and feasible small vibratory rollers / static rolling will be prioritised to reduce vibration impacts to surrounding receivers.	Best practice CoA E80
Vibration intensive works required within the minimum working distance at the same receiver must only be undertaken: a) Between 08:00am – 06:00pm Monday to Friday; b) Between 08:00am – 01:00pm Saturday; and c) if continuously, then not exceeding three (3) hours, with a minimum cessation of work of not less than one hour. Refer to **Section 8.2**.	Best practice CoA E70
Where works are required within the cosmetic damage minimum working distances, building condition surveys will be completed before and after the works to ensure no cosmetic damage has occurred. Condition status of all heritage structures that fall within the unsound heritage minimum working distance for the nominated vibration-intensive equipment should be confirmed prior to the commencement of works.	Best practice CoA C9
Property damage caused directly or indirectly (for example from vibration or from groundwater change) by the construction or operation must be rectified at no cost to the owner. Alternatively, compensation may be provided for the property damage as agreed with the property owner.	Best practice CoA E122

8.2 Respite

In accordance with CoA E70, except as permitted by an EPL, highly noise intensive works that result in an exceedance of the applicable NML at the same receiver must only be undertaken:

a) Between 08:00am – 06:00pm Monday to Friday;

b) Between 08:00am – 01:00pm Saturday; and

c) if continuously, then not exceeding three (3) hours, with a minimum cessation of work of not less than one hour.

For the purposes of this condition, 'continuously' includes any period during which there is less than one hour between ceasing and recommencing any of the work.

In accordance with CoA E72 and E83, the procedure outlined in the OOHW Protocol must be implemented to coordinate OOHW (including those approved by an EPL or undertaken by a third party), to ensure appropriate respite is provided. This coordination must include:

a) rescheduling work to provide respite to impacted noise sensitive land use(s) so that the respite is achieved; or

b) the provision of alternative respite or mitigation to impacted noise sensitive land use(s); and

c) the provision of documentary evidence to the AA in support of any decision made in relation to respite or mitigation.

The consideration of respite must also include all other CSSI, SSI and SSD projects which may cause cumulative and/or consecutive impacts at receivers affected by the delivery of the CSSI.

Highly noise intensive works (as defined in **Section 2.2.1**) are required in various work scenarios. As outlined above, highly noise intensive work that results in an exceedance of the applicable NML is restricted to the hours shown above and must have respite periods as defined above.

CoA E70 applies to the following work scenarios where highly noise intensive works are proposed and the NML is predicted to be exceeded:

- W.003 - Geotechnical Investigation
- W.004 - Pavement Investigation
- W.005 - Track Work – Peak
- W.007 - Track Tamping
- W.008 - Crossover Removal
- W.009 - Drainage Work
- W.011 - Level Crossing Work - Peak

In accordance with CoA E71, the scenarios listed above require approval through the OOHW Protocol or and EPL to occur outside the hours listed above from CoA E70.

Respite offers are also required as part of the additional mitigation measured outlined in **Section 8.3**.

8.3 Additional Mitigation and Management Measures for Out of Hours Work

Where the 'mitigated' construction noise levels remain above the NMLs, the Additional Mitigation Measures Matrix (AMMM) adapted from in the CNVF and CNVMP is to be implemented. The approach, guided by the AMMM, is primarily aimed at pro-active engagement with affected sensitive receptors rather than additional noise reducing mitigation. OOHW has been divided into three periods (Day, Evening and Night) as adapted from the CNVF around the approved project hours (CoA E69).

Additional mitigation measures described in the CNVF and CNVMP are listed in **Table 20**. The additional mitigation measures for airborne noise are shown in **Table 21**. The additional mitigation measures for construction vibration are shown in **Table 22**.

Table 20 Additional Mitigation Measures

Mitigation/Management Measure	Abbreviation
Communication (Category 1)[1]	CO1
Communication (Category 2)[2]	CO2
Respite Offer[3]	RO
Alternative Accommodation	AltA
Agreement with Owners	AO

Note 1: As outlined in the CNVF, Communication to provide information on the OOHW via methods such as letter box drop, email, newsletter, media advertisements and/ or website prior to the works commencing.

Note 2: As outlined in the CNVF, Communication should be personalised (e.g. door knock, meeting, telephone call). Contact with these residents should commence early to enable feedback to be considered by the proposal.

Note 3: As outlined in the CNVF, RO are not applicable to non-residential receivers. RO may comprise of pre-purchased movie tickets, dinner vouchers or similar. RO can also be provided by limiting high noise generating works and allowing at least a one-hour respite period between blocks of work. Where possible, the timing of this respite should be discussed with the impacted community.

Table 21 Airborne Noise – Additional Mitigation Measures Matrix

Time Period		Exceedance of NML	Perception	Duration	Communication Category/ Management Measure
OOHW Daytime Period	Sunday 8am – 6pm (including public holidays)	<5	Noticeable	Any	CO1
		5-15	Clearly audible	Any	CO1
		16-25	Moderately intrusive	Any	CO1, CO2
		>25	Highly intrusive	Any	CO1, CO2
OOHW Evening Period	Monday – Sunday 6pm – 10pm (including public holidays)	<5	Noticeable	Any	CO1
		5-15	Clearly audible	Any	CO1
		16-25	Moderately intrusive	Any	CO1, CO2
		>25	Highly intrusive	Any	CO1, CO2
				>2 consecutive rest periods[1]	CO1, CO2, RO
OOHW Night Period	Monday – Saturday 10pm – 7am Sunday 10pm – 8am (including public holidays)	<5	Noticeable	Any	CO1
		5-15	Clearly audible	Any	CO1
		16-25	Moderately intrusive	Any	CO1, CO2
				>2 consecutive sleep periods[1]	CO1, CO2, RO,AO
		>25	Highly intrusive	Any	CO1, CO2, RO
				>2 consecutive sleep periods[1]	CO1, CO2, RO, AO, AltA

Note 1: Where the duration exceeds 2 consecutive rest/sleep periods, the corresponding additional mitigation measures will be provided for all periods where construction exceedances are expected to occur.

Table 22 Vibration – Additional Mitigation Measures Matrix

Time Period		Duration	Exceedance of 'preferred' value	Exceedance of 'maximum' value
OOHW Daytime Period	Sunday 8am – 6pm (including public holidays)	Any	CO1, CO2	CO1, CO2, RO
OOHW Evening Period	Monday – Sunday 6pm – 10pm (including public holidays)	Any	CO1, CO2	CO1, CO2, RO
OOHW Night Period	Monday – Saturday 10pm – 7am Sunday 10pm – 8am (including public holidays)	Any	CO1, CO2, RO	CO1, CO2, RO, AltA

8.3.1 Receivers Eligible for Additional Mitigation Measures - Noise

The receivers eligible for additional mitigation and management measures due to construction noise from the project work are presented in **Appendix C** and **Appendix D**. Where work occurs for greater than two consecutive evening or nights, receivers may be eligible for respite offers (RO), agreements with owners (AO) or alternative accommodation (AltA) depending on the exceedance level and works period as detailed in **Table 21**.

As outlined in **Section 5.2**, 'highly intrusive' impacts at nearest residential receivers and some other sensitive receivers are predicted for most work scenarios due to the proximity to the work. The addresses of the 'highly intrusive' impacted receivers are provided in **Appendix D**.

OOHW scenarios *W.002, W.005, W.006, W.007, W.008, W.011* and *W.012*, are predicted to create highly intrusive noise levels at residential receivers. Should these works occur for more than two consecutive sleep periods in a row, additional mitigation measures must be provided to affected sensitive receivers as detailed in **Table 21**. Where possible, work would be scheduled to avoid impacting the same receivers for more than two consecutive sleep periods. Receivers that would be impacted for more than two consecutive sleep periods must be identified in the OOHW permit.

8.3.2 Receivers Eligible for Additional Mitigation Measures – Vibration

Figure 9 and **Figure 15** identify occupied receivers that have the potential to fall within the minimum working distances for Human Comfort when vibratory rollers are in use.

Construction vibration mitigation and management measures are discussed in **Section 8.0**. As defined in **Section 2.2.1** and **Section 8.2** activities involving high noise generating equipment, such vibratory rolling, are limited to specific daytime construction hours only. Respite periods of 1 hour after every 3 hours of high noise/vibration generating work are also required.

Construction vibration mitigation and management measures are discussed in **Section 8.0**. Any proposed works outside of the approved daytime hours will need to be assessed as part of the OOHW permit preparation discussed in **Section 2.4**. Any additional mitigation (from **Table 22**) for vibration activities must be identified in the OOHW permit.

8.4 Community Notification

As detailed in the standard management measures outlined in the CNVF:

- A telephone, email and web-based community information service will be established to allow the community to obtain additional information on construction activities, provide feedback or make a complaint.
- Regular communications on the activities and progress of the proposal shall be provided to the community (e.g. via newsletter, email and/or website).

8.5 Consultation with Affected Receivers

In accordance with CoA E78, the CNVIS must include specific mitigation measures identified through consultation with affected sensitive land user(s) and the mitigation measures must be implemented for the duration of the Work. Details of this consultation are provided below.

8.5.1 Consultation approach

This section discusses the consultation approach that has been undertaken for the purposes of the work subject to this CNVIS. It is noted that consultation with affected sensitive land

users on what specific mitigation measures they may require is considered to be an ongoing and live process and as such, measures that are personal to individual affected sensitive land user(s) will not be regularly documented in this CNVIS. Consultation records will be made available to the AA upon request.

The purpose of this consultation is to identify receivers who have specific circumstances that need further consideration during construction – for example, households who have children undertaking exams (HSC or similar), households who have vulnerable persons with disabilities or medical conditions, shift workers, etc.

The consultation approach utilised by Martinus Rail is in accordance with the Community Communications Strategy. The approach involved directly contacting the affected sensitive land user identified by this CNVIS through one or more of the following methods:

- Surveys distributed by email and paper notifications
- Door-knocks with a 'Sorry we missed you' card for those who were not at home
- Notifications
- Phone calls
- Emails
- Community briefings / group meetings.

Affected sensitive land users contacted by Martinus Rail have been made aware of the anticipated duration and nature of construction works that may affect them, as well as mitigation measures that will be implemented in accordance with the CEMP and CNVMP. Contact information for Martinus Rail's Community Team have been provided to assist with ongoing consultation during construction.

Depending on individual needs and circumstances, specific mitigation measures offered by Martinus Rail could include but are not limited to:

- Offers of individually agreed respite to highly noise affected sensitive land users (standard construction hours)
- Consultation on timetabling of highly noise intensive works to avoid sensitive periods
- Offers of attended noise monitoring at the premises to confirm actual levels of impact
- Offers of temporary alternative accommodation or work space
- Individual briefings.

Specific mitigation measures identified in consultation with individual affected sensitive land users will be implemented during works subject to this CNVIS. Further mitigation measures may be identified by the affected community as construction progresses and these will be assessed where reasonable and feasible and on a case by-case basis.

8.5.2 Consultation for this CNVIS

The project website includes the following key information:

- Latest approvals
- All management plans, including the CNVMP and the Construction Environmental Management Plan (CEMP), which provide information on the relevant environmental management measures
- Notifications, including three-month lookaheads, monthly updates and specific OOHW notifications

- Contact mechanisms, including requests for feedback and/or complaints on individual circumstances.

As part of the project's program of regular notifications, the following notifications have included information on the OOHW requirements subject to this CNVIS:

- Project-wide monthly notifications distributed to over 25,000 properties
- Work specific notifications
- Three-month lookahead notifications distributed to over 25,000 properties
- Regular email with details of upcoming work or changes.

All notifications include the following:

- Link to project website
- 24/7 phone number and email address for enquiries, complaints or comments
- Requests for the community to provide feedback on their individual needs and circumstances.

Prior to commencement of works subject to this CNVIS, targeted consultation occurred with a total of approximately 7,127 residential properties across the entire project alignment, approximately 96 of which were located around the Junee to Illabo work sites. These properties received targeted letterbox drops, emails and newspaper adverts from the Community Team and feedback was sought across (3) three weeks, from 7 August to 28 August 2024.

The team requested feedback from the affected community on their individual needs during this targeted consultation.

8.5.3 Consultation outcomes

Feedback received during this consultation was primarily related to the existing operational train line and the disturbance the trains cause.

For the Junee to Illabo area, no additional management measures relating to construction noise were identified during this consultation; however, the following general sentiments were noted from respondents:

- Limit noise generating work outside of standard construction hours as much as possible
- Limit noise generating work on the weekends as much as possible
- Construction works should be completed as soon as possible.
- Minimise works between the period of 10pm – 7am. Currently, this period is outside of the standard work hours defined in the CoA. Any out of hours work will need to be assessed in accordance with **Section 2.4**.
- Illabo Public School has identified their noise sensitive periods as weekdays 9:15am – 3:05pm. Construction noise and vibration during this period will be managed in accordance with the mitigation measures detailed in **Section 8.0**.

The CNVIS documents the need to limit noise generating work as much as possible and this will be achieved through the implementation of existing mitigation measures listed in this CNVIS.

Nevertheless, regular consultation with the community will continue throughout construction in accordance with the Community Communications Strategy and the Community Action

Plan prepared for the relevant activities. A list of key stakeholders relevant to this CNVIS are included in **Table 23** below.

Table 23 Key Stakeholders for this CNVIS

Precinct Area	Receiver Type	Level of Engagement	Distance from Work Site (m)
Junee to Illabo Clearances			
Illabo Public School	Educational	Consult	50
Olympic Highway	Residential	Consult	30
Layton Street, Crowther Street, Boyton Street, Wood Street, Jubilee Street, Longhorn Hotel	Residential/Hotel	Consult	Various

8.6 Occupational Noise Exposure

In accordance with CoA E77, worksites will be managed to ensure that noise generated by construction will not exceed the National Standard for exposure to noise in the occupational environment of an eight-hour equivalent continuous A-weighted sound pressure level of $L_{Aeq,8h}$ of 85 dBA for any employee working at a location near the project.

It is not anticipated that an exceedance will occur at any point during the project, however occupational exposure to noise will primarily be managed under the Work Health and Safety Management Plan.

8.7 Monitoring

Noise and vibration monitoring will be undertaken in accordance with the CNVMP (including monitoring program) and the CNVF.

CoA E81 requires that advice from an independent heritage specialist must be sought on methods and locations for installing equipment used for vibration, movement and noise monitoring at heritage-listed structures prior to the installation of the equipment.

Construction Noise Monitoring

Construction noise monitoring will be carried out at the commencement of activities to confirm that actual noise levels are consistent with the predictions presented in this CNVIS, and that the management measures that have been implemented are effective or as per the CNVMP.

Monitoring locations will be focused to the most impacted receivers identified in **Appendix C**. Indicative locations are identified in **Table 24**, however, these will be subject to provision of safe access and the specific location of work being undertaken at the time of monitoring.

Noise monitoring will, where practicable, be in a position with unobstructed views of general site activities, whilst shielded as much as possible from non-construction site noise (e.g. road traffic, rail noise and other surrounding noise). The preferred measurement height is 1.2-1.5m above the ground. In accordance with *Australian Standard AS1055:2018*, outdoor noise monitoring is to be undertaken at least 3.5m from any reflecting structure other than the ground.

Noise monitoring will be carried out on or near the property boundary at the locations representative of the nominated receivers in **Table 24** (i.e. in publicly accessible areas near the nominated receivers, if it is safe to do so). Noise monitoring results will be assessed against the noise management levels (NMLs) and predicted exceedance category identified in **Appendix C**.

The results will be documented with discussion about the details of work underway at the time and mitigation in place. Noise monitoring results will be recorded on the MR Noise Monitoring Form in Procore. Noise monitoring data will be made available to the AA and ER for information, upon request.

Construction Vibration monitoring

Attended or unattended vibration monitoring will be undertaken as required. Monitoring locations may vary as work progresses and will be determined on a case-by-case basis or in response to complaints. The focus of monitoring will be at risk buildings, structures and sensitive receivers as identified in **Section 6.0**. If other vibration intensive activities are required, an assessment of their potential impact is required as per the CNVMP.

Indicative locations are identified in **Table 24**, however, these will be subject to provision of safe access and the specific location of work being undertaken at the time of monitoring. Vibration monitoring data will be made available to the AA and ER for information, upon request.

Table 24 Indicative Monitoring Locations

Location	Type	Monitoring	Timing
Noise Monitoring			
Western Work Areas 701 Olympic Hwy, Marinna 731 Ballengorrah Ln, Wantiool **Eastern Work Areas** 2-4 Turland St, Illabo 7 Tohheys Ln, Illabo 26 Morris St, Illabo Illabo Public School	Activities based noise monitoring	• Confirming that actual noise levels are consistent with predicted noise impacts and that the effectiveness of actions and mitigation measures implemented are satisfactory, • In response to a noise related complaint(s) (determined on a case-by-case basis) • Following implementation of mitigation measures or noise attenuation because of exceedance of predicted noise levels	At the commencement of the activities being undertaken
	Out of Hours Work	Attended monitoring as required by the Out of Hours Work (OOHW) plan to validate noise levels are consistent with predicted noise impacts and that the effectiveness of actions and mitigation measures implemented are satisfactory	At the commencement of the range of OOHW activities being undertaken.
	Plant / Equipment Checks	Spot checks would be carried out as required on a case-by-case basis, such as • In response to a specific noise related complaint and • During noise verification monitoring when it is possible to isolate the noise from one piece of plant or equipment.	case-by-case basis
Vibration Monitoring			
Western Work Areas Structure within the rail corridor at Wantiool	Activities based vibration monitoring	• Confirming that vibration levels are below criteria and that the effectiveness of	At the commencement of

Location	Type	Monitoring	Timing
		actions and mitigation measures implemented are satisfactory	the activities being undertaken
Eastern Work Areas • 36 Turland St, Illabo OR Illabo Public School • 2 Crowther St, Illabo OR Illabo Hotel • Structures within the rail corridor at Illabo Yard	Activities based vibration monitoring	• Confirming that vibration levels are below criteria and that the effectiveness of actions and mitigation measures implemented are satisfactory • In response to a vibration related complaint(s) (determined on a case-by-case basis)	Throughout vibration generating activities being undertaken within minimum working distances to nearby receivers.

9.0 Cumulative Impacts

Cumulative construction noise impacts can occur where multiple work activities are being completed near to a particular receiver at the same time. There is potential for cumulative construction impacts from multiple construction activities being completed in different areas of the project.

Since the construction scenarios required for various stages of the project would generally require similar items of equipment, concurrent construction work being completed near to a particular area could theoretically increase the worst-case noise levels in this report by around 3 dB (ie a logarithmic adding of two sources of noise at the same level).

The likelihood of worst-case noise levels being generated by two different work activities at the same time is, however, considered low and rather than increase construction noise levels, the impact of concurrent work would generally be a limited to a potential increase in the duration, and annoyance, of noise impacts on the affected receivers.

In practice, construction noise levels in any one location would vary and would be frequently much lower than the worst-case scenario assessed due to construction staging moving work around within the study area and, in many cases, only a few items of equipment being used at any one time.

Martinus Rail will take feasible and reasonable steps to consult and coordinate with other construction projects when they become aware of them and if they have the potential to impact the same receivers concurrently, to minimise cumulative impacts of noise and vibration and maximise respite for affected sensitive receivers (in accordance with CoA E72 and E83).

Appendix A Acoustic Terminology

A2I | Albury to Illabo – Junee to Illabo

Construction Noise and Vibration Impact Statement

Martinus Rail

SLR Project No.: 610.031317.00001

17 April 2025

Doc No:
6-0052-210-EEC-J7-AS-0002_1

1. Sound Level or Noise Level

The terms 'sound' and 'noise' are almost interchangeable, except that 'noise' often refers to unwanted sound.

Sound (or noise) consists of minute fluctuations in atmospheric pressure. The human ear responds to changes in sound pressure over a very wide range with the loudest sound pressure to which the human ear can respond being ten million times greater than the softest. The decibel (abbreviated as dB) scale reduces this ratio to a more manageable size by the use of logarithms.

The symbols SPL, L or LP are commonly used to represent Sound Pressure Level. The symbol LA represents A-weighted Sound Pressure Level. The standard reference unit for Sound Pressure Levels expressed in decibels is 2×10^{-5} Pa.

2. 'A' Weighted Sound Pressure Level

The overall level of a sound is usually expressed in terms of dBA, which is measured using a sound level meter with an 'A-weighting' filter. This is an electronic filter having a frequency response corresponding approximately to that of human hearing.

People's hearing is most sensitive to sounds at mid frequencies (500 Hz to 4,000 Hz), and less sensitive at lower and higher frequencies. Different sources having the same dBA level generally sound about equally loud.

A change of 1 dB or 2 dB in the level of a sound is difficult for most people to detect, whilst a 3 dB to 5 dB change corresponds to a small but noticeable change in loudness. A 10 dB change corresponds to an approximate doubling or halving in loudness. The table below lists examples of typical noise levels.

Sound Pressure Level (dBA)	Typical Source	Subjective Evaluation
130	Threshold of pain	Intolerable
120	Heavy rock concert	Extremely noisy
110	Grinding on steel	
100	Loud car horn at 3 m	Very noisy
90	Construction site with pneumatic hammering	
80	Kerbside of busy street	Loud
70	Loud radio or television	
60	Department store	Moderate to quiet
50	General Office	
40	Inside private office	Quiet to very quiet
30	Inside bedroom	
20	Recording studio	Almost silent

Other weightings (eg B, C and D) are less commonly used than A-weighting. Sound Levels measured without any weighting are referred to as 'linear', and the units are expressed as dB(lin) or dB.

3. Sound Power Level

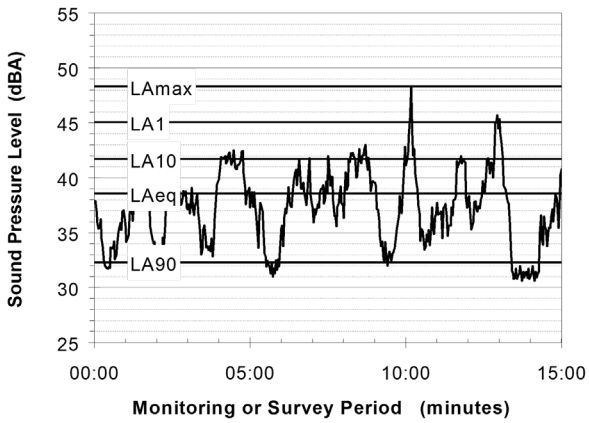
The Sound Power of a source is the rate at which it emits acoustic energy. As with Sound Pressure Levels, Sound Power Levels are expressed in decibel units (dB or dBA), but may be identified by the symbols SWL or LW, or by the reference unit 10^{-12} W.

The relationship between Sound Power and Sound Pressure is similar to the effect of an electric radiator, which is characterised by a power rating but has an effect on the surrounding environment that can be measured in terms of a different parameter, temperature.

4. Statistical Noise Levels

Sounds that vary in level over time, such as road traffic noise and most community noise, are commonly described in terms of the statistical exceedance levels LAN, where LAN is the A-weighted sound pressure level exceeded for N% of a given measurement period. For example, the LA1 is the noise level exceeded for 1% of the time, LA10 the noise exceeded for 10% of the time, and so on.

The following figure presents a hypothetical 15 minute noise survey, illustrating various common statistical indices of interest.



Of particular relevance, are:

LA1 The noise level exceeded for 1% of the 15 minute interval.

LA10 The noise level exceeded for 10% of the 15 minute interval. This is commonly referred to as the average maximum noise level.

LA90 The noise level exceeded for 90% of the sample period. This noise level is described as the average minimum background sound level (in the absence of the source under consideration), or simply the background level.

LAeq The A-weighted equivalent noise level (basically, the average noise level). It is defined as the steady sound level that contains the same amount of acoustical energy as the corresponding time-varying sound.

LAmax The A-weighted maximum sound pressure level of an event measured with a sound level meter.

5. Frequency Analysis

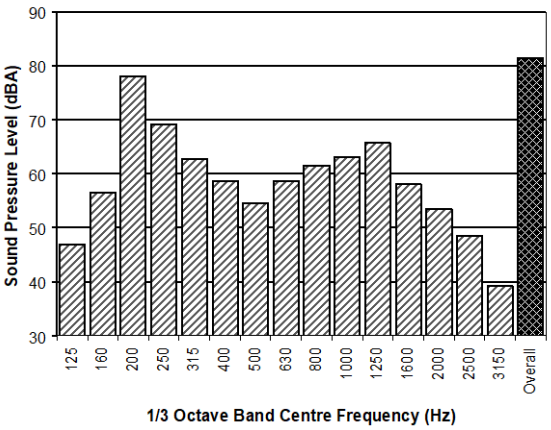
Frequency analysis is the process used to examine the tones (or frequency components) which make up the overall noise or vibration signal.

The units for frequency are Hertz (Hz), which represent the number of cycles per second.

Frequency analysis can be in:

- Octave bands (where the centre frequency and width of each band is double the previous band)
- 1/3 octave bands (three bands in each octave band)
- Narrow band (where the spectrum is divided into 400 or more bands of equal width)

The following figure shows a 1/3 octave band frequency analysis where the noise is dominated by the 200 Hz band. Note that the indicated level of each individual band is less than the overall level, which is the logarithmic sum of the bands.



6. Annoying Noise (Special Audible Characteristics)

A louder noise will generally be more annoying to nearby receivers than a quieter one. However, noise is often also found to be more annoying and result in larger impacts where the following characteristics are apparent:

- **Tonality** - tonal noise contains one or more prominent tones (ie differences in distinct frequency components between adjoining octave or 1/3 octave bands), and is normally regarded as more annoying than 'broad band' noise.
- **Impulsiveness** - an impulsive noise is characterised by one or more short sharp peaks in the time domain, such as occurs during hammering.
- **Intermittency** - intermittent noise varies in level with the change in level being clearly audible. An example would include mechanical plant cycling on and off.
- **Low Frequency Noise** - low frequency noise contains significant energy in the lower frequency bands, which are typically taken to be in the 10 to 160 Hz region.

7. Vibration

Vibration may be defined as cyclic or transient motion. This motion can be measured in terms of its displacement, velocity or acceleration. Most assessments of human response to vibration or the risk of damage to buildings use measurements of vibration velocity. These may be expressed in terms of 'peak' velocity or 'rms' velocity.

The former is the maximum instantaneous velocity, without any averaging, and is sometimes referred to as 'peak particle velocity', or PPV. The latter incorporates 'root mean squared' averaging over some defined time period.

Vibration measurements may be carried out in a single axis or alternatively as triaxial measurements (ie vertical, longitudinal and transverse).

The common units for velocity are millimetres per second (mm/s). As with noise, decibel units can also be used, in which case the reference level should always be stated. A vibration level V, expressed in mm/s can be converted to decibels by the formula 20 log (V/Vo), where Vo is the reference level (10^{-9} m/s). Care is required in this regard, as other reference levels may be used.

8. Human Perception of Vibration

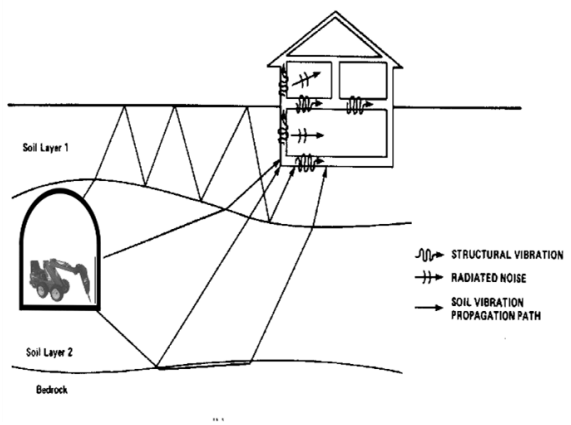
People are able to 'feel' vibration at levels lower than those required to cause even superficial damage to the most susceptible classes of building (even though they may not be disturbed by the motion). An individual's perception of motion or response to vibration depends very strongly on previous experience and expectations, and on other connotations associated with the perceived source of the vibration. For example, the vibration that a person responds to as 'normal' in a car, bus or train is considerably higher than what is perceived as 'normal' in a shop, office or dwelling.

9. Ground-borne Noise, Structure-borne Noise and Regenerated Noise

Noise that propagates through a structure as vibration and is radiated by vibrating wall and floor surfaces is termed 'structure-borne noise', 'ground-borne noise' or 'regenerated noise'. This noise originates as vibration and propagates between the source and receiver through the ground and/or building structural elements, rather than through the air.

Typical sources of ground-borne or structure-borne noise include tunnelling works, underground railways, excavation plant (eg rockbreakers), and building services plant (eg fans, compressors and generators).

The following figure presents an example of the various paths by which vibration and ground-borne noise may be transmitted between a source and receiver for construction activities occurring within a tunnel.



The term 'regenerated noise' is also used in other instances where energy is converted to noise away from the primary source. One example would be a fan blowing air through a discharge grill. The fan is the energy source and primary noise source. Additional noise may be created by the aerodynamic effect of the discharge grill in the airstream. This secondary noise is referred to as regenerated noise.

Appendix B Modelling Scenarios and Equipment

A2I | Albury to Illabo – Junee to Illabo

Construction Noise and Vibration Impact Statement

Martinus Rail

SLR Project No.: 610.031317.00001

17 April 2025

Doc No:
6-0052-210-EEC-J7-AS-0002_1

Equipment		Total Lw (dBA)	Articulated Dump Truck	Asphalt Paver	Ballast Regulator[1]	Ballast Tamper[1]	Compactor	Compressor	Concrete Agitator Truck	Crane (mobile)	Crane Franna (20 tonne)	Directional Drill[1]	Elevated Work Platform	Excavator - Slasher	Excavator - Tracked (10T)	Excavator - Tracked (20T)	Excavator – (20T) + Hammer[1]	Front End Loader	Generator	Grinder	Hand tools (electric)	Hand tools (power)	Hi-Rail Crane	Hi-Rail Excavator	Hi-Rail Truck/Trolley	Hydraulic / Pneumatic Tools	Hydrema / Moxy	Light Vehicle	Lighting Tower	Pavement Profiler	PEM-LEM	Plate Compactor	Positrack	Rail saw[1]	Roller – Static	Roller – Trech (vibratory)[1]	Roller – Vibratory[1]	Saw - Concrete[1]	Telescopic Handler	Tracked Hydraulic Drill Rig[1]	Tractor - Slasher	Truck - Medium Rigid (20T)	Truck – Truck & Dog	Truck - Vacuum (NDD)	Watercart
Sound Power Level (Lw)[2]			109	108	114	115	106	109	109	104	98	106	97	105	100	105	122	113	92	105	102	104	104	105	103	116	107	95	80	117	100	104	104	118	109	108	109	118	99	114	108	103	108	109	105
Estimated utilisation (%)			25	100	75	75	50	50	100	30	30	50	25	50	50	50	30	50	100	30	75	30	30	50	25	75	25	25	100	50	50	100	50	25	100	100	100	25	50	50	50	25	25	100	75
ID	**Construction Scenario**																																											
W.001	Site Establishment / Demobilisation	**115**	1							1			1	1				1	1		2	1						2					1		1						1	2	1		1
W.002	Compound Operation	**114**						1			1							1	1		1							15					1									2	1		1
W.003	Geotechnical Investigation	**116**					1														1			1				2				1				1						2		1	
W.004	Pavement Investigation	**117**							1																			2										1		1		1		1	1
W.005	Track Work - Peak	**119**						1		1			1			1		1	1	1	2		1	1	1	1		2	1		1	1		1			1		1			2	2		1
W.006	Track Work - Typical	**115**						1		1			1					1	1		1		1	1	1			2			1	1							1			2	2		1
W.007	Track Tamping	**116**			1	1																																						
W.008	Crossover Removal – Civil Works	**114**																	1	1	1		1	1			1	2	1					1								2	2		
W.009	Drainage Work	**119**					1			1						1	1		1		1							2				1				1	1					2	2	1	
W.010	Signalling Work	**112**								1		1	1			1			1		1							4				1										1		1	
W.011	Level Crossing Work - Peak	**119**		1						1						1		1			1							2	1	1					1		1	1	1			2	2		
W.012	Level Crossing Work - Typical	**114**								1						1		1			1							2	1						1				1			2	2		

Note 1: Equipment classed as 'annoying' in the ICNG and requires a 5 dB correction.

Note 2: Sound power level data is taken from the DEFRA Noise Database, AS2436, TfNSW Construction Noise and Vibration Guideline.

Appendix C Noise Impact Maps

A2I | Albury to Illabo – Junee to Illabo

Construction Noise and Vibration Impact Statement

Martinus Rail

SLR Project No.: 610.031317.00001

17 April 2025

Doc No:
6-0052-210-EEC-J7-AS-0002_1

0 250 500 m

Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

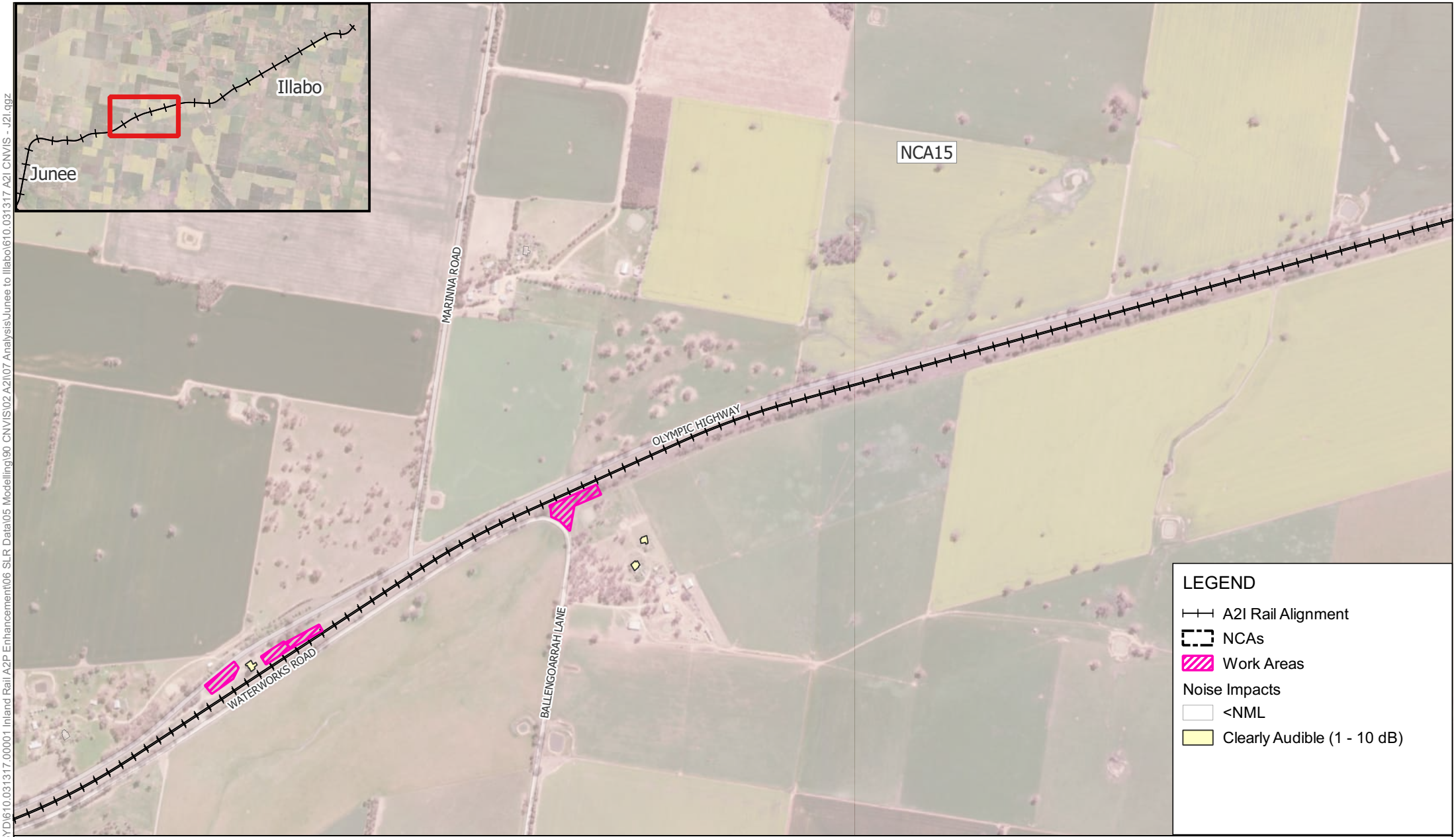
Data Source:
ESRI World Imagery

DISCLAIMER: All information within this document maybe based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose .

W.001 Site Establishment / Demobilisation - Approved Daytime Hours

APPENDIX C-1a

H:\Projects-SLR\610-SrvSYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



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Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

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0 250 500 m

Scale: Scale: 1:18,000
Coordinate System: GDA2020 / MGA zone 55

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Project Number: 610.031317

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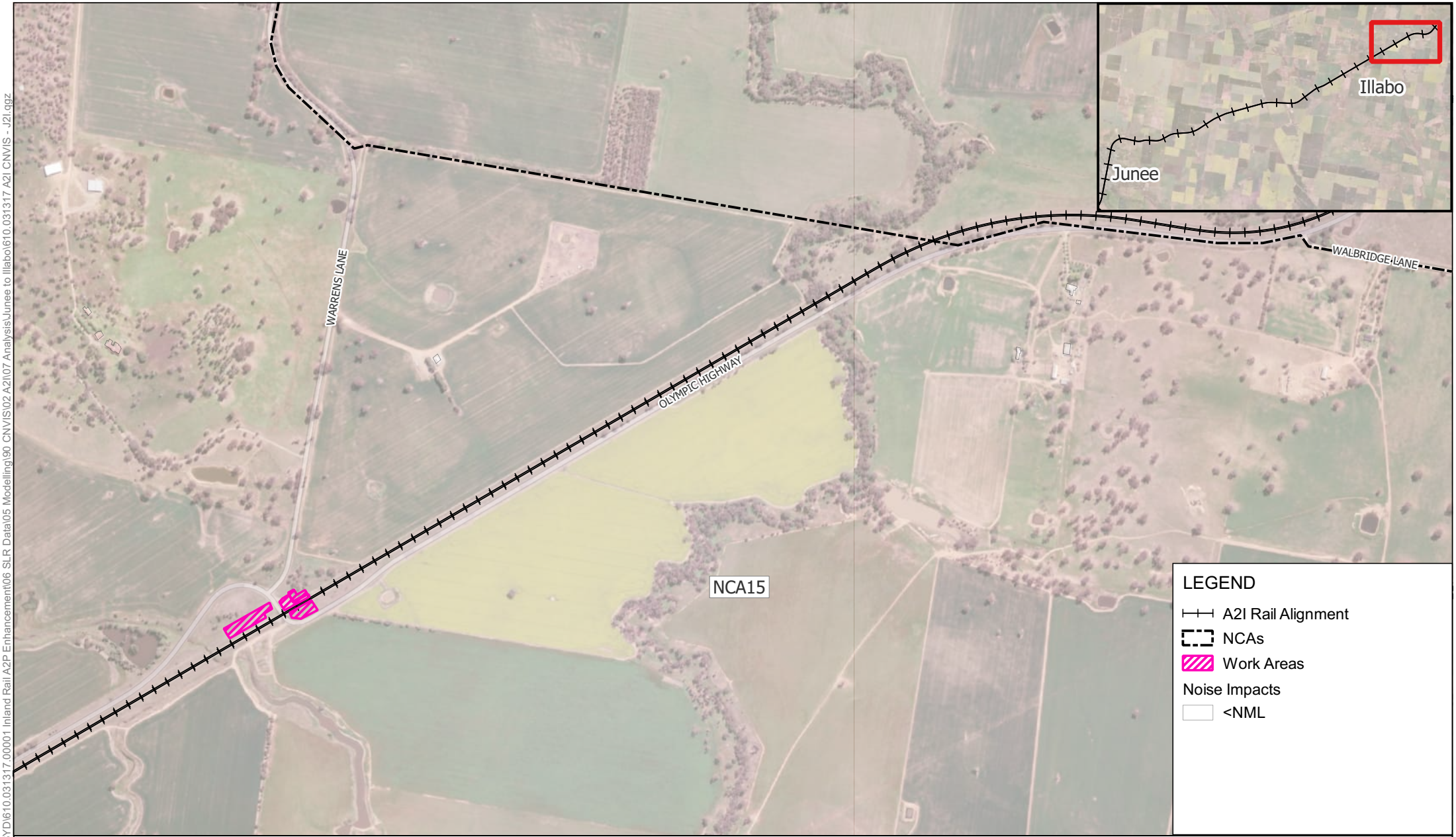

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Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
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SLR

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W.001 Site Establishment / Demobilisation - Approved Daytime Hours

APPENDIX C-1e

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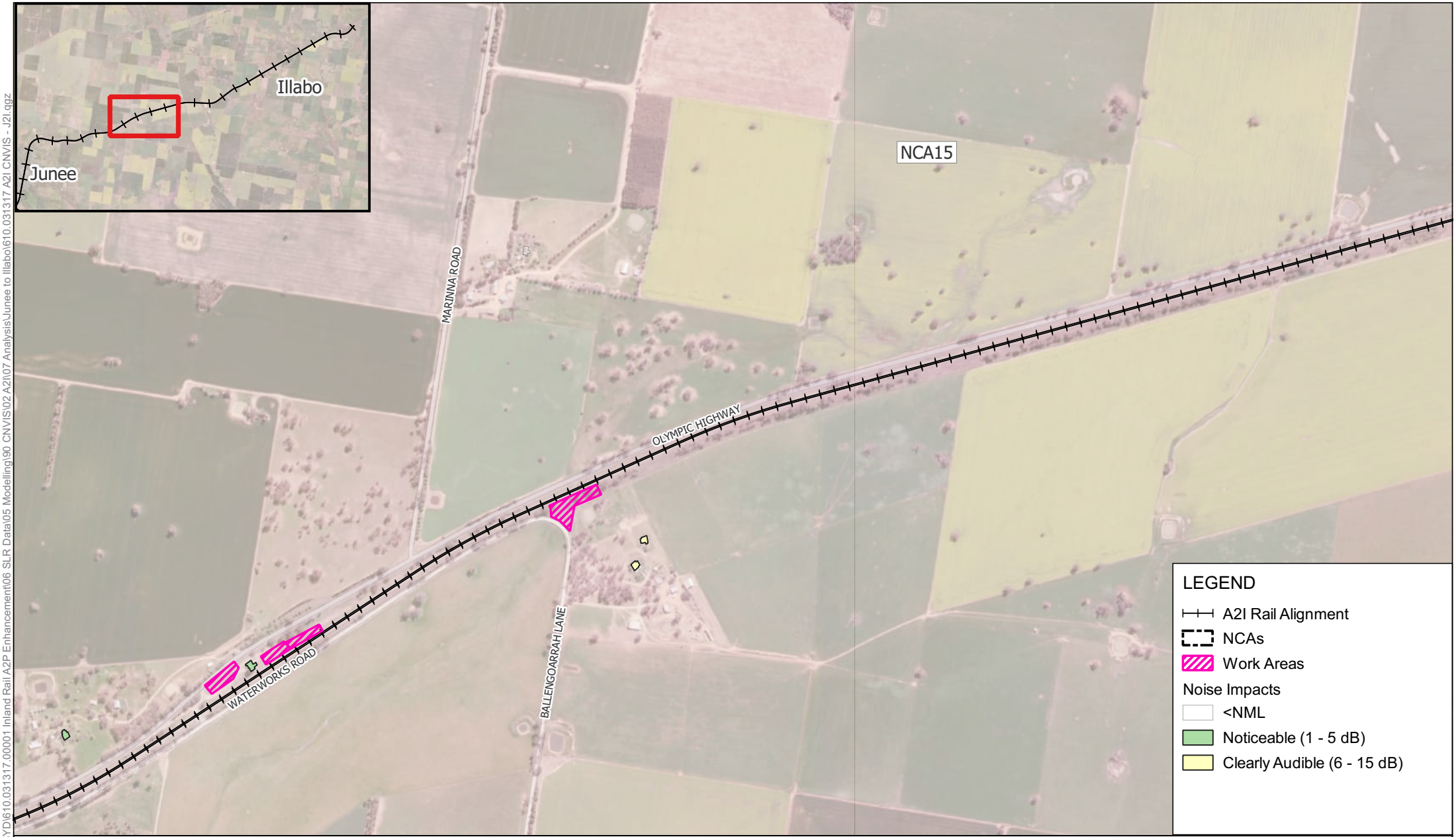
W.001 Site Establishment / Demobilisation - Out of Hours Daytime

APPENDIX C-2a

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



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Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

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W.001 Site Establishment / Demobilisation - Out of Hours Daytime

APPENDIX C-2b

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Scale: Scale: 1:18,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

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APPENDIX C-2c

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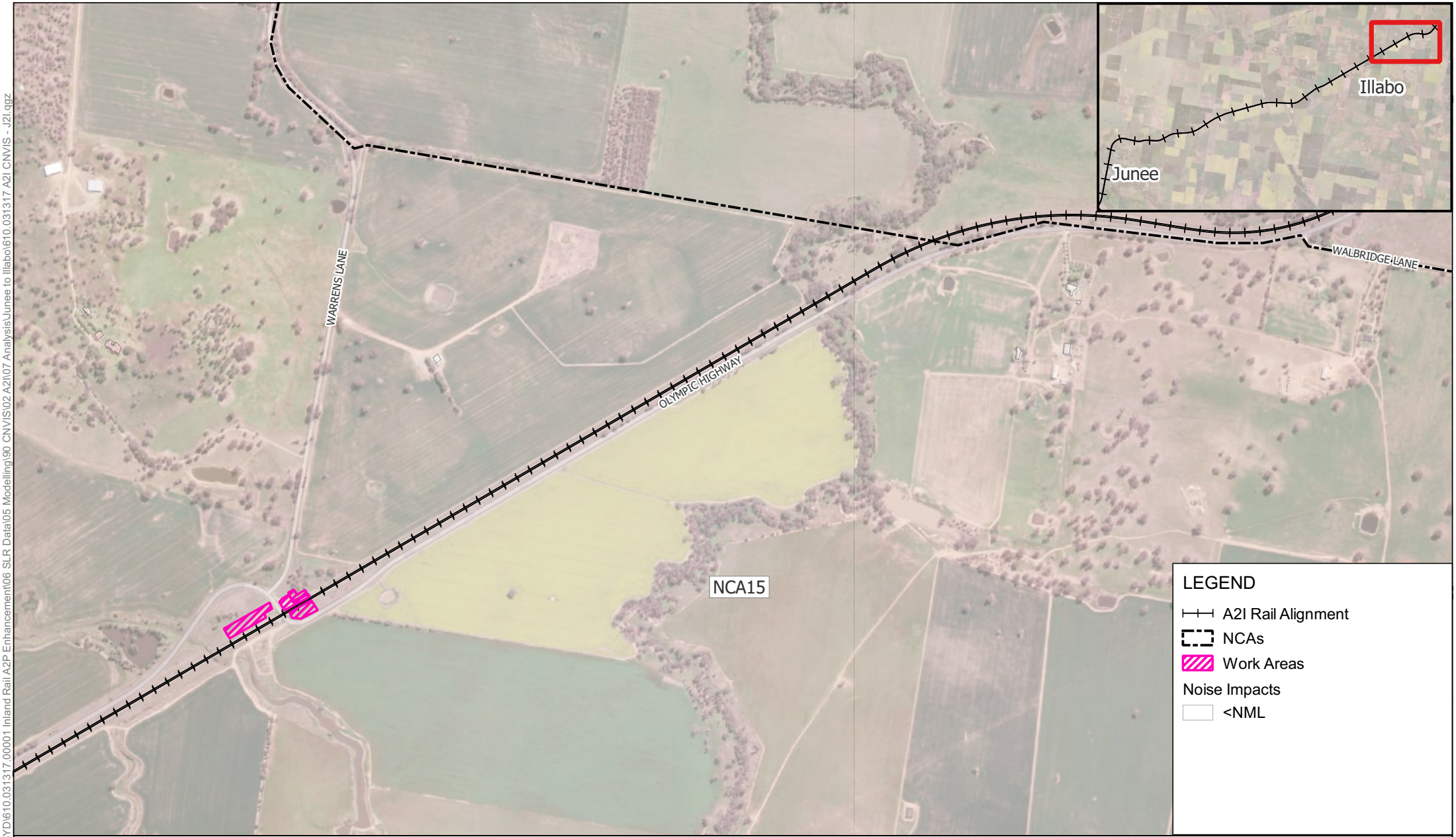

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Drawn Date: 02-Apr-2025
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W.002 Compound Operation - Approved Daytime Hours

APPENDIX C-3a

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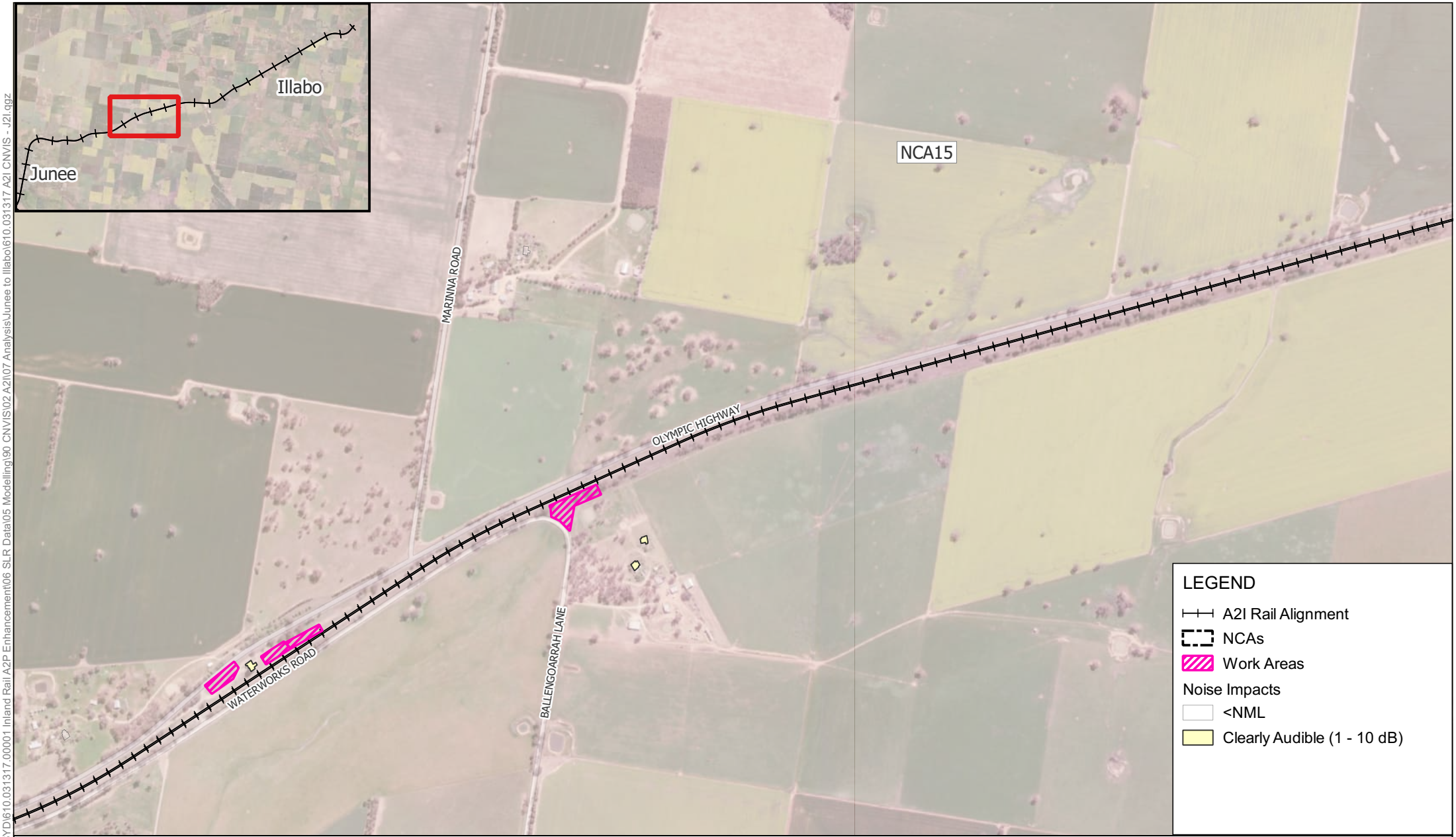

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Scale: Scale: 1:18,000
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W.002 Compound Operation - Approved Daytime Hours

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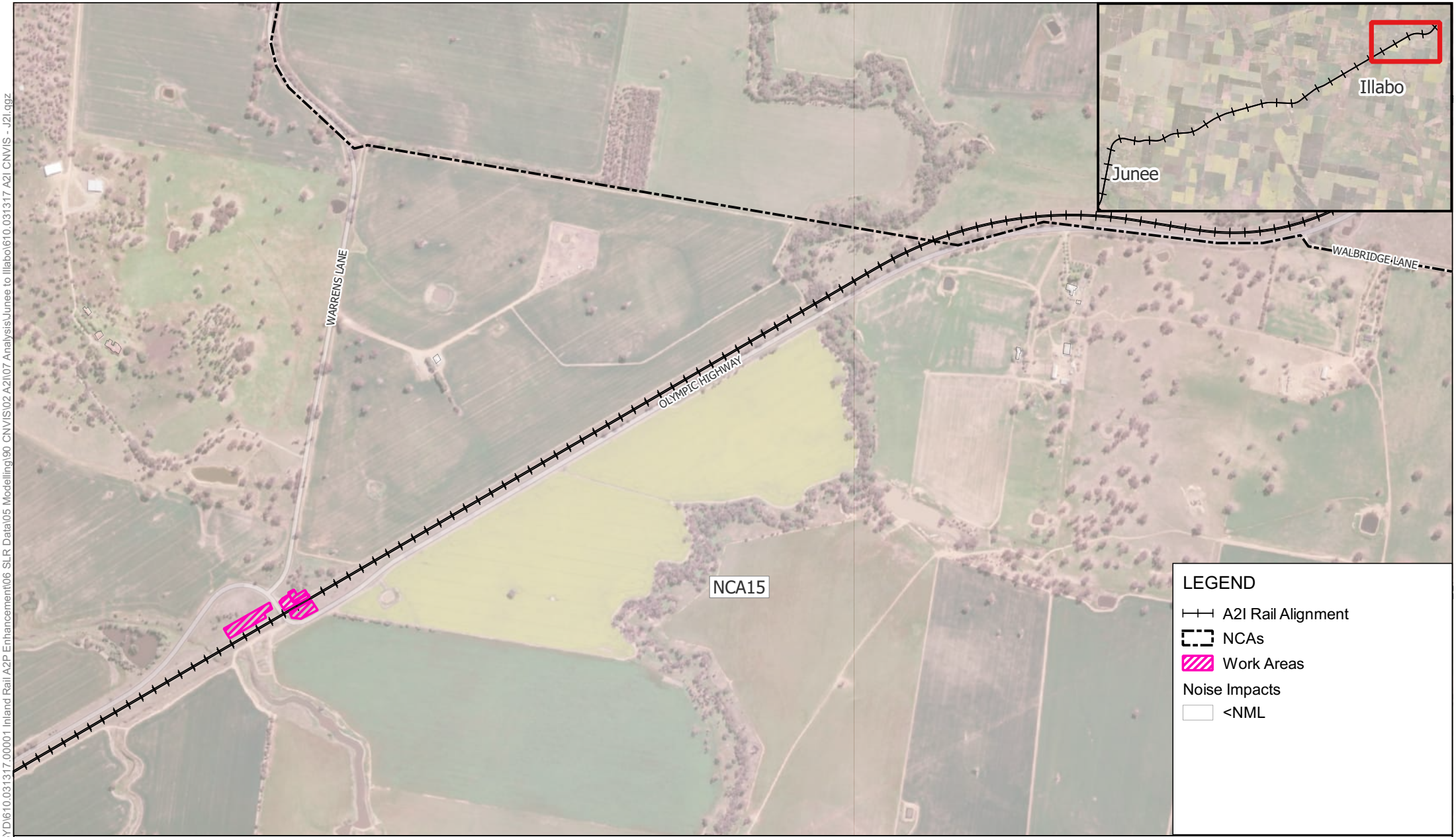

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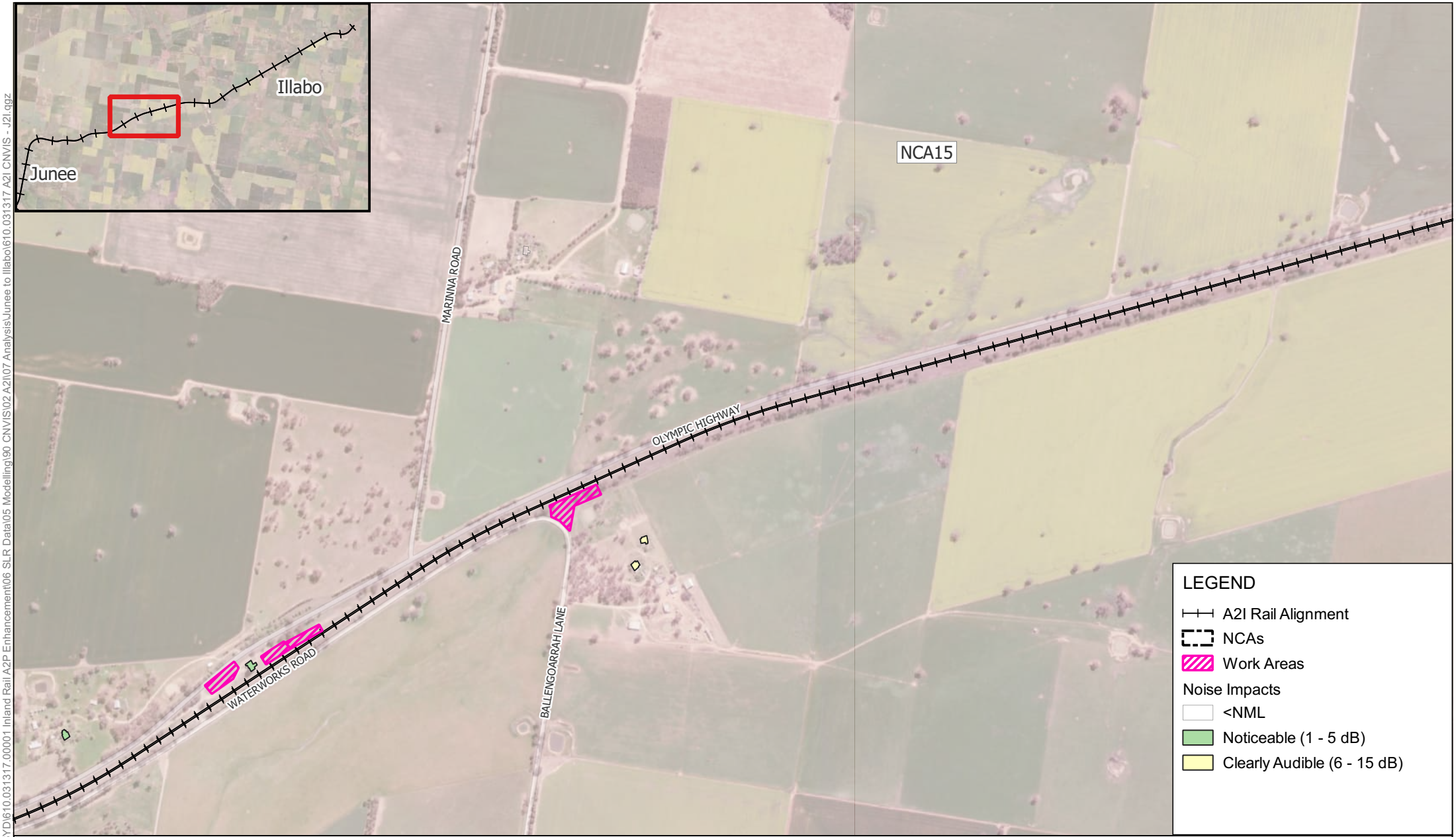
W.002 Compound Operation - Out of Hours Daytime

APPENDIX C-4a

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



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W.002 Compound Operation - Out of Hours Daytime

APPENDIX C-4b

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Project Number: 610.031317

SLR

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W.002 Compound Operation - Out of Hours Daytime

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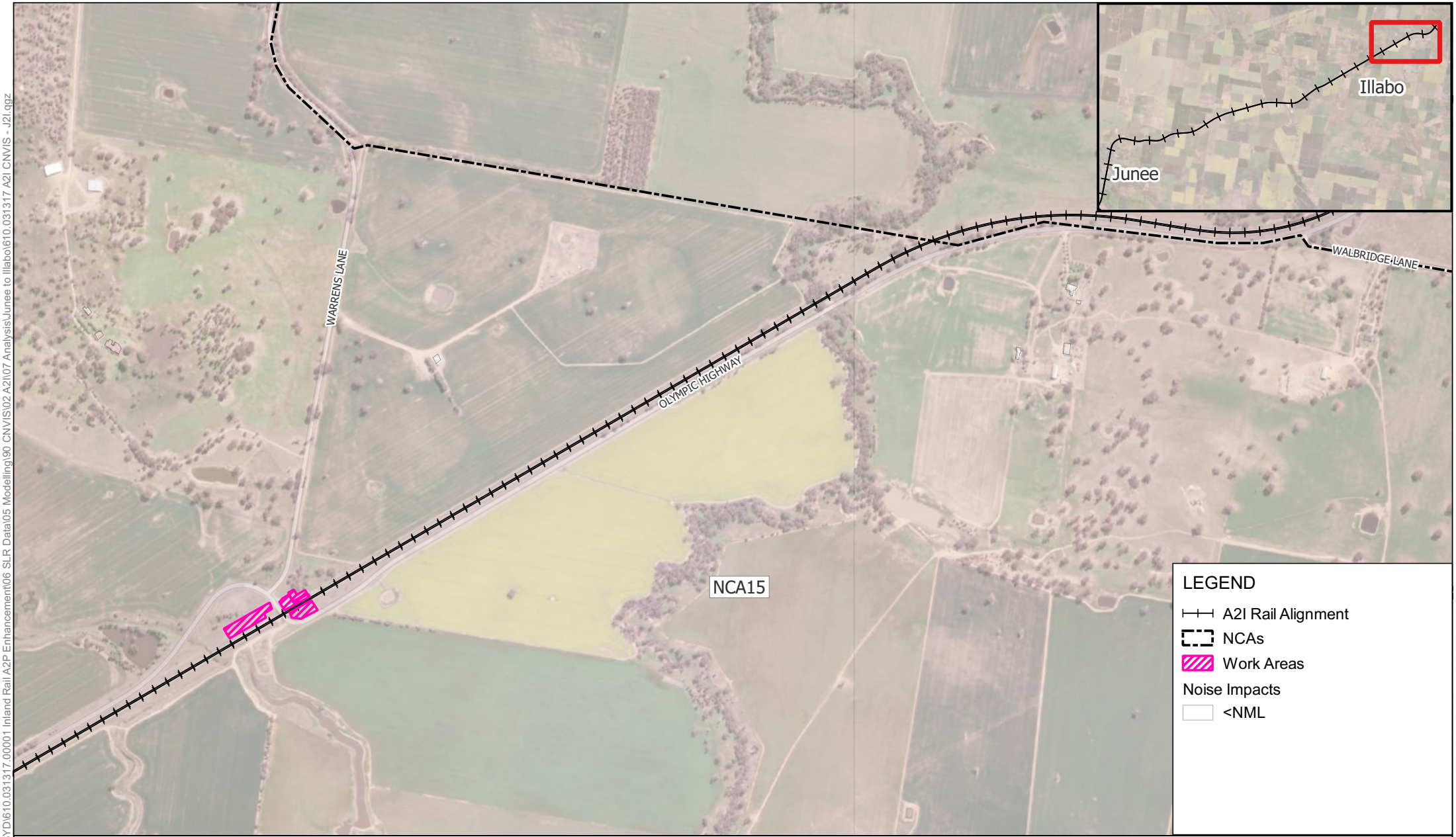

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W.002 Compound Operation - Out of Hours Evening

APPENDIX C-5a

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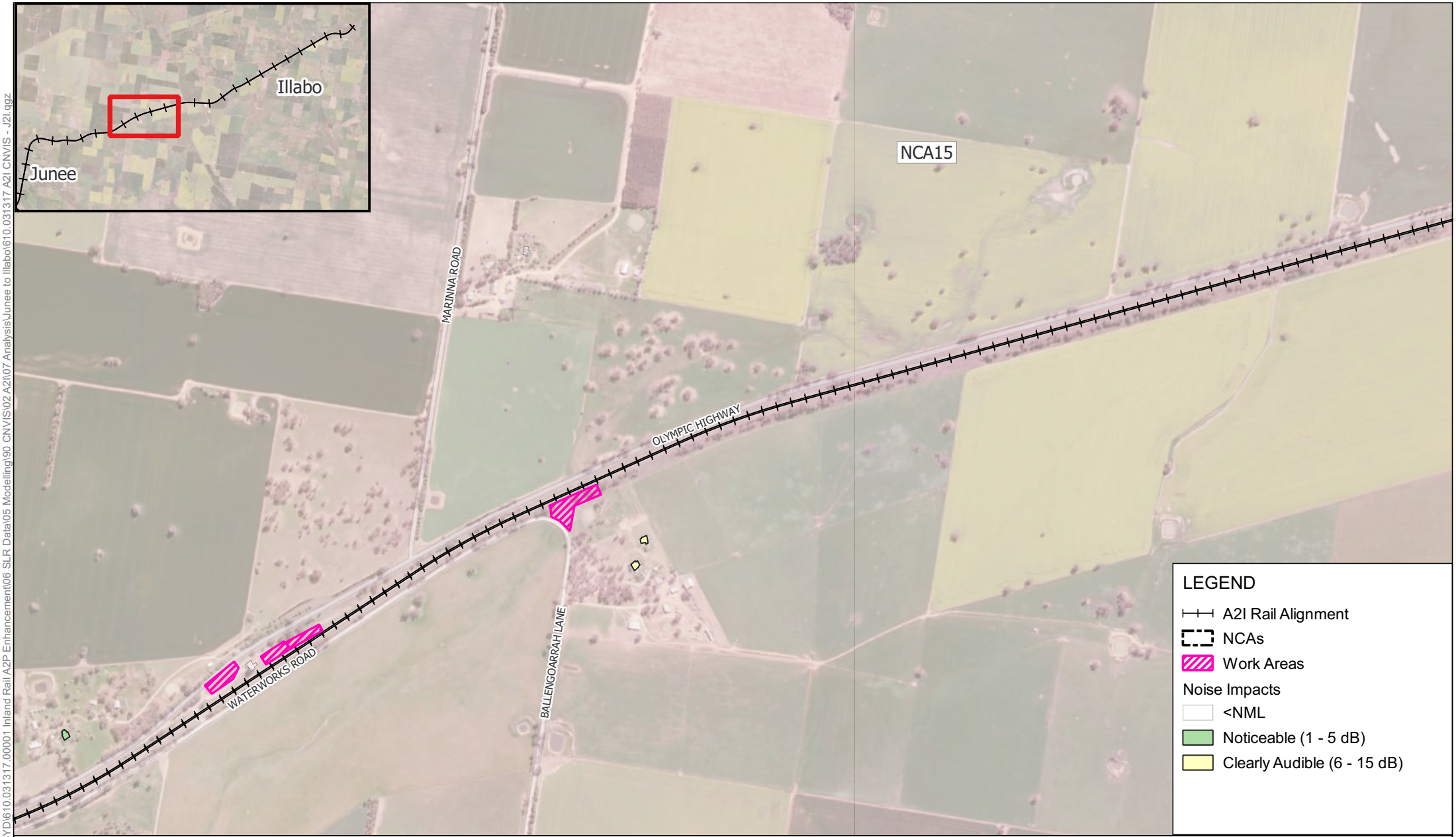

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Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
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W.002 Compound Operation - Out of Hours Evening

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Scale: Scale: 1:18,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

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W.002 Compound Operation - Out of Hours Evening

APPENDIX C-5c

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W.002 Compound Operation - Out of Hours Evening

APPENDIX C-5d

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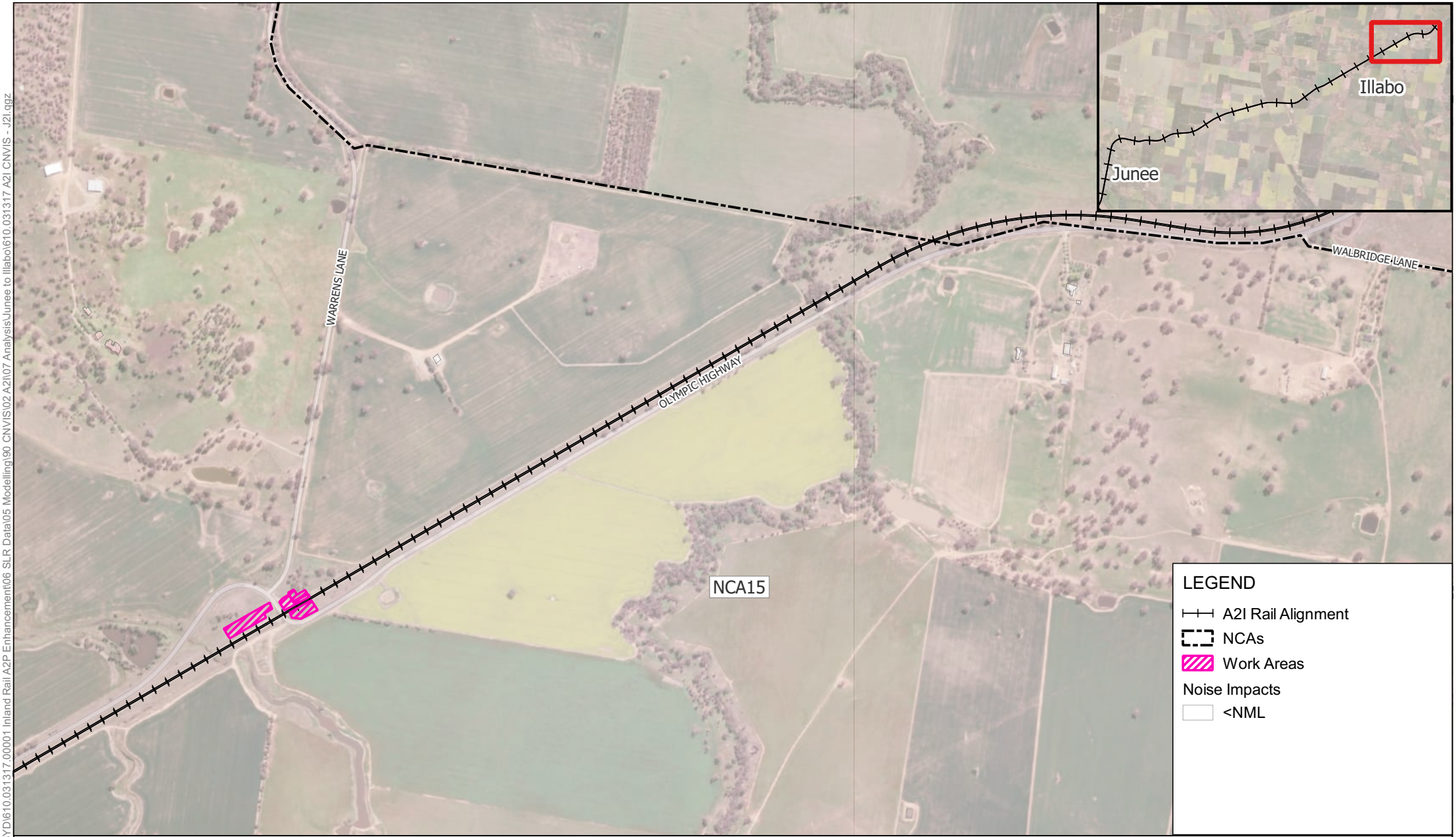

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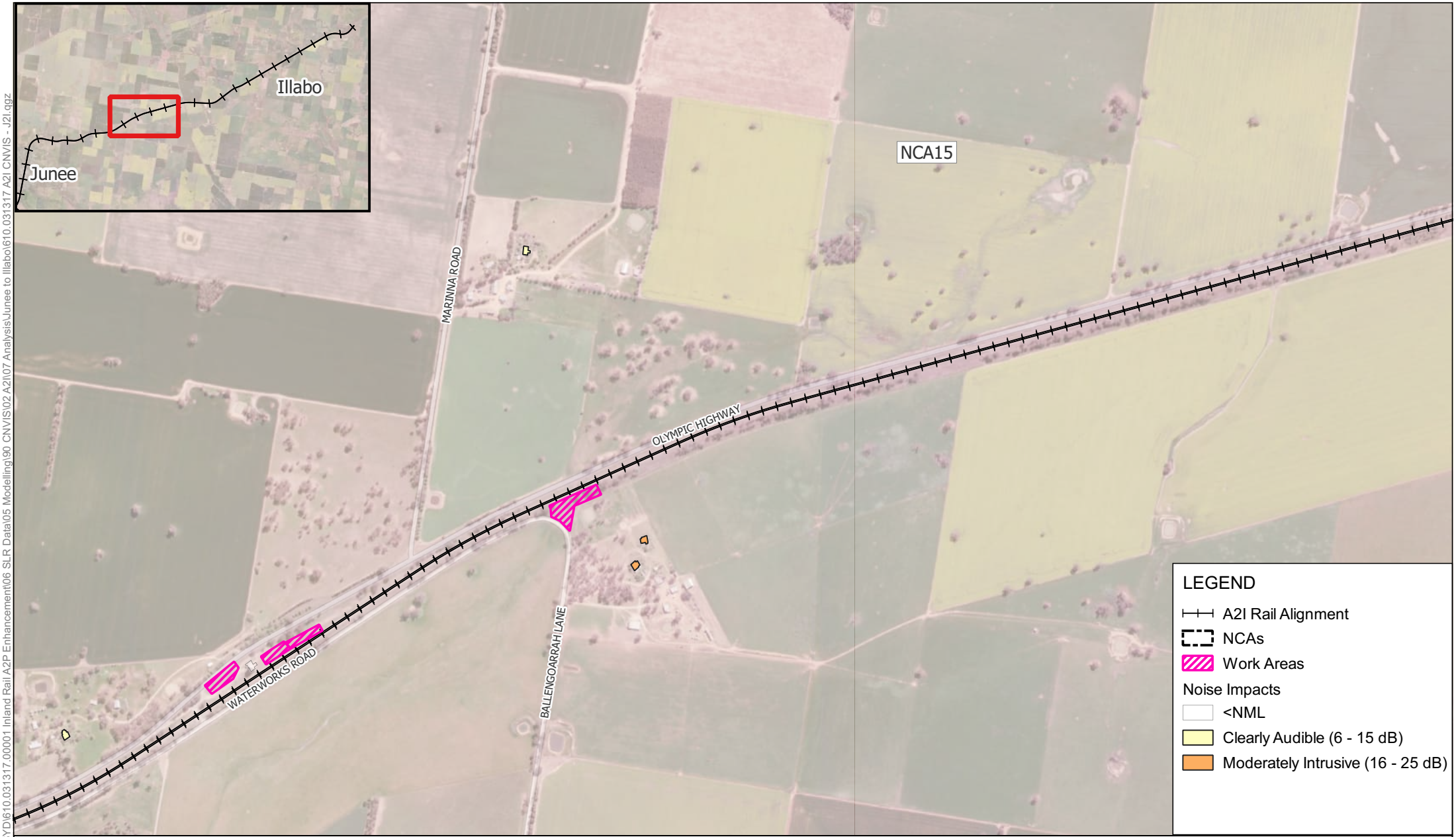
W.002 Compound Operation - Out of Hours Night-time

APPENDIX C-6a

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



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Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
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W.002 Compound Operation - Out of Hours Night-time

APPENDIX C-6b

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0 250 500 m

Scale: Scale: 1:18,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

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W.002 Compound Operation - Out of Hours Night-time

APPENDIX C-6c

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0 250 500 m

Scale: Scale: 1:13,000
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ESRI World Imagery

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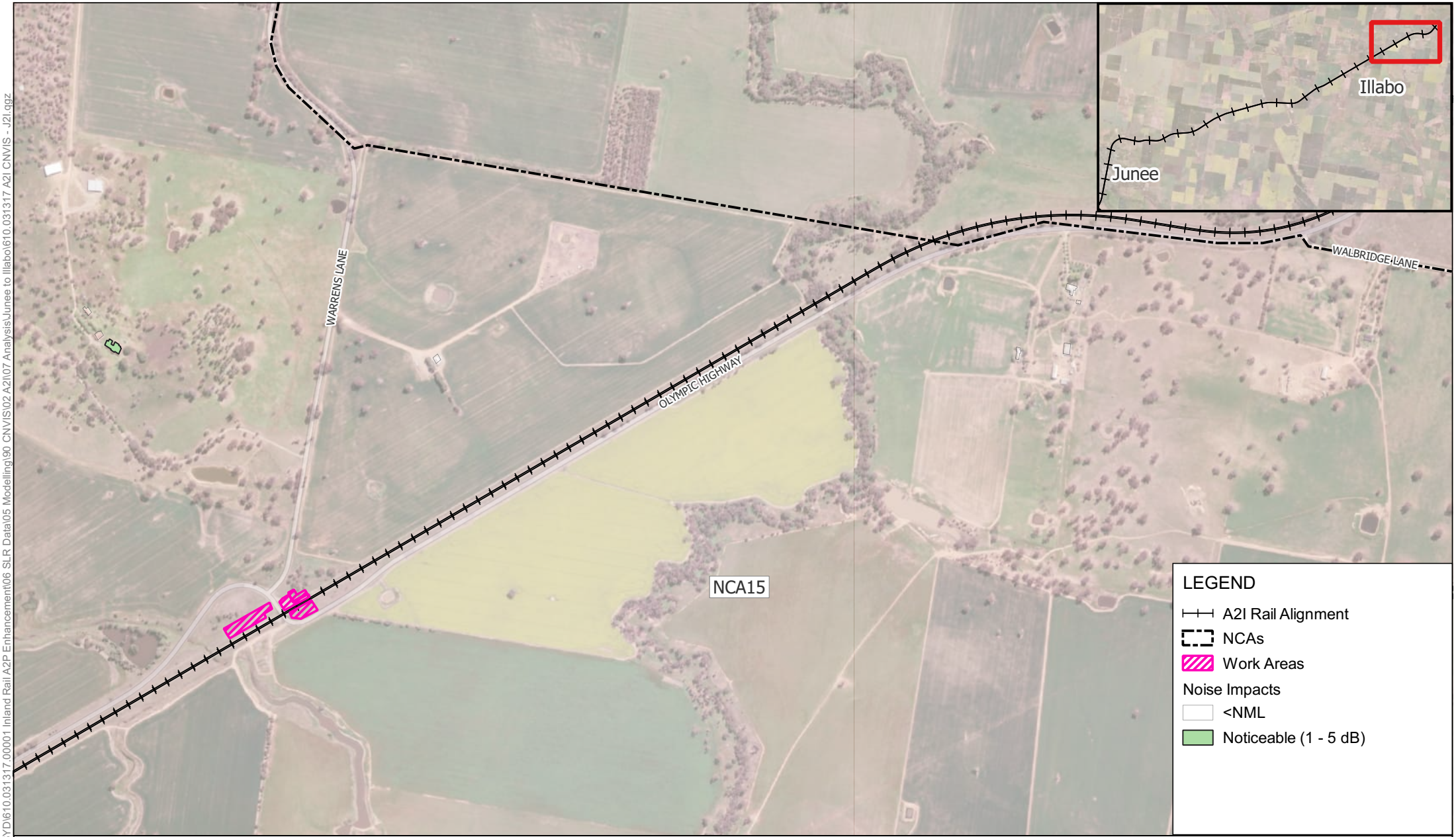
W.002 Compound Operation - Out of Hours Night-time

APPENDIX C-6d

H:\Projects-SLR\610-SrvSYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



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Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

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W.002 Compound Operation - Out of Hours Night-time

APPENDIX C-6e

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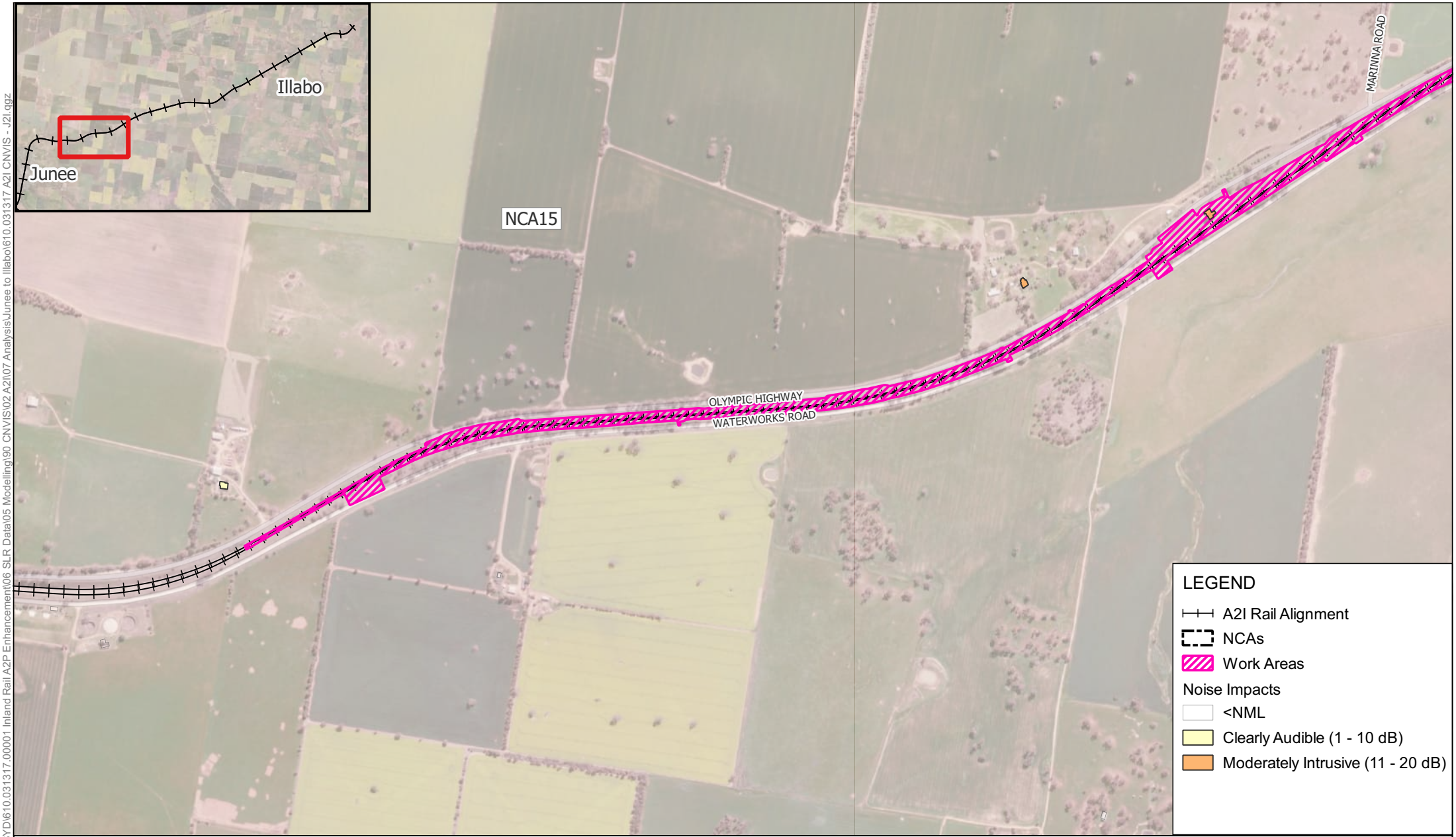

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Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
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SLR

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W.003 Geotechnical Investigation - Approved Daytime Hours

APPENDIX C-7a

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W.003 Geotechnical Investigation - Approved Daytime Hours

APPENDIX C-7b

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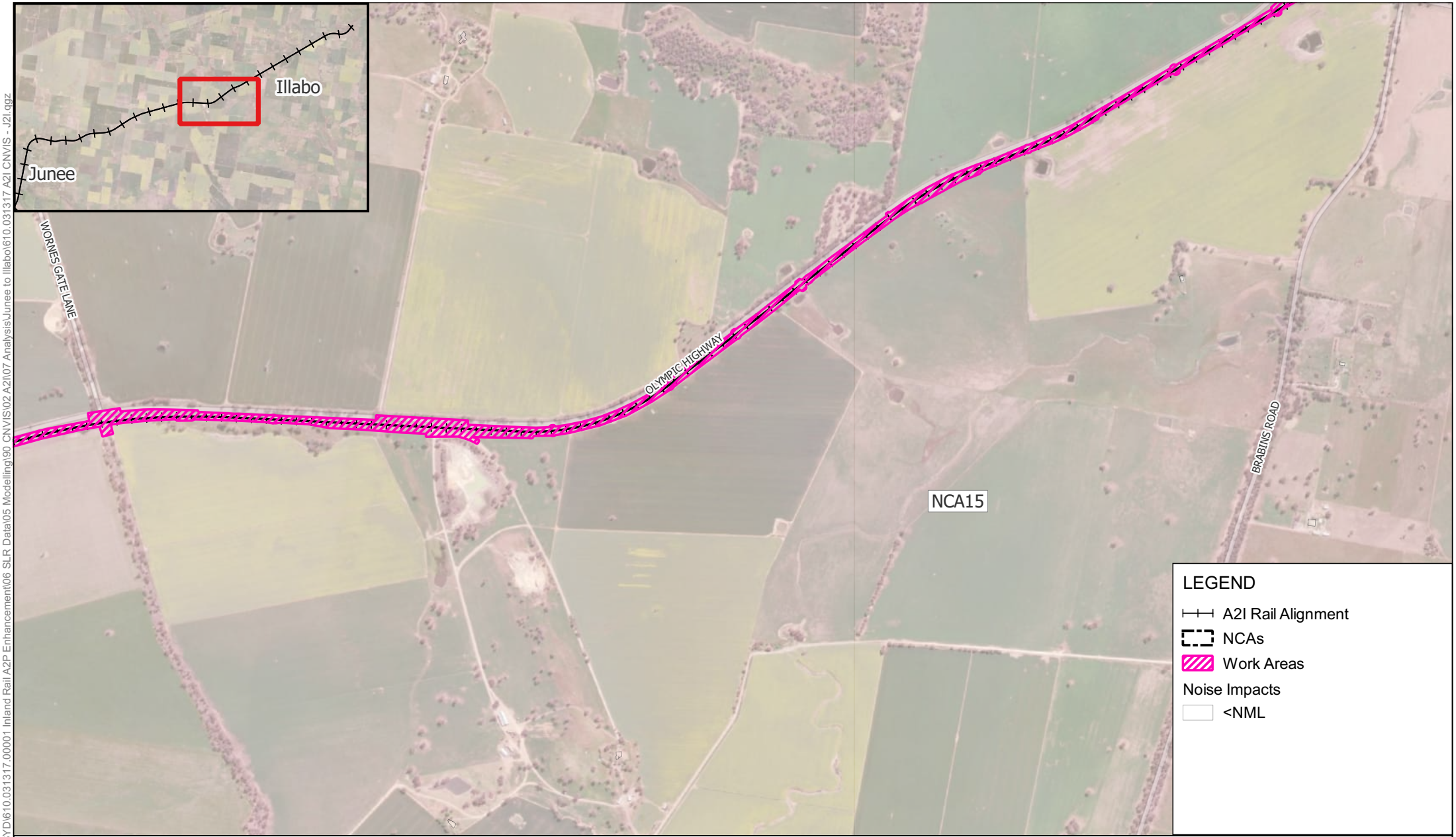

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Coordinate System: GDA2020 / MGA zone 55

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W.003 Geotechnical Investigation - Approved Daytime Hours

APPENDIX C-7c

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W.003 Geotechnical Investigation - Approved Daytime Hours

APPENDIX C-7d

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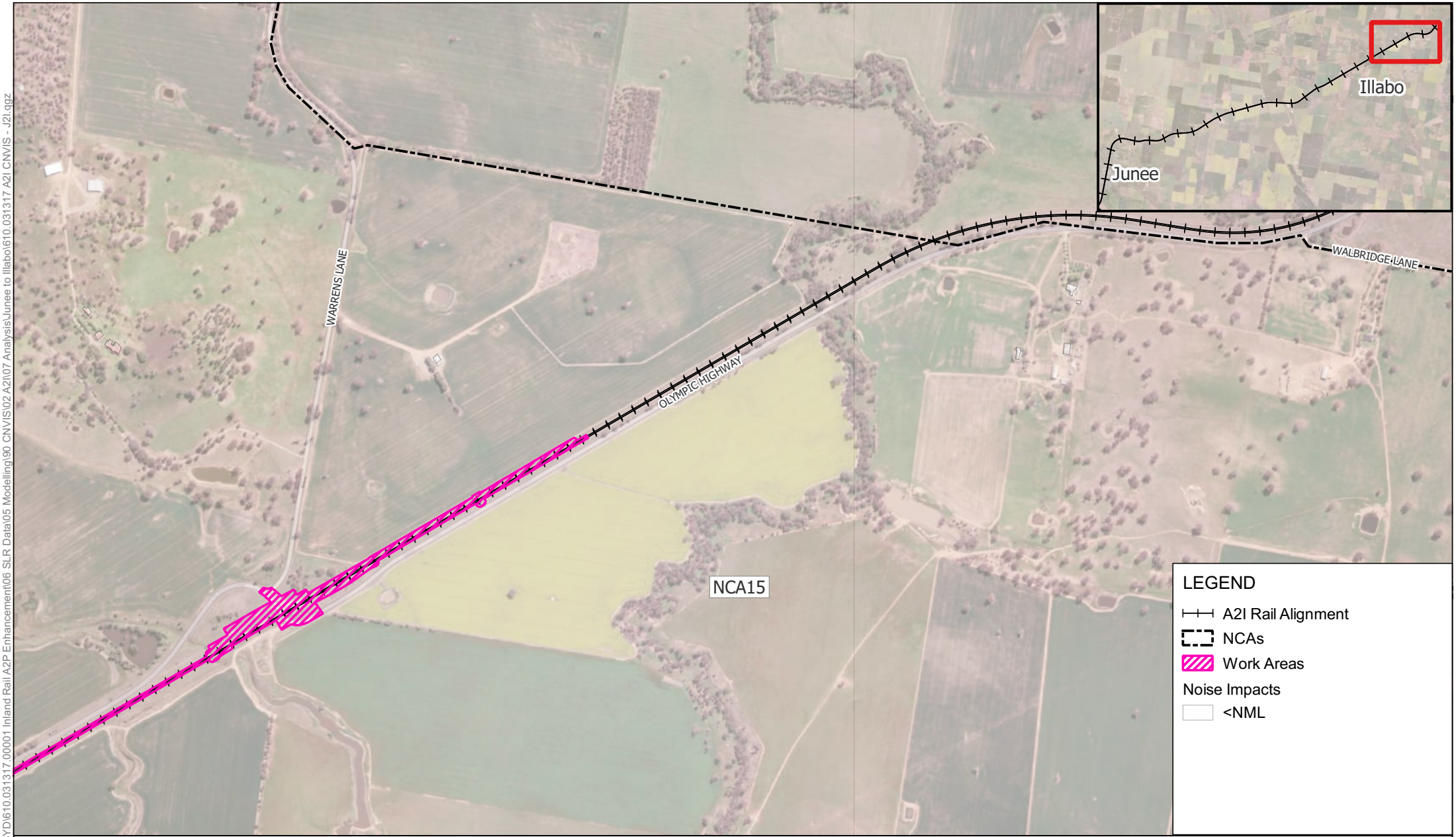

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W.003 Geotechnical Investigation - Approved Daytime Hours

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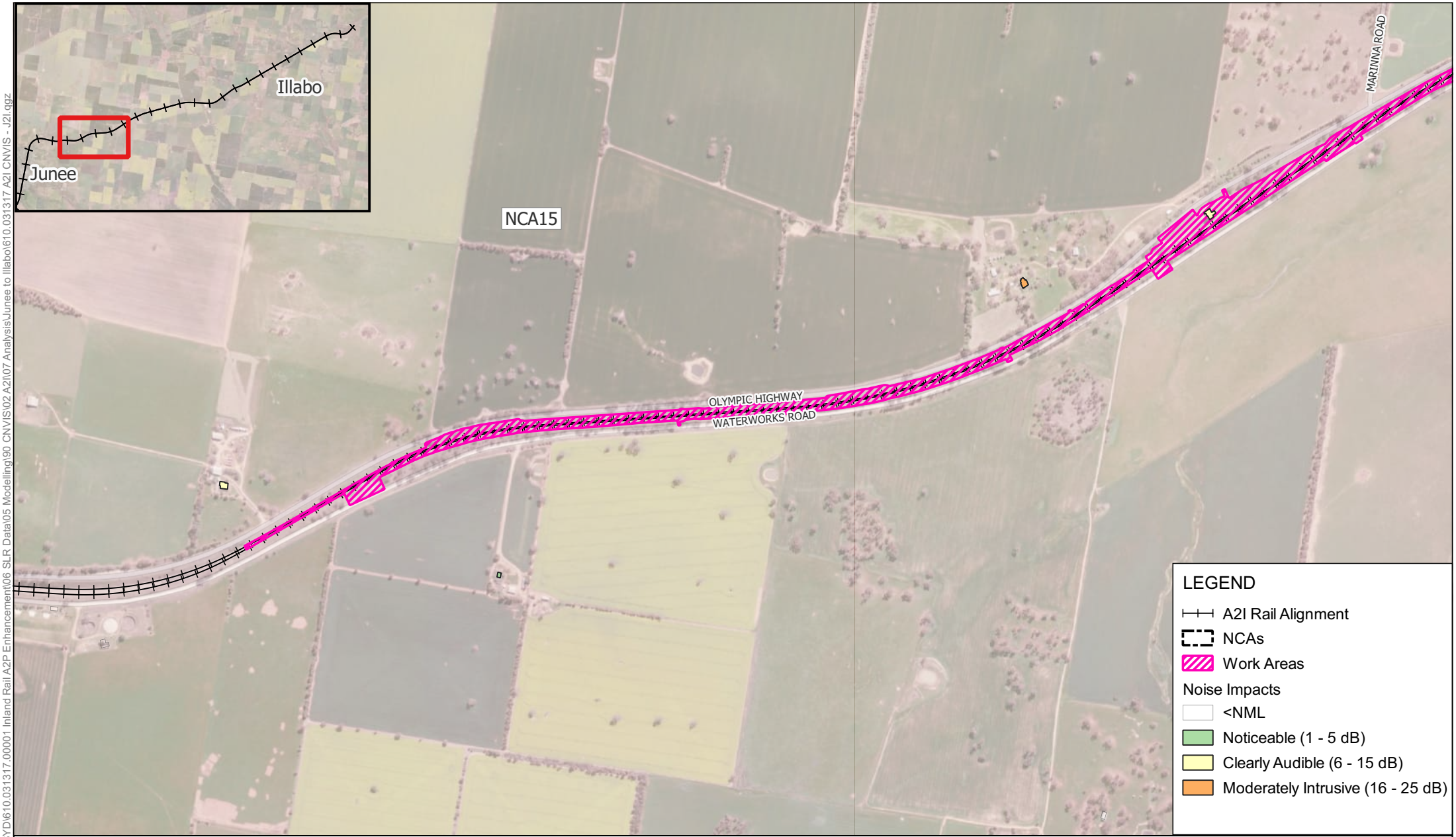

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W.003 Geotechnical Investigation - Out of Hours Daytime

APPENDIX C-8a

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W.003 Geotechnical Investigation - Out of Hours Daytime

APPENDIX C-8b

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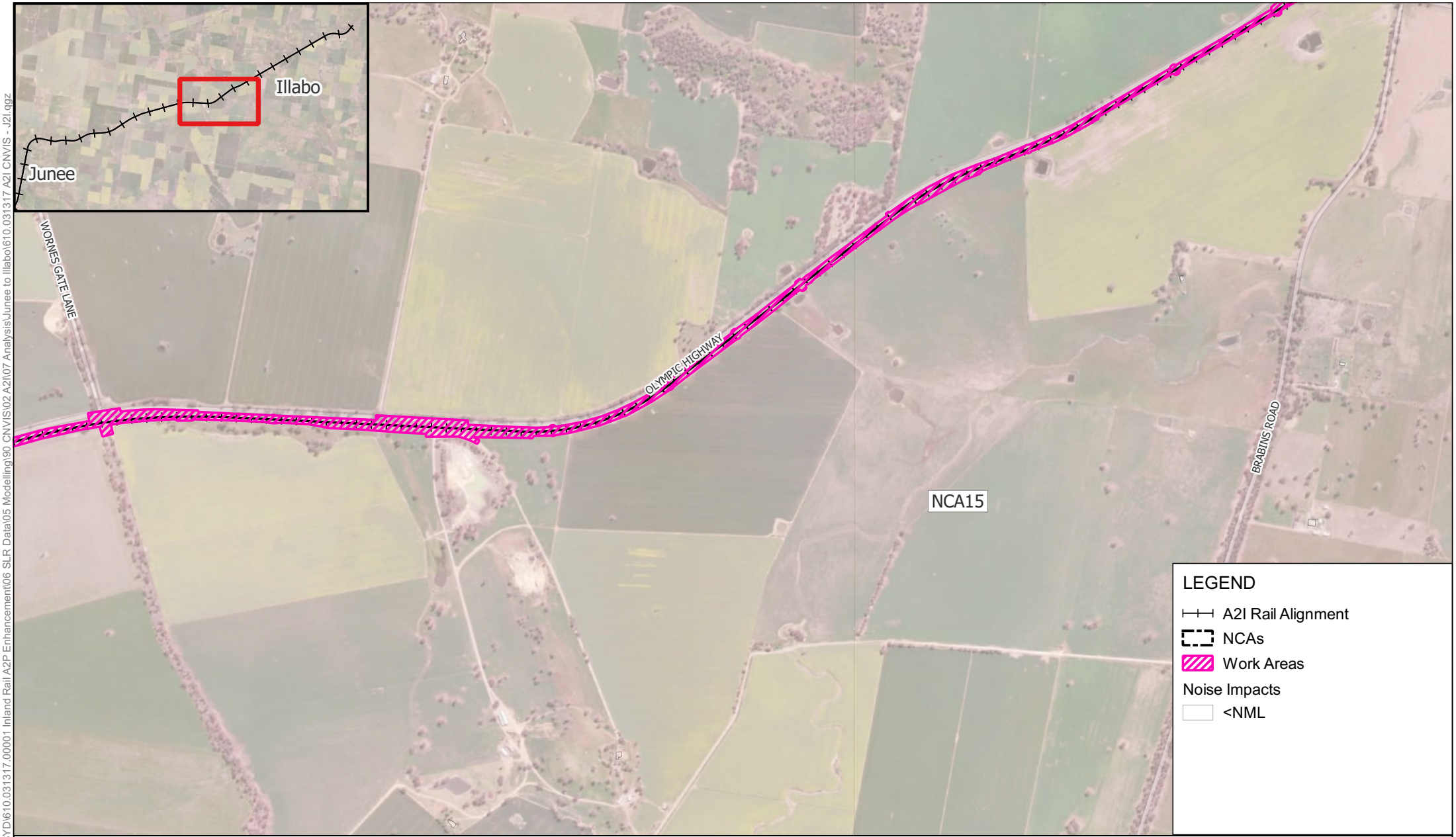

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W.003 Geotechnical Investigation - Out of Hours Daytime

APPENDIX C-8c

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W.003 Geotechnical Investigation - Out of Hours Daytime

APPENDIX C-8d

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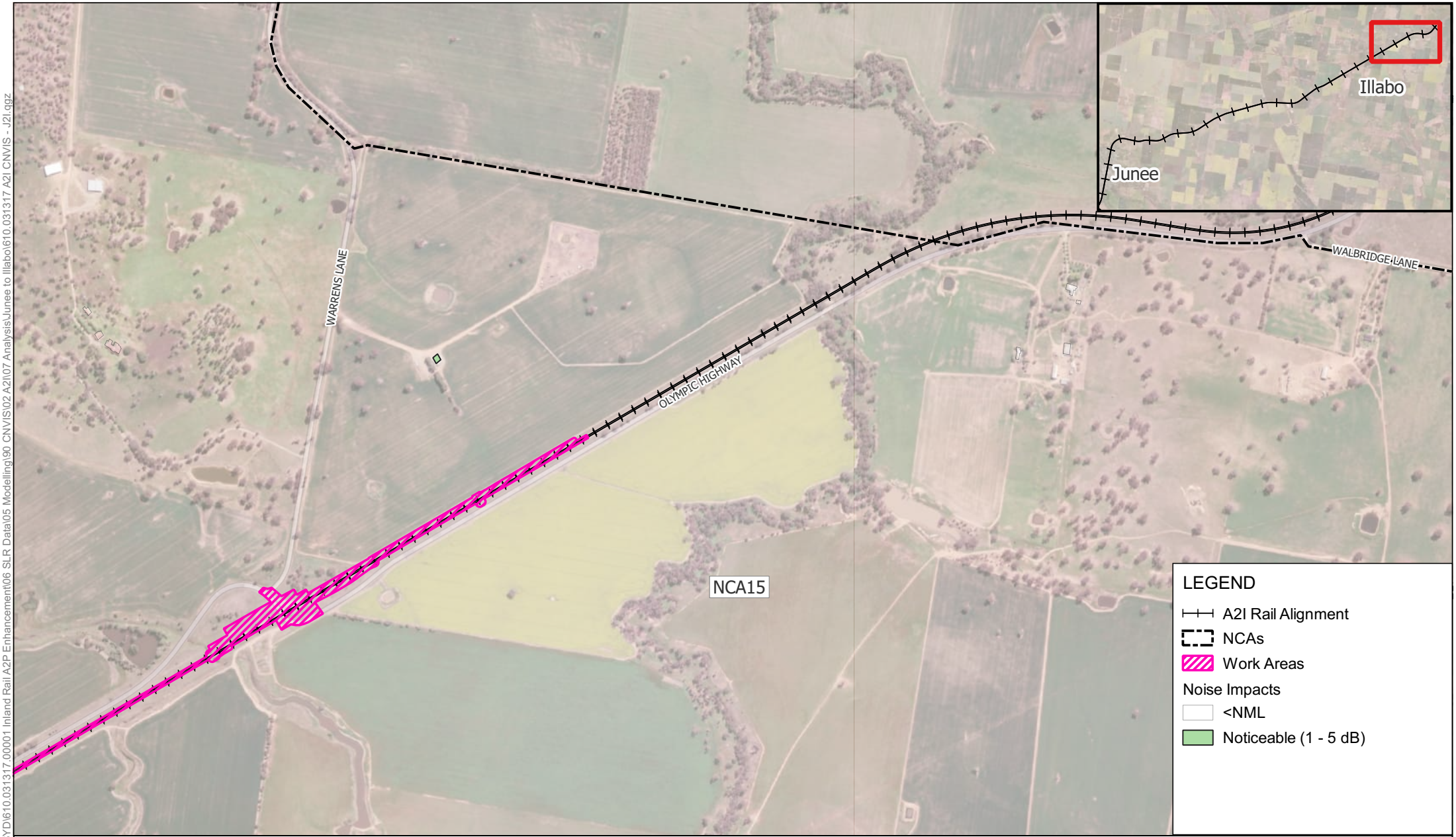

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W.003 Geotechnical Investigation - Out of Hours Daytime

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W.004 Pavement Investigation - Approved Daytime Hours

APPENDIX C-9a

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W.004 Pavement Investigation - Approved Daytime Hours

APPENDIX C-9b

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W.004 Pavement Investigation - Approved Daytime Hours

APPENDIX C-9c

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W.004 Pavement Investigation - Approved Daytime Hours

APPENDIX C-9d

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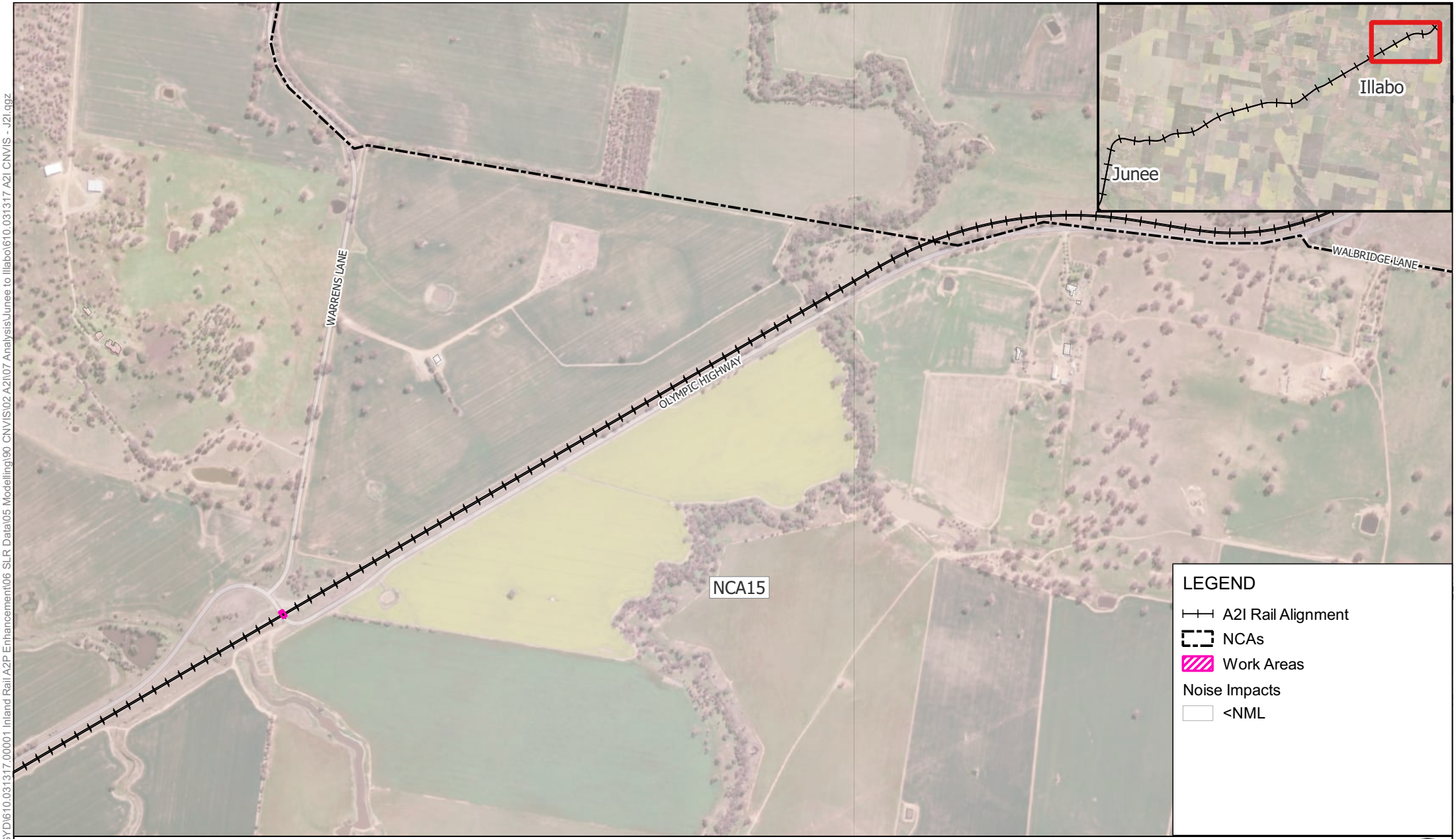

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W.004 Pavement Investigation - Out of Hours Daytime

APPENDIX C-10a

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W.004 Pavement Investigation - Out of Hours Daytime

APPENDIX C-10b

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W.004 Pavement Investigation - Out of Hours Daytime

APPENDIX C-10c

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APPENDIX C-10d

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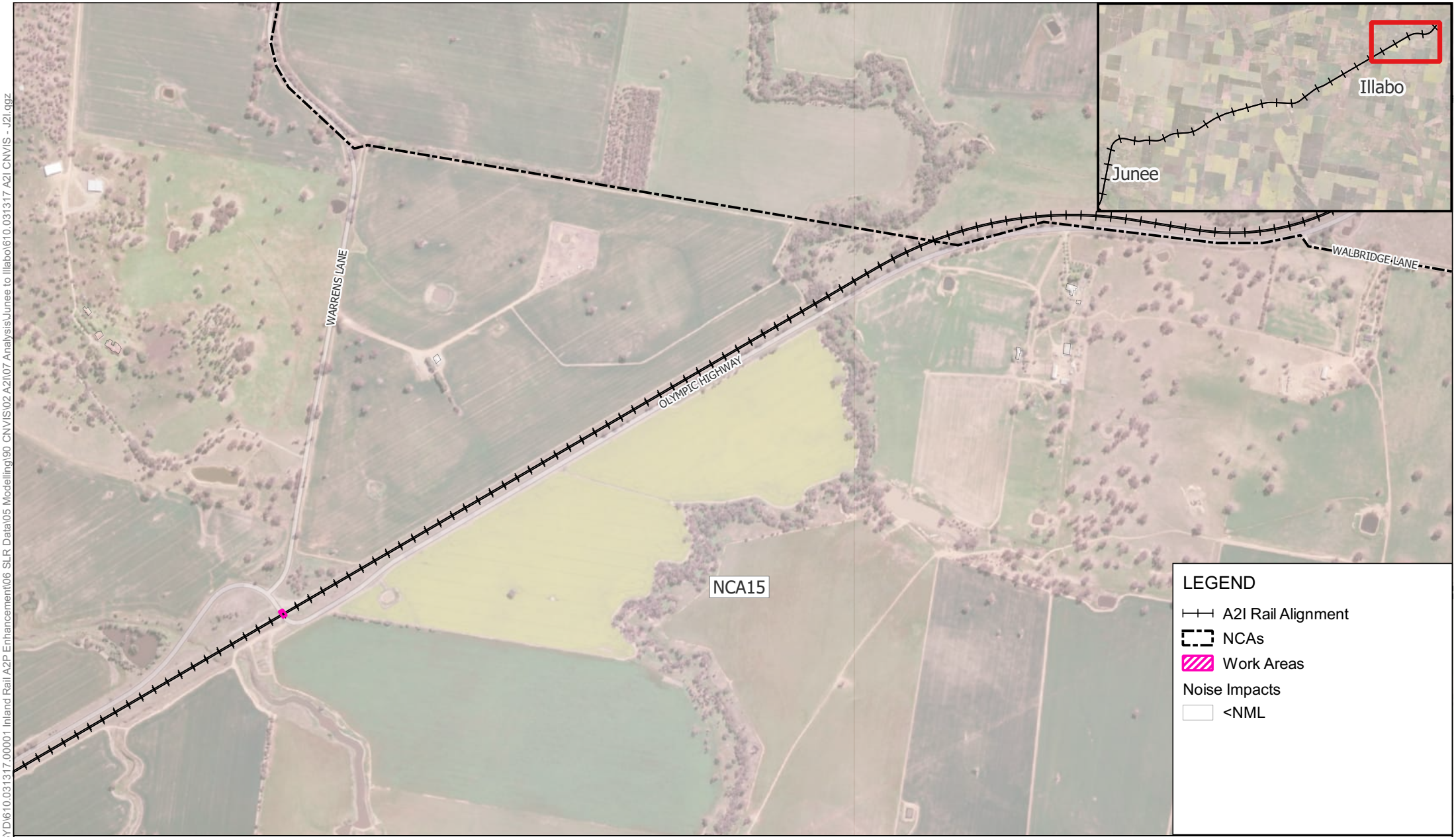

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W.004 Pavement Investigation - Out of Hours Daytime

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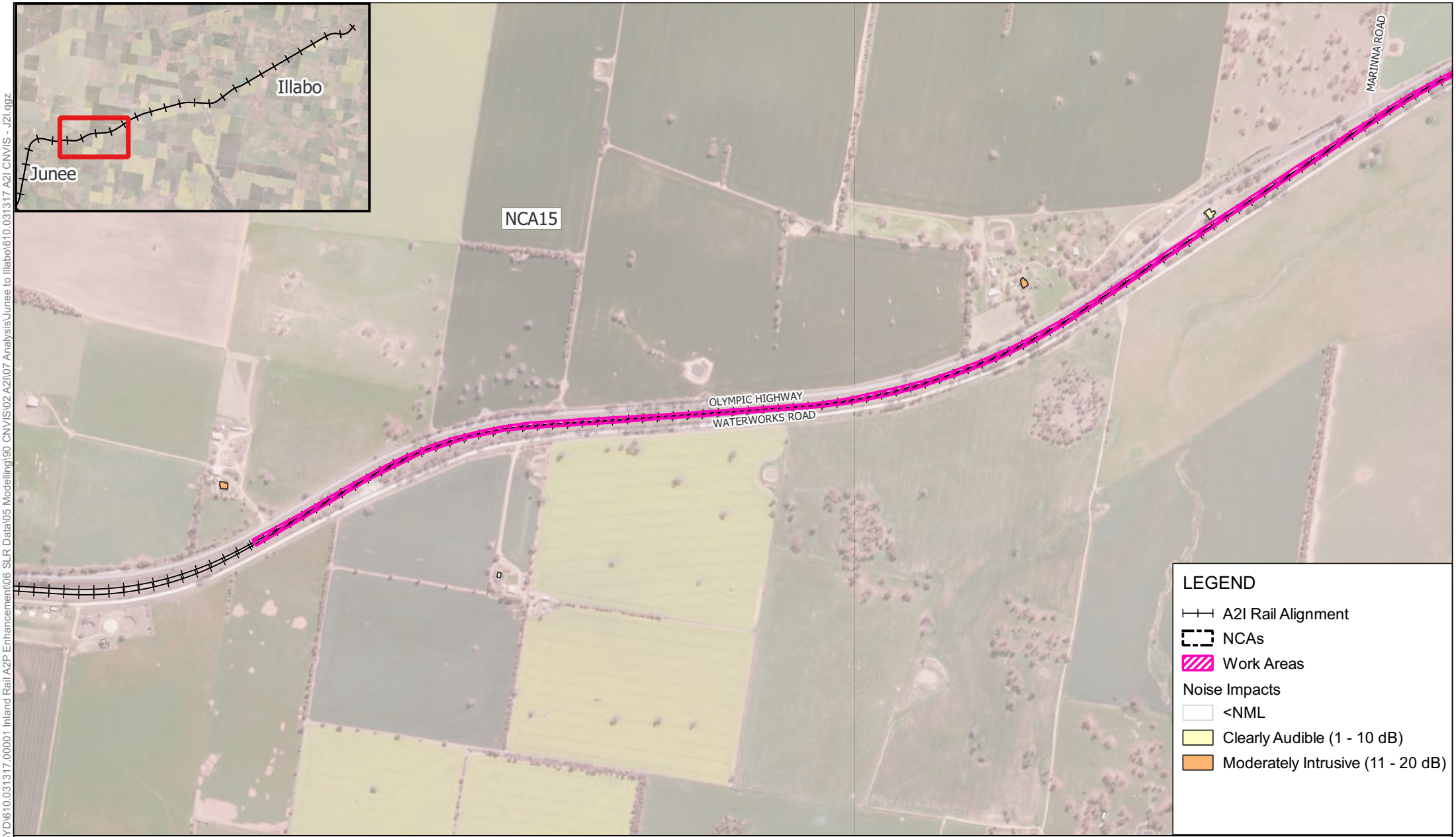

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W.005 Track Work - Peak - Approved Daytime Hours

APPENDIX C-11a

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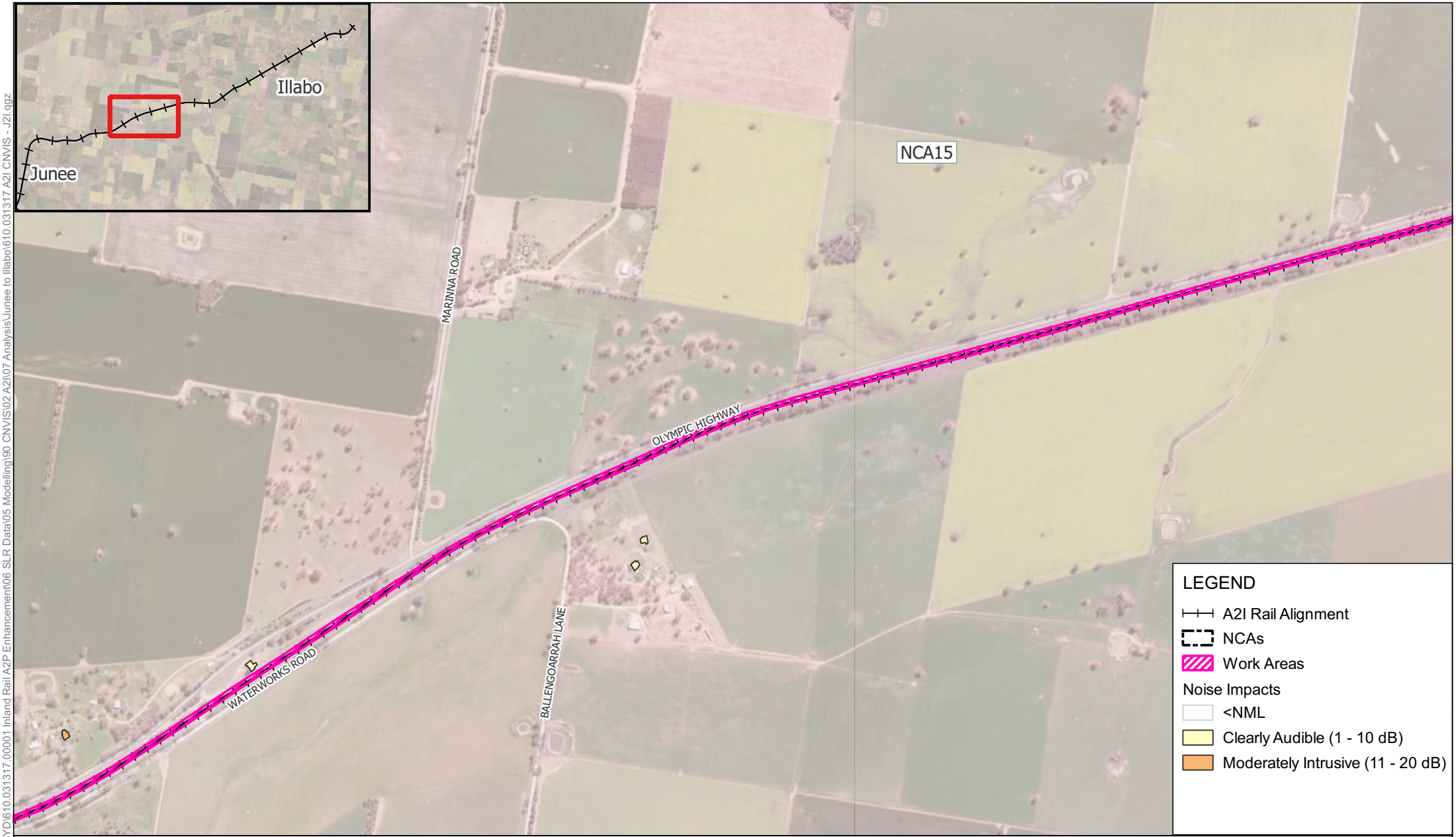

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W.005 Track Work - Peak - Approved Daytime Hours

APPENDIX C-11b

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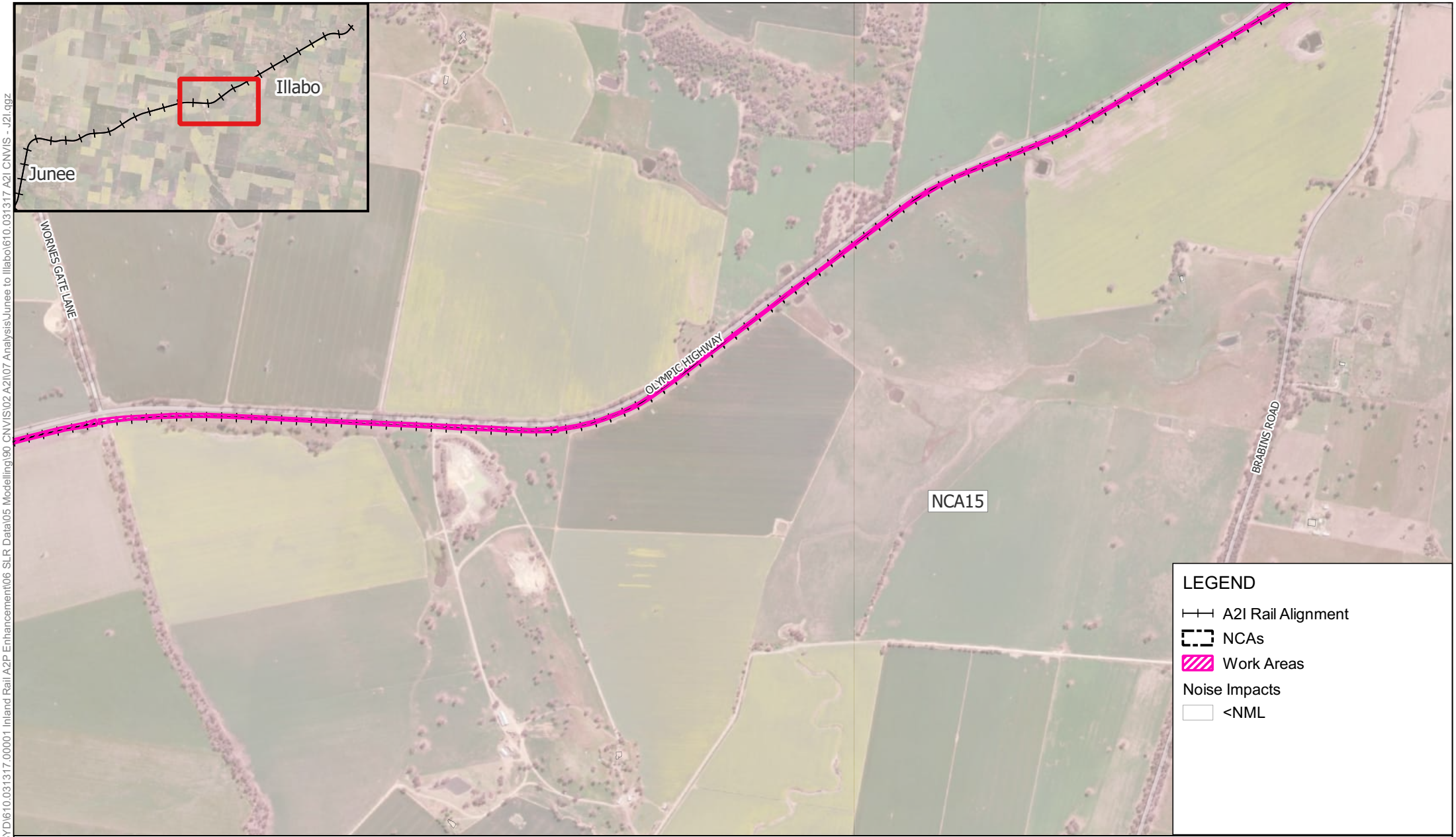

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W.005 Track Work - Peak - Approved Daytime Hours

APPENDIX C-11c

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W.005 Track Work - Peak - Approved Daytime Hours

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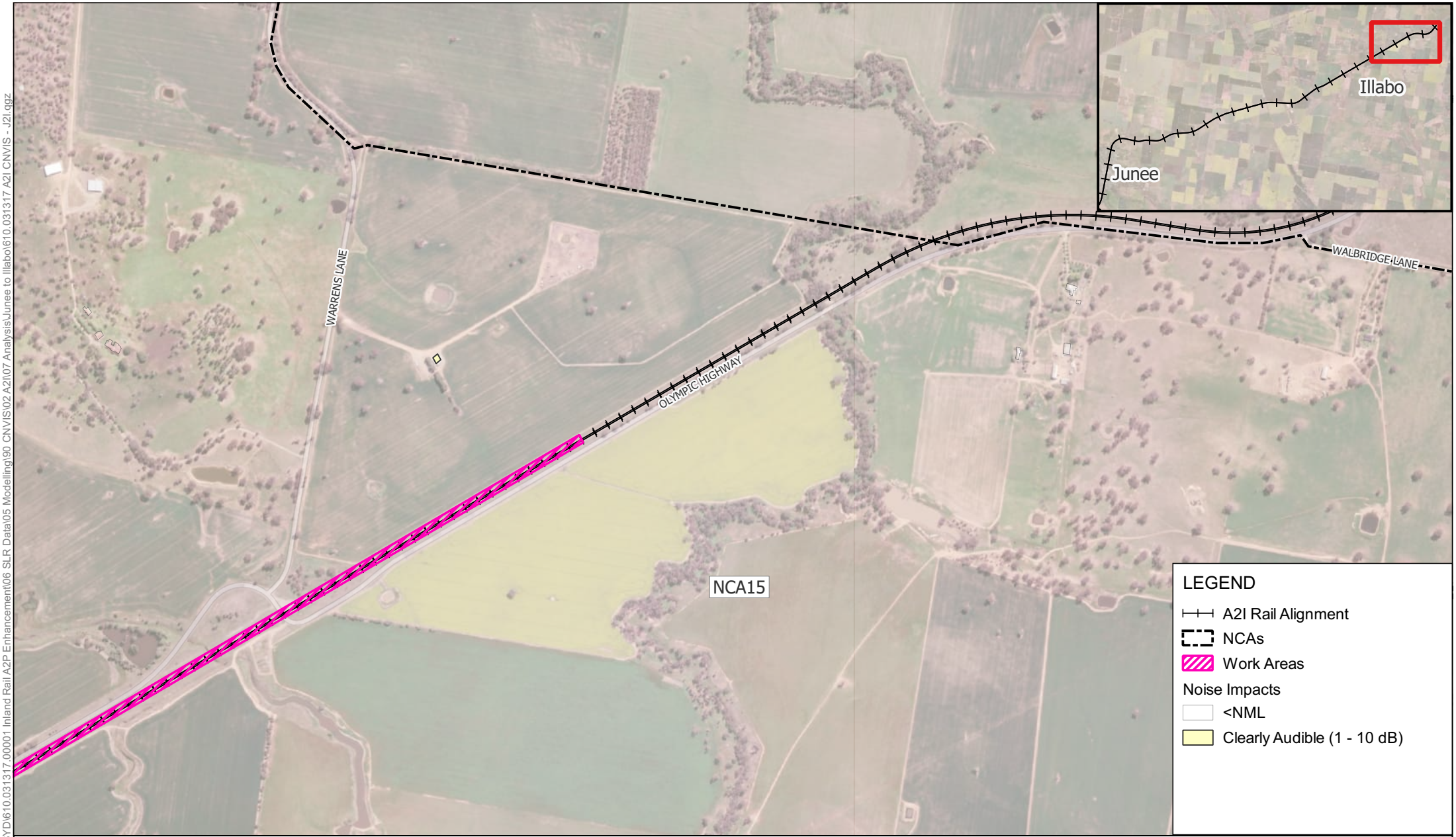

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W.005 Track Work - Peak - Approved Daytime Hours

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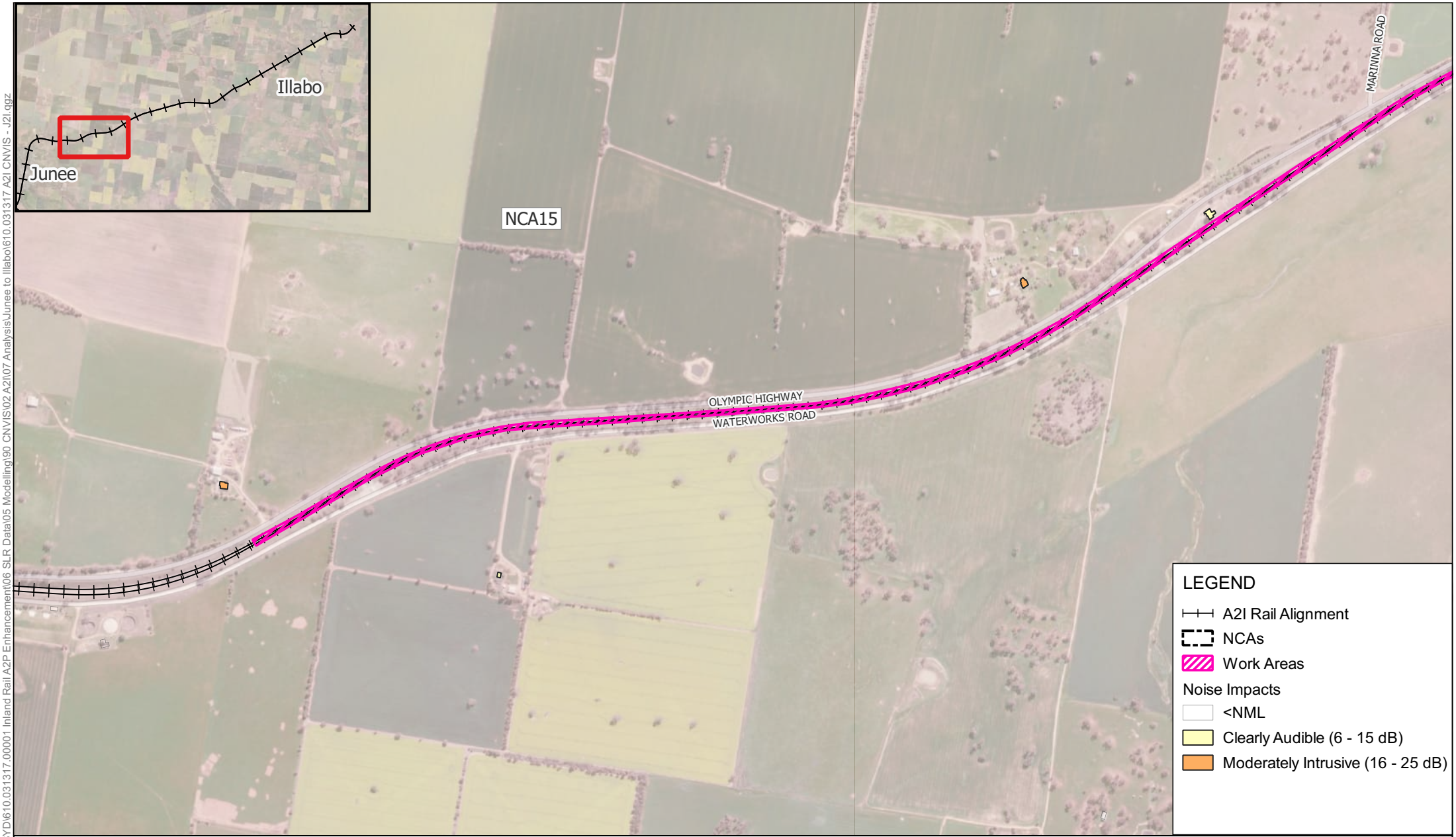

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W.005 Track Work - Peak - Out of Hours Daytime

APPENDIX C-12a

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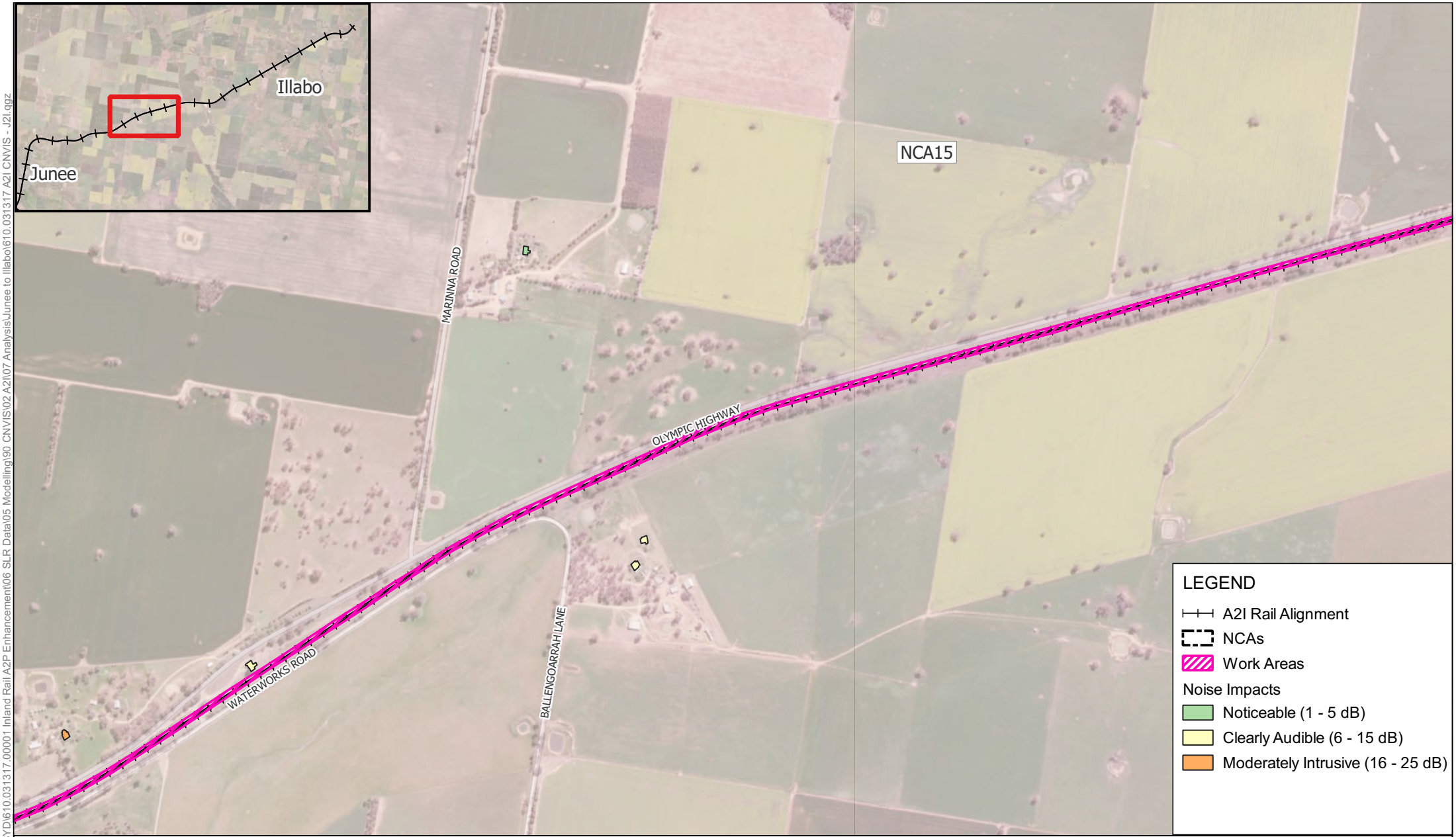

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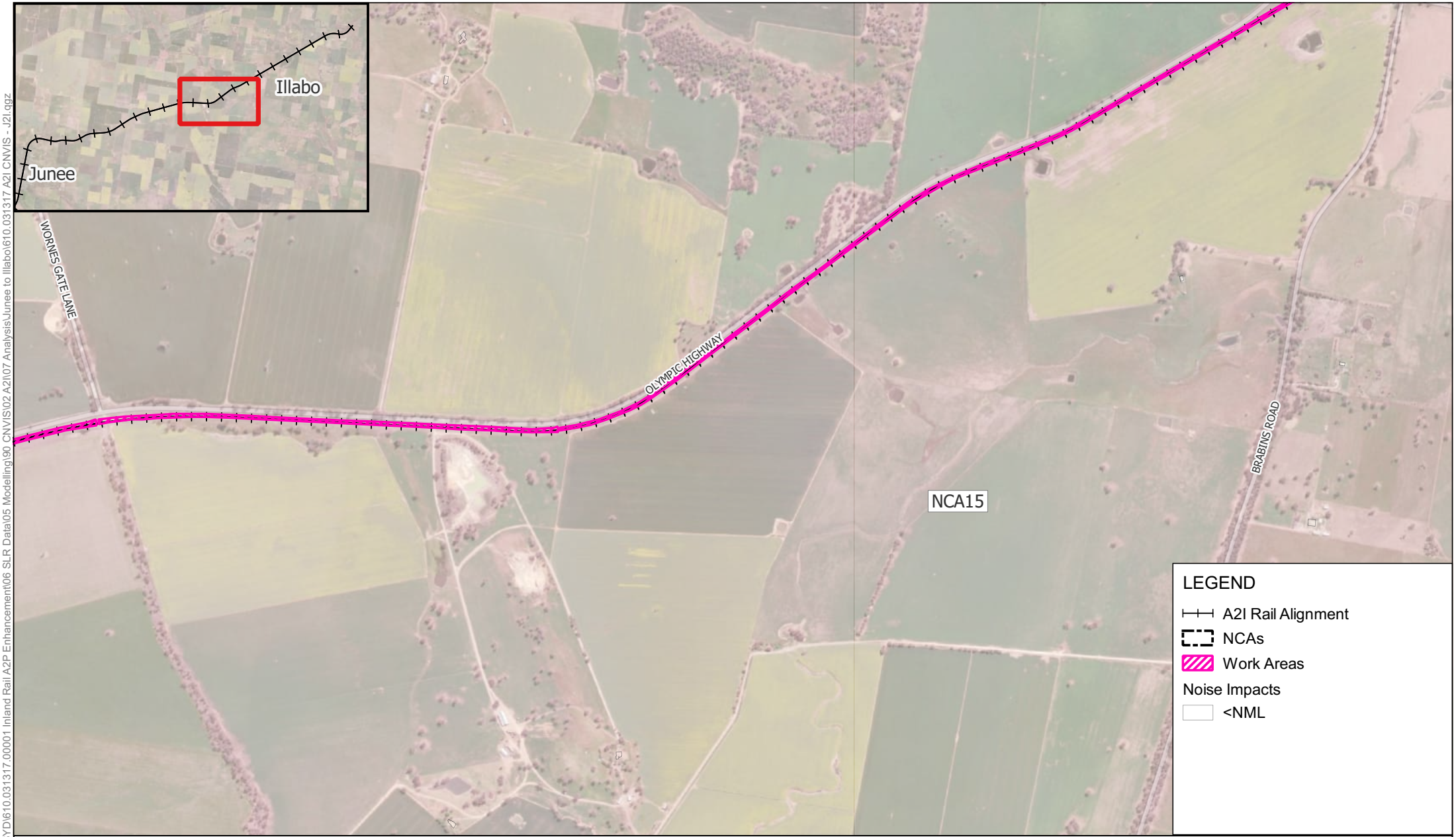
W.005 Track Work - Peak - Out of Hours Daytime

APPENDIX C-12b

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



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Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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W.005 Track Work - Peak - Out of Hours Daytime

APPENDIX C-12c

H:\Projects-SLR\610-SrvSYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

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Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

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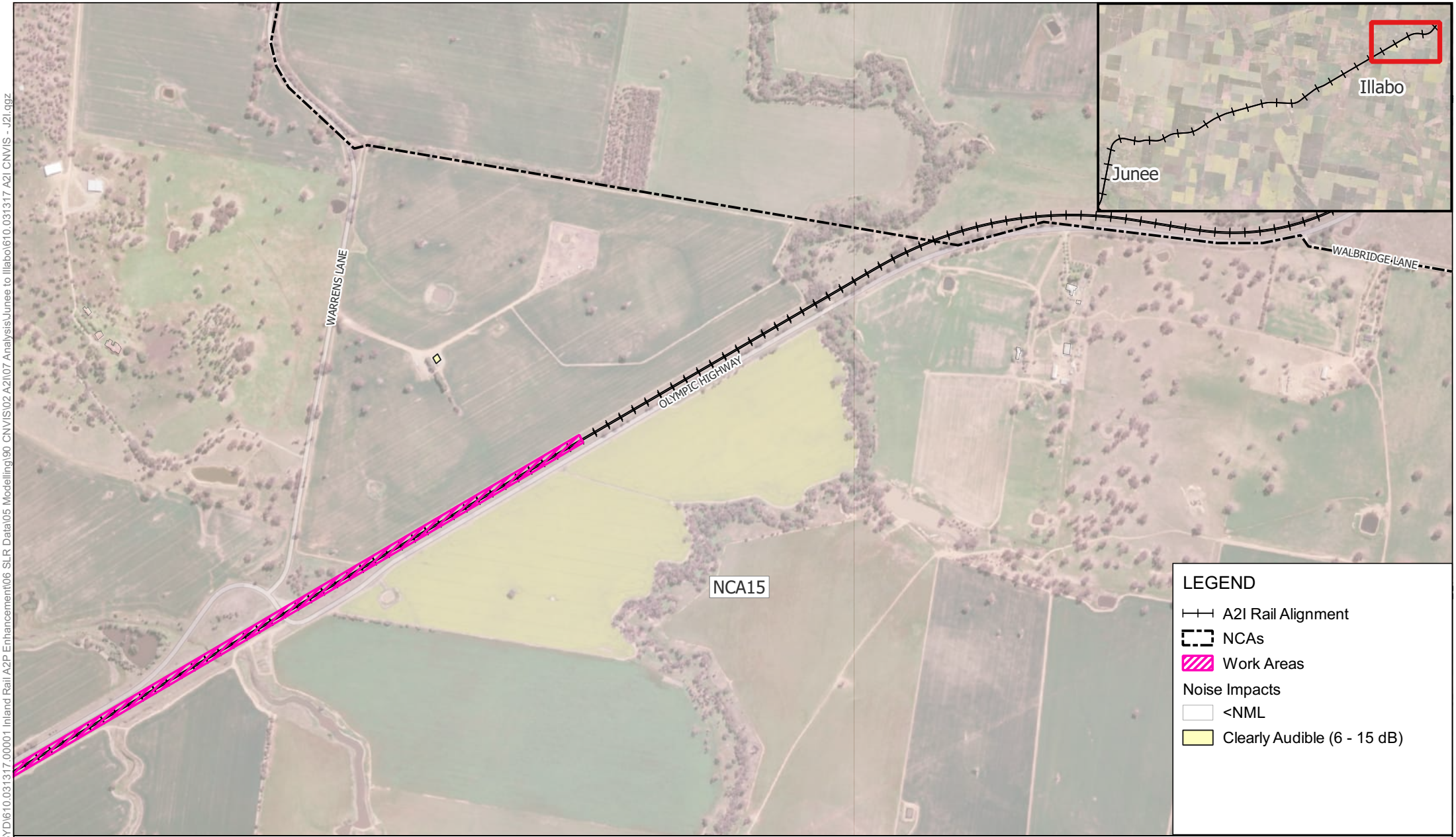
W.005 Track Work - Peak - Out of Hours Daytime

APPENDIX C-12d

H:\Projects-SLR\610-SrvSYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



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Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

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W.005 Track Work - Peak - Out of Hours Daytime

APPENDIX C-12e

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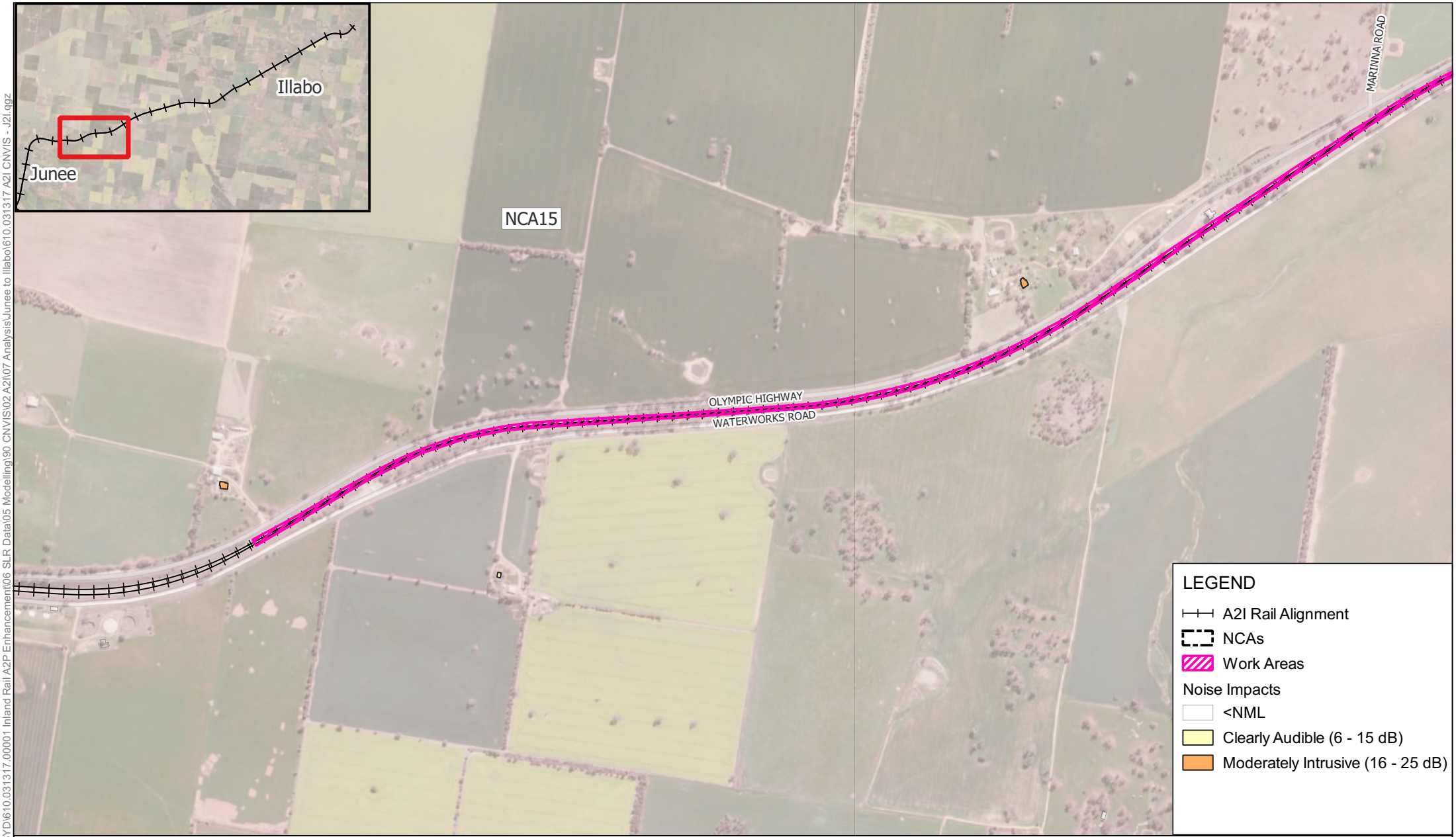

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Coordinate System: GDA2020 / MGA zone 55

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W.005 Track Work - Peak - Out of Hours Evening

APPENDIX C-13a

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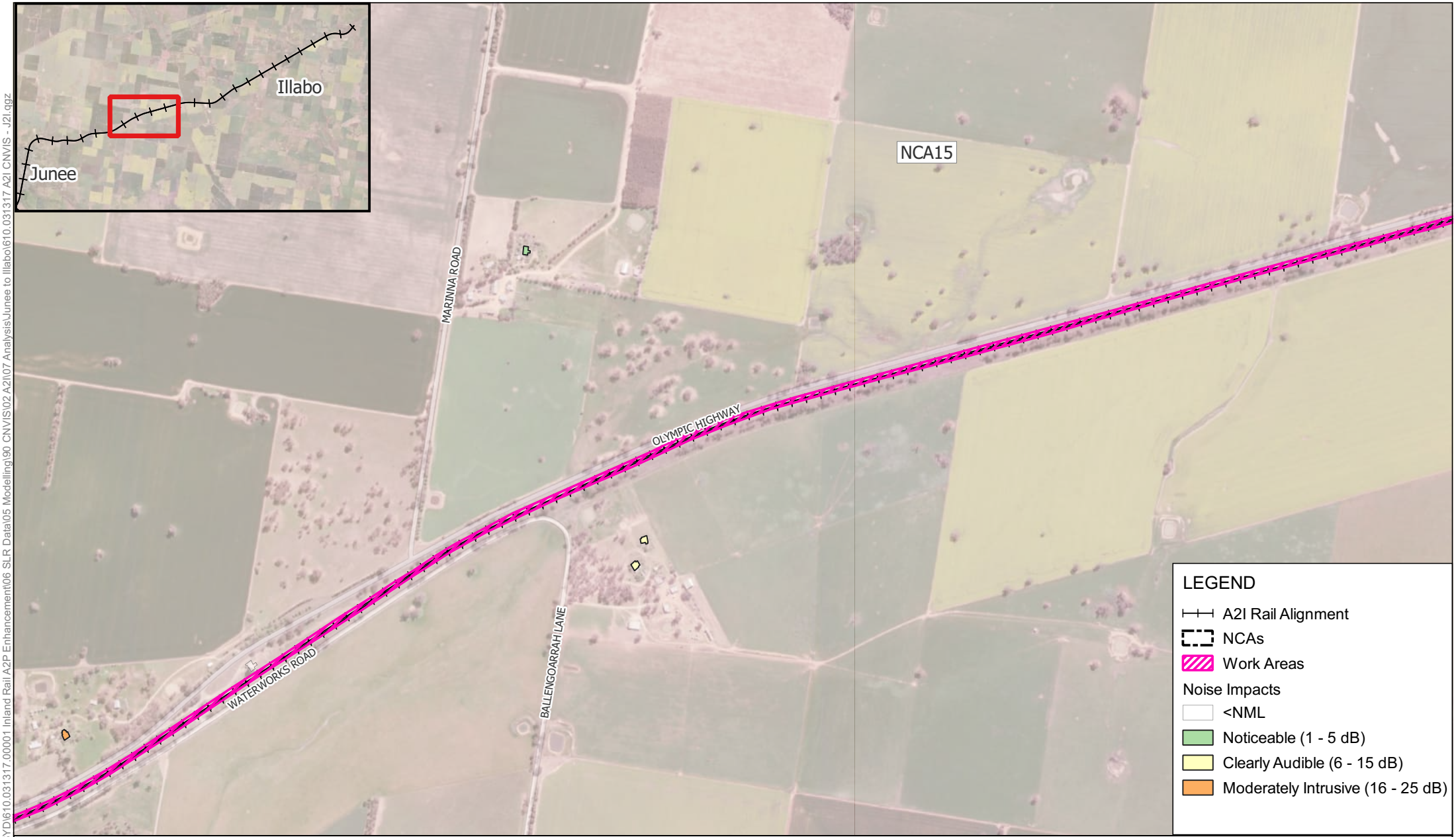

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Drawn Date: 02-Apr-2025
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W.005 Track Work - Peak - Out of Hours Evening

APPENDIX C-13b

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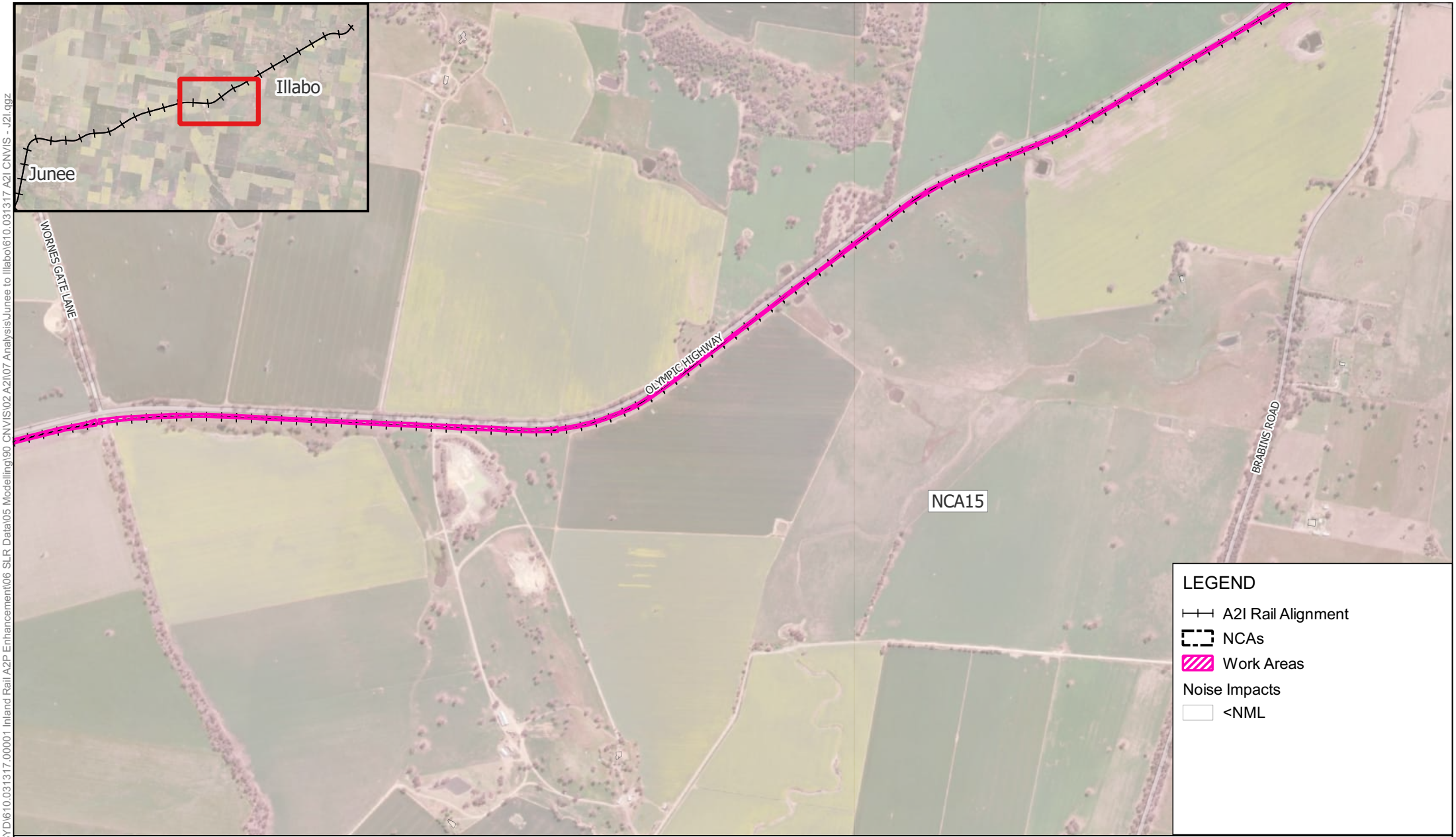

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W.005 Track Work - Peak - Out of Hours Evening

APPENDIX C-13c

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W.005 Track Work - Peak - Out of Hours Evening

APPENDIX C-13d

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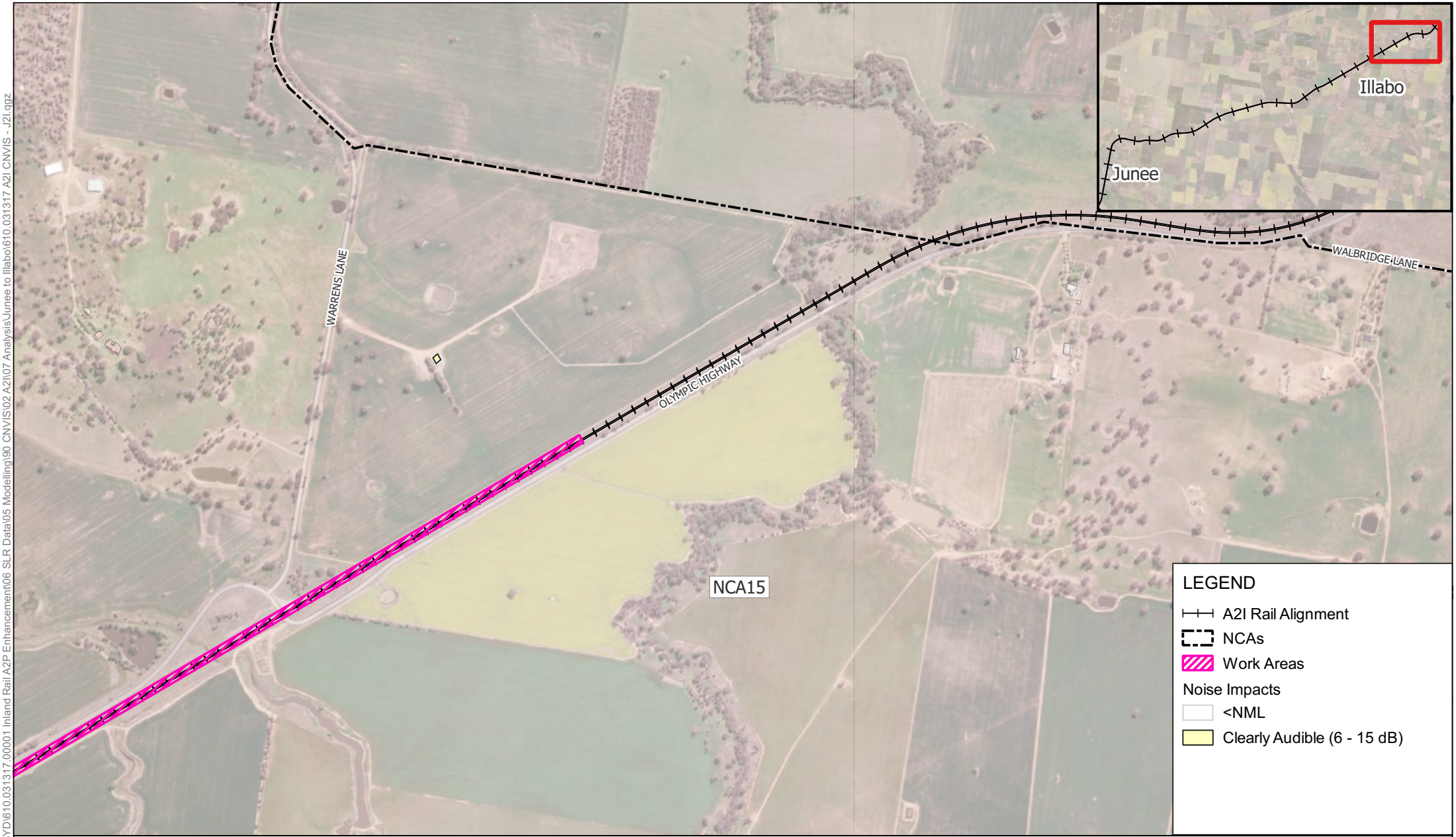

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W.005 Track Work - Peak - Out of Hours Evening

APPENDIX C-13e

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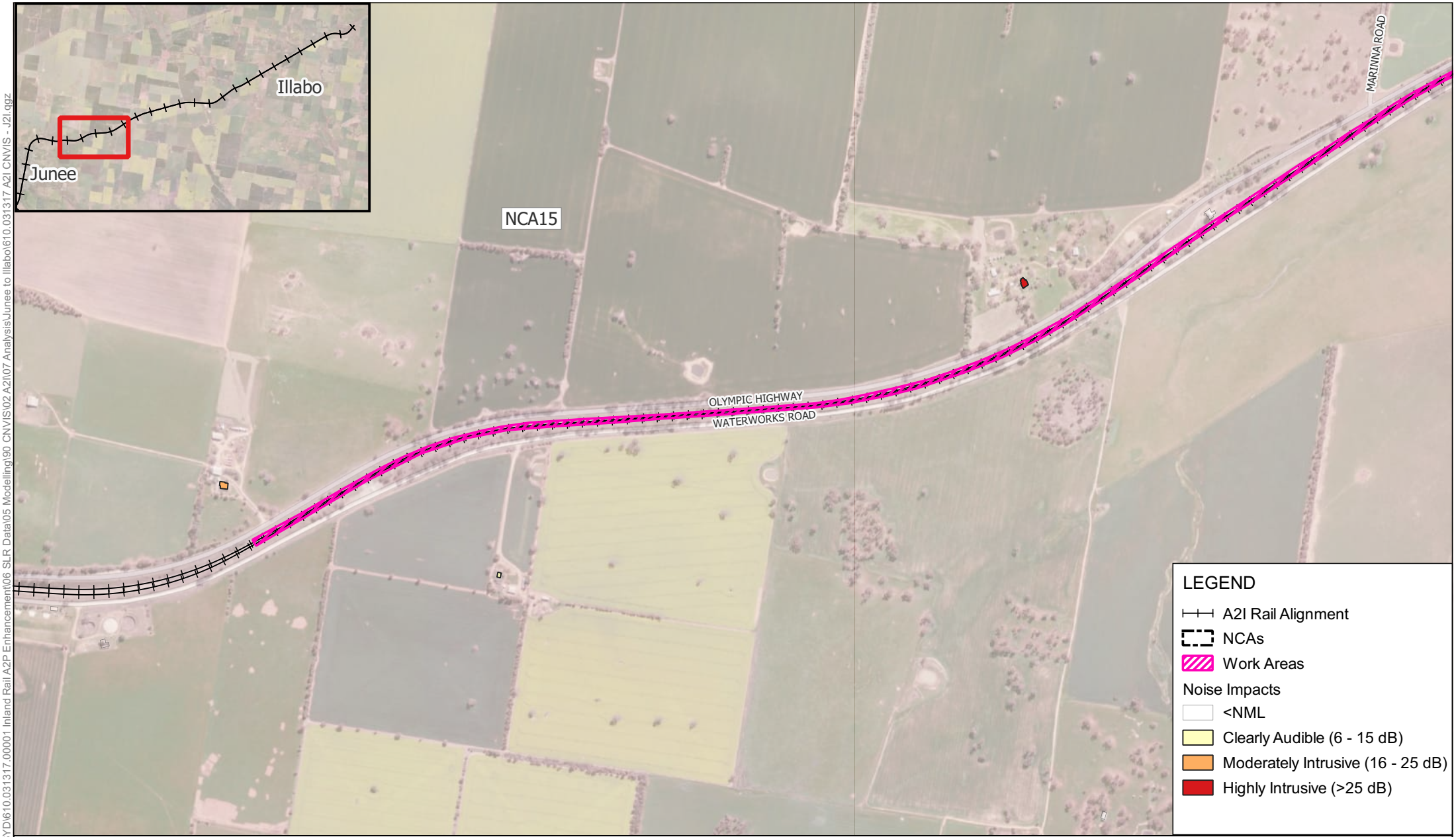

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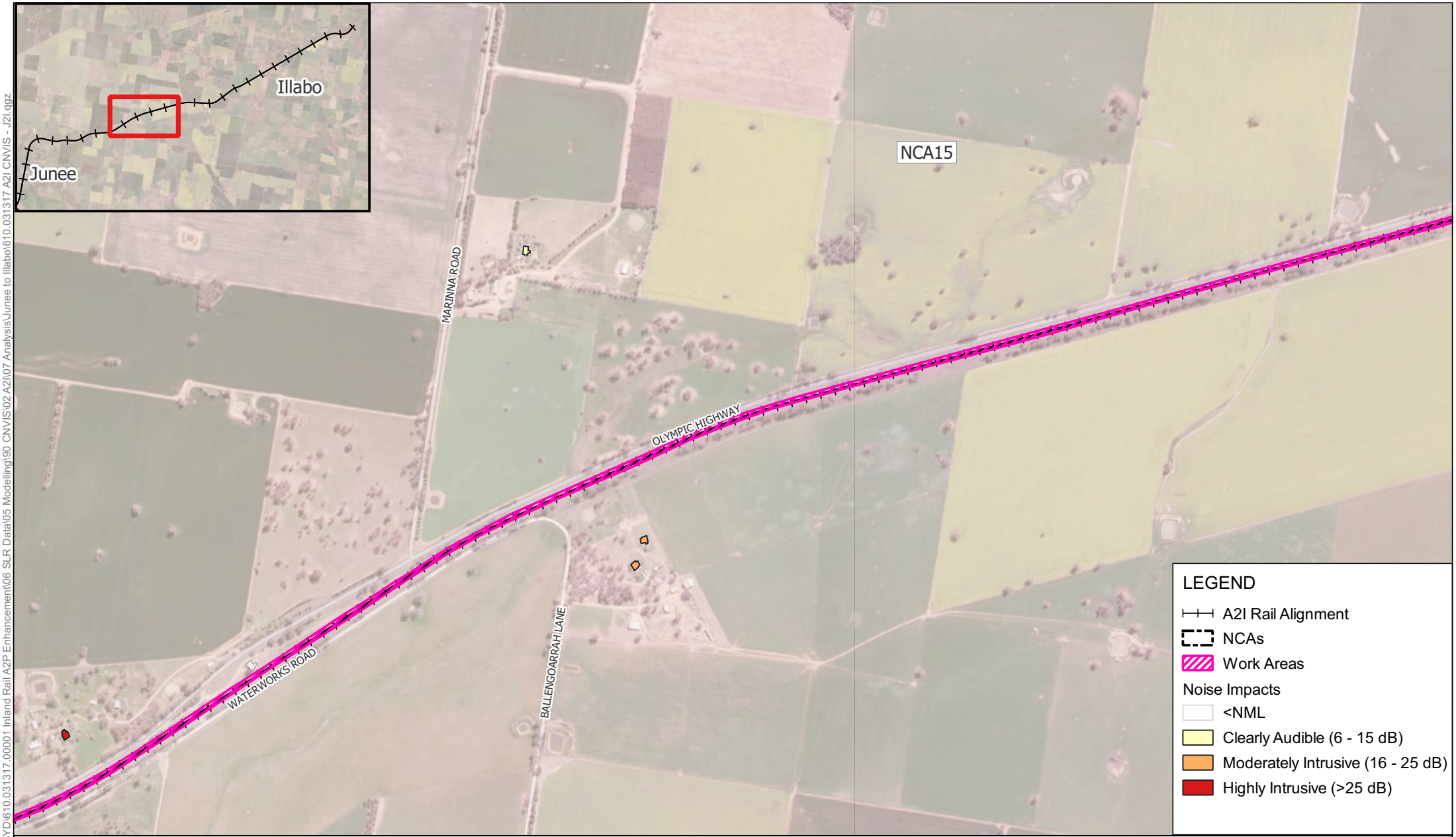
W.005 Track Work - Peak - Out of Hours Night-time

APPENDIX C-14a

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



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Project Number: 610.031317

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W.005 Track Work - Peak - Out of Hours Night-time

APPENDIX C-14b

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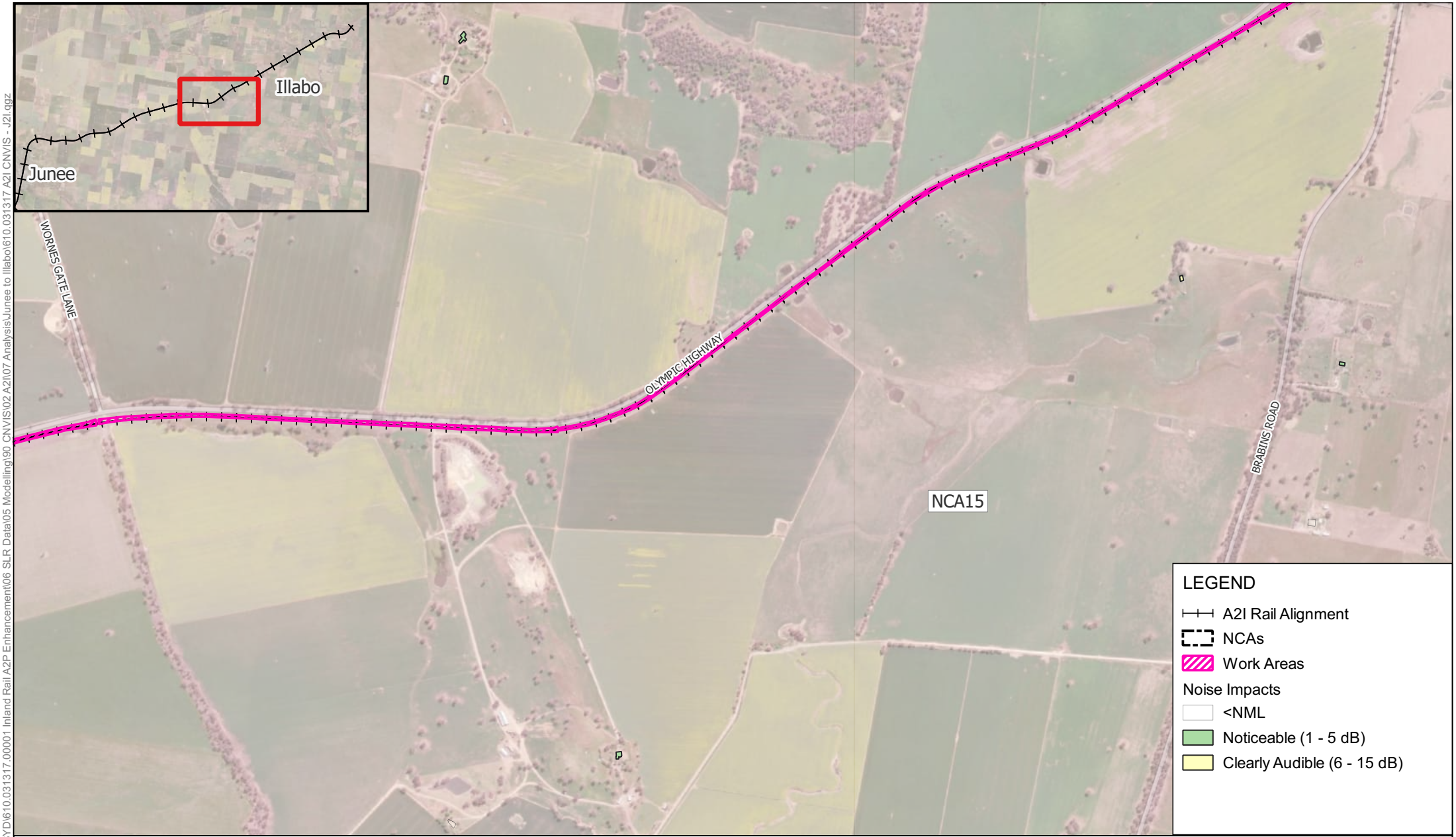

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Drawn Date: 02-Apr-2025
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W.005 Track Work - Peak - Out of Hours Night-time

APPENDIX C-14c

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W.005 Track Work - Peak - Out of Hours Night-time

APPENDIX C-14d

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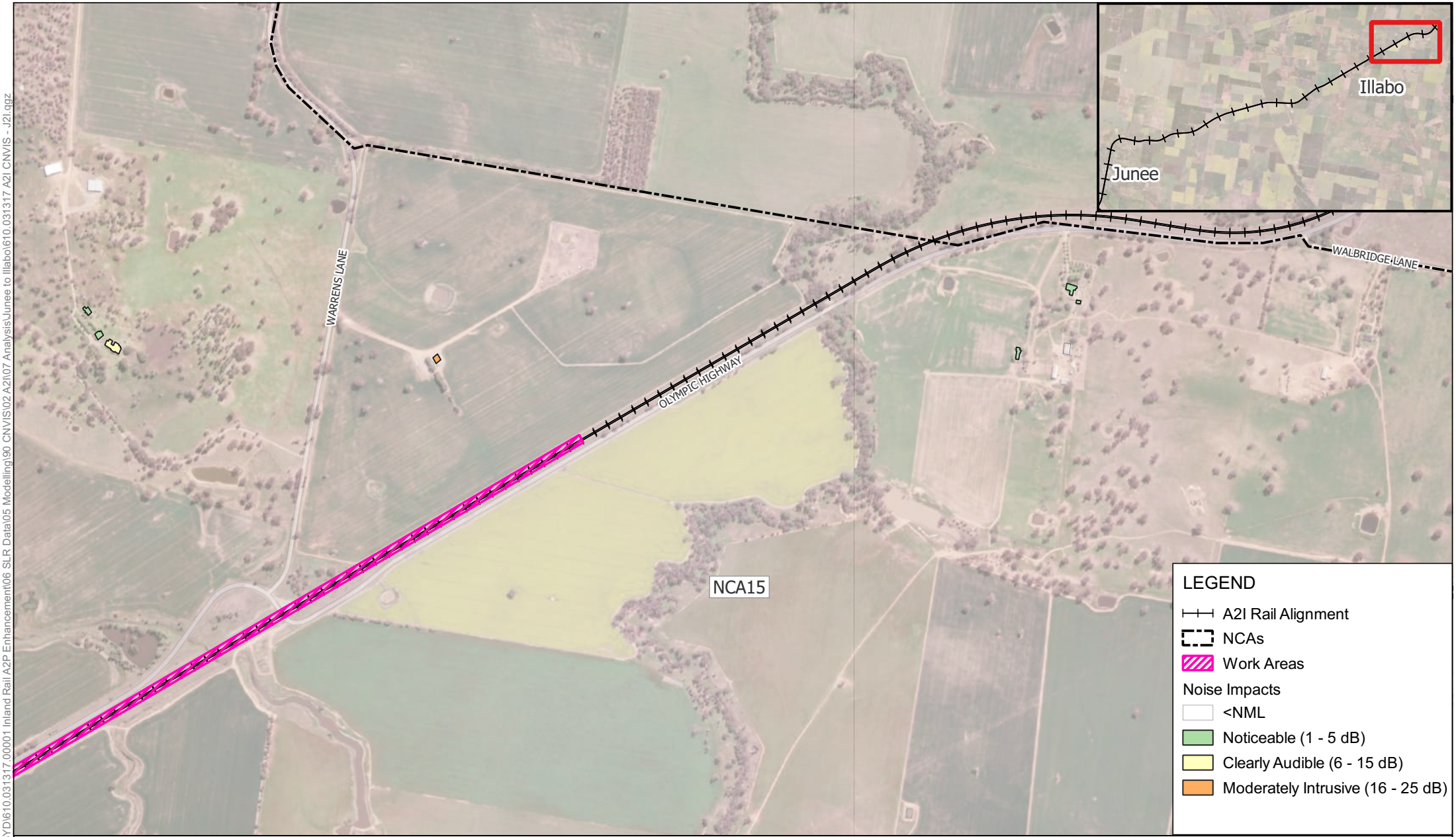

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W.005 Track Work - Peak - Out of Hours Night-time

APPENDIX C-14e

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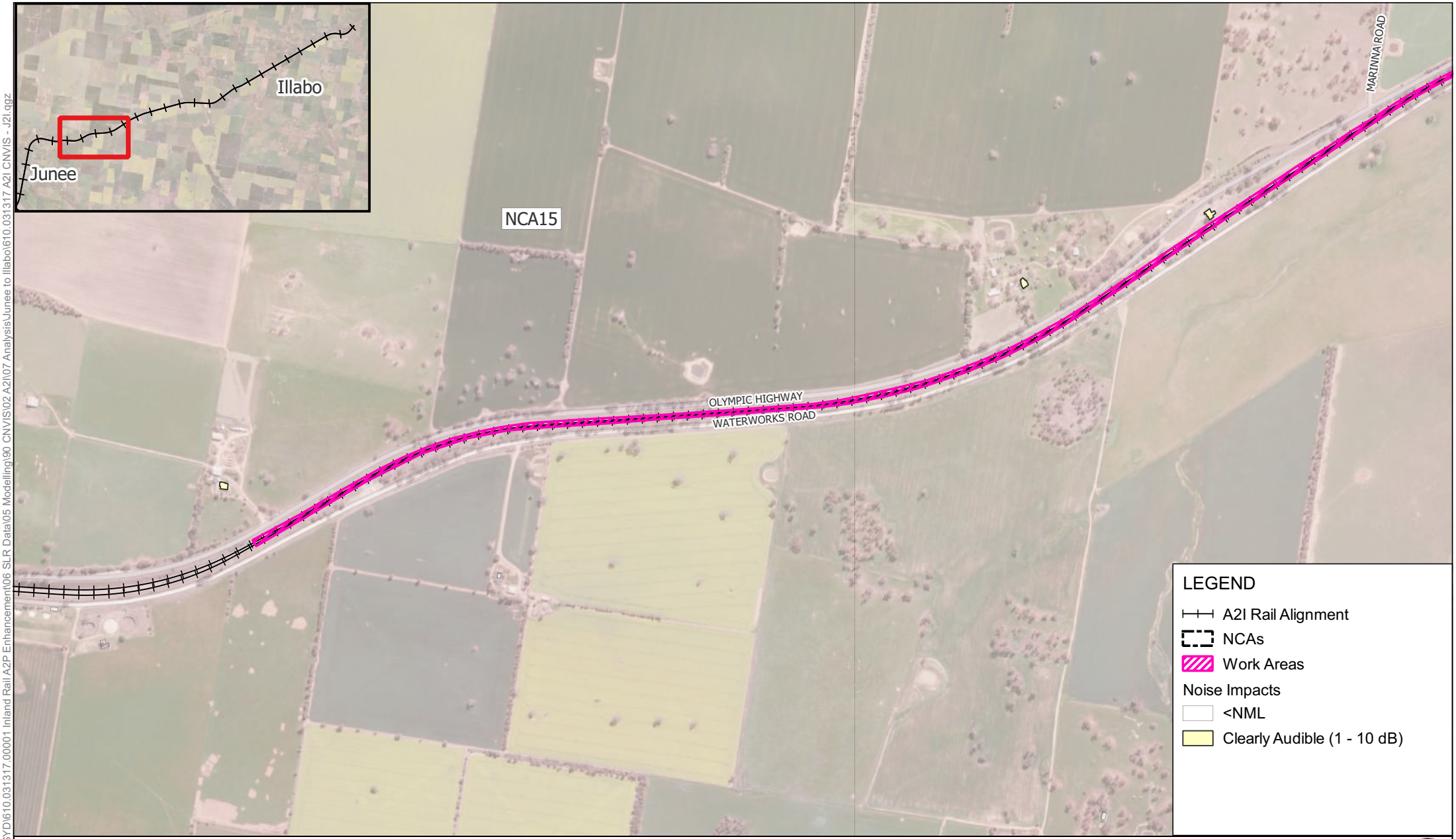

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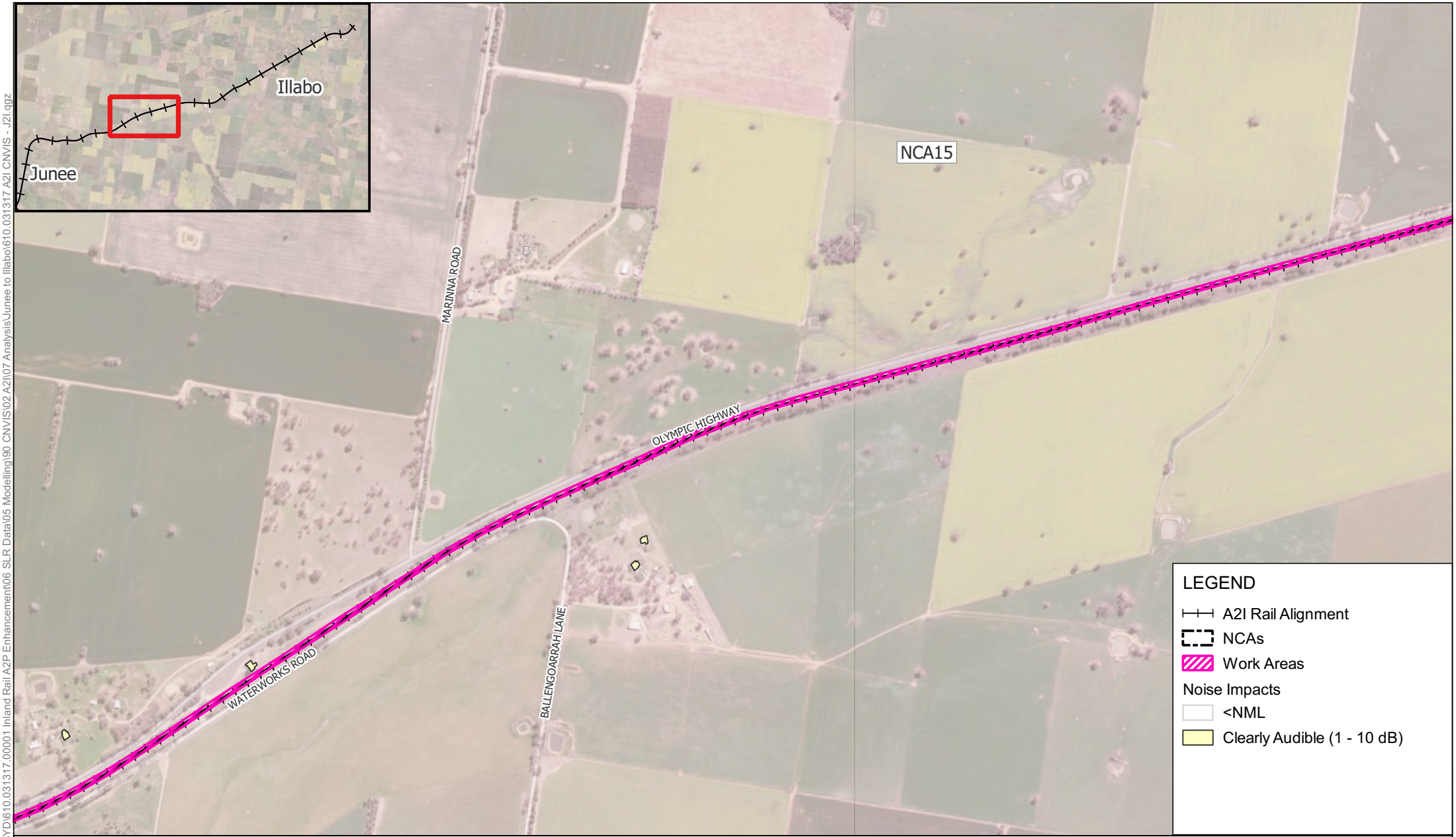
W.006 Track Work - Typical - Approved Daytime Hours

APPENDIX C-15a

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



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W.006 Track Work - Typical - Approved Daytime Hours

APPENDIX C-15b

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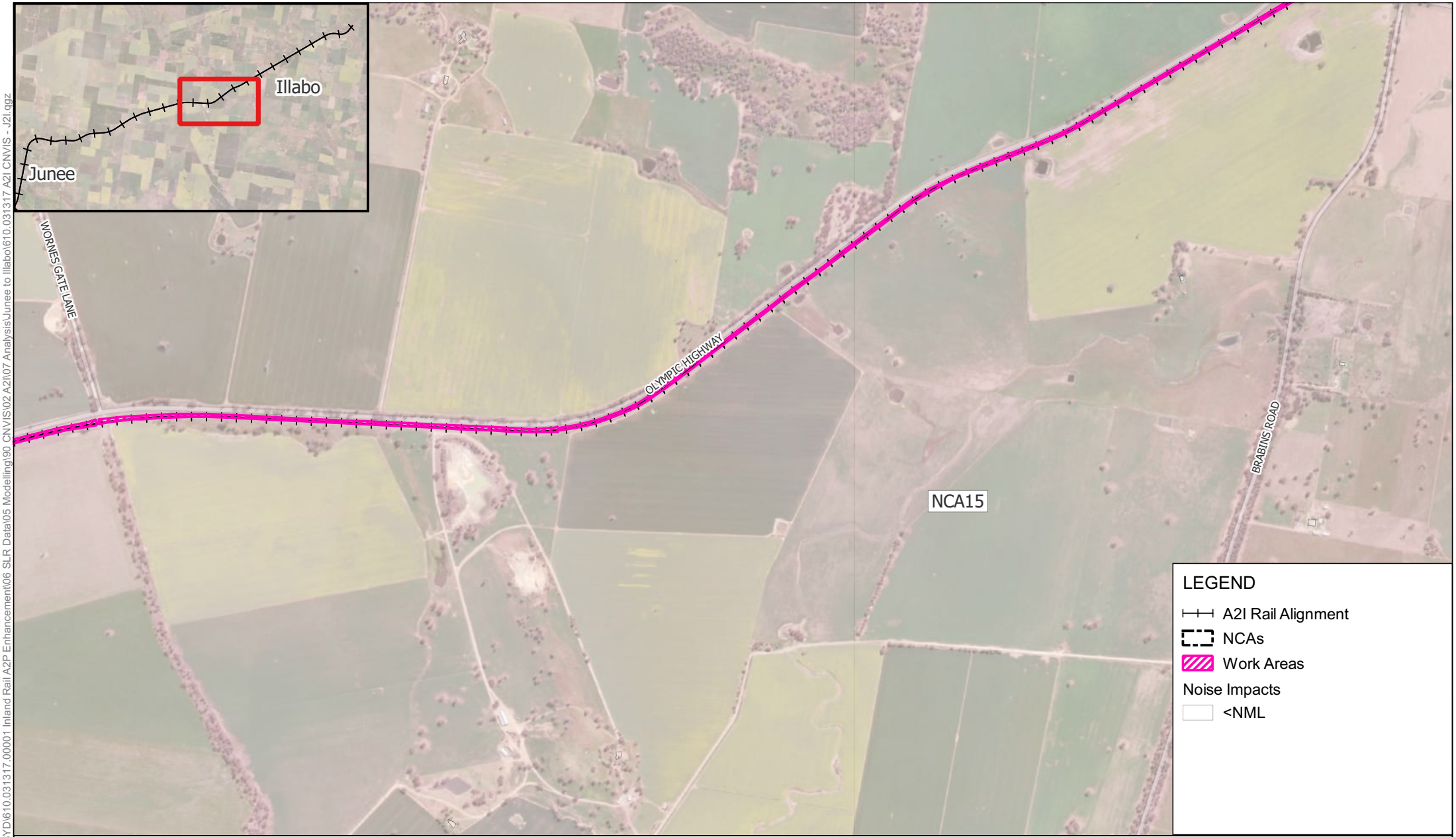

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Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

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W.006 Track Work - Typical - Approved Daytime Hours

APPENDIX C-15c

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W.006 Track Work - Typical - Approved Daytime Hours

APPENDIX C-15d

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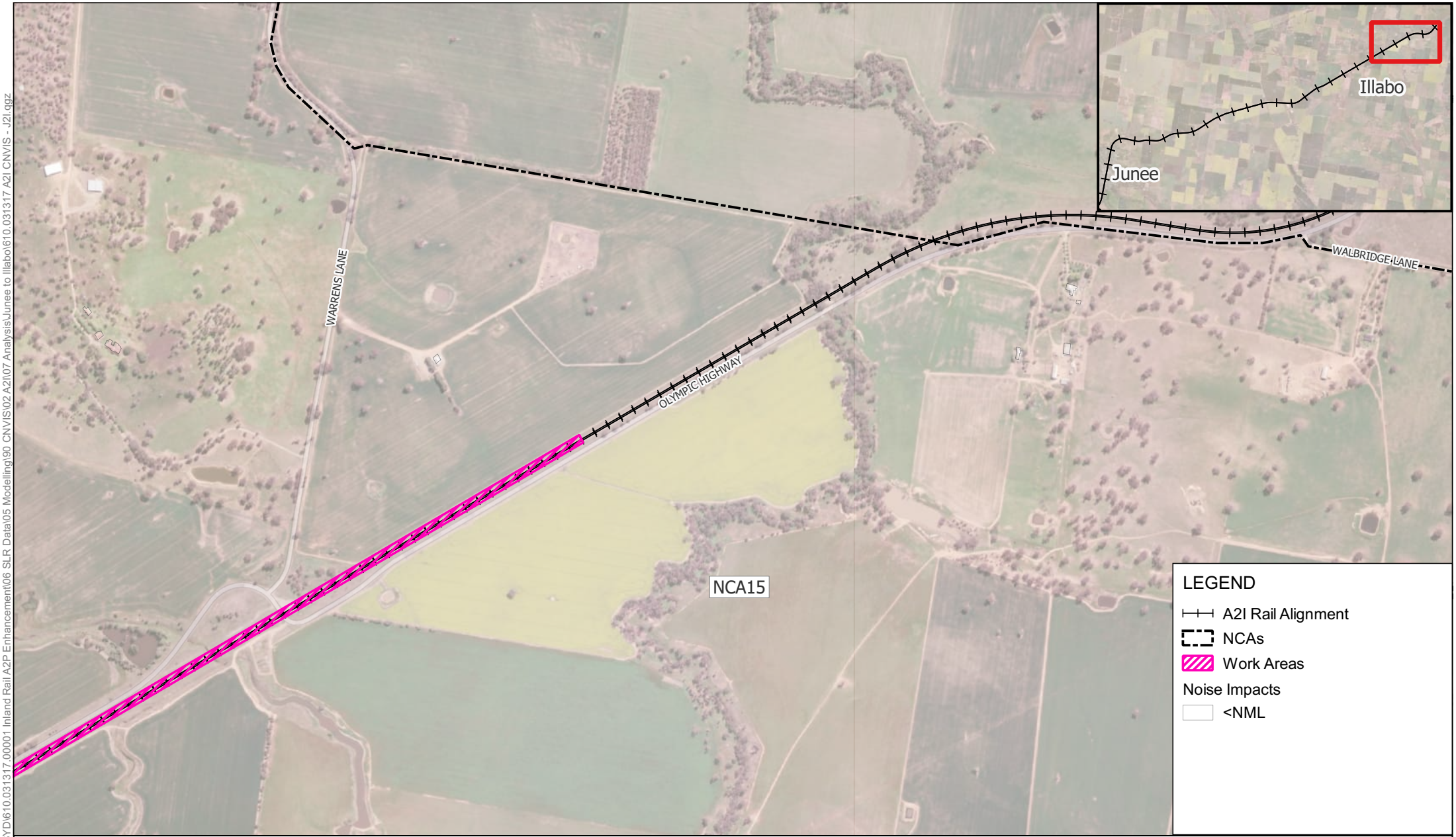

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W.006 Track Work - Typical - Approved Daytime Hours

APPENDIX C-15e

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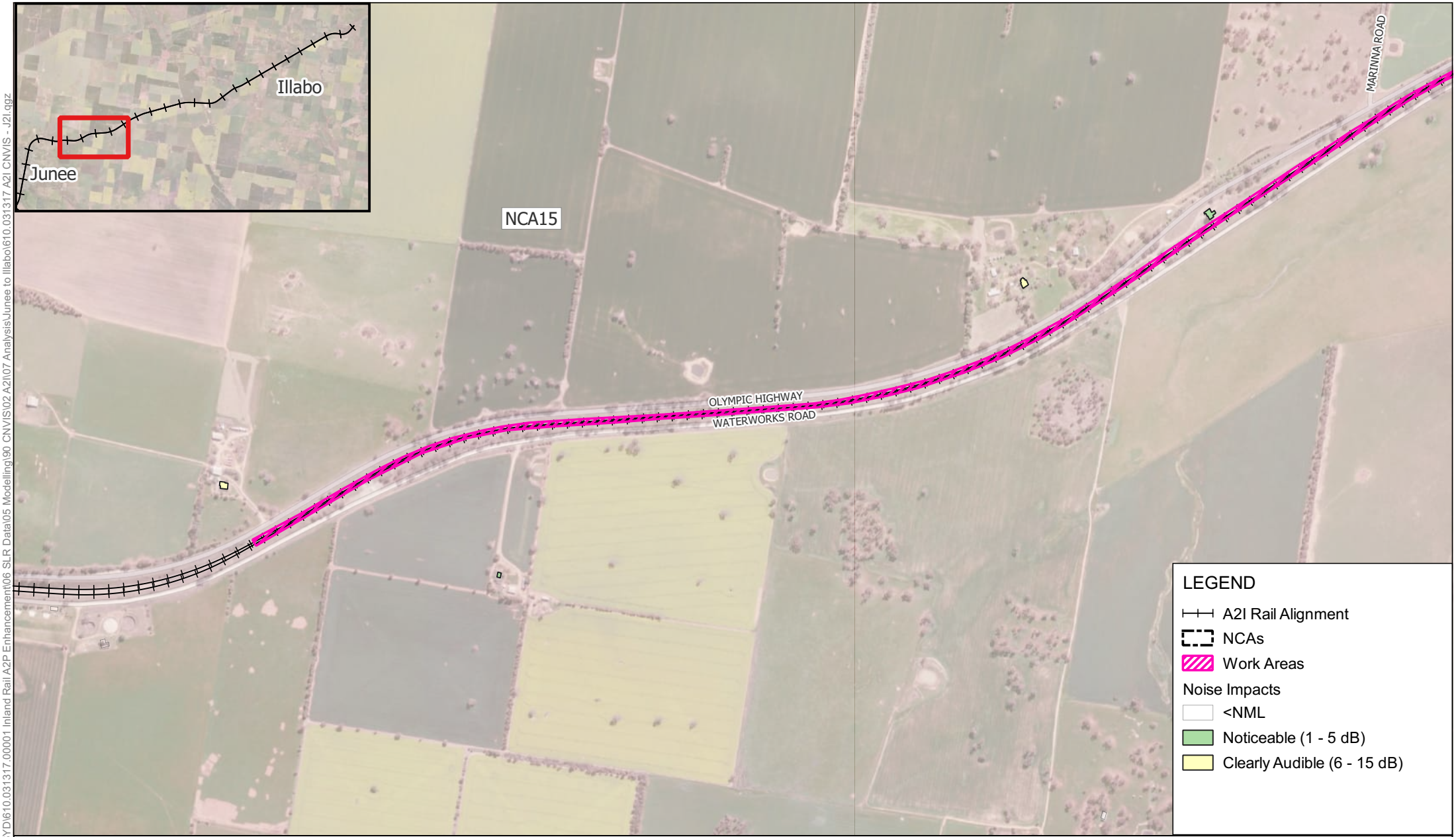

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W.006 Track Work - Typical - Out of Hours Daytime

APPENDIX C-16a

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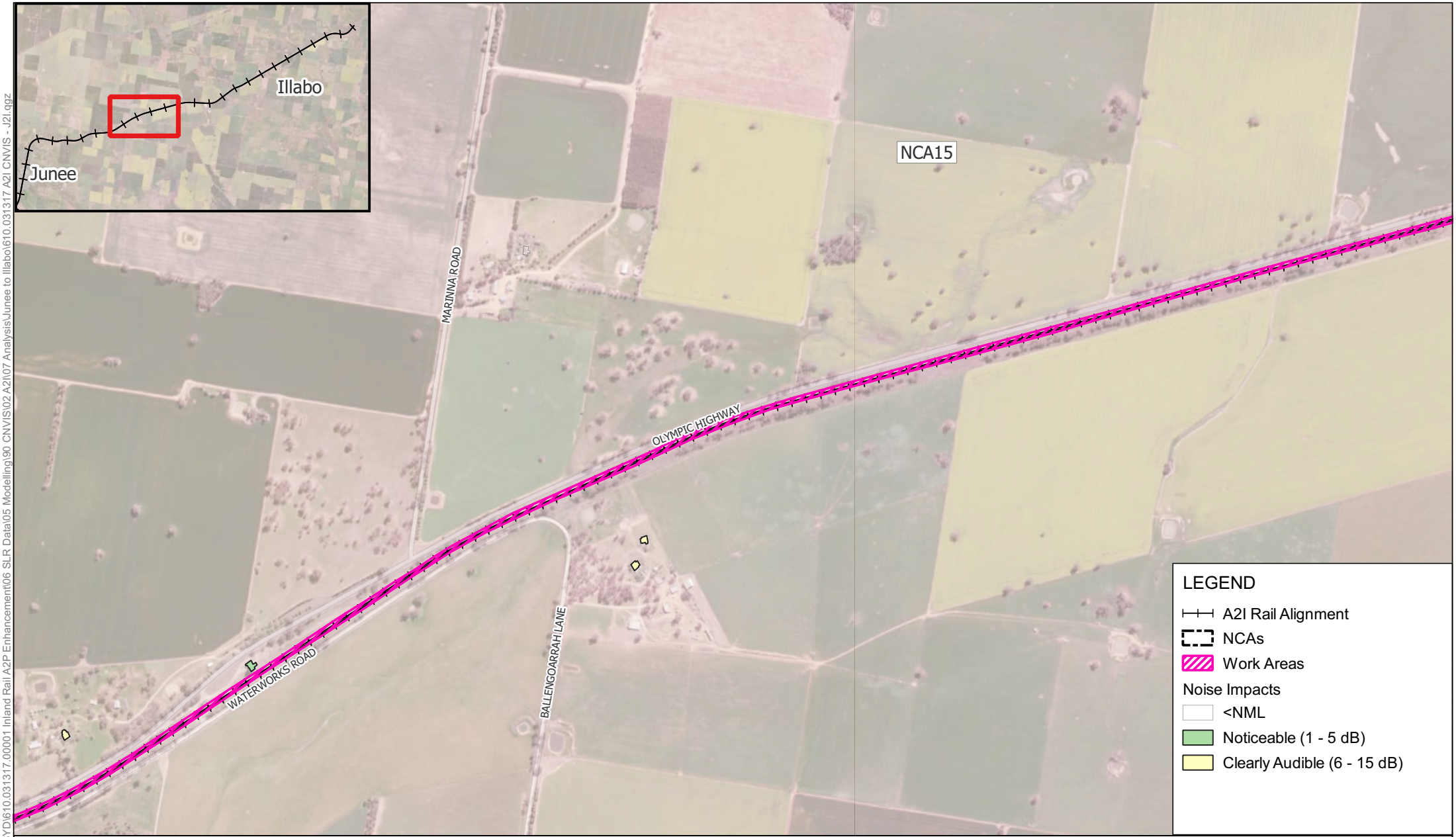

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APPENDIX C-16b

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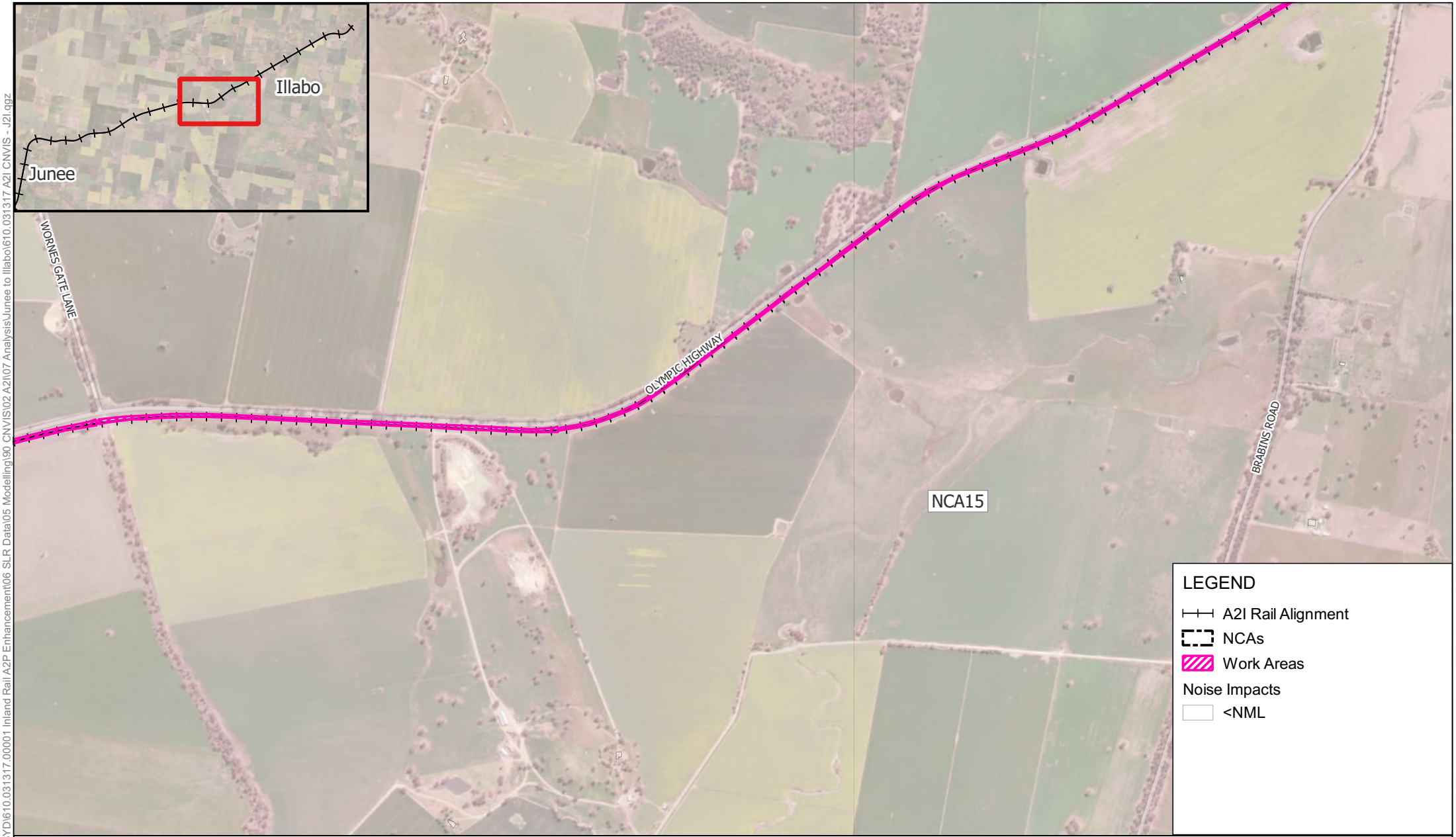

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APPENDIX C-16c

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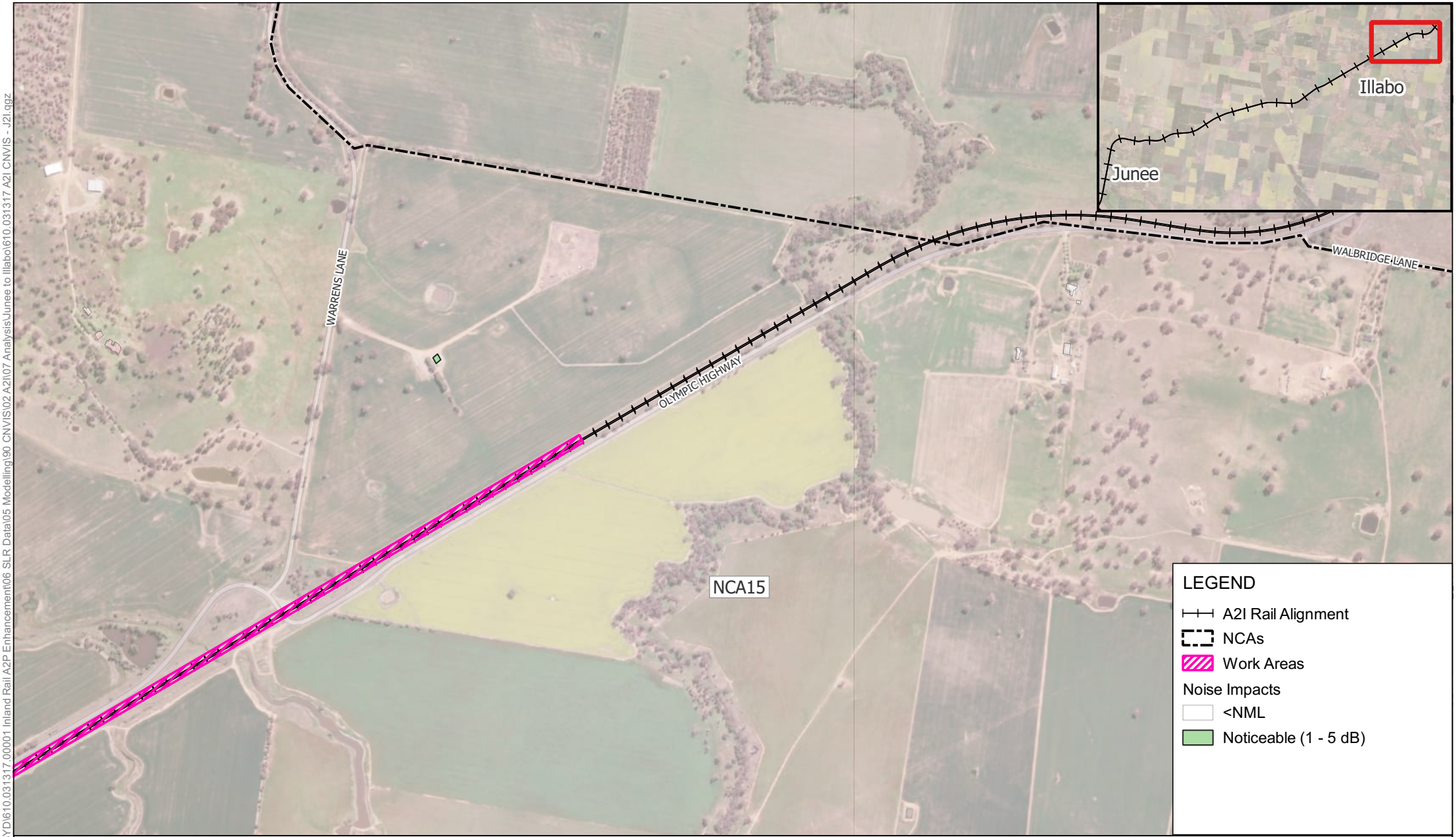

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W.006 Track Work - Typical - Out of Hours Daytime

APPENDIX C-16e

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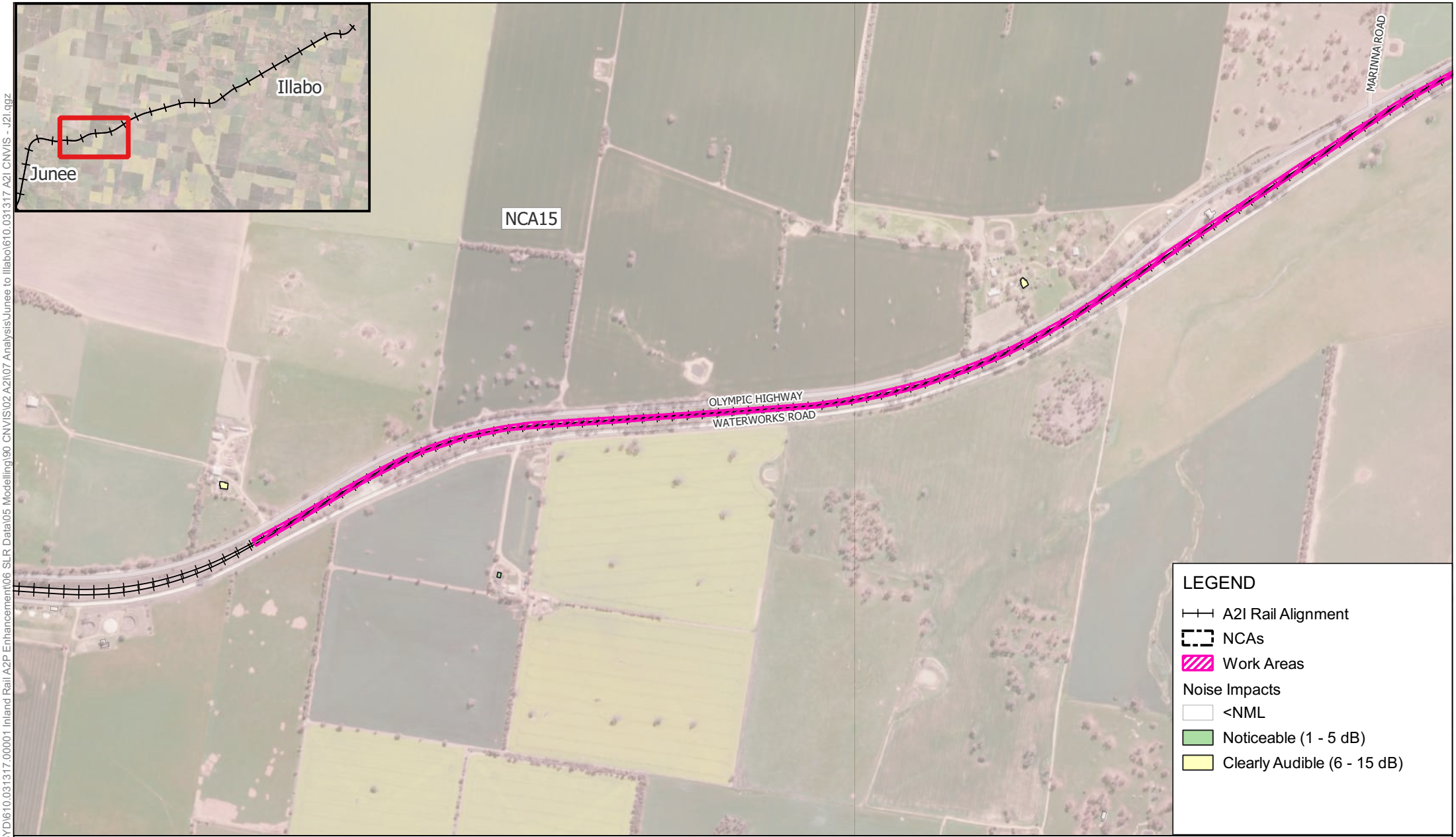

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W.006 Track Work - Typical - Out of Hours Evening

APPENDIX C-17a

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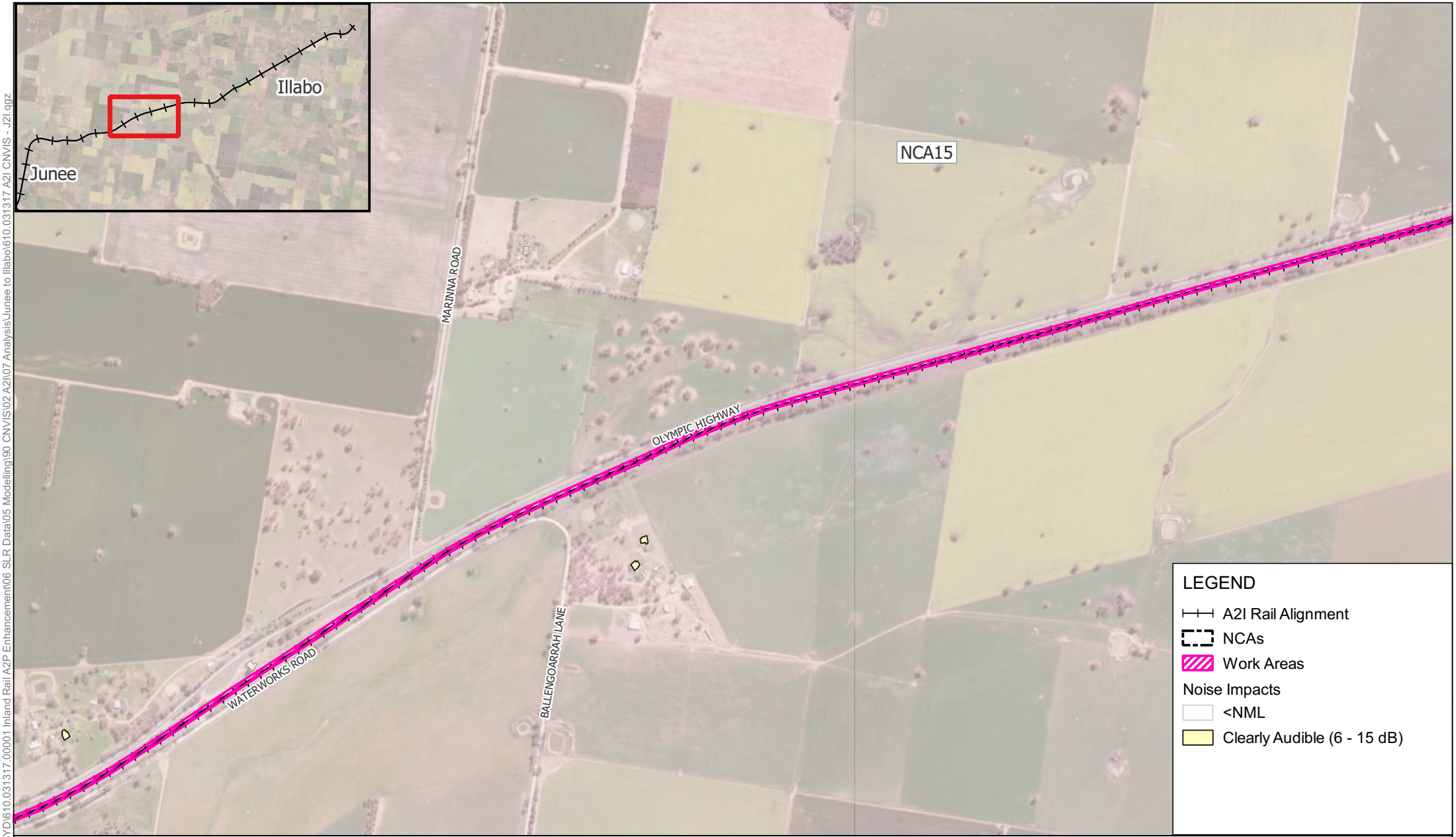

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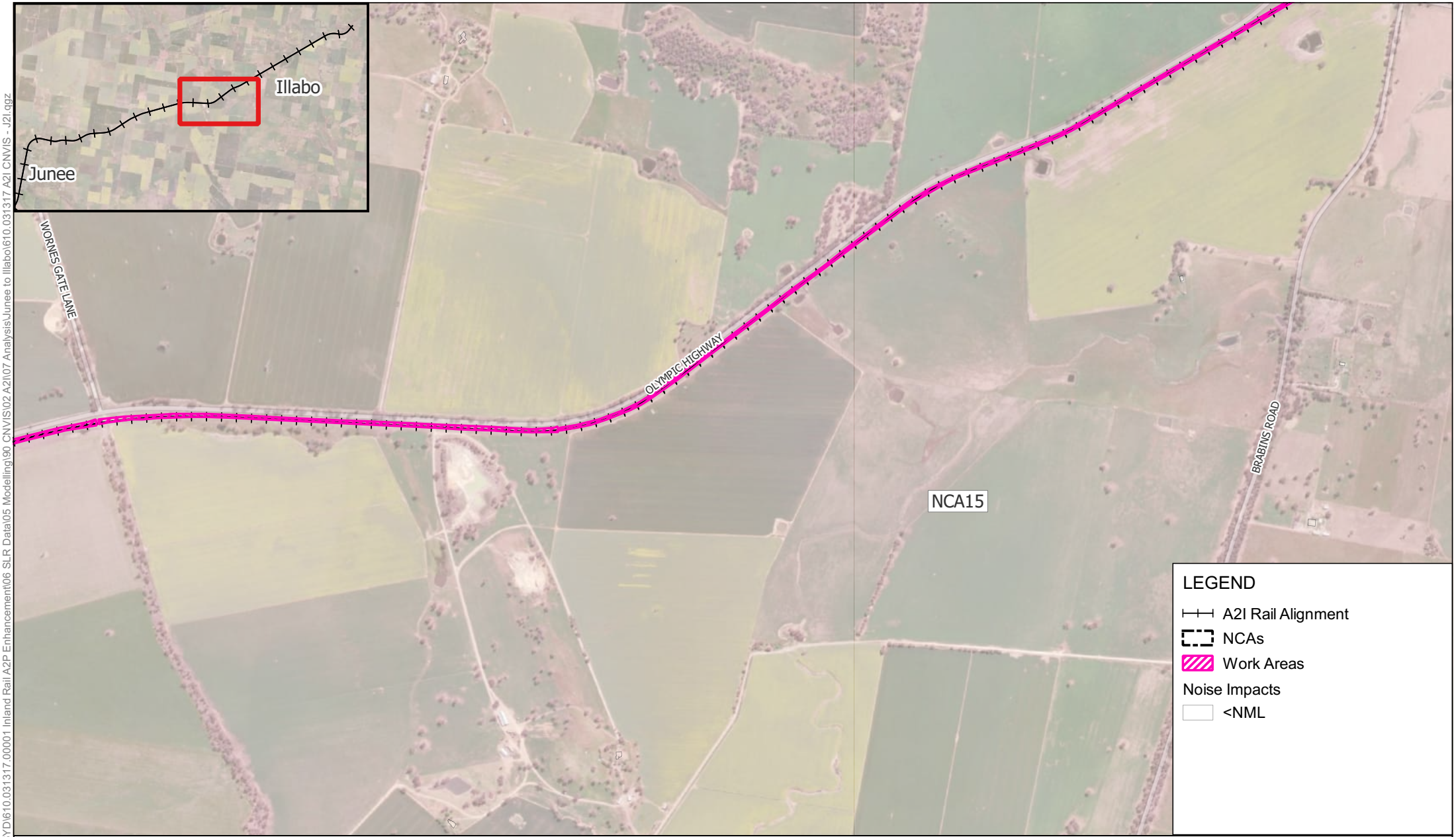
W.006 Track Work - Typical - Out of Hours Evening

APPENDIX C-17b

H:\Projects-SLR\610-SrvSYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



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Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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W.006 Track Work - Typical - Out of Hours Evening

APPENDIX C-17c

H:\Projects-SLR\610-SrvSYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

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Scale: Scale: 1:13,000
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Drawn Date: 02-Apr-2025
Project Number: 610.031317

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W.006 Track Work - Typical - Out of Hours Evening

APPENDIX C-17d

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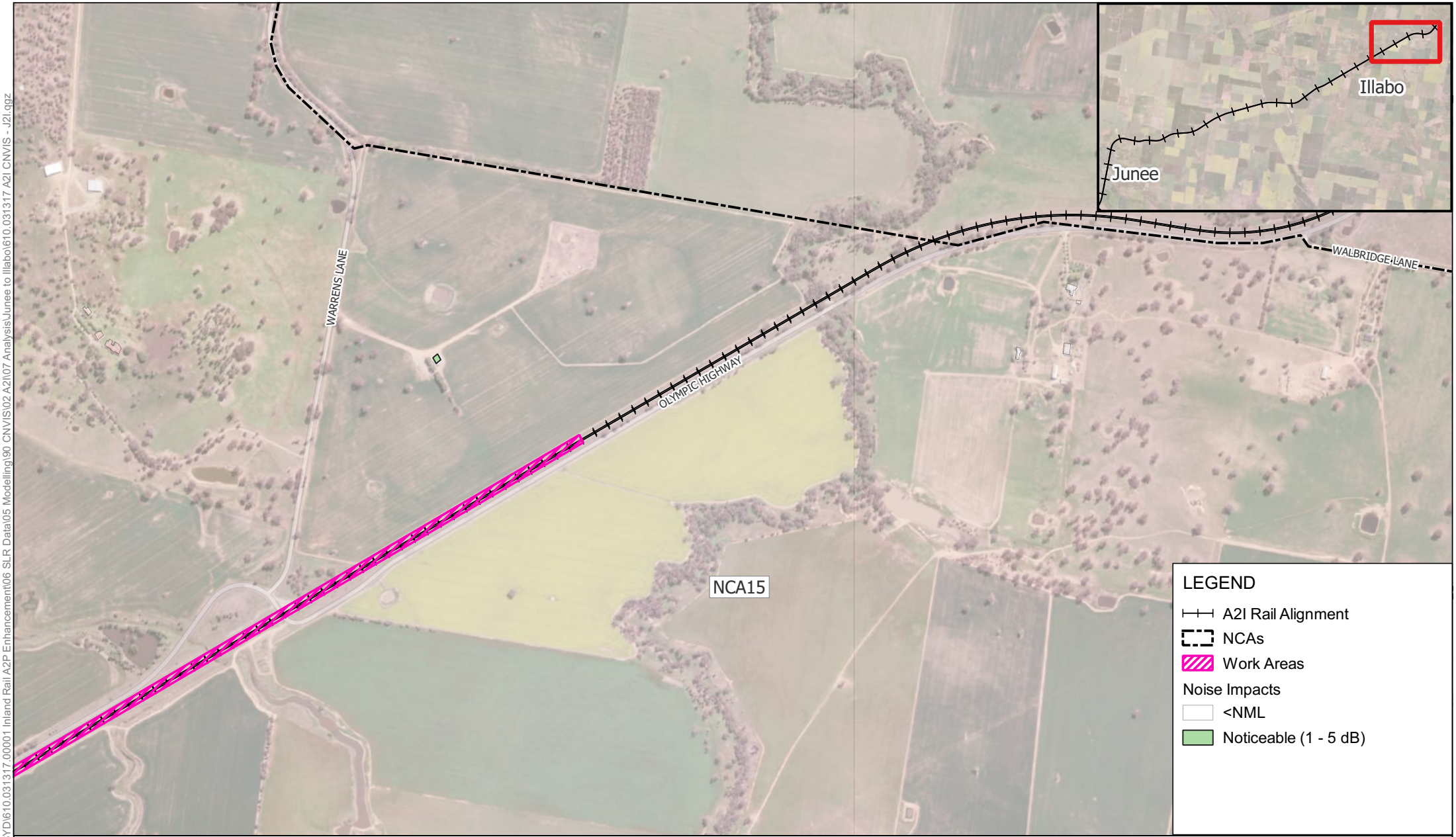

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Project Number: 610.031317

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W.006 Track Work - Typical - Out of Hours Evening

APPENDIX C-17e

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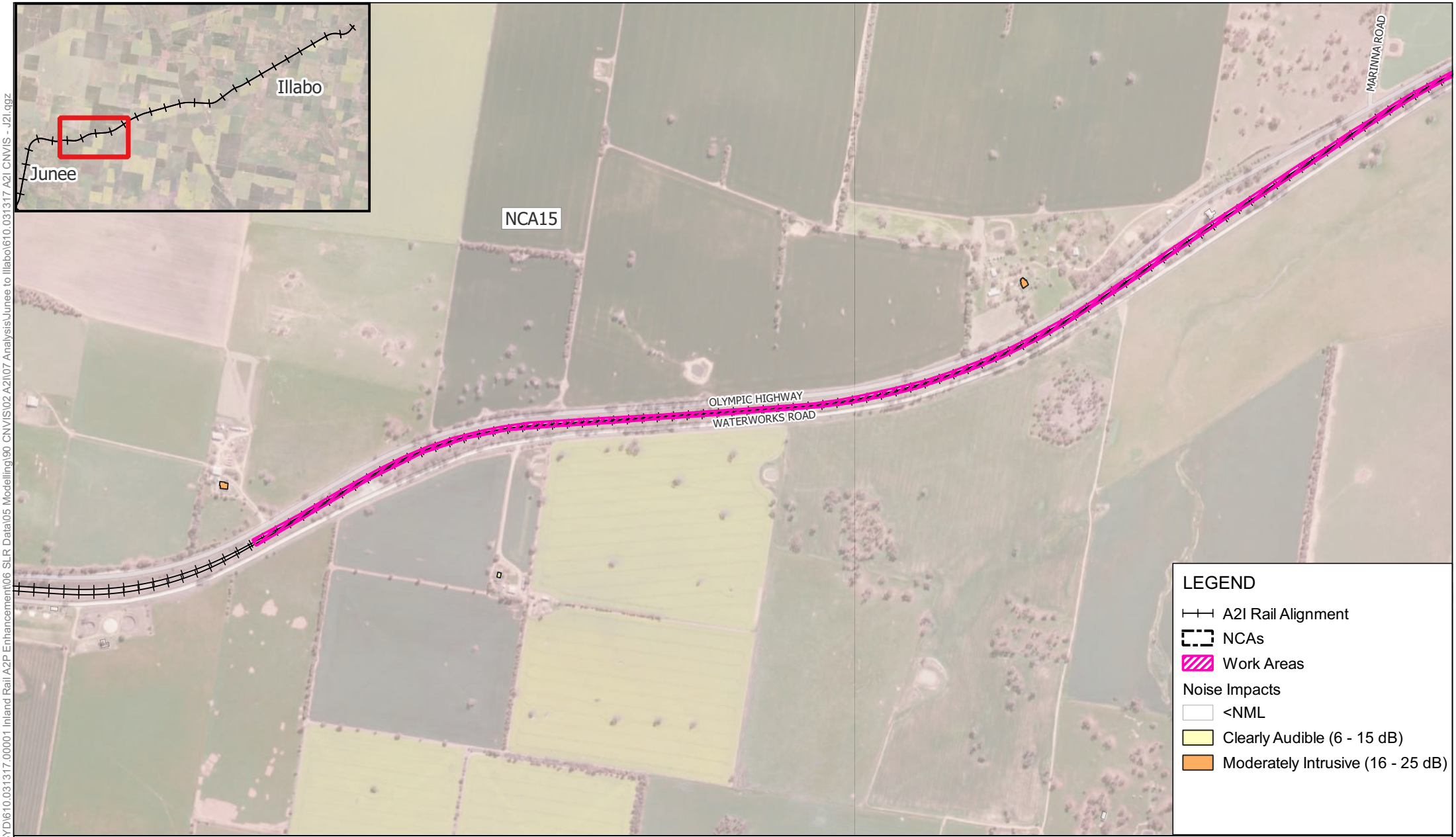

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W.006 Track Work - Typical - Out of Hours Night-time

APPENDIX C-18a

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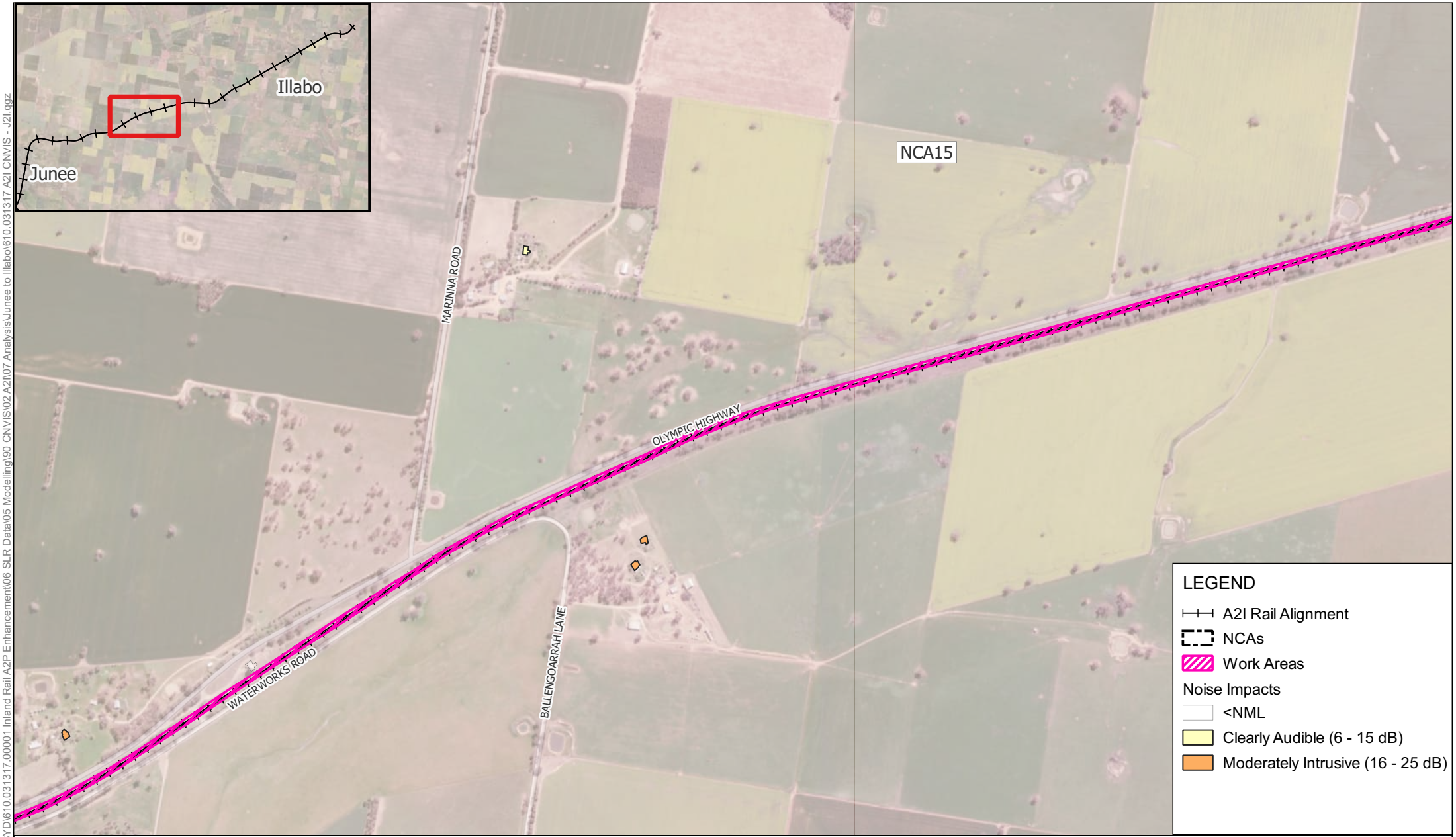

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Drawn Date: 02-Apr-2025
Project Number: 610.031317

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W.006 Track Work - Typical - Out of Hours Night-time

APPENDIX C-18b

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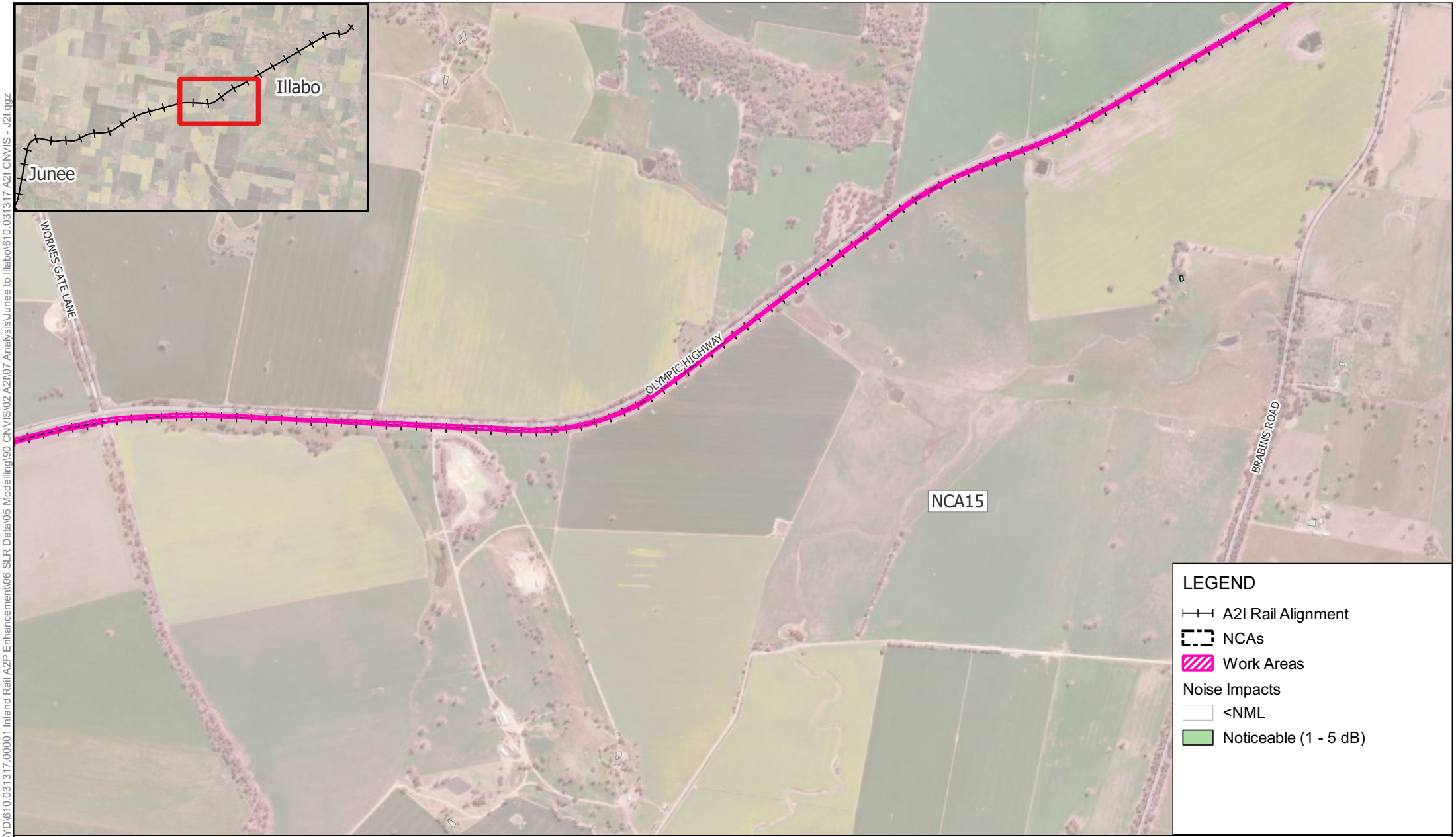

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Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

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W.006 Track Work - Typical - Out of Hours Night-time

APPENDIX C-18c

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W.006 Track Work - Typical - Out of Hours Night-time

APPENDIX C-18d

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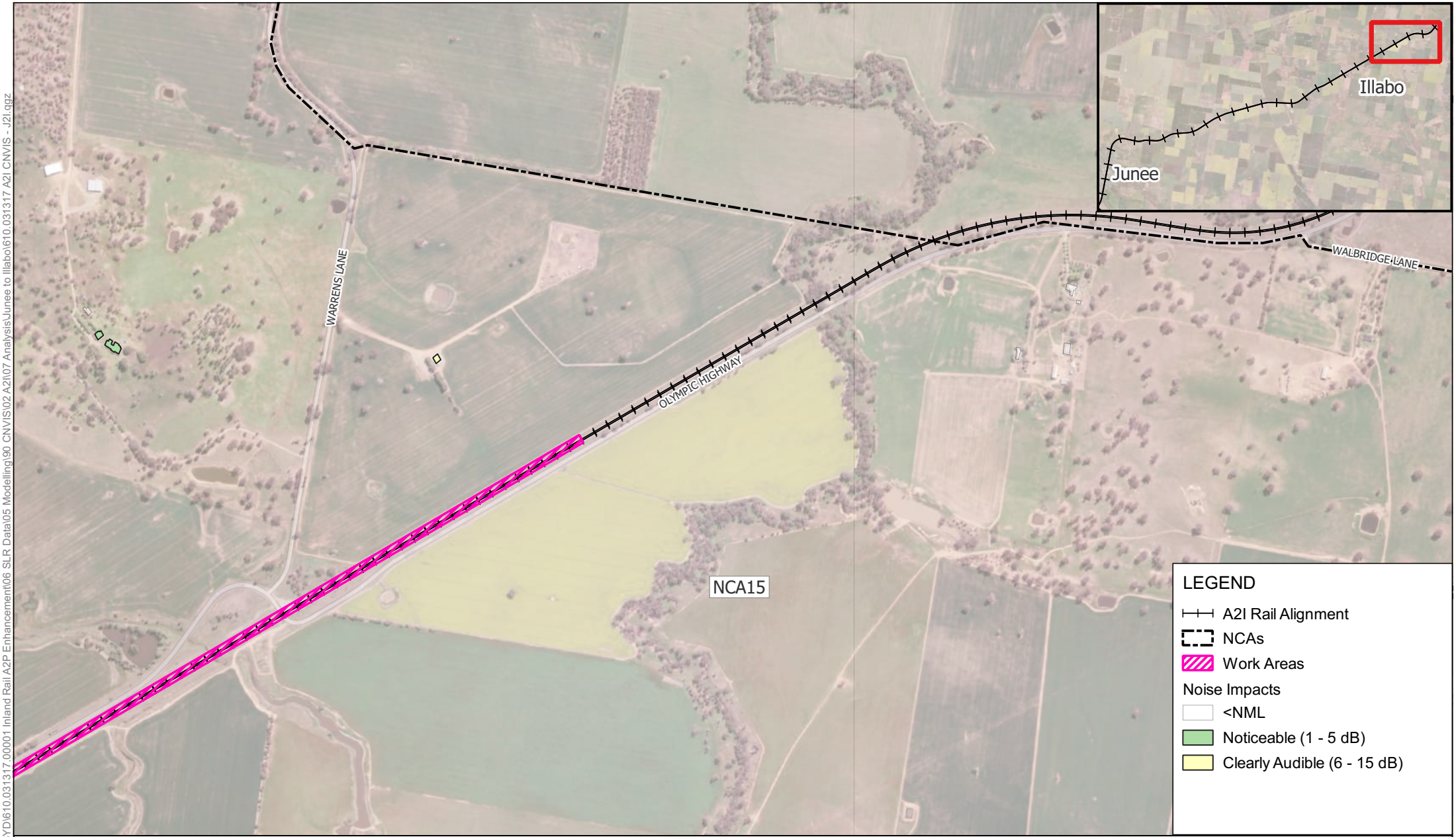

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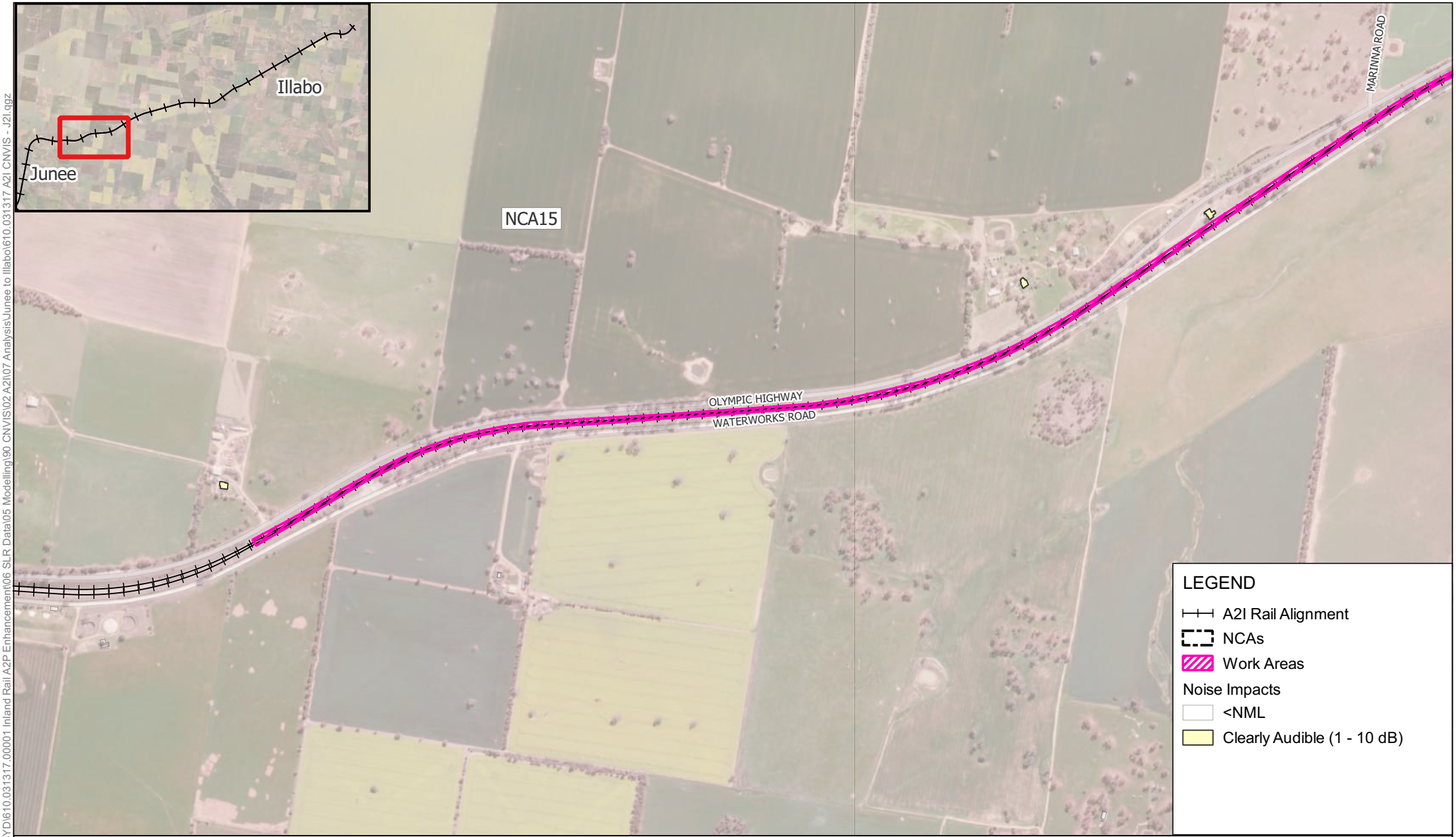

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W.007 Track Tamping - Approved Daytime Hours

APPENDIX C-19a

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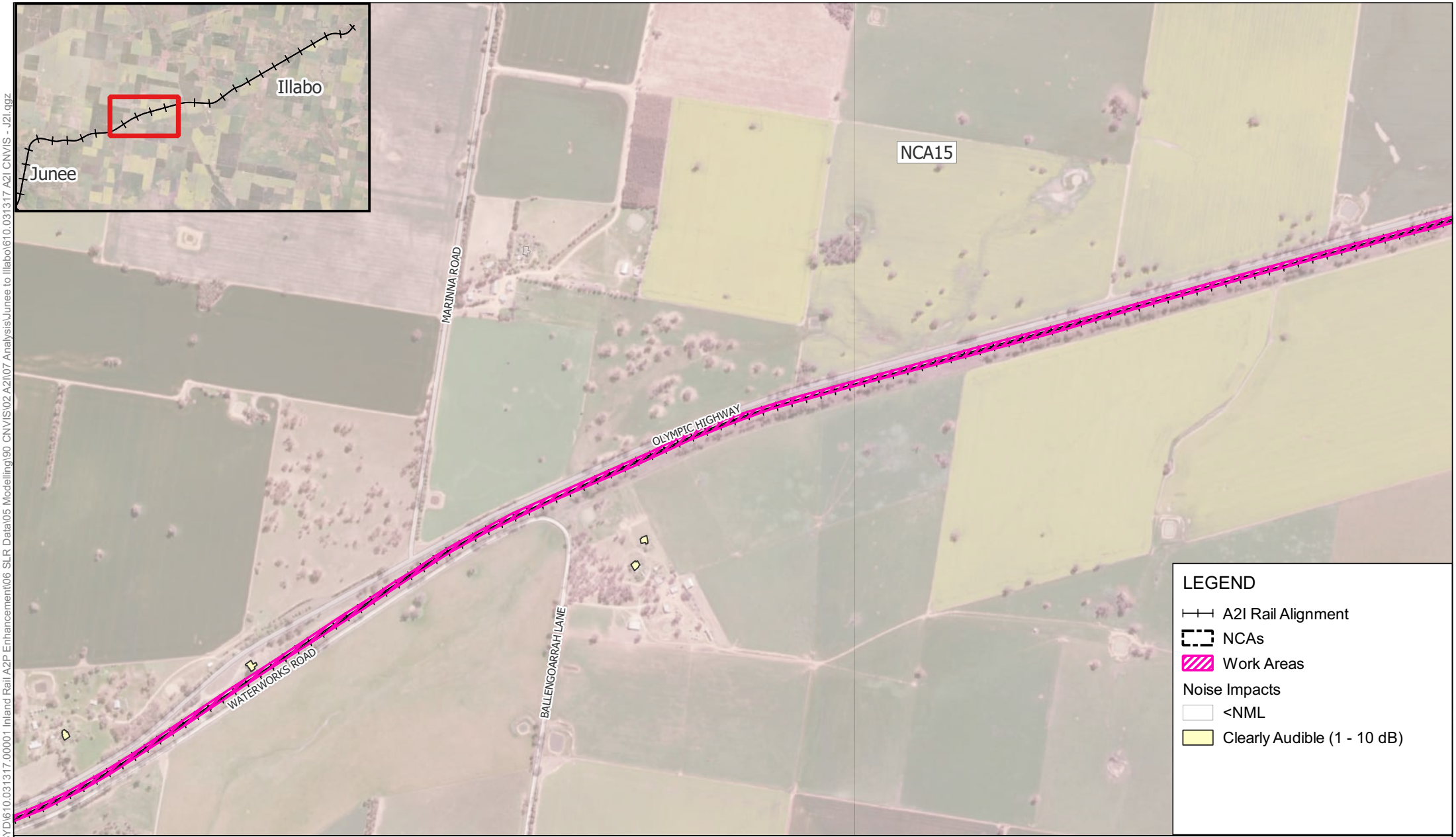

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APPENDIX C-19b

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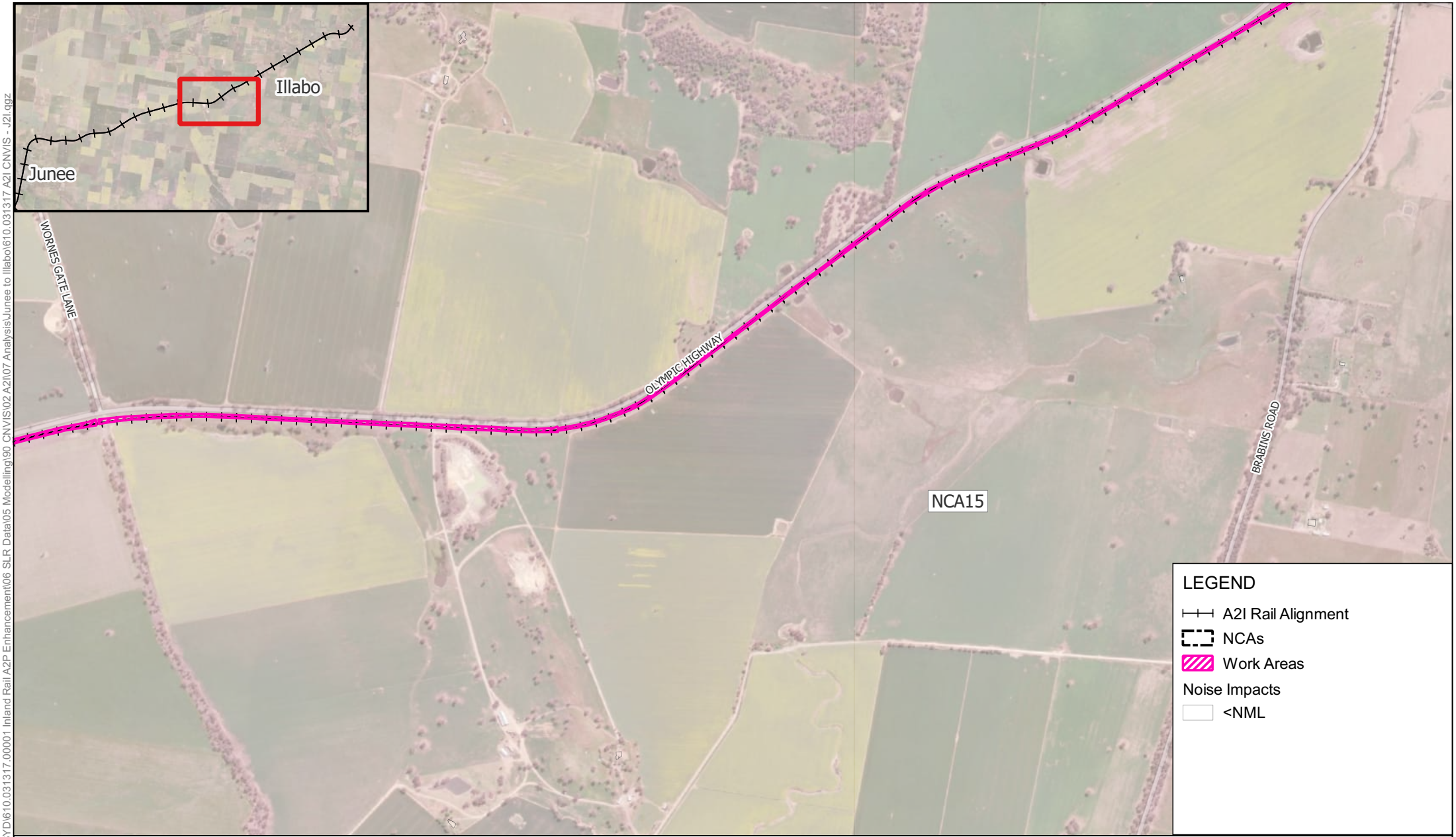

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APPENDIX C-19c

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APPENDIX C-19d

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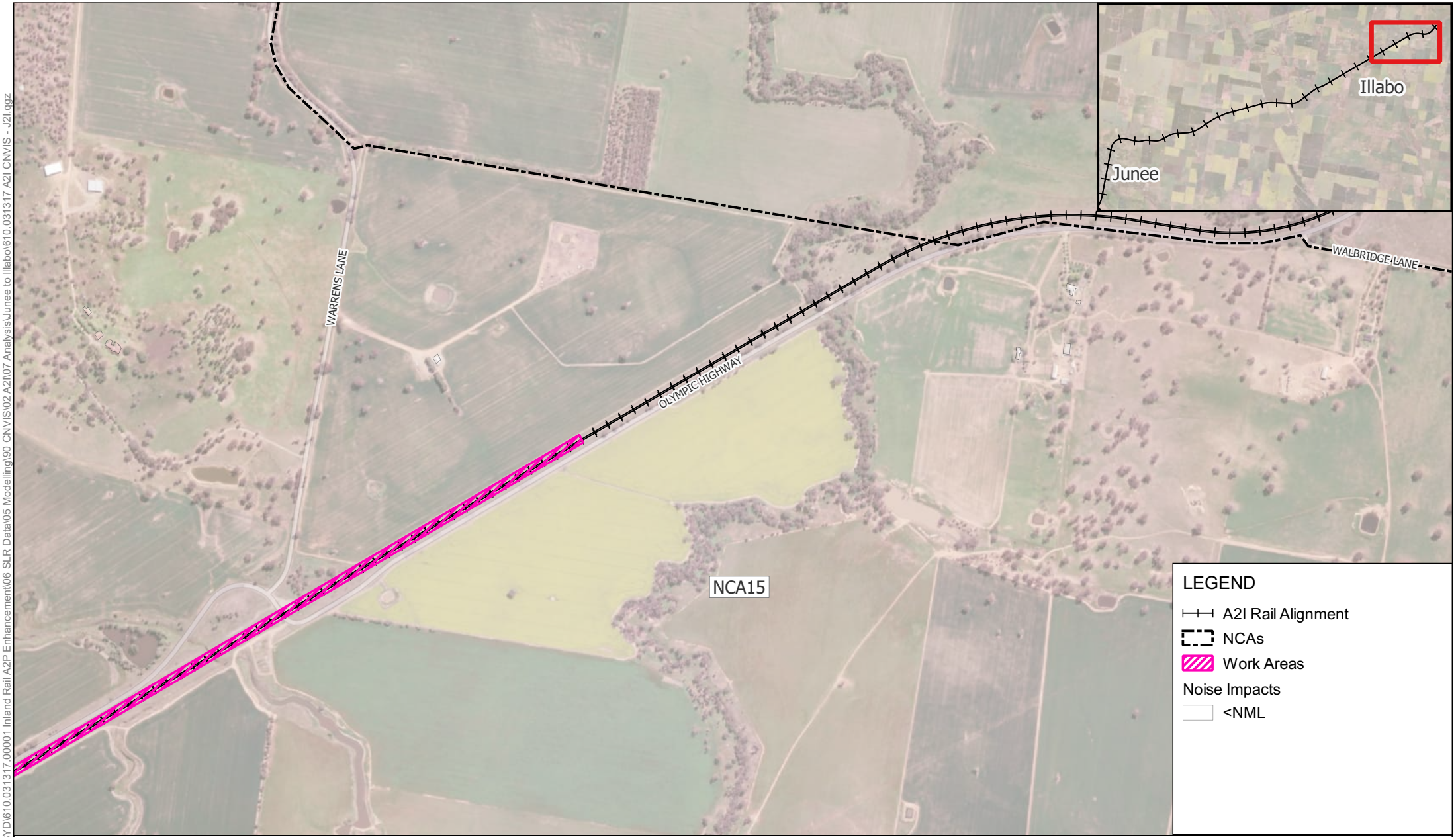

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APPENDIX C-19e

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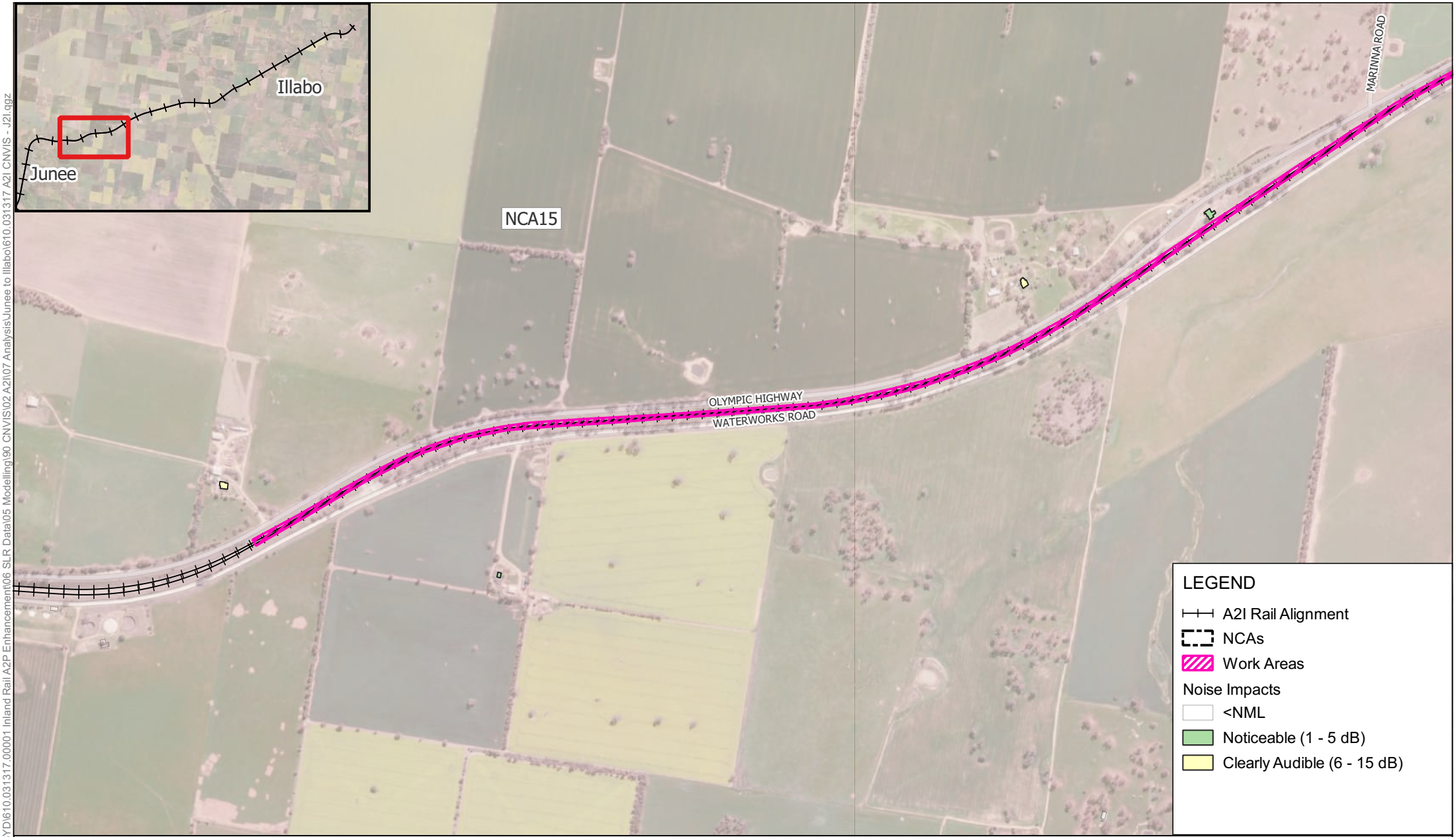

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W.007 Track Tamping - Out of Hours Daytime

APPENDIX C-20a

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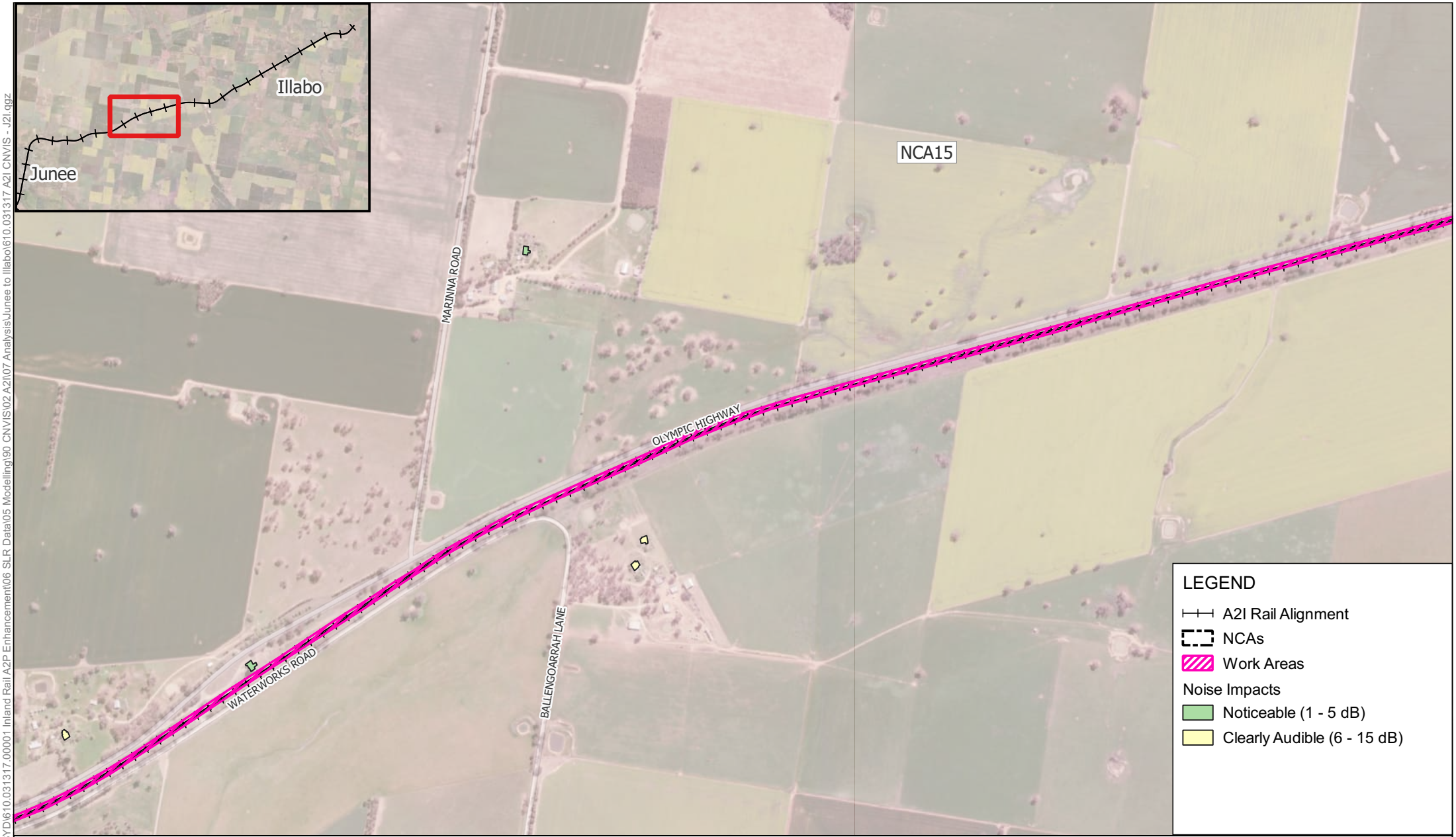

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APPENDIX C-20b

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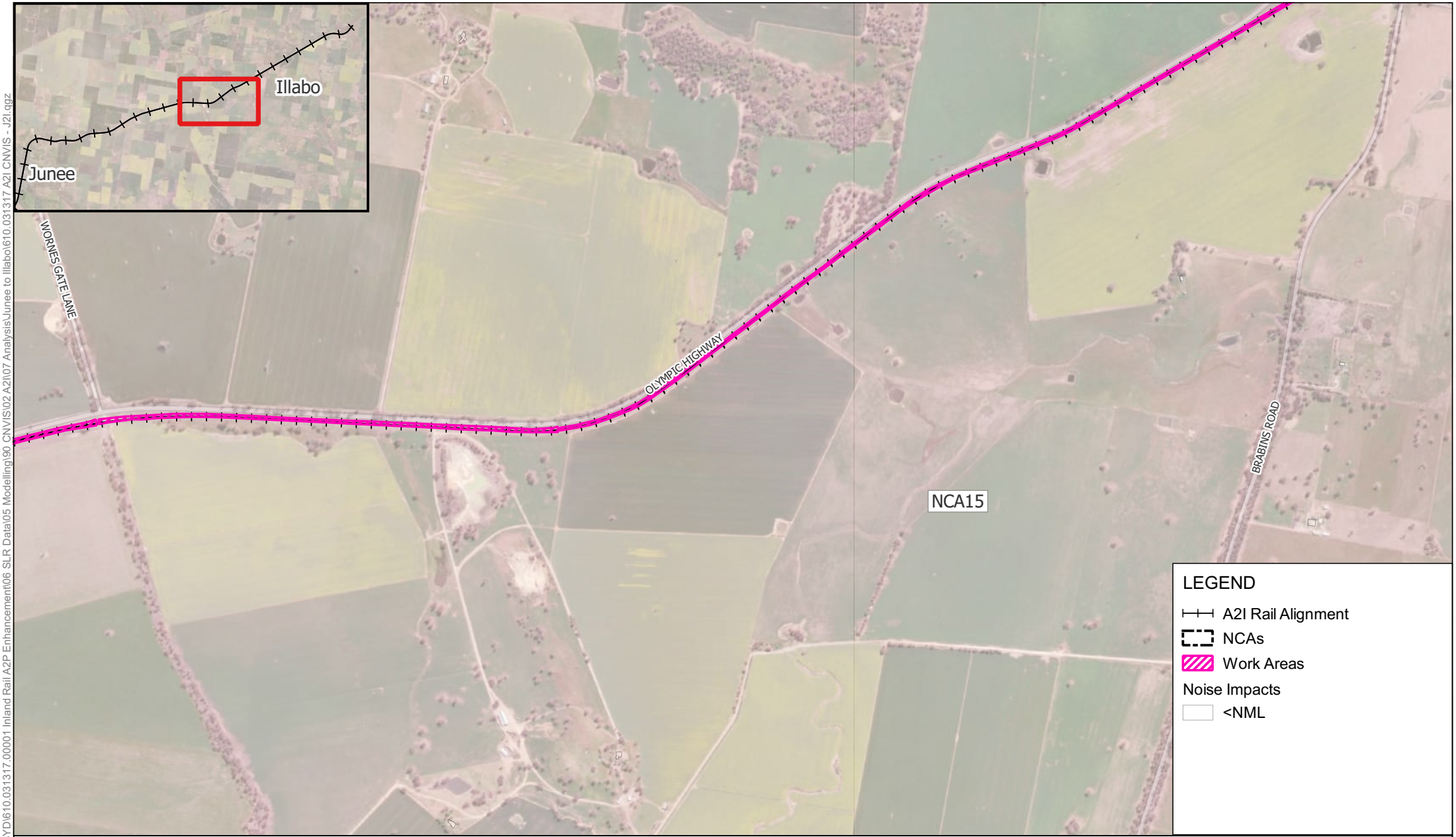

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APPENDIX C-20c

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APPENDIX C-20d

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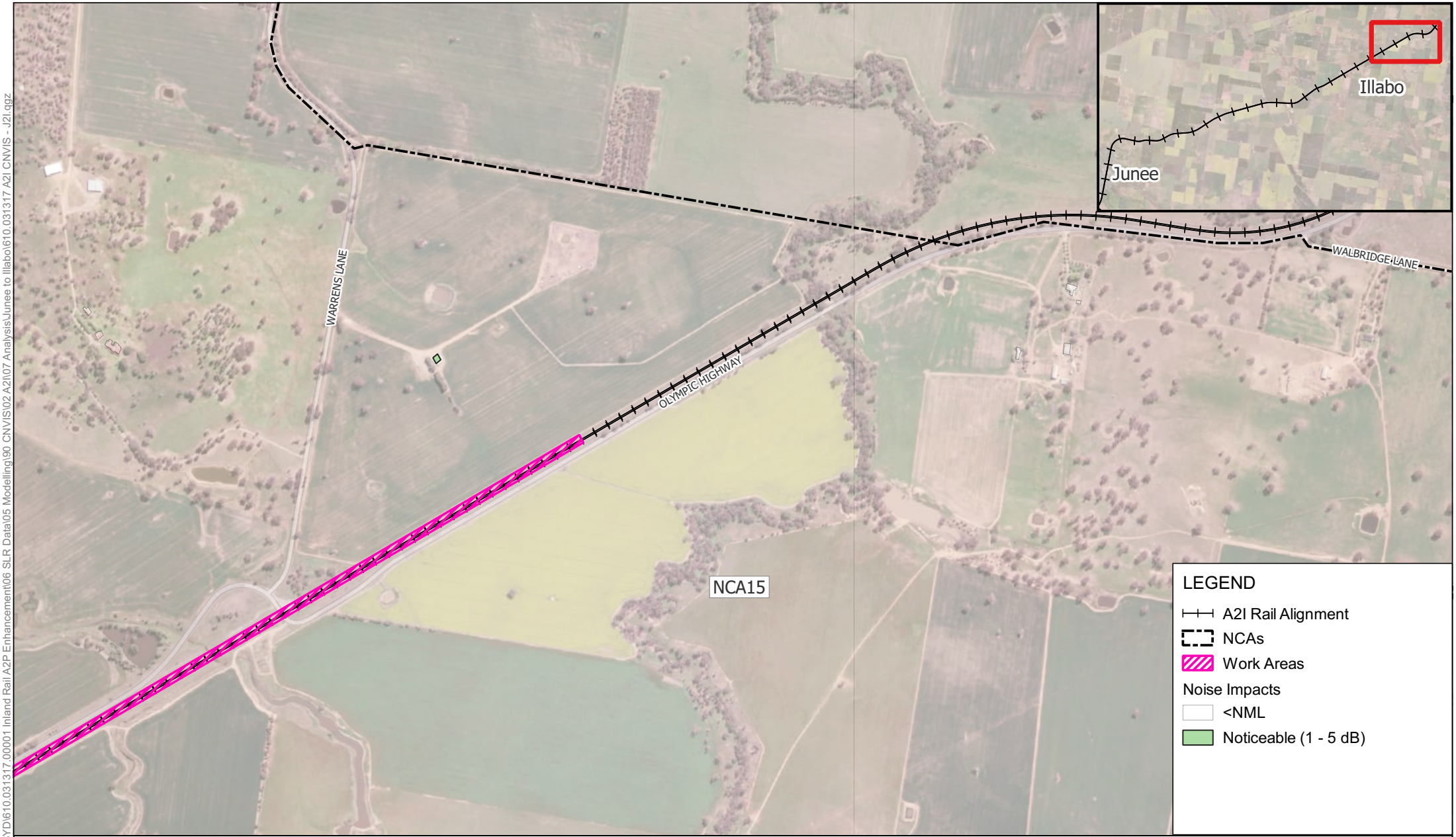

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W.007 Track Tamping - Out of Hours Daytime

APPENDIX C-20e

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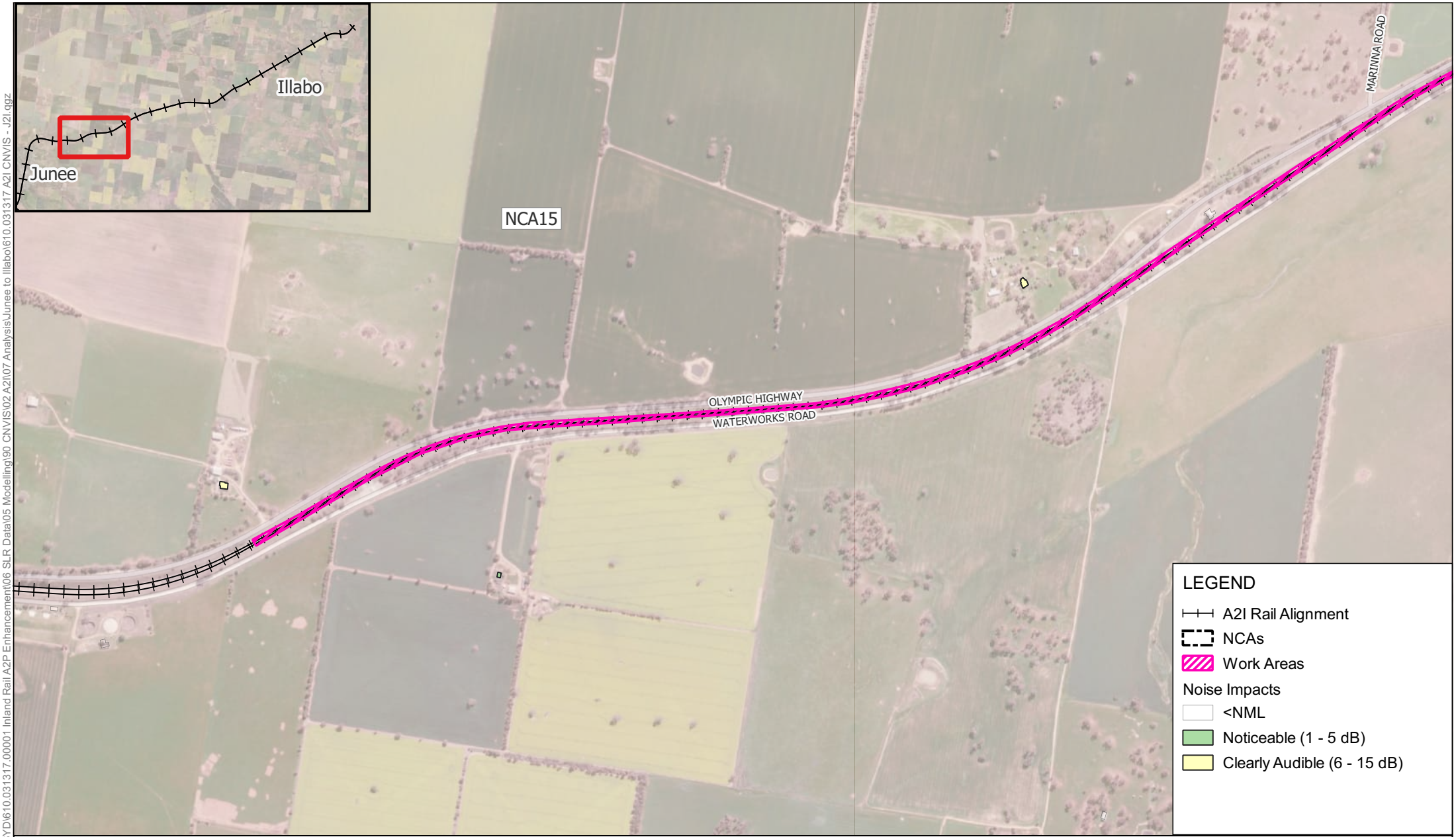

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W.007 Track Tamping - Out of Hours Evening

APPENDIX C-21a

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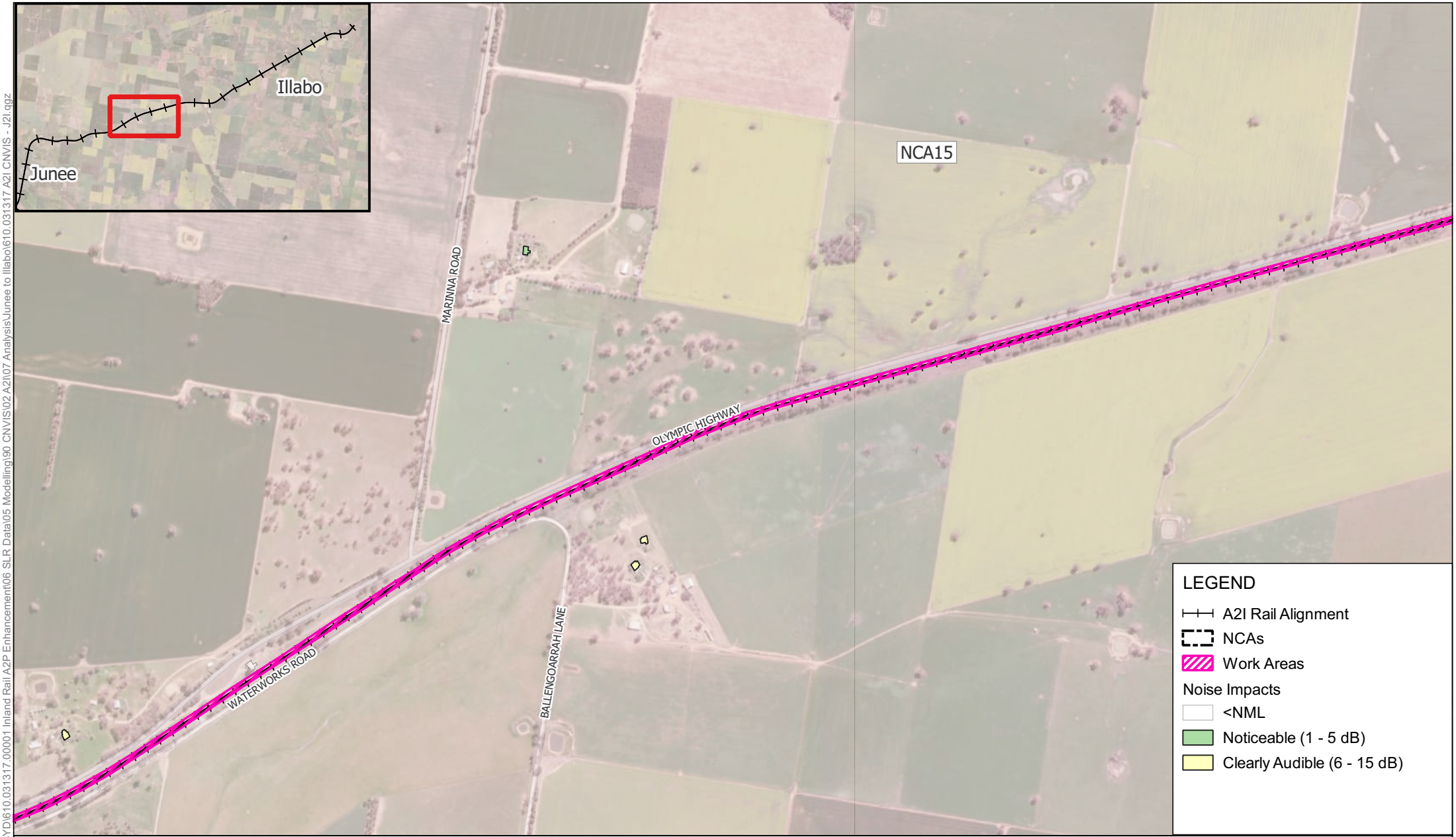

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Coordinate System: GDA2020 / MGA zone 55

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W.007 Track Tamping - Out of Hours Evening

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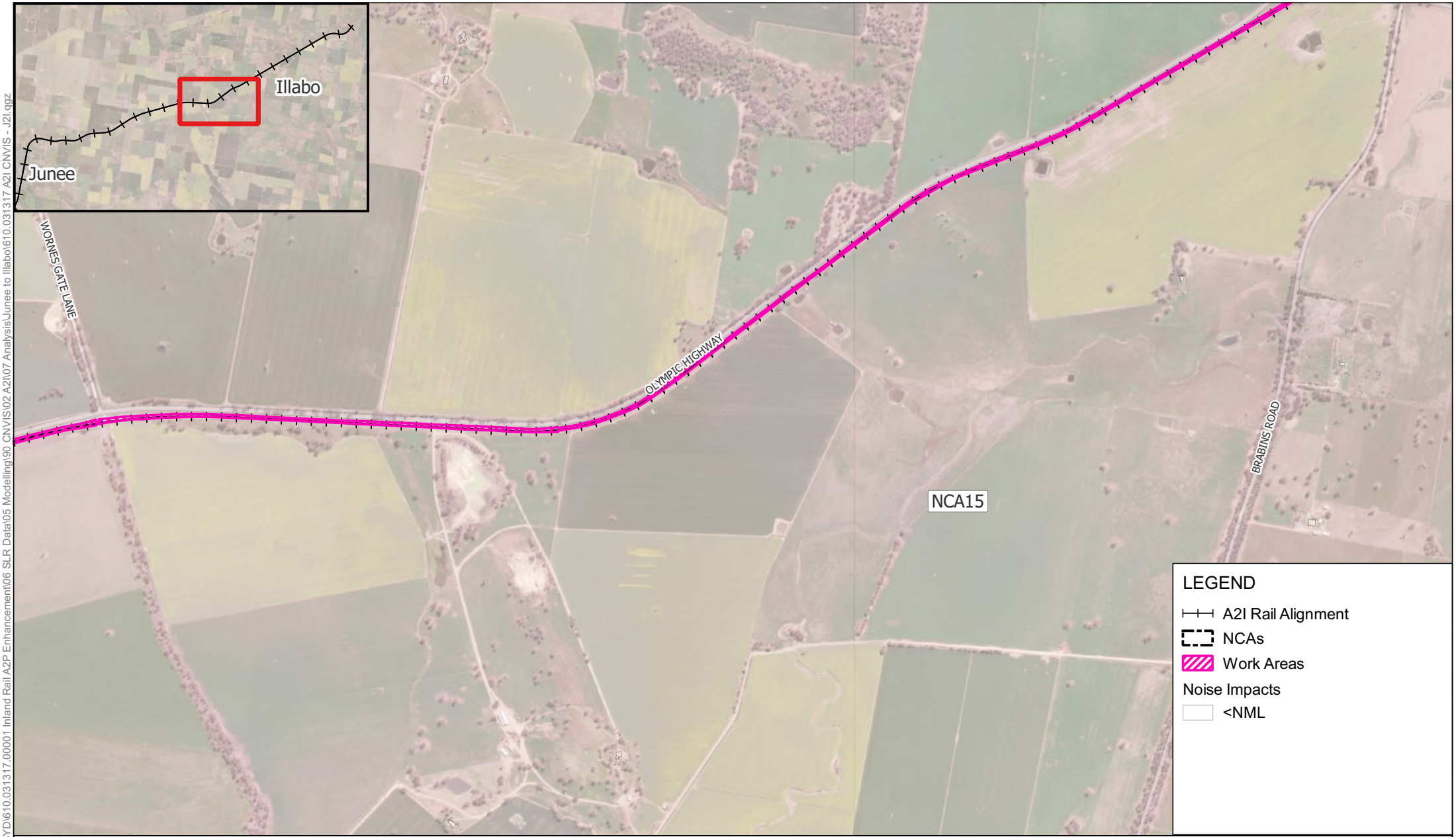

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W.007 Track Tamping - Out of Hours Evening

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W.007 Track Tamping - Out of Hours Evening

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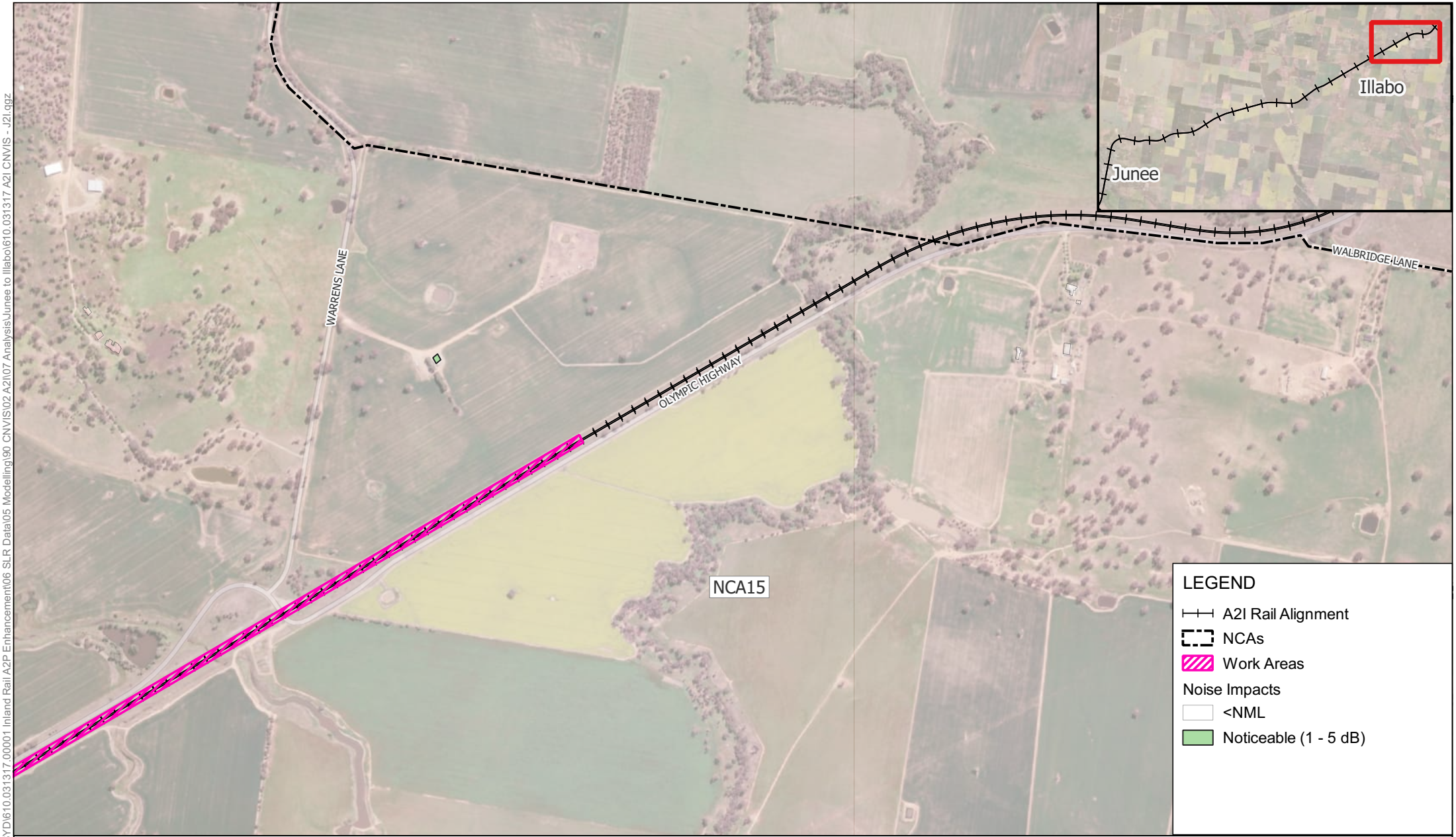

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W.007 Track Tamping - Out of Hours Evening

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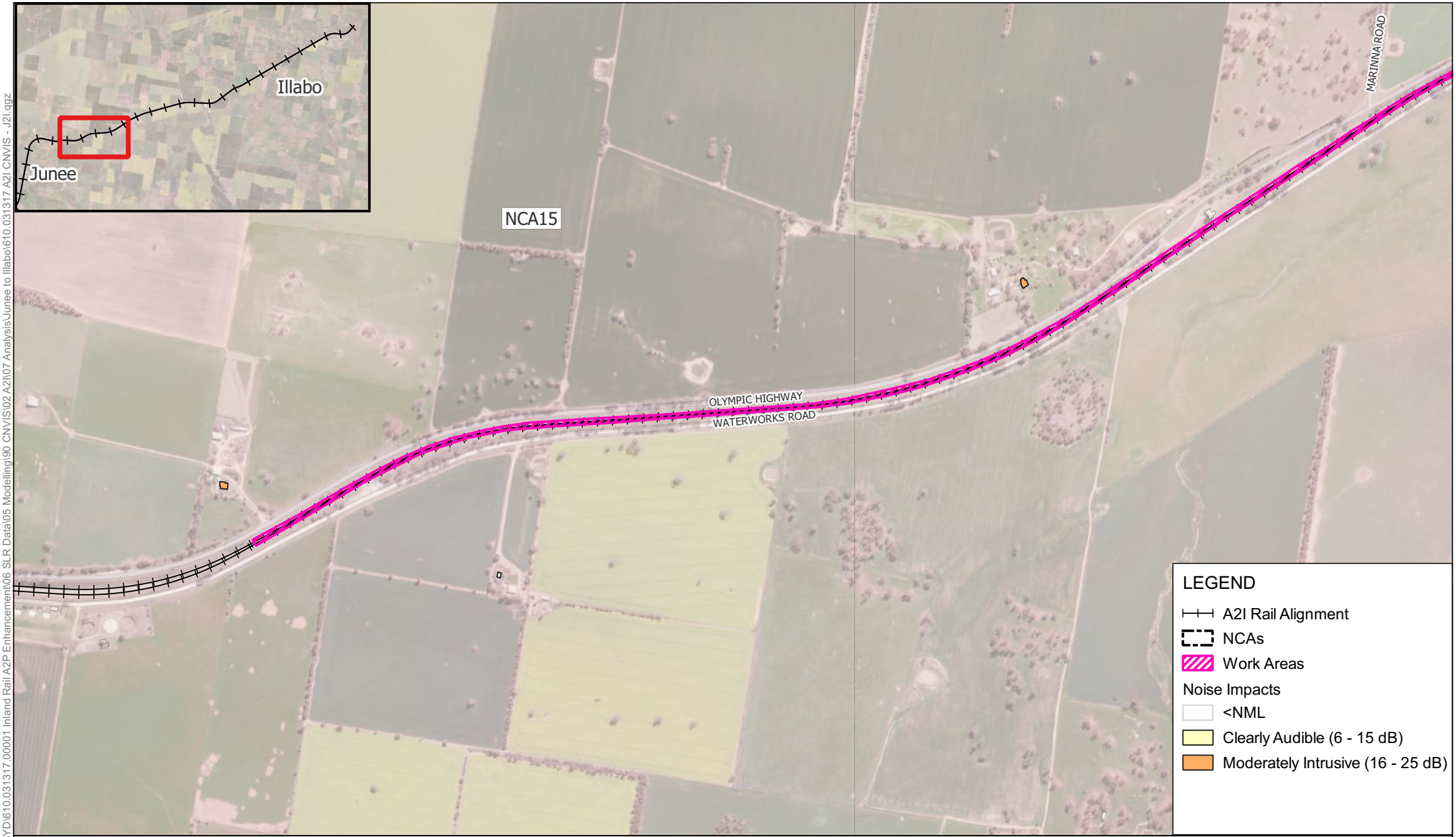

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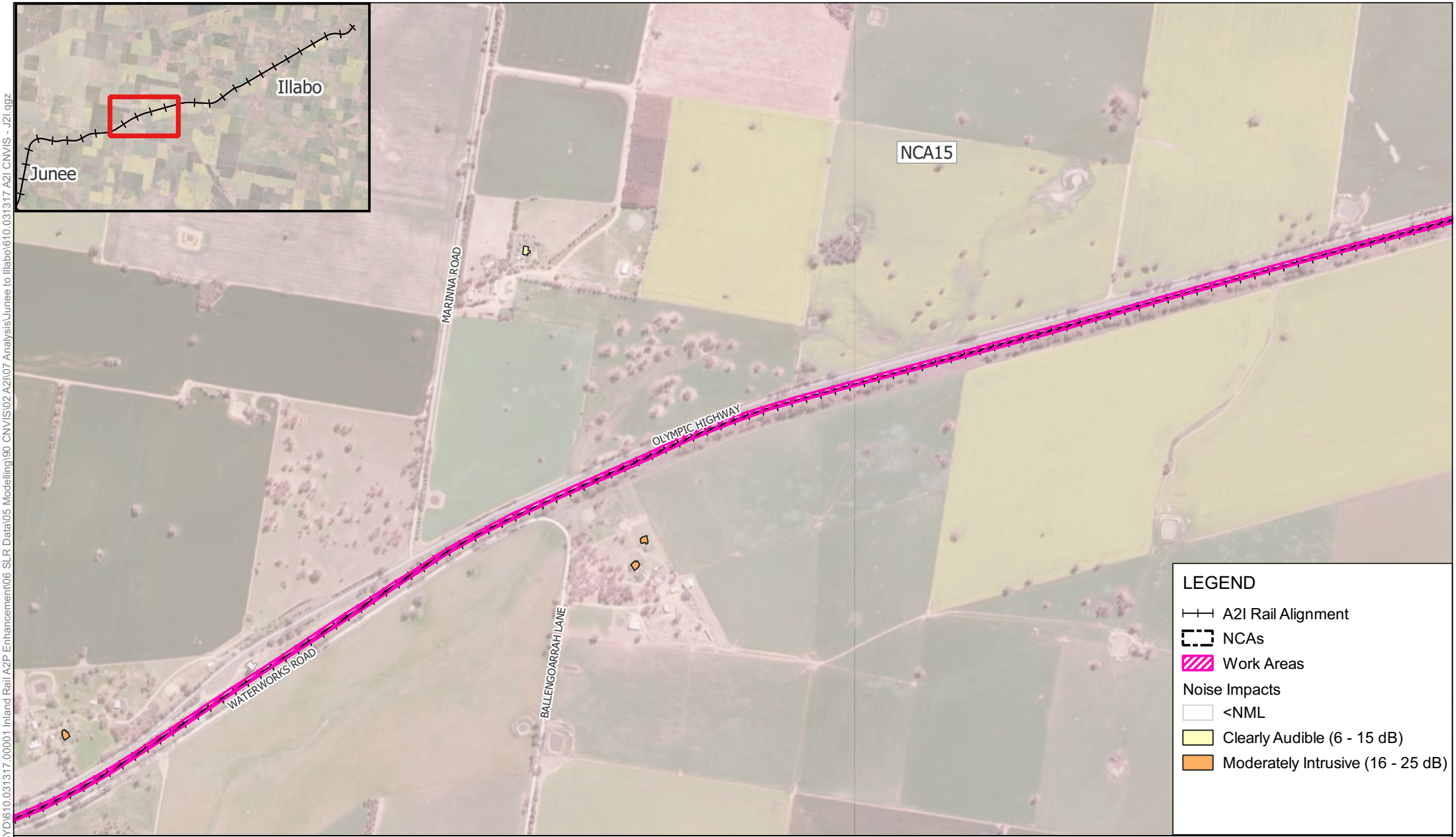

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W.007 Track Tamping - Out of Hours Night-time

APPENDIX C-22b

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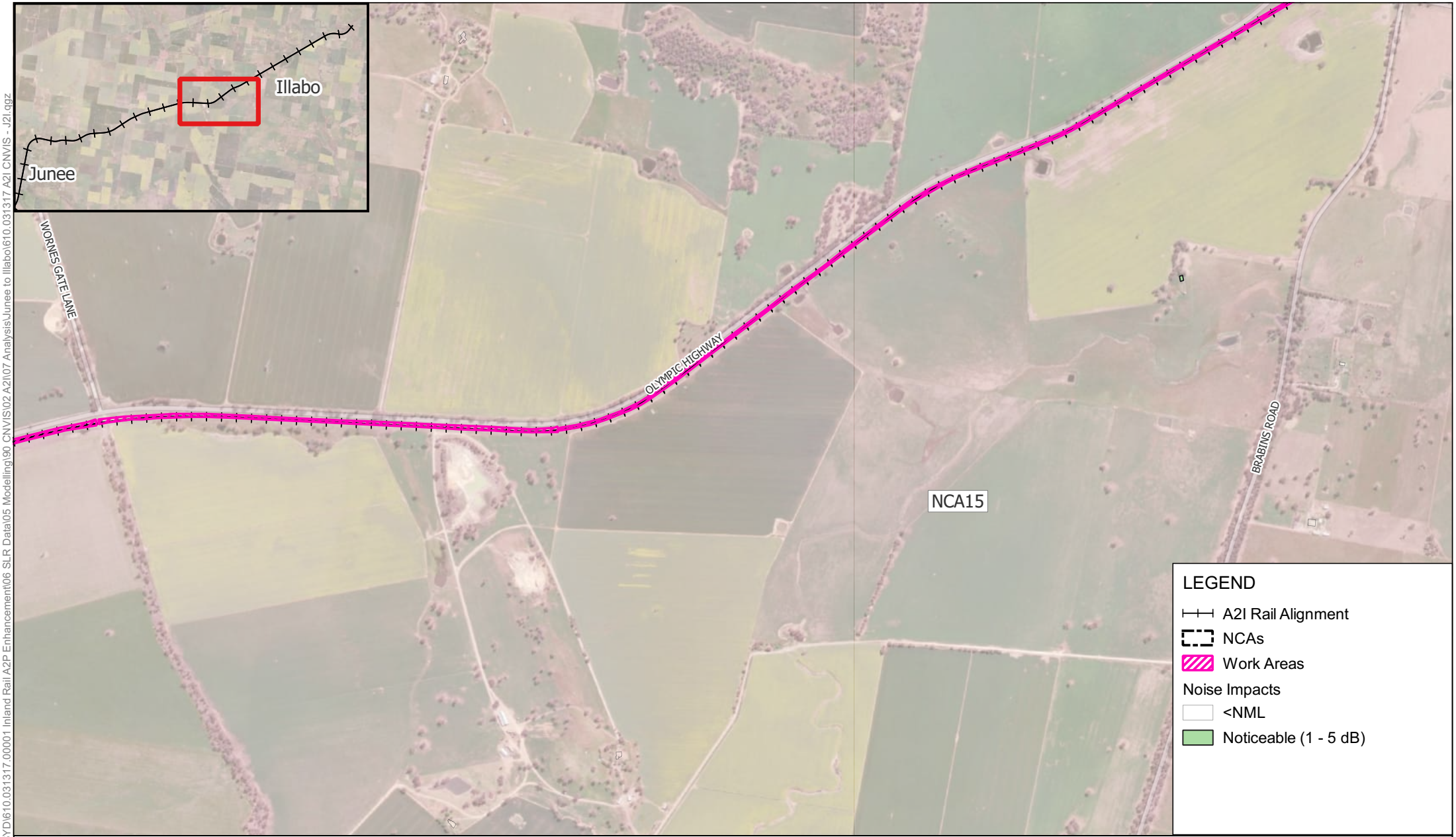

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Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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W.007 Track Tamping - Out of Hours Night-time

APPENDIX C-22c

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W.007 Track Tamping - Out of Hours Night-time

APPENDIX C-22d

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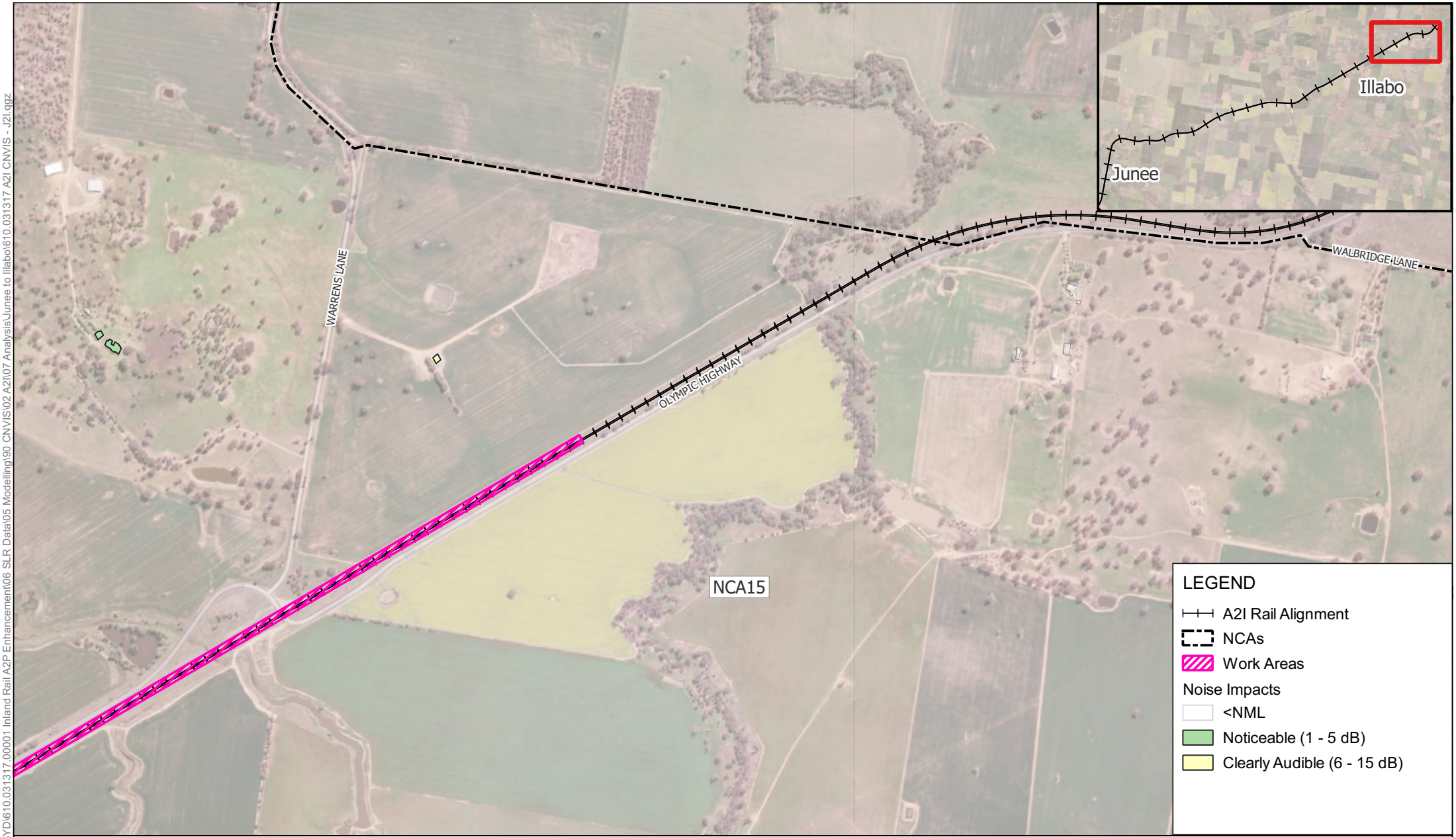

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W.007 Track Tamping - Out of Hours Night-time

APPENDIX C-22e

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W.008 Crossover Removal - Civil Works - Approved Daytime Hours

APPENDIX C-23a

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W.008 Crossover Removal - Civil Works - Approved Daytime Hours

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W.008 Crossover Removal - Civil Works - Approved Daytime Hours

APPENDIX C-23c

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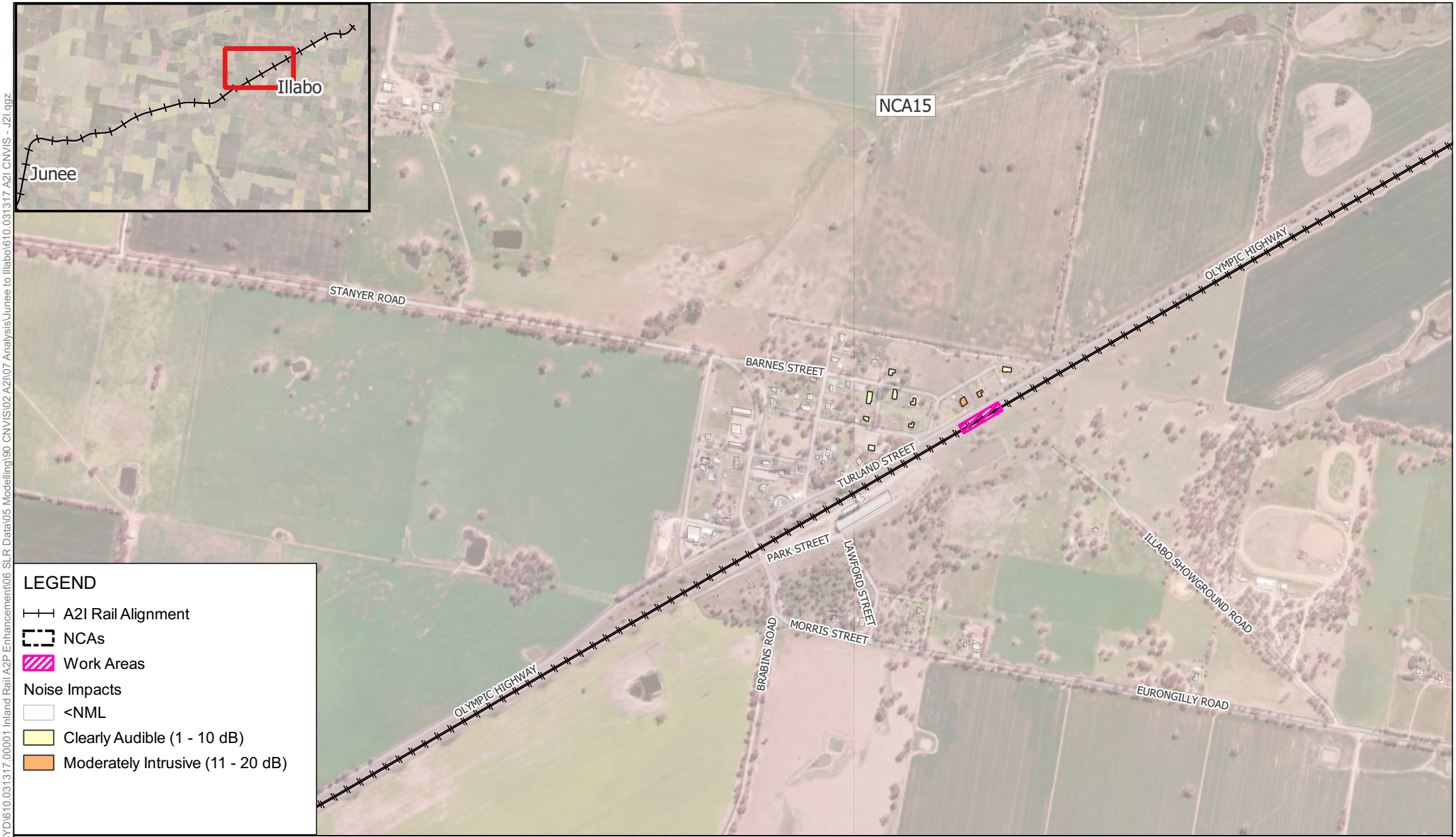

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W.008 Crossover Removal - Civil Works - Approved Daytime Hours

APPENDIX C-23d

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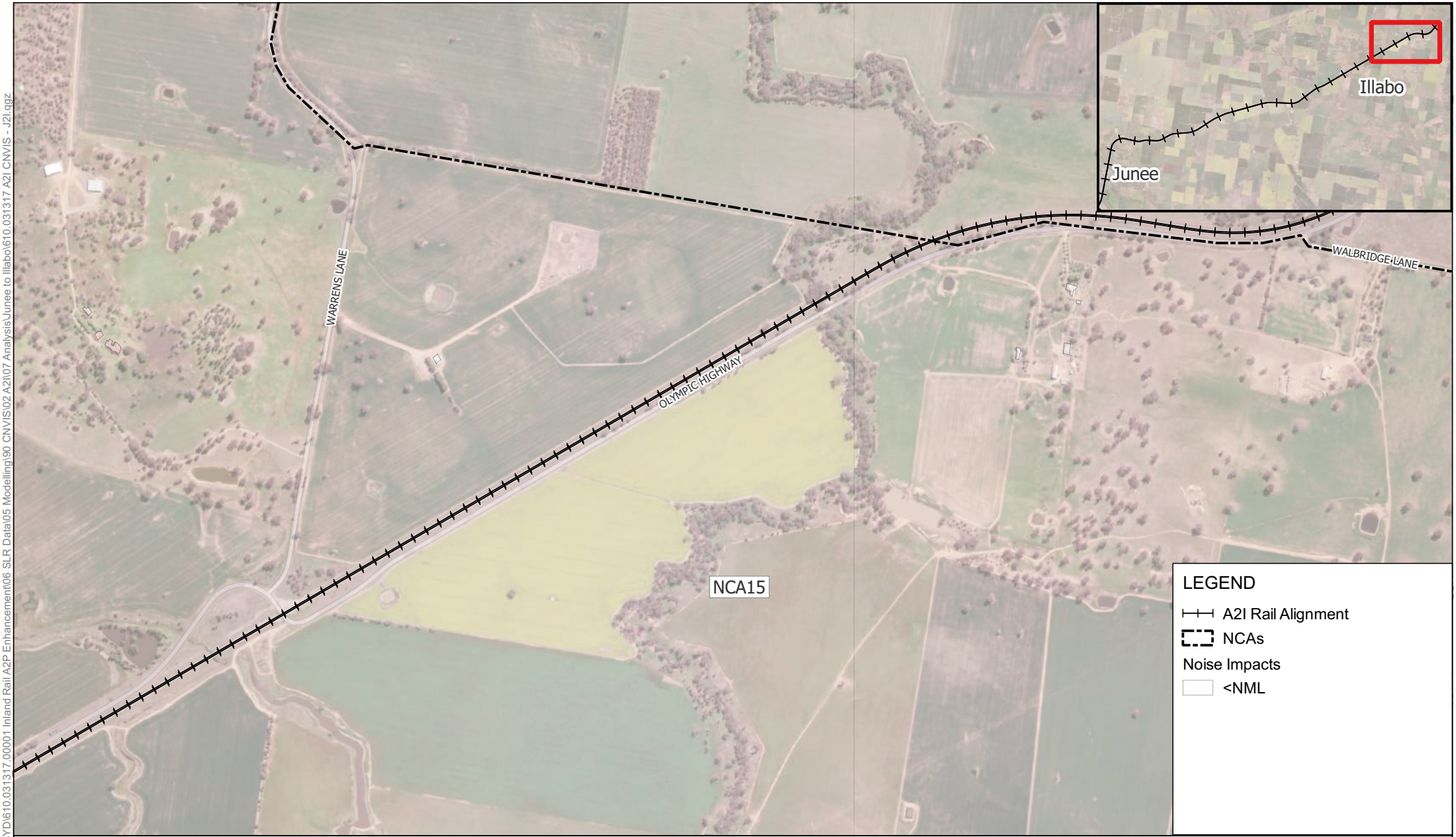

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W.008 Crossover Removal - Civil Works - Approved Daytime Hours

APPENDIX C-23e

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W.008 Crossover Removal - Civil Works - Out of Hours Daytime

APPENDIX C-24a

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W.008 Crossover Removal - Civil Works - Out of Hours Daytime

APPENDIX C-24b

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W.008 Crossover Removal - Civil Works - Out of Hours Daytime

APPENDIX C-24c

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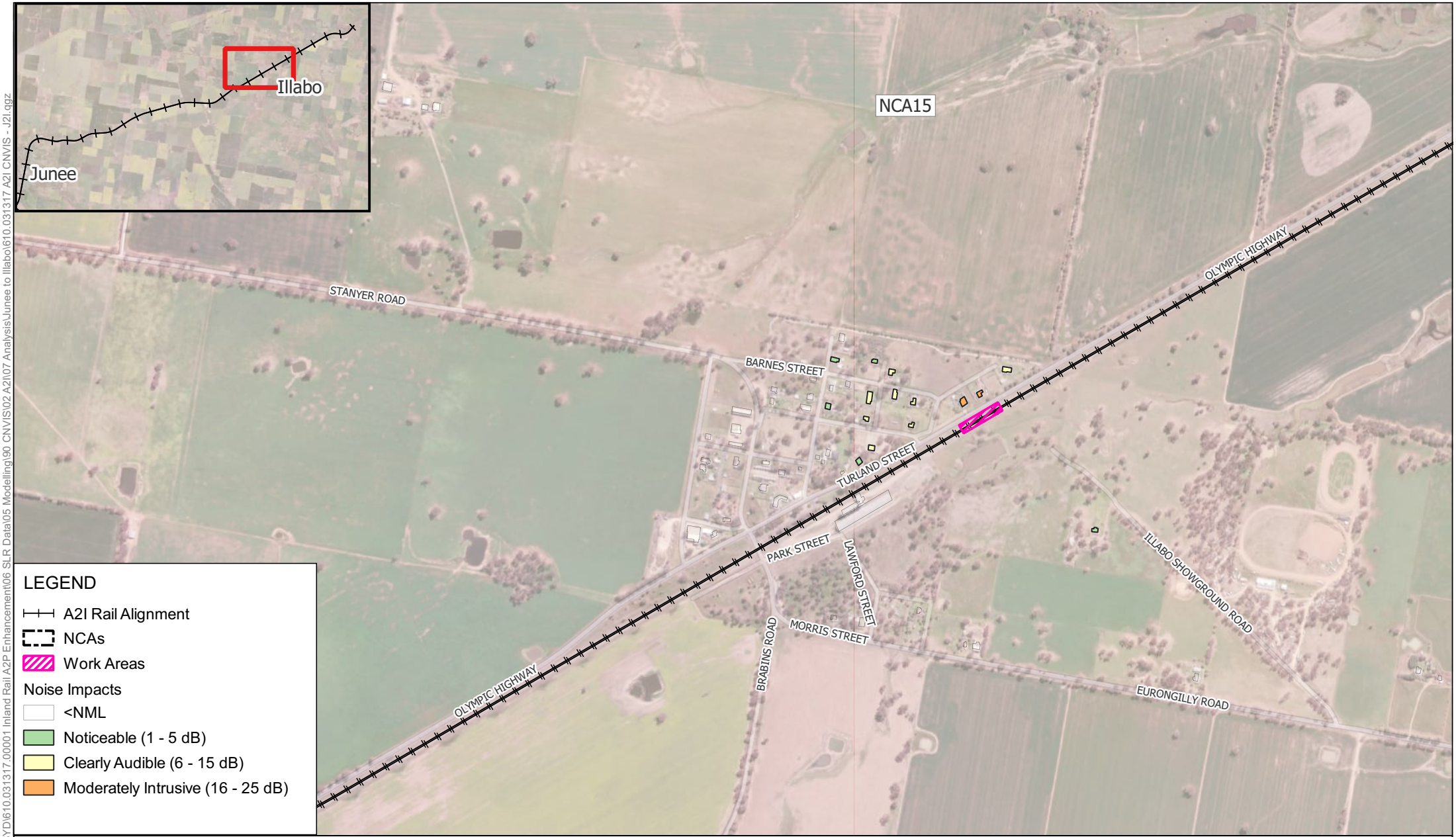

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W.008 Crossover Removal - Civil Works - Out of Hours Daytime

APPENDIX C-24d

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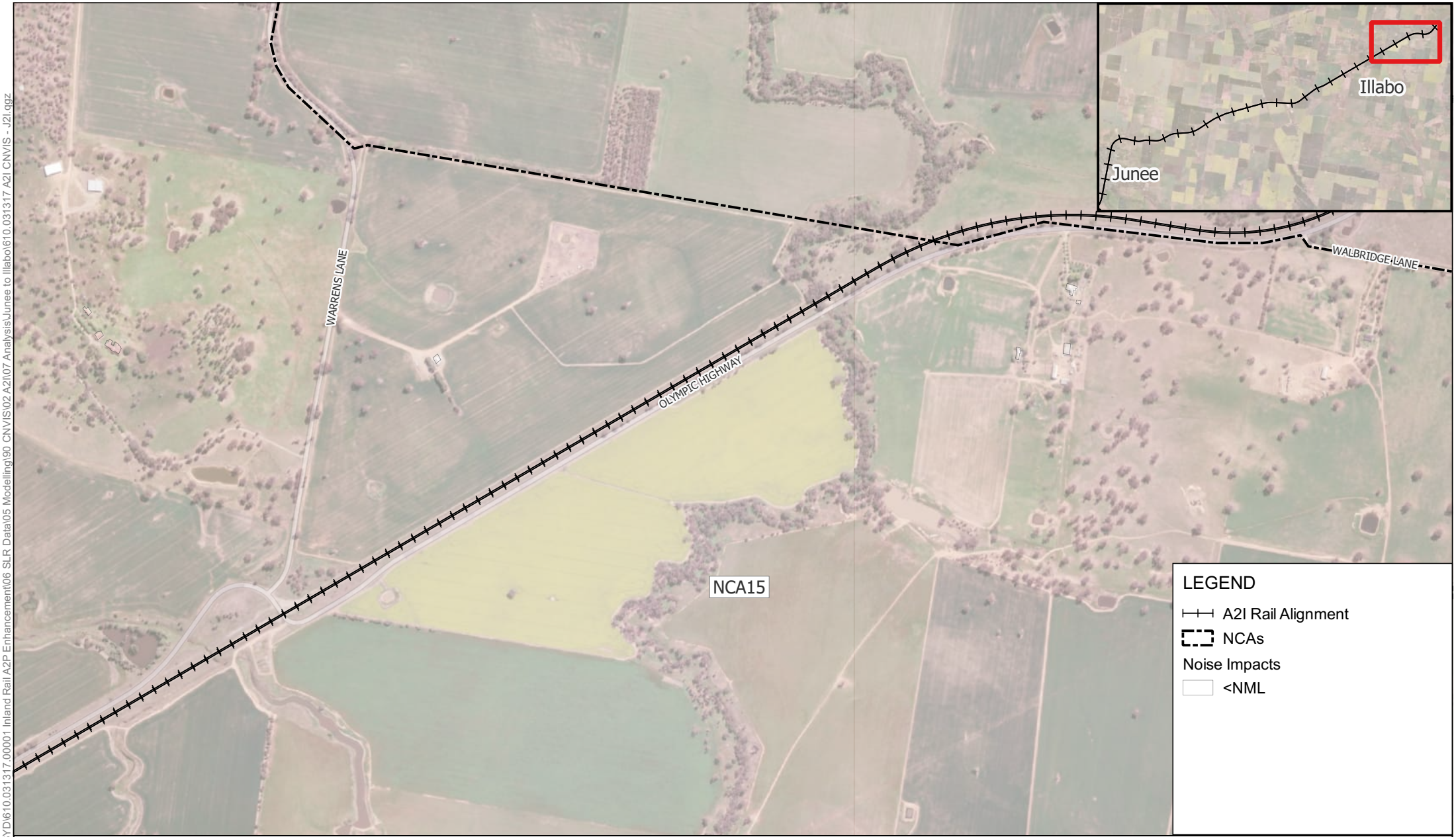

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W.008 Crossover Removal - Civil Works - Out of Hours Daytime

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W.008 Crossover Removal - Civil Works - Out of Hours Evening

APPENDIX C-25a

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W.008 Crossover Removal - Civil Works - Out of Hours Evening

APPENDIX C-25b

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W.008 Crossover Removal - Civil Works - Out of Hours Evening

APPENDIX C-25c

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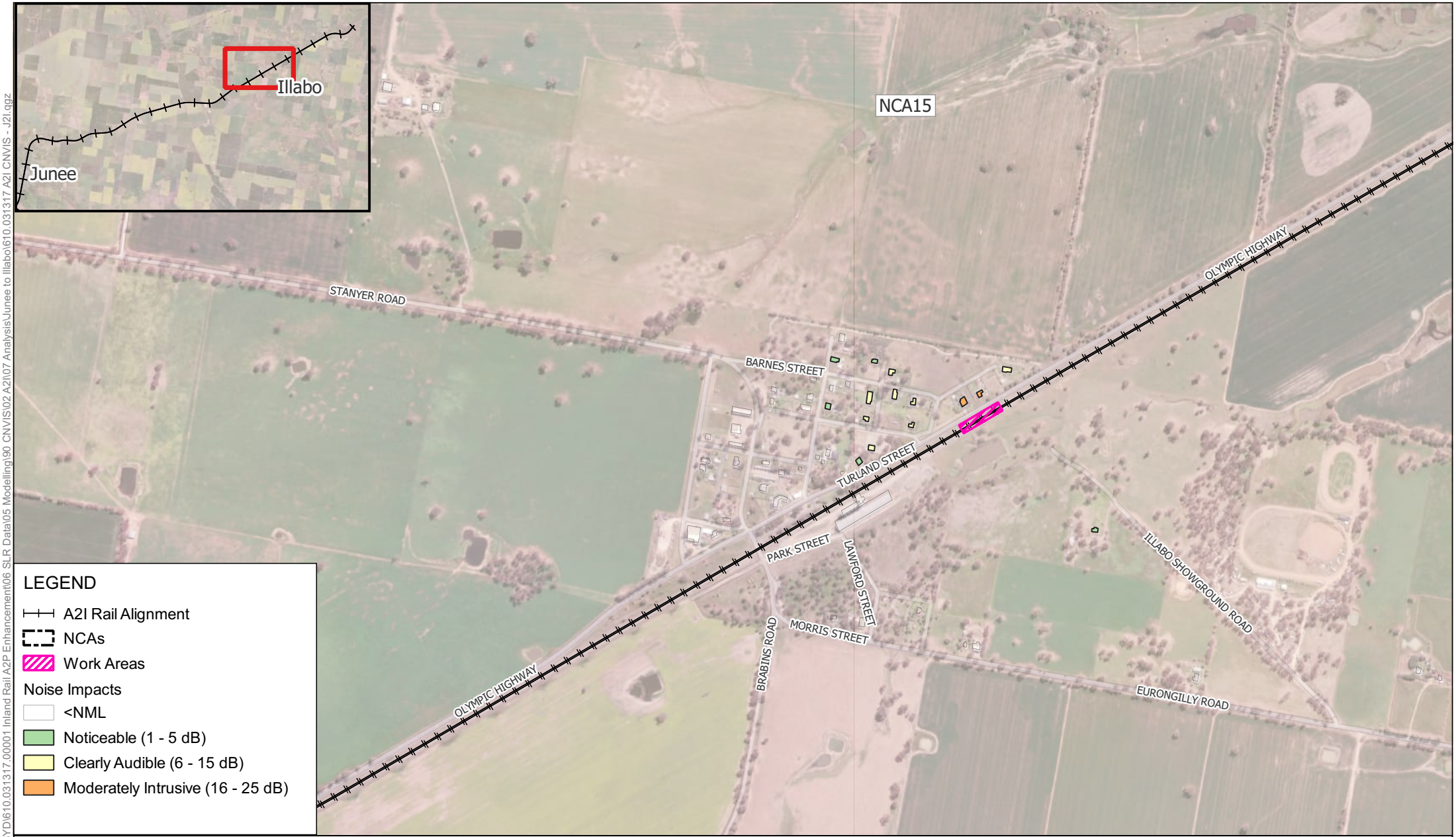

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W.008 Crossover Removal - Civil Works - Out of Hours Evening

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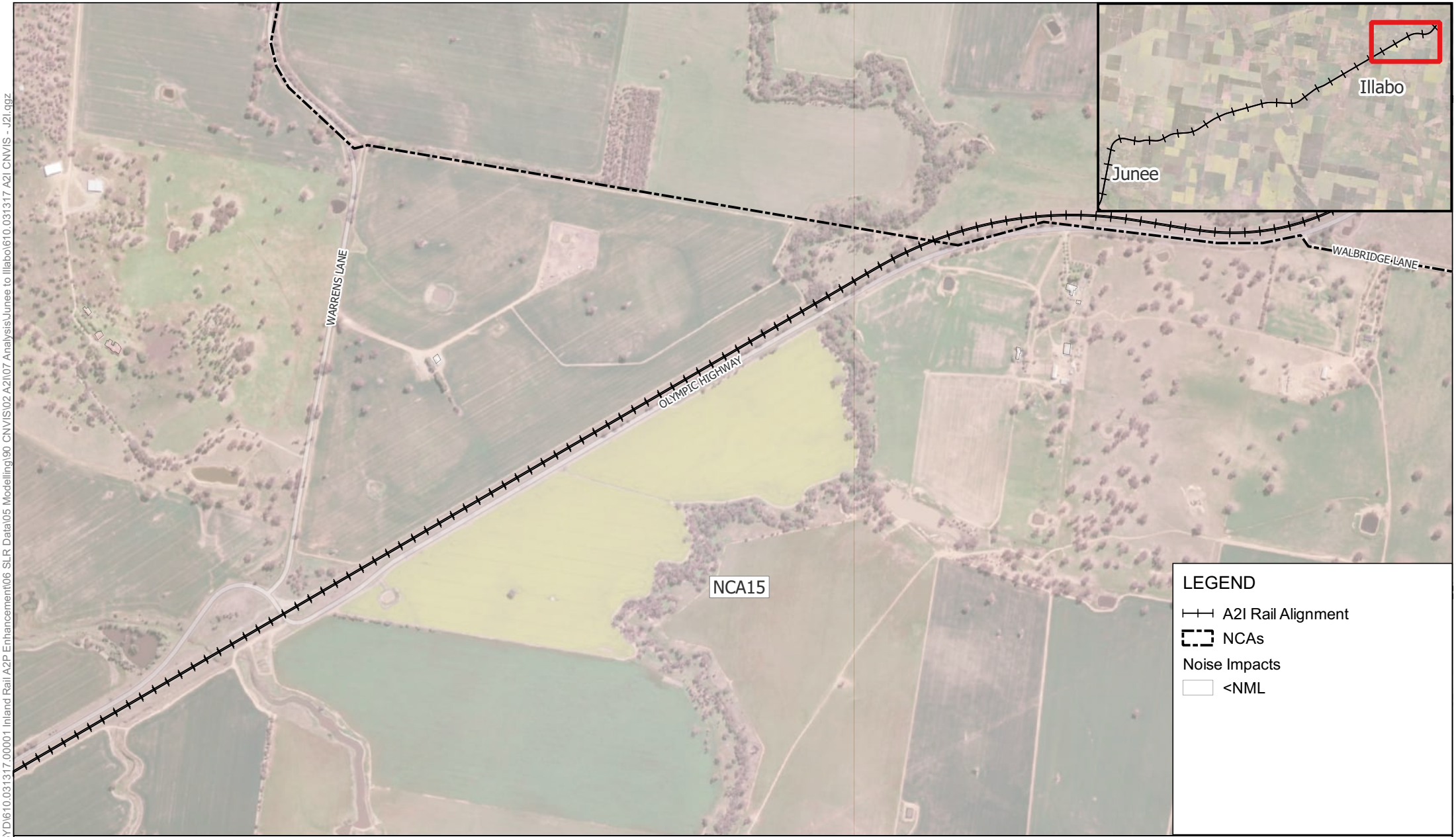

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W.008 Crossover Removal - Civil Works - Out of Hours Evening

APPENDIX C-25e

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W.008 Crossover Removal - Civil Works - Out of Hours Night-time

APPENDIX C-26a

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W.008 Crossover Removal - Civil Works - Out of Hours Night-time

APPENDIX C-26b

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W.008 Crossover Removal - Civil Works - Out of Hours Night-time

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W.008 Crossover Removal - Civil Works - Out of Hours Night-time

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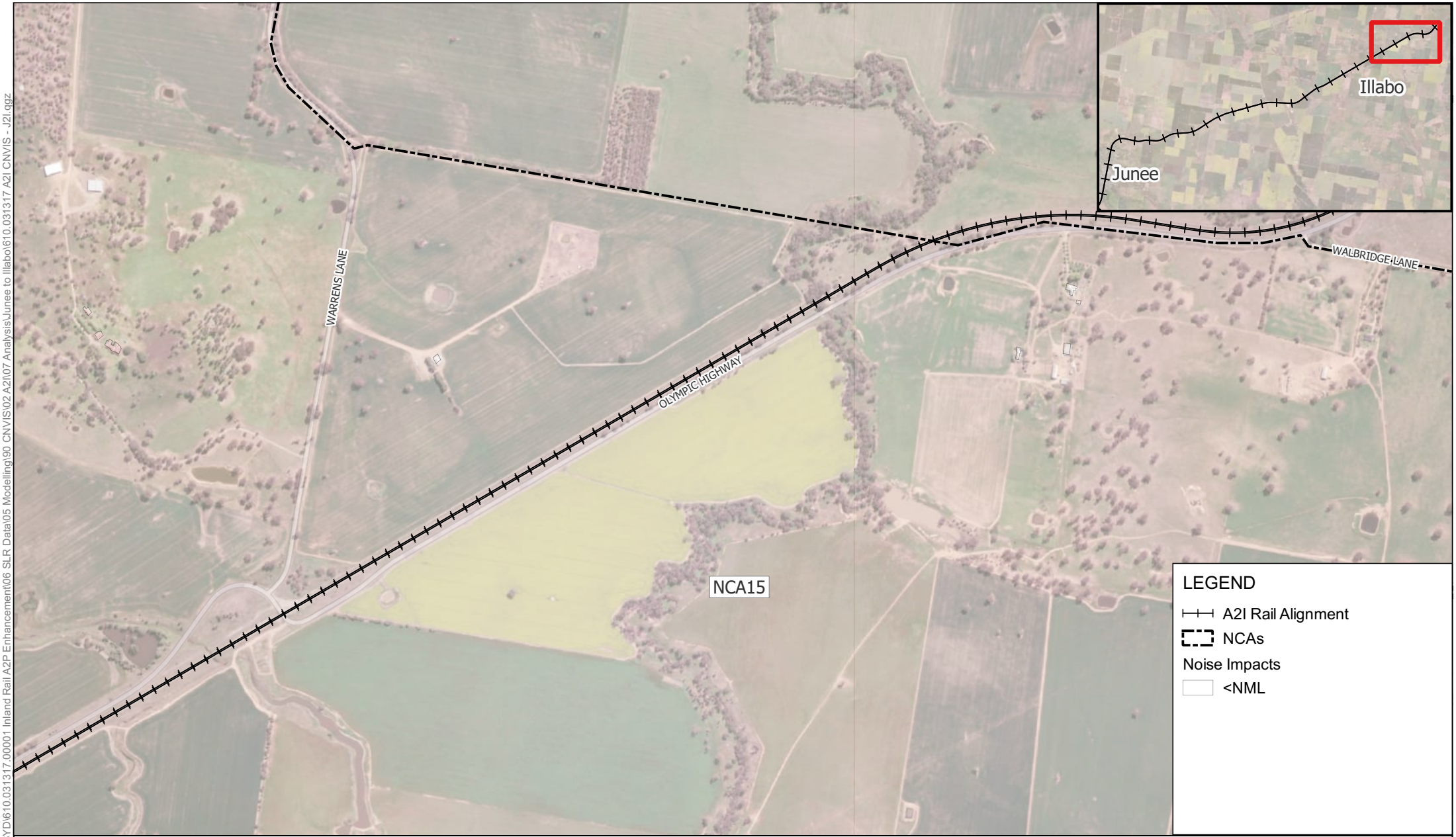

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W.009 Drainage Work - Approved Daytime Hours

APPENDIX C-27a

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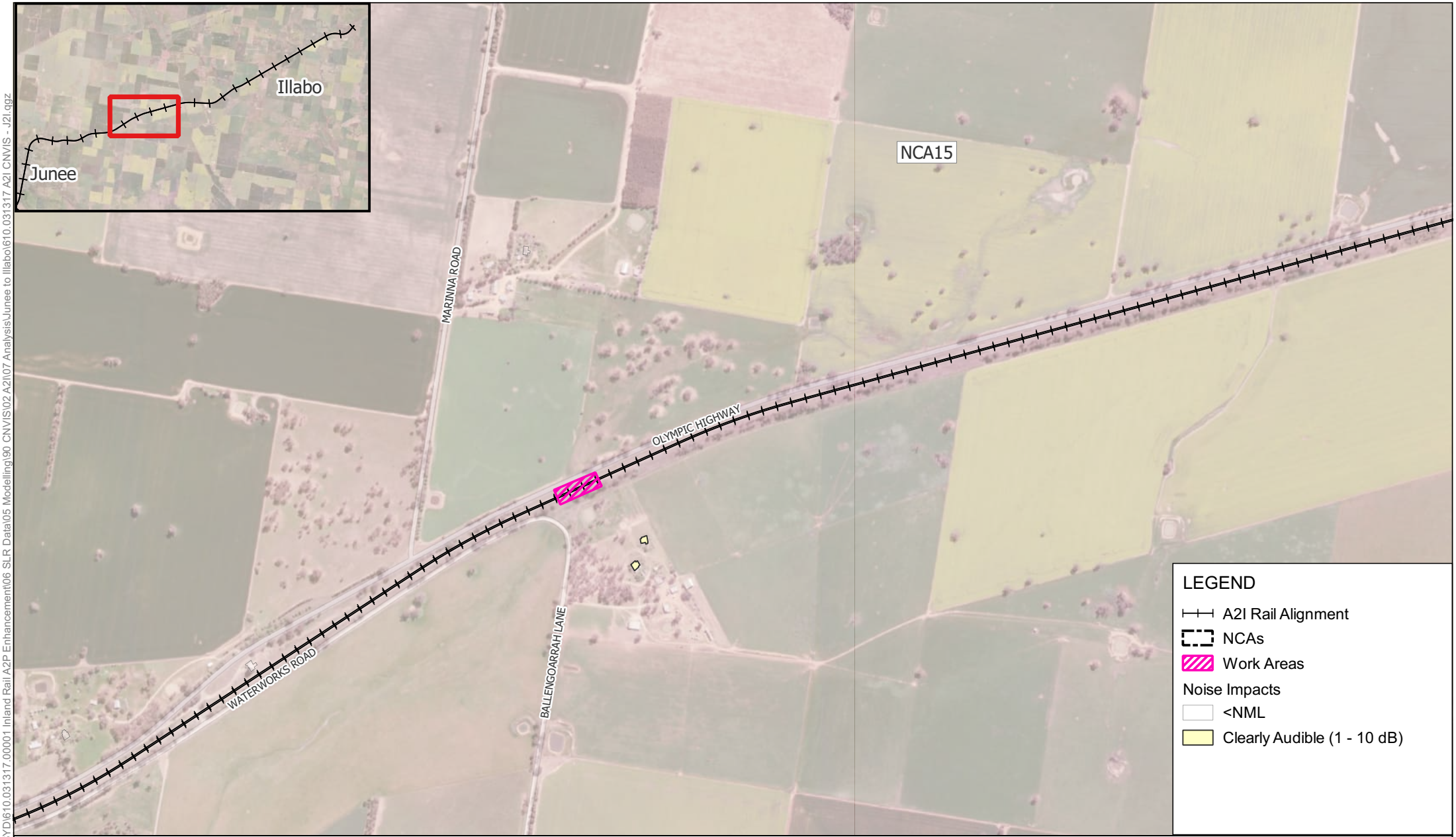

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W.009 Drainage Work - Approved Daytime Hours

APPENDIX C-27b

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W.009 Drainage Work - Approved Daytime Hours

APPENDIX C-27c

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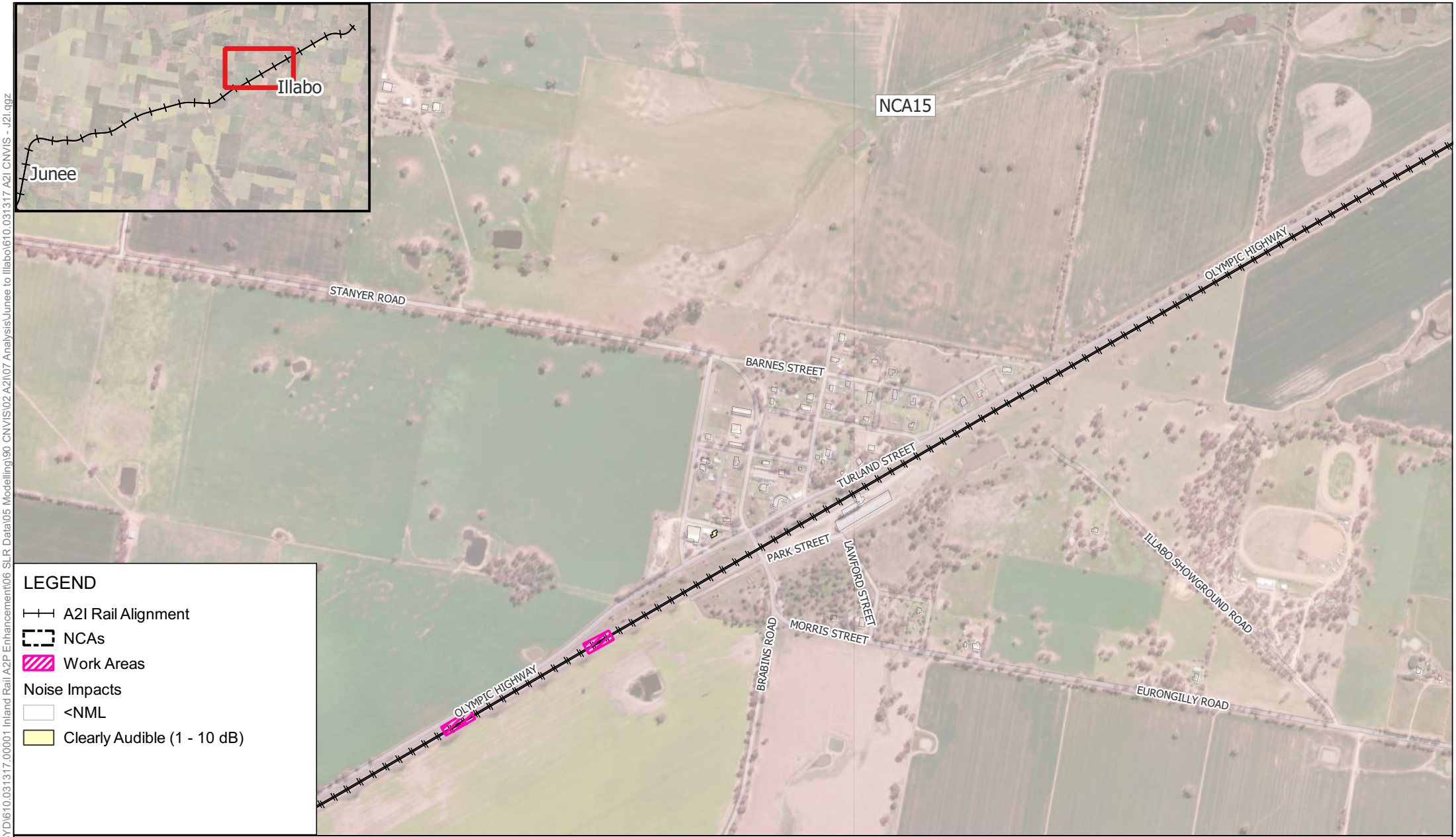

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W.009 Drainage Work - Approved Daytime Hours

APPENDIX C-27d

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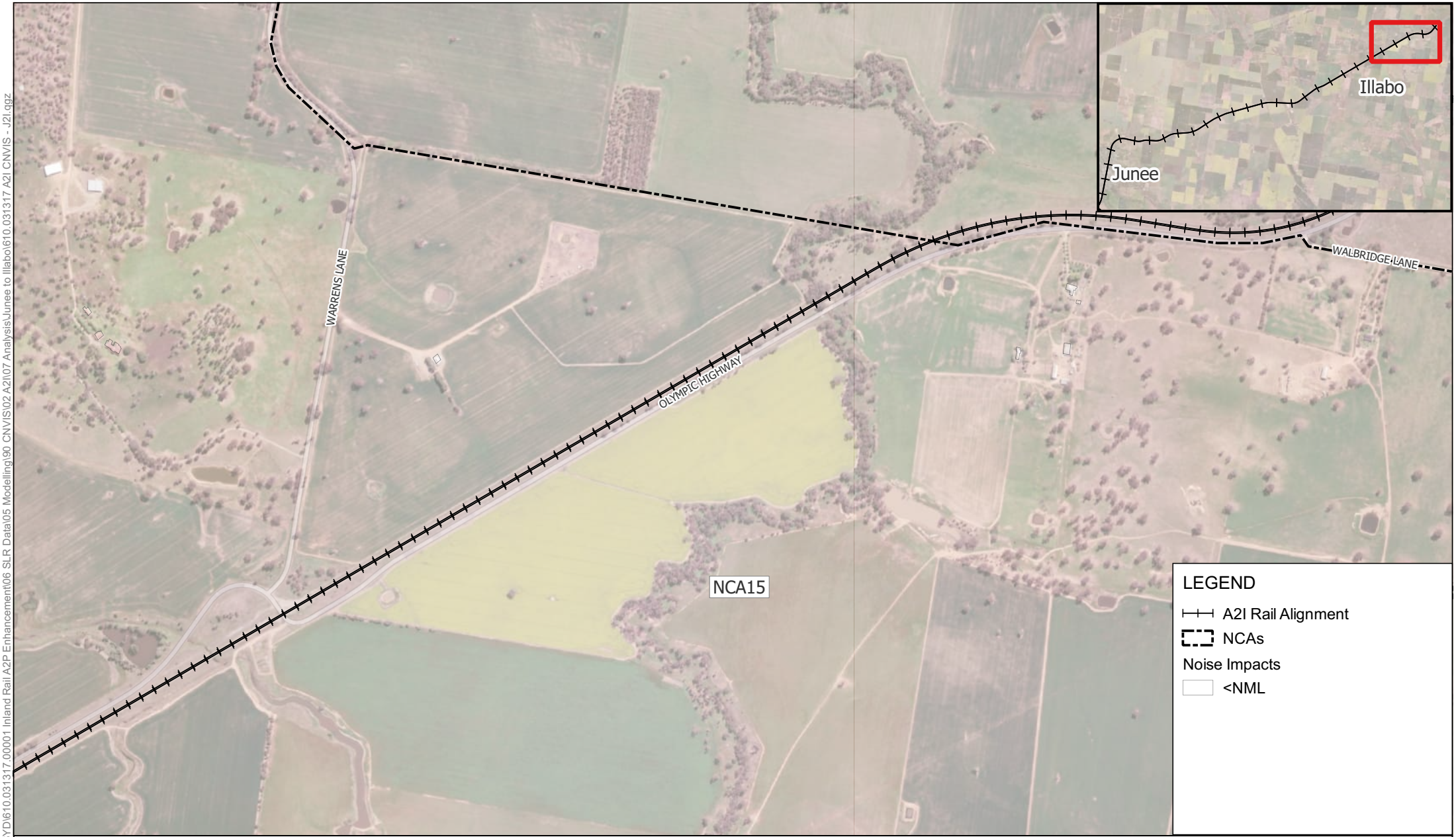

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W.009 Drainage Work - Out of Hours Daytime

APPENDIX C-28a

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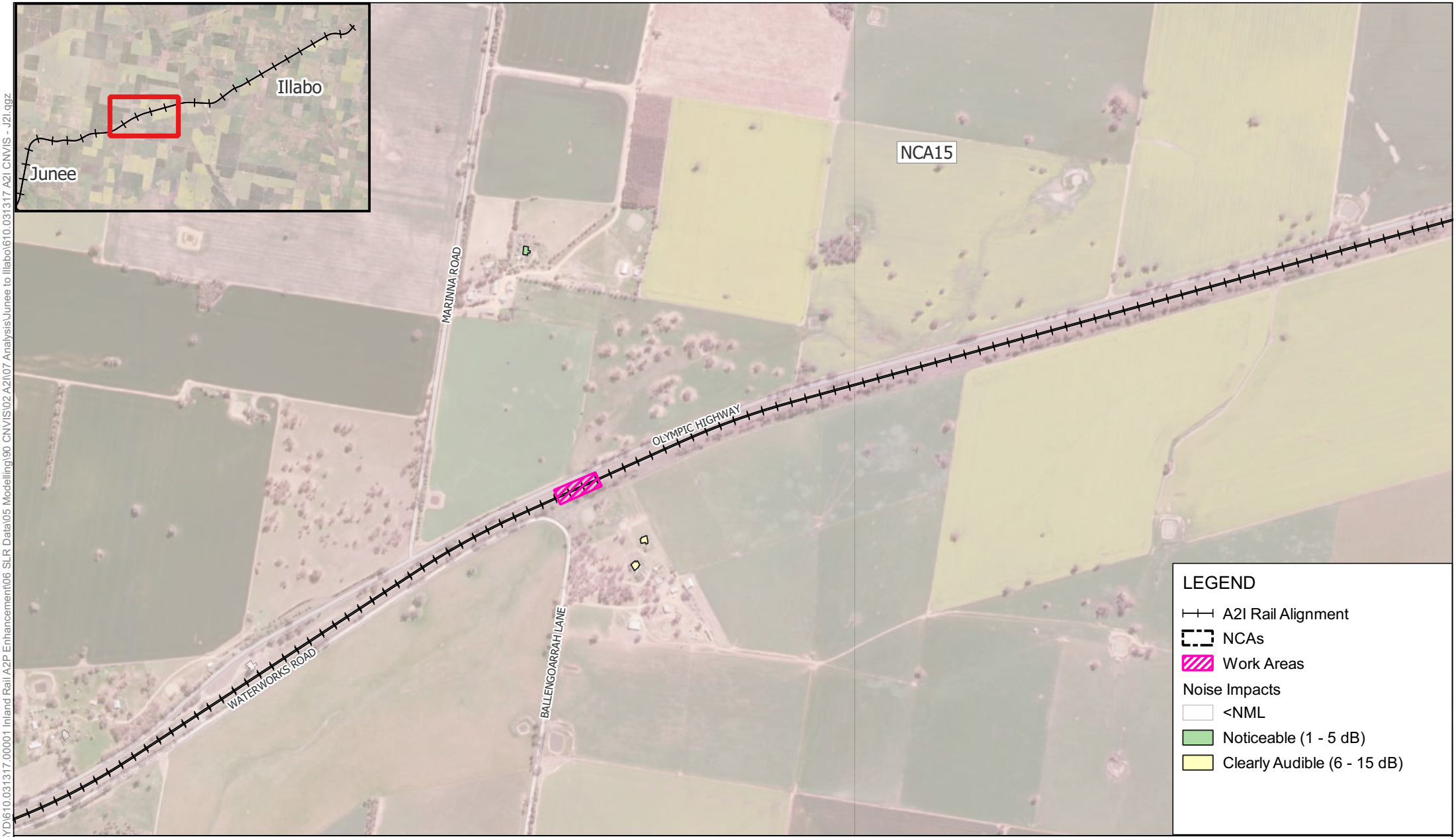

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Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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W.009 Drainage Work - Out of Hours Daytime

APPENDIX C-28b

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

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Scale: Scale: 1:18,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

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W.009 Drainage Work - Out of Hours Daytime

APPENDIX C-28c

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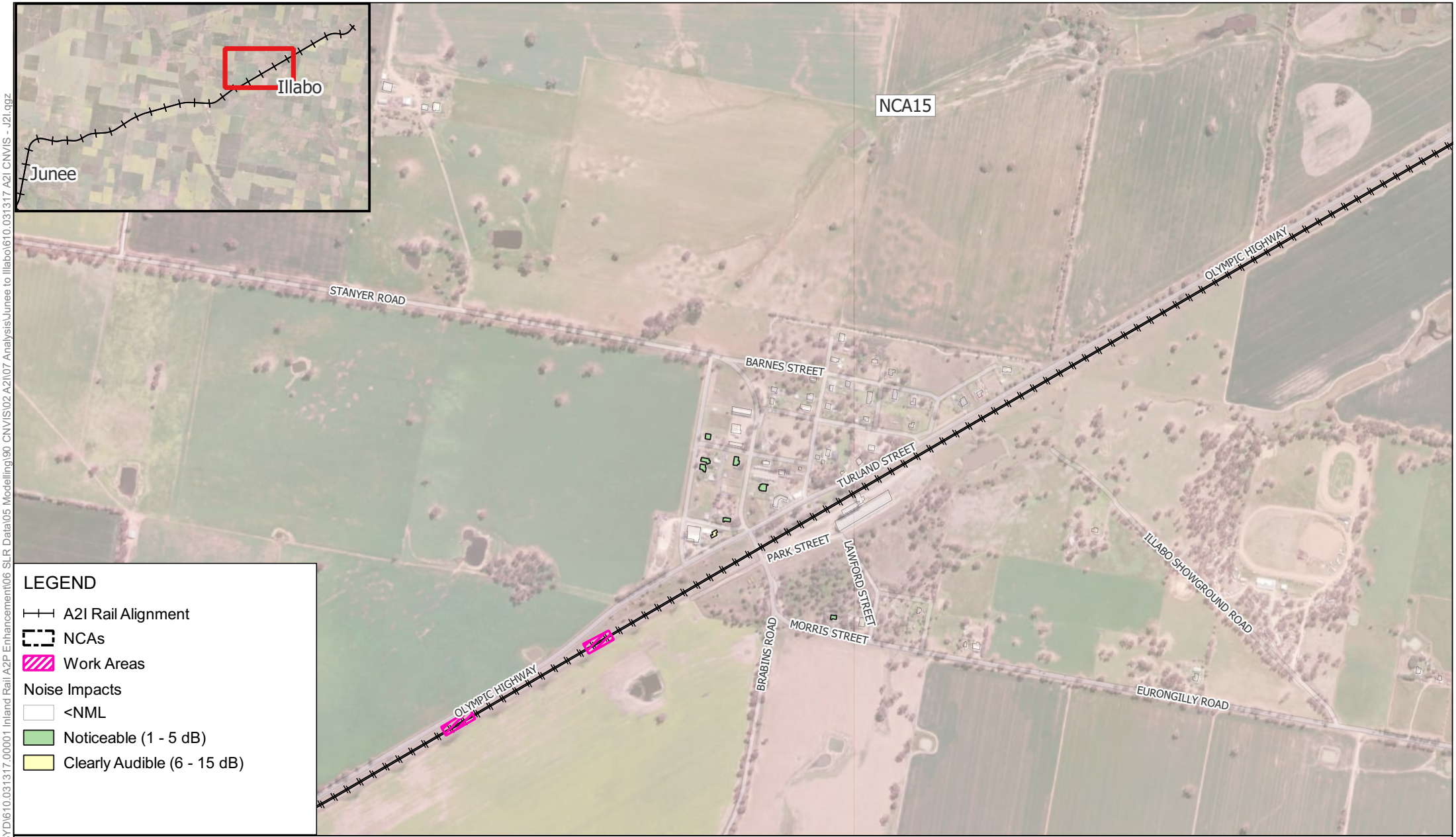

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Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

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W.009 Drainage Work - Out of Hours Daytime

APPENDIX C-28d

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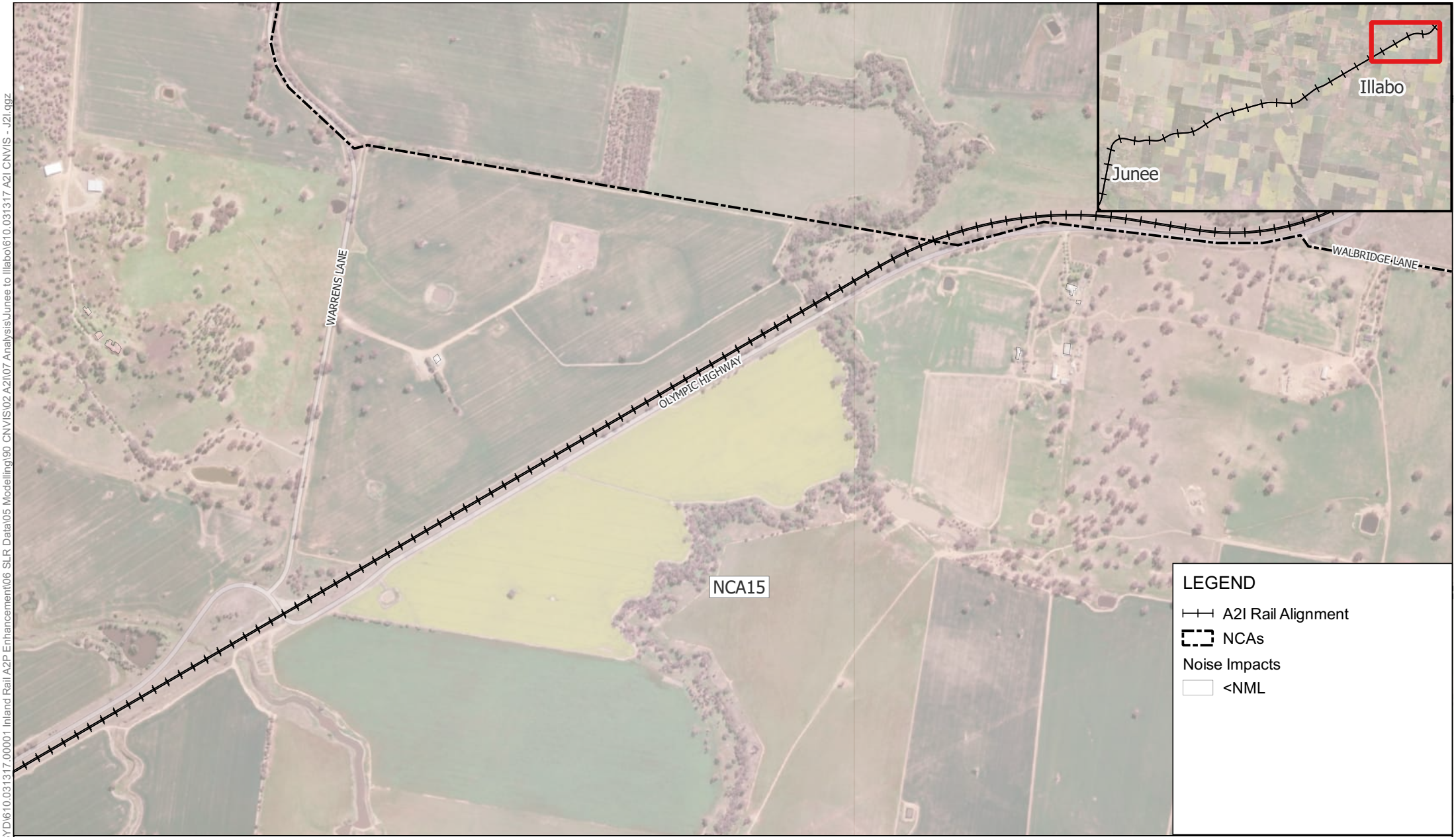

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Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

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W.009 Drainage Work - Out of Hours Daytime

APPENDIX C-28e

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W.009 Drainage Work - Out of Hours Evening

APPENDIX C-29a

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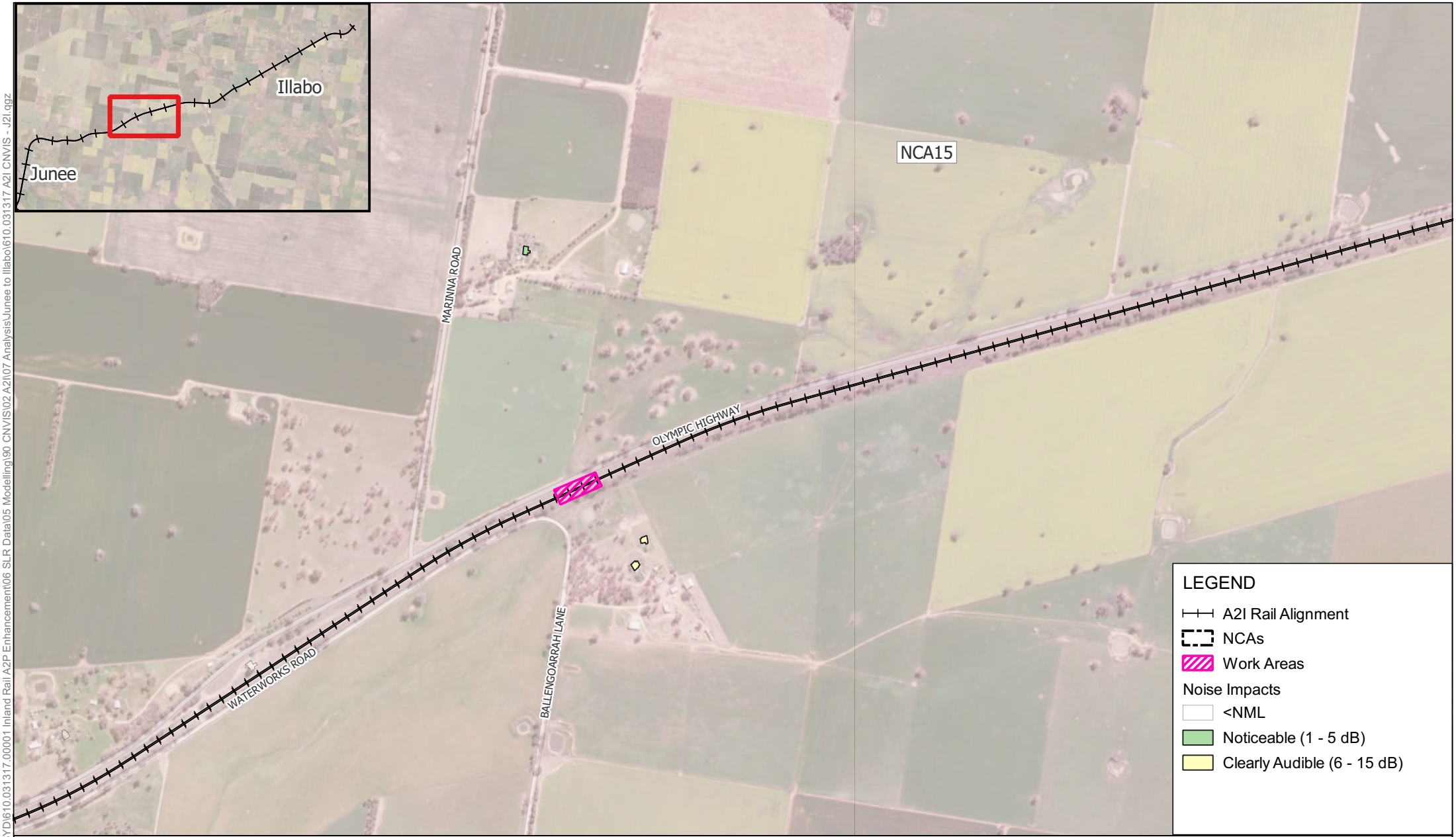

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Coordinate System: GDA2020 / MGA zone 55

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W.009 Drainage Work - Out of Hours Evening

APPENDIX C-29b

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W.009 Drainage Work - Out of Hours Evening

APPENDIX C-29c

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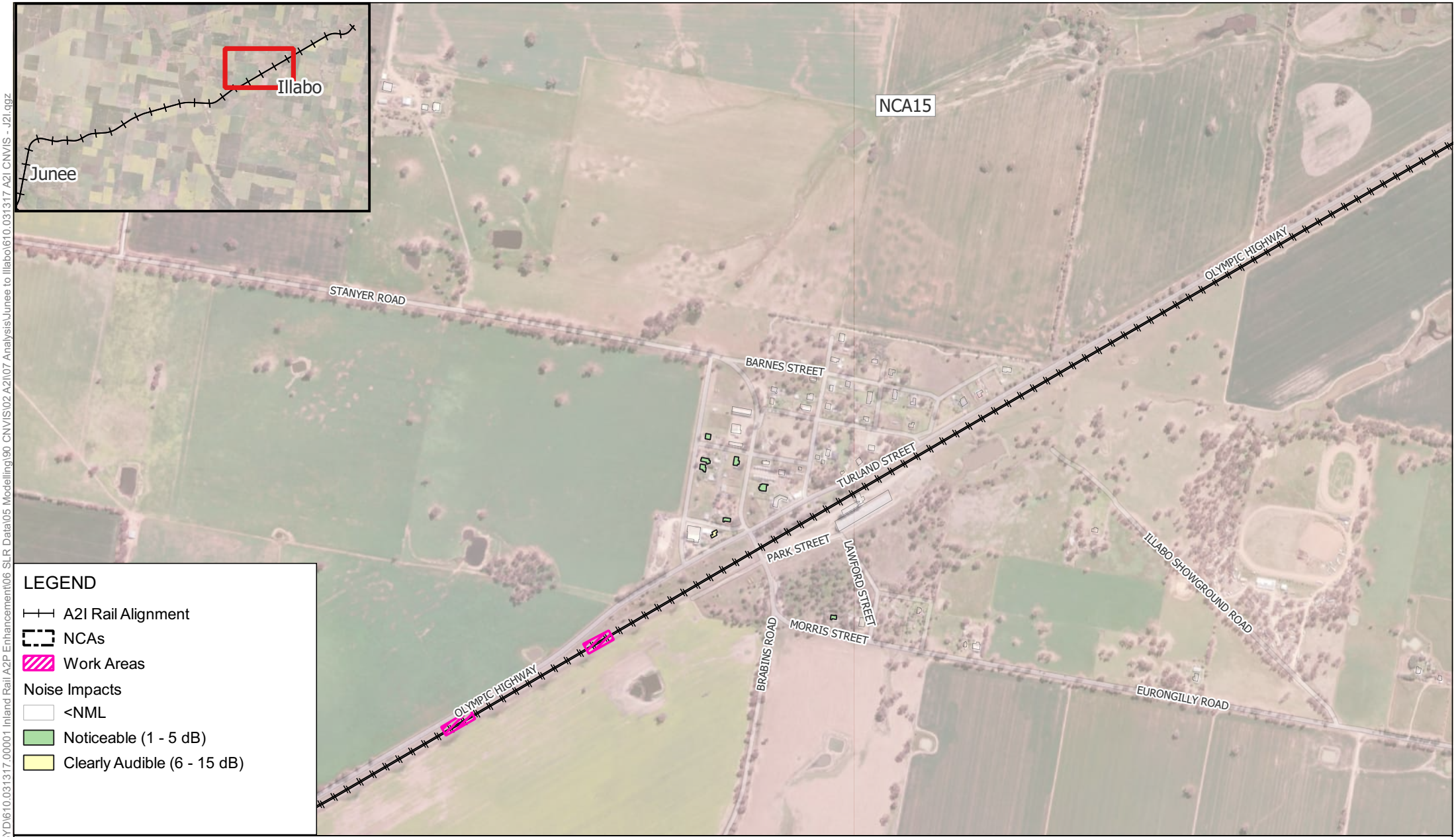

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W.009 Drainage Work - Out of Hours Evening

APPENDIX C-29d

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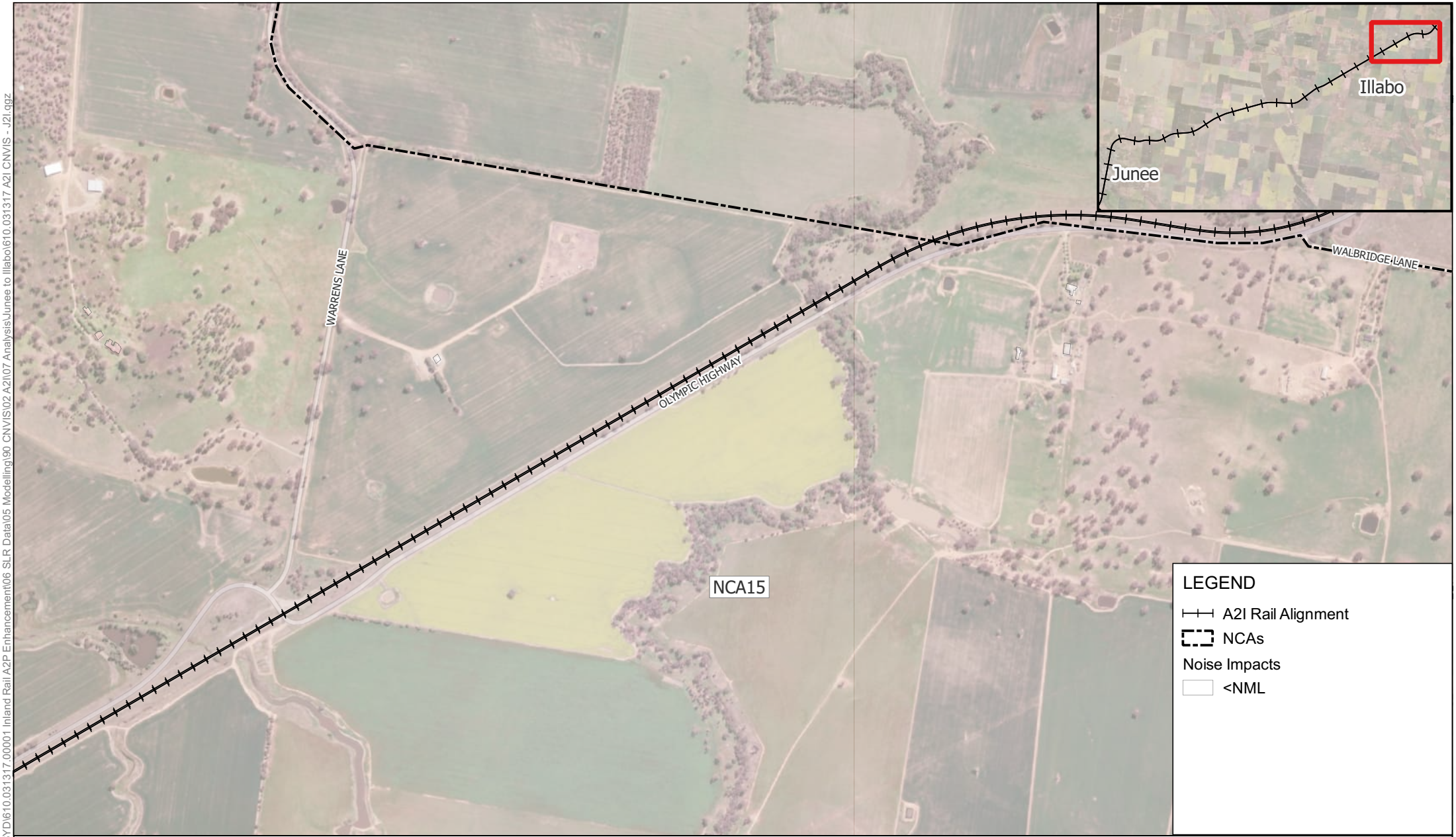

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Coordinate System: GDA2020 / MGA zone 55

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W.009 Drainage Work - Out of Hours Night-time

APPENDIX C-30a

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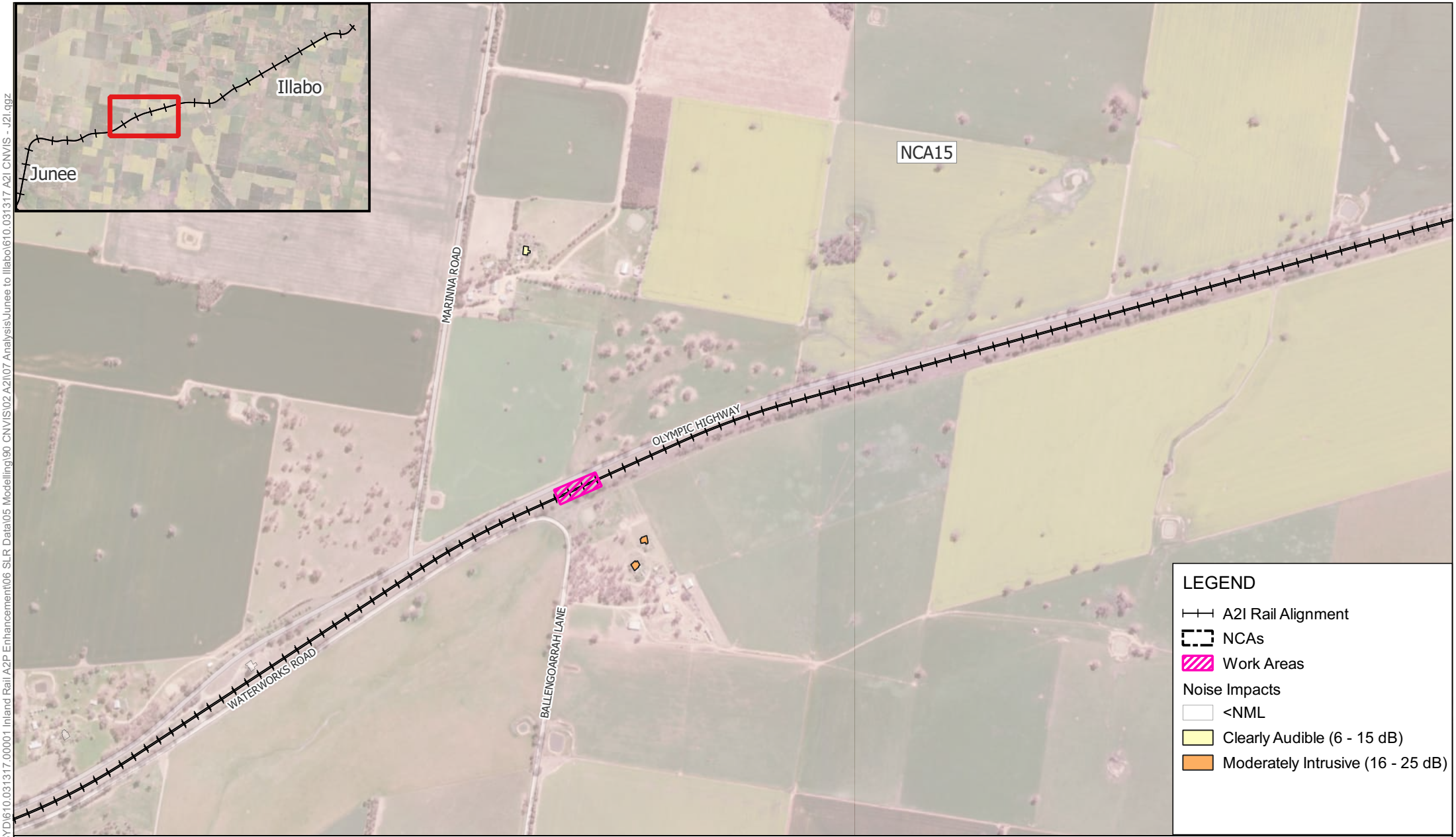

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W.009 Drainage Work - Out of Hours Night-time

APPENDIX C-30b

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Coordinate System: GDA2020 / MGA zone 55

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APPENDIX C-30c

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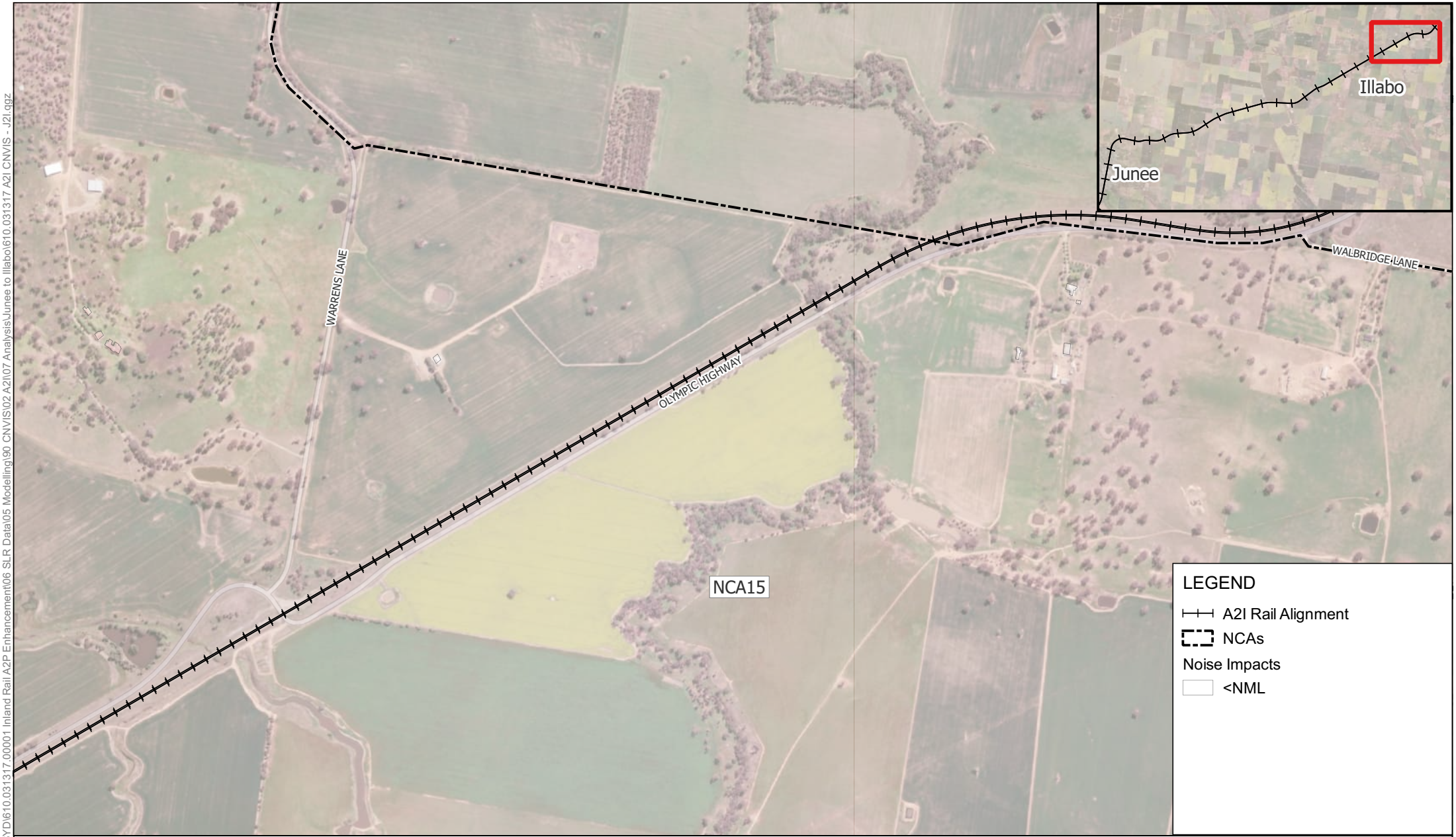

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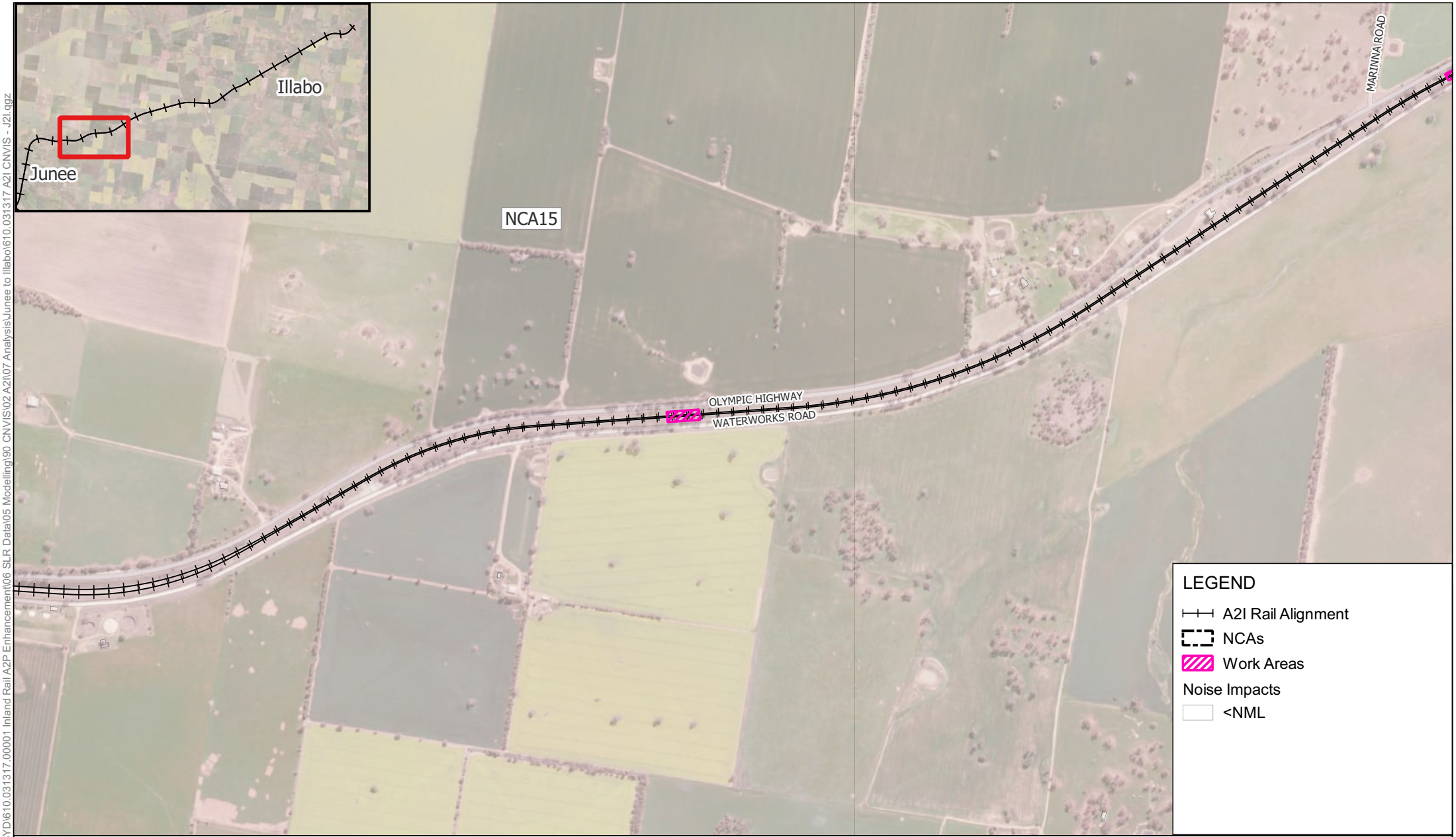

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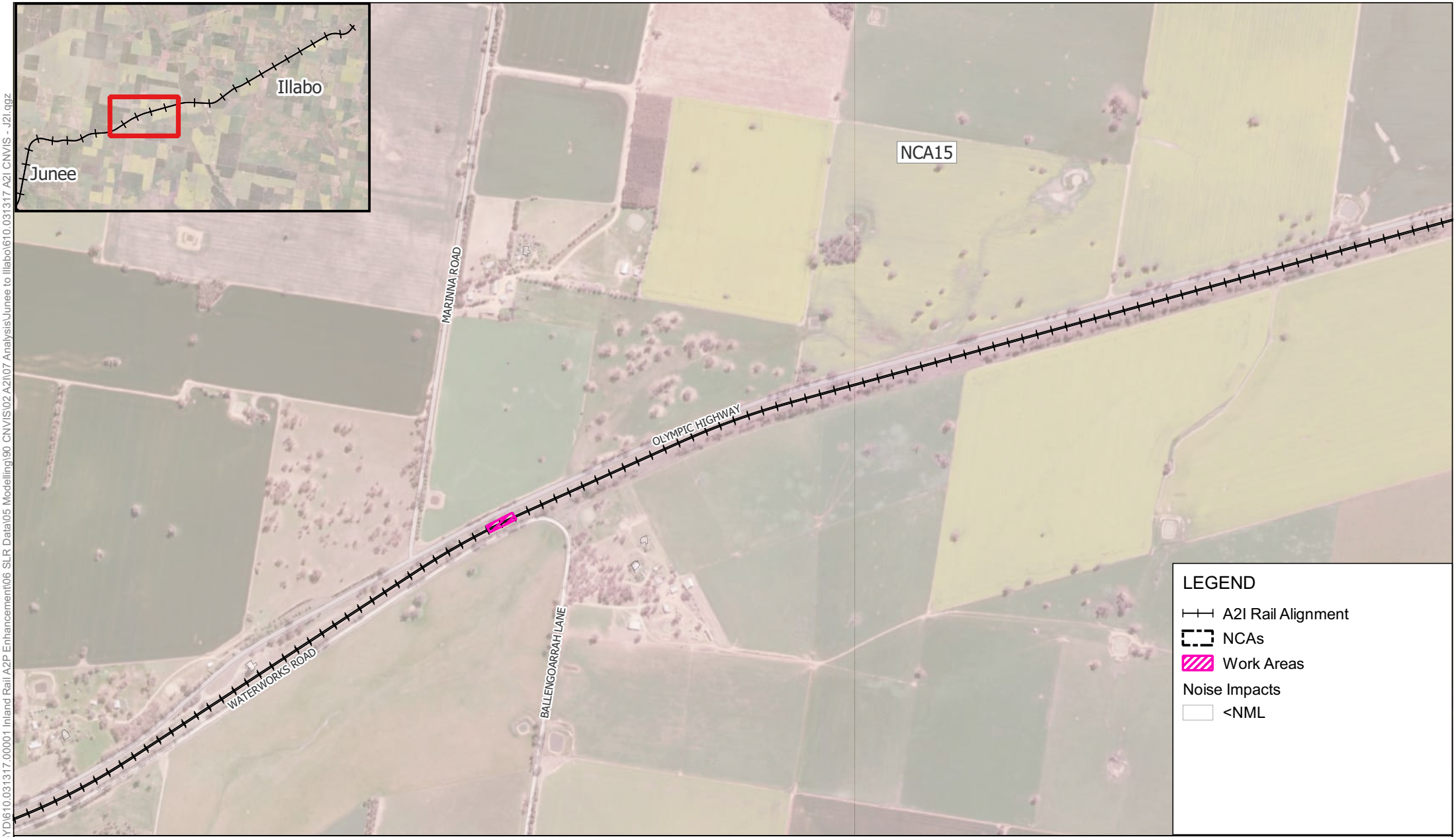
W.010 Signalling Work - Approved Daytime Hours

APPENDIX C-31a

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



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APPENDIX C-31b

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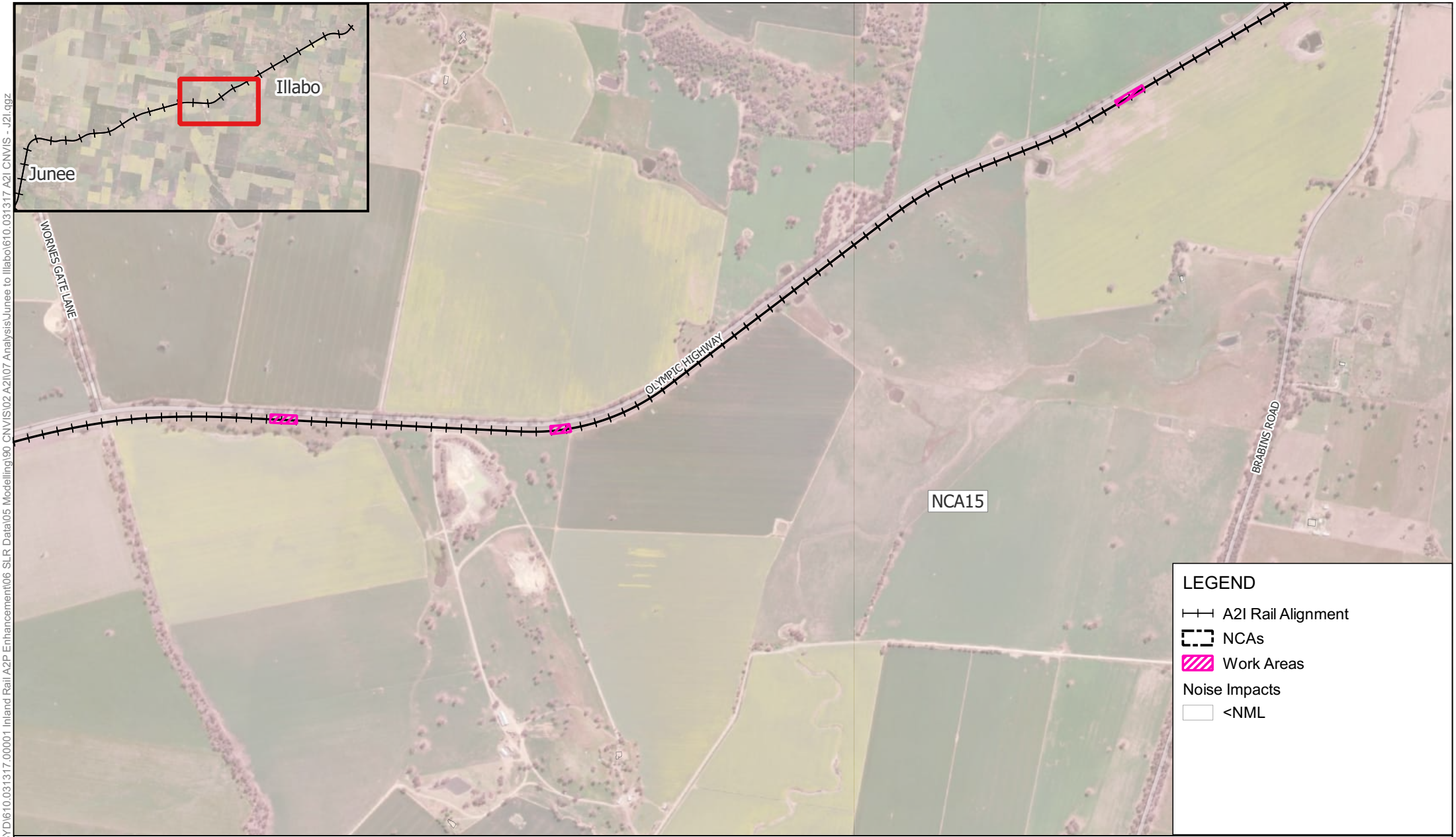

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Drawn Date: 02-Apr-2025
Project Number: 610.031317

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APPENDIX C-31c

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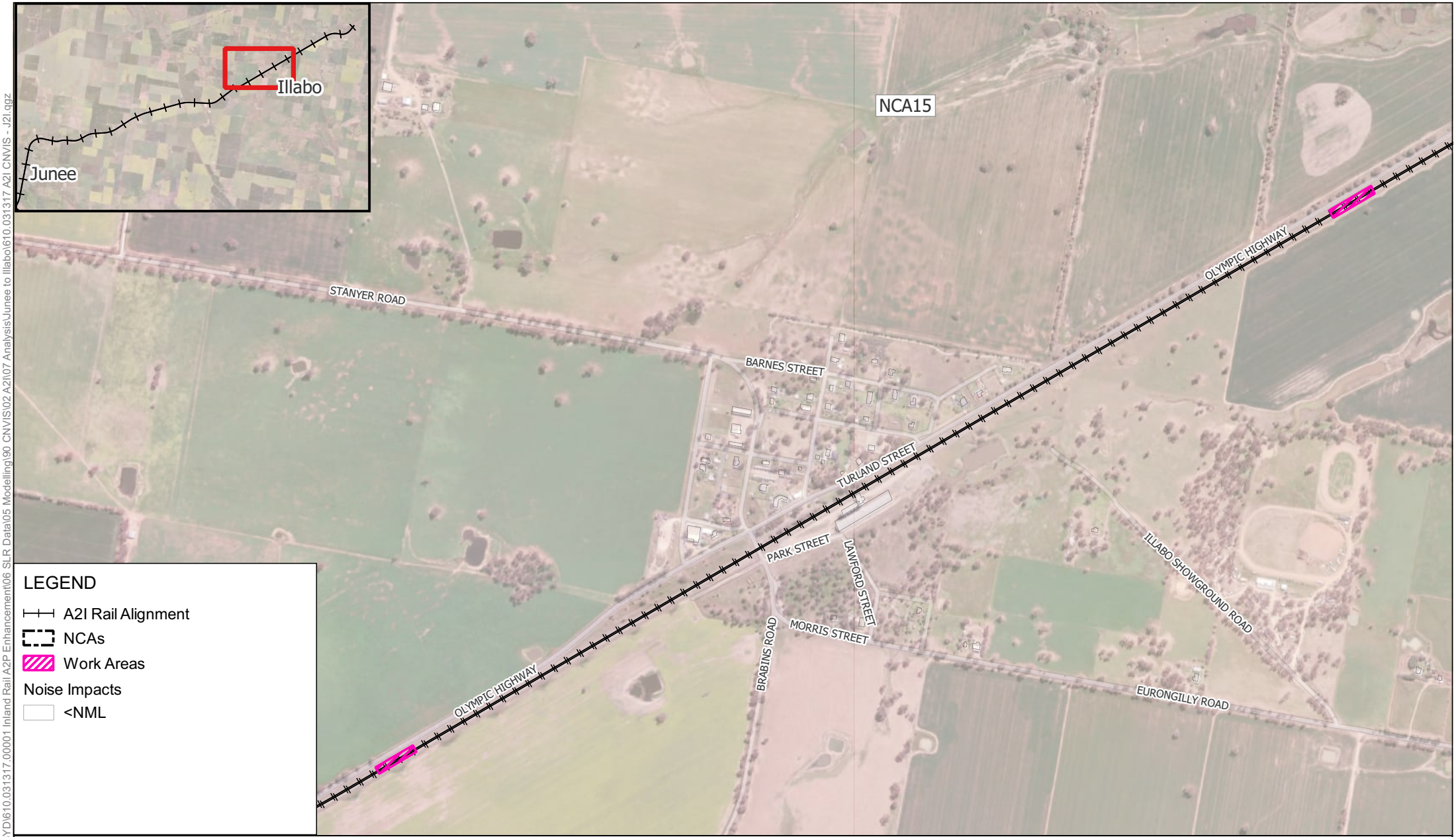

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Drawn Date: 02-Apr-2025
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APPENDIX C-31d

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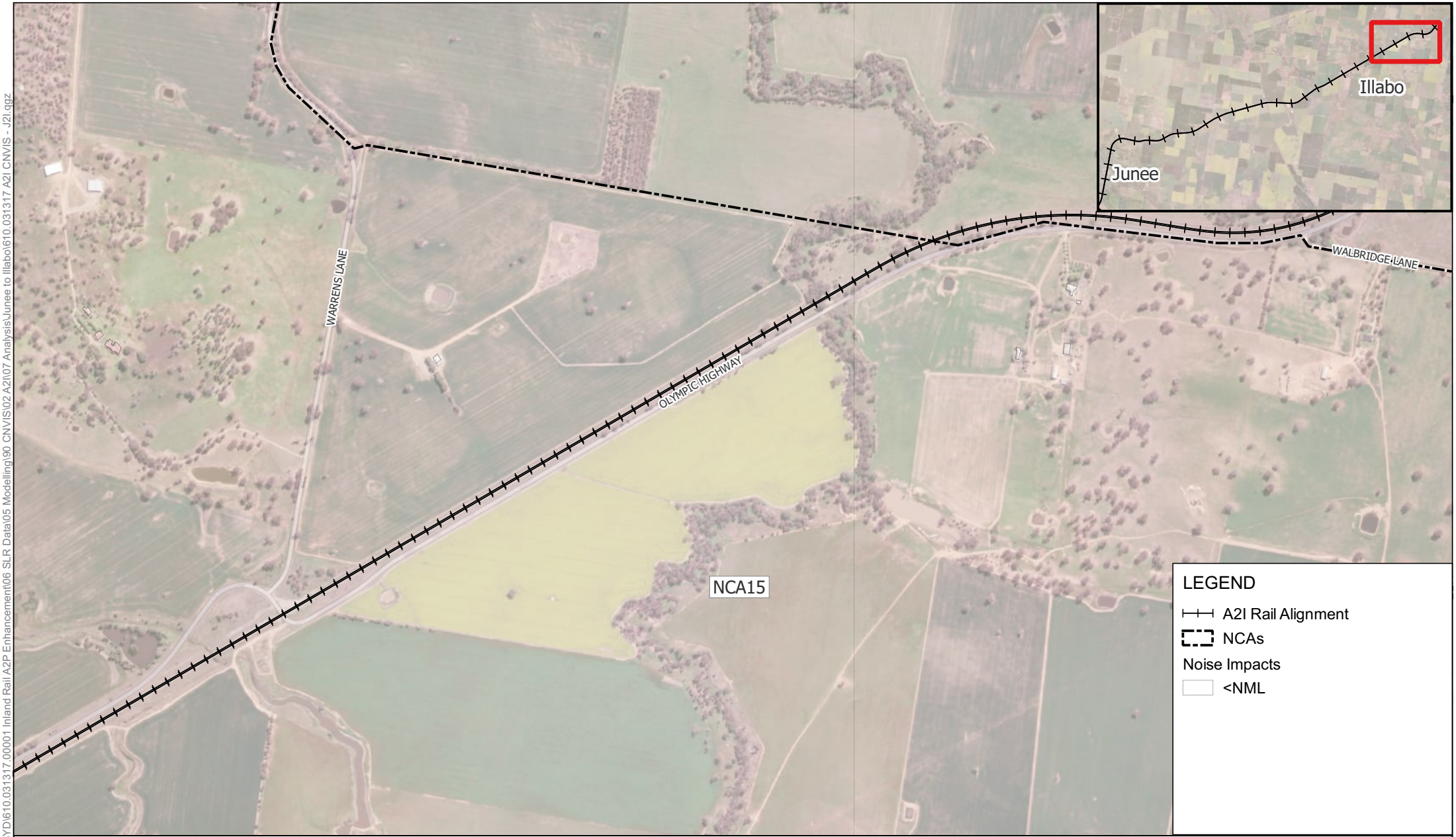

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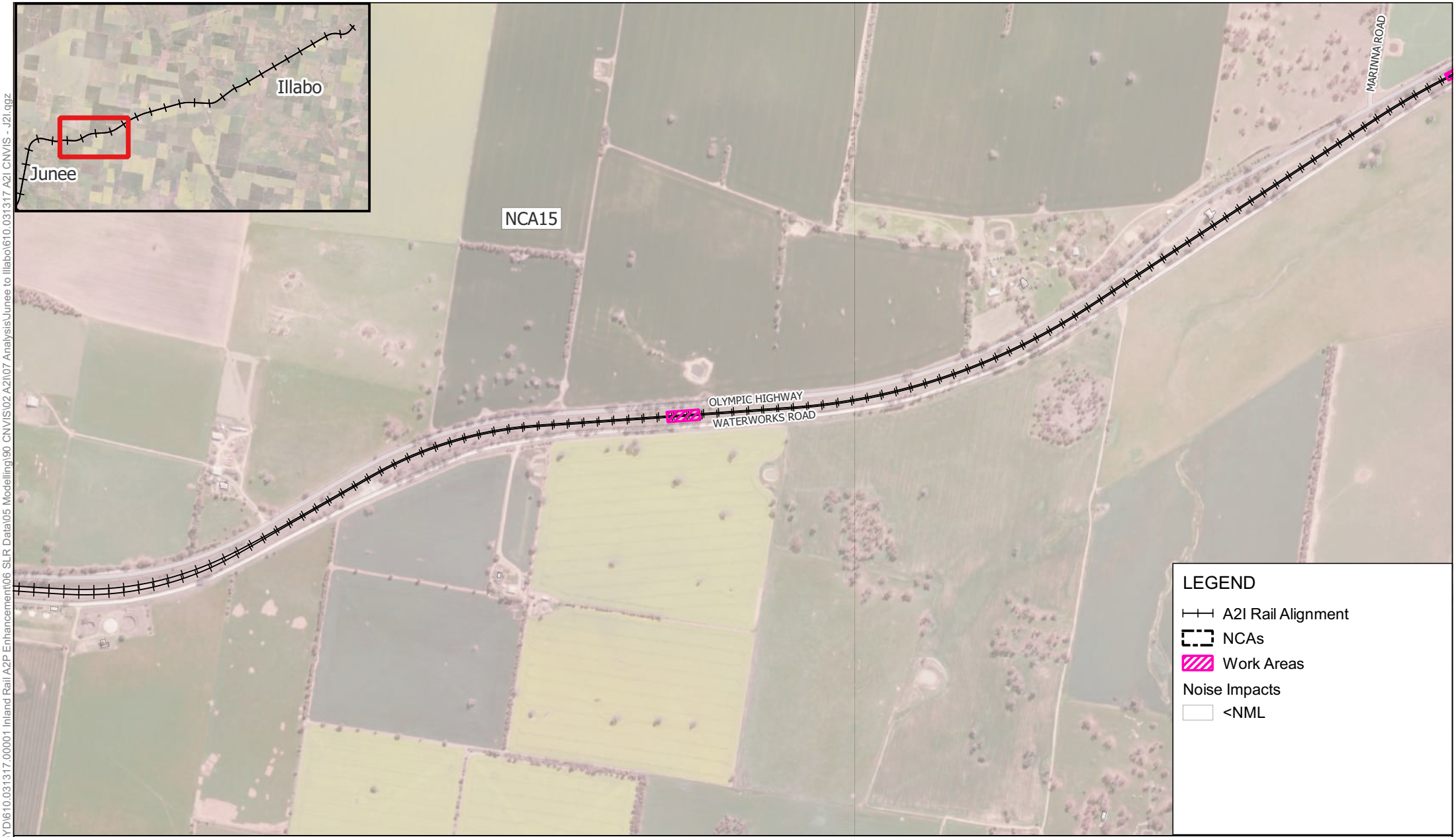

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APPENDIX C-32a

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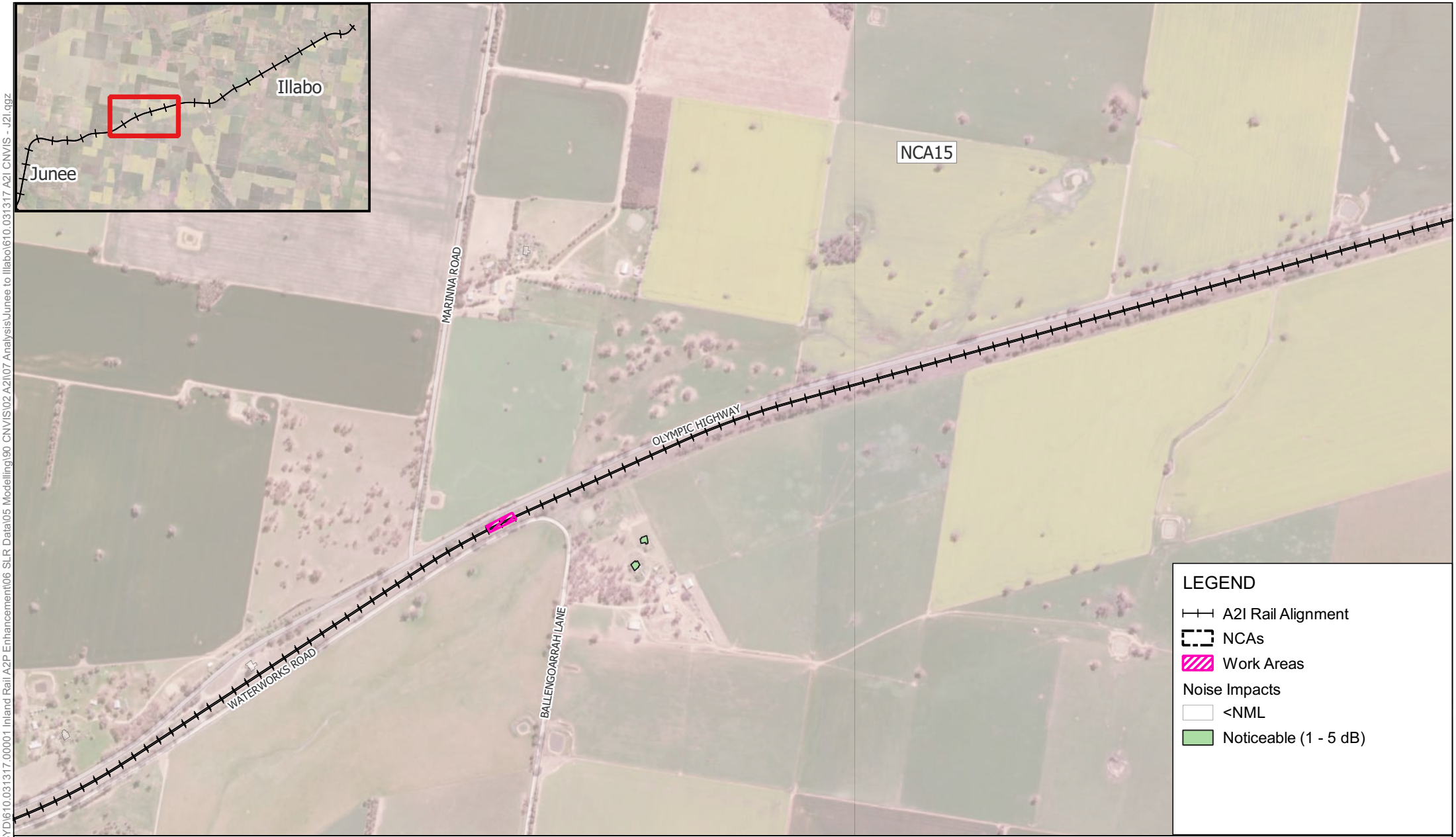

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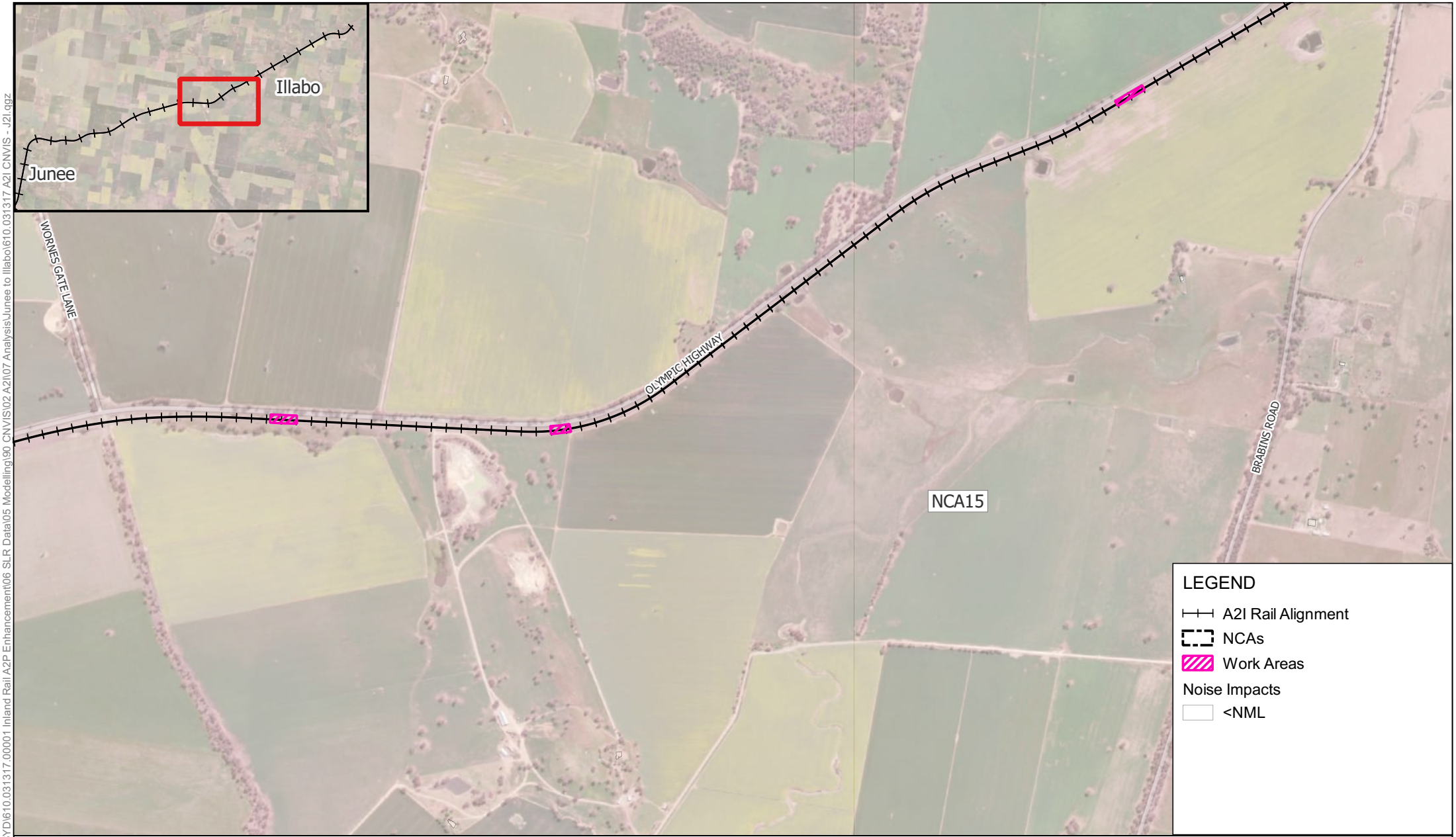

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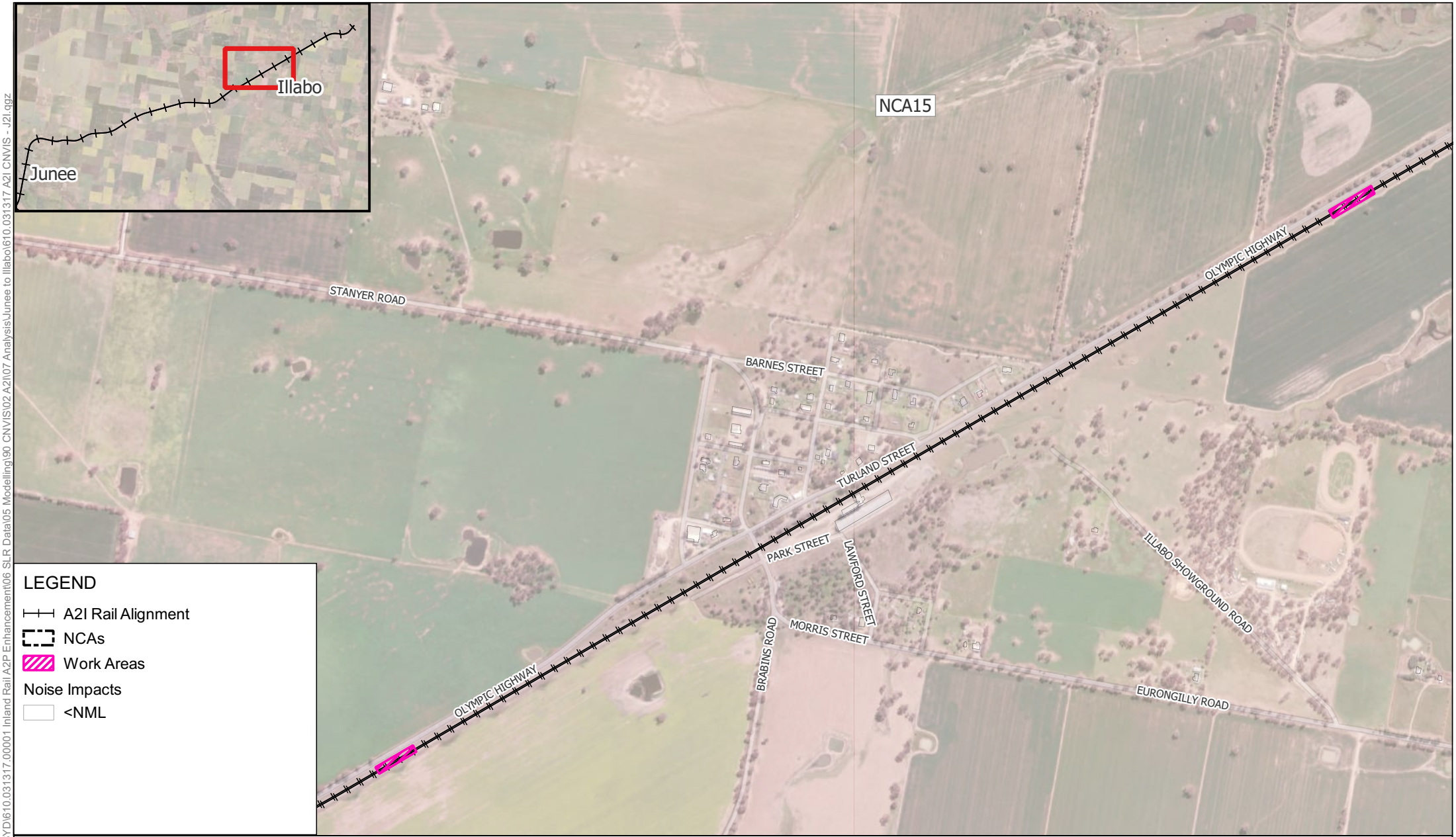

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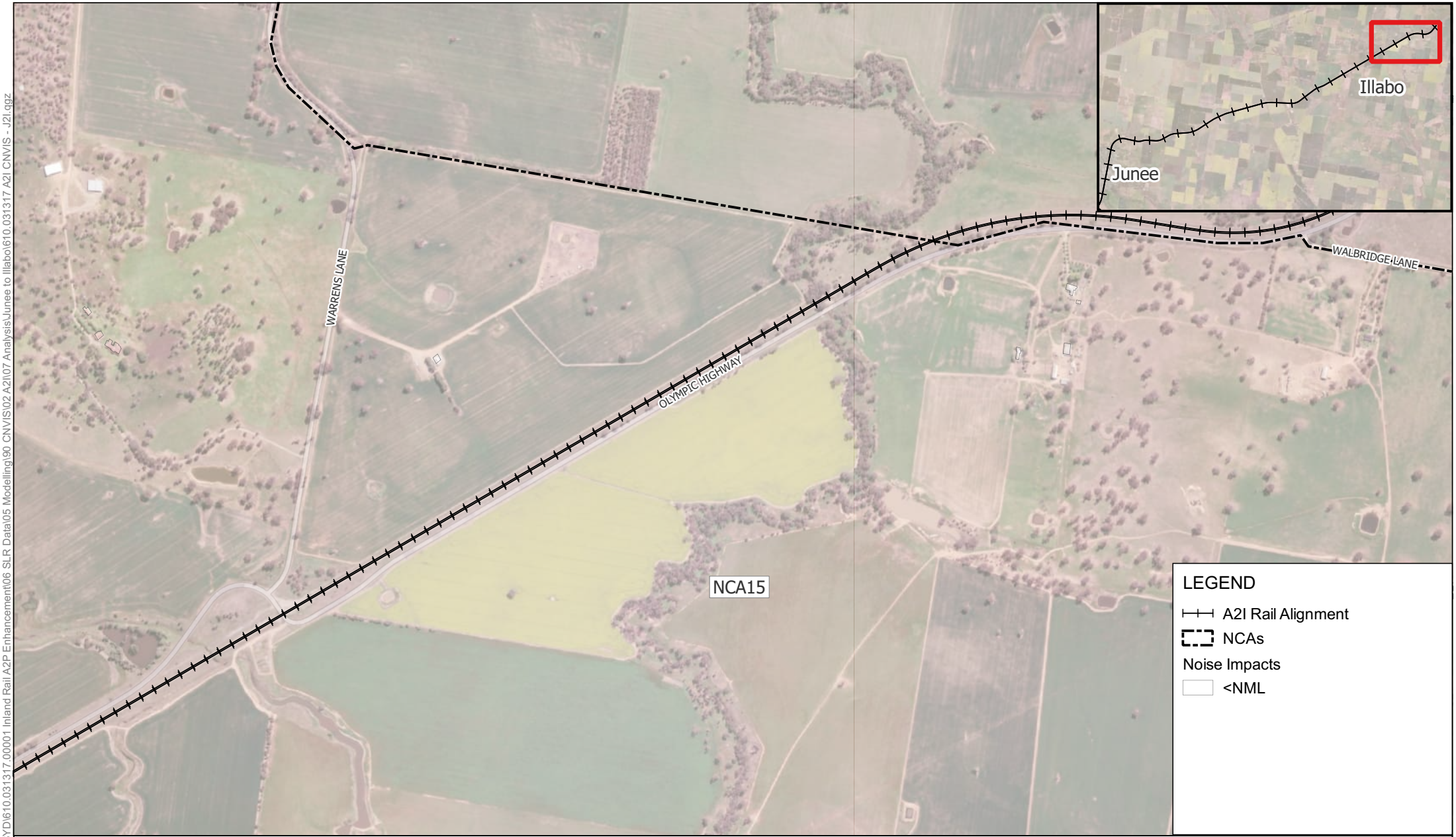

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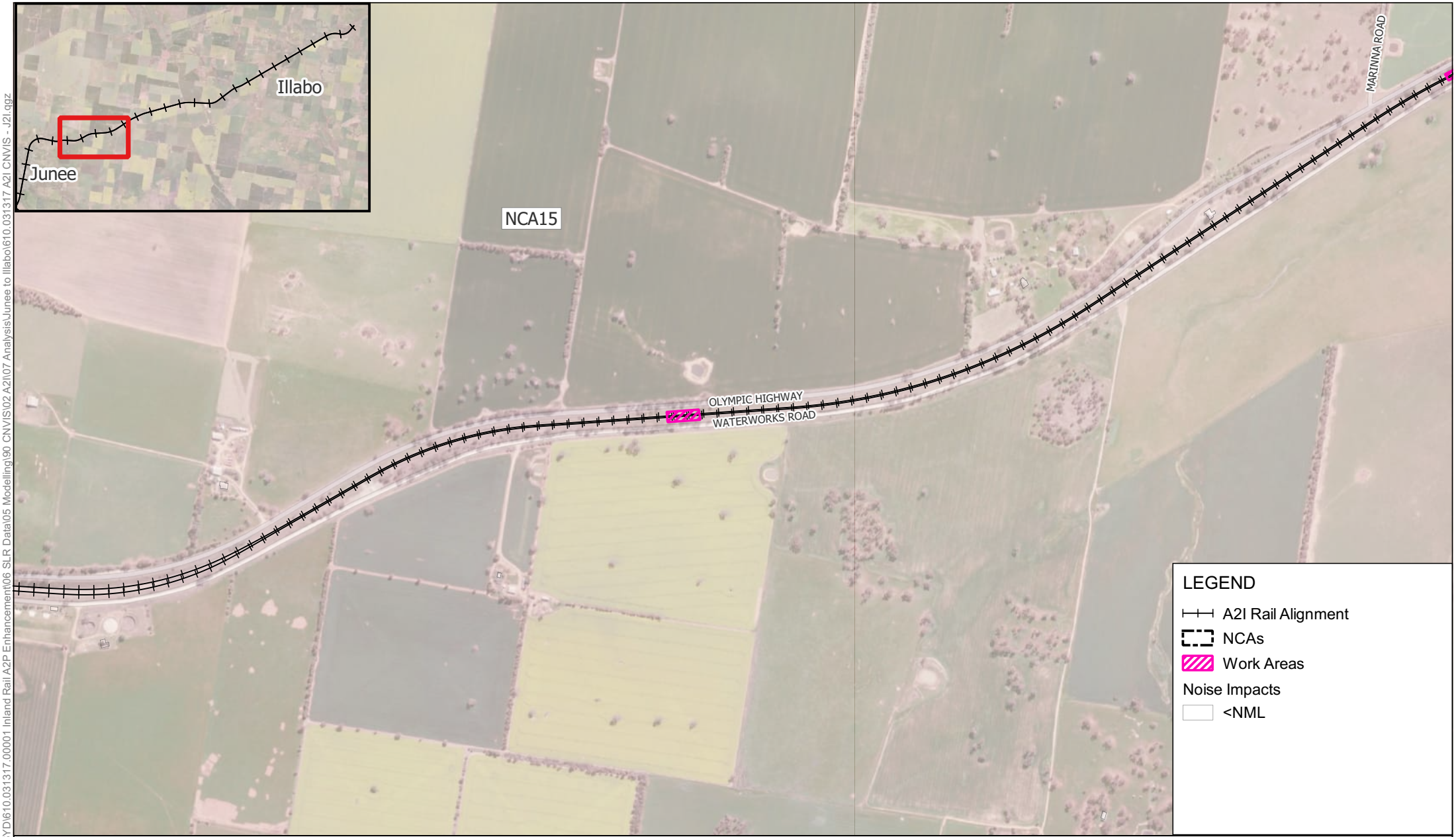

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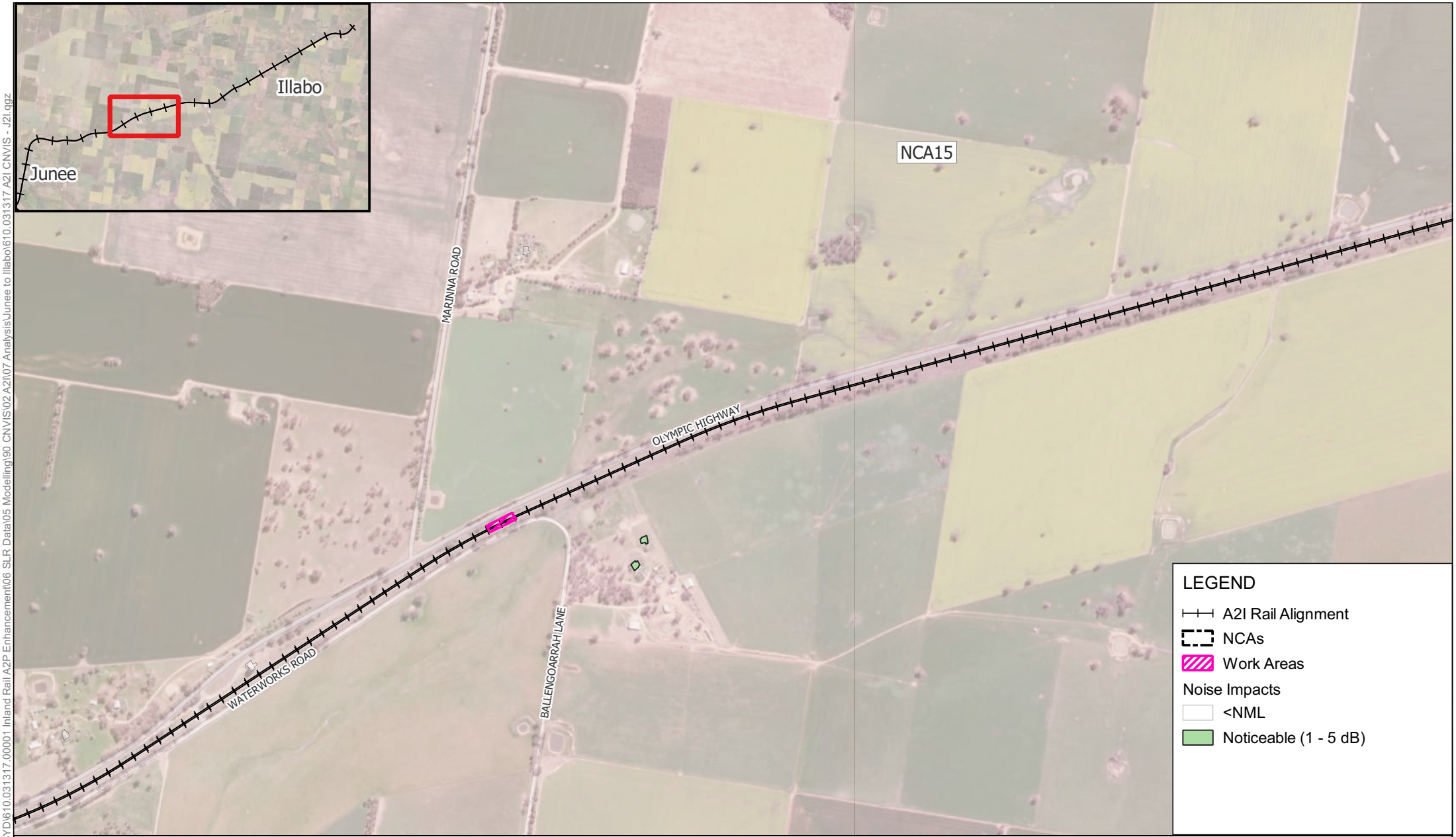

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APPENDIX C-33b

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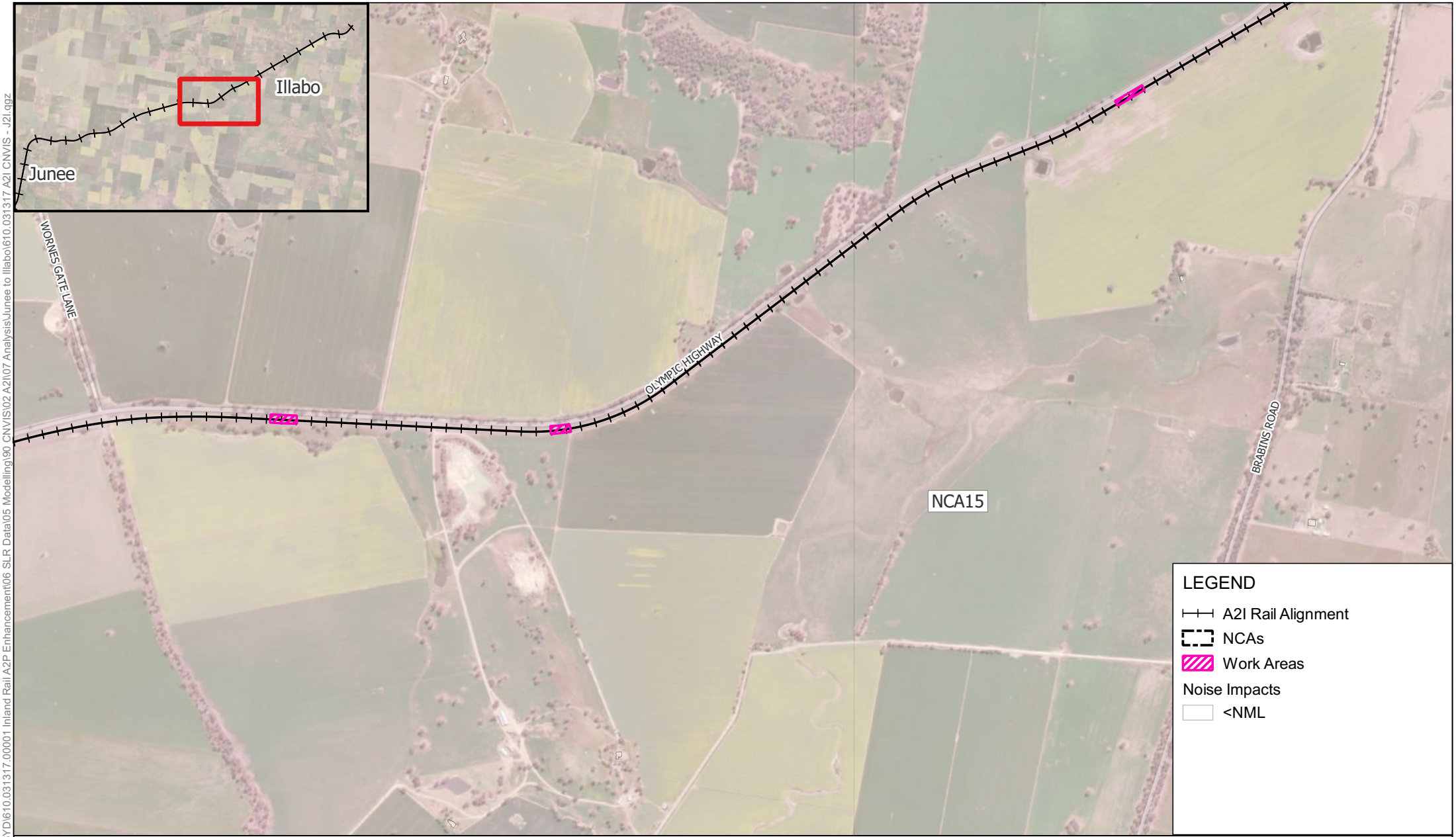

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Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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W.010 Signalling Work - Out of Hours Evening

APPENDIX C-33c

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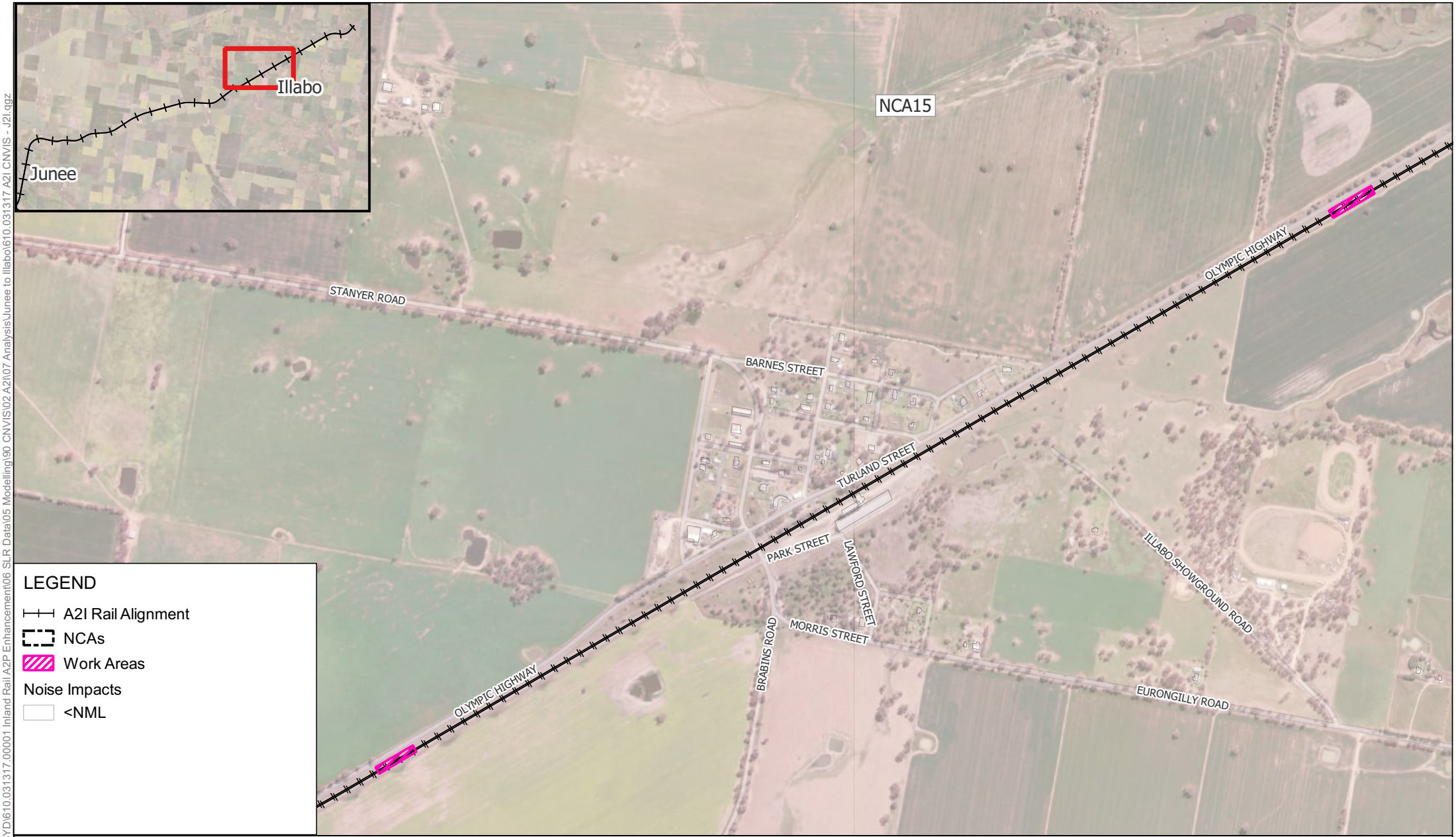

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Project Number: 610.031317

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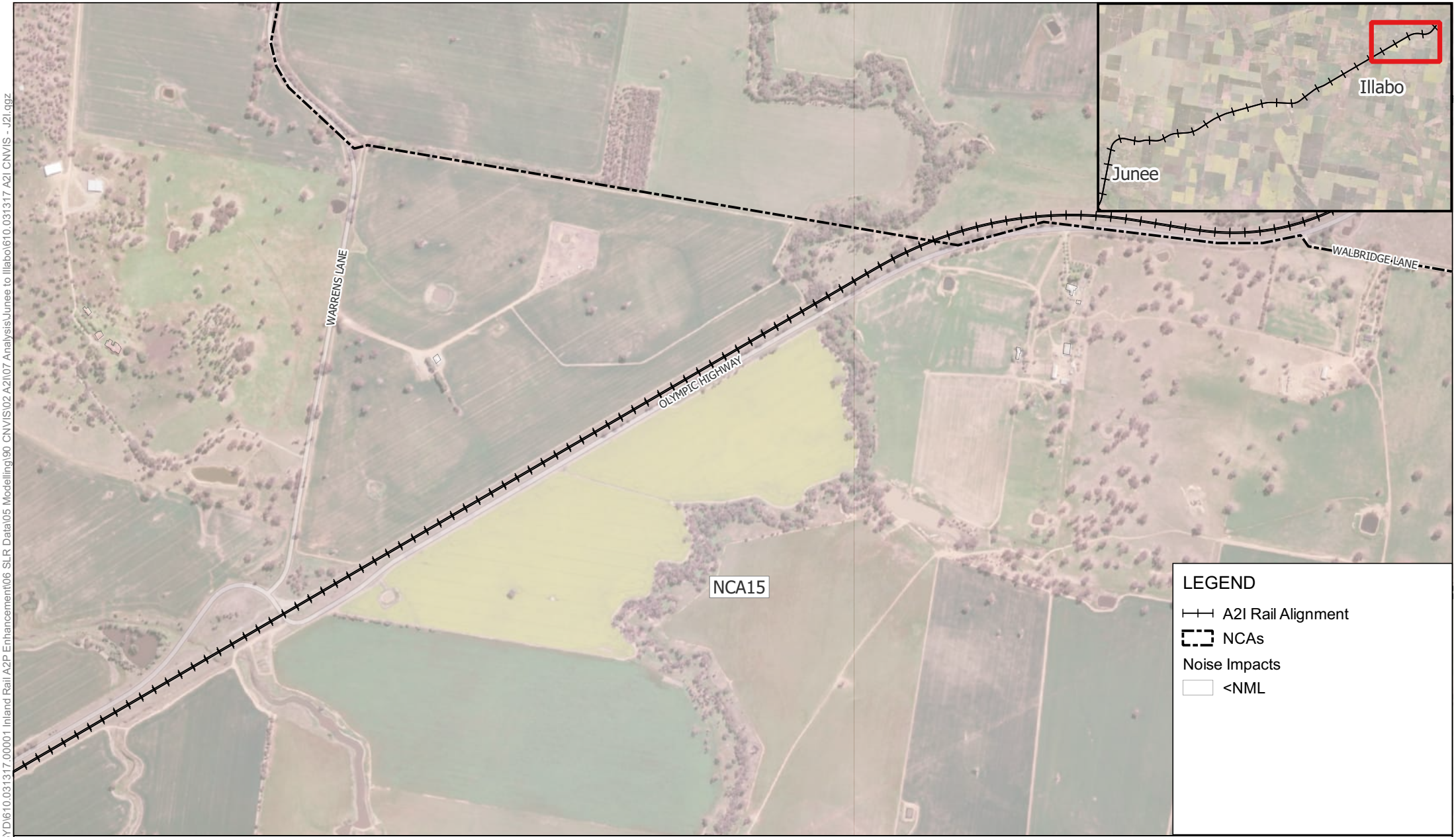

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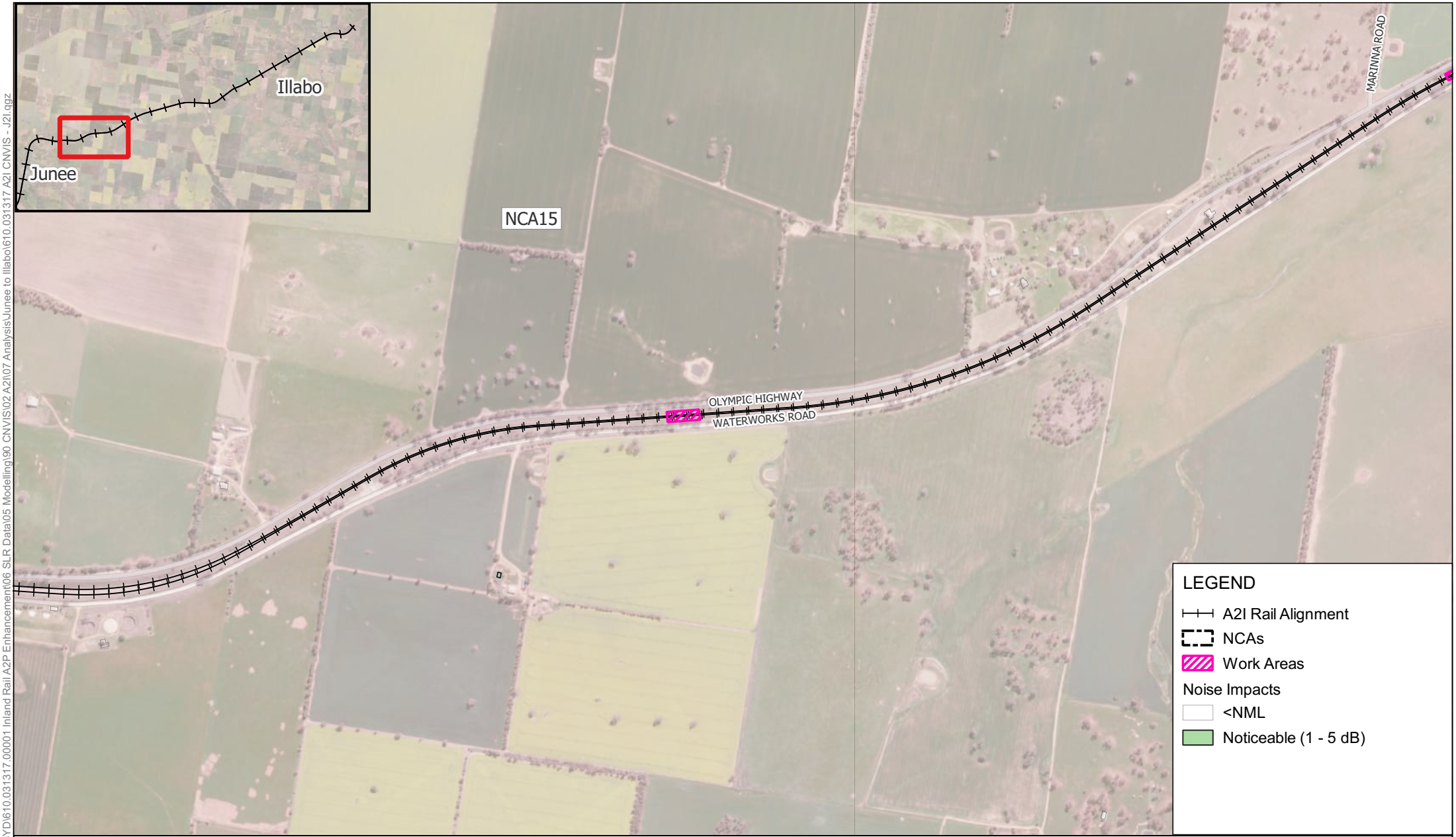

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W.010 Signalling Work - Out of Hours Night-time

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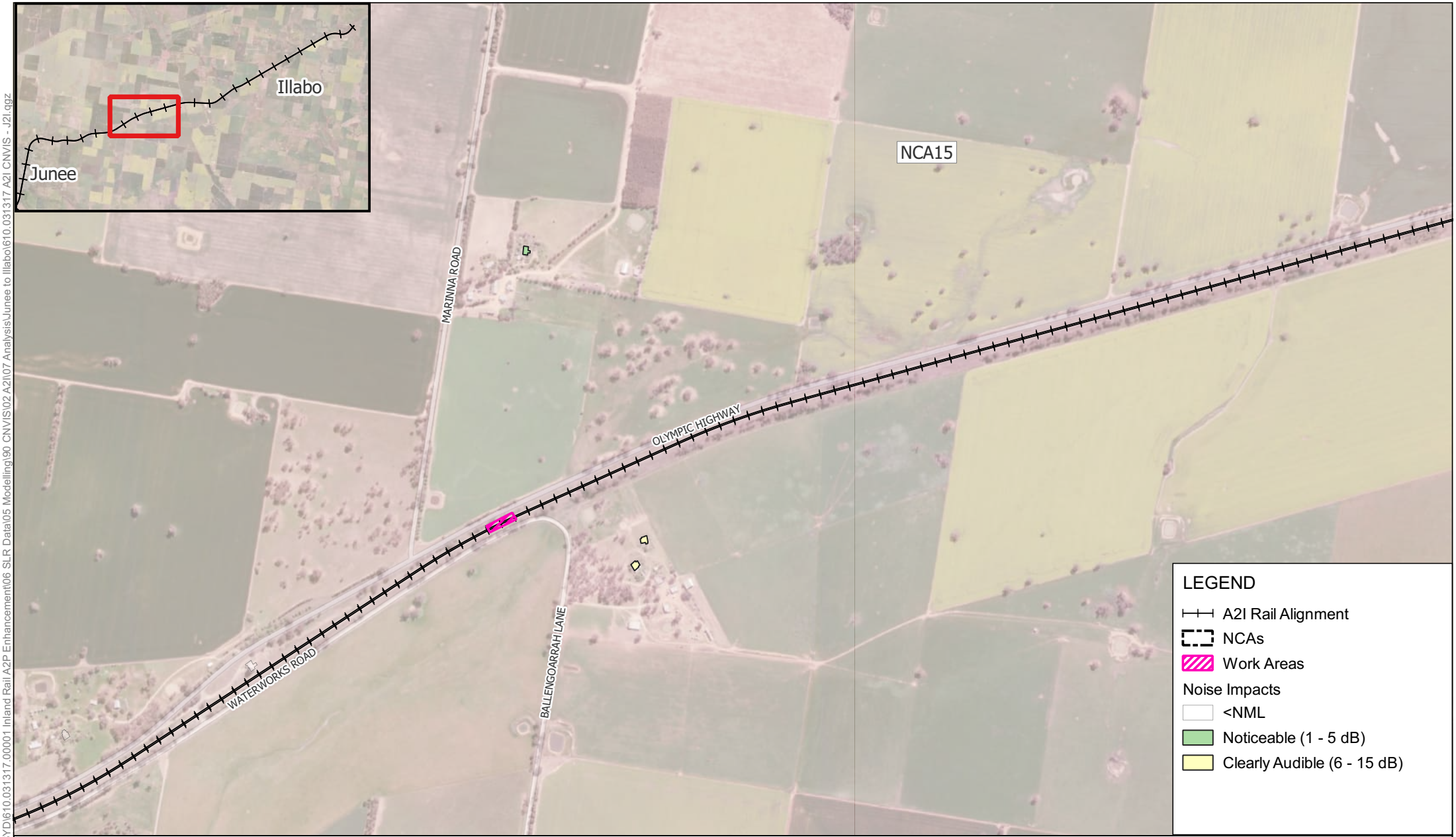

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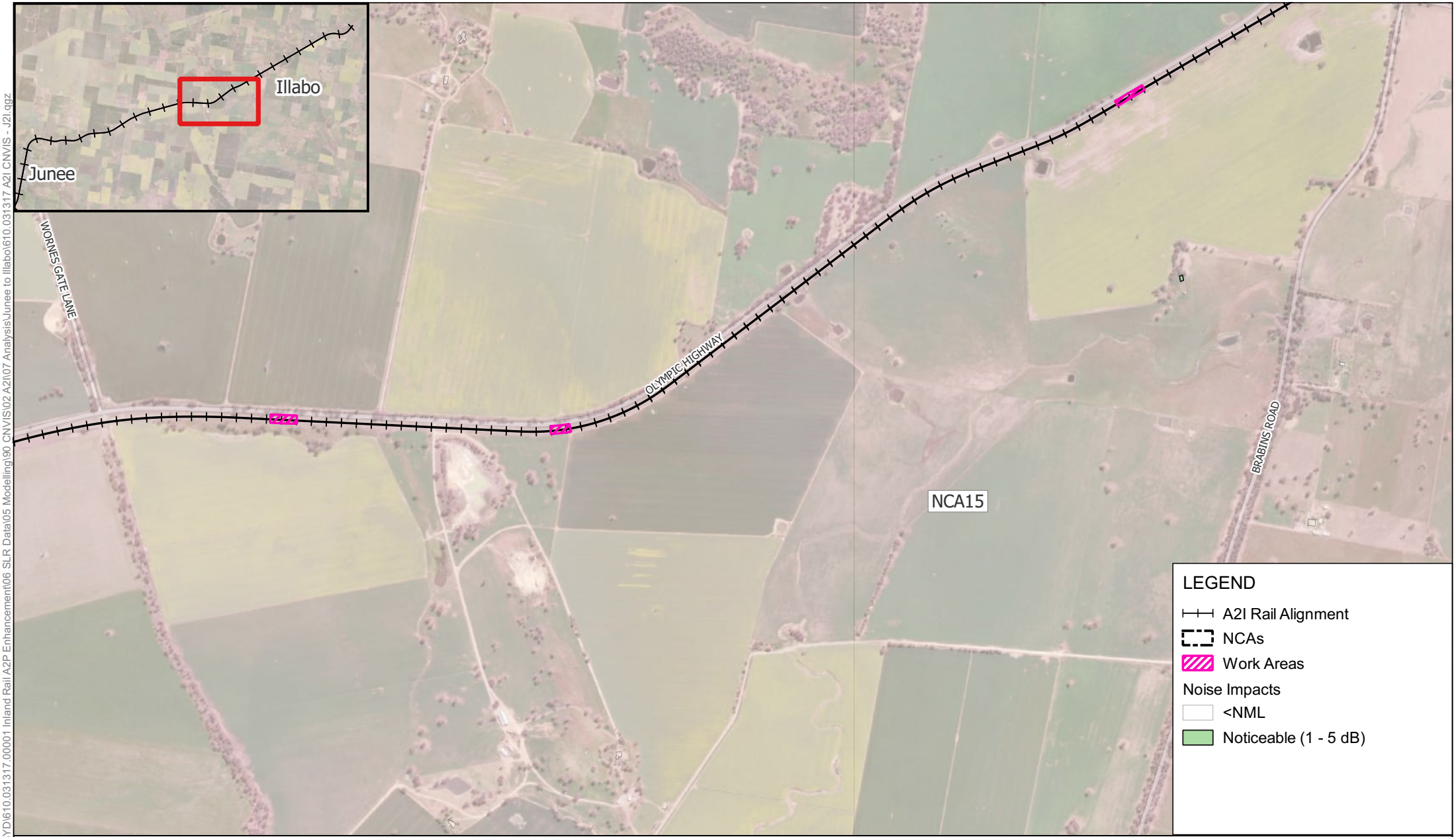

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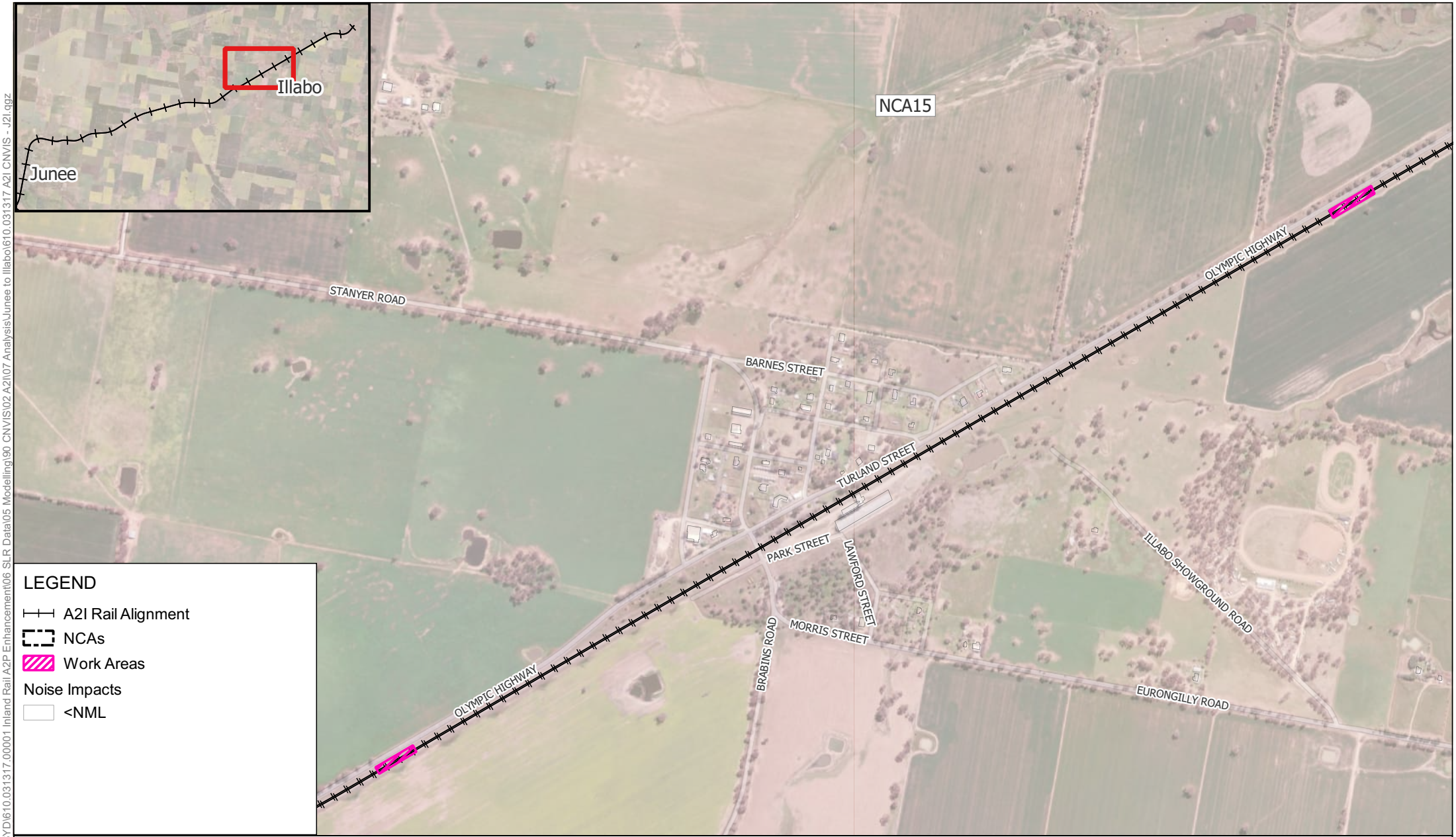

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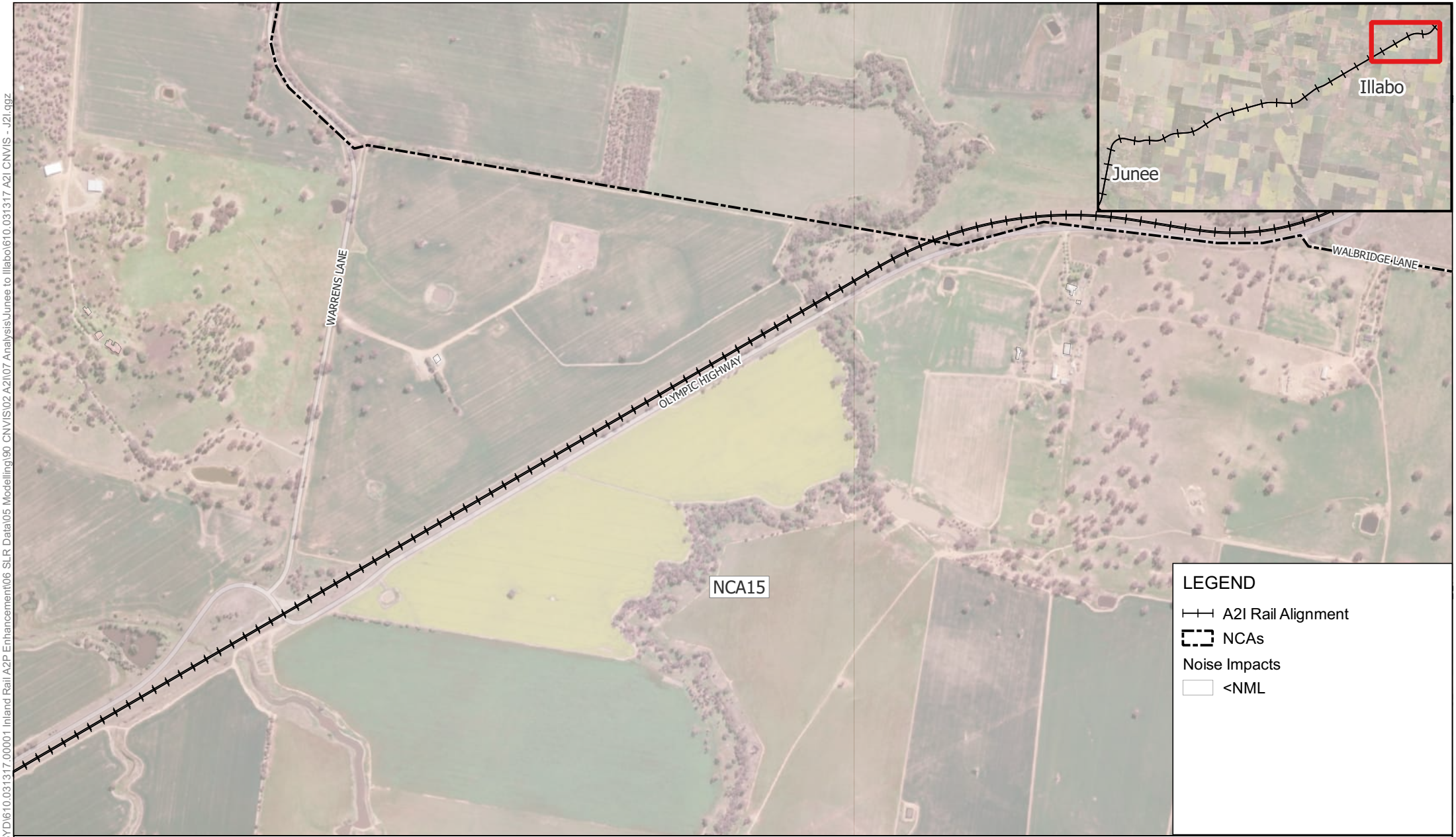

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W.011 Level Crossing Work - Peak - Approved Daytime Hours

APPENDIX C-35a

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W.011 Level Crossing Work - Peak - Approved Daytime Hours

APPENDIX C-35b

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W.011 Level Crossing Work - Peak - Approved Daytime Hours

APPENDIX C-35c

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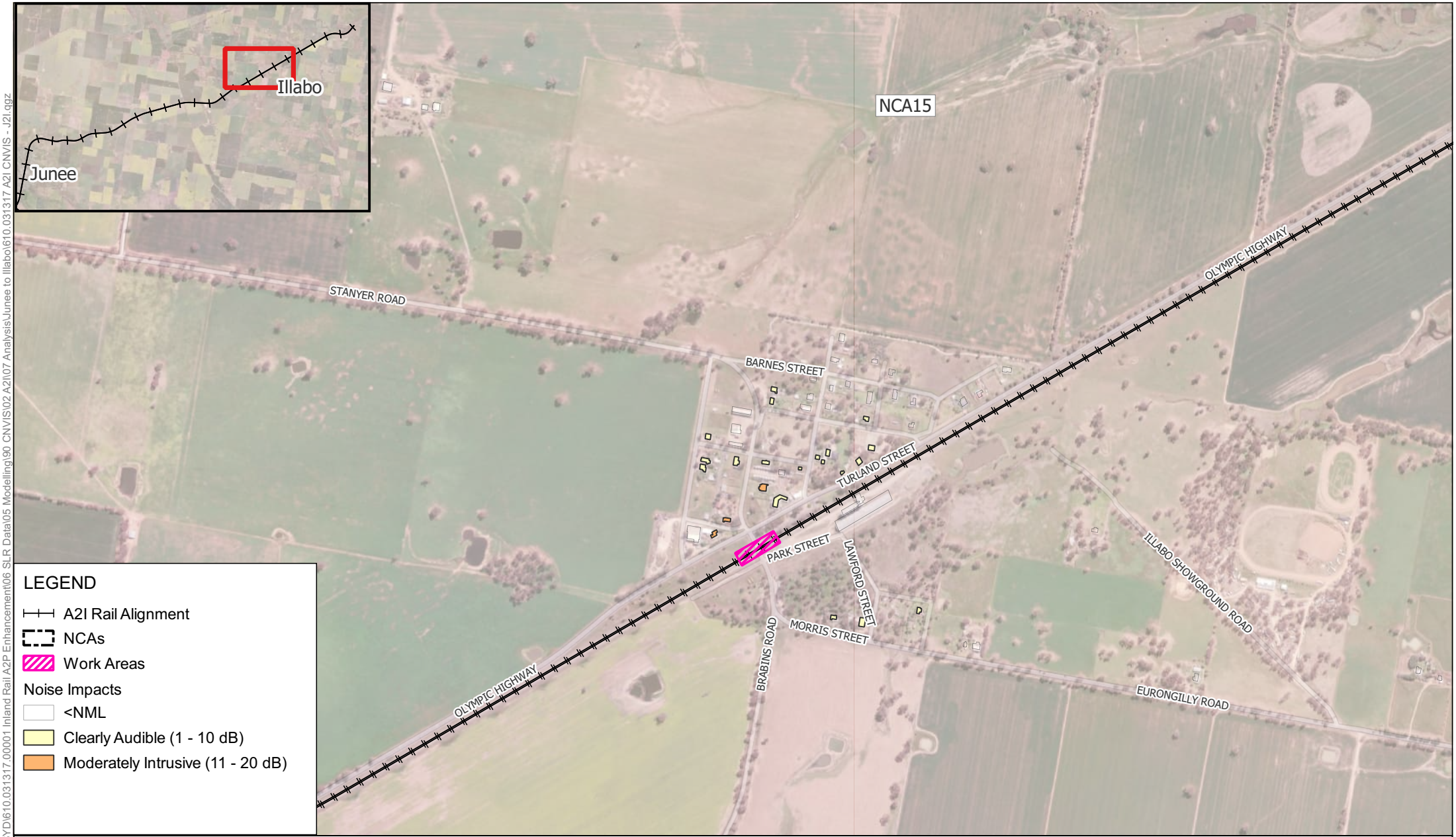

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W.011 Level Crossing Work - Peak - Approved Daytime Hours

APPENDIX C-35d

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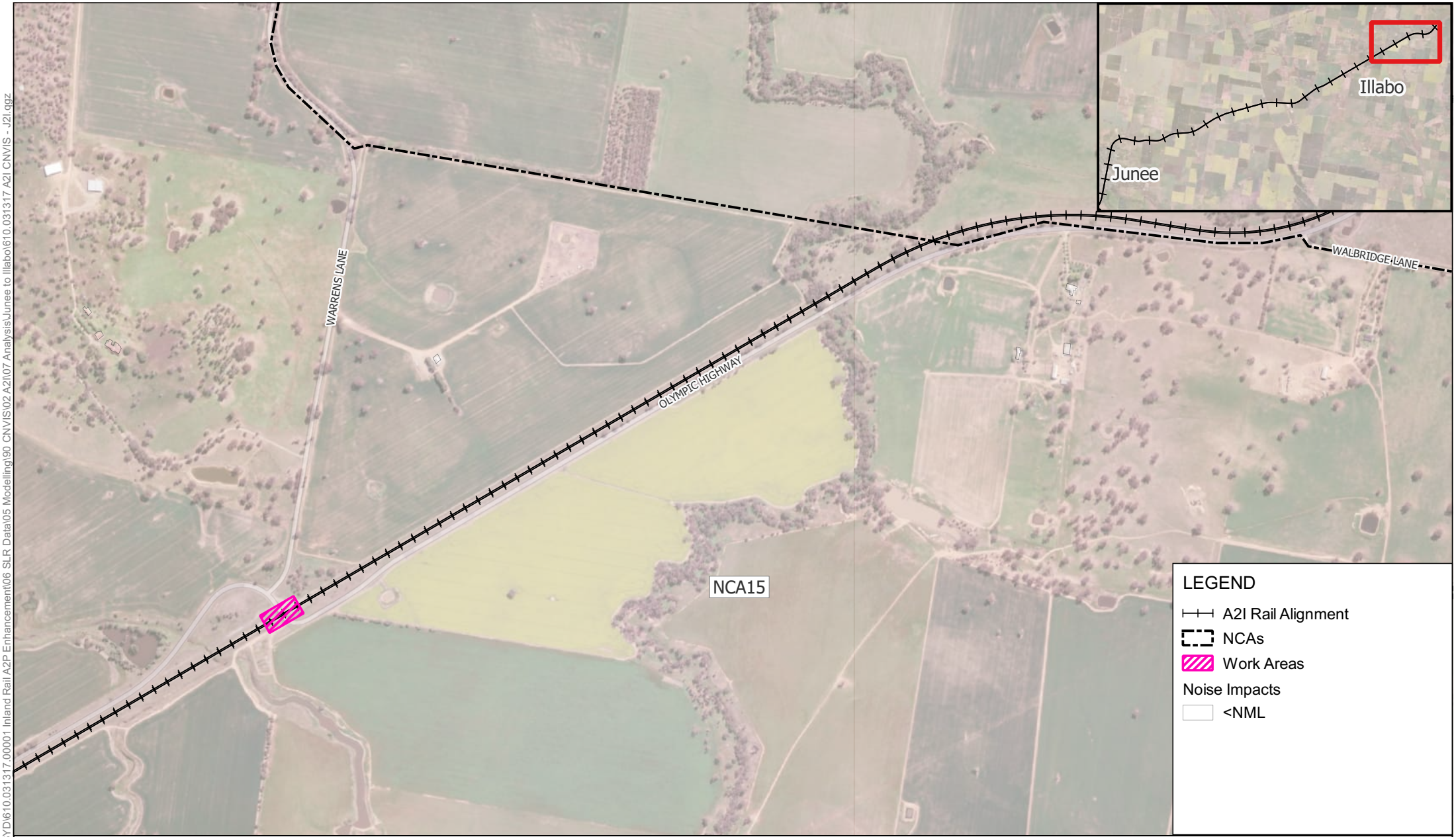

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W.011 Level Crossing Work - Peak - Out of Hours Daytime

APPENDIX C-36a

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W.011 Level Crossing Work - Peak - Out of Hours Daytime

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W.011 Level Crossing Work - Peak - Out of Hours Daytime

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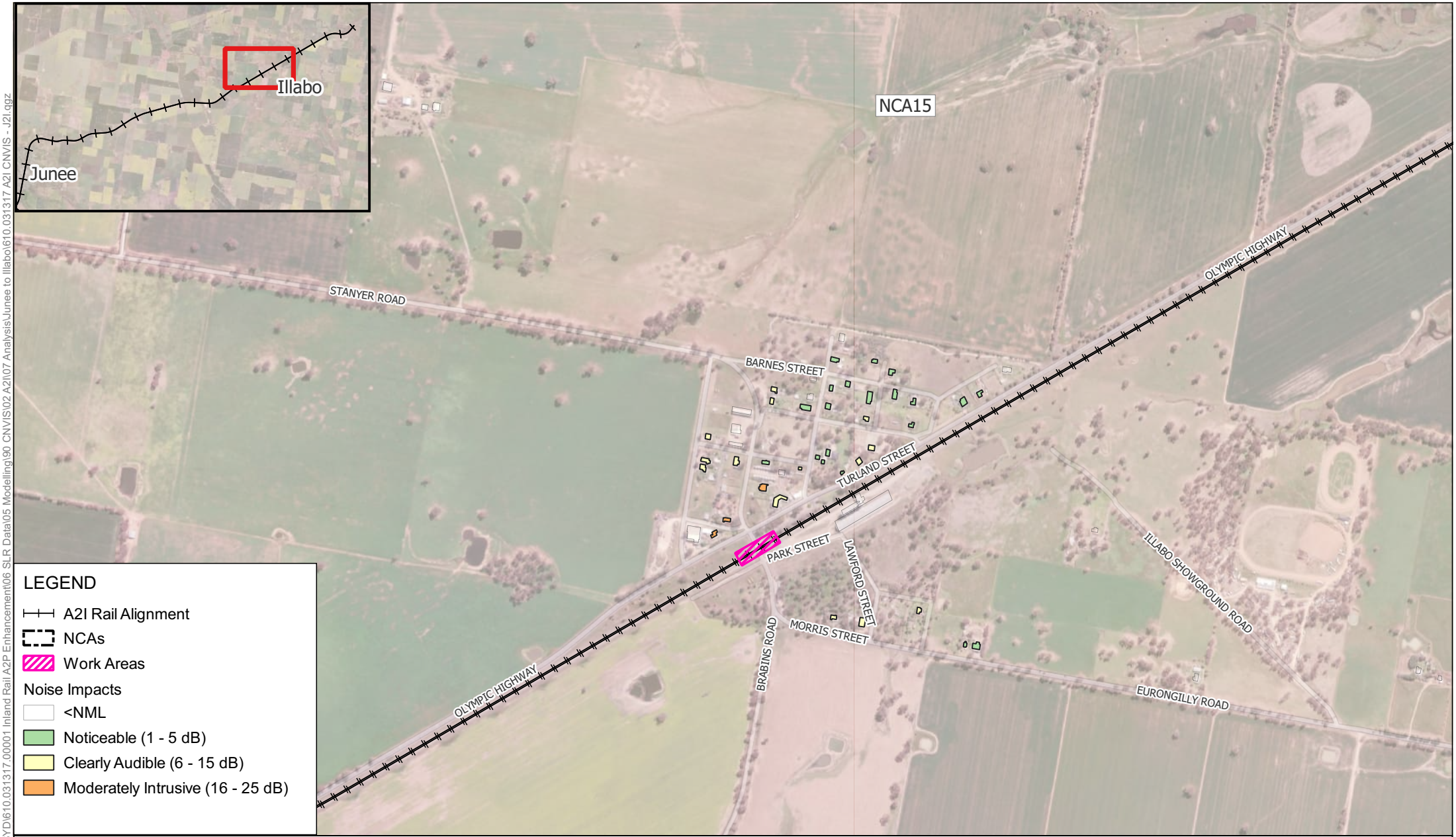

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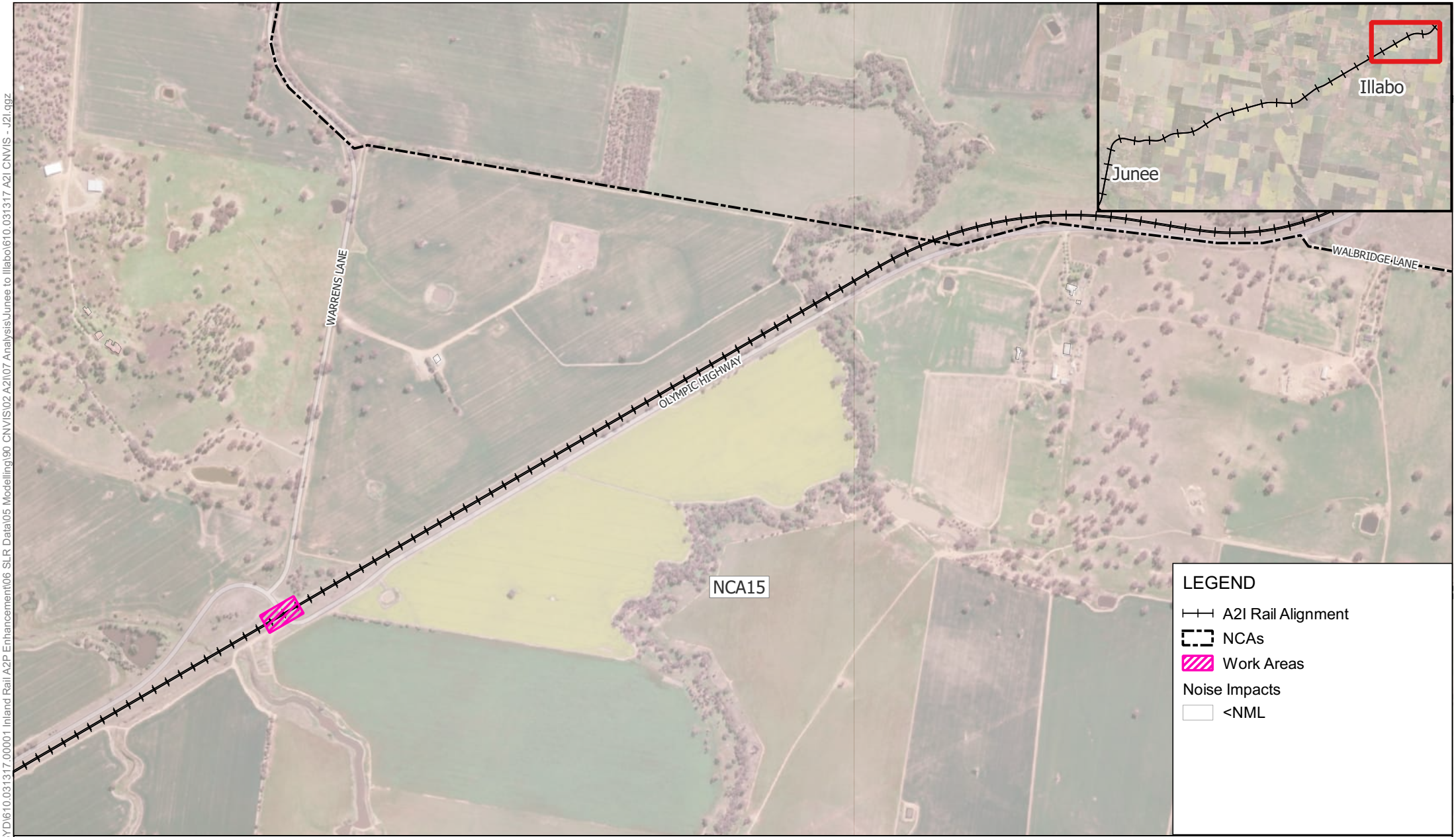

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W.011 Level Crossing Work - Peak - Out of Hours Evening

APPENDIX C-37a

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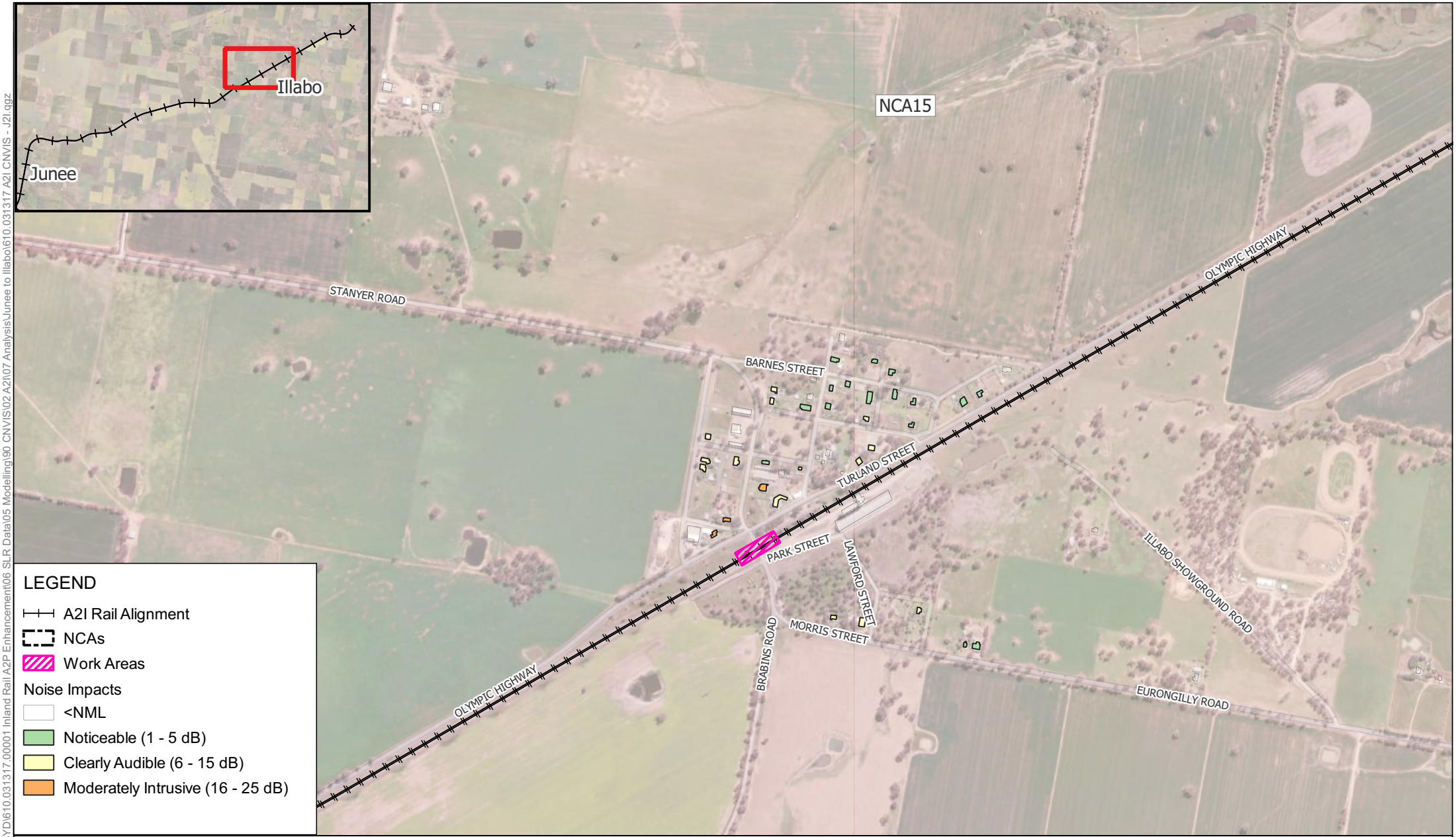

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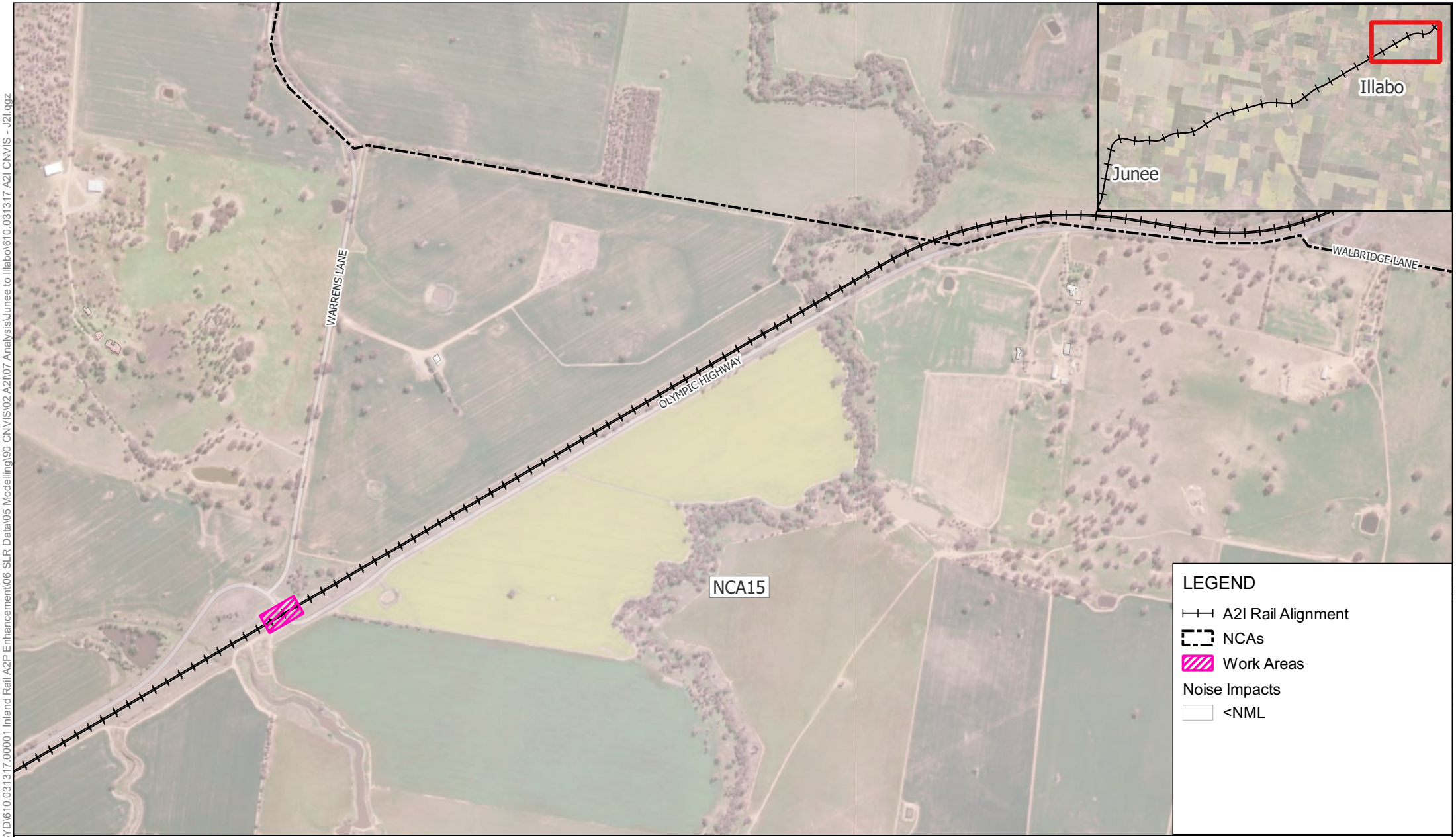

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W.011 Level Crossing Work - Peak - Out of Hours Night-time

APPENDIX C-38a

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APPENDIX C-38b

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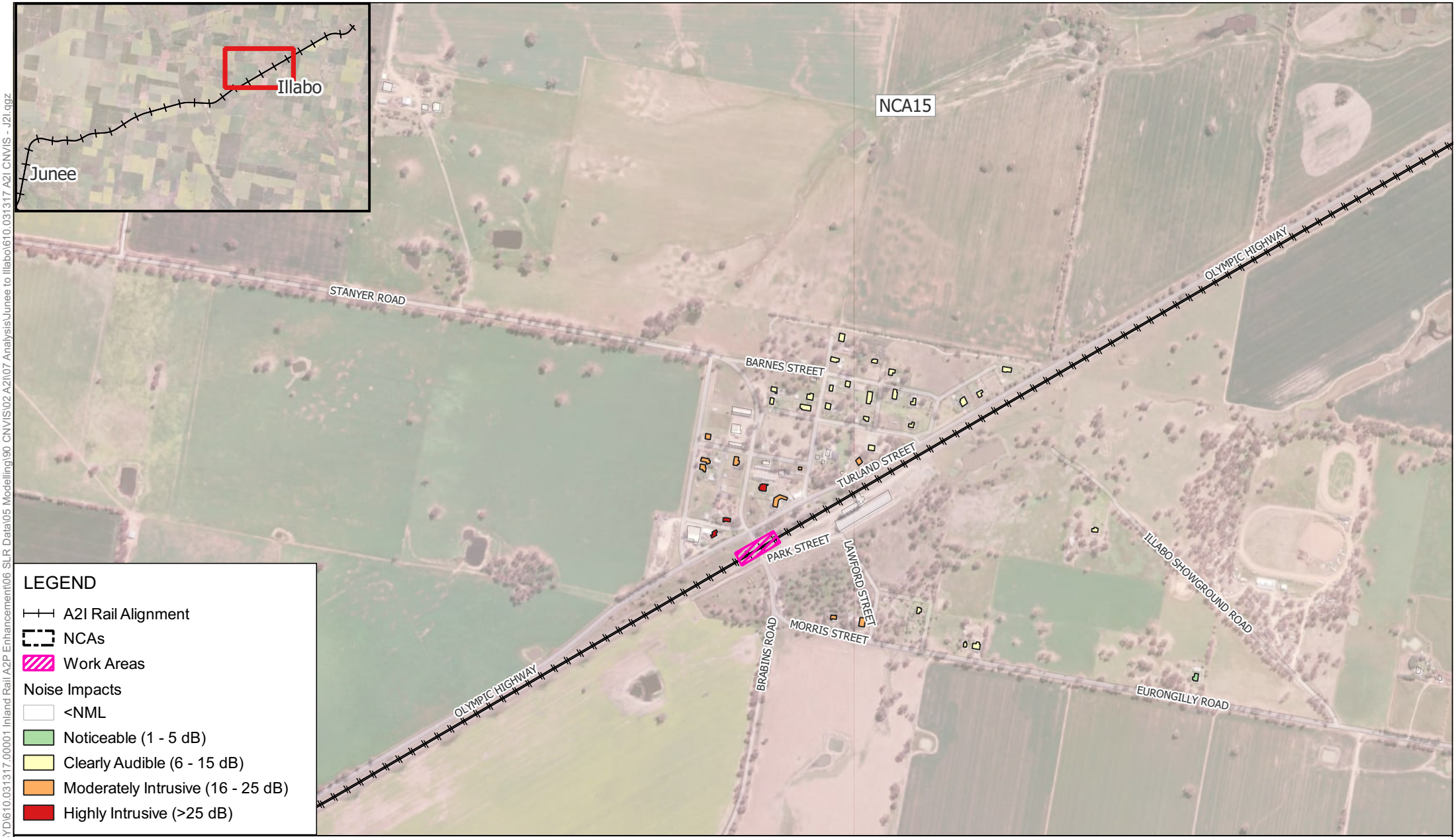

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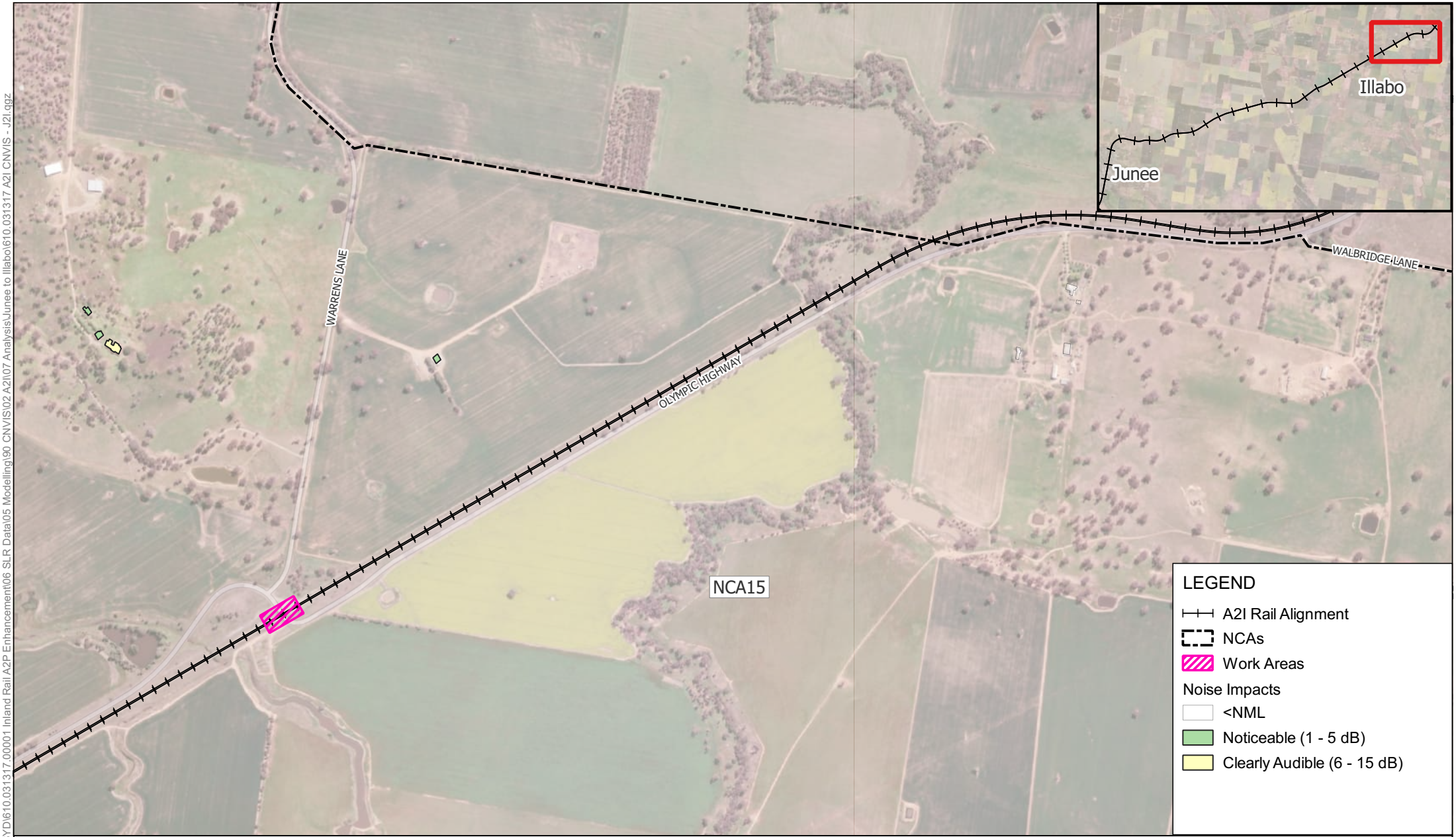

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Data Source:
ESRI World Imagery

DISCLAIMER: All information within this document maybe based on external sources. SLR Consulting Pty Ltd makes no warranty regarding the data's accuracy or reliability for any purpose .

W.011 Level Crossing Work - Peak - Out of Hours Night-time

APPENDIX C-38e

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

0 250 500 m

Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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W.012 Level Crossing Work - Typical - Approved Daytime Hours

APPENDIX C-39a

H:\Projects-SLR\610-SrvSYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

0 250 500 m

Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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W.012 Level Crossing Work - Typical - Approved Daytime Hours

APPENDIX C-39b

H:\Projects-SLR\610-SrvSYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

0 250 500 m

Scale: Scale: 1:18,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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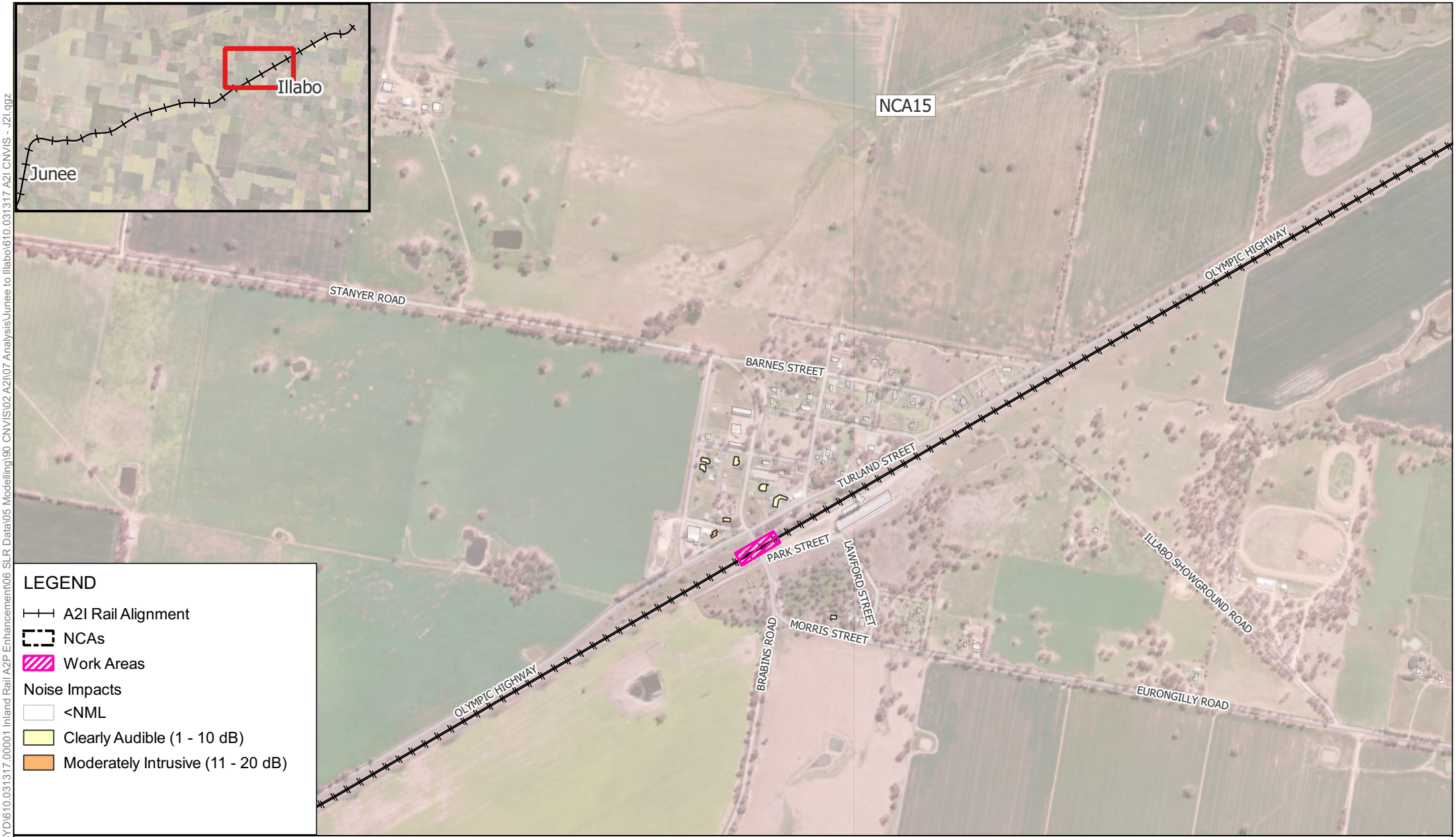
W.012 Level Crossing Work - Typical - Approved Daytime Hours

APPENDIX C-39c

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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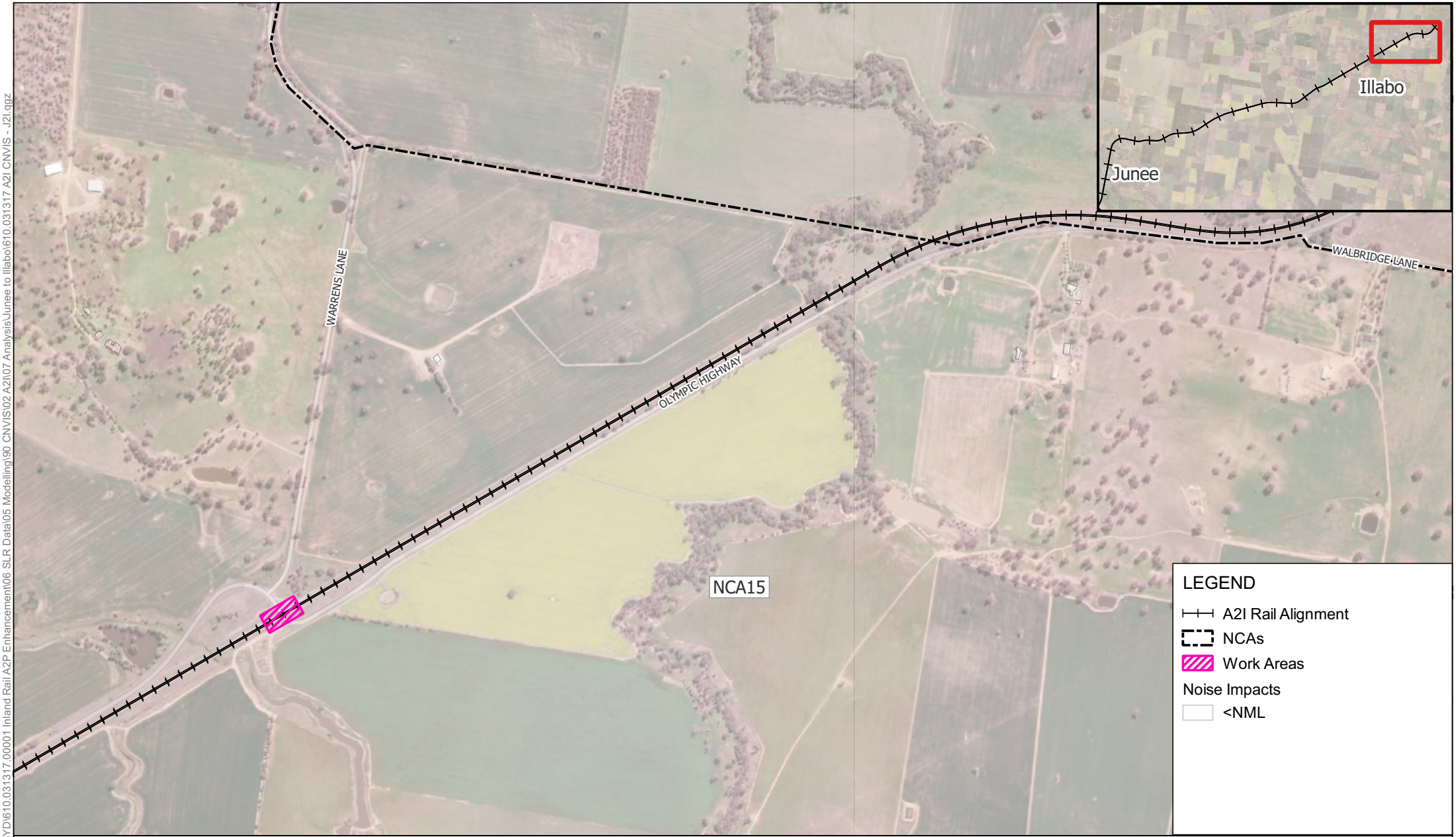
W.012 Level Crossing Work - Typical - Approved Daytime Hours

APPENDIX C-39d

H:\Projects-SLR\610-SrvSYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



0 250 500 m

Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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W.012 Level Crossing Work - Typical - Approved Daytime Hours

APPENDIX C-39e

H:\Projects-SLR\610-SrvSYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

0 250 500 m

Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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W.012 Level Crossing Work - Typical - Out of Hours Daytime

APPENDIX C-40a

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

0 250 500 m

Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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W.012 Level Crossing Work - Typical - Out of Hours Daytime

APPENDIX C-40b

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

0 250 500 m

Scale: Scale: 1:18,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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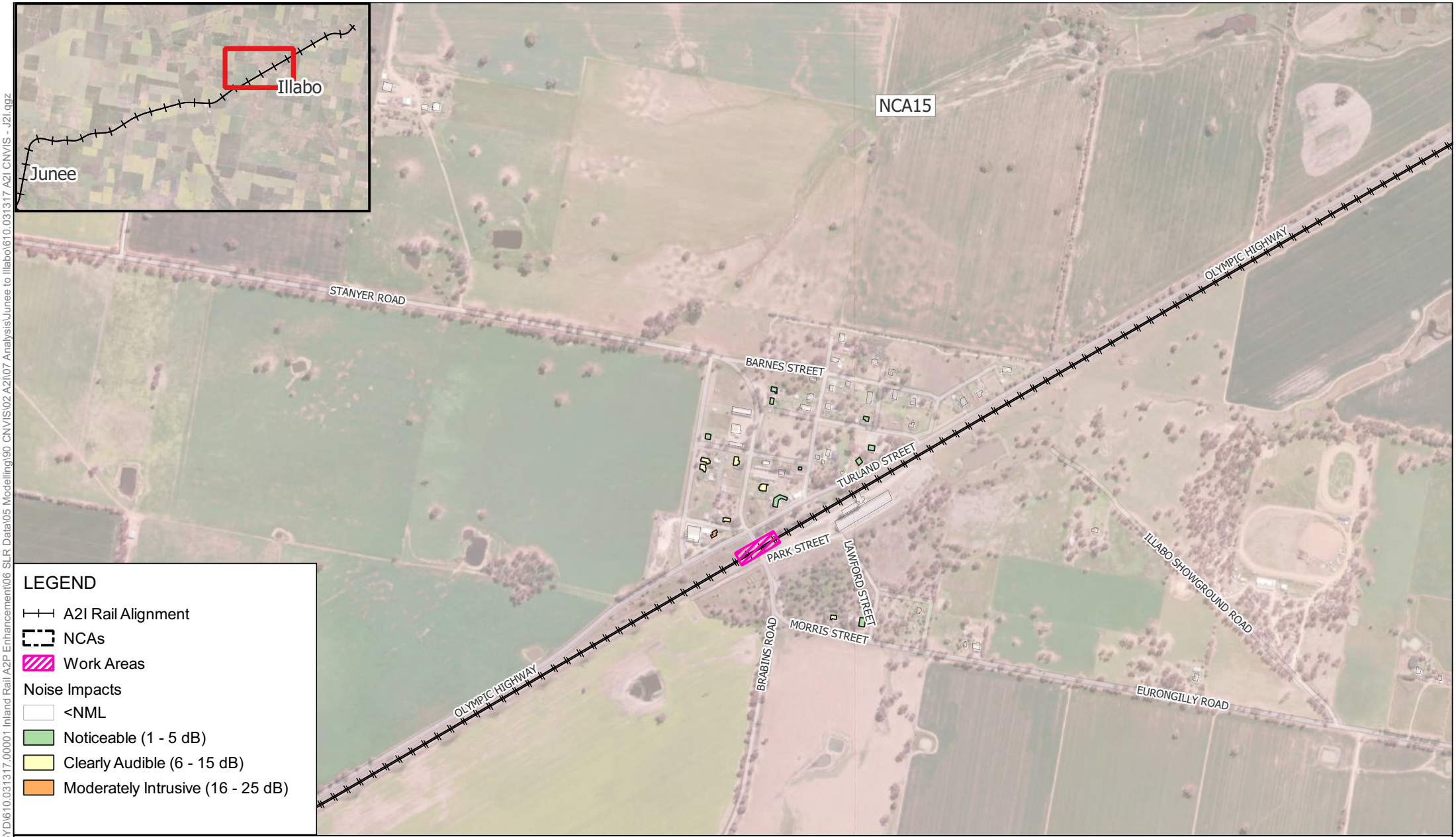
W.012 Level Crossing Work - Typical - Out of Hours Daytime

APPENDIX C-40c

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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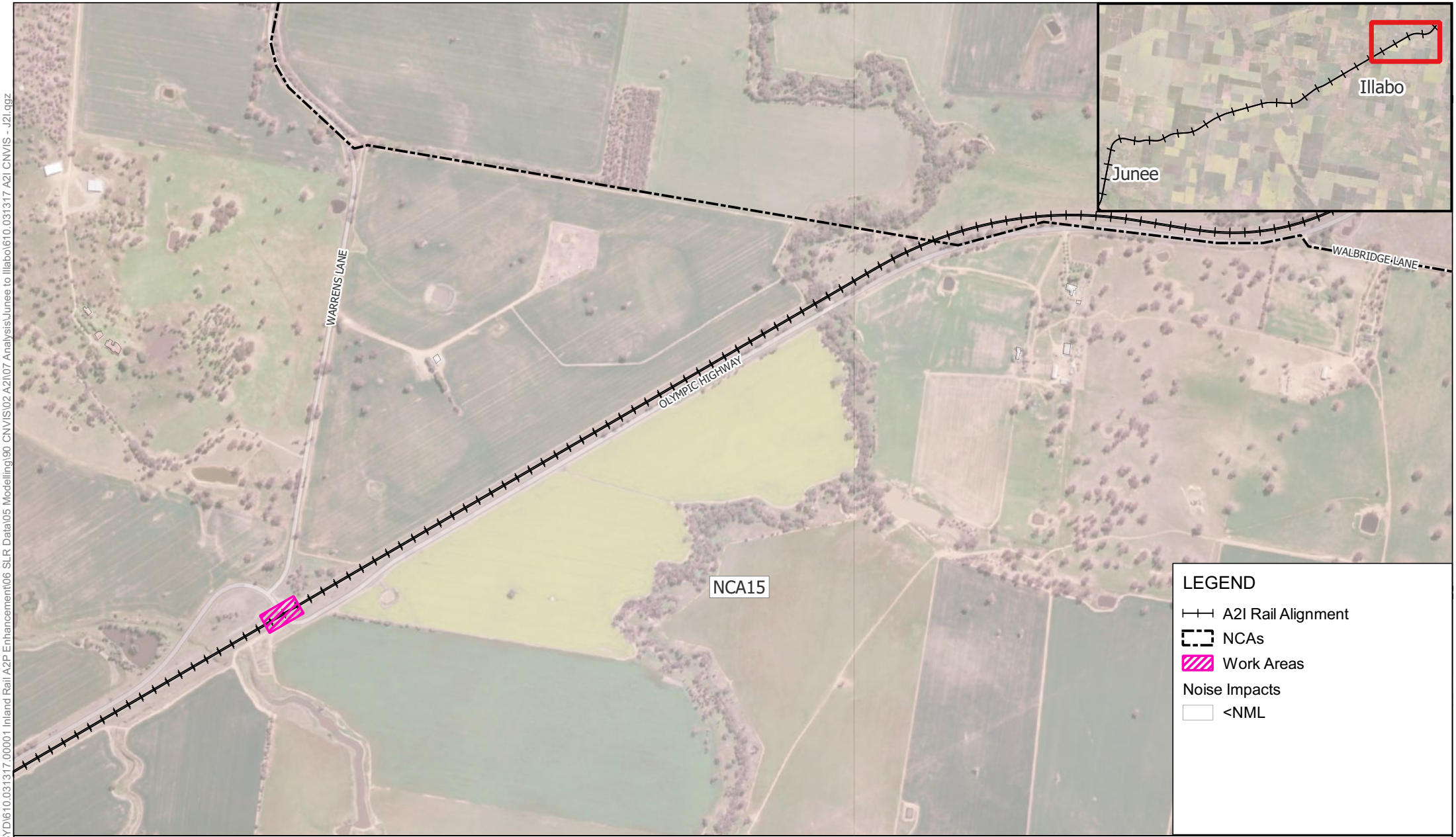
W.012 Level Crossing Work - Typical - Out of Hours Daytime

APPENDIX C-40d

H:\Projects-SLR\610-SrvSYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



0 250 500 m

Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

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W.012 Level Crossing Work - Typical - Out of Hours Daytime

APPENDIX C-40e

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

0 250 500 m

Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

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W.012 Level Crossing Work - Typical - Out of Hours Evening

APPENDIX C-41a

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

0 250 500 m

Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

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W.012 Level Crossing Work - Typical - Out of Hours Evening

APPENDIX C-41b

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

0 250 500 m

Scale: Scale: 1:18,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
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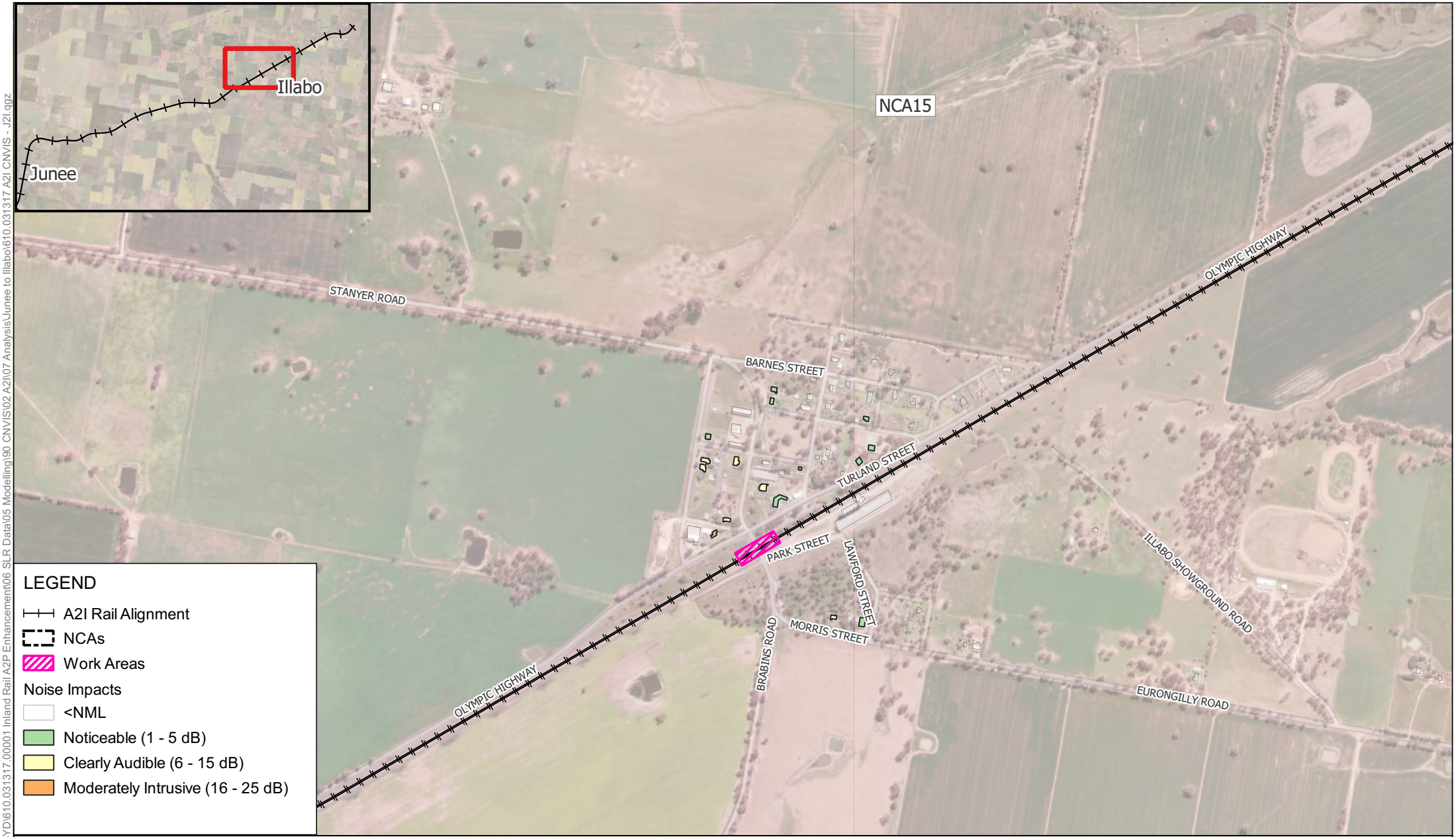
W.012 Level Crossing Work - Typical - Out of Hours Evening

APPENDIX C-41c

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

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W.012 Level Crossing Work - Typical - Out of Hours Evening

APPENDIX C-41d

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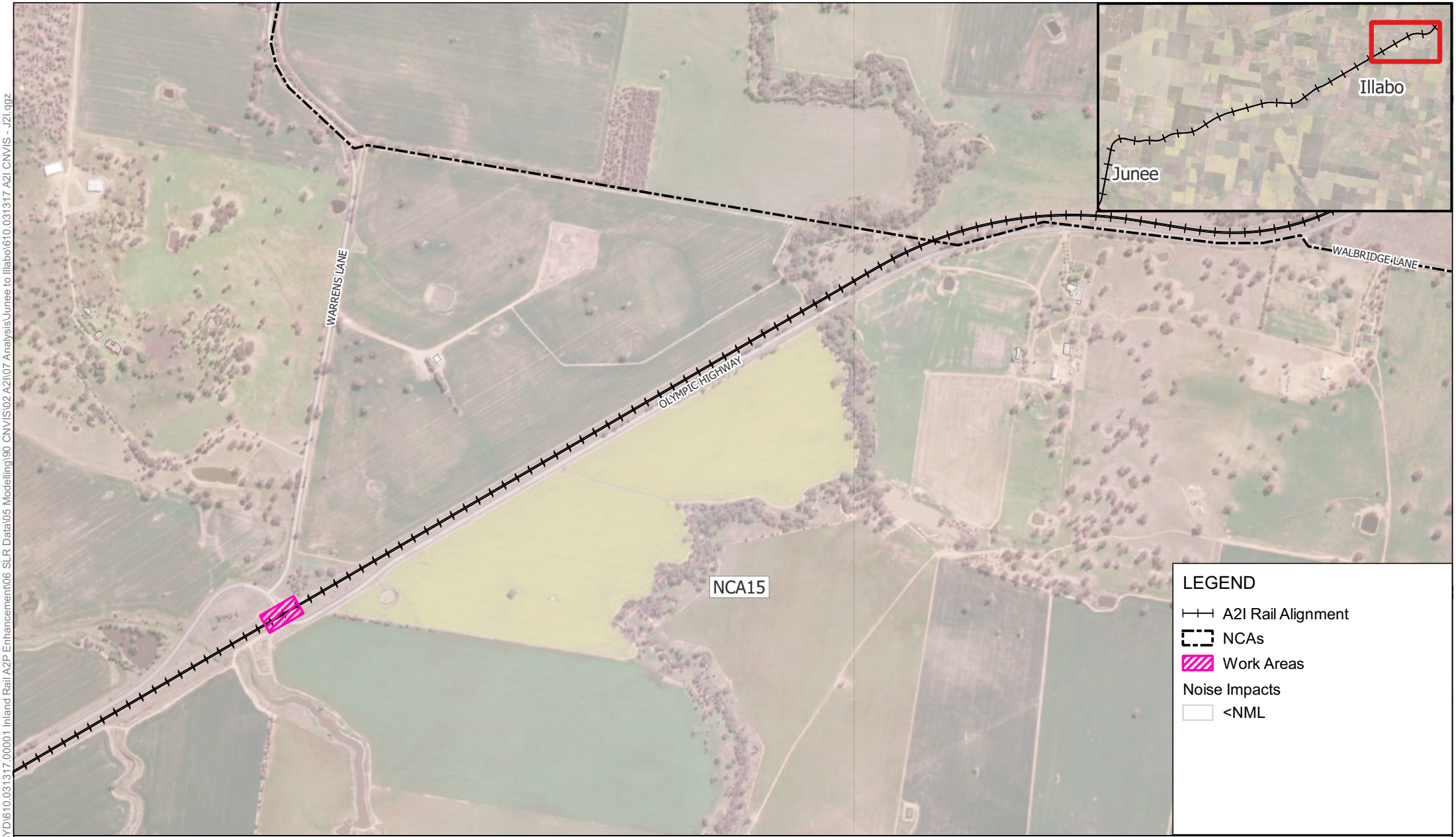

0 250 500 m

Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

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W.012 Level Crossing Work - Typical - Out of Hours Evening

APPENDIX C-41e

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

0 250 500 m

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Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
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W.012 Level Crossing Work - Typical - Out of Hours Night-time

APPENDIX C-42a

H:\Projects-SLR\610-SrvSYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

0 250 500 m

Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

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W.012 Level Crossing Work - Typical - Out of Hours Night-time

APPENDIX C-42b

H:\Projects-SLR\610-SrvSYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

0 250 500 m

Scale: Scale: 1:18,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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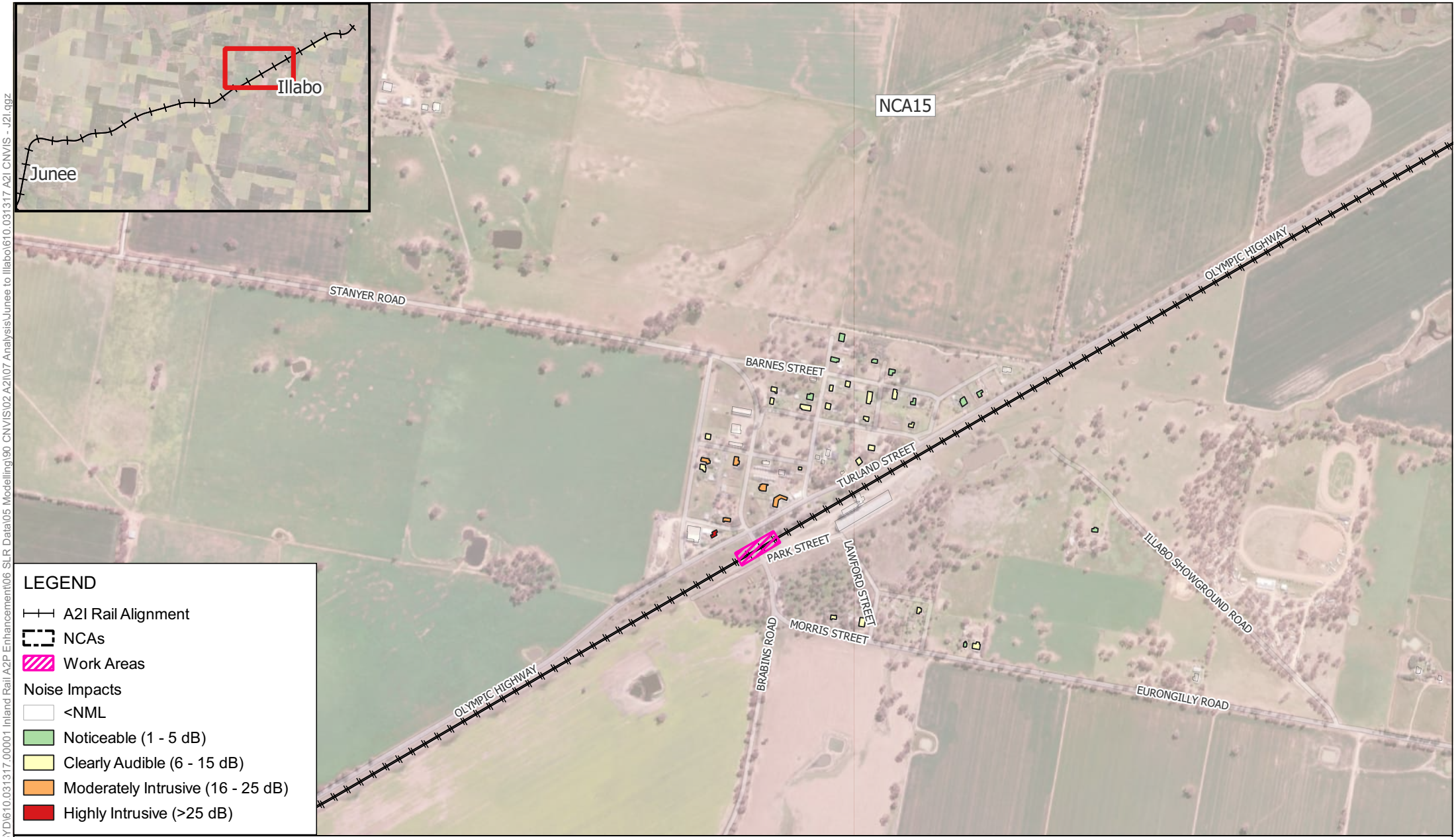
W.012 Level Crossing Work - Typical - Out of Hours Night-time

APPENDIX C-42c

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

Data Source:
ESRI World Imagery

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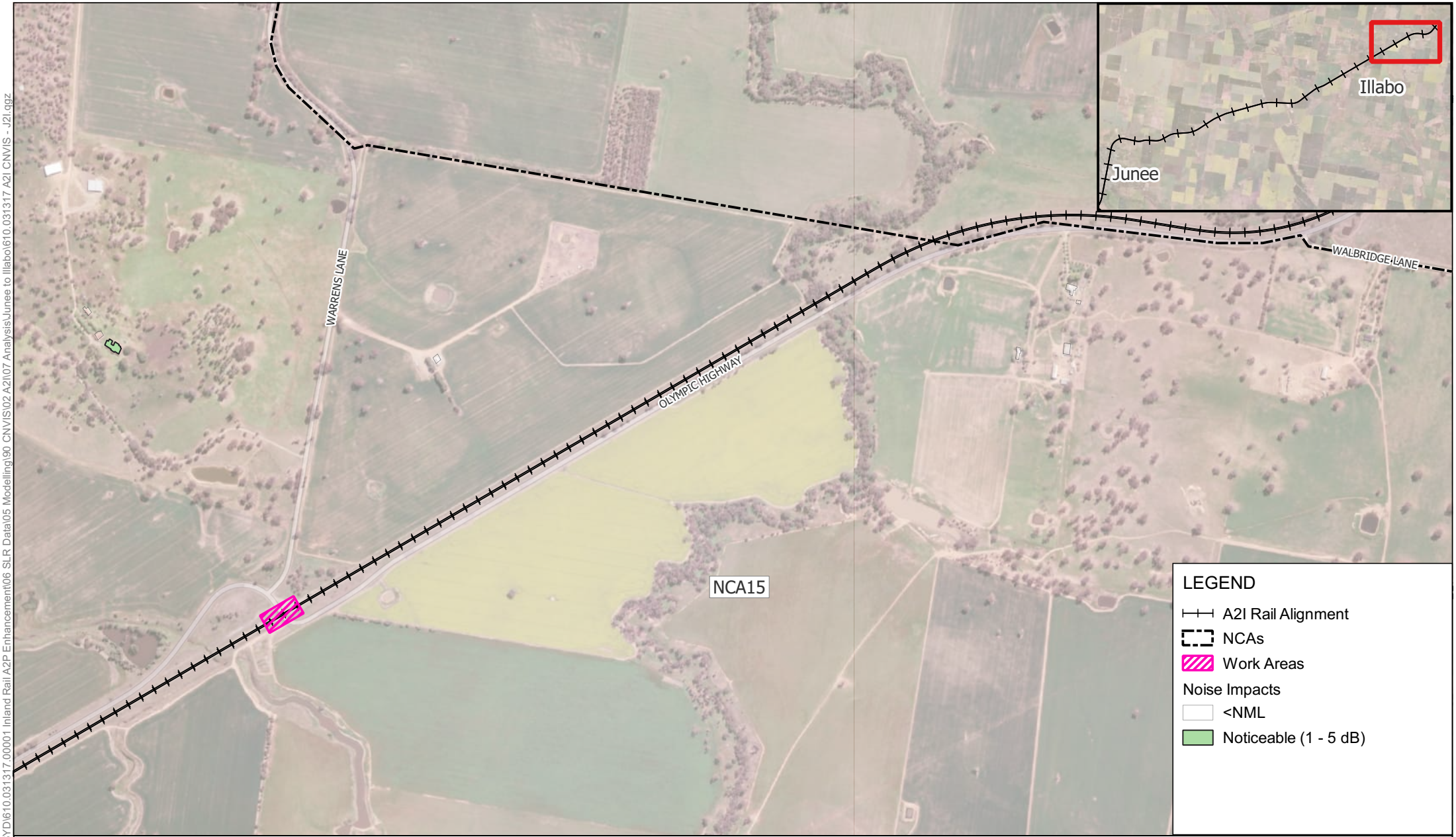
W.012 Level Crossing Work - Typical - Out of Hours Night-time

APPENDIX C-42d

H:\Projects-SLR\610-SrvSYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz



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Scale: Scale: 1:13,000
Coordinate System: GDA2020 / MGA zone 55

Drawn Date: 02-Apr-2025
Project Number: 610.031317

SLR

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W.012 Level Crossing Work - Typical - Out of Hours Night-time

APPENDIX C-42e

H:\Projects-SLR\610-SrvSYD\610-SYD\610.031317.00001 Inland Rail A2P Enhancement\06 SLR Data\05 Modelling\90 CNVIS\02 A2I\07 Analysis\Junee to Illabo\610.031317 A2I CNVIS - J2I.qgz

Appendix D Receivers Triggering Additional Mitigation

A2I | Albury to Illabo – Junee to Illabo

Construction Noise and Vibration Impact Statement

Martinus Rail

SLR Project No.: 610.031317.00001

17 April 2025

Doc No:
6-0052-210-EEC-J7-AS-0002_1

W.001 Site Establishment / Demobilisation

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
226255	701 OLYMPIC HWY, MARINNA NSW 2663	51	46	46	38	49	CO1	-	-
226281	744 OLYMPIC HWY, WANTIOOL NSW 2663	75	75	-	-	77	CO1	-	-
226317	731 BALLENGOARRAH LANE, WANTIOOL NSW 266	51	46	46	38	55	CO1	-	-
226318	731 BALLENGOARRAH LANE, WANTIOOL NSW 266	51	46	46	38	57	CO1	-	-
226393	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	49	CO1	-	-
226394	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	47	CO1	-	-
226399	24 MORRIS ST, ILLABO NSW 2590	51	46	46	38	55	CO1	-	-
226402	LOT 4 (DP758533) BOREE ST, ILLABO NSW 2590	51	46	46	38	50	CO1	-	-
226426	2-4 TURLAND ST, ILLABO NSW 2590	51	46	46	38	60	CO1	-	-
226432	81 ILLABO SHOWGROUND RD, ILLABO NSW 2590	51	46	46	38	49	CO1	-	-
226433	2 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	59	CO1	-	-
226442	7 BRABINS RD, ILLABO NSW 2590	75	75	-	-	79	CO1	-	-
226453	26 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	59	CO1	-	-
226465	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	65	CO1	-	-
226467	6-8 LAYTON ST, ILLABO NSW 2590	51	46	46	38	58	CO1	-	-
226468	23 COMMINS ST, ILLABO NSW 2590	51	46	46	38	51	CO1	-	-
226473	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	60	CO1	-	-
226474	29 COMMINS ST, ILLABO NSW 2590	51	46	46	38	54	CO1	-	-
226475	36 TURLAND ST, ILLABO NSW 2590	51	46	46	38	66	CO1, CO2	-	-
226479	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	58	CO1	-	-
226480	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	60	CO1	-	-
226481	21 WOOD ST, ILLABO NSW 2590	51	46	46	38	64	CO1, CO2	-	-
226489	33 COMMINS ST, ILLABO NSW 2590	51	46	46	38	50	CO1	-	-
226495	81 WOOD ST, ILLABO NSW 2590	51	46	46	38	63	CO1, CO2	-	-
226496	2 HOWELL ST, ILLABO NSW 2590	51	46	46	38	58	CO1	-	-
226502	24-26 LAYTON ST, ILLABO NSW 2590	51	46	46	38	54	CO1	-	-
226504	25 LAYTON ST, ILLABO NSW 2590	51	46	46	38	55	CO1	-	-
226506	31 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	50	CO1	-	-
226507	7 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	56	CO1	-	-
226509	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	56	CO1	-	-
226510	LOT 4 (DP758533) LAYTON ST, ILLABO NSW 2590	51	46	46	38	53	CO1	-	-
226513	6 TURLAND ST, ILLABO NSW 2590	51	46	46	38	54	CO1	-	-
226515	11 HOWELL ST, ILLABO NSW 2590	51	46	46	38	57	CO1	-	-
226519	37 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	49	CO1	-	-
226521	33 LAYTON ST, ILLABO NSW 2590	51	46	46	38	53	CO1	-	-
226525	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	54	CO1	-	-
226529	13 HOWELL ST, ILLABO NSW 2590	51	46	46	38	56	CO1	-	-
226531	17 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	50	CO1	-	-
226536	16 HOWELL ST, ILLABO NSW 2590	51	46	46	38	52	CO1	-	-
226537	35 LAYTON ST, ILLABO NSW 2590	51	46	46	38	50	CO1	-	-
226547	41-45 LAYTON ST, ILLABO NSW 2590	51	46	46	38	48	CO1	-	-
1000429	6 JUBILEE ST, ILLABO NSW 2590	51	46	46	38	58	CO1	-	-
1000915	14 TURLAND ST, ILLABO NSW 2590	60	60	60	45	66	CO1	-	-
1110615	18 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	56	CO1	-	-
1110660	26 MORRIS ST, ILLABO NSW 2590	51	46	46	38	53	CO1	-	-

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W.002 Compound Operation

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
226255	701 OLYMPIC HWY, MARINNA NSW 2663	51	46	46	38	48	CO1	CO1	CO1
226281	744 OLYMPIC HWY, WANTIOOL NSW 2663	75	75	-	-	76	CO1	-	-
226317	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226318	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	56	CO1	CO1	CO1, CO2, (RO,AO)*
226341	120 MARINNA RD, MARINNA NSW 2663	51	46	46	38	44	-	-	CO1
226393	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226394	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1
226399	24 MORRIS ST, ILLABO NSW 2590	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226402	LOT 4 (DP758533) BOREE ST, ILLABO NSW 2590	51	46	46	38	49	CO1	CO1	CO1
226426	2-4 TURLAND ST, ILLABO NSW 2590	51	46	46	38	59	CO1	CO1	CO1, CO2, (RO,AO)*
226432	81 ILLABO SHOWGROUND RD, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226433	2 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	58	CO1	CO1	CO1, CO2, (RO,AO)*
226442	7 BRABINS RD, ILLABO NSW 2590	75	75	-	-	78	CO1	-	-
226453	26 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	58	CO1	CO1	CO1, CO2, (RO,AO)*
226465	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	64	CO1	-	-
226467	6-8 LAYTON ST, ILLABO NSW 2590	51	46	46	38	57	CO1	CO1	CO1, CO2, (RO,AO)*
226468	23 COMMINS ST, ILLABO NSW 2590	51	46	46	38	50	CO1	CO1	CO1
226473	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	59	CO1	-	-
226474	29 COMMINS ST, ILLABO NSW 2590	51	46	46	38	53	CO1	CO1	CO1
226475	36 TURLAND ST, ILLABO NSW 2590	51	46	46	38	65	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226479	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	57	CO1	-	-
226480	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	59	CO1	-	-
226481	21 WOOD ST, ILLABO NSW 2590	51	46	46	38	63	CO1, CO2	CO1, CO2	CO1, CO2, (RO,AO)*
226489	33 COMMINS ST, ILLABO NSW 2590	51	46	46	38	49	CO1	CO1	CO1
226495	81 WOOD ST, ILLABO NSW 2590	51	46	46	38	62	CO1, CO2	CO1, CO2	CO1, CO2, (RO,AO)*
226496	2 HOWELL ST, ILLABO NSW 2590	51	46	46	38	56	CO1	CO1	CO1, CO2, (RO,AO)*
226502	24-26 LAYTON ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226504	25 LAYTON ST, ILLABO NSW 2590	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226506	31 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	50	CO1	CO1	CO1
226507	7 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	55	CO1	CO1	CO1, CO2, (RO,AO)*
226509	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	56	CO1	CO1	CO1, CO2, (RO,AO)*
226510	LOT 4 (DP758533) LAYTON ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226513	6 TURLAND ST, ILLABO NSW 2590	51	46	46	38	53	CO1	CO1	CO1
226515	11 HOWELL ST, ILLABO NSW 2590	51	46	46	38	56	CO1	CO1	CO1, CO2, (RO,AO)*
226519	37 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226521	33 LAYTON ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226525	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	53	CO1	CO1	CO1
226529	13 HOWELL ST, ILLABO NSW 2590	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226531	17 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	50	CO1	CO1	CO1
226536	16 HOWELL ST, ILLABO NSW 2590	51	46	46	38	51	CO1	CO1	CO1
226537	35 LAYTON ST, ILLABO NSW 2590	51	46	46	38	49	CO1	CO1	CO1
226547	41-45 LAYTON ST, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226601	BEHTUNGRA PARK 37 WARRENS LANE, ILLABO NSW	51	46	46	38	42	-	-	CO1
1000429	6 JUBILEE ST, ILLABO NSW 2590	51	46	46	38	56	CO1	CO1	CO1, CO2, (RO,AO)*
1000915	14 TURLAND ST, ILLABO NSW 2590	60	60	60	45	65	CO1	CO1	CO1, CO2, (RO,AO)*
1110615	18 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	55	CO1	CO1	CO1, CO2, (RO,AO)*
1110660	26 MORRIS ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1

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SLR Consulting Pty Ltd makes no warranty regarding the data's
accuracy or reliability for any purpose.

W.003 Geotechnical Investigation

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
226197	426 WATERWORKS RD, WANTIOOL NSW 2663	51	46	46	38	51	CO1	-	-
226212	MT PLEASANT 493 OLYMPIC HWY, MARINNA NSW 26	51	46	46	38	59	CO1	-	-
226255	701 OLYMPIC HWY, MARINNA NSW 2663	51	46	46	38	62	CO1, CO2	-	-
226281	744 OLYMPIC HWY, WANTIOOL NSW 2663	75	75	-	-	90	CO1	-	-
226317	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	57	CO1	-	-
226318	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	58	CO1	-	-
226341	120 MARINNA RD, MARINNA NSW 2663	51	46	46	38	47	CO1	-	-
226393	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	53	CO1	-	-
226394	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	51	CO1	-	-
226399	24 MORRIS ST, ILLABO NSW 2590	51	46	46	38	58	CO1	-	-
226402	LOT 4 (DP758533) BOREE ST, ILLABO NSW 2590	51	46	46	38	56	CO1	-	-
226426	2-4 TURLAND ST, ILLABO NSW 2590	51	46	46	38	69	CO1, CO2	-	-
226432	81 ILLABO SHOWGROUND RD, ILLABO NSW 2590	51	46	46	38	51	CO1	-	-
226433	2 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	70	CO1, CO2	-	-
226440	7 BRABINS RD, ILLABO NSW 2590	75	75	-	-	89	CO1	-	-
226442	7 BRABINS RD, ILLABO NSW 2590	75	75	-	-	91	CO1, CO2	-	-
226453	26 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	62	CO1, CO2	-	-
226465	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	71	CO1, CO2	-	-
226467	6-8 LAYTON ST, ILLABO NSW 2590	51	46	46	38	62	CO1, CO2	-	-
226468	23 COMMINS ST, ILLABO NSW 2590	51	46	46	38	56	CO1	-	-
226472	LESTER ST, ILLABO NSW 2590	55	55	55	-	58	CO1	-	-
226473	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	64	CO1	-	-
226474	29 COMMINS ST, ILLABO NSW 2590	51	46	46	38	57	CO1	-	-
226475	36 TURLAND ST, ILLABO NSW 2590	51	46	46	38	70	CO1, CO2	-	-
226479	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	63	CO1	-	-
226480	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	64	CO1	-	-
226481	21 WOOD ST, ILLABO NSW 2590	51	46	46	38	66	CO1, CO2	-	-
226489	33 COMMINS ST, ILLABO NSW 2590	51	46	46	38	54	CO1	-	-
226495	81 WOOD ST, ILLABO NSW 2590	51	46	46	38	69	CO1, CO2	-	-
226496	2 HOWELL ST, ILLABO NSW 2590	51	46	46	38	61	CO1	-	-
226502	24-26 LAYTON ST, ILLABO NSW 2590	51	46	46	38	56	CO1	-	-
226504	25 LAYTON ST, ILLABO NSW 2590	51	46	46	38	56	CO1	-	-
226506	31 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	55	CO1	-	-
226507	7 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	73	CO1, CO2	-	-
226509	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	59	CO1	-	-
226510	LOT 4 (DP758533) LAYTON ST, ILLABO NSW 2590	51	46	46	38	54	CO1	-	-
226513	6 TURLAND ST, ILLABO NSW 2590	51	46	46	38	71	CO1, CO2	-	-
226515	11 HOWELL ST, ILLABO NSW 2590	51	46	46	38	60	CO1	-	-
226519	37 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	54	CO1	-	-
226521	33 LAYTON ST, ILLABO NSW 2590	51	46	46	38	55	CO1	-	-
226525	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	55	CO1	-	-
226529	13 HOWELL ST, ILLABO NSW 2590	51	46	46	38	58	CO1	-	-
226531	17 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	67	CO1, CO2	-	-
226536	16 HOWELL ST, ILLABO NSW 2590	51	46	46	38	54	CO1	-	-
226537	35 LAYTON ST, ILLABO NSW 2590	51	46	46	38	53	CO1	-	-
226547	41-45 LAYTON ST, ILLABO NSW 2590	51	46	46	38	50	CO1	-	-
226598	72 WARRENS LANE, ILLABO NSW 2590	51	46	46	38	51	CO1	-	-
1000429	6 JUBILEE ST, ILLABO NSW 2590	51	46	46	38	63	CO1, CO2	-	-
1000915	14 TURLAND ST, ILLABO NSW 2590	60	60	60	45	68	CO1	-	-
1110615	18 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	60	CO1	-	-
1110660	26 MORRIS ST, ILLABO NSW 2590	51	46	46	38	57	CO1	-	-

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SLR Consulting Pty Ltd makes no warranty regarding the data's
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W.004 Pavement Investigation

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
226255	701 OLYMPIC HWY, MARINNA NSW 2663	51	46	46	38	52	CO1	-	-
226393	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	47	CO1	-	-
226399	24 MORRIS ST, ILLABO NSW 2590	51	46	46	38	54	CO1	-	-
226402	LOT 4 (DP758533) BOREE ST, ILLABO NSW 2590	51	46	46	38	49	CO1	-	-
226426	2-4 TURLAND ST, ILLABO NSW 2590	51	46	46	38	64	CO1, CO2	-	-
226433	2 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	64	CO1, CO2	-	-
226453	26 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	61	CO1	-	-
226467	6-8 LAYTON ST, ILLABO NSW 2590	51	46	46	38	50	CO1	-	-
226468	23 COMMINS ST, ILLABO NSW 2590	51	46	46	38	55	CO1	-	-
226474	29 COMMINS ST, ILLABO NSW 2590	51	46	46	38	56	CO1	-	-
226475	36 TURLAND ST, ILLABO NSW 2590	51	46	46	38	51	CO1	-	-
226481	21 WOOD ST, ILLABO NSW 2590	51	46	46	38	48	CO1	-	-
226489	33 COMMINS ST, ILLABO NSW 2590	51	46	46	38	53	CO1	-	-
226495	81 WOOD ST, ILLABO NSW 2590	51	46	46	38	47	CO1	-	-
226496	2 HOWELL ST, ILLABO NSW 2590	51	46	46	38	49	CO1	-	-
226502	24-26 LAYTON ST, ILLABO NSW 2590	51	46	46	38	48	CO1	-	-
226506	31 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	48	CO1	-	-
226515	11 HOWELL ST, ILLABO NSW 2590	51	46	46	38	47	CO1	-	-
1000915	14 TURLAND ST, ILLABO NSW 2590	60	60	60	45	63	CO1	-	-
1110615	18 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	58	CO1	-	-
1110660	26 MORRIS ST, ILLABO NSW 2590	51	46	46	38	52	CO1	-	-

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W.005 Track Work - Peak

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
225697	278 WATERWORKS RD, JUNEE NSW 2663	51	46	46	38	40	-	-	CO1
226197	426 WATERWORKS RD, WANTIOOL NSW 2663	51	46	46	38	53	CO1	CO1	CO1
226212	MT PLEASANT 493 OLYMPIC HWY, MARINNA NSW 26	51	46	46	38	62	CO1, CO2	CO1, CO2	CO1, CO2, (RO,AO)*
226255	701 OLYMPIC HWY, MARINNA NSW 2663	51	46	46	38	64	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226281	744 OLYMPIC HWY, WANTIOOL NSW 2663	75	75	-	-	82	CO1	-	-
226296	1272 OLYMPIC HWY, ILLABO NSW 2590	51	46	46	38	40	-	-	CO1
226317	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	58	CO1	CO1	CO1, CO2, (RO,AO)*
226318	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	60	CO1	CO1	CO1, CO2, (RO,AO)*
226341	120 MARINNA RD, MARINNA NSW 2663	51	46	46	38	50	CO1	CO1	CO1
226353	139 BRABINS RD, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
226355	128 BRABINS RD, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1
226375	TIBOROO 1 STANYER RD, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
226380	TIBOROO 1 STANYER RD, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
226383	109 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	44	-	-	CO1
226384	167 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
226386	167 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	40	-	-	CO1
226393	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226394	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	50	CO1	CO1	CO1
226399	24 MORRIS ST, ILLABO NSW 2590	51	46	46	38	57	CO1	CO1	CO1, CO2, (RO,AO)*
226402	LOT 4 (DP758533) BOREE ST, ILLABO NSW 2590	51	46	46	38	53	CO1	CO1	CO1
226426	2-4 TURLAND ST, ILLABO NSW 2590	51	46	46	38	69	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226432	81 ILLABO SHOWGROUND RD, ILLABO NSW 2590	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226433	2 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	66	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226442	7 BRABINS RD, ILLABO NSW 2590	75	75	-	-	89	CO1	-	-
226453	26 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	65	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226465	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	73	CO1, CO2	-	-
226467	6-8 LAYTON ST, ILLABO NSW 2590	51	46	46	38	65	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226468	23 COMMINS ST, ILLABO NSW 2590	51	46	46	38	57	CO1	CO1	CO1, CO2, (RO,AO)*
226472	LESTER ST, ILLABO NSW 2590	55	55	55	-	60	CO1	CO1	-
226473	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	67	CO1	-	-
226474	29 COMMINS ST, ILLABO NSW 2590	51	46	46	38	59	CO1	CO1	CO1, CO2, (RO,AO)*
226475	36 TURLAND ST, ILLABO NSW 2590	51	46	46	38	72	CO1, CO2	CO1, CO2, (RO)*	CO1, CO2, RO, (AO, AltA)*
226479	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	65	CO1	-	-
226480	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	66	CO1	-	-
226481	21 WOOD ST, ILLABO NSW 2590	51	46	46	38	69	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226489	33 COMMINS ST, ILLABO NSW 2590	51	46	46	38	55	CO1	CO1	CO1, CO2, (RO,AO)*
226495	81 WOOD ST, ILLABO NSW 2590	51	46	46	38	70	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226496	2 HOWELL ST, ILLABO NSW 2590	51	46	46	38	63	CO1, CO2	CO1, CO2	CO1, CO2, (RO,AO)*
226502	24-26 LAYTON ST, ILLABO NSW 2590	51	46	46	38	59	CO1	CO1	CO1, CO2, (RO,AO)*
226504	25 LAYTON ST, ILLABO NSW 2590	51	46	46	38	59	CO1	CO1	CO1, CO2, (RO,AO)*
226506	31 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	57	CO1	CO1	CO1, CO2, (RO,AO)*
226507	7 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	73	CO1, CO2	CO1, CO2, (RO)*	CO1, CO2, RO, (AO, AltA)*
226509	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	62	CO1, CO2	CO1, CO2	CO1, CO2, (RO,AO)*
226510	LOT 4 (DP758533) LAYTON ST, ILLABO NSW 2590	51	46	46	38	57	CO1	CO1	CO1, CO2, (RO,AO)*
226513	6 TURLAND ST, ILLABO NSW 2590	51	46	46	38	74	CO1, CO2	CO1, CO2, (RO)*	CO1, CO2, RO, (AO, AltA)*
226515	11 HOWELL ST, ILLABO NSW 2590	51	46	46	38	61	CO1	CO1	CO1, CO2, (RO,AO)*
226519	37 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	56	CO1	CO1	CO1, CO2, (RO,AO)*
226521	33 LAYTON ST, ILLABO NSW 2590	51	46	46	38	58	CO1	CO1	CO1, CO2, (RO,AO)*
226525	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	58	CO1	CO1	CO1, CO2, (RO,AO)*
226526	36 LAYTON ST, ILLABO NSW 2590	55	55	55	-	56	CO1	CO1	-
226529	13 HOWELL ST, ILLABO NSW 2590	51	46	46	38	59	CO1	CO1	CO1, CO2, (RO,AO)*
226531	17 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	70	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226536	16 HOWELL ST, ILLABO NSW 2590	51	46	46	38	56	CO1	CO1	CO1, CO2, (RO,AO)*
226537	35 LAYTON ST, ILLABO NSW 2590	51	46	46	38	55	CO1	CO1	CO1, CO2, (RO,AO)*
226547	41-45 LAYTON ST, ILLABO NSW 2590	51	46	46	38	53	CO1	CO1	CO1
226598	72 WARRENS LANE, ILLABO NSW 2590	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226601	BEHTUNGRA PARK 37 WARRENS LANE, ILLABO NSW	51	46	46	38	46	-	-	CO1
226603	2184 OLYMPIC HWY, ILLABO NSW 2590	51	46	46	38	40	-	-	CO1
226607	BEHTUNGRA PARK 37 WARRENS LANE, ILLABO NSW	51	46	46	38	43	-	-	CO1
226611	BEHTUNGRA PARK 37 WARRENS LANE, ILLABO NSW	51	46	46	38	40	-	-	CO1
226613	2184 OLYMPIC HWY, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
226614	2184 OLYMPIC HWY, ILLABO NSW 2590	51	46	46	38	40	-	-	CO1
1000429	6 JUBILEE ST, ILLABO NSW 2590	51	46	46	38	64	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
1000915	14 TURLAND ST, ILLABO NSW 2590	60	60	60	45	72	CO1	CO1	CO1, CO2, RO, (AO, AltA)*
1110615	18 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	61	CO1	CO1	CO1, CO2, (RO,AO)*
1110660	26 MORRIS ST, ILLABO NSW 2590	51	46	46	38	55	CO1	CO1	CO1, CO2, (RO,AO)*

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W.006 Track Work - Typical

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
226197	426 WATERWORKS RD, WANTIOOL NSW 2663	51	46	46	38	49	CO1	CO1	CO1
226212	MT PLEASANT 493 OLYMPIC HWY, MARINNA NSW 26	51	46	46	38	58	CO1	CO1	CO1, CO2, (RO,AO)*
226255	701 OLYMPIC HWY, MARINNA NSW 2663	51	46	46	38	60	CO1	CO1	CO1, CO2, (RO,AO)*
226281	744 OLYMPIC HWY, WANTIOOL NSW 2663	75	75	-	-	78	CO1	-	-
226317	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226318	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	56	CO1	CO1	CO1, CO2, (RO,AO)*
226341	120 MARINNA RD, MARINNA NSW 2663	51	46	46	38	46	-	-	CO1
226355	128 BRABINS RD, ILLABO NSW 2590	51	46	46	38	42	-	-	CO1
226383	109 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	40	-	-	CO1
226393	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226394	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1
226399	24 MORRIS ST, ILLABO NSW 2590	51	46	46	38	53	CO1	CO1	CO1
226402	LOT 4 (DP758533) BOREE ST, ILLABO NSW 2590	51	46	46	38	49	CO1	CO1	CO1
226426	2-4 TURLAND ST, ILLABO NSW 2590	51	46	46	38	65	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226432	81 ILLABO SHOWGROUND RD, ILLABO NSW 2590	51	46	46	38	50	CO1	CO1	CO1
226433	2 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	62	CO1, CO2	CO1, CO2	CO1, CO2, (RO,AO)*
226442	7 BRABINS RD, ILLABO NSW 2590	75	75	-	-	85	CO1	-	-
226453	26 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	61	CO1	CO1	CO1, CO2, (RO,AO)*
226465	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	69	CO1	-	-
226467	6-8 LAYTON ST, ILLABO NSW 2590	51	46	46	38	61	CO1	CO1	CO1, CO2, (RO,AO)*
226468	23 COMMINS ST, ILLABO NSW 2590	51	46	46	38	53	CO1	CO1	CO1
226472	LESTER ST, ILLABO NSW 2590	55	55	55	-	56	CO1	CO1	-
226473	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	63	CO1	-	-
226474	29 COMMINS ST, ILLABO NSW 2590	51	46	46	38	55	CO1	CO1	CO1, CO2, (RO,AO)*
226475	36 TURLAND ST, ILLABO NSW 2590	51	46	46	38	68	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226479	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	61	CO1	-	-
226480	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	62	CO1	-	-
226481	21 WOOD ST, ILLABO NSW 2590	51	46	46	38	65	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226489	33 COMMINS ST, ILLABO NSW 2590	51	46	46	38	51	CO1	CO1	CO1
226495	81 WOOD ST, ILLABO NSW 2590	51	46	46	38	66	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226496	2 HOWELL ST, ILLABO NSW 2590	51	46	46	38	59	CO1	CO1	CO1, CO2, (RO,AO)*
226502	24-26 LAYTON ST, ILLABO NSW 2590	51	46	46	38	55	CO1	CO1	CO1, CO2, (RO,AO)*
226504	25 LAYTON ST, ILLABO NSW 2590	51	46	46	38	55	CO1	CO1	CO1, CO2, (RO,AO)*
226506	31 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	53	CO1	CO1	CO1
226507	7 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	69	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226509	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	58	CO1	CO1	CO1, CO2, (RO,AO)*
226510	LOT 4 (DP758533) LAYTON ST, ILLABO NSW 2590	51	46	46	38	53	CO1	CO1	CO1
226513	6 TURLAND ST, ILLABO NSW 2590	51	46	46	38	70	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226515	11 HOWELL ST, ILLABO NSW 2590	51	46	46	38	57	CO1	CO1	CO1, CO2, (RO,AO)*
226519	37 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226521	33 LAYTON ST, ILLABO NSW 2590	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226525	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226529	13 HOWELL ST, ILLABO NSW 2590	51	46	46	38	55	CO1	CO1	CO1, CO2, (RO,AO)*
226531	17 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	66	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226536	16 HOWELL ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226537	35 LAYTON ST, ILLABO NSW 2590	51	46	46	38	51	CO1	CO1	CO1
226547	41-45 LAYTON ST, ILLABO NSW 2590	51	46	46	38	49	CO1	CO1	CO1
226598	72 WARRENS LANE, ILLABO NSW 2590	51	46	46	38	50	CO1	CO1	CO1
226601	BEHTUNGRA PARK 37 WARRENS LANE, ILLABO NSW	51	46	46	38	42	-	-	CO1
226607	BEHTUNGRA PARK 37 WARRENS LANE, ILLABO NSW	51	46	46	38	39	-	-	CO1
1000429	6 JUBILEE ST, ILLABO NSW 2590	51	46	46	38	60	CO1	CO1	CO1, CO2, (RO,AO)*
1000915	14 TURLAND ST, ILLABO NSW 2590	60	60	60	45	68	CO1	CO1	CO1, CO2, (RO,AO)*
1110615	18 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	57	CO1	CO1	CO1, CO2, (RO,AO)*
1110660	26 MORRIS ST, ILLABO NSW 2590	51	46	46	38	51	CO1	CO1	CO1

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W.007 Track Tamping

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
226197	426 WATERWORKS RD, WANTIOOL NSW 2663	51	46	46	38	50	CO1	CO1	CO1
226212	MT PLEASANT 493 OLYMPIC HWY, MARINNA NSW 26	51	46	46	38	59	CO1	CO1	CO1, CO2, (RO,AO)*
226255	701 OLYMPIC HWY, MARINNA NSW 2663	51	46	46	38	60	CO1	CO1	CO1, CO2, (RO,AO)*
226281	744 OLYMPIC HWY, WANTIOOL NSW 2663	75	75	-	-	80	CO1	-	-
226317	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	55	CO1	CO1	CO1, CO2, (RO,AO)*
226318	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	57	CO1	CO1	CO1, CO2, (RO,AO)*
226341	120 MARINNA RD, MARINNA NSW 2663	51	46	46	38	47	CO1	CO1	CO1
226355	128 BRABINS RD, ILLABO NSW 2590	51	46	46	38	43	-	-	CO1
226383	109 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	41	-	-	CO1
226393	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	49	CO1	CO1	CO1
226394	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	47	CO1	CO1	CO1
226399	24 MORRIS ST, ILLABO NSW 2590	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226402	LOT 4 (DP758533) BOREE ST, ILLABO NSW 2590	51	46	46	38	50	CO1	CO1	CO1
226426	2-4 TURLAND ST, ILLABO NSW 2590	51	46	46	38	66	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226432	81 ILLABO SHOWGROUND RD, ILLABO NSW 2590	51	46	46	38	51	CO1	CO1	CO1
226433	2 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	63	CO1, CO2	CO1, CO2	CO1, CO2, (RO,AO)*
226442	7 BRABINS RD, ILLABO NSW 2590	75	75	-	-	86	CO1	-	-
226453	26 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	62	CO1, CO2	CO1, CO2	CO1, CO2, (RO,AO)*
226465	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	70	CO1	-	-
226467	6-8 LAYTON ST, ILLABO NSW 2590	51	46	46	38	62	CO1, CO2	CO1, CO2	CO1, CO2, (RO,AO)*
226468	23 COMMINS ST, ILLABO NSW 2590	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226472	LESTER ST, ILLABO NSW 2590	55	55	55	-	58	CO1	CO1	-
226473	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	64	CO1	-	-
226474	29 COMMINS ST, ILLABO NSW 2590	51	46	46	38	56	CO1	CO1	CO1, CO2, (RO,AO)*
226475	36 TURLAND ST, ILLABO NSW 2590	51	46	46	38	69	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226479	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	62	CO1	-	-
226480	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	64	CO1	-	-
226481	21 WOOD ST, ILLABO NSW 2590	51	46	46	38	66	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226489	33 COMMINS ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226495	81 WOOD ST, ILLABO NSW 2590	51	46	46	38	66	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226496	2 HOWELL ST, ILLABO NSW 2590	51	46	46	38	60	CO1	CO1	CO1, CO2, (RO,AO)*
226502	24-26 LAYTON ST, ILLABO NSW 2590	51	46	46	38	56	CO1	CO1	CO1, CO2, (RO,AO)*
226504	25 LAYTON ST, ILLABO NSW 2590	51	46	46	38	56	CO1	CO1	CO1, CO2, (RO,AO)*
226506	31 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226507	7 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	70	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226509	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	59	CO1	CO1	CO1, CO2, (RO,AO)*
226510	LOT 4 (DP758533) LAYTON ST, ILLABO NSW 2590	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226513	6 TURLAND ST, ILLABO NSW 2590	51	46	46	38	70	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226515	11 HOWELL ST, ILLABO NSW 2590	51	46	46	38	58	CO1	CO1	CO1, CO2, (RO,AO)*
226519	37 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226521	33 LAYTON ST, ILLABO NSW 2590	51	46	46	38	55	CO1	CO1	CO1, CO2, (RO,AO)*
226525	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	55	CO1	CO1	CO1, CO2, (RO,AO)*
226529	13 HOWELL ST, ILLABO NSW 2590	51	46	46	38	56	CO1	CO1	CO1, CO2, (RO,AO)*
226531	17 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	67	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226536	16 HOWELL ST, ILLABO NSW 2590	51	46	46	38	53	CO1	CO1	CO1
226537	35 LAYTON ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226547	41-45 LAYTON ST, ILLABO NSW 2590	51	46	46	38	50	CO1	CO1	CO1
226598	72 WARRENS LANE, ILLABO NSW 2590	51	46	46	38	51	CO1	CO1	CO1
226601	BEHTUNGRA PARK 37 WARRENS LANE, ILLABO NSW	51	46	46	38	43	-	-	CO1
226607	BEHTUNGRA PARK 37 WARRENS LANE, ILLABO NSW	51	46	46	38	40	-	-	CO1
1000429	6 JUBILEE ST, ILLABO NSW 2590	51	46	46	38	61	CO1	CO1	CO1, CO2, (RO,AO)*
1000915	14 TURLAND ST, ILLABO NSW 2590	60	60	60	45	68	CO1	CO1	CO1, CO2, (RO,AO)*
1110615	18 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	58	CO1	CO1	CO1, CO2, (RO,AO)*
1110660	26 MORRIS ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1

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W.008 Crossover Removal - Civil Works

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
226393	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1
226394	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	43	-	-	CO1
226399	24 MORRIS ST, ILLABO NSW 2590	51	46	46	38	42	-	-	CO1
226402	LOT 4 (DP758533) BOREE ST, ILLABO NSW 2590	51	46	46	38	45	-	-	CO1
226426	2-4 TURLAND ST, ILLABO NSW 2590	51	46	46	38	40	-	-	CO1
226432	81 ILLABO SHOWGROUND RD, ILLABO NSW 2590	51	46	46	38	49	CO1	CO1	CO1
226453	26 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	42	-	-	CO1
226467	6-8 LAYTON ST, ILLABO NSW 2590	51	46	46	38	44	-	-	CO1
226468	23 COMMINS ST, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
226475	36 TURLAND ST, ILLABO NSW 2590	51	46	46	38	50	CO1	CO1	CO1
226481	21 WOOD ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226489	33 COMMINS ST, ILLABO NSW 2590	51	46	46	38	41	-	-	CO1
226495	81 WOOD ST, ILLABO NSW 2590	51	46	46	38	58	CO1	CO1	CO1, CO2, (RO,AO)*
226496	2 HOWELL ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226502	24-26 LAYTON ST, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1
226504	25 LAYTON ST, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226506	31 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	44	-	-	CO1
226507	7 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	68	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226509	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226510	LOT 4 (DP758533) LAYTON ST, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1
226513	6 TURLAND ST, ILLABO NSW 2590	51	46	46	38	69	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226515	11 HOWELL ST, ILLABO NSW 2590	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226519	37 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	41	-	-	CO1
226521	33 LAYTON ST, ILLABO NSW 2590	51	46	46	38	45	-	-	CO1
226525	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1
226529	13 HOWELL ST, ILLABO NSW 2590	51	46	46	38	53	CO1	CO1	CO1
226531	17 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	61	CO1	CO1	CO1, CO2, (RO,AO)*
226536	16 HOWELL ST, ILLABO NSW 2590	51	46	46	38	49	CO1	CO1	CO1
226537	35 LAYTON ST, ILLABO NSW 2590	51	46	46	38	49	CO1	CO1	CO1
226547	41-45 LAYTON ST, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1
1000429	6 JUBILEE ST, ILLABO NSW 2590	51	46	46	38	57	CO1	CO1	CO1, CO2, (RO,AO)*
1110615	18 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	42	-	-	CO1
1110660	26 MORRIS ST, ILLABO NSW 2590	51	46	46	38	43	-	-	CO1

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W.009 Drainage Work

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
226317	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	59	CO1	CO1	CO1, CO2, (RO,AO)*
226318	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	60	CO1	CO1	CO1, CO2, (RO,AO)*
226341	120 MARINNA RD, MARINNA NSW 2663	51	46	46	38	50	CO1	CO1	CO1
226353	139 BRABINS RD, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
226355	128 BRABINS RD, ILLABO NSW 2590	51	46	46	38	45	-	-	CO1
226393	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	42	-	-	CO1
226394	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	42	-	-	CO1
226399	24 MORRIS ST, ILLABO NSW 2590	51	46	46	38	47	CO1	CO1	CO1
226402	LOT 4 (DP758533) BOREE ST, ILLABO NSW 2590	51	46	46	38	43	-	-	CO1
226426	2-4 TURLAND ST, ILLABO NSW 2590	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226433	2 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226453	26 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226467	6-8 LAYTON ST, ILLABO NSW 2590	51	46	46	38	45	-	-	CO1
226468	23 COMMINS ST, ILLABO NSW 2590	51	46	46	38	50	CO1	CO1	CO1
226474	29 COMMINS ST, ILLABO NSW 2590	51	46	46	38	49	CO1	CO1	CO1
226475	36 TURLAND ST, ILLABO NSW 2590	51	46	46	38	44	-	-	CO1
226481	21 WOOD ST, ILLABO NSW 2590	51	46	46	38	41	-	-	CO1
226489	33 COMMINS ST, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226495	81 WOOD ST, ILLABO NSW 2590	51	46	46	38	40	-	-	CO1
226496	2 HOWELL ST, ILLABO NSW 2590	51	46	46	38	40	-	-	CO1
226502	24-26 LAYTON ST, ILLABO NSW 2590	51	46	46	38	41	-	-	CO1
226504	25 LAYTON ST, ILLABO NSW 2590	51	46	46	38	40	-	-	CO1
226506	31 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	42	-	-	CO1
226507	7 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	40	-	-	CO1
226509	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	40	-	-	CO1
226510	LOT 4 (DP758533) LAYTON ST, ILLABO NSW 2590	51	46	46	38	41	-	-	CO1
226513	6 TURLAND ST, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
226515	11 HOWELL ST, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
226519	37 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	42	-	-	CO1
226521	33 LAYTON ST, ILLABO NSW 2590	51	46	46	38	40	-	-	CO1
226525	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
226537	35 LAYTON ST, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
226547	41-45 LAYTON ST, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
1000429	6 JUBILEE ST, ILLABO NSW 2590	51	46	46	38	41	-	-	CO1
1000915	14 TURLAND ST, ILLABO NSW 2590	60	60	60	45	49	-	-	CO1
1110615	18 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	47	CO1	CO1	CO1
1110660	26 MORRIS ST, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1

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W.010 Signalling Work

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
226197	426 WATERWORKS RD, WANTIOOL NSW 2663	51	46	46	38	41	-	-	CO1
226317	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	47	CO1	CO1	CO1
226318	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	47	CO1	CO1	CO1
226341	120 MARINNA RD, MARINNA NSW 2663	51	46	46	38	41	-	-	CO1
226355	128 BRABINS RD, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1

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W.011 Level Crossing Work - Peak

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
226255	701 OLYMPIC HWY, MARINNA NSW 2663	51	46	46	38	56	CO1	CO1	CO1, CO2, (RO,AO)*
226317	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	39	-	-	CO1
226318	731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	51	46	46	38	41	-	-	CO1
226375	TIBOROO 1 STANYER RD, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
226383	109 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
226393	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	50	CO1	CO1	CO1
226394	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226399	24 MORRIS ST, ILLABO NSW 2590	51	46	46	38	57	CO1	CO1	CO1, CO2, (RO,AO)*
226402	LOT 4 (DP758533) BOREE ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226426	2-4 TURLAND ST, ILLABO NSW 2590	51	46	46	38	69	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226432	81 ILLABO SHOWGROUND RD, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1
226433	2 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	66	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226453	26 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	65	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226465	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	58	CO1	-	-
226467	6-8 LAYTON ST, ILLABO NSW 2590	51	46	46	38	56	CO1	CO1	CO1, CO2, (RO,AO)*
226468	23 COMMINS ST, ILLABO NSW 2590	51	46	46	38	57	CO1	CO1	CO1, CO2, (RO,AO)*
226472	LESTER ST, ILLABO NSW 2590	55	55	55	-	56	CO1	CO1	-
226473	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	58	CO1	-	-
226474	29 COMMINS ST, ILLABO NSW 2590	51	46	46	38	59	CO1	CO1	CO1, CO2, (RO,AO)*
226475	36 TURLAND ST, ILLABO NSW 2590	51	46	46	38	55	CO1	CO1	CO1, CO2, (RO,AO)*
226479	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	58	CO1	-	-
226480	11 LAYTON ST, ILLABO NSW 2590	55	55	-	-	57	CO1	-	-
226481	21 WOOD ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226489	33 COMMINS ST, ILLABO NSW 2590	51	46	46	38	55	CO1	CO1	CO1, CO2, (RO,AO)*
226495	81 WOOD ST, ILLABO NSW 2590	51	46	46	38	51	CO1	CO1	CO1
226496	2 HOWELL ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226502	24-26 LAYTON ST, ILLABO NSW 2590	51	46	46	38	51	CO1	CO1	CO1
226504	25 LAYTON ST, ILLABO NSW 2590	51	46	46	38	51	CO1	CO1	CO1
226506	31 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	53	CO1	CO1	CO1
226507	7 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226509	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	51	CO1	CO1	CO1
226510	LOT 4 (DP758533) LAYTON ST, ILLABO NSW 2590	51	46	46	38	44	-	-	CO1
226513	6 TURLAND ST, ILLABO NSW 2590	51	46	46	38	47	CO1	CO1	CO1
226515	11 HOWELL ST, ILLABO NSW 2590	51	46	46	38	50	CO1	CO1	CO1
226519	37 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226521	33 LAYTON ST, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226525	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	51	CO1	CO1	CO1
226529	13 HOWELL ST, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226531	17 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	44	-	-	CO1
226536	16 HOWELL ST, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226537	35 LAYTON ST, ILLABO NSW 2590	51	46	46	38	47	CO1	CO1	CO1
226547	41-45 LAYTON ST, ILLABO NSW 2590	51	46	46	38	44	-	-	CO1
226598	72 WARRENS LANE, ILLABO NSW 2590	51	46	46	38	42	-	-	CO1
226601	BEHTUNGRA PARK 37 WARRENS LANE, ILLABO NSW	51	46	46	38	46	-	-	CO1
226607	BEHTUNGRA PARK 37 WARRENS LANE, ILLABO NSW	51	46	46	38	40	-	-	CO1
226611	BEHTUNGRA PARK 37 WARRENS LANE, ILLABO NSW	51	46	46	38	39	-	-	CO1
1000429	6 JUBILEE ST, ILLABO NSW 2590	51	46	46	38	47	CO1	CO1	CO1
1000915	14 TURLAND ST, ILLABO NSW 2590	60	60	60	45	68	CO1	CO1	CO1, CO2, (RO,AO)*
1110615	18 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	61	CO1	CO1	CO1, CO2, (RO,AO)*
1110660	26 MORRIS ST, ILLABO NSW 2590	51	46	46	38	55	CO1	CO1	CO1, CO2, (RO,AO)*

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W.012 Level Crossing Work - Typical

SLR ID	ADDRESS	NML Daytime	NML Daytime OOH	NML Evening	NML Night-time	Predicted Level LAeq(15min)	Additional Mitigation Daytime OOH	Additional Mitigation Evening *(>2 consecutive rest periods)	Additional Mitigation Night *(>2 consecutive sleep periods)
226255	701 OLYMPIC HWY, MARINNA NSW 2663	51	46	46	38	50	CO1	CO1	CO1
226393	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	44	-	-	CO1
226394	47 EURONGILLY RD, ILLABO NSW 2590	51	46	46	38	43	-	-	CO1
226399	24 MORRIS ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226402	LOT 4 (DP758533) BOREE ST, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1
226426	2-4 TURLAND ST, ILLABO NSW 2590	51	46	46	38	64	CO1, CO2	CO1, CO2	CO1, CO2, RO, (AO, AltA)*
226432	81 ILLABO SHOWGROUND RD, ILLABO NSW 2590	51	46	46	38	41	-	-	CO1
226433	2 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	61	CO1	CO1	CO1, CO2, (RO,AO)*
226453	26 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	60	CO1	CO1	CO1, CO2, (RO,AO)*
226467	6-8 LAYTON ST, ILLABO NSW 2590	51	46	46	38	51	CO1	CO1	CO1
226468	23 COMMINS ST, ILLABO NSW 2590	51	46	46	38	52	CO1	CO1	CO1
226474	29 COMMINS ST, ILLABO NSW 2590	51	46	46	38	54	CO1	CO1	CO1, CO2, (RO,AO)*
226475	36 TURLAND ST, ILLABO NSW 2590	51	46	46	38	50	CO1	CO1	CO1
226481	21 WOOD ST, ILLABO NSW 2590	51	46	46	38	47	CO1	CO1	CO1
226489	33 COMMINS ST, ILLABO NSW 2590	51	46	46	38	50	CO1	CO1	CO1
226495	81 WOOD ST, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1
226496	2 HOWELL ST, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226502	24-26 LAYTON ST, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1
226504	25 LAYTON ST, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1
226506	31 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	48	CO1	CO1	CO1
226507	7 TOOHEYS LANE, ILLABO NSW 2590	51	46	46	38	42	-	-	CO1
226509	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1
226510	LOT 4 (DP758533) LAYTON ST, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
226513	6 TURLAND ST, ILLABO NSW 2590	51	46	46	38	42	-	-	CO1
226515	11 HOWELL ST, ILLABO NSW 2590	51	46	46	38	45	-	-	CO1
226519	37 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	47	CO1	CO1	CO1
226521	33 LAYTON ST, ILLABO NSW 2590	51	46	46	38	44	-	-	CO1
226525	10 HOWELL ST, ILLABO NSW 2590	51	46	46	38	46	-	-	CO1
226529	13 HOWELL ST, ILLABO NSW 2590	51	46	46	38	43	-	-	CO1
226536	16 HOWELL ST, ILLABO NSW 2590	51	46	46	38	43	-	-	CO1
226537	35 LAYTON ST, ILLABO NSW 2590	51	46	46	38	42	-	-	CO1
226547	41-45 LAYTON ST, ILLABO NSW 2590	51	46	46	38	39	-	-	CO1
226601	BEHTUNGRA PARK 37 WARRENS LANE, ILLABO NSW	51	46	46	38	41	-	-	CO1
1000429	6 JUBILEE ST, ILLABO NSW 2590	51	46	46	38	42	-	-	CO1
1000915	14 TURLAND ST, ILLABO NSW 2590	60	60	60	45	64	CO1	CO1	CO1, CO2, (RO,AO)*
1110615	18 CROWTHER ST, ILLABO NSW 2590	51	46	46	38	56	CO1	CO1	CO1, CO2, (RO,AO)*
1110660	26 MORRIS ST, ILLABO NSW 2590	51	46	46	38	50	CO1	CO1	CO1

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MARTINUS INLAND RAIL

JUNEE TO ILLABO – CONSTRUCTION NOISE AND VIBRATION IMPACT STATEMENT ADDENDUM 4

A2I I Albury to Illabo

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GLOSSARY

Specific terms and acronyms used throughout this plan are listed and described in Table 1 below.

TABLE 1: DEFINITIONS

TERM	DEFINITION
A2I	Albury to Illabo section of the Inland Rail project
CA	Consistency Assessment
CIZ	Construction Impact Zone
CNVIS	Construction Noise and Vibration Impact Statement
CNVIS Addendum	This document
Construction boundary	The area physically affected by work as defined in the Project Description as described in the documents listed in Condition A1 of the project Infrastructure Approval.
Junee to Illabo CNVIS	Junee to Illabo Construction Noise and Vibration Impact Statement (Doc No. 6-0052-210-EEC-J7-AS-0002)
km	Kilometres
m	Metres
NML	Noise Management Level
OOH	Out-of-hours
Project	Albury to Illabo project approved under section 5.19 of the EP&A Act on 8 October 2024, as modified on 13 August 2025
RBL	Rating Background Level
SLR Predict	A2I noise and vibration management tool
W.0010A	Work Scenario 10A – CSR Activities
W.0012A	Work Scenario 12A – Level Crossing Work
W.013	Work Scenario 13 – Watermain Relocation Work

1 INTRODUCTION

1.1 Inland Rail

Inland Rail is an approximate 1,600 kilometres (km) freight rail network that will connect Beveridge and Kagaru via regional Victoria, New South Wales and Queensland. The Inland Rail route would involve using approximately 1,000 km of existing track (with enhancements and upgrades where necessary) and 600 km of new track, passing through 30 local government areas. Inland Rail will accommodate double-stacked freight trains up to 1,800 metres (m) long and 6.5 m high.

The Albury to Illabo (A2I) section (the Project) forms a key component of the Inland Rail program.It is a 185 km section of existing rail corridor located in regional NSW between the towns of Albury and Illabo. Works would include track realignment, lowering and/or modification within the existing rail corridor, modification, removal or replacement of bridge structures (rail, road and/or pedestrian bridges), raising or replacing signal gantries, level-crossing modifications and other associated works.

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

FIGURE 1 PROJECT ENHANCEMENT SITES

1.2 Purpose of this Noise Assessment

This Noise Assessment has been prepared to identify and assess two new work areas / scenarios required to support and enable approved construction activities associated with the Junee to Illabo clearances for the Junee Precinct. This Construction Noise and Vibration Impact Statement Addendum (CNVIS Addendum 4) forms an addendum to the endorsed Junee to Illabo CNVIS (Doc No: 6-0052-210-EEC-J7-AS-0002).

This CNVIS Addendum should be reviewed in conjunction with the Junee to Illabo CNVIS (Doc No: 6-0052-210-EEC-J7-AS-0002) including adopted rating background levels (RBL), noise management levels (NMLs) and assessment criteria in accordance with the Infrastructure Approval (SSI-10055). For completeness, this CNVIS Addendum 4 should also be read in conjunction with the preceding CNVIS Addendums:

- Junee to Illabo Addendum 1 (Doc No: 6-0052-210-EEC-J7-AS-0002_ADD_0) required for Waterworks Road Compound Operation;
- Junee to Illabo Addendum 2 (Doc No: 6-0052-210-EEC-J7-AS-0002_ADD2_0) required for shoulder recondition works outside of major possession periods; and,
- Junee to Illabo Addendum 3 (Doc No: 6-0052-210-EEC-J7-AS-0002_ADD3_0) required for Carters and Wornes Gate Site Establishment and Operation.

The new work areas and scenarios assessed in this CNVIS Addendum 4 are as follows:

- Work area for W.010A CSR Activities (Figure 2)
- Work area for W.012A Level Crossing Work (Figure 3)
- Work area for W.013 Utility Work (Figure 4)

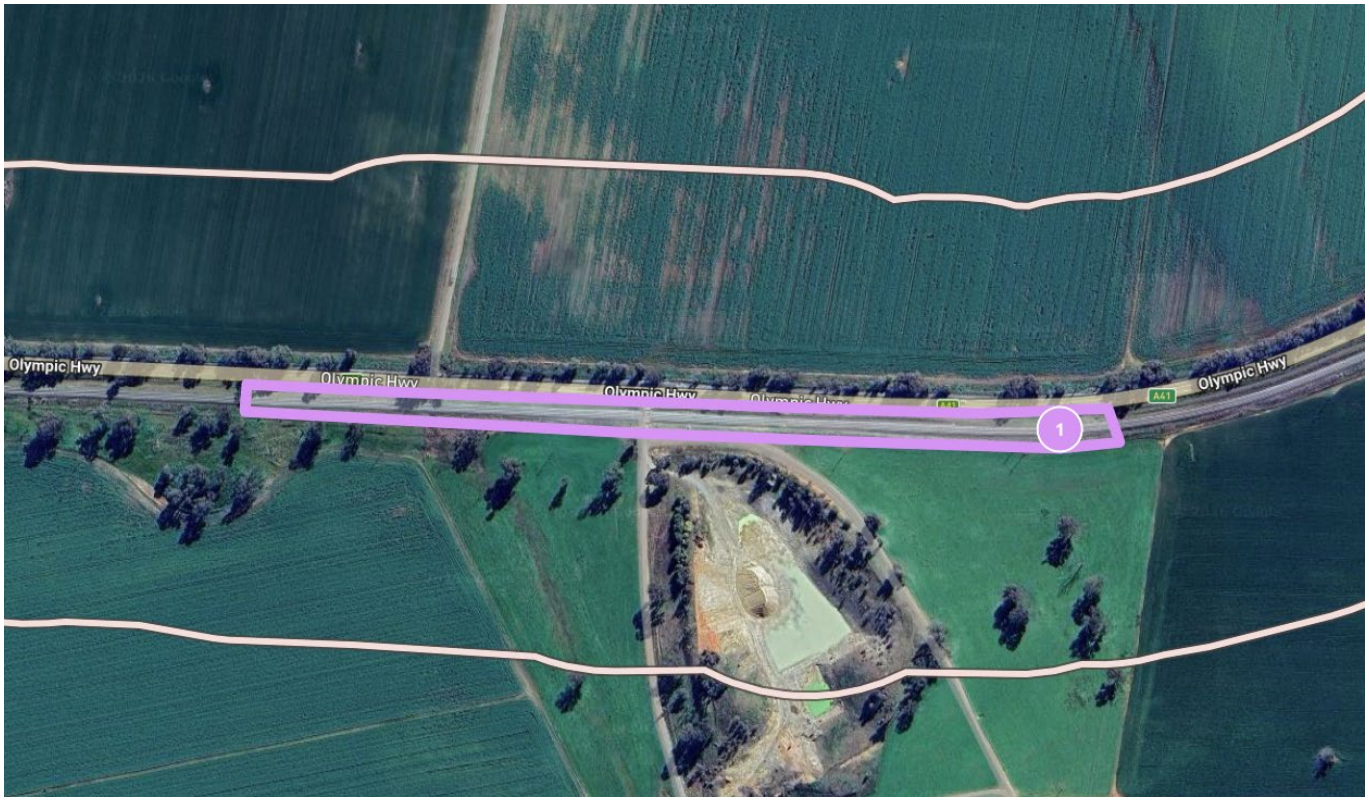

FIGURE 2: WORK AREA REQUIRED FOR CSR ACTIVITIES – W.010A

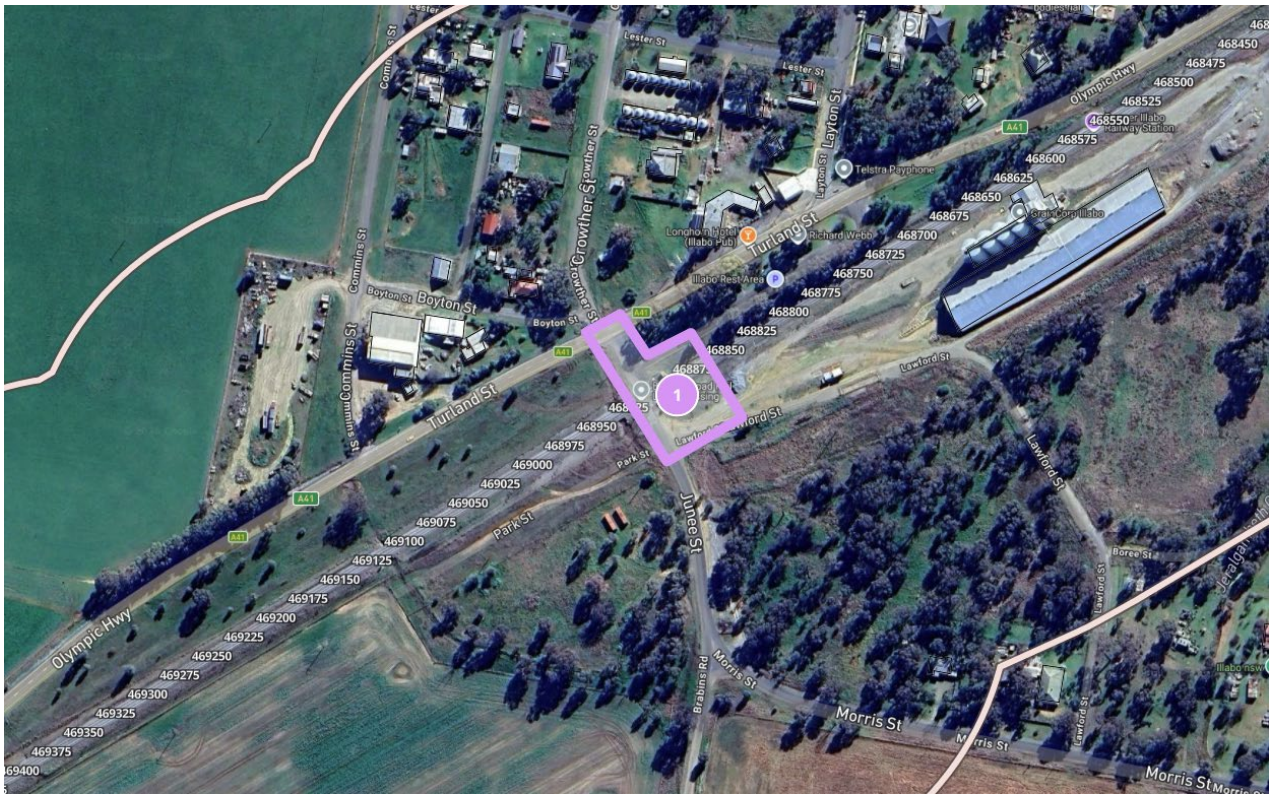

FIGURE 3: WORK AREA REQUIRED FOR LEVEL CROSSING WORK – W.012A

FIGURE 4: WORK AREA REQUIRED FOR WATERMAIN RELOCATION WORK – W.013

2 NOISE ASSESSMENT

The potential construction noise levels from the proposed works have been predicted using SLR Predict, the A2I project-specific noise and vibration tool. This CNVIS Addendum 3 assesses the work scenarios identified in Table 2.

TABLE 2: WORK SCENARIO DESCRIPTION

ID	Scenario	Description	Total Lw
W.010A	CSR Activities	CSR installation works	111
W.012A	Level Crossing Work	Temporary level crossing works Construction of temporary vehicle ramp	115
W.013	Watermain Relocation Work	Excavation for watermain works Under bore new watermain alignment	114

2.1 CSR Activities (W.010A)

2.1.1 Scope

The work area (Figure 2) falls within and adjacent to within the Construction Impact Zone (CIZ) for the approved project (referred to as the 'Construction boundary' in the Infrastructure Approval). Where the work area is outside the Construction boundary, the additional CIZ area is considered as part of various revisions of the Junee to Illabo Consistency Assessment (CA) (Doc No: 6-0052-210-EAP-J7-AS-0001).

This CNVIS Addendum 4 has assessed the work area required for W.010A, using SLR Predict, with the following noted:

Plant and equipment

- 1 x Hand tools (electric)
- 1 x Light vehicles
- 1 x Excavator (10T)
- 1 x Tipper truck (5T)
- 1 x Plate compactor
- 1 x Vacuum truck (NDD)

Construction hours

- Standard approved Hours:
  - 7am to 6pm Monday to Friday, inclusive
  - 7am to 6pm Saturday
- Day Out-of-Hours (OOH):
  - 8am to 6pm Sunday and public holidays
- Evening OOH:
  - 6pm to 10pm Monday to Sunday (including public holidays)
- Night OOH:
  - 10pm to 7am Monday to Saturday
  - 10pm to 8am Sunday (including public holidays)

2.1.2 Assessment

The new work scenario has been assessed utilising SLR Predict. The plant and equipment list (as noted above) has been considered as a worst-case scenario within a 15-minute assessment period. The operating time (utilisation %) of each plant and equipment is representative to site working conditions.

2.1.3 Results

The SLR Predict results are presented in Appendix A for the CSR Activities (W.010A) scenario. Night time out of hours is the most affected period.

Table 3 provides a summary of the exceedances identified for W.010A (night time) exceedances assessed in SLR Predict with the proposed equipment list, in the proposed work area (Figure 2).

TABLE 3: EXCEEDANCES FOR W.0010A (NIGHT OOH)

ASSESSMENT RESULTS	NUMBER OF RESIDENTIAL RECEIVERS WITH NML EXCEEDANCE
	W.010A SLR Predict (Night) (new work scenario)
Total Lw (dBA)	111
Noticeable (1-5 dB)	-
Clearly Audible (6-10 dB)	-
Moderately Intrusive (11-20 dB)	-
Highly Intrusive (>20 dB)	-
Sleep Disturbance (>52 dB)	-
Sleep Awakening (>65 dB)	-

There is a limitation in allowing a comparison of the results with other work scenarios in the endorsed CNVIS due to the difference in location, plant and equipment. The new work scenario for W.010A for the work area in Figure 2 has been considered and assessed on its own. The work scenario W.010A would not impact any receivers.

The same management and mitigation measures will be implemented for all additional affected receivers, as noted in Section 8 of the endorsed CNVIS and as per Section 4 below.

2.2 Level Crossing Work (W.012A)

2.2.1 Scope

The work area (Figure 3) falls within and adjacent to within the Construction Impact Zone (CIZ) for the approved project, (referred to as the 'Construction boundary' in the Infrastructure Approval). Where the work area is outside the Construction boundary, the additional CIZ area is considered as part of the Junee to Illabo CA (Doc No: 6-0052-210-EAP-J7-AS-0001).

This CNVIS Addendum 4 has assessed the work area required for W.012A, using SLR Predict, with the following noted:

Plant and equipment

- 1 x Hi-Rail Hydrema
- 1 x Dump Truck
- 1 x Grader
- 1 x Hi- Rail Excavator
- 1 x Track Excavator
- 1 x Watercart
- 1 x Loader
- 1 x Positrack

Construction hours

- Standard approved Hours:
  - 7am to 6pm Monday to Friday, inclusive
  - 7am to 6pm Saturday
- Day Out-of-Hours (OOH):
  - 8am to 6pm Sunday and public holidays

- Evening OOH:
  - 6pm to 10pm Monday to Sunday (including public holidays)
- Night OOH:
  - 10pm to 7am Monday to Saturday
  - 10pm to 8am Sunday (including public holidays)

2.2.2 Assessment

The new work scenario has been assessed utilising SLR Predict. The plant and equipment list (as noted above) has been considered as a worst-case scenario within a 15-minute assessment period. The operating time (utilisation %) of each plant and equipment is representative to site working conditions.

2.2.3 Results

The SLR Predict results are presented in Appendix B for the Level Crossing Work (W.012A) scenario. Night time out of hours is the most affected period.

Table 4 provides a summary of the exceedances identified for W.012A (night time) exceedances assessed in SLR Predict with the proposed equipment list, in the proposed locations (Figure 3).

TABLE 4: EXCEEDANCES FOR W.012A (NIGHT OOH)

ASSESSMENT RESULTS	NUMBER OF RESIDENTIAL RECEIVERS WITH NML EXCEEDANCE
	W.012A SLR Predict (Night) (new work scenario)
Total Lw (dBA)	115
Noticeable (1-5 dB)	13
Clearly Audible (6-10 dB)	15
Moderately Intrusive (11-20 dB)	5
Highly Intrusive (>20 dB)	2
Sleep Disturbance (>52 dB)	13
Sleep Awakening (>65 dB)	2

There is a limitation in allowing a comparison of the results with other work scenarios in the endorsed CNVIS due to the difference in location, plant and equipment. The additional work area for W.012A has been considered and assessed specifically in relation to the W.011 Level Crossing Work-Peak work scenario at LX604 (Figure 4). The work scenario W.012A would have a lesser impact compared with W.011 in the endorsed CNVIS (Appendix C-38d).

The same management and mitigation measures will be implemented for all additional affected receivers, as noted in Section 8 of the endorsed CNVIS and as per Section 4 below.

2.3 Watermain Relocation Work (W.013)

2.3.1 Scope

The work area (Figure 4) falls within and adjacent to within the Construction Impact Zone (CIZ) for the approved project, (referred to as the 'Construction boundary' in the Infrastructure Approval). Where the work area is outside the approved CSSI boundary, the additional CIZ area is considered as part of the Junee to Illabo Consistency Assessment (CA) (Doc No: 6-0052-210-EAP-J7-AS-0001).

This CNVIS Addendum 4 has assessed the work area required for W.013, using SLR Predict, with the following noted:

Plant and equipment

- 1 x Bob cat
- 1 x Concrete Agitator
- 1 x Crew Truck
- 1 x Excavator (5-8T)
- 1 x Generator
- 1 x Grouting mix machine
- 1 x Grout pump
- 1 x Hand tools
- 1 x Hydraulic power pack
- 5 x Light vehicles
- 1 x NDD Truck
- 1 x Pipe welding machine
- 1 x Under boring machine
- 1 x Water cart
- 1 x Water pump

Construction hours

- Standard approved Hours:
  - 7am to 6pm Monday to Friday, inclusive
  - 7am to 6pm Saturday

2.3.2 Assessment

The new work scenario has been assessed utilising SLR Predict. The plant and equipment list (as noted above) has been considered as a worst-case scenario within a 15-minute assessment period. The operating time (utilisation %) of each plant and equipment is representative to site working conditions.

2.3.3 Results

The SLR Predict results are presented in Appendix C for the Watermain Relocation Work (W.013) scenario. Day time is the most affected period.

Table 5 provides a summary of the exceedances identified for W.013 (day time) exceedances assessed in SLR Predict with the proposed equipment list, in the proposed locations (Figure 4).

TABLE 5: EXCEEDANCES FOR W.013 (DAY)

ASSESSMENT RESULTS	NUMBER OF RESIDENTIAL RECEIVERS WITH NML EXCEEDANCE
	W.013 SLR Predict (Day) (new work area)
Total Lw (dBA)	114
Clearly Audible (1-10 dB)	2
Moderately Intrusive (11-20 dB)	-
Highly Intrusive (>20 dB)	-

There is a limitation in allowing a comparison of the results with other work scenarios in the endorsed CNVIS due to the difference in location, plant and equipment. The additional work area for W.013 has been considered and assessed on its own.

Compared to other work scenarios in the endorsed CNVIS, the number of affected receivers is relatively low. The work scenario W.013 would have a clearly audible noise impact (1-10 dB) on two residential receivers. The same two receivers potentially impacted by the new work area (W.013), are also identified as being subject to the same level of impact (clearly audible) by the W.003 Geotechnical Investigation scenario during the day time (as per the endorsed CNVIS):

The same management and mitigation measures will be implemented for all additional affected receivers, as noted in Section 8 of the endorsed CNVIS and as per Section 4 below.

3 VIBRATION ASSESSMENT

3.1 CSR Activities (W.010A)

There are no vibration intensive plant and equipment items proposed to be utilised as part of W.010A as presented in Appendix A; therefore no vibration impacts are expected.

3.2 Level Crossing Work (W.012A)

There are no vibration intensive plant and equipment items proposed to be utilised as part of W.012A as presented in Appendix B; therefore no vibration impacts are expected.

3.3 Watermain Relocation Work (W.013)

There are no vibration intensive plant and equipment items proposed to be utilised as part of W.013 as presented in Appendix C; therefore no vibration impacts are expected.

4 CONCLUSION

4.1 Mitigation and Management Measures

As this Assessment is an addendum to the endorsed CNVIS for Junee to Illabo, the same mitigation and management measures apply as noted in Section 8 of the CNVIS.

4.2 Additional mitigation measures

As noted in Figure 5 below and under Appendices A, B and C, the SLR Predict noise results include a section on all applicable additional mitigation measures. These additional mitigation measures will be implemented where appropriate. No additional mitigation measures were identified for vibration.

Airborne Noise - Additional Mitigation Measures Matrix				
Time Period	Exceedance of NML	Perception	Duration	Communication Category/Management Measure
OOHW Daytime PeriodSunday 7am - 6pm(including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
OOHW Evening PeriodMonday - Sunday 6pm - 10pm(including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
			>2 consecutive rest periods	CO1, CO2, RO
OOHW Night PeriodMonday - Sunday 10pm - 7am(including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
			>2 consecutive sleep periods	CO1, CO2, RO, AO
	>25	Highly intrusive	Any	CO1, CO2, RO
			>2 consecutive sleep periods	CO1, CO2, RO, AO, AltA

FIGURE 5: ADDITIONAL MITIGATION MEASURES MATRIX – NOISE

Vibration - Additional Mitigation Measures Matrix			
Time Period	**Duration**	**Exceedance of 'preferred' value**	**Exceedance of 'maximum' value**
OOHW Daytime Period Sunday 8am-6pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Evening Period Mon-Sun 6pm-10pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Night Period Mon-Sat 10pm-7am Sun 10pm-8am	Any	CO1, CO2, RO	CO1, CO2, RO, AltA

Additional Mitigation Measures	
Measure	**Abbreviation**
Communication (Category 1)[1]	CO1
Communication (Category 2)[2]	CO2
Respite Offer[3]	RO
Alternative Accommodation	AltA
Agreement with Owners	AO

Note 1: CO1: Communication to provide information on the OOHW via methods such as letter box drop, email, newsletter, media advertisements and/ or website prior to the works commencing.

Note 2: CO2: Communication should be personalised (e.g. door knock, meeting, telephone call). Contact with these residents should commence early to enable feedback to be considered by the proposal.

Note 3: RO are not applicable to non-residential receivers. RO may comprise of pre-purchased movie tickets, dinner vouchers or similar. RO can also be provided by limiting high noise generating works and allowing at least a one-hour respite period between blocks of work. Where possible, the timing of this respite should be discussed with the impacted community.

Receiver Types			
Code	**Description**	**Code**	**Description**
RES	Residential	OED	Other Educational
COM	Commercial	OHO	Other Hotel
IND	Industrial	OLI	Other Library
OOA	Other Outdoor Active Recreation	OME	Other Medical
OOP	Other Outdoor Passive Recreation	OPW	Other Place of Worship
OCC	Other Child Care	OPB	Other Public Building

FIGURE 6: ADDITIONAL MITIGATION MEASURES MATRIX AND NOTES – NOISE AND VIBRATION

APPENDICES

APPENDIX A

SLR Predict (W.010A)

Construction Noise and Vibration Impact Statement (CNVIS)

This report presents the outcomes of detailed noise/vibration modelling relating to specific construction activities proposed on site in accordance with the methodology outlined in the *Construction Noise and Vibration Management Plan* (CNVMP) and overarching *Construction Noise and Vibration Impact Statement* (CNVIS).
Prior to detailed noise/vibration modelling being undertaken, work activities are reviewed and considered in relation to industry best practice, consistent with the requirements of the CNVMP. Consideration is first given to eliminating the noise/vibration emissions so far as reasonably practicable. Where elimination is not practicable, efforts are been made to reduce the risk as far as practical by implementing noise and vibration management measures as outlined in the overarching CNVIS and CNVMP.
Examples of these measures include selecting the quietest equipment and processes to complete the works, considering staging and periods of respite to minimise prolonged periods of noise and vibration exposure, and maximising distances between construction activities and sensitive receivers.

Consultation with Affected Receivers
In accordance with CoA E78, the CNVIS must include specific mitigation measures identified through consultation with affected sensitive land user(s) and the mitigation measures must be implemented for the duration of the Work. Details of this consultation are provided in the overarching CNVIS for each enhancement site.

Predicted Noise Levels
The assessment presents the highest predicted level at each receiver building, considering predictions at each floor and façade from all potential work areas. The assessment is generally considered conservative as the calculations assume several items of construction equipment are in use at the same time within each work area. The assessment uses 'realistic worst-case' scenarios to determine the impacts from the noisiest 15-minute period that is likely to occur for each work scenario.

Assessment Details

Author Name	
Author Email	noiseassessments@martinus.com.au
Author Organisation	Martinus Rail
Project Name	A2I - Albury to Illabo
Assessment Name	J7 LX605 CSR
Assessment Number	405
Stage	A2I Construction
Permit Number	
Start Date	
End Date	
Assessment Period	Night - out of hours

Equipment Details

Plant/Equipment	Equipment Sound Power Level (Unadjusted), dBA	Number of Units	Temporary Noise Barrier
1: CSR and signalling (Height: Ground)	Total: 111		
Light Vehicle (accelerating) 25% operation	95	10	No
Excavator - Tracked (10T) 50% operation	100	1	No
Truck - tipper small (5T) 100% operation	97	1	No
Truck - vacuum (NDD or non-destructive digger) 100% operation	109	1	No
Compactor (plate) 100% operation	104	1	No
Hand tools (electric) 75% operation	102	1	No

Note 1: Equipment classed as 'annoying' in the *Interim Construction Noise Guideline (DECC, 2009)* include a 5 dB correction.
Note 2: Equipment sound power levels consider the mitigation measures outlined in the overarching CNVIS to provide mitigated results.

Assessment Results

	Residential	Non-Residential
Highly Intrusive	0 property	0 property
Moderately Intrusive	0 property	0 property
Clearly Audible	0 property	0 property
Noticeable	0 property	0 property
Above Sleep Disturbance	0 property	0 property
Above Sleep Awake	0 property	0 property

Legend

	Project Boundary
	Work Areas
	Barriers

Results by Receiver

Address	Land Use	Noise Catchment Area	Construction Noise Management Level, dBA	Predicted Noise Level, dBA	Predicted Noise Level Above Noise Management Level, dB	Noise Category
No results						

Recommended Mitigation Measures

This assessment has been conducted with regard to the relevant CNVIS and CNVMP. To manage noise and vibration impacts, project specific mitigation measures may be considered such as reviewing construction staging methodology to identify opportunities to schedule intensive works during less sensitive time periods and by providing a clear process for community engagement and complaints. Likewise, the requirements and actionable items within the overarching CNVIS and CNVMP should be considered and adopted where appropriate. Following the consideration of project specific noise mitigation measures, additional noise mitigation measures to be explored are described in the Inland Rail NSW Construction Noise and Vibration Framework (CNVF) and summarised below.

Airborne Noise - Additional Mitigation Measures Matrix				
Time Period	**Exceedance of NML**	**Perception**	**Duration**	**Communication Category/Management Measure**
OOHW Daytime Period Sunday 7am - 6pm (including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
OOHW Evening Period Monday - Sunday 6pm - 10pm (including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
			>2 consecutive rest periods	CO1, CO2, RO
OOHW Night Period Monday - Sunday 10pm - 7am (including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
			>2 consecutive sleep periods	CO1, CO2, RO, AO
	>25	Highly intrusive	Any	CO1, CO2, RO
			>2 consecutive sleep periods	CO1, CO2, RO, AO, AltA

Vibration - Additional Mitigation Measures Matrix			
Time Period	**Duration**	**Exceedance of 'preferred' value**	**Exceedance of 'maximum' value**
OOHW Daytime Period Sunday 8am-6pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Evening Period Mon-Sun 6pm-10pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Night Period Mon-Sat 10pm-7am Sun 10pm-8am	Any	CO1, CO2, RO	CO1, CO2, RO, AltA

Additional Mitigation Measures	
Measure	**Abbreviation**
Communication (Category 1)[1]	CO1
Communication (Category 2)[2]	CO2
Respite Offer[3]	RO
Alternative Accommodation	AltA
Agreement with Owners	AO

Note 1: CO1: Communication to provide information on the OOHW via methods such as letter box drop, email, newsletter, media advertisements and/ or website prior to the works commencing.

Note 2: CO2: Communication should be personalised (e.g. door knock, meeting, telephone call). Contact with these residents should commence early to enable feedback to be considered by the proposal.

Note 3: RO are not applicable to non-residential receivers. RO may comprise of pre-purchased movie tickets, dinner vouchers or similar. RO can also be provided by limiting high noise generating works and allowing at least a one-hour respite period between blocks of work. Where possible, the timing of this respite should be discussed with the impacted community.

Receiver Types			
Code	**Description**	**Code**	**Description**
RES	Residential	OED	Other Educational
COM	Commercial	OHO	Other Hotel
IND	Industrial	OLI	Other Library
OOA	Other Outdoor Active Recreation	OME	Other Medical
OOP	Other Outdoor Passive Recreation	OPW	Other Place of Worship
OCC	Other Child Care	OPB	Other Public Building

APPENDIX B

SLR Predict (W.012A)

Construction Noise and Vibration Impact Statement (CNVIS)

This report presents the outcomes of detailed noise/vibration modelling relating to specific construction activities proposed on site in accordance with the methodology outlined in the *Construction Noise and Vibration Management Plan* (CNVMP) and overarching *Construction Noise and Vibration Impact Statement* (CNVIS).
Prior to detailed noise/vibration modelling being undertaken, work activities are reviewed and considered in relation to industry best practice, consistent with the requirements of the CNVMP. Consideration is first given to eliminating the noise/vibration emissions so far as reasonably practicable. Where elimination is not practicable, efforts are been made to reduce the risk as far as practical by implementing noise and vibration management measures as outlined in the overarching CNVIS and CNVMP.
Examples of these measures include selecting the quietest equipment and processes to complete the works, considering staging and periods of respite to minimise prolonged periods of noise and vibration exposure, and maximising distances between construction activities and sensitive receivers.

Consultation with Affected Receivers
In accordance with CoA E78, the CNVIS must include specific mitigation measures identified through consultation with affected sensitive land user(s) and the mitigation measures must be implemented for the duration of the Work. Details of this consultation are provided in the overarching CNVIS for each enhancement site.

Predicted Noise Levels
The assessment presents the highest predicted level at each receiver building, considering predictions at each floor and façade from all potential work areas. The assessment is generally considered conservative as the calculations assume several items of construction equipment are in use at the same time within each work area. The assessment uses 'realistic worst-case' scenarios to determine the impacts from the noisiest 15-minute period that is likely to occur for each work scenario.

Assessment Details

Author Name	
Author Email	noiseassessments@martinus.com.au
Author Organisation	Martinus Rail
Project Name	A2I - Albury to Illabo
Assessment Name	J7 LX604 temp crossing
Assessment Number	404
Stage	A2I Construction
Permit Number	
Start Date	
End Date	
Assessment Period	Night - out of hours

Equipment Details

Plant/Equipment	Equipment Sound Power Level (Unadjusted), dBA	Number of Units	Temporary Noise Barrier
1: LX604 tempoarary crossing (Height: Ground)	Total: 115		
Hi-Rail Hydrema 25% operation	107	1	No
Truck - dump 25% operation	117	1	No
Grader (small) 50% operation	110	1	No
Water Cart 75% operation	105	1	No
Front End Loader 50% operation	113	1	No
Positrack 50% operation	104	1	No
Hi-Rail Excavator (20T) 50% operation	105	1	No

Note 1: Equipment classed as 'annoying' in the *Interim Construction Noise Guideline (DECC, 2009)* include a 5 dB correction.
Note 2: Equipment sound power levels consider the mitigation measures outlined in the overarching CNVIS to provide mitigated results.

Assessment Results

		Residential	Non-Residential
	Highly Intrusive	2 properties	0 property
	Moderately Intrusive	5 properties	1 property
	Clearly Audible	15 properties	0 property
	Noticeable	13 properties	0 property
	Above Sleep Disturbance	11 properties	0 property
	Above Sleep Awake	2 properties	0 property

Legend

	Project Boundary
	Work Areas
	Barriers

Results by Receiver

Address	Land Use	Noise Catchment Area	Construction Noise Management Level, dBA	Predicted Noise Level, dBA	Predicted Noise Level Above Noise Management Level, dB	Noise Category
2 CROWTHER ST, ILLABO NSW 2590	RES	NCA15	38	69	31	Highly Intrusive Above Sleep Dist Above Sleep Awake
2-4 TURLAND ST, ILLABO NSW 2590	RES	NCA15	38	67	29	Highly Intrusive Above Sleep Dist Above Sleep Awake
26 CROWTHER ST, ILLABO NSW 2590	RES	NCA15	38	61	23	Moderately Intrusive Above Sleep Dist
18 CROWTHER ST, ILLABO NSW 2590	RES	NCA15	38	59	21	Moderately Intrusive Above Sleep Dist
29 COMMINS ST, ILLABO NSW 2590	RES	NCA15	38	56	18	Moderately Intrusive Above Sleep Dist
14 TURLAND ST, ILLABO NSW 2590	OHO	NCA15	45	63	18	Moderately Intrusive
23 COMMINS ST, ILLABO NSW 2590	RES	NCA15	38	55	17	Moderately Intrusive Above Sleep Dist
24 MORRIS ST, ILLABO NSW 2590	RES	NCA15	38	54	16	Moderately Intrusive Above Sleep Dist
33 COMMINS ST, ILLABO NSW 2590	RES	NCA15	38	52	14	Clearly Audible Above Sleep Dist

Results by Receiver

Address	Land Use	Noise Catchment Area	Construction Noise Management Level, dBA	Predicted Noise Level, dBA	Predicted Noise Level Above Noise Management Level, dB	Noise Category
26 MORRIS ST, ILLABO NSW 2590	RES	NCA15	38	51	13	Clearly Audible Above Sleep Dist
6-8 LAYTON ST, ILLABO NSW 2590	RES	NCA15	38	50	12	Clearly Audible Above Sleep Dist
36 TURLAND ST, ILLABO NSW 2590	RES	NCA15	38	50	12	Clearly Audible Above Sleep Dist
25 LAYTON ST, ILLABO NSW 2590	RES	NCA15	38	48	10	Clearly Audible
LOT 4 (DP758533) BOREE ST, ILLABO NSW 2590	RES	NCA15	38	47	9	Clearly Audible
21 WOOD ST, ILLABO NSW 2590	RES	NCA15	38	47	9	Clearly Audible
31 CROWTHER ST, ILLABO NSW 2590	RES	NCA15	38	47	9	Clearly Audible
24-26 LAYTON ST, ILLABO NSW 2590	RES	NCA15	38	46	8	Clearly Audible
47 EURONGILLY RD, ILLABO NSW 2590	RES	NCA15	38	45	7	Clearly Audible
2 HOWELL ST, ILLABO NSW 2590	RES	NCA15	38	45	7	Clearly Audible
37 CROWTHER ST, ILLABO NSW 2590	RES	NCA15	38	45	7	Clearly Audible
47 EURONGILLY RD, ILLABO NSW 2590	RES	NCA15	38	44	6	Clearly Audible
10 HOWELL ST, ILLABO NSW 2590	RES	NCA15	38	44	6	Clearly Audible

Results by Receiver

Address	Land Use	Noise Catchment Area	Construction Noise Management Level, dBA	Predicted Noise Level, dBA	Predicted Noise Level Above Noise Management Level, dB	Noise Category
33 LAYTON ST, ILLABO NSW 2590	RES	NCA15	38	44	6	Clearly Audible
81 WOOD ST, ILLABO NSW 2590	RES	NCA15	38	43	5	Noticeable
10 HOWELL ST, ILLABO NSW 2590	RES	NCA15	38	43	5	Noticeable
11 HOWELL ST, ILLABO NSW 2590	RES	NCA15	38	42	4	Noticeable
13 HOWELL ST, ILLABO NSW 2590	RES	NCA15	38	42	4	Noticeable
35 LAYTON ST, ILLABO NSW 2590	RES	NCA15	38	42	4	Noticeable
6 JUBILEE ST, ILLABO NSW 2590	RES	NCA15	38	42	4	Noticeable
LOT 4 (DP758533) LAYTON ST, ILLABO NSW 2590	RES	NCA15	38	41	3	Noticeable
6 TURLAND ST, ILLABO NSW 2590	RES	NCA15	38	41	3	Noticeable
16 HOWELL ST, ILLABO NSW 2590	RES	NCA15	38	41	3	Noticeable
41-45 LAYTON ST, ILLABO NSW 2590	RES	NCA15	38	41	3	Noticeable
81 ILLABO SHOWGROUND RD, ILLABO NSW 2590	RES	NCA15	38	40	2	Noticeable
7 TOOHEYS LANE, ILLABO NSW 2590	RES	NCA15	38	40	2	Noticeable

Results by Receiver

Address	Land Use	Noise Catchment Area	Construction Noise Management Level, dBA	Predicted Noise Level, dBA	Predicted Noise Level Above Noise Management Level, dB	Noise Category
17 TOOHEYS LANE, ILLABO NSW 2590	RES	NCA15	38	39	1	Noticeable

Recommended Mitigation Measures

This assessment has been conducted with regard to the relevant CNVIS and CNVMP. To manage noise and vibration impacts, project specific mitigation measures may be considered such as reviewing construction staging methodology to identify opportunities to schedule intensive works during less sensitive time periods and by providing a clear process for community engagement and complaints. Likewise, the requirements and actionable items within the overarching CNVIS and CNVMP should be considered and adopted where appropriate. Following the consideration of project specific noise mitigation measures, additional noise mitigation measures to be explored are described in the Inland Rail NSW Construction Noise and Vibration Framework (CNVF) and summarised below.

Airborne Noise - Additional Mitigation Measures Matrix				
Time Period	**Exceedance of NML**	**Perception**	**Duration**	**Communication Category/Management Measure**
OOHW Daytime Period Sunday 7am - 6pm (including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
OOHW Evening Period Monday - Sunday 6pm - 10pm (including public holidays)	<5	Noticeable	Any	CO1
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	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
			>2 consecutive rest periods	CO1, CO2, RO
OOHW Night Period Monday - Sunday 10pm - 7am (including public holidays)	<5	Noticeable	Any	CO1
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			>2 consecutive sleep periods	CO1, CO2, RO, AO
	>25	Highly intrusive	Any	CO1, CO2, RO
			>2 consecutive sleep periods	CO1, CO2, RO, AO, AltA

Vibration - Additional Mitigation Measures Matrix			
Time Period	**Duration**	**Exceedance of 'preferred' value**	**Exceedance of 'maximum' value**
OOHW Daytime Period Sunday 8am-6pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Evening Period Mon-Sun 6pm-10pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Night Period Mon-Sat 10pm-7am Sun 10pm-8am	Any	CO1, CO2, RO	CO1, CO2, RO, AltA

Additional Mitigation Measures	
Measure	**Abbreviation**
Communication (Category 1)[1]	CO1
Communication (Category 2)[2]	CO2
Respite Offer[3]	RO
Alternative Accommodation	AltA
Agreement with Owners	AO

Note 1: CO1: Communication to provide information on the OOHW via methods such as letter box drop, email, newsletter, media advertisements and/ or website prior to the works commencing.

Note 2: CO2: Communication should be personalised (e.g. door knock, meeting, telephone call). Contact with these residents should commence early to enable feedback to be considered by the proposal.

Note 3: RO are not applicable to non-residential receivers. RO may comprise of pre-purchased movie tickets, dinner vouchers or similar. RO can also be provided by limiting high noise generating works and allowing at least a one-hour respite period between blocks of work. Where possible, the timing of this respite should be discussed with the impacted community.

Receiver Types			
Code	**Description**	**Code**	**Description**
RES	Residential	OED	Other Educational
COM	Commercial	OHO	Other Hotel
IND	Industrial	OLI	Other Library
OOA	Other Outdoor Active Recreation	OME	Other Medical
OOP	Other Outdoor Passive Recreation	OPW	Other Place of Worship
OCC	Other Child Care	OPB	Other Public Building

APPENDIX C

SLR Predict (W.013)

Construction Noise and Vibration Impact Statement (CNVIS)

This report presents the outcomes of detailed noise/vibration modelling relating to specific construction activities proposed on site in accordance with the methodology outlined in the *Construction Noise and Vibration Management Plan* (CNVMP) and overarching *Construction Noise and Vibration Impact Statement* (CNVIS).
Prior to detailed noise/vibration modelling being undertaken, work activities are reviewed and considered in relation to industry best practice, consistent with the requirements of the CNVMP. Consideration is first given to eliminating the noise/vibration emissions so far as reasonably practicable. Where elimination is not practicable, efforts are been made to reduce the risk as far as practical by implementing noise and vibration management measures as outlined in the overarching CNVIS and CNVMP.
Examples of these measures include selecting the quietest equipment and processes to complete the works, considering staging and periods of respite to minimise prolonged periods of noise and vibration exposure, and maximising distances between construction activities and sensitive receivers.

Consultation with Affected Receivers
In accordance with CoA E78, the CNVIS must include specific mitigation measures identified through consultation with affected sensitive land user(s) and the mitigation measures must be implemented for the duration of the Work. Details of this consultation are provided in the overarching CNVIS for each enhancement site.

Predicted Noise Levels
The assessment presents the highest predicted level at each receiver building, considering predictions at each floor and façade from all potential work areas. The assessment is generally considered conservative as the calculations assume several items of construction equipment are in use at the same time within each work area. The assessment uses 'realistic worst-case' scenarios to determine the impacts from the noisiest 15-minute period that is likely to occur for each work scenario.

Assessment Details

Author Name	
Author Email	noiseassessments@martinus.com.au
Author Organisation	Martinus Rail
Project Name	A2I - Albury to Illabo
Assessment Name	J7 477 Watermain
Assessment Number	359
Stage	A2I Construction
Permit Number	
Start Date	
End Date	
Assessment Period	Day - standard

Equipment Details

Plant/Equipment	Equipment Sound Power Level (Unadjusted), dBA	Number of Units	Temporary Noise Barrier
1: Watermain relocation (Height: Ground)	Total: 114		
Directional Drill 50% operation	101	1	No
Excavator - Tracked (10T) 50% operation	100	1	No
Bobcat 50% operation	104	1	No
Truck - vacuum (NDD or non-destructive digger) 100% operation	109	1	No
Water Cart 75% operation	105	1	No
Water Pump 75% operation	93	1	No
Welding Equipment 100% operation	110	1	No

Note 1: Equipment classed as 'annoying' in the *Interim Construction Noise Guideline (DECC, 2009)* include a 5 dB correction.
Note 2: Equipment sound power levels consider the mitigation measures outlined in the overarching CNVIS to provide mitigated results.

Equipment Details

Plant/Equipment	Equipment Sound Power Level (Unadjusted), dBA	Number of Units	Temporary Noise Barrier
Generator - diesel/ petrol 100% operation	103	1	No
Hand tools (electric) 75% operation	102	1	No
Truck - light rigid 25% operation	97	1	No
Light Vehicle (accelerating) 25% operation	95	5	No
Hand tools (manual) 75% operation	102	1	No

Note 1: Equipment classed as 'annoying' in the *Interim Construction Noise Guideline (DECC, 2009)* include a 5 dB correction.
Note 2: Equipment sound power levels consider the mitigation measures outlined in the overarching CNVIS to provide mitigated results.

Assessment Results

	Residential	Non-Residential

Assessment Results

	Highly Intrusive	0 property	0 property
	Moderately Intrusive	0 property	0 property
	Clearly Audible	2 properties	0 property
	Above HNA	0 property	0 property

Legend

	Project Boundary
	Work Areas
	Barriers

Results by Receiver

Address	Land Use	Noise Catchment Area	Construction Noise Management Level, dBA	Predicted Noise Level, dBA	Predicted Noise Level Above Noise Management Level, dB	Noise Category
731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	RES	NCA15	51	54	3	Clearly Audible
731 BALLENGOARRAH LANE, WANTIOOL NSW 2663	RES	NCA15	51	53	2	Clearly Audible

Recommended Mitigation Measures

This assessment has been conducted with regard to the relevant CNVIS and CNVMP. To manage noise and vibration impacts, project specific mitigation measures may be considered such as reviewing construction staging methodology to identify opportunities to schedule intensive works during less sensitive time periods and by providing a clear process for community engagement and complaints. Likewise, the requirements and actionable items within the overarching CNVIS and CNVMP should be considered and adopted where appropriate. Following the consideration of project specific noise mitigation measures, additional noise mitigation measures to be explored are described in the Inland Rail NSW Construction Noise and Vibration Framework (CNVF) and summarised below.

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Time Period	**Exceedance of NML**	**Perception**	**Duration**	**Communication Category/Management Measure**
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	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
OOHW Evening Period Monday - Sunday 6pm - 10pm (including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
	>25	Highly intrusive	Any	CO1, CO2
			>2 consecutive rest periods	CO1, CO2, RO
OOHW Night Period Monday - Sunday 10pm - 7am (including public holidays)	<5	Noticeable	Any	CO1
	5 - 15	Clearly audible	Any	CO1
	16 - 25	Moderately intrusive	Any	CO1, CO2
			>2 consecutive sleep periods	CO1, CO2, RO, AO
	>25	Highly intrusive	Any	CO1, CO2, RO
			>2 consecutive sleep periods	CO1, CO2, RO, AO, AltA

Vibration - Additional Mitigation Measures Matrix			
Time Period	**Duration**	**Exceedance of 'preferred' value**	**Exceedance of 'maximum' value**
OOHW Daytime Period Sunday 8am-6pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Evening Period Mon-Sun 6pm-10pm	Any	CO1, CO2	CO1, CO2, RO
OOHW Night Period Mon-Sat 10pm-7am Sun 10pm-8am	Any	CO1, CO2, RO	CO1, CO2, RO, AltA

Additional Mitigation Measures	
Measure	**Abbreviation**
Communication (Category 1)[1]	CO1
Communication (Category 2)[2]	CO2
Respite Offer[3]	RO
Alternative Accommodation	AltA
Agreement with Owners	AO

Note 1: CO1: Communication to provide information on the OOHW via methods such as letter box drop, email, newsletter, media advertisements and/ or website prior to the works commencing.

Note 2: CO2: Communication should be personalised (e.g. door knock, meeting, telephone call). Contact with these residents should commence early to enable feedback to be considered by the proposal.

Note 3: RO are not applicable to non-residential receivers. RO may comprise of pre-purchased movie tickets, dinner vouchers or similar. RO can also be provided by limiting high noise generating works and allowing at least a one-hour respite period between blocks of work. Where possible, the timing of this respite should be discussed with the impacted community.

Receiver Types			
Code	**Description**	**Code**	**Description**
RES	Residential	OED	Other Educational
COM	Commercial	OHO	Other Hotel
IND	Industrial	OLI	Other Library
OOA	Other Outdoor Active Recreation	OME	Other Medical
OOP	Other Outdoor Passive Recreation	OPW	Other Place of Worship
OCC	Other Child Care	OPB	Other Public Building

MARTINUS

Appendix C Unexpected Finds Procedure (Heritage and Human Remains)

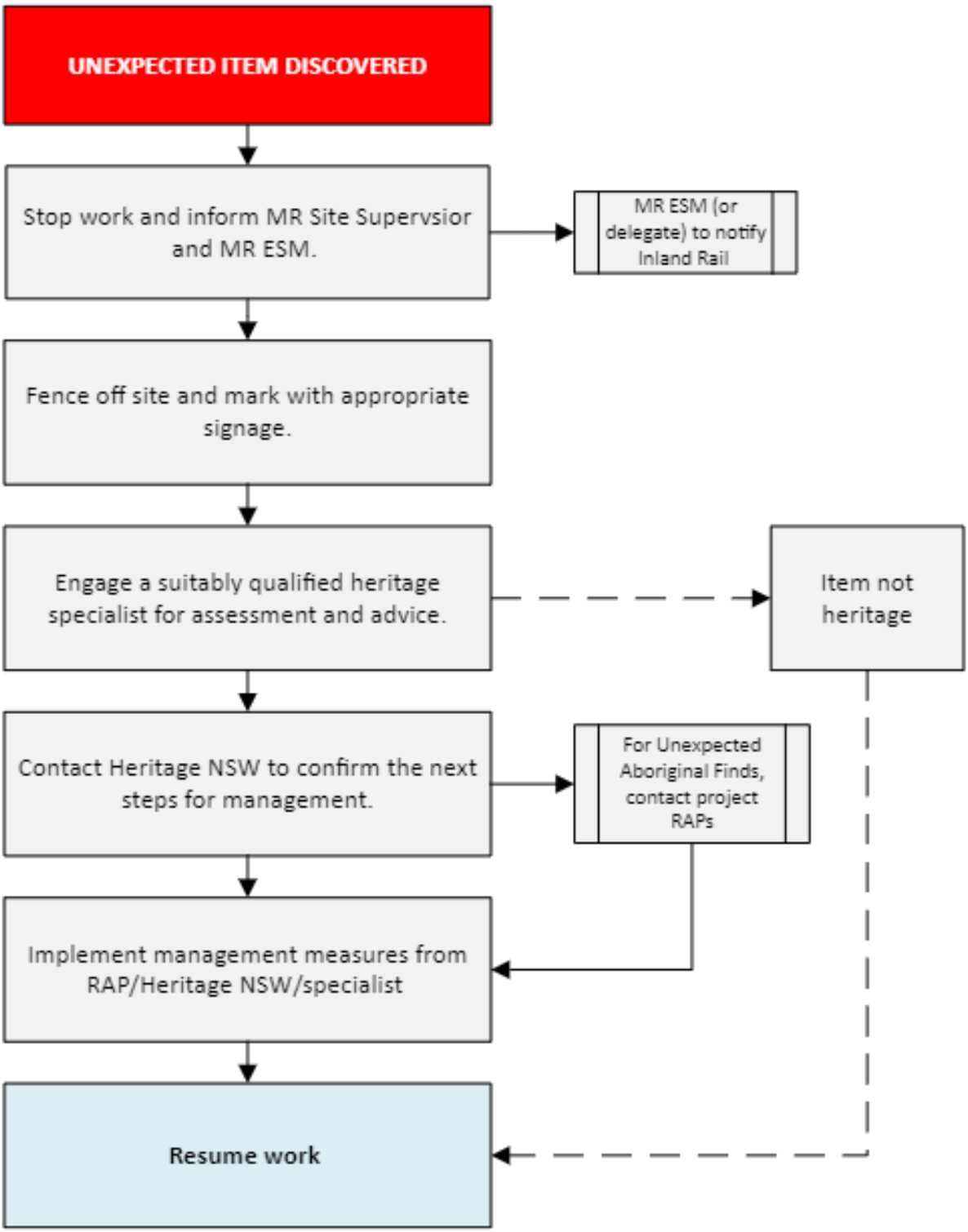
ABORIGINAL AND NON-ABORIGINAL HERITAGE: UNEXPECTED FINDS PROCEDURE

An Aboriginal artefact is anything that is the result of past Aboriginal activity. This includes stone (artefacts, rock engravings etc.), plant (culturally scarred trees) and animal bone (if showing signs of modification; i.e. smoothing, use). Human bone (skeletal remains) may also be uncovered while onsite.

A historic artefact is anything that is the result of past activity not related to Aboriginal occupation. This includes pottery, wood, glass and metal objects as well as the built remains of structures, sometimes heavily ruined.

In the event of an unexpected heritage find, the following protocol will apply:

1. All ground-disturbance work in the vicinity of the find must cease immediately. The Site Supervisor is to be made aware of the object(s) and is to notify the MR Construction Manager and MR ESM. The MR ESM (or delegate) will notify the relevant Inland Rail (IR) representative.
2. The find will be temporarily fenced off as quickly as possible to ensure no damage/further damage to the object(s). Signage on the fencing is to state that the area is subject to environmental protection, that no ground disturbance is allowed, and should include relevant contact details for the MR ESM.
3. The MR ESM (or delegate) will contact a suitably qualified heritage specialist to assess the find. The heritage specialist will then determine the need for further investigation or management. The heritage specialists assessment may be undertaken using good quality images, with a scale and several angles, however, if photographic evidence does not allow for certainty, then a site visit from the suitably qualified heritage specialist will be required.
4. If the find is an Aboriginal object, the MR ESM (or delegate) and/or heritage specialist will contact the RAPs to attend the site to inspect the find and to determine, in consultation, the next steps for management. These measures will include registration of the object in the Aboriginal Heritage Information Management System within a reasonable time.
5. The MR ESM (or delegate) and/or heritage specialist will also contact Heritage NSW (phone 02 9873 8500) to confirm the next steps for management.
6. Ground disturbance work in the vicinity of the find can only continue under supervision of a suitably qualified heritage specialist, having regard to any advice from Heritage NSW and RAPs.



Flow Chart: Unexpected heritage finds

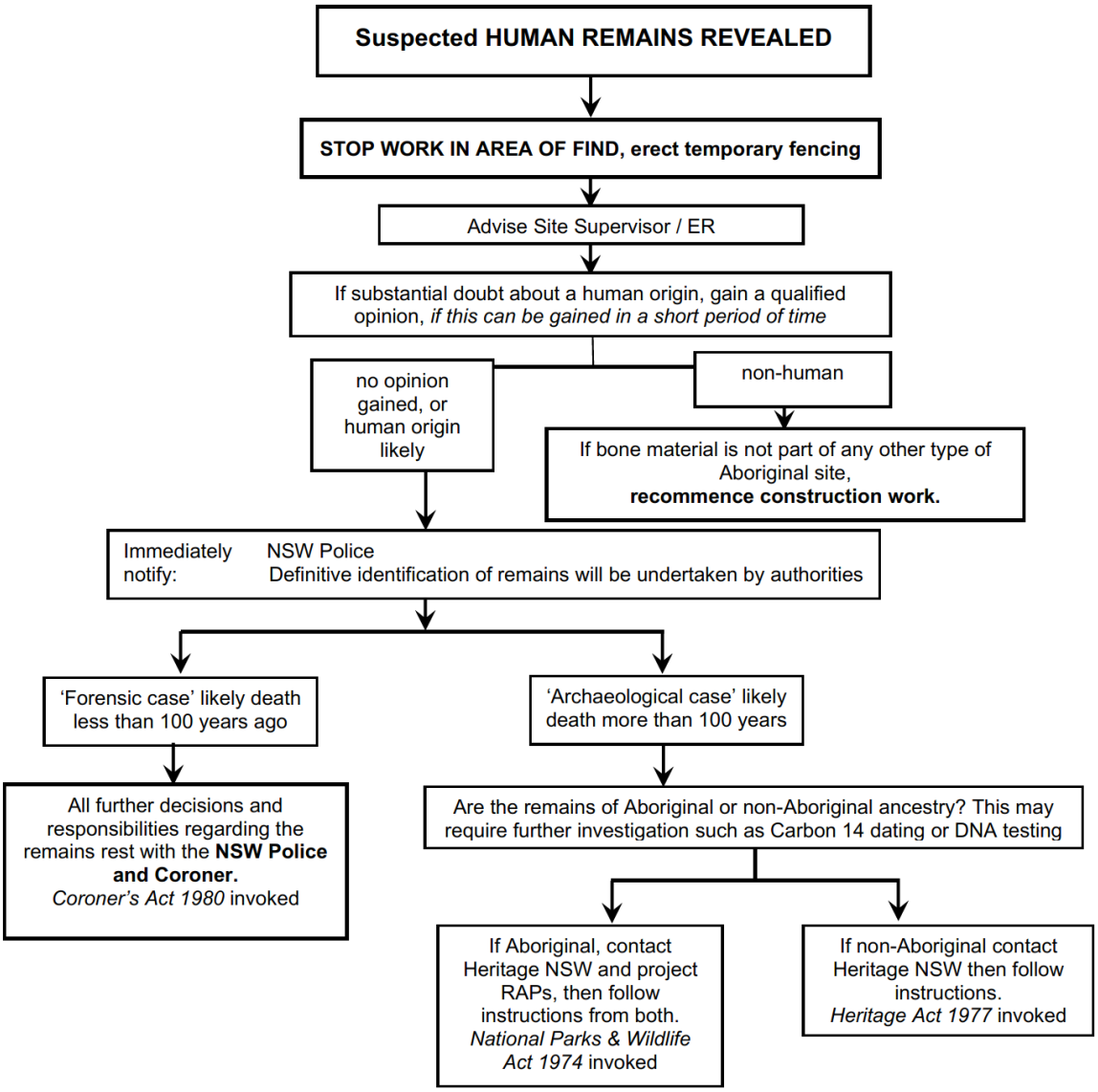
UNEXPECTED HUMAN REMAINS PROCEDURE

The procedure related to the discovery of suspected human skeletal material is based on Requirement 25 of the *Code of Practice for Archaeological Investigation of Aboriginal objects in NSW* (DECCW 2010b) and the *Skeletal Remains: Guidelines for the management of human skeletal remains under Heritage Act 1977* (NSW Heritage Office1998). A flow chart is supplied below.

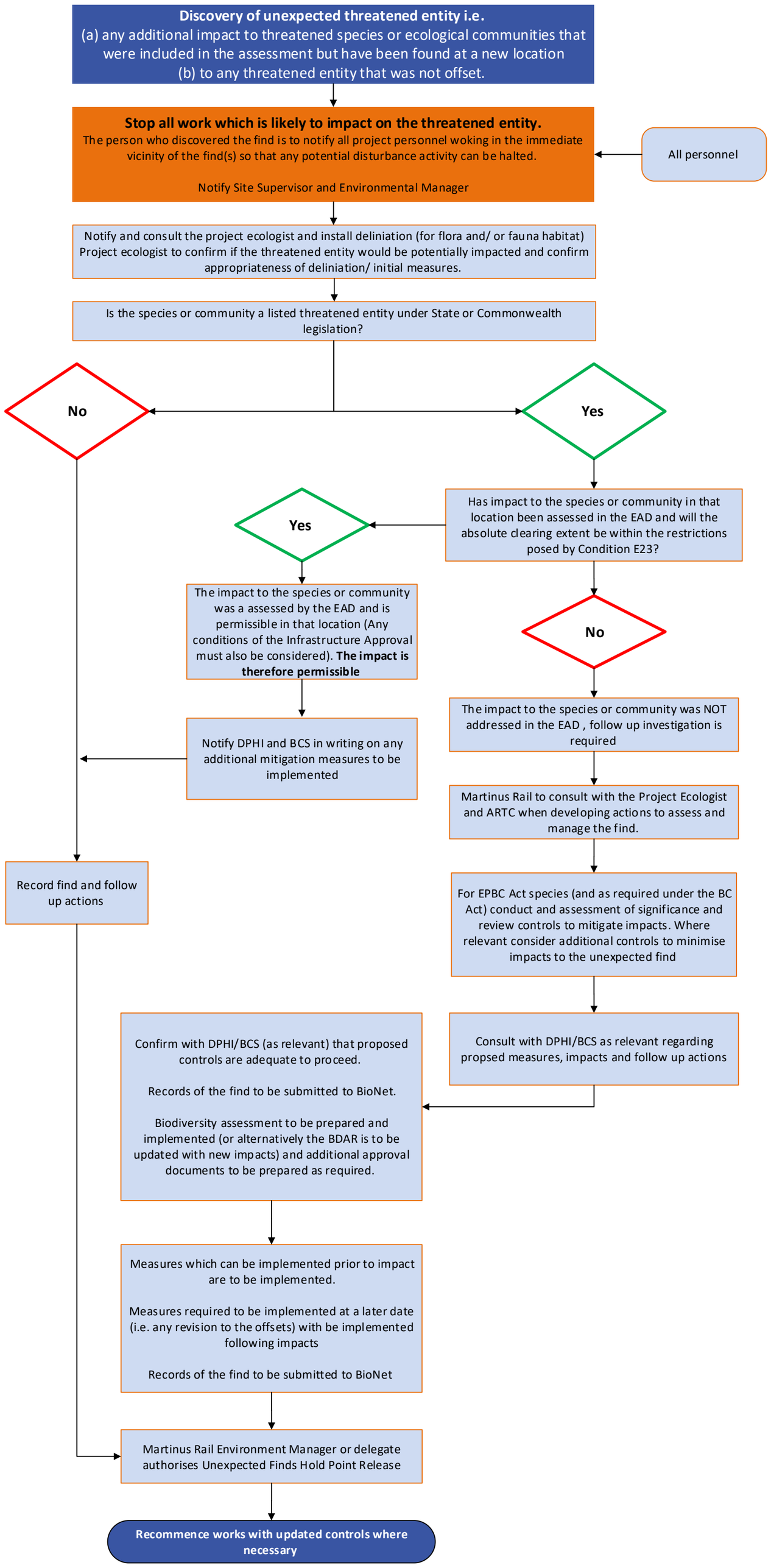
If known, or suspected skeletal remains are encountered during the construction and/or operation of the project, the following procedure will be followed:

1. The area will be temporarily fenced immediately to ensure no damage/further damage to skeletal material. No skeletal material that remains in place should be disturbed from its location;
2. Works in the vicinity are to be stopped immediately;
3. The Site Supervisor is to be made aware of the skeletal material and is to notify the MR Environmental Manager and MR Construction Manager. Inland Rail Representatives are to be contacted at this stage;
4. Attempt to determine if the bones are animal or human. May require photos of the bones to be sent to the MR Heritage Consultant to determine if the remains are likely to be human or not;
5. If a qualified opinion concludes the bones are not human in origin and are unlikely to be part of an archaeological site works may recommence;
6. If no qualified opinion can be gained or the bones are suspected of being human, undertake the following:
    i) MR will contact Police, allowing Police to conduct an assessment to determine if the remains are part of a forensic case (less than 100 years old), or are archaeological (more than 100 years old);
    ii) If the remains are assessed as ‘archaeological’, there then needs to be an attempt to determine if they are Aboriginal or non-Aboriginal;
    iii) Inland Rail will contact the relevant stakeholders, including Heritage NSW (phone 02 9873 8500) and RAPs (if the remains are Aboriginal);
    iv) All further activities will be determined by Heritage NSW and the RAPs (if the remains are Aboriginal);
    v) No work may recommence in the area of the find until Heritage NSW provides the approval to do so.

Flow Chart: Suspected Human remains



Appendix D Unexpected Finds Procedure (Flora and Fauna)


Discovery of unexpected threatened entity i.e.
(a) any additional impact to threatened species or ecological communities that were included in the assessment but have been found at a new location
(b) to any threatened entity that was not offset.
Stop all work which is likely to impact on the threatened entity.
The person who discovered the find is to notify all project personnel woking in the immediate vicinity of the find(s) so that any potential disturbance activity can be halted.
Notify Site Supervisor and Environmental Manager
All personnel
Notify and consult the project ecologist and install deliniation (for flora and/ or fauna habitat) Project ecologist to confirm if the threatened entity would be potentially impacted and confirm appropriateness of deliniation/ initial measures.
Is the species or community a listed threatened entity under State or Commonwealth legislation?
No
Yes
Has impact to the species or community in that location been assessed in the EAD and will the absolute clearing extent be within the restrictions posed by Condition E23?
Yes
The impact to the species or community was a assessed by the EAD and is permissible in that location (Any conditions of the Infrastructure Approval must also be considered). The impact is therefore permissible
Notify DPHI and BCS in writing on any additional mitigation measures to be implemented
No
The impact to the species or community was NOT addressed in the EAD , follow up investigation is required
Martinus Rail to consult with the Project Ecologist and ARTC when developing actions to assess and manage the find.
For EPBC Act species (and as required under the BC Act) conduct and assessment of significance and review controls to mitigate impacts. Where relevant consider additional controls to minimise impacts to the unexpected find
Consult with DPHI/BCS as relevant regarding propsed measures, impacts and follow up actions
Record find and follow up actions
Confirm with DPHI/BCS (as relevant) that proposed controls are adequate to proceed.
Records of the find to be submitted to BioNet.
Biodiversity assessment to be prepared and implemented (or alternatively the BDAR is to be updated with new impacts) and additional approval documents to be prepared as required.
Measures which can be implemented prior to impact are to be implemented.
Measures required to be implemented at a later date (i.e. any revision to the offsets) with be implemented following impacts
Records of the find to be submitted to BioNet
Martinus Rail Environment Manager or delegate authorises Unexpected Finds Hold Point Release
Recommence works with updated controls where necessary

Appendix E Unexpected Finds Procedure (Contamination)

UNEXPECTED FINDS PROCEDURE

MANAGEMENT AND RESPONSIBILITY

INDUCTION/ TOOLBOX TALKS
All personnel are to receive Project/ Site Inductions and on-going training via Toolbox Talks

All personnel

EVIDENCE OF CONTAMINATION OBSERVED

STOP ALL WORK IN THE AREA IMMEDIATELY AND

PREVENT FURTHER ACTIVITY IN THE AREA.

NOTIFY THE SITE SUPERVISOR AND SAFETY MANAGER , ENVIRONMENT MANAGER AND CORDON OFF AREA.

Site Supervisor
Project Manager
Lead Safety Manager
Environment Manager

- Do not touch or disturb the item/ material
- Delineate the find from the rest of the worksite
- Inform the Environment Manager regarding the potential contamination find. The following detail should be provided:
  - The location of the potential contamination
  - Visual appearance
  - Odour (if any)
  - Depth
  - Surrounding material and works being undertaken at the time of discovering the material
- WHS and EM to determine immediate actions to prevent WHS and ENV issues
- EM to notify IR of Unexpected Find

ASSESSMENT

Contamination Consultant to assess and classify the unexpected find in accordance with the NSW regulatory requirements, including sampling and laboratory analysis.

Contamination Consultant

MANAGEMENT STRATEGY

- Contamination Consultant to develop a provide a plan for managing and/or remediating the material. The strategy may involve a site auditor if required under the relevant CoAs.
- IR/ARTC to review and accept the proposed strategy

Environment Manager
Contamination Consultant
IR/ARTC

STRATEGY IMPLEMENTATION

- Implement the approved management and/or remediation as per the Contamination consultants direction
- IR/ARTC to review and accept the proposed strategy (if required)

Contamination Consultant
Site Supervisor
Environment Manager

Once the contamination find has been mitigated and clearance report received from the contamination consultant. EM is to notify Project Manager who is to approve re-commencement of works in the vicinity of the remediation site.
IR/ARTC will review clearance report and must provide approval/acceptance prior to recommencing works

Environment Manager
Project Manager
IR/ARTC

Recommence works

Asbestos

An unexpected find occurs when Asbestos Containing Material (ACM) not identified in the Asbestos Register is found on site. In the event of an unexpected find the below steps are to be followed:

1. The area is to be demarcated, works in the area to cease and workers notified
2. Notify the Site Supervisor first. Site Supervisor will then notify the Project Manager, Safety Manager and Environment Manager.
3. Notify IR/ARTC within five (5) business days after the discovery.
4. Control dust by with dust suppression
5. A certified occupational hygienist is to be engaged to provide recommendations to manage the area
6. Occupational hygienist arrange for testing of the suspected ACM and monitoring of the area (if required)
7. The area is to be made safe as per the certified

Contamination Consultant

Works undertaken in relation to Contamination to investigate, assess, remediate or validate remediation or land use suitability shall be undertaken by a suitably qualified person holding valid 'Site Contamination' certification under the Certified Environment Practitioners Scheme (CEnvP) - Environment Institute of Australia and New Zealand or Certified Professional Soil Scientist – Contaminated Site Assessment and Management under the Soil Science Australia Certification Scheme.

With relevant qualifications and experience in keeping with the National Environmental Protection (Assessment of Site Contamination) Measure 1999 Amendment 2013 (ASC NEPM 2013).

Procedure

1) Potential contaminated soil/material encountered during construction activities. STOP ALL WORK AND NOTIFY IMMEDITELY
2) Undertake a site/area contamination investigation. The Environment Manager (EM) is to assess the situation and if considered necessary, commission a suitably qualified contamination specialist to undertake a contamination investigation in the area of the find.
3) The consultation specialists in consultation with the EM will determine the appropriate management measures to be implemented. This may include leaving contamination undisturbed if it does not pose unacceptable risks to human health or the environment, capping of contamination, treatment or offsite disposal. If the material is to be disposed of offsite, ensure the waste facility is appropriately licensed. Contaminated material requiring off-site disposal is to be classified in accordance with the Waste Classification Guidelines – Part 1: Classification of Waste, NSW EPA 2014. Maintain records to demonstrate waste material was appropriately managed
4) If the material is determined to be Acid Sulfate Soil (ASS) or Potential Acid Sulfate Soil (PASS), an Acid Sulfate Soil Management Plan would be prepared and implemented in accordance with the Acid Sulfate Soil Manual (Acid Sulfate Soil Management Advisory Committee, August 1998).
5) Prior to any contamination investigation, management or remediation activities appropriate work method documentation encompassing safety and environmental risk management will be prepared for review and approval by the EM and IR
6) If required a Remedial Action Plan (RAP) will be prepared in accordance with legislative requirements
7) If material is to be treated and reused or left in situ ensure appropriate records are maintained and location of material (survey) is undertaken and provided to IR
8) Once the contamination find has been mitigated and clearance report received from the contamination consultant. This report is to be submitted to IR/ARTC for acceptance prior to recommencement of work
9) EM is to notify Project Manager who is to approve re-commencement of works in the vicinity of the remediation site.

Appendix F Biodiversity Assessment Report Memo

Steven Dando
Environmental Approvals Advisor
Martinus Rail Pty Ltd

26th March 2026

Biodiversity Memorandum: Inland Rail (Junee to Illabo)

Dear Steven,

Martinus Rail Pty Ltd (Martinus) on behalf of the Australian Rail Track Corporation (ARTC) propose to conduct vegetation removal and thinning between Junee to Illabo (J2I) to accommodate multiple activities to facilitate the construction of the Albury to Illabo (A2I) Inland Rail upgrade (the Proposed Change).

The Proposed Change is located outside of the construction boundary of the Inland Rail program (the Project) and was not assessed as a part of the Inland Rail, Albury to Illabo Revised Technical Paper 8: Biodiversity Development Assessment Report (BDAR) (WSP, 2024).

1.1 Scope of Assessment

East Coast Ecology Pty Ltd (ECE) was commissioned by ARTC c/- Martinus to prepare a Biodiversity Memo, for the Proposed Change. The scope of this assessment was to identify and assess impacts to species and ecological communities listed as threatened under the Biodiversity Conservation Act 2016 (NSW) (BC Act), Fisheries Management Act 1994 (FM Act) and Matters of National Environmental Significance (MNES) listed under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and where relevant, the requirements of the Biosecurity Act 2015 (NSW), and relevant State Environmental Planning Policies (SEPPs).

The area assessed in this memo has been defined by representatives of Martinus, this memo has been prepared to accompany a Consistency Assessment (CA) in relation to the Proposed Change and is hereafter referred to as the Subject Land.

1.2 The Subject Land

The Subject Land is a series of scattered sites covering an area of approximately 12.78ha from the town of Junee to approximately 2.7km east of the town Illabo. The Subject Land is depicted in **Figure 1** - **Figure 13**.

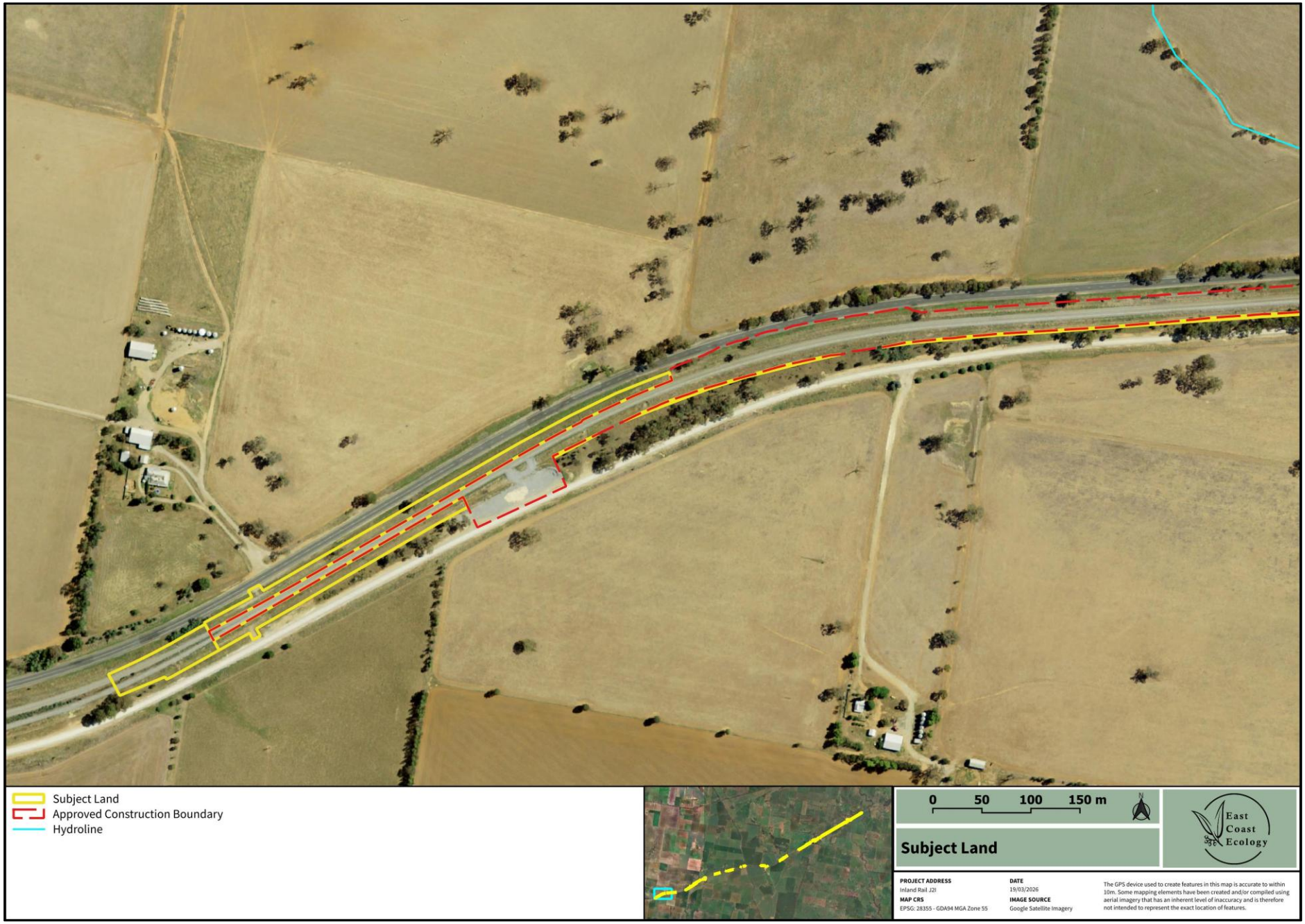


Figure 1. Location of the Subject Land (Map 1 of 13).

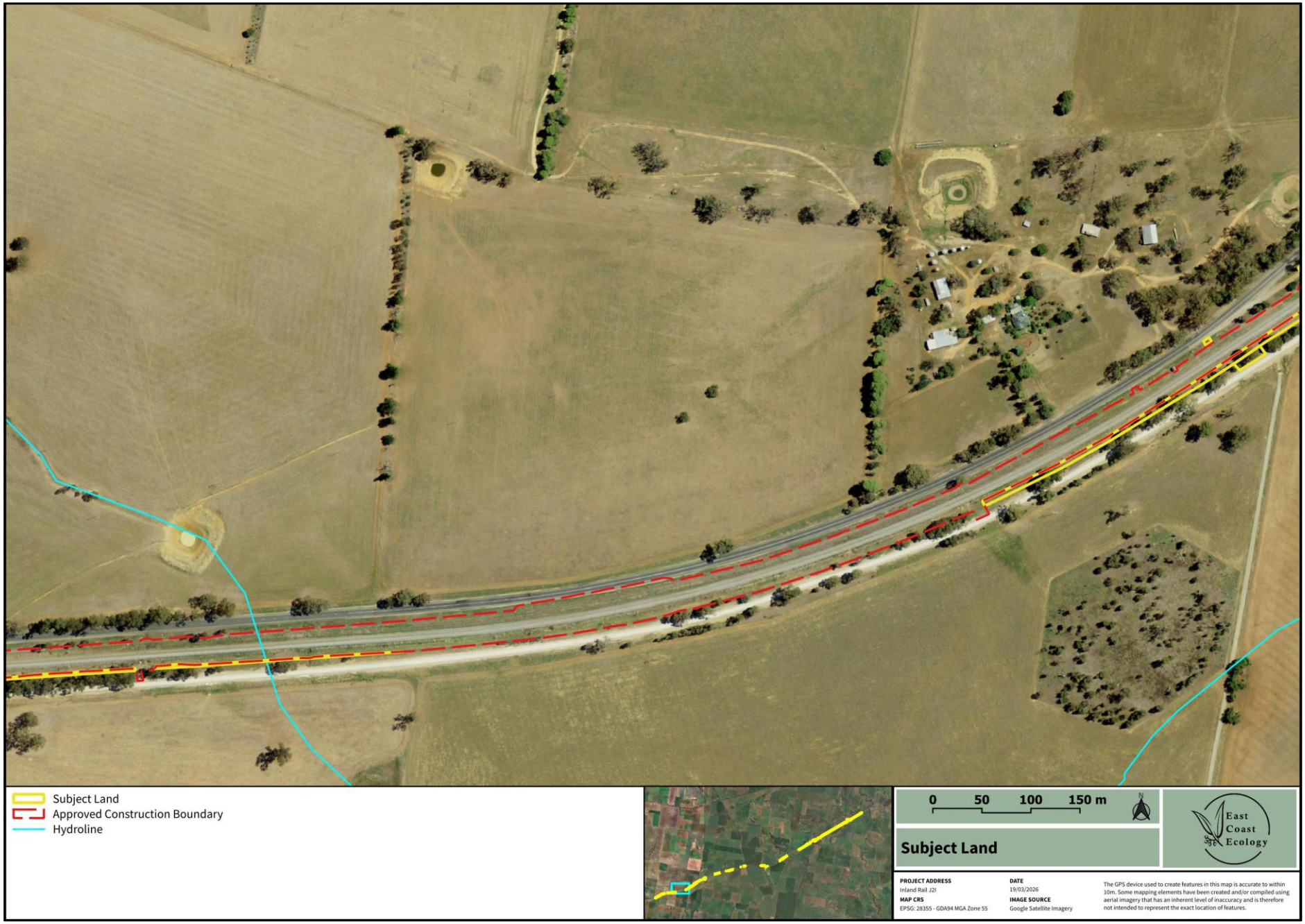


Figure 2. Location of the Subject Land (Map 2 of 13).

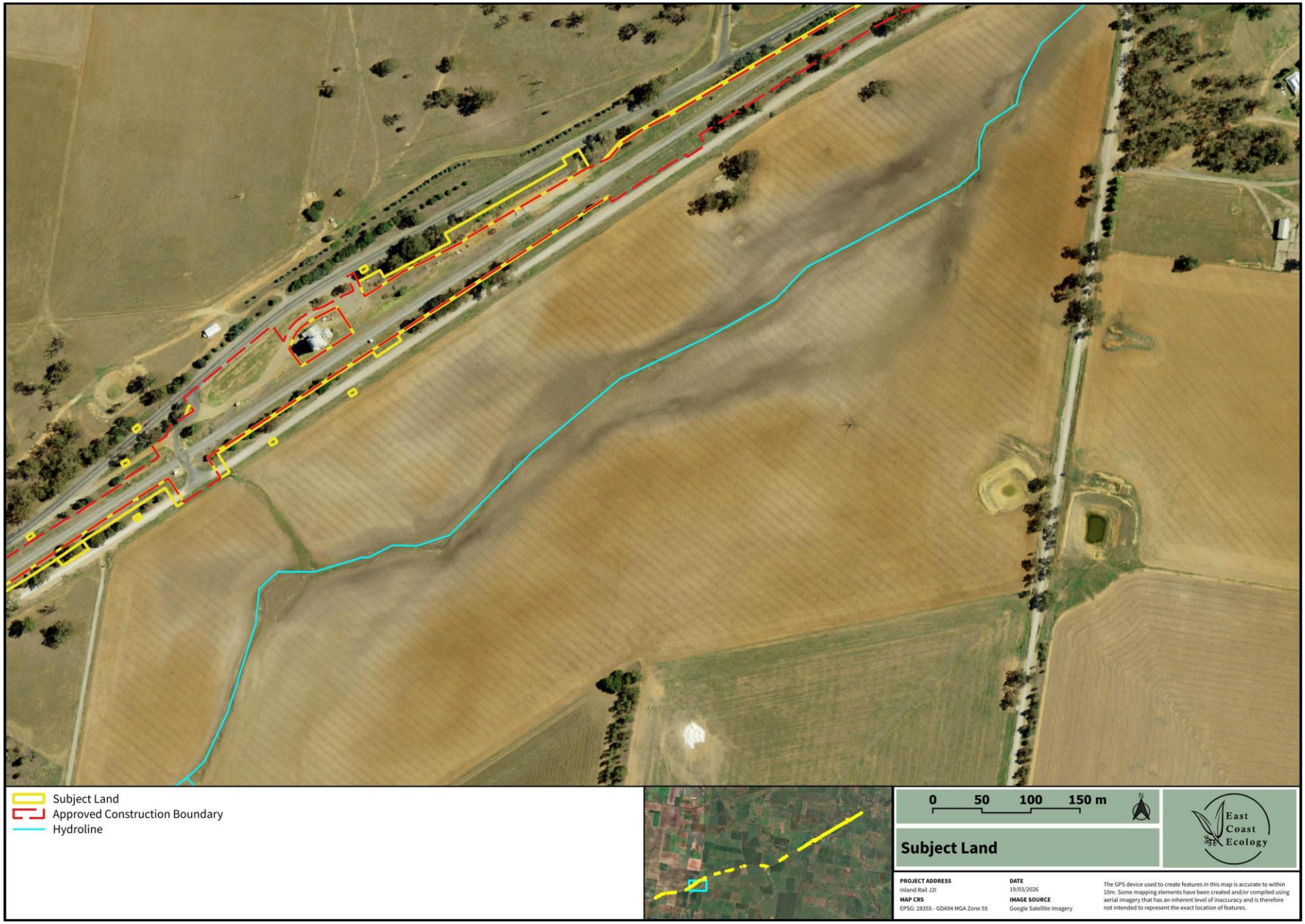


Figure 3. Location of the Subject Land (Map 3 of 13).

Figure 4. Location of the Subject Land (Map 4 of 13).

Figure 5. Location of the Subject Land (Map 5 of 13).

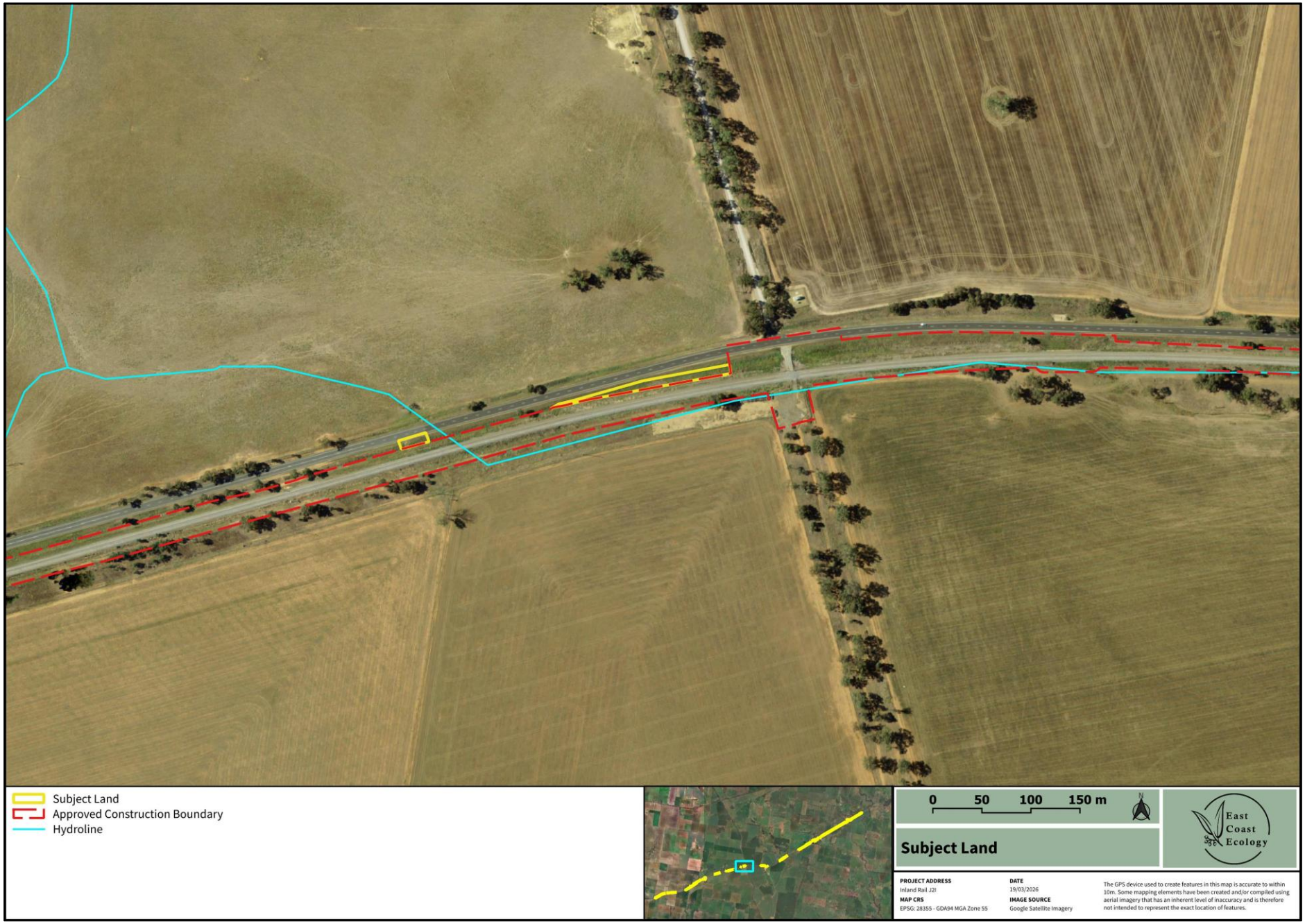


Figure 6. Location of the Subject Land (Map 6 of 13).

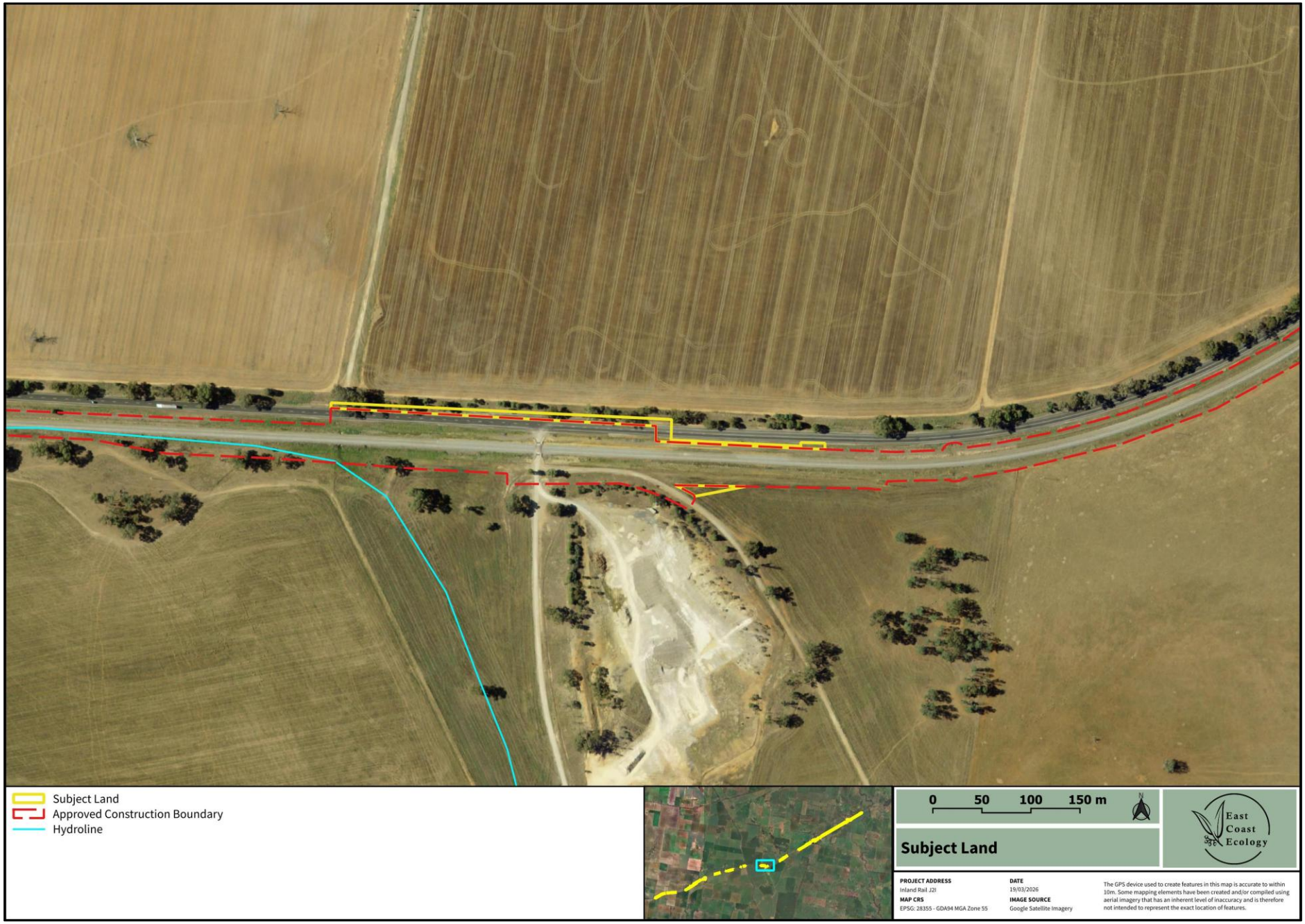


Figure 7. Location of the Subject Land (Map 7 of 13).

Figure 8. Location of the Subject Land (Map 8 of 13).

Figure 9. Location of the Subject Land (Map 9 of 13).

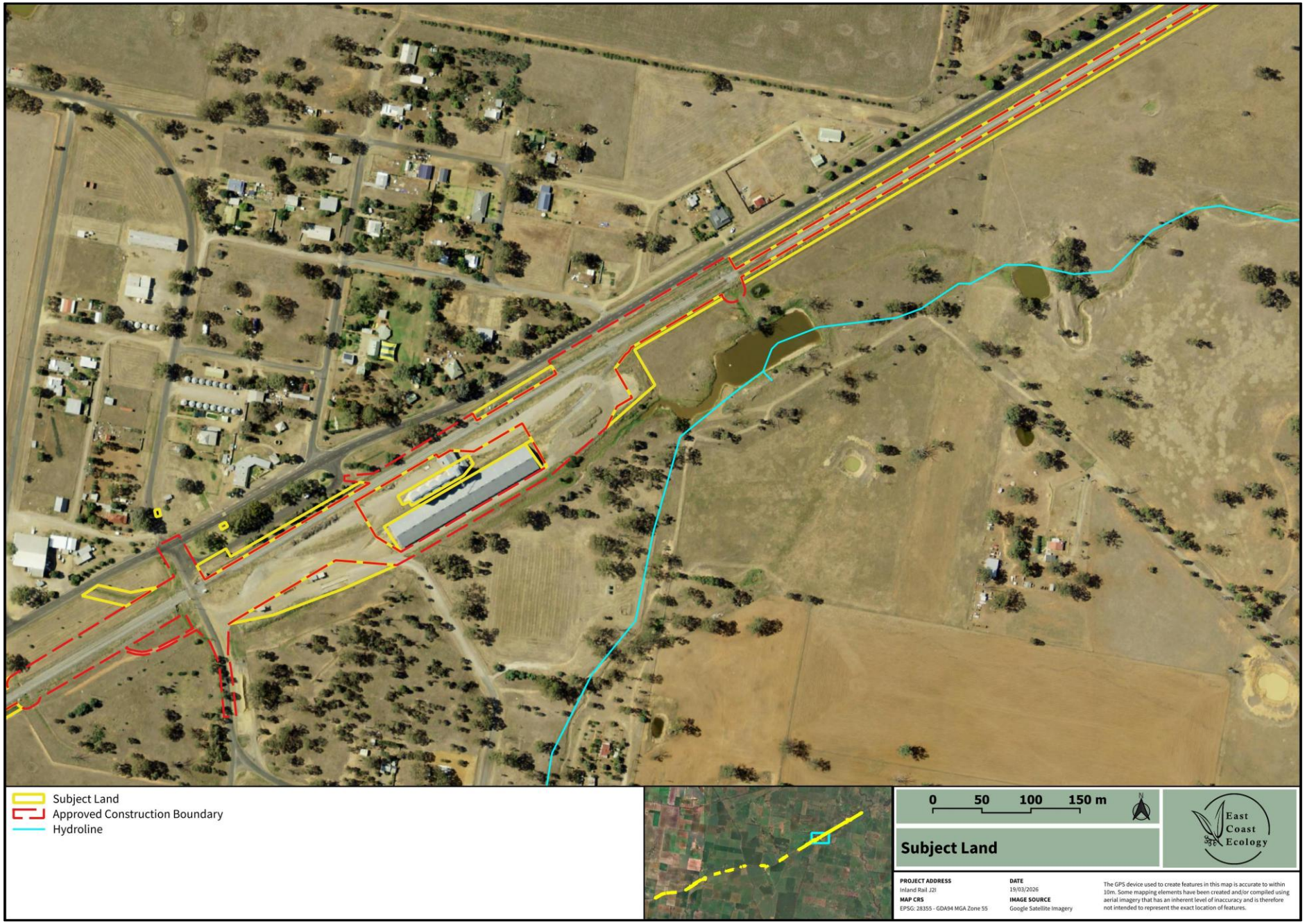


Figure 10. Location of the Subject Land (Map 10 of 13).

Figure 11. Location of the Subject Land (Map 11 of 13).

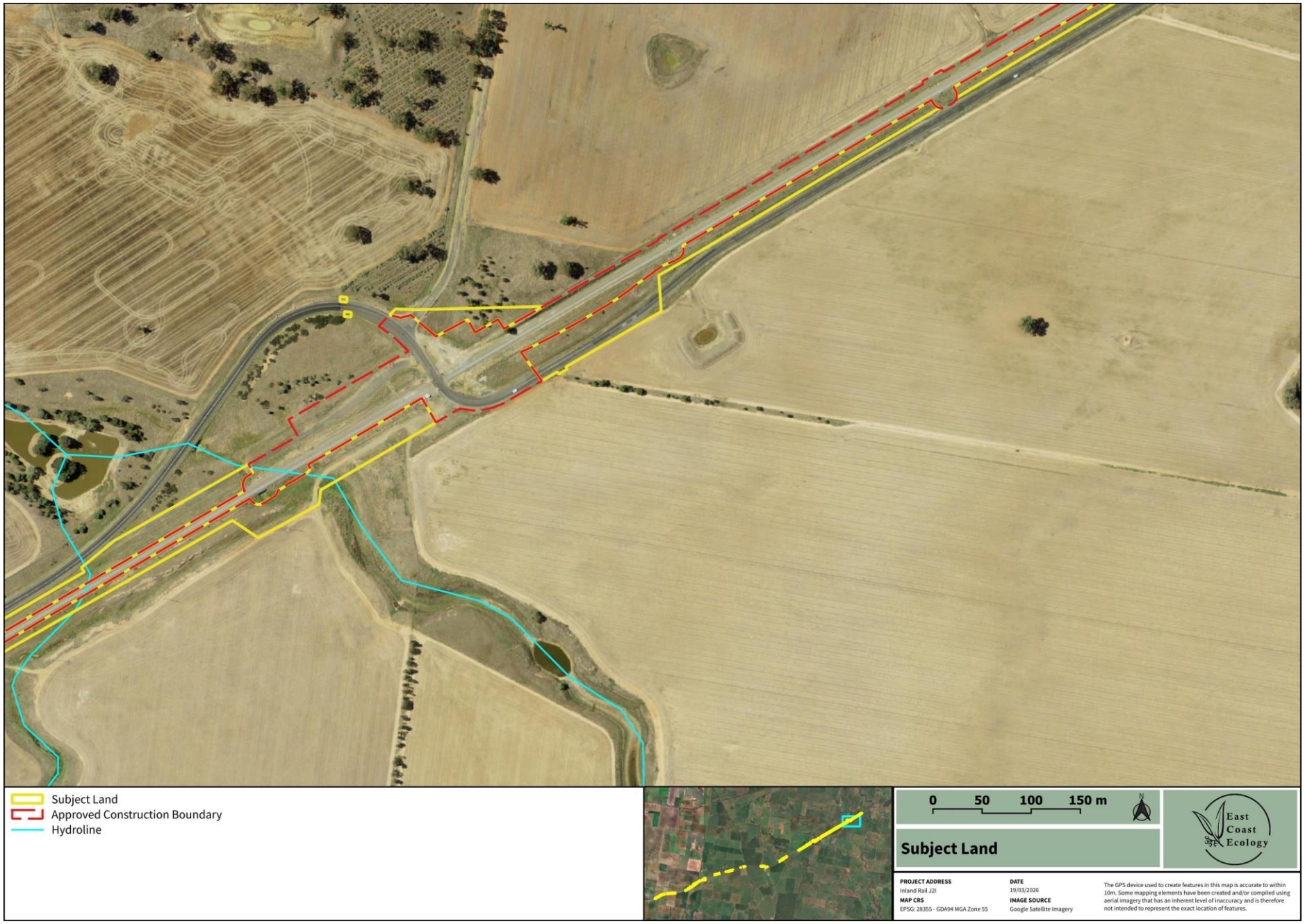


Figure 12. Location of the Subject Land (Map 12 of 13).

Figure 13. Location of the Subject Land (Map 13 of 13).

2. METHODS

A thorough literature review of local information relevant to the Subject Land was undertaken. Searches using NSW Wildlife Atlas (BioNet) (NSW DCCEEW, 2025a), the Commonwealth Protected Matters Search Tool (PMST) (DCCEEW, 2025) and the Fisheries Spatial Data Portal (DPI, 2025) were conducted to identify all current threatened flora and fauna, as well as migratory fauna records, within a 5km radius of the Subject Land. A literature review was also undertaken of all relevant project documentation, including;

- Biodiversity Development Assessment Report (WSP, 2024), and
- Environmental Impact Statement (ARTC, 2022).

This assessment provides the results of the assessment of the sites that were determined to not contain PCT's vegetation or other ecological constraints.

2.1 Native Vegetation

A review of the State Vegetation Type Map (NSW DCCEEW, 2025b) was used to assist in the identification of Plant Community Types (PCTs) within and surrounding the Subject Land. The PCT of 'best-fit' was determined based on the floristic descriptions within the BioNet Vegetation Classification System database (NSW DCCEEW, 2025c).

2.2 Threatened Flora Survey Methods

Threatened flora that are known or likely to occur within the Subject Land and immediate surrounds (i.e. within 5km) were identified following a review of BioNet and the PMST. Soil mapping (NSW DCCEEW, 2025d) and topography (Google Earth) were also used to provide further context on habitat constraints for threatened flora.

Targeted surveys were undertaken by Ecologist, Chris Keogh on the 6th and 7th of January 2025 and the 2nd and 21st of March 2025, using parallel field traverses in accordance with the 'Surveying threatened plants and their habitats - NSW survey guide for the Biodiversity Assessment Method' (DPIE, 2020). All vegetated areas within the Subject Land were surveyed.

2.3 Threatened Fauna Survey Methods

Threatened fauna were recorded opportunistically however, their habitats (e.g. waterbodies, rocky areas, tree hollows), were targeted during the parallel field traverses. Potential habitat constraints within the broader area (500m buffer) were assessed using Google Earth, soil landscape mapping (NSW DCCEEW, 2025d) and recent vegetation mapping (NSW DCCEEW, 2025b).

3. EXISTING ENVIRONMENT

3.1 Rivers, streams, estuaries and wetlands

One 3rd order stream and several 1st order streams were found within the Subject Land. The watercourses were primarily man-made drainage depressions and culverts.

3.2 Habitat Connectivity

Minimal terrestrial habitat connectivity exists between the Subject Land and the broader landscape due to historical clearing and existing infrastructure (e.g. roads, railway and built areas) (**Figure 14**).

The Subject Land may provide mobile species with minor refuge while moving throughout the landscape, however due to the degraded condition of the vegetation, it is not considered likely that threatened species would be reliant on this area as a part of their life cycle.

3.3 Karst, Caves, Crevices, Cliffs, Rocks or Other of Geological Features of Significance

The Subject Land did not contain any areas of geological significance, such as karsts, caves, cliffs or crevices. The Subject Land was not mapped as occurring on acid sulfate soils nor mapped as having risk/ probability of exhibiting occurrence of acid sulfate soils.

3.4 Areas of Outstanding Biodiversity Value

No Areas of Outstanding Biodiversity Value occur on the Subject Land or the surrounding area.

3.5 Topography, Geology and Soils

The Subject Land occurs on gently inclined terrain, with various elevations ranging from 261m above sea level (asl) at Illabo to 357 asl north-east of Junee (Google Earth). The Subject Land is mapped as occurring on the following soil landscapes:

- Currajong
  - characterised by gentle to undulating footslopes and colluvial plains formed on Quaternary colluvium derived from Silurian granites. Soils are well-drained Haplic Mesotrophic Red Kandosols (Red Earths) and Mottled Calcic Red and Brown Chromosols (Red-brown Earths) on upper, mid and lower slopes.
- Eurongilly
  - characterised by gentle to undulating rises and footslopes formed on Quaternary colluvium. Soils are well-drained Haplic Eutrophic Red Chromosols (Non-calcic Brown Soils; Red-brown Earths) on mid to upper slopes.
- Malebo
  - characterised by undulating to rolling low hills formed on Silurian granites. Soils are well-drained Paralithic Leptic Rudosols (Lithosols and Earthy Sands) on upper slopes and crests (underlain by weathering granite substrate with extensive rock outcrop).

- Mimosa
  - characterised by gently undulating footslopes and plains formed on recent Quaternary colluvium underlain by Ordovician metasediments. Soils are moderately well-drained Haplic Mesotrophic Red Dermosols (Brown Podzolic Soils) on mid to upper slopes.
- Mount View
  - characterised by undulating low hills and rises formed on Ordovician sedimentary rocks. Soils are well-drained Paralithic Leptic Rudosols (Lithosols) on some upper slopes and crests.
- Stoney Hill
  - characterised by undulating low hills and rises formed on Silurian sedimentary rocks. Soils are variable and complex. Shallow (<50 cm), well-drained gravelly Paralithic Leptic Rudosols (Lithosols) on mid to upper slopes and crests.

3.6 Mapped Native Vegetation Communities – NSW State Vegetation Type Map

The NSW State Vegetation Type Map (NSW DCCEEW, 2025b) indicated the presence of the following PCTs within or adjoining, the Subject Land (**Figure 14**):

- PCT 76: Western Grey Box tall grassy woodland on alluvial loam and clay soils in the NSW South Western Slopes and Riverina Bioregions,
- PCT 276: Yellow Box grassy tall woodland on alluvium or parna loams and clays on flats in NSW South Western Slopes Bioregion,
- PCT 277: Blakely's Red Gum - Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion, and
- PCT 0: Not Classified.

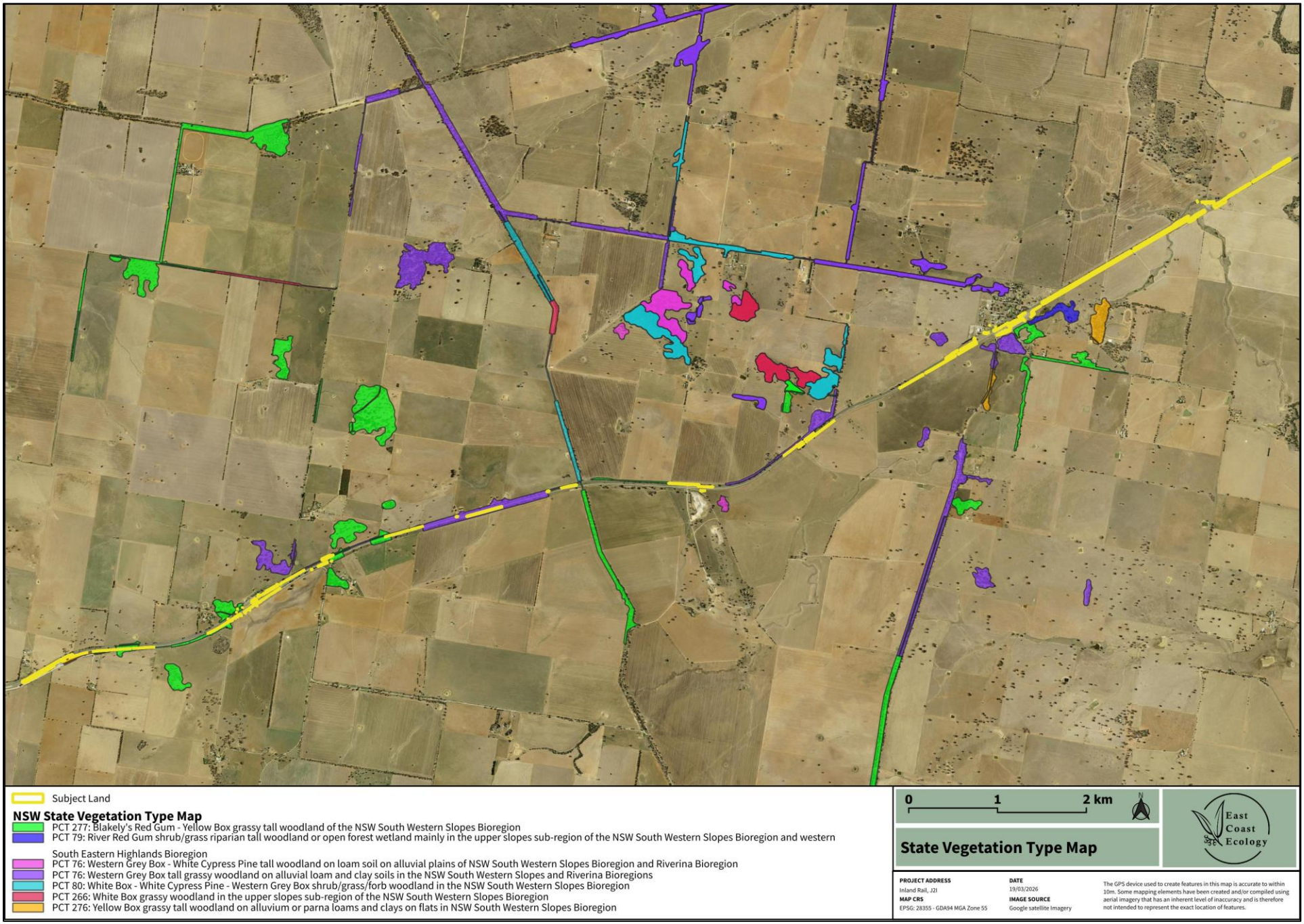


Figure 14. State Vegetation Type Map.

4. RESULTS

4.1 Vegetation Communities

Field surveys revealed the following vegetation community types described by WSP (2024):

- Miscellaneous Ecosystems – 'Ornamental Plantings',
- Miscellaneous Ecosystems – 'Highly Disturbed areas with no or limited Native Vegetation', and
- Poor Condition - PCT 277: Blakely's Red Gum - Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion.

These vegetation community types are consistent with vegetation types described in the approved BDAR.

Table 1. Vegetation communities identified within the Subject Land.

Community Name	Area within the Subject Land (ha)
Miscellaneous Ecosystems – Ornamental Plantings	0.09ha
Miscellaneous Ecosystems – Highly Disturbed areas with no or limited Native Vegetation	11.32ha
Poor Condition - PCT 277: Blakely's Red Gum - Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion	0.94ha
Total Area	**12.35ha**

Descriptions of the vegetation types are provided in **Table 2**, **Table 3** and **Table 4**.

Table 2. Miscellaneous Ecosystems - Ornamental plantings vegetation identified within the Subject Land.

Miscellaneous Ecosystems – Ornamental Plantings	
Novel Vegetation Type	**Miscellaneous Ecosystems – Ornamental Plantings**
Extent	0.09ha
Description of vegetation	The Subject Land displayed historical and ongoing residential and community use, much of the vegetation was comprised of exotic groundcover species, manicured grasses, ornamental native and exotic species planted for aesthetic purposes and was therefore determined to have limited ecological function (WSP, 2024). The vegetation within the Subject Land was comprised of exotic and non-endemic native ornamental plantings. Vegetation was mostly planted in the street verge or nature strip and consisted of *Brachychiton populneus, Corymbia citriodora,* and several Eucalypt species.

Table 3. Miscellaneous Ecosystems - Highly Disturbed areas with no or limited Native Vegetation, vegetation identified within the Subject Land.

Miscellaneous Ecosystems - Highly Disturbed areas with no or limited Native Vegetation	
Novel Vegetation Type	**Miscellaneous Ecosystems - Highly Disturbed areas with no or limited Native Vegetation**
Extent	11.32ha
Description of vegetation	The Subject Land displayed a long history of disturbance from infrastructure (rail and road) and industrial use, the Subject Land is comprised of no or limited native species and is dominated by exotic species, and provides limited ecological function (WSP, 2024). The vegetation within the Subject Land was comprised of exotic ground cover species such as *Hypericum perforatum, Rumex* sp., *Verbascum virgatum, Sorghum halepense*, *Cirsium vulgare*, *Erigeron bonariensis*, *Avena fatua*, *Paspalum dilatatum, Chondrilla juncea.* Occasional native grasses were present in low abundance, e.g. *Dichanthium sericeum.*

Table 4. Poor Condition - PCT 277: Blakely's Red Gum - Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion.

Poor Condition - PCT 277: Blakely's Red Gum - Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion	
Vegetation Type	**Poor Condition - PCT 277: Blakely's Red Gum - Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion**
Extent	0.94ha
Description of vegetation	Vegetation within this zone was comprised of exotic ground cover species such as *Sorghum halepense*, *Verbascum thapsus*, *Chondrilla juncea, Avena fatua, Solanum nigrum* and native *Themeda triandra* and *Lomandra longifolia.* Trees included scattered *Eucalyptus blakelyi, Eucalyptus melliodora, Melia azedarach* and *Acacia deanei.* The ground vegetation was generally in poor condition and native trees were regenerative growth.
Threatened Species Associations	▪ *Petaurus norfolcensis* (Squirrel Glider) ▪ *Polytelis swainsonii* (Superb Parrot)

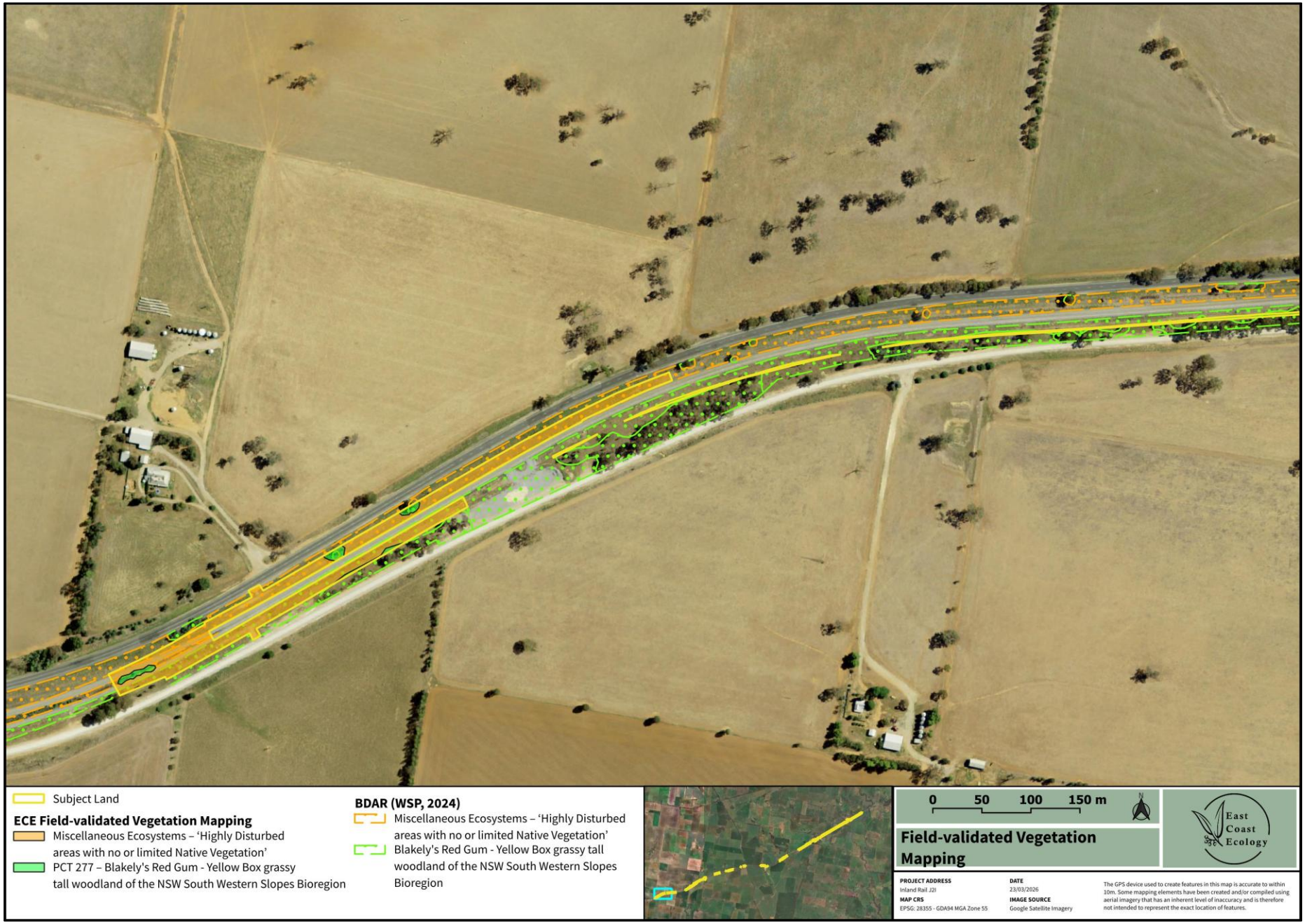


Figure 15. Field-validated Vegetation (Map 1 of 13).

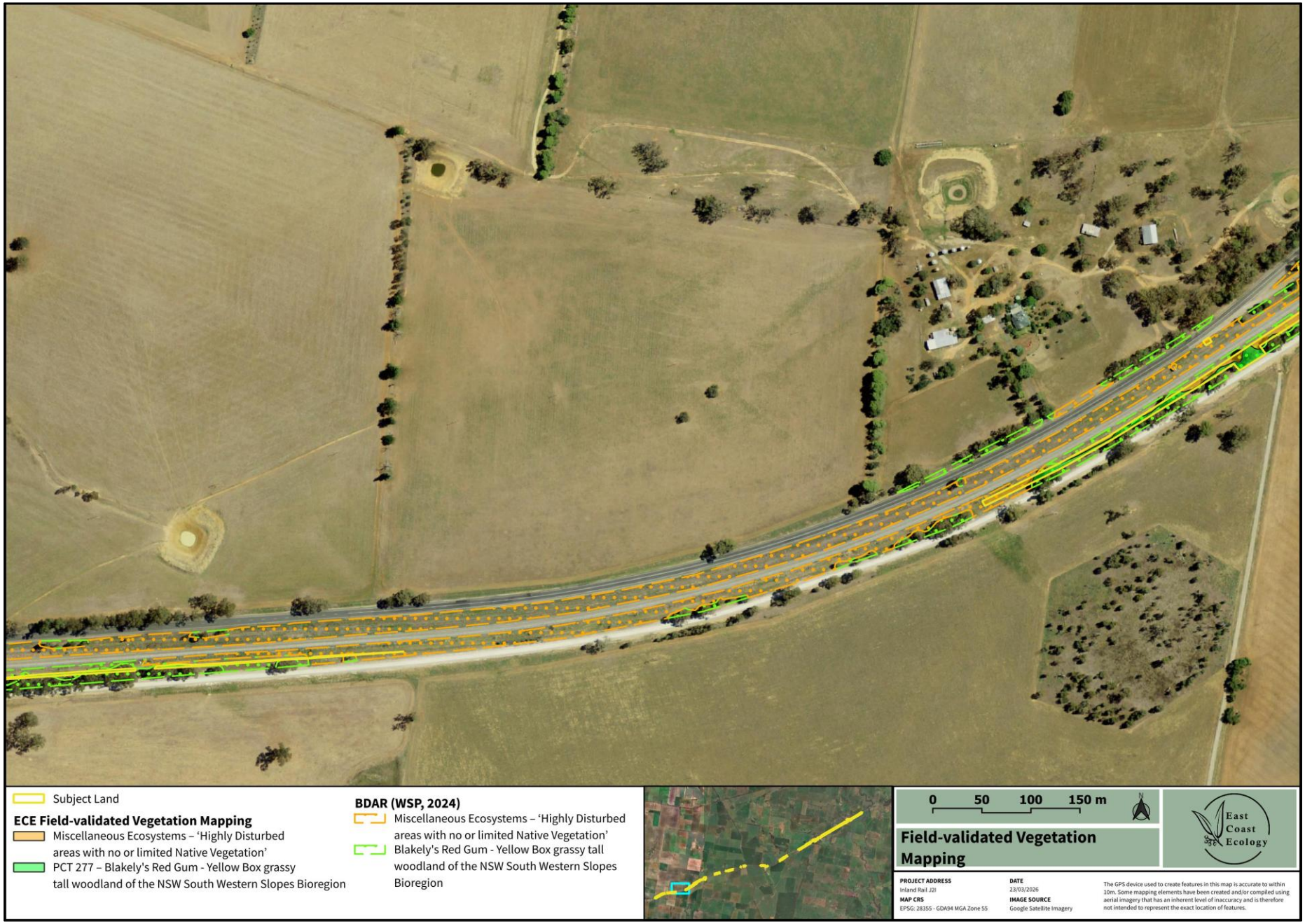


Figure 16. Field-validated Vegetation (Map 2 of 13).

Figure 17. Field-validated Vegetation (Map 3 of 13).

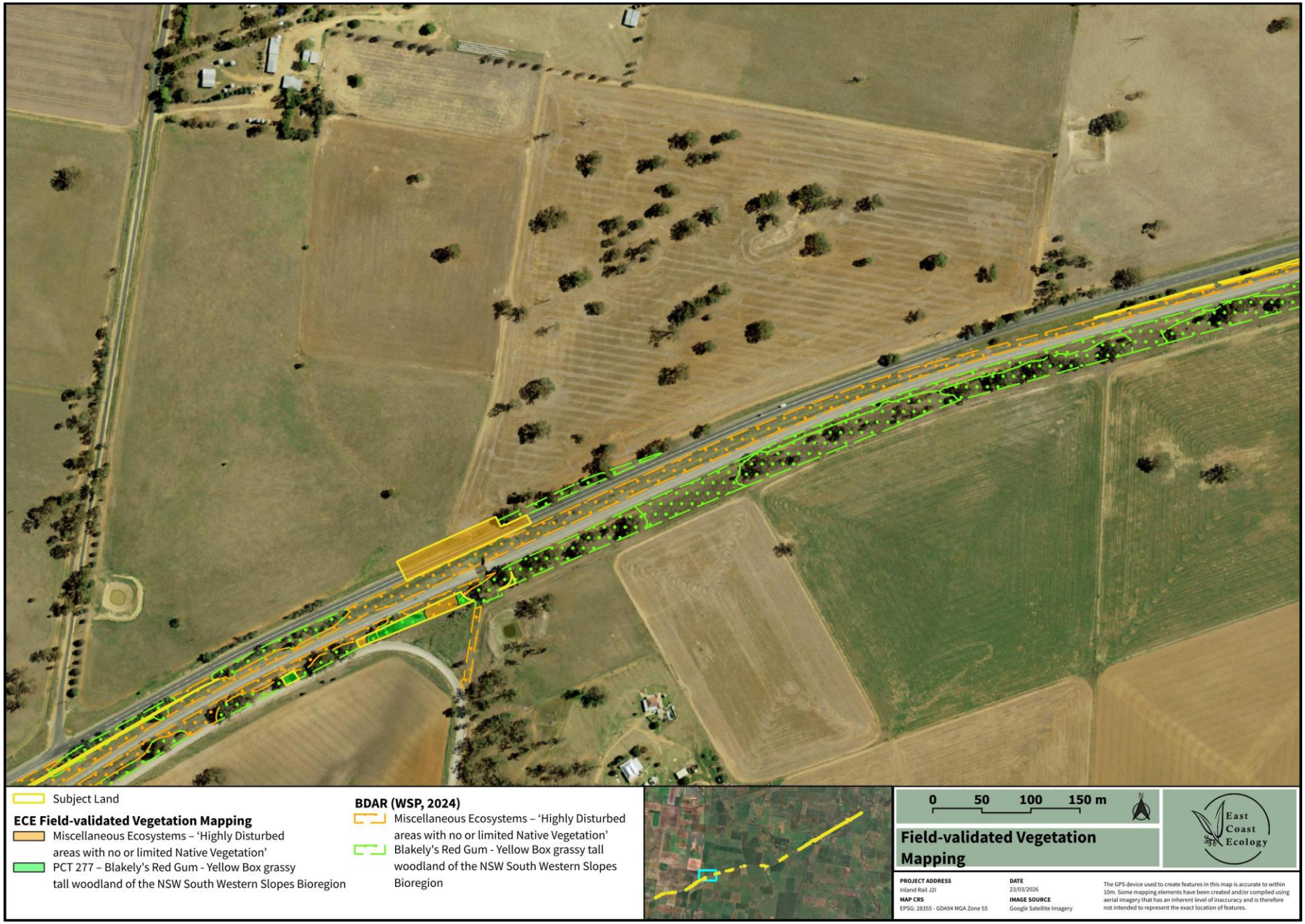


Figure 18. Field-validated Vegetation (Map 4 of 13).

Figure 19. Field-validated Vegetation (Map 5 of 13).

Figure 20. Field-validated Vegetation (Map 6 of 13).

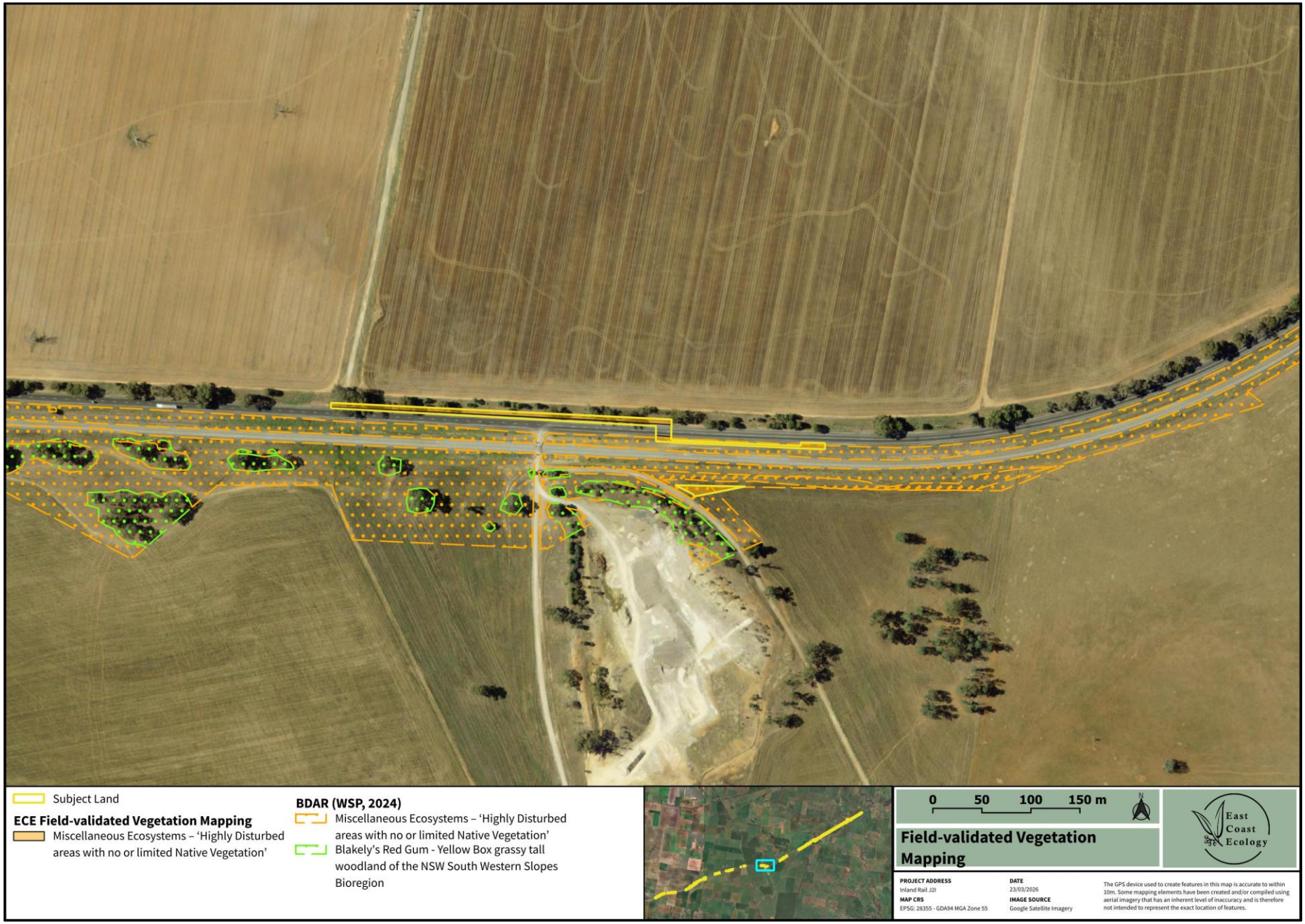


Figure 21. Field-validated Vegetation (Map 7 of 13).

Figure 22. Field-validated Vegetation (Map 8 of 13).

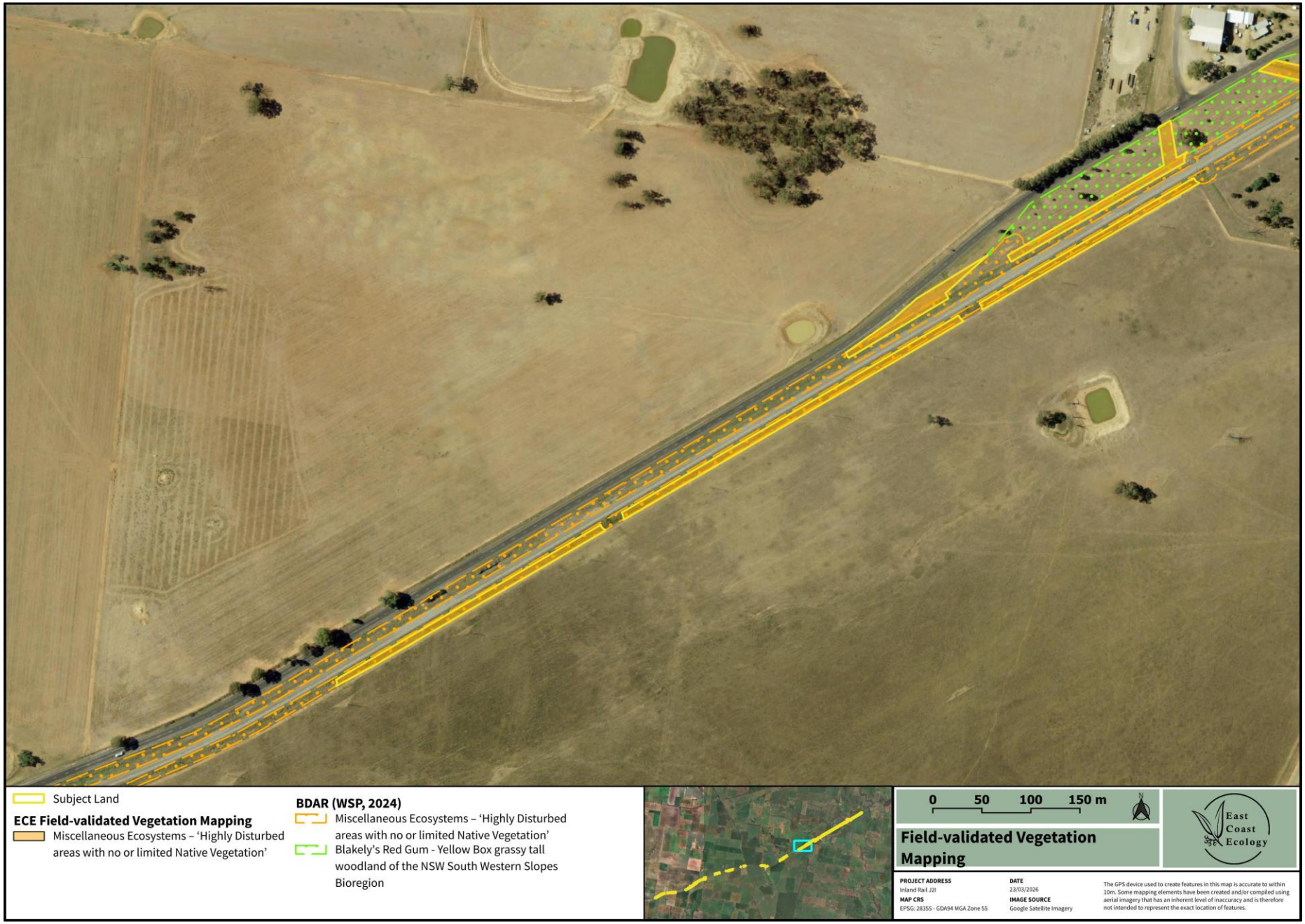


Figure 23. Field-validated Vegetation (Map 9 of 13).

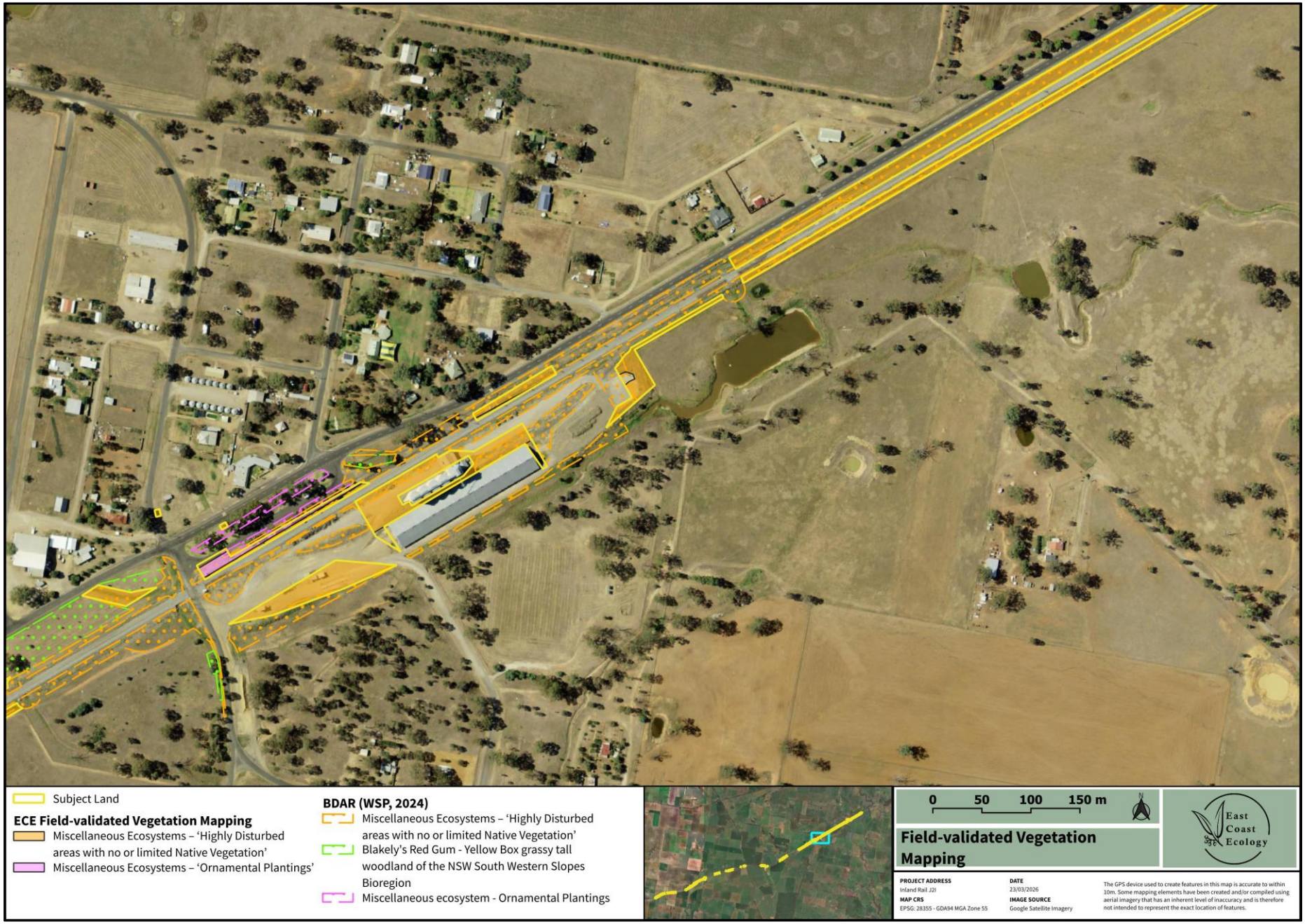


Figure 24. Field-validated Vegetation (Map 10 of 13).

Figure 25. Field-validated Vegetation (Map 11 of 13).

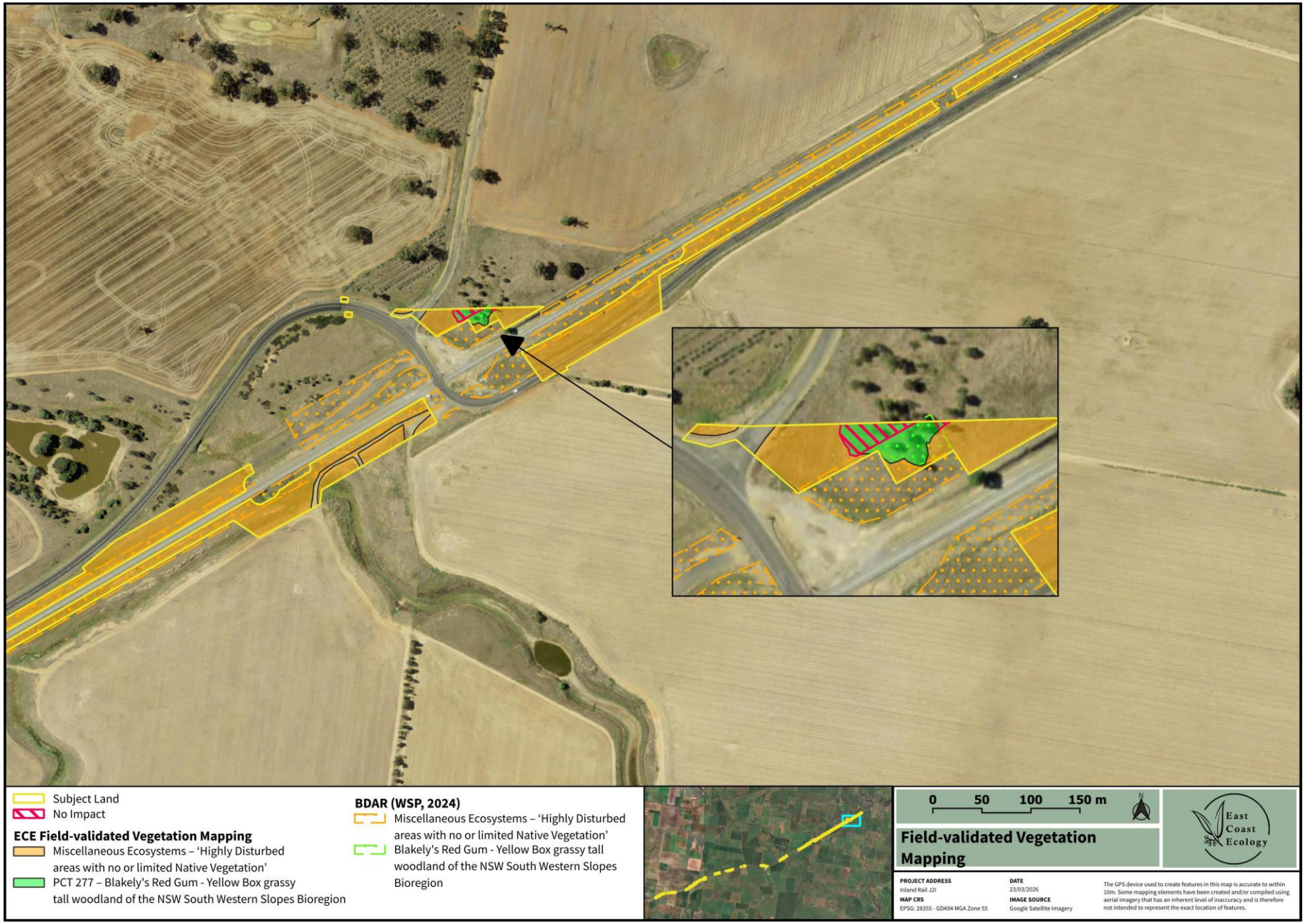


Figure 26. Field-validated Vegetation (Map 12 of 13).

Figure 27. Field-validated Vegetation (Map 13 of 13).

4.2 Threatened Flora

BioNet and PMST searches revealed seven threatened flora species occur, or have potential to occur, within a ~5km radius of the Subject Land.

Table 5. Threatened flora with potential to occur within the Subject Land.

Scientific Name	Common Name	BC Act	EPBC Act	Records within 5km
Austrostipa wakoolica	Wakool Spear-grass	E	E	Modelled Only
Caladenia arenaria	Sand-hill Spider-orchid	E	E	Modelled Only
Caladenia concolor	Crimson Spider-orchid	E	V	Modelled Only
Lepidium aschersonii	Spiny Peppercress	V	V	Modelled Only
Prasophyllum petilum	Tarengo Leek Orchid	E	E	Modelled Only
Swainsona murrayana	Slender Darling-pea	V	V	Modelled Only
Vincetoxicum forsteri	-	V	E	Modelled Only

V – Vulnerable; E – Endangered; EP – Endangered Population; CE – Critically Endangered

The results from the site assessment, including targeted flora surveys and habitat assessment, were used to assess each species' likelihood of occurrence within the Subject Land. After carrying out the assessment, the assessor determined that the habitat is substantially degraded such that all potential threatened flora species are unlikely to occur within the Subject Land.

4.3 Threatened Fauna

BioNet and PMST searches revealed 14 threatened fauna occur, or have potential to occur, within a ~5km radius of the Subject Land.

Table 6. Threatened fauna with potential to occur within the Subject Land.

Scientific Name	Common Name	BC Act	EPBC Act	Records within 5km
Anthochaera phrygia	Regent Honeyeater	E	CE	Modelled Only
Aphelocephala leucopsis	Southern Whiteface	V	V	Modelled Only
Botaurus poiciloptilus	Australasian Bittern	E	E	Modelled Only
Circus assimilis	Spotted Harrier	V	-	1
Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	V	V	1
Hieraaetus morphnoides	Little Eagle	V	-	5
Lathamus discolor	Swift Parrot	E	CE	1
Neophema pulchella	Turquoise Parrot	V	-	1
Petroica boodang	Scarlet Robin	V	-	1

Scientific Name	Common Name	BC Act	EPBC Act	Records within 5km
Petroica phoenicea	Flame Robin	V	-	1
Polytelis swainsonii	Superb Parrot	V	V	13
Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	V	-	2
Pteropus poliocephalus	Grey-headed Flying-fox	V	V	1
Stagonopleura guttata	Diamond Firetail	V	V	1

V – Vulnerable; E – Endangered; EP – Endangered Population; CE – Critically Endangered

The degraded vegetation within the Subject Land would only provide low-quality foraging habitat for threatened species. There was no breeding habitat identified (in the form of hollow-bearing trees, rocky outcrops/ caves, waterbodies, large trees or human-made structures). Due to the absence of suitable habitat constraints and/ or the degraded nature of potential habitat and historical clearing, it was determined that the habitat is substantially degraded such that potential threatened fauna are unlikely to utilise the Subject Land.

4.4 Threatened Species Polygons

The following species polygons (**Figure 28** - **Figure 40**) (WSP, 2024) were mapped as occurring within the Subject Land:

- 0.94ha of *Petaurus norfolcensis* (Squirrel Glider) habitat
- 0.94ha of *Polytelis swainsonii* (Superb Parrot) habitat, and
- 0.03ha of *Crinia sloanei* (Sloane's Froglet) habitat.

Please Note: Whole species polygons were not available for *Petaurus norfolcensis* (Squirrel Glider) and *Polytelis swainsonii* (Superb Parrot). As a result, WSP's 2024 vegetation mapping was used as a surrogate to define species extents. Both species are known to be directly associated with PCT 277 (in poor and moderate condition), and their mapped extents align with this vegetation community.

4.5 Migratory Species

Database searches revealed seven migratory terrestrial species, or their habitat, are known to occur within the Subject Land (**Table 7**). These species are unlikely to occur due to the lack of suitable habitat in the Subject Land (i.e. ornamental tree dominated) and these species do not breed in Australia.

Table 7. Migratory terrestrial species with potential to occur in the Subject Land.

Species	EPBC Act Status
Actitis hypoleucos (Common Sandpiper)	Migratory, CAMBA, JAMBA, ROKAMBA
Calidris acuminata (Sharp-tailed Sandpiper)	Migratory, CAMBA, JAMBA, ROKAMBA
Calidris ferruginea (Curlew Sandpiper)	Critically Endangered, Migratory, CAMBA, JAMBA, ROKAMBA
Calidris melanotos (Pectoral Sandpiper)	Migratory, JAMBA, ROKAMBA
Gallinago hardwickii (Latham's Snipe)	Vulnerable, Migratory, JAMBA, ROKAMBA

Species	EPBC Act Status
Hirundapus caudacutus (White-throated Needletail)	Vulnerable, Migratory, CAMBA, JAMBA, ROKAMBA
Motacilla flava (Yellow Wagtail)	Migratory, CAMBA, JAMBA, ROKAMBA

CAMBA = China-Australia Migratory Bird Agreement, JAMBA = Japan-Australia Migratory Bird Agreement, ROKAMBA = Republic of Korea-Australia Migratory Bird Agreement and Bonn = Convention on the Conservation of Migratory Species of Wild Animals

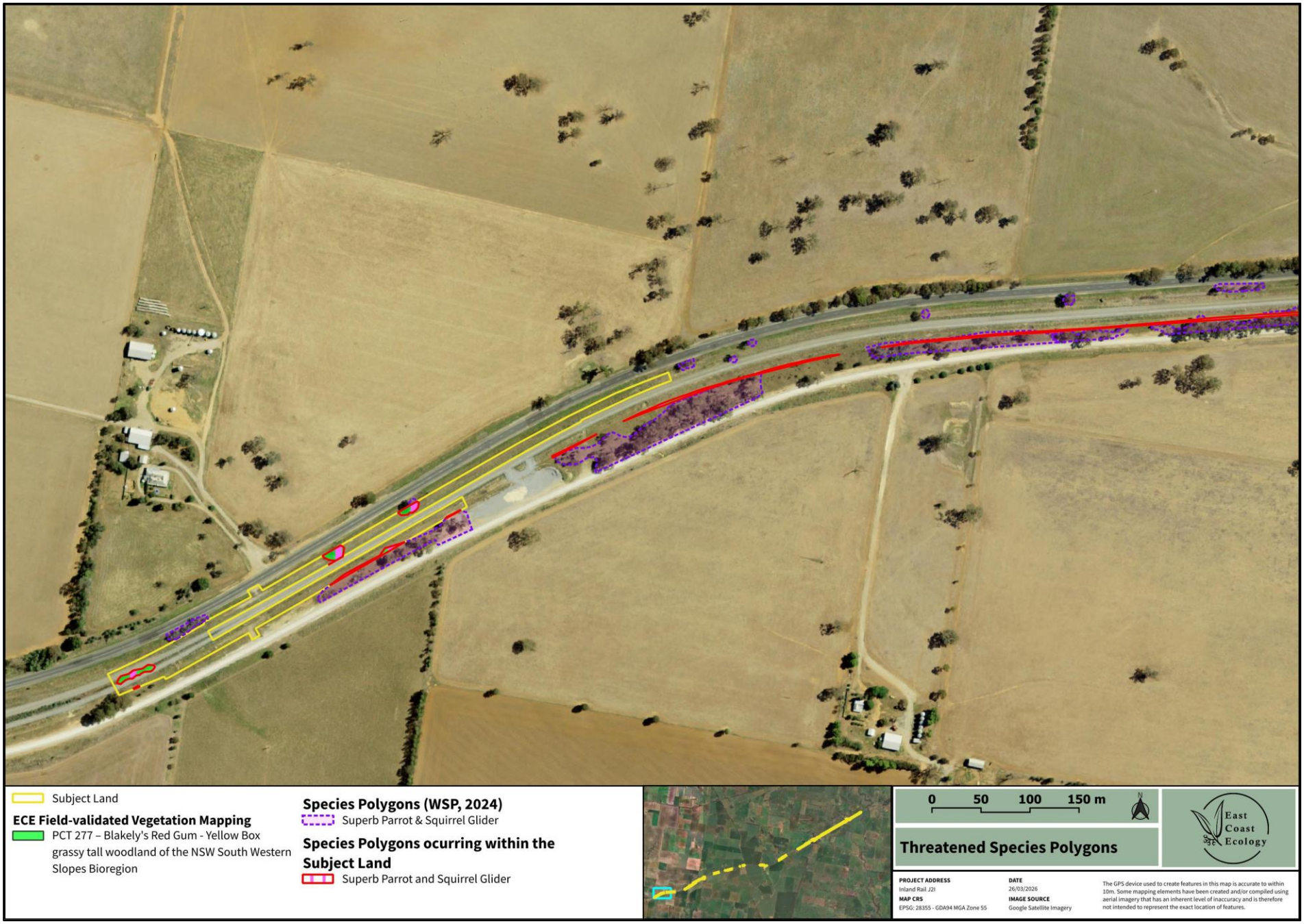


Figure 28. Threatened Species Polygons (Map 1 of 13).

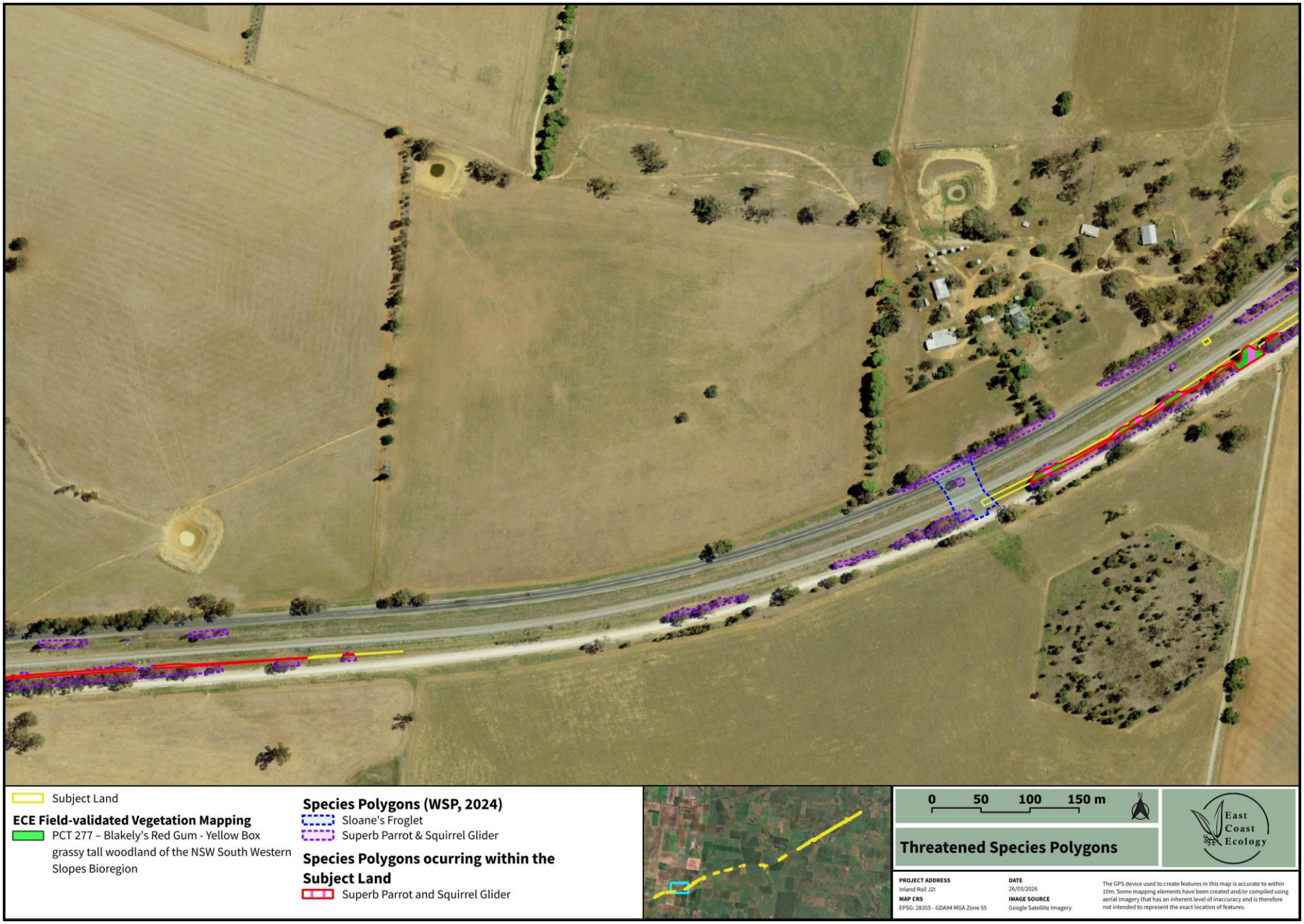


Figure 29. Threatened Species Polygons (Map 2 of 13).

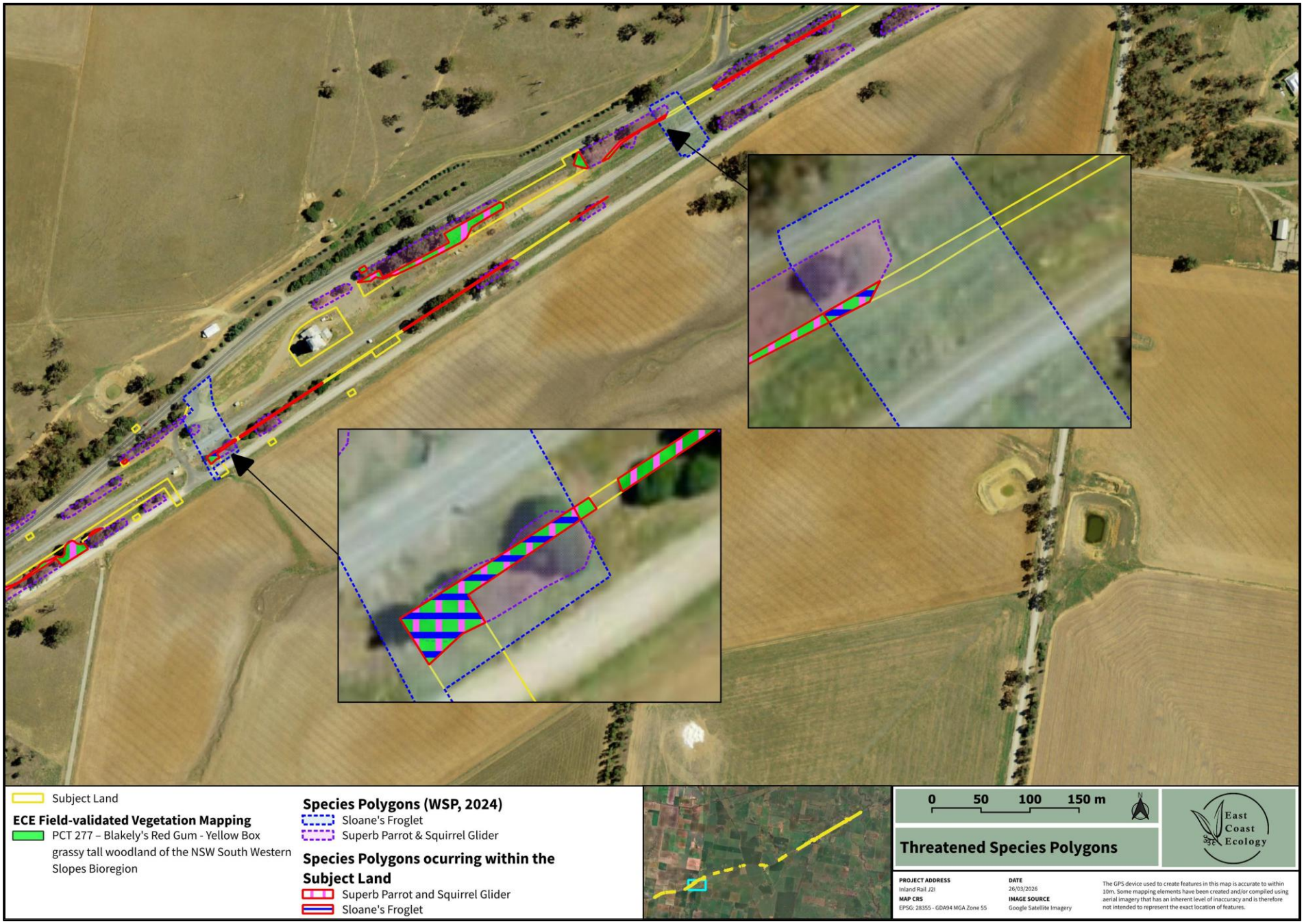


Figure 30. Threatened Species Polygons (Map 3 of 13).

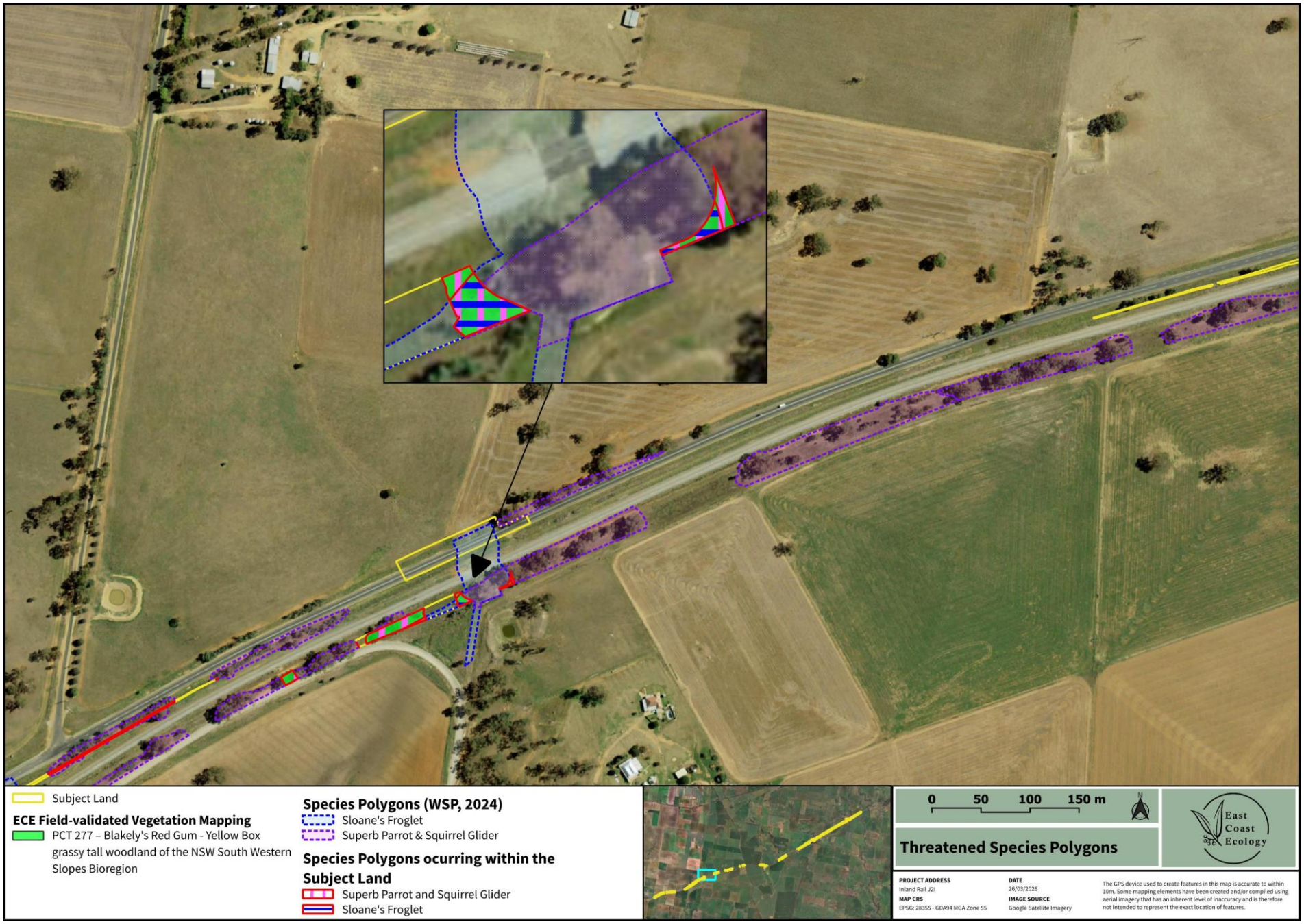


Figure 31. Threatened Species Polygons (Map 4 of 13).

Figure 32. Threatened Species Polygons (Map 5 of 13).

Figure 33. Threatened Species Polygons (Map 6 of 13).

Figure 34. Threatened Species Polygons (Map 7 of 13).

Figure 35. Threatened Species Polygons (Map 8 of 13).

Figure 36. Threatened Species Polygons (Map 9 of 13).

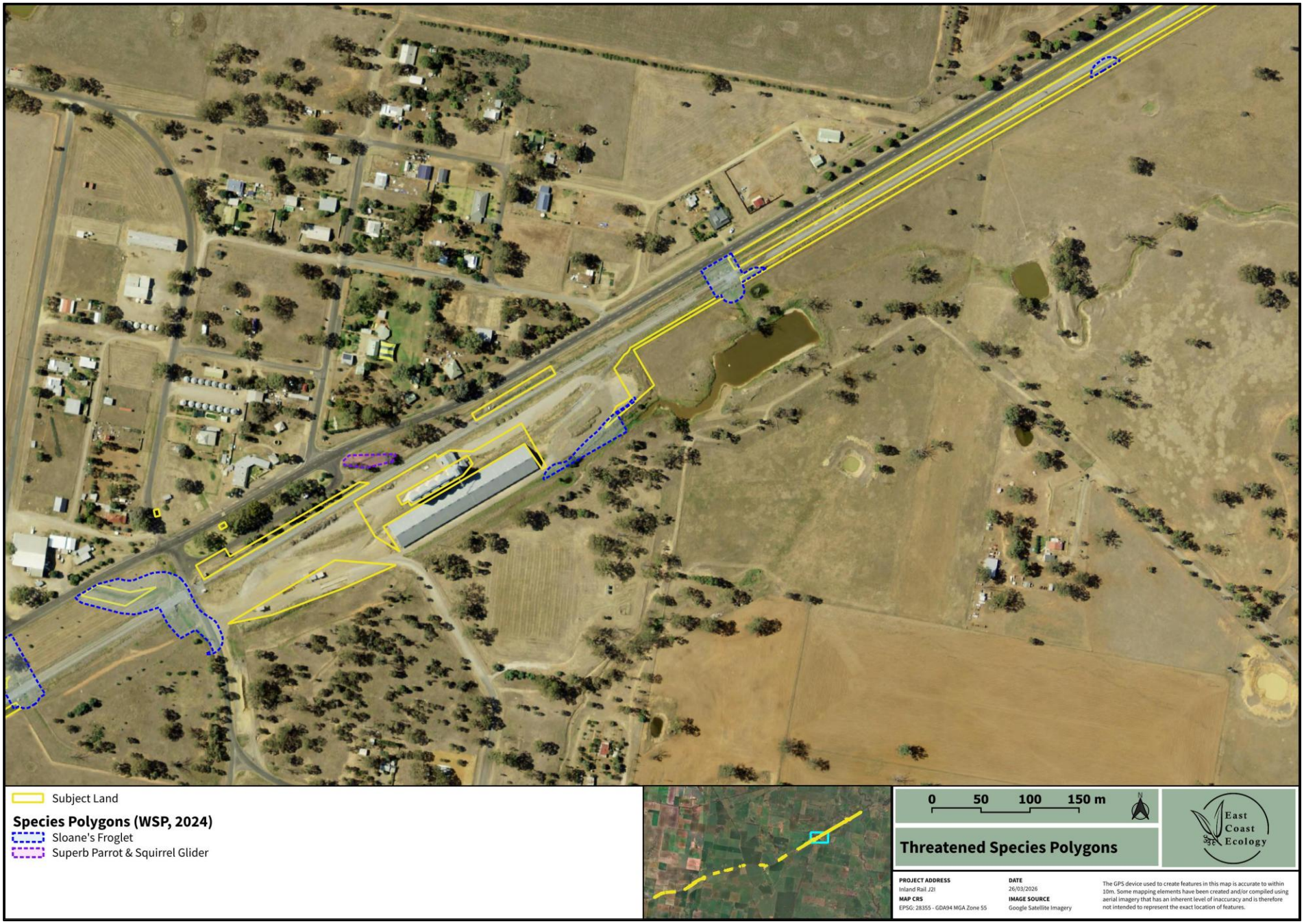


Figure 37. Threatened Species Polygons (Map 10 of 13).

Figure 38. Threatened Species Polygons (Map 11 of 13).

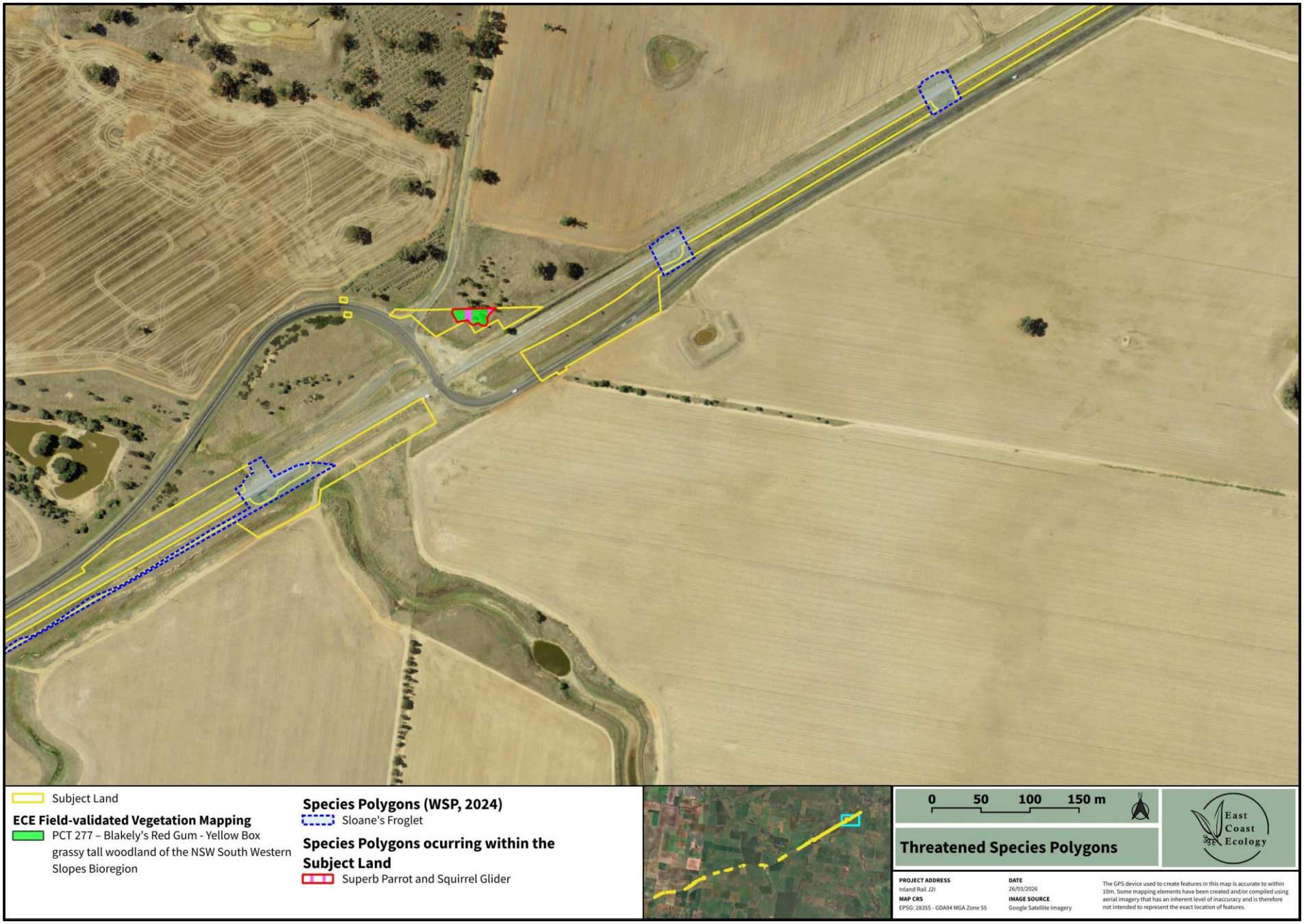


Figure 39. Threatened Species Polygons (Map 12 of 13).

Figure 40. Threatened Species Polygons (Map 13 of 13).

5. IMPACT SUMMARY

The proposed activity will require the removal/ trimming (worst case) of the following:

- 0.09ha of Miscellaneous Ecosystems - Ornamental Plantings
- 11.32ha of Miscellaneous Ecosystems - Highly Disturbed areas with no or limited Native Vegetation
- 0.94ha of Poor Condition PCT 277: Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion
- 0.94ha of *Petaurus norfolcensis* (Squirrel Glider) habitat
- 0.94ha of *Polytelis swainsonii* (Superb Parrot) habitat, and
- 0.03ha of *Crinia sloanei* (Sloane's Froglet) habitat.

All areas of PCT 277 to be impacted are located within the BDAR (WSP, 2024) Survey Area. The project does not have approval to impact (clearing limits) for other PCTs/ Conditions/ Species. Impacts to PCT's outside the Study Area will require additional clearing limits for threatened species that were excluded by WSP Survey within the Study Area (e.g. Little Eagle).

All areas within the Subject Land that are located outside the BDAR Survey Area (WSP, 2024) that contain either a Plant Community Type or threatened species habitat are to be retained without impact. These areas are designated 'No Impact' areas (0.03 ha) and will have biodiversity exclusion zones established around them.

6. LEGISLATION

6.1 Matters of National Environmental Significance

Under the EPBC Act, a proponent must not take an action if that action will have, or is likely to have, a significant impact on matters protected under the EPBC Act, referred to as MNES. The EPBC Act identifies eight MNES:

- World Heritage properties
- National Heritage places
- Wetlands of international importance (those listed under the Ramsar Convention)
- Listed threatened species and communities
- Migratory species listed under international agreements
- Great Barrier Reef Marine Park
- Commonwealth marine areas
- Nuclear actions

The PMST identified the following as potentially occurring within the Subject Land or surrounding area:

- 3 Threatened Ecological Communities
- 36 Threatened species
- 7 Migratory species

No MNES have been identified in or adjoining the Subject Land.

6.2 State Environmental Planning Policy (Resilience and Hazards) 2021

The State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) commenced on the 1st of March 2022 and replaces the following former SEPPs:

- State Environmental Planning Policy (Coastal Management) 2018
- State Environmental Planning Policy 33 – Hazardous and Offensive Development, and
- State Environmental Planning Policy 55 – Remediation of Land.

The Subject Land is not situated within the 'Coastal Zone' therefore this SEPP does not apply.

6.3 *Fisheries Management Act 1994*

The FM Act aims to conserve, develop, and share the fishery resources of NSW for the benefit of present and future generations including conserving fish stocks and key fish habitats and promoting ecologically sustainable development.

The proposed activity does not require works within mapped KFH, nor did threatened aquatic species or marine vegetation protected under the FM Act occur within the Subject Land. As such, the activity would not impact upon KFH, nor are there any legislative requirements or notifications required under this Act.

6.4 *Biosecurity Act 2015*

The *Biosecurity Act 2015* (NSW) provides a framework for the prevention, elimination and minimisation of biosecurity risks posed by an activity as a matter of biosecurity. As defined in Part 3, section 23 of this Act, any non-conformance by an individual is defined as guilty of an offence. One priority weed was identified within the Subject Land at the time of the survey:

- *Senecio madagascariensis* (St John's Wort)

All priority weeds are to be appropriately managed in accordance with the *Biosecurity Act 2015*.

7. MANAGEMENT MEASURES AND IMPLEMENTATION

The potential impacts on biodiversity identified for the Proposed Change can be appropriately managed in accordance with the Conditions of Approval and through implementation of the updated management measures outlined in the Preferred Infrastructure Report Submissions Report for the Project.

8. CONCLUSION

The proposed activity will require the removal/ trimming of:

- 0.09ha of Miscellaneous Ecosystems - Ornamental Plantings
- 11.32ha of Miscellaneous Ecosystems - Highly Disturbed areas with no or limited Native Vegetation
- 0.94ha of Poor Condition PCT 277: Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion
- 0.94ha of *Petaurus norfolcensis* (Squirrel Glider) habitat
- 0.94ha of *Polytelis swainsonii* (Superb Parrot) habitat, and
- 0.03ha of *Crinia sloanei* (Sloane's Froglet) habitat.

Please Note: Whole species polygons were not available for *Petaurus norfolcensis* (Squirrel Glider) and *Polytelis swainsonii* (Superb Parrot). As a result, WSP's 2024 vegetation mapping was used as a surrogate

to define species extents. Both species are known to be directly associated with PCT 277 (in poor and moderate condition), and their mapped extents align with this vegetation community.

All areas within the Subject Land that are located outside the BDAR Survey Area (WSP, 2024) that contain a Plant Community Type or threatened species habitat are to be retained without impact. These areas are designated 'No Impact' areas (0.03 ha) and will have biodiversity exclusion zones established around them.

9. REFERENCES

Department of Climate Change Energy the Environment and Water (DCCEEW, 2025) Protected Matters Search Tool

Department of Environmental Conservation (DEC, 2004b) Threatened Species Survey and Assessment: Guidelines for developments and activities (working draft)

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East Coast Ecology

www.ececology.com.au

Greater Sydney | Canberra | South Coast | Central West

Appendix G AHIMS Basic Search Result

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : Martinus Rail

Client Service ID : 992495

Martinus Rail

Date: 04 April 2025

Attention: Rachel Don-Wauchope

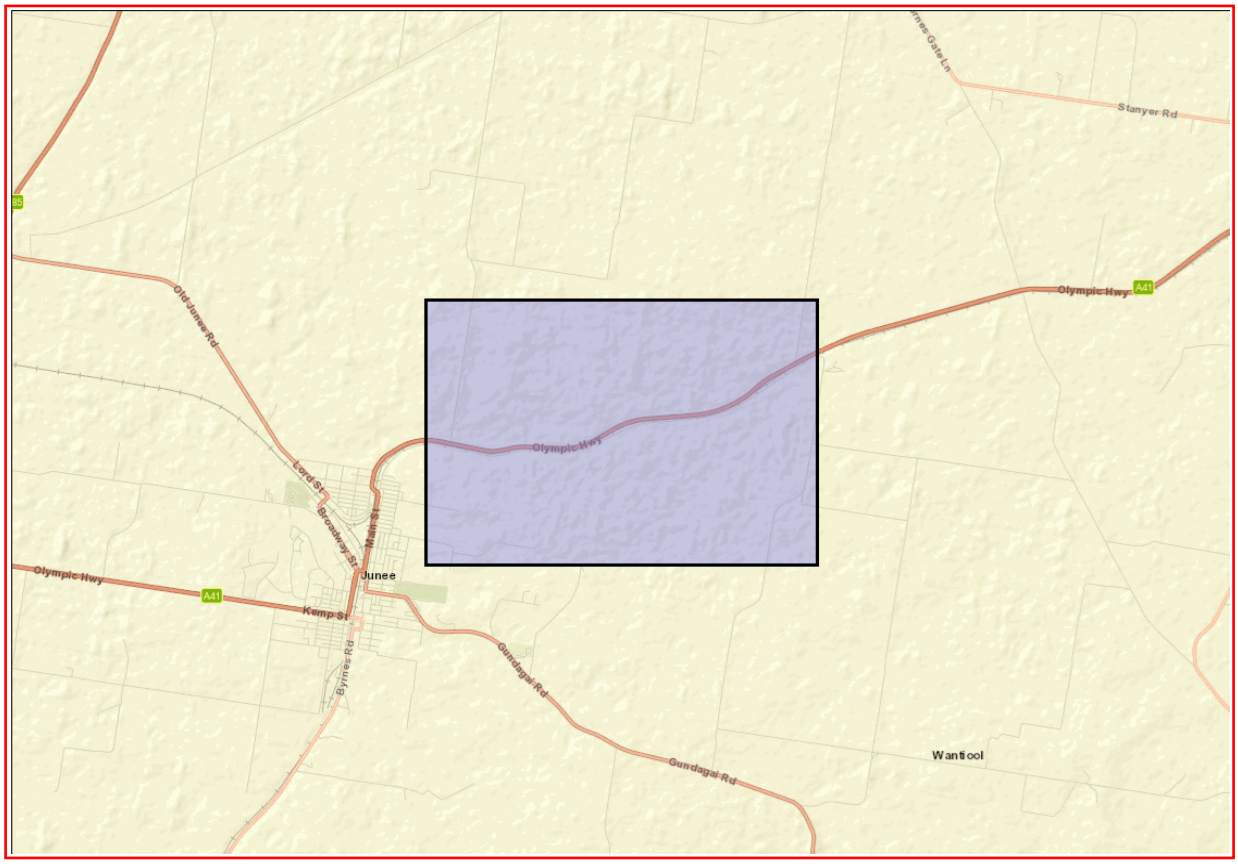
Email: rachel.don-wauchope@martinus.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -34.8681, 147.5941 - Lat, Long To :

-34.8329, 147.6559, conducted by Rachel Don-Wauchope on 04 April 2025.

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



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

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

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

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

Important information about your AHIMS search

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

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : Martinus Rail

Client Service ID : 992502

Martinus Rail
Attention: Rachel Don-Wauchope

Date: 04 April 2025

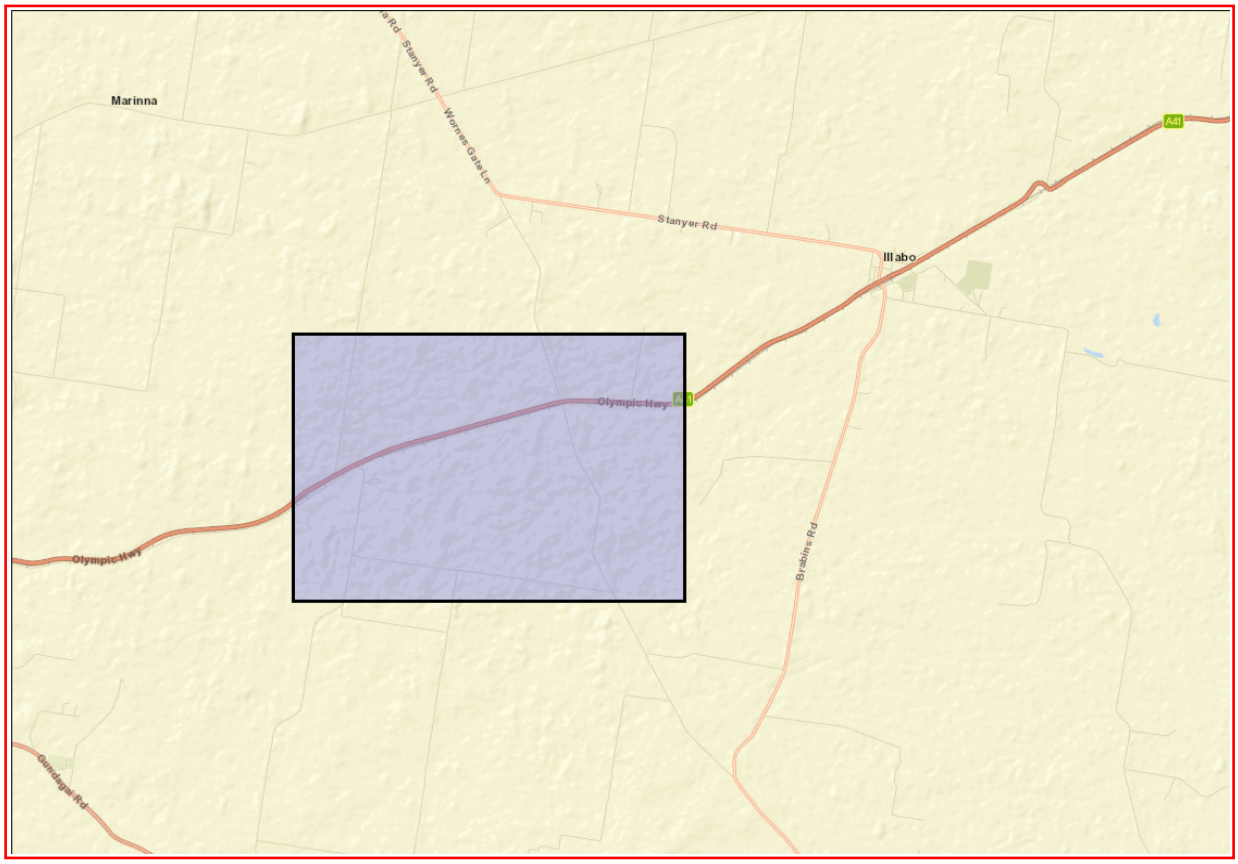
Email: rachel.don-wauchope@martinus.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -34.858, 147.6458 - Lat, Long To :

-34.8227, 147.7076, conducted by Rachel Don-Wauchope on 04 April 2025.

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



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

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- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
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- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : Martinus Rail

Client Service ID : 992503

Martinus Rail

Date: 04 April 2025

Attention: Rachel Don-Wauchope

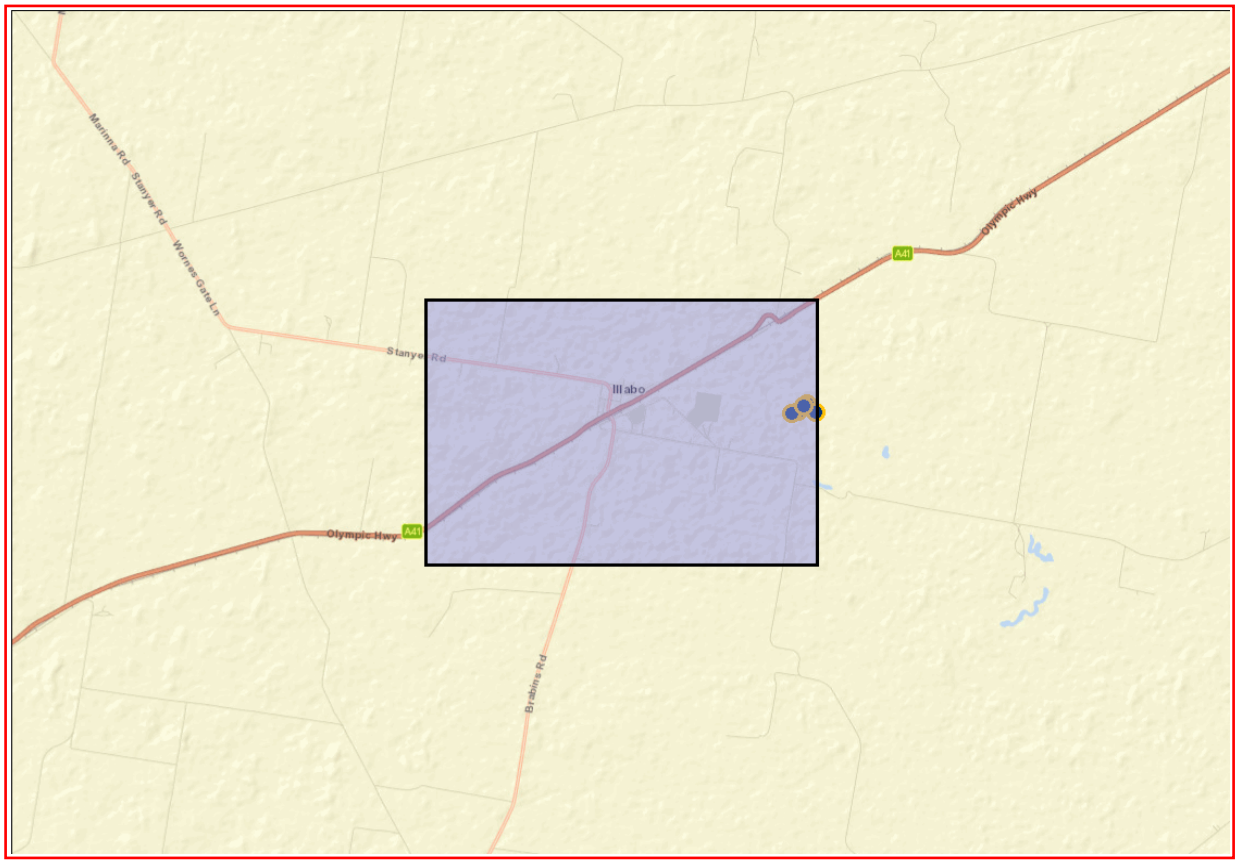
Email: rachel.don-wauchope@martinus.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -34.8358, 147.7095 - Lat, Long To :

-34.8006, 147.7713, conducted by Rachel Don-Wauchope on 04 April 2025.

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



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

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

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

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

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