

INLAND RAIL

ILLABO TO STOCKINBINGAL PROJECT

I2S | Construction Traffic Transport and Access Management Plan (CTTAMP)

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Signature **Date**		

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1 Revisions and Distribution

1.1 Revisions

Draft issues of this document are identified as Revision A, B, C etc. Following acceptance by the document approver, the first finalised revision will be Revision A. Subsequent revisions will have an increase of "1" in the revision number (1, 2, 3 etc.).

1.2 Distribution

The controlled master version of this document is available for distribution as appropriate and maintained on the document management system being used on the Project. All circulated hard copies of this document are deemed to be uncontrolled.

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Project Personnel	Aconex Distribution
Environmental Representative	Tim Elder
Environment and Sustainability Manager	Daniel Lidbetter

2 Introduction

2.1 Project Scope

Inland Rail is an approximate 1,600 kilometres (km) freight rail network that will connect Melbourne and Brisbane via regional Victoria, New South Wales (NSW) and Queensland. Comprising 13 sections, a staged approach is being undertaken to deliver Inland Rail.

The Australian Rail Track Corporation (ARTC), with Inland Rail Pty Ltd (IRPL) as its subsidiary for the Inland Rail Project, received infrastructure approval for the Illabo to Stockinbingal (I2S) section of Inland Rail in September 2024. The approval for I2S (the Project) was granted by the Minister for Planning and Public Spaces under section 5.19 of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act).

The Project is located in south-western New South Wales (NSW) in the Riverina region. Illabo is a small town of approximately 132 people (Australian Bureau of Statistics, 2021) located at the southern end of the alignment, 16 kilometres (km) north-east of Junee in the Junee Local Government Area (LGA). Stockinbingal is a town of approximately 347 people (Australian Bureau of Statistics, 2021) is situated at the northern end of the Project, approximately 20 km north-west of Cootamundra in the Cootamundra–Gundagai Regional LGA. The major towns surrounding the Project are Wagga Wagga, about 50 km to the south, Young to the north-east and Cootamundra to the east.

The Project comprises a new rail corridor that would connect Illabo to Stockinbingal. The alignment branches out from the existing rail line north-east of Illabo and travels north to join the Stockinbingal–Parkes Line west of Stockinbingal. The route will travel primarily through undeveloped land predominantly used for agriculture. The Project includes modifications to the tie- in points at Illabo and Stockinbingal to allow for trains to safely enter and exit the Illabo to Stockinbingal section of Inland Rail. The alignment also crosses several local and private roads, watercourses and privately owned properties. Additionally, no major towns are located within the Project site between Illabo and Stockinbingal.

The Project will include a total extent of approximately 42.5 km, including 39 km of new, greenfield railway which will incorporate the following key features:

- Connection to other rail lines, including Stockinbingal to Parkes line, Lake Cargelligo line, and Main Southern Railway
- One crossing loop and maintenance siding
- Level crossings and stock crossings
- Bridges over rivers and other watercourses, floodplains, and roads
- Upgrades of around 3.5 km of existing track for the tie-in works to the existing Main South Line at Illabo
- New track to maintain Lake Cargelligo line connection either side of the proposal
- Realignment and road-over rail bridge for a section of the Burley Griffin Way at Stockinbingal
- Realignment of Ironbong Road to allow for safe sight lines at the new active level crossing
- Ancillary infrastructure to support the proposal, inclusive of signalling and communications, drainage, drainage control areas, signage and fencing, and services and utilities
- Construction infrastructure, including ancillary facilities, and a temporary workforce accommodation facility.

The Project will also include upgrades to approximately 3 km of existing track associated with tie-in works and construction of an additional 1.7 km of new track to maintain the existing rail network connections. Road upgrade works will also be undertaken to re-align approximately 1.4 km of Burley Griffin Way to provide a road-over-rail bridge at Stockinbingal. Re-alignment of Ironbong Road will also be completed to allow for safe sight lines. A temporary workforce accommodation camp will also be constructed to house the workforce for the duration of works.

Key features of the Project are shown on Figure 2-1.

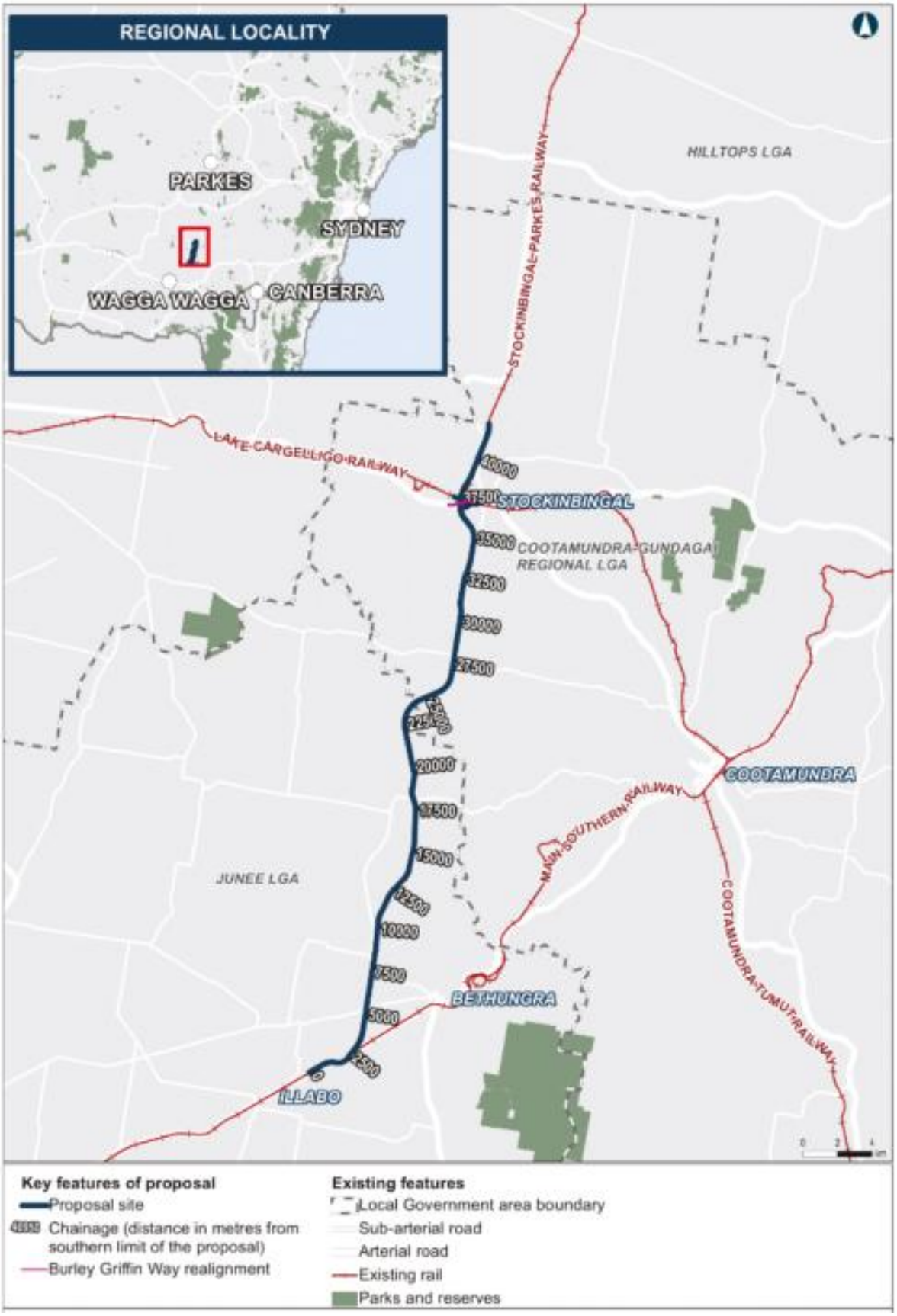


Figure 2-1 Project Locality (Source: Illabo to Stockinbingal - Environmental Impact Statement, 2022)

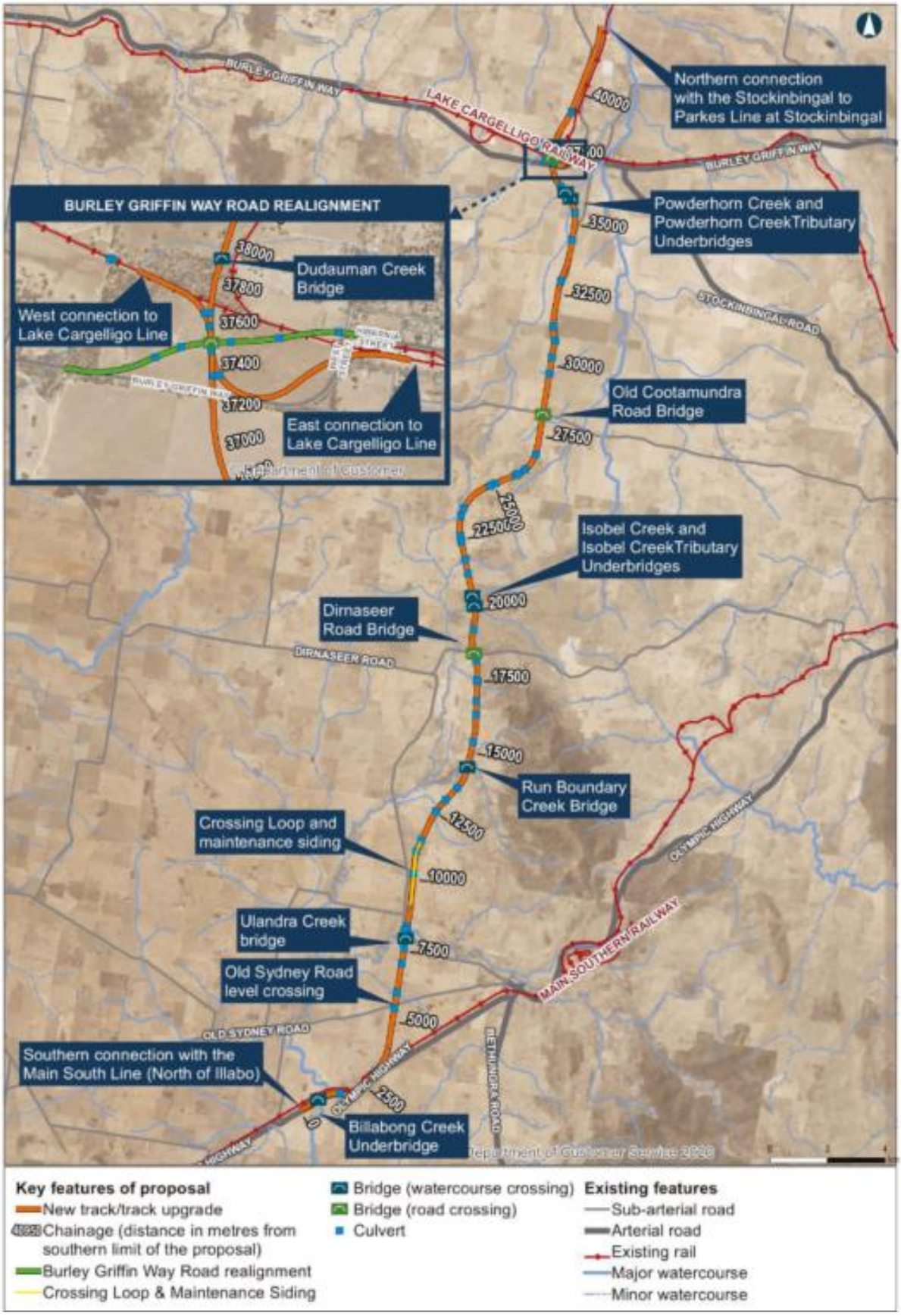


Figure 2-2 Key Project Features (Source: Illabo to Stockinbingal - Environmental Impact Statement, 2022)

2.2 Purpose and Application

Inland Rail Pty Ltd (IRPL) has appointed John Holland under a Design & Construct Contract, to perform the design, construction, commissioning and completion of Illabo to Stockinbingal (I2S) Inland Rail Project.

The purpose of this Construction Traffic Transport and Access Management Plan (CTTAMP) is to demonstrate how John Holland will comply with the traffic management and safety objectives, and contractual requirements of the Conditions of Approval (CoA) and the Environmental Impact Statement (EIS), including:

- Chapter 8 - Proposal description--construction,
- Chapter 11 - Traffic, transport and access,
- Technical paper 3 - Traffic, Transport & Access,
- Response to Submissions Appendix B - Updated Mitigation Measures

The CTTAMP requirements and where each has been addressed within this management plan including those derived from the CoAs and the REMMs are located within Tables 2-1 and Table 2-2 of this document respectively.

This CTTAMP has been prepared in accordance with the CoAs of SSI-9406, including (but not limited to CoAs C17 and C21) and will require endorsement by the Environmental Representative (ER) under CoA C15 and approval by the Planning Secretary under CoA C15.

2.3 Objective

The objective of this subplan is to ensure:

- Compliance with the Project Scope Requirements, Road Authority requirements and relevant NSW road requirements.
- Provision of personnel with the required competencies to undertake works on the road network.
- The traffic management details of the site and occupation schedule.
- The planning and processes for road occupations and traffic management are documented.
- The safety of road workers, all road users, including vulnerable road users, are safely guided around, through or past the work site.
- Communication process is managed with the community engagement team.

2.4 Performance Outcomes

Project design and construction will be prepared in consideration of the Project-specific performance outcomes detailed in Chapter 27 (Table 27.7) of the EIS. The environmental performance outcomes related to transport and traffic during construction of the Project are:

- Impacts to traffic and transport are minimised.
- Motorist, pedestrian and cyclist safety will be maintained or improved.

2.5 Compliance Roadmap

The following is a tabular representation of the requirements of the Construction Traffic Transport and Access Management Plan (CTTAMP) and how I2S intend to comply.

2.5.1 State Conditions of Approval

Table 2-1 provides the CoA relevant to the Project and CTTAMP (SSI-9406) under the *NSW Environmental Planning and Assessment Act 1979*.

Table 2-2 CSSI Conditions of Approval

<table>
<tr><th>No.</th><th>Requirement</th><th>Plan Reference</th></tr>
<tr><td>A1</td><td>The Proponent must carry out the CSSI in accordance with the terms of approval and generally in accordance with the:</td><td></td></tr>
<tr><td>A1 (a)</td><td>Inland Rail – Illabo to Stockinbingal Environmental Impact Statement (ARTC 2022);</td><td>Section 2.2</td></tr>
<tr><td>A1 (b)</td><td>Illabo to Stockinbingal Project Response to Submissions (ARTC 2023);</td><td>Table 2-3</td></tr>
<tr><td>A1 (d)</td><td>I2S – Mitigation Measures (Inland Rail, April 2024);</td><td>Table 2-2</td></tr>
<tr><td>C4</td><td>Ancillary facilities that are not identified by description and location in the documents listed in Condition A1 can only be established and used in each case if:
(a) They are located within or adjacent to the construction boundary; and
(b) They are not located next to a sensitive land use(s) (including where an access road is between the facility and the receiver), unless the landowner and occupier have given written acceptance to the carrying out of the relevant facility in the proposed location; and
(c) They have no impacts on heritage items (including areas of archaeological sensitivity), threatened species, populations or ecological communities beyond the impacts approved under the terms of this approval; and
(d) The establishment and use of the facility can be carried out and managed within the performance outcomes set out in the terms of this approval, including in relation to environmental, social and economic impacts.</td><td>Section 6.4.1
Section 6.5
Section 6.6</td></tr>
<tr><td>C7</td><td>Where possible, ancillary facilities must be accessed via existing public roads and/or the existing rail corridor. Where access via existing roads or the rail corridor is not possible, the Proponent may utilise existing private access tracks on private property but only with the written permission of the landowner. The Proponent must consult with each landowner whose property is required for access and agree on the terms and conditions relating to access arrangements. Nothing in this condition prevents the landowner from refusing the Proponent access to and via their land. New construction access tracks on private property must comply with the requirements of Condition C4.</td><td>Section 6.4.1
Section 6.5
Section 6.6</td></tr>
<tr><td>C8</td><td>The Proponent must ensure that all roads / tracks that will be used to access ancillary facilities are to the standard necessary to provide access as agreed with landowners, asset owner(s) and/or the relevant roads authority (as applicable), including a trafficable surface suitable to accommodate the type of vehicle movements that are anticipated to be associated with the construction of the CSSI.</td><td>Section 6.5
Section 6.6</td></tr>
<tr><td>C14</td><td>CEMP(s) (and relevant CEMP sub-plans) must be submitted to the Planning Secretary for approval except those permitted to be endorsed by others pursuant to a CEMF approved by the Planning Secretary under Condition C1.</td><td>Section 2.2</td></tr>
<tr><td>C15</td><td>Where a CEMP (and relevant CEMP sub-plans) requires the Planning Secretary's approval, the CEMP (and relevant CEMP sub-plans) must be endorsed by the ER and then submitted to the Planning Secretary for approval no later than one (1) month before the commencement of construction, or where construction is staged, no later than one (1) month before the commencement of each stage.</td><td>Section 2.2</td></tr>
<tr><td>C17</td><td>Except as provided by Condition C1, the following CEMP Sub-plans must be prepared in consultation with the relevant state agencies, relevant councils and RAPs identified for each CEMP Sub-plan. Evidence of consultation must be provided consistent with Condition A10.
<table>
<tr><th></th><th>Required CEMP Sub-plan</th><th>Relevant authorities to be consulted for each CEMP Sub-plan</th></tr>
<tr><td>(a)</td><td>Traffic, transport and access</td><td>TfNSW and relevant councils</td></tr>
</table></td><td>Appendix F</td></tr>
<tr><td>C18</td><td>The CEMP Sub-plans listed in Condition C17 must state how:</td><td></td></tr>
</table>

No.	Requirement	Plan Reference
	(a) the environmental performance outcomes identified in the documents listed in Condition A1, as modified by these conditions, will be achieved;	Section 2.4
	(b) the mitigation measures identified in the documents listed in Condition A1, as modified by these conditions will be implemented;	Table 2-3
	(c) the relevant terms of this approval will be complied with; and	This Plan
	(d) issues requiring management during construction, as identified through ongoing environmental risk analysis, will be managed.	Section 14
C21	The Construction Traffic, Transport and Access Management Plan (CTTAMP) must be consistent with any agreements with the relevant road's authority about the use and management of local roads and include measures to:	Section 6.1 Section 5.6
C21(a)	Minimise impacts on seasonal and school related traffic, including harvest-related vehicles, public transport (including school buses, bus stops) and freight operators;	Section 5.3
C21(b)	Minimise noise and amenity impact of heavy vehicles entering and exiting construction compounds, and ancillary sites, and driving through populated areas, including school zones at speed limited times;	Section 6.1
C21(c)	Minimise impacts to vulnerable road users and sensitive receivers;	Section 5.5
C21(d)	Schedule heavy vehicle movements to avoid movements on public roads outside the construction hours detailed in Condition E1	Section 6.1
C21(e)	Provide any necessary road intersection treatments to accommodate construction traffic,	Section 6.4.2 Section 6.5.2
C21(f)	Ensure road repair is undertaken periodically before and during construction, and as identified in Conditions E101 and E102;	Section 5.1.2
C21(g)	Inform road users and freight operators of changes to traffic conditions;	Section 5.9 Section 9.1
C21(h)	Maintain pedestrian and vehicular access to affected properties, including mechanisms to consult with affected landowners and implement measures prior to any access disruption;	Section 5.5 Section 5.8 Section 5.2.5
C21(i)	Consult utility providers and managers to ensure appropriate access to utilities and assets is maintained;	Section 9.4
C21(j)	Identify construction vehicle routes not identified in the documents listed in Condition A1.	Section 6.4.1 Section 6.7.2
C21 (k)	Prepare a Country Rail Network / Inland Rail Interface Management Plan to address potential impacts to Country Rail Network / Inland Rail interfaces.	Appendix H
C26	Construction must not commence until the CEMP and all CEMP Sub-plans have been approved by the Planning Secretary or endorsed by the ER (as applicable and as identified in the CEMF approved under Condition C1). The CEMP and CEMP Sub-plans, as approved by the Planning Secretary, including any minor amendments approved by the ER, must be implemented for the duration of construction. Where the CSSI is being staged, construction of that stage is not to commence until the relevant CEMP and sub-plans have been endorsed by the ER and approved by the Planning Secretary or ER.	Section 2.2
C27	Except as provided by Condition C1 the following Construction Monitoring Programs must be prepared in consultation with the relevant state agencies and relevant councils identified for the Construction Monitoring Programs to compare actual performance of construction of the CSSI against performance predicted in the documents specified in Condition A1. **Required Construction Monitoring Programs** / **Relevant government authorities to be consulted for each Construction Monitoring Program** (a) Noise and vibration — Nil (b) Surface water — DCCEEW Water, Crown Lands and relevant Councils (c) Traffic, transport and access management — TfNSW and relevant Councils	Section 11.1
C28	Each Construction Monitoring Program (CMP) must have consideration of SMART principles and provide:	Section 11.1

No.	Requirement	Plan Reference
C28(a)	Details of baseline data available;	
C28(b)	Details of baseline data to be obtained and when;	
C28(c)	Details of all monitoring of the CSSI to be undertaken;	
C28(d)	The parameters of the CSSI to be monitored;	
C28(e)	The frequency of monitoring to be undertaken;	
C28(f)	The location of monitoring and reasons for choosing the location;	
C28(g)	The reporting of monitoring results and analysis results against relevant criteria;	
C28(h)	Details of the methods that will be used to analyse the monitoring data;	
C28(i)	Procedures to identify and implement additional mitigation measures where the results of the monitoring indicate unacceptable Project impacts;	
C28(j)	any consultation to be undertaken in relation to the monitoring programs; and	
C28(k)	Any specific requirements as required by Condition C29 (Surface Water Monitoring Program)	
C31	CMPs must be submitted to the Planning Secretary for approval except those permitted to be endorsed by others pursuant to a CEMF approved by the Planning Secretary under Condition C1.	Section 11.1
C32	Where a CMP requires Planning Secretary's approval, the CMP must be endorsed by the ER and then submitted to the Planning Secretary for approval no later than one (1) month before the commencement of construction, or where construction is staged, no later than one (1) month before the commencement of each stage.	Section 11.1
C34	Construction must not commence until the relevant CMP(s) have been approved by the Planning Secretary or endorsed by the ER, (as applicable and as identified in the CEMF approved under Condition C1), and all relevant baseline data for the specific construction activity has been collected.	Section 11.1
C35	The CMP(s), as approved or endorsed (as relevant), including any minor amendments approved by the ER, must be implemented for the duration of construction and for any longer period set out in the monitoring program or specified by the Planning Secretary, whichever is the greater.	Section 11.1
C36	The results of the CMP(s) must be made publicly available in the form of a Construction Monitoring Report at the frequency identified in the relevant CMP.	Section 11.1
E86	Construction traffic must not use local roads or privately-owned roads unless no alternative access is available. Use of private access roads must be in accordance with Conditions C7 and C8. Local or privately owned roads used for access to ancillary facilities, construction sites, and temporary accommodation must be identified in the Construction Traffic, Transport and Access Management Sub-plan required by Condition C13.	Section 6.5 Section 6.6
E87	Where bus stops (including school bus stops) are required to be temporarily closed or relocated during construction, such closure must not occur until relocated bus stops are functioning and are within 400 metres of the original bus stop or as otherwise agreed with the relevant council and bus operator. The relocation of bus stops must be undertaken in consultation with the relevant council and bus operator, and details regarding the relocations provided to affected communities (and educational facilities in relation to school bus stops) at least 14 days prior to the relocation occurring.	Section 5.4

No.	Requirement	Plan Reference
E91	Within one year of commencing operation, and ten years after commencement of operations, or as otherwise agreed by the Planning Secretary, the Proponent must prepare a **Level Crossing Performance Report** to confirm the operational traffic impacts of the level crossings on the classified road network. The review of the operation of the level crossings that interact with the classified road network must be carried out in consultation with TfNSW and the relevant councils and include: (a) updated traffic analysis of movements on these roads; (b) assessment of the level of service at these level crossings (queue length, queuing time delay); (c) identification of additional new work outside of the rail corridor delivered by third parties that may result in changes to traffic movements as initially considered in the Level Crossing Treatment Report; (d) assessment of the performance of the level crossing treatment outlined in the Public Level Crossing Treatment Report required by Condition **E88**; (e) all reported near misses and collisions at level crossings within the Project area; and (f) mitigation measures to manage any actual or predicted road network performance impacts.	IRPL activity to be undertaken post commissioning and not included in this plan.
E94	The Proponent must consult with all landowners where the Project will either temporarily or permanently impact farm operations, access to the property from public roads and/or to other parts of the property owned by the landowner to ensure that impacts to the use of properties are minimised and mitigated. This consultation must include, but not be limited to: (a) safe and convenient stock and machinery movement across the rail corridor, including provision and maintenance of livestock holding pens; (b) the safe and efficient operation of agricultural aerial activities; (c) provision and maintenance of fencing of a type suited to stock and livestock husbandry operations conducted on the property (including barrier fencing where appropriate); and (d) relocation of farm infrastructure necessitated by the CSSI. Details of consultation and agreed management measures must be included in the Individual Property Management Plans required by Condition E95	Section 9.5 Community Communication Strategy (CCS)
E95	Individual Property Management Plans must be prepared to document the results of consultation with landowners identified to be consulted by Condition E94 with and agreed outcomes. The Proponent must implement all reasonable measures proposed by landowners. A copy of the Individual Property Management Plan must be provided to the landowner. A copy of each agreement must also be provided to the Planning Secretary upon request.	Section 9.5
E96	No part of any crossing loop may cross over any driveway, private road or public road unless determined in consultation with the relevant landowner and any other adjacent landowner whose access is impacted by the crossing loop, and with the relevant road authority for any road within 60m of the road and rail interfaces.	Section 9.5
E97	The Proponent must maintain existing access to properties during the entirety of work where practicable. Where construction of the CSSI restricts a property's access to a public road, the Proponent must, until their primary access is reinstated, provide the property with temporary alternate access to an agreed standard determined through consultation with the landowner, at no cost to the property landowner, unless otherwise agreed with the landowner.	Section 5.8
E98	Where construction of the CSSI restricts the ability of a resident or landowner to access other parts of their property via a level crossing, the Proponent must, until the permanent level crossing is reinstated, supply the property with a temporary alternate level crossing access at a convenient location determined through consultation with the landowner, at no cost to the property landowner, unless otherwise agreed with the landowner. This can include other existing level crossings or a new alternative temporary level crossing access that is both safe and agreed to.	Section 5.8

No.	Requirement	Plan Reference
E100	The Proponent must notify Local Land Services at least 1 month prior to access and movement restrictions on the Old Cootamundra Road underbridge to enable alternative stock routes to be used.	Section 5.10
E101	Before any local road is used by a heavy vehicle for the purposes of construction of the CSSI, a Road Dilapidation Report must be prepared for subject roads and bridges, and interfaces with regional roads. A copy of the Road Dilapidation Report must be provided to the relevant road authority(ies) within one (1) month of completion of the road dilapidation survey and at least two weeks before the road is used by heavy vehicles associated with the construction of the CSSI for endorsement by the road's authority.	Section 5.1.2
E102	The Road Dilapidation Report shall provide measures to ensure: (a) roads deemed unsafe for the use of heavy vehicles are upgraded and repaired prior to use; (b) roads used can safely accommodate heavy vehicle haulage based on volume, types and duration of use; and (c) road repair is undertaken periodically before and during construction. Where the road is not up to standard due to condition, width, pavement type, and road geometry, the Proponent must upgrade the road to a service level equal to (or better than) the level it was being maintained immediately prior to construction and before heavy haulage commences, at no cost to the owner.	Section 5.1.2
E103	If damage to roads occurs as a result of the construction of the CSSI, the Proponent must, within six months of the completion of construction, either (at the relevant road authority's discretion): (a) rectify the damage to restore the road to at least the condition it was in at the time of the dilapidation survey in Condition E101; or (b) compensate the relevant road authority(ies) for the damage so caused. The amount of compensation may be agreed with the relevant road authority(ies), but compensation must be paid even if no agreement is reached; or (c) where other agreements are in place, leave, maintain or remunerate for damages to these roads in accordance with these agreements. Damage to roads that affects road safety or trafficability as a result of the construction of the CSSI must be rectified by the Proponent as soon as practicable after the damage is identified, at no cost to the owner.	Section 5.1.2
E106	An independent Road Safety Audit is to be undertaken by an appropriately qualified and experienced person in accordance with the Austroads Guide to Road Safety Part 6: Road Safety Audits, including but not limited to for all areas identified by the Safe Systems Assessment as requiring further assessment. Audit findings and recommendations must be actioned before construction of the relevant infrastructure and must be made available to the Planning Secretary on request.	Section 4.2.7
E107	Safe pedestrian and cyclist access, where such access exists, must be maintained around work sites during construction. In circumstances where pedestrian and cyclist access is restricted or removed due to construction activities, an alternate route which complies with the relevant standards must be provided and signposted.	Section 5.5
E108	The design of any new or modified connection to the Country Rail Network (CRN) must be developed in consultation with the CRN Rail Infrastructure Manager (RIM) and TfNSW. Designs, management plans and programs of work must be endorsed by the CRN RIM and TfNSW prior to construction of any new or modified connection.	Appendix H
E117	The Proponent must prepare and implement a Workforce Code of Conduct for employees and contractors involved in the construction of the CSSI. The Code of Conduct must be prepared by a suitably qualified and experienced person(s) in the human resources sector and made publicly available prior to work commencing. The Code of Conduct sets out the ethical standards that employees are expected to adhere to in the construction site and interaction with the local community.	Illabo to Stockinbingal Workforce Code of Conduct

No.	Requirement	Plan Reference
E118	The Employee Code of Conduct applies to all employees on the CSSI site (including the temporary workforce accommodation facilities) and those living in the community in the surrounding towns. The Employee Code of Conduct must: (a) set out the ethical standards for the behaviour and conduct of employees on and off the site, including for driving on public roads; (b) include disciplinary actions where employee behaviour and conduct do not meet the ethical behaviour standards; and (c) include processes for responding to and addressing community complaints about the behaviour and conduct of employees.	Illabo to Stockinbingal Workforce Code of Conduct

2.5.2 Revised Mitigation Measures

Table 2-3 provides the Revised Mitigation Measures (RMMs) relevant to this CCTAMP from the Submissions Report.

Table 2-3 Revised Environmental Mitigation Measures (RMMs)

No.	Issue	Requirement	Plan Reference
T-1	Road user safety at changes to the road network	Road safety audits will be conducted over the three key phases of the I2S Projects life cycle, 1. Pre-Construction, 2 Construction, 3 Post Construction.	Section 4.2.7
T-2	Road user safety at level crossings	Public level crossings would be designed in accordance with relevant guidelines and standards, including AS 1742.7:2016: Manual of uniform traffic control devices (Standards Australia, 2016) and in consultation with Transport for NSW.	Detailed design
T-3	Closure of level crossings	Consultation with Transport for NSW would be undertaken regarding the proposed closure of level crossings.	Section 9
T-4	Consultation during design development	Input would be sought from relevant stakeholders (including local councils, NHVR and TfNSW) prior to finalising the detailed design of those aspects of the proposal that affect the operation of road and other transport infrastructure under the management of these stakeholders. This would include confirming ongoing operation and maintenance arrangements for those assets under the control of other stakeholders.	Detailed Design
T-5	General impacts of construction activities on traffic, transport, access, pedestrians and cyclists	A traffic, transport and access management plan would be prepared and implemented as part of the CEMP. The plan would include measures, processes and responsibilities to minimise the potential for impacts on the community and the operation of the surrounding road and transport environment during construction. The plan would be developed in consultation with local councils, TfNSW, emergency services and public transport/bus operators. It would include, as appropriate, additional reasonable and feasible measures identified as an outcome of consultation undertaken under the Inland Rail Communications and Engagement Strategy.	Section 4.2.2
T-6	General impacts of construction activities on traffic flow	Traffic control would be engaged to maintain vehicle flow and safe access where required on construction and diversion routes and at construction accesses. This would include at the Hibernia Street and Dudauman Street intersection, to prevent queuing across the existing rail line	Section 5.3
T-7	Emergency vehicle access	Emergency vehicle access routes that may be impacted by the proposal would be identified and appropriate control measures would be implemented, in consultation with the relevant emergency services providers.	Section
T-8	Heavy vehicles damaging local roads	A dilapidation survey would be undertaken of the made public roads within the proposed haulage routes and diversion roads at the commencement of construction and provided to the relevant road authority. Upgrades to pavements on construction routes would be undertaken prior to construction, as deemed to be required. Pavement monitoring would be carried out during works. Rectification measures would be implemented as needed during and/or following completion of construction to address any damage caused by construction.	Section 5.1.2

No.	Issue	Requirement	Plan Reference
T-9	Impact on livestock highways	Local Land Services would be notified of increased heavy vehicle movements along livestock highways during the construction phase as well as periods of changed traffic operations. Construction staff would be informed of the location of the livestock highways.	Section 5.10
AT-1	Road safety	As part of the traffic, transport and access management plan, the arrival and departure of the workforce to the accommodation camp would be managed to minimise peaks in congestion and reduce impacts on the road network, particularly at nearby intersections.	Section 6.7
AT-2	Road safety	The 80 km/hr speed limit associated with the level crossing on Grogan Road would be temporarily extended south to incorporate both access points to the accommodation camp, during both establishment and operation. The speed limit would be clearly signposted at the accommodation camp access points and on Grogan Road.	Section 6.7
AT-3	Site access	The design of the two-way access points to the accommodation camp would be undertaken with regard to relevant standards and guidelines, and in consultation with the Cootamundra-Gundagai Regional Council.	Section 6.7
AT-4	Transport of construction workers	During operation of the accommodation camp, workers would be transported between the construction work sites and the accommodation camp via shuttle buses to help minimise potential traffic impacts on the local roads.	Section 6.7
AT-5	Road safety	Swept path analysis would be undertaken for all construction gate access' with consideration of bus and service vehicle movements during detailed design.	Section 6.5.4 Appendix E
AT-6	Road safety	Route analysis, including an assessment of clearance heights, bridge weight limits and swept path analysis would be undertaken for Oversize Overmass (OSOM) load-carrying vehicles used in the establishment of the accommodation camp.	Section 6.3
AT-7	Cumulative Impact	Coordination and consultation would occur with the proponents of any current development proposals, with potential for cumulative impacts at the appropriate Project stages. If consultation with these proponents during detailed design confirms the likelihood of a cumulative impact, ongoing consultation and coordination would include: - provision of regular updates on construction planning for the proposal - identification of key potential conflict points with other construction Projects -Developing mitigation strategies in order to manage conflicts Depending on the nature of the conflict, this could involve coordination of traffic management arrangements between Projects, where reasonable and feasible.	Section 9.2
HS-3	Bushfire	Detailed design and construction planning would maintain appropriate access during construction and operation, ensuring local roads allow emergency access, first-response firefighting, access to water supply for firefighting purposes and safe evacuation routes.	Section 5.6

No.	Issue	Requirement	Plan Reference
LP-6	Maintaining permanent access to properties	Where any legal access to a property is permanently affected and a property has no other legal means of access, alternative access to and from a public road would be provided to an equivalent standard, where feasible and practicable. Where an alternative access is not feasible or practicable, and a property is left with no access to a public road, negotiations would be undertaken with the relevant landowner for acquisition of the property.	Section 5.8 Section 9.5
LP-11	Access to properties	Access to individual residences, services and businesses, and for livestock across the rail corridor, would be maintained during construction where reasonably practicable. The traffic, transport and access management plan included in the CEMP (mitigation measure T-54) would include measures in relation to property access during construction. Where alternative access arrangements need to be made, these would be developed in consultation with affected property owners/occupants and LLS for travelling stock reserves.	Section 5.8
NV-3	Blasting management	A blast management strategy would be prepared in accordance with relevant guidelines, and in consultation with the NSW Environment Protection Authority, and would include: • sequencing and review of trial blasting to inform blasting • regularity of blasting • intensity of blasting • periods of relief • blasting program. Traffic management during drilling and blasting which impact on TfNSW roads shall be carried out in accordance with *AS 1742: Manual of Uniform Traffic Control Devices*. Monitoring of airblast and ground vibration caused by blasting would be conducted in line with *AS 2187.2:2006: Storage and use Part 2: Explosives (Standards Australia, 2006)*. Monitoring would be conducted at the nearest sensitive receiver and non-sensitive receiver (if closer to the blasting zone than the closest sensitive receiver) and assessed in accordance with the criteria outlined in this document.	Blast Management Strategy
SC-8	Rehabilitation (local roads)	Where decommissioning or realignment of local roads is required, the CEMP would include decommissioning and rehabilitation requirements, as per relevant conditions of approval and road authority requirements. This would include measures to manage: • milling and removal of bitumen pavement • removal of any decommissioned culverts • tying and ripping of base and sub-base material • application of soil ameliorants • topsoiling and/or compost blanket • stabilisation and rehabilitation (for example planting and or seeding).	Section 5.1.2

2.6 Definitions and Abbreviations

Definitions and abbreviations applicable to the Construction Traffic, Transport and Access Management Plan are listed in Table 2-4

Table 2-4 Definitions and Abbreviations

Term/Abbreviation	Definition
85th percentile	The speed at or below which 85% of vehicles are observed to travel under free-flowing conditions past a nominated point.
Average Annual Daily Traffic (AADT)	Annual average daily traffic. The total volume of traffic passing a roadside observation point over the period of a calendar year, divided by the number of days in that year (365 or 366 days).
AGTTM	Austroads Guide to Temporary Traffic Management
adjacent clearance area	The area immediately adjacent to the traffic lane, and typically between the traffic lane and the worksite that should be kept free from features that would be potentially hazardous to errant vehicles.
advance warning area	Area in advance of the worksite where advance warning traffic control devices are erected to warn and inform of changes to traffic conditions ahead and to give road users time to adjust their driving behaviour.
advance warning distance	Distance measured between successive signs in the advance warning area and the distance from the beginning of the taper or closure or work area to the first advance sign.
Albury to Illabo	IRPL Project being delivered by Martinus Rail with a southern interface with the IRPL I2S Project being delivered by John Holland.
around the worksite	Methods of hazard elimination, when the entire work area (including all vehicles and plant) is located 6 m or more clear from the nearest edge of a traffic lane.
arterial road	A road that predominantly carries through traffic from one region to another, forming principal avenues of travel for traffic movements. Sub-definitions as follows:
	Rural - A general term for the main road carrying mostly long-distance traffic, as distinct from local traffic.
	Urban - A general term for a main traffic route but specifically referring to certain streets so designated in a local authority's district scheme.
auxiliary lane	A portion of the roadway adjoining the through traffic lanes, used for speed change or for other purposes supplementary to through traffic movement.
B-double	A combination consisting of a prime mover towing two semitrailers, with the first semitrailer being attached directly to the prime mover by a fifth wheel coupling and the second semitrailer being mounted on the rear of the first semitrailer by a fifth wheel coupling on the first semitrailer.
B-triple	A prime mover towing three semitrailers. The first and second semitrailers are connected to the following semitrailer by a fifth wheel permanently located toward the rear of the semitrailer. Under the Heavy Vehicle National Law, a B-triple is categorised as a road train.
barricade	Barricades comprise either barrier boards or stand-alone non-interconnected lightweight modules. They shall be used to inhibit access to a work area.
barrier board	Boards 150 mm to 200 mm in height and not more than 4 m in length. They are mounted on trestles or fixed posts at about 1 m above the pavement. The colour combination used for barrier boards shall be alternate diagonal stripes of black and retroreflective yellow, terminating in yellow at each end.
barrier line	A pair of longitudinal lines marked on the roadway to prohibit overtaking movement in one or both directions.
buffer zone	An advance warning area if speed on the approach to a temporary speed zone is more than 30 km/h higher than the temporary speed limit and needs to be reduced in stages.
built-up area	In relation to a length of road, means an area in which either of the following is present for a distance of at least 500 metres, for the whole of the road: buildings, not over 100 metres

Term/Abbreviation	Definition
	apart on land next to the road and/or streetlights not over 100 metres apart (see *urban road)* or, if the length of road is shorter than 500 metres.
centreline	The line which defines the axis or alignment of the centre of a road or other work.
	In relation to any portion of a roadway not marked with a flush median –a dotted or solid line or lines of paint or raised studs (or any combination of those lines or studs) intended to separate opposing traffic.
	In relation to any portion of a roadway marked with a flush median –the longitudinal white line that forms the left side of the median as viewed by a driver facing forward.
	In relation to an unmarked roadway – the inferred line down the longitudinal centre of the roadway.
Construction Environmental Management Plan (CEMP)	Document which is required to be produced by John Holland as part of the Conditions of Approval
chicane	The lateral movement of traffic from one or more lanes onto another alignment before a shift back toward the original road alignment but not necessarily into the original lane or lanes. Typically applied to reduce the speed of traffic.
closure	The physical area from which the road users are to be excluded. This includes but is not limited to shoulder closures, lane closures and road closures.
competent person	A person who has, through a combination of training, qualification, and experience, acquired knowledge and skills enabling that person to correctly perform a specified task.
containment fence	Physical barrier sufficient to provide separation between the travelled path, or paths used by cyclists and pedestrians, from the work area, but not as rigid as to become a hazard if struck by vehicles, or to act as a safety barrier.
contractor	A person, organisation, or company responsible for implementation of an activity on or affecting a road. Examples include but are not limited to construction and maintenance crews, utility companies, surveyors, filming crews and event management.
contraflow	Traffic flow in a direction opposite to the normal flow, where two-way flow is always maintained.
Council	Refers to either Cootamundra-Gundagai Regional Council or Junee Shire Council depending upon the site-specific location.
Critical State significant Infrastructure (CSSI)	The critical State significant infrastructure, as generally described in CoA Schedule 1, the carrying out of which is approved under the terms of this approval.
detour	A temporary, alternative route to guide road users around a worksite operation, most commonly during temporary closure of a road or path.
divided road	A road with separate roadways for traffic travelling in opposite directions.
dividing line	A road marking formed by a line, or two parallel lines, whether broken or continuous, designed to indicate the parts of the road to be used by vehicles travelling in opposite directions.
DPIE	Department of Planning, Industry and Environment.
dynamic deflection	The largest transverse deflection of a road safety barrier system during an actual crash or during a full-scale impact test (i.e. the amount the road safety barrier deflects from its initial position during impact).
EAD	Environmental Assessment Documentation
EIS	Environmental Impact Statement
emergency services	An entity that has a statutory responsibility to respond to an emergency and includes the following:
	• an ambulance service
	• a fire brigade, including a volunteer fire brigade

Term/Abbreviation	Definition
	• a police force or police service • a disaster or emergency organisation of the Commonwealth or a State or Territory.
gore	A triangular area where two roads either meet or split.
TfNSW Specification D&C	A TfNSW model specification that contractors must adapt for specific Projects (in this case, G10)
hazard (roadside)	Any object or feature located between the edge of a traffic lane and the road reserve boundary, or within a median, that could cause significant personal injury (including fatal injury) to road users when impacted by an errant vehicle.
Illabo to Stockinbingal (I2S)	Project which forms a portion of the larger inland rail scheme
intersection	The place at which two or more roads meet or cross.
IRPL	Inland Rail Proprietary Limited
JHG	John Holland Group
lane line	A line (usually painted), other than the centreline, that divides adjacent traffic lanes travelling in the same direction. This line may be raised delineating devices.
long term	The description which applies when a traffic guidance scheme is required to operate both day and night and may be left unattended.
median	A strip of road, not intended for use by traffic, which separates carriageways for traffic in opposite directions. Usually formed by painted lines, kerbed, and paved areas, grassed areas, etc.
minimum gap sight distance (M.G.S.D)	The minimum sight distance required for a driver to safely accept a gap in traffic when making a manoeuvre like crossing or turning at an intersection. It's the distance a driver needs to see to determine if there's enough space and time to safely complete their intended movement
mobile work	Work that entails vehicles moving progressively along the roadway at speeds significantly lower than other traffic, with all traffic control devices being either vehicle mounted or regularly moved along the road.
motorway	A divided highway, freeway, expressway, controlled access highway etc. for through traffic with no access for traffic between interchanges and with grade separation at some interchanges. Certain activities may be restricted or prohibited by legislative provision.
multilane	Two or more running lanes in one direction.
off-peak period	The periods that have low demand volumes of traffic during the day (see *peak period)*.
offset speed zone	Temporary speed zones which result in speed limits which are different for each direction of travel at a particular location.
open road area	Roadside development less frequent than that specified for a built-up area.
past the worksite	Methods of hazard control, when the entire work area (including all vehicles and plant) is located within 6 m from the nearest edge of a traffic lane.
peak period	The period that has the highest demand volume of traffic and/or number of passengers during the day (peak hour, peak half hour, etc.) (see *off-peak period)*.
permanent speed limit	The maximum legal speed limit for a specific section of road indicated by permanent speed limit signs. These signs are in place 24 hours a day, seven days a week and have been implemented after a speed limit review has been carried out.
Portable Traffic Control Device (PTCD)	An approved portable device used to control traffic to enhance the safety and protection of road users and road workers at the worksite, specifically an option to improve safety for traffic controllers. Portable traffic controller devices may include PTSS or boom barriers.
Portable Traffic Signal Systems (PTSS)	An approved portable traffic signal device allowing traffic controllers to perform their roles at a safe distance from traffic in high-risk environments.

Term/Abbreviation	Definition
primary sign	The first sign closest to the worksite, work area or hazard. This sign is followed by repeater signs placed further from the worksite, work area or hazard.
RASS	radar activated speed signs
road reserve	An area of land between the legal road boundaries, usually a fence line to fence line. This typically includes the roadway, footpaths, other access ways and unpaved areas, which allow the passage of road users. The road reserve also includes an airspace of six metre directly above the road surface.
Road Safety Audit (RSA)	A formal examination of a road or intersection, existing or proposed, to identify potential safety issues and opportunities for improvement. It's conducted by an independent, multidisciplinary team that qualitatively assesses and reports on safety risks for all road users.
road train	A combination, other than a B-double, consisting of a motor vehicle towing at least two trailers, excluding any converter dolly supporting a semitrailer.
road user	Any driver, rider, passenger, or pedestrian using the road.
roadway	Any one part of the width of a road devoted particularly to the use of vehicles, inclusive of shoulders and auxiliary lanes.
Road Occupancy Licence (ROL)	A permit which allows the applicant to use or occupy a specified road space at approved times, provided that certain conditions are met.
running lane	The portion of the roadway allotted for the use of a single line of vehicles. Cyclists operating in these lanes are considered vehicles.
rural road	A general term for the road carrying mostly long-distance traffic, as distinct from local traffic and located in open road areas.
safety buffer	The unoccupied space between the additional warning area and work area which allows for an errant vehicle to pull up before reaching the work area.
safe intersection sight distance (S.S.I.D)	the minimum distance a driver needs to see a vehicle entering or leaving a side road to safely stop before a collision at an intersection. It's crucial for ensuring safe road operations, especially at unsignalized intersections.
safe work method statement (SWMS)	A document which identifies the type of work being undertaken, the risks, the hazards, and controls to be implemented to eliminate the risk.
short term (traffic control)	Description that applies when a traffic guidance scheme is required only while work personnel are in attendance and is generally limited to the duration of a single work shift.
shoulder	A sealed or unsealed part of the road outside the edge line, or inferred edge line, which is trafficable, adjacent to the traffic lane and flush with the surface of the pavement.
shuttle flow	Where a portion of the roadway is closed so that a single lane is used alternately by traffic from opposite directions. It is one-way flow with one direction first, then the other. This is used where insufficient width is available for maintaining two-way flow at all times.
sight distance	The distance, measured along the road over which visibility occurs between a driver or rider and an object or between two drivers at specific heights above the roadway in their lane of travel.
speed	Distance travelled per unit of time (km per hour).
speed of traffic	The posted speed limit at a location when being adhered to by the majority of road users (see *85th percentile*). This can be checked by travelling in the stream of vehicles and comparing to the posted speed limit.
(traffic speed)	If the speed of the majority of vehicles is travelling significantly slower or faster than the posted speed limit (±10 km/h), apply this speed limit when making any decisions regarding design.
static works	All works which are greater in scope and duration than can be handled by short term, low impact methods or mobile works and are contained within a fixed area.
swept path	The area bounded by lines traced by the extremities of the bodywork of a vehicle while turning.

Term/Abbreviation	Definition
taper	A straight or smoothly curved row of delineation devices used to shift traffic laterally, e.g. from a lane to the shoulder.
temporary speed limit	A speed limit that is applied on some sections of road as a result of roadworks, school zones or other variable speed limits which are in place to suit driving and travel conditions. These are not permanent speed limits.
termination area	Where road users have passed the work area and normal traffic conditions resume.
TMC	Transport Management Centre
Transport for NSW (TfNSW)	NSW Highway & State Road Manager
through the worksite	Methods of hazard separation by stopping all road user's movement for short periods when workers need to occupy the roadway.
traffic controller (TC or TCR)	A competent person whose duty it is to control traffic at a worksite.
Traffic Control at Worksites (TCAW's)	TfNSW TS 05492 Traffic Controls at Work Sites (TCAWS) including all amendments
traffic control device (TCD)	Any traffic sign, road marking, traffic signal, or other device, placed or erected under public authority for the purpose of regulating, directing, warning or guiding traffic.
Traffic Guidance Scheme (TGS)	An arrangement of temporary traffic control devices to warn traffic and guide it around, through or past a worksite or temporary hazard.
Traffic Management Plan (TMP)	A document describing all essential traffic management matters associated with roadworks or works on roads. This includes risk assessment, traffic demand and accommodation, traffic routing and control and provision for vulnerable road users and special vehicles such as buses, trams, or over-dimensional vehicles.
travelled path	That part of the roadway which is made available to vehicles, and which may consist of one of more running lanes.
Truck mounted attenuator (TMA)	Safety device designed to reduce the severity of collision that should be fitted to slow moving or stationary vehicles which are exposed to potential impact from behind by approaching traffic. Also referred to as a "bump truck"
Traffic, Transport Liaison Group (TTLG)	This group is formed to facilitate communication and coordination between different stakeholders involved in major transport Projects.
two-way roadway	A roadway having running lanes allotted for use by traffic in opposing directions.
undivided road	A road without a median (see *divided road).*
unsealed road	A road that does not have a hard or smooth surface. Unsealed road surfaces include gravel, sand or dirt.
Vehicle Management Plan (VMP)	Document detailing the internal vehicle and workforce movements within sites and compounds. It includes and barriers/barricading required to protect and direct workers around site.
Variable Message Signs (VMS)	Variable message signs can be changed to display information messages to alert drivers of on-road incidents on the road ahead. They are also used to warn road users about weather conditions and other important information
vehicles per day (vpd)	The number of vehicles observed passing a point in both directions on a road for 24 hours
vehicles per hour (vph)	The number of vehicles observed passing a point in both directions on a road for one hour
vulnerable road user	Pedestrians, cyclists, motorcyclists.
work area	Area where maintenance or construction work is being done.
worksite	An area which includes the work area(s), and any additional length of road required for advance signing, tapers, side-tracks or other areas needed for associated purposes.

2.7 Relevant Standards, Legislation and Guidelines

The primary legislation, standards and specifications relevant to Construction Traffic, Transport and Access Management Plan (CTTAMP) are listed in Table 2-5.

Table 2-5: Principal legislation, standards and specifications relevant to CTTAMP

Type of Reference	Reference
Relevant Acts, Regulations, Codes and Ordinances	*NSW Roads Act 1993*
	NSW Roads Regulation 2018
	NSW Work Health and Safety Act 2011
	NSW Environmental Planning and Assessment Act 1979
	NSW Protection of the Environment Operations Act 1997
	NSW Biosecurity Act 2015
	NSW Local Government Act 1993
Federal Acts and Standards	*Safe Work Australia - Traffic management: Guide for construction work* (Federal)
	Heavy Vehicle National Law (Federal)
	Heavy Vehicle (Adoption of National Law) Act 2013 (Federal)
	Transport Administration Act 1988 (Federal)
	Road Transport (General) Regulation 2021 (Federal)
	National Land Transport Act 2014 (Federal)
	Protection and Biodiversity Conservation Act 1999 (EPBC Act) (Federal)
Relevant Australian and International Standards	*Austroads Guide to Temporary Traffic Management (AGTTM)*
	Austroads Guide to Road Design (AGRD)
	Austroads Guide to Traffic Management (AGTM)
	AS 4852.2 Variable message Signs, Part 2: Portable Signs
	AS 1742: Manual of Uniform Traffic Control Devices – Parts 1 to 15 (As required)
IRPL Specifications	*0-0000-900-POS-00-SP-0001 Inland Rail Work Health and Safety Requirements Specification*
TfNSW Specifications	*TfNSW TS 05492 Traffic Controls at Work Sites (TCAWS) including all amendments*
	TfNSW Roads and Maritime Supplement to AS1742: Manual of Uniform Traffic Control Devices – Parts 1 to 15
	TfNSW Intelligent Transport System, Traffic Systems, Specification No. TSI-SP-008 Variable Message Signs
	TfNSW G10 Traffic Management Control of Traffic
	RMS Road Occupancy Manual
	RMS Road Design Guide
	RMS Regulatory Signs Guide
	TfNSW R132 Safety barrier systems

Type of Reference	Reference
	TfNSW R145 Pavement marking
	TS 00028 3.00 Accepted Road Safety Barrier Systems and Devices
	National Land Transport Act 2014

2.8 Location

This CTTAMP will be implemented on the I2S Project which stretches from Illabo to Stockinbingal. A location map is provided in Figure 2-1

2.9 Project Timing and Duration

Refer to Section 4.1.2 of the CEMP for the proposed construction program for the Project.

2.10 Work Hours

Permitted works hours for the Project, in accordance with CoA E1 to E14, are summarised in Table 2-6.

Standard hours for the Project are 7am-6pm Monday to Saturday (excluding public holidays) (as per Condition E1). Despite this, subject to compliance with Condition E2, works can be completed between 6am and 6pm Monday to Sunday. On a fortnightly basis, there will be no works between 6pm Saturday and 7am Monday.

These construction hours differ from standard construction hours, with an hour before 7am and work during weekends. Implemented mitigation measures will take into consideration of noise and vibration impacts during these times.

Works undertaken outside these standard approved hours, or Out-of-Hours Work (OOHW), will only be performed under the out-of-hours works protocol or in accordance with an EPL.

Table 2-6 Permitted work hours for the Project

Applicable Construction Period	CoA	Applicable Working Hours		
		Monday- Friday	Saturday	Sunday / Public Holiday
Standard construction hours	E1	7:00am to 6:00pm	7:00am to 6:00pm	No work
CoA E2 construction hours[1]	E2	6:00am to 6:00pm	6:00am to 6:00pm	6:00am to 6:00pm
Highly noise intensive works[2]	E4	8:00am to 6:00pm	8:00am to 1:00pm	No work
Standard Blasting Hours	Nil	9.00am to 5.00pm	9.00am to 1.00pm	No Blasting

Further detail specific to the management of hours of operation and noise management is provided in the I2S Noise and Vibration Management Plan (5-0019-220-PMA-00-PL-0054).

3 Organisation, Roles and Responsibilities

3.1 Management Roles and Responsibilities

Project roles and responsibilities relevant to this Plan and provided in Table 3-1

Table 3-1 Project roles, responsibilities and authorities relevant to this Plan

Title	Roles, Responsibilities, and Authorities Relevant to this Plan
Project Traffic Manager	Responsible for ensuring that all traffic staging work activities comply with the relevant standards, codes of practice and statutory requirements.
Project General Superintendent	Responsible for coordinating all on site discipline supervisors, direct labour, subcontractors and plant resources to achieve effective performance in accordance with detailed programs and schedules.
Project Construction Manager	Responsible for working with the design and construction teams to ensure that all designs are able to be constructed in a cost effective and timely manner. They will also produce method statements detailing the key steps to the construction process.
Project Health and Safety Manager	Responsible for ensuring agreed control measures are implemented and compliance is met throughout the life of the Project.
Project Environment and Sustainability Manager	Responsible for ensuring that all work activities comply with the relevant environment standards and ensures the protection of the local environment.

Refer to the I2S Construction Environmental Management Plan (5-0019-220-PMA-00-PL-0037) for the I2S Project Organisational Chart.

3.2 Traffic Control Organisation

John Holland will engage a traffic control organisation(s) who are registered under the TfNSW Registration Scheme Category G (Traffic Control) which can be checked via:

- https://www.transport.nsw.gov.au/operations/roads-and-waterways/business-and-industry/partners-and-suppliers/tenders-and-17

The Traffic Control Organisation(s) will supply qualified traffic control personnel as required. All personnel will be I2S site inducted.

3.3 Traffic Control Personnel

As a requirement of the *NSW WHS Regulation 2017*, a person undertaking traffic control work must hold the relevant qualification for the work they are performing. The three qualifications outlined in the *WHS Regulation 2017* are as follows:

- Traffic Control (TC);
- Implement Traffic Control Plans (ITCP); and
- Prepare Work Zone Traffic Management Plans (PWZTMP).

The *NSW Work Health and Safety (WHS) Regulation 2017*, requires that all persons carrying out traffic control work must have successfully completed appropriate traffic control work training.

3.3.1 Traffic Controller (TCR)

Traffic controller (TCR) is a person who directs traffic in accordance with a work zone traffic management plan. John Holland will require all sub-contracted Traffic Controllers to operate at the highest standards and to comply with the statutory conditions of their appointment. Traffic controllers will:

- Maintain a zero percent blood/alcohol concentration while performing traffic control functions,
- Not perform traffic control functions while adversely affected by a drug or other medication causing functional impairment,
- Not direct traffic through a worksite, unless the worksite has an approach speed of 60 km/hr or less,
- Ensure that the approved Traffic Guidance Scheme (TGS) is erected correctly, at the beginning of the shift, and direct traffic at and/or through a worksite, or other event as specified in the approved operating procedure for traffic,
- Only use equipment specifically designed to direct or divert traffic through a worksite, and
- Ensure that the approved Traffic Guidance Scheme (TGS) is removed when work is suspended throughout a shift or completed for the day.
- Mobile phones should not be used in any circumstances while directing traffic control operations.

John Holland will only deploy Traffic Controllers who are accredited under the SafeWork NSW Traffic Control Work Training (TCWT) card for their appropriate role level: The following website can be utilised to verify NSW Traffic Control work cards:

- https://verify.licence.nsw.gov.au/

3.3.2 Implement Traffic Control Plans / TGS (IMP)

Person with the qualification of Implement traffic control plans (IMP) is able to set up and work with Traffic Guidance Schemes (TGSs) at a work site and complete safety inspections.

3.3.3 Prepare a Work Zone Traffic Management Plan (PWZ)

A PWZ qualification allows for qualified personnel to design and modify Traffic Management Plans (TMPs), Vehicle Movement Plans (VMPs) and Traffic Guidance Schemes (TGSs).

4 Traffic Management System

4.1 Interfaces with Other Plans

This Plan should be read in conjunction with the documents identified in Table 4-1.

Table 4-1: Interface Documents

Planning Document	Document Number	Interface	Applicable CoA
I2S Traffic Management Plan	N/A	Worksite specific traffic management plan to detail the requirements at each worksite. – will be submitted to TfNSW for approval in a future date separate to this CTTAMP.	C21
I2S Community Communication Strategy	4-0000-220-PCS-00-ST-0001_3	Community notification surrounding the traffic management impacts on site and surrounding communities, LGAs and road users.	B1, B2, B3, B4, and B5
I2S Mobilisation Management Plan	5-0019-220-PMA-00-PL-0023	Management plan which discusses site laydowns, accommodation and compounds including Worker Parking	NA- this plan is an internal plan which is not required by the Conditions of Approval.
I2S Construction Environmental Management Plan	5-0019-220-PMA-00-PL-0031	The CEMP is the overarching Environmental Management Plan which addresses all environmental items related to the CTTAMP.	C12 C13
I2S Construction Noise and Vibration Management Plan	5-0019-220-PMA-00-PL-0054	Sub plan of the CEMP which discusses mitigation measures to address construction noise	C19 E7
I2S Country Rail Network / Inland Rail Interface Management Plan	5-0019-220-PMA-00-PL-0057	Country Rail Network / Inland Rail Interface Management Plan to address potential impacts to Country Rail Network / Inland Rail interfaces	E108 C21
Biosecurity Management Plan	5-0019-220-PMA-00-PL-0061	CEMP Sub Plan which addresses the management of biosecurity when entering/exiting private properties	C25

4.2 Traffic Management Framework

4.2.1 Structure

The CTTAMP will be overarching management plan with site-specific TMPs (Traffic Management Plans) to cover five (5) key areas which will have the major traffic impacts. Each site-specific TMP will have relevant TGSs (Traffic Guidance Scheme).

Figure 4-1 represents the structure of the Traffic Management Plans.

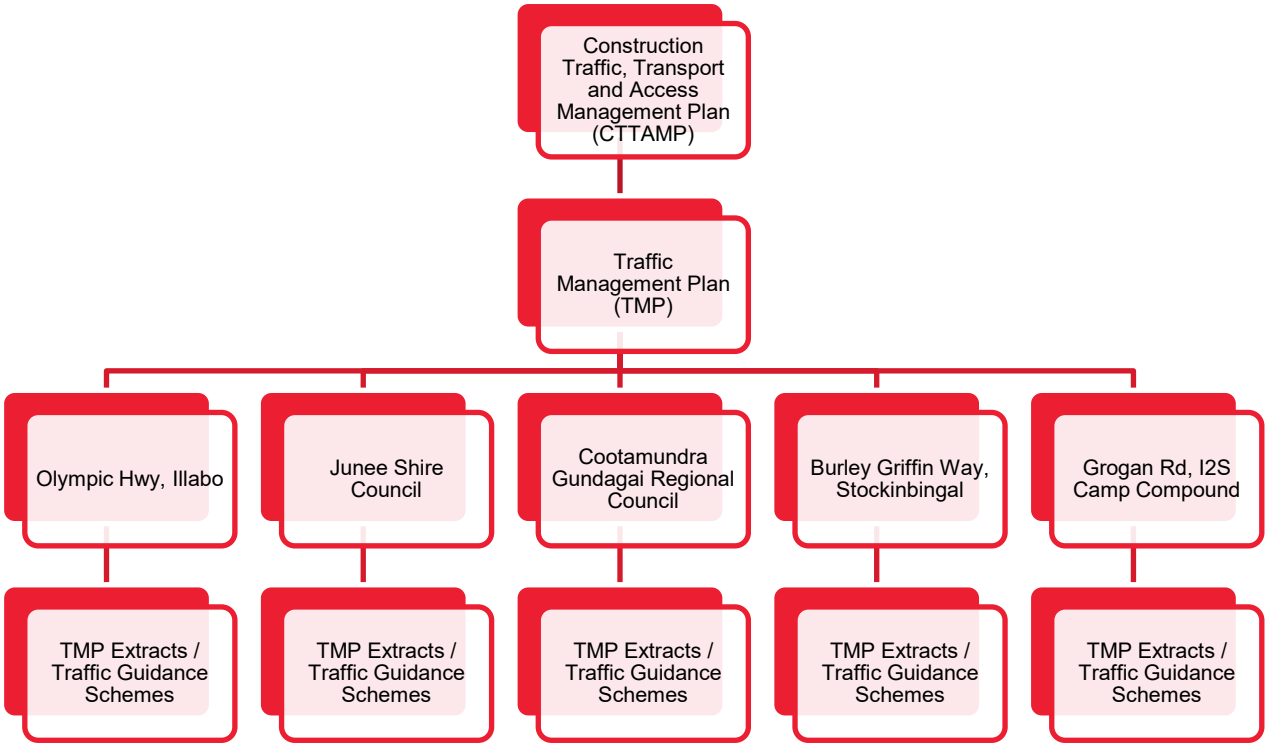


Figure 4-1: Road Access and Traffic Management Plan Structure

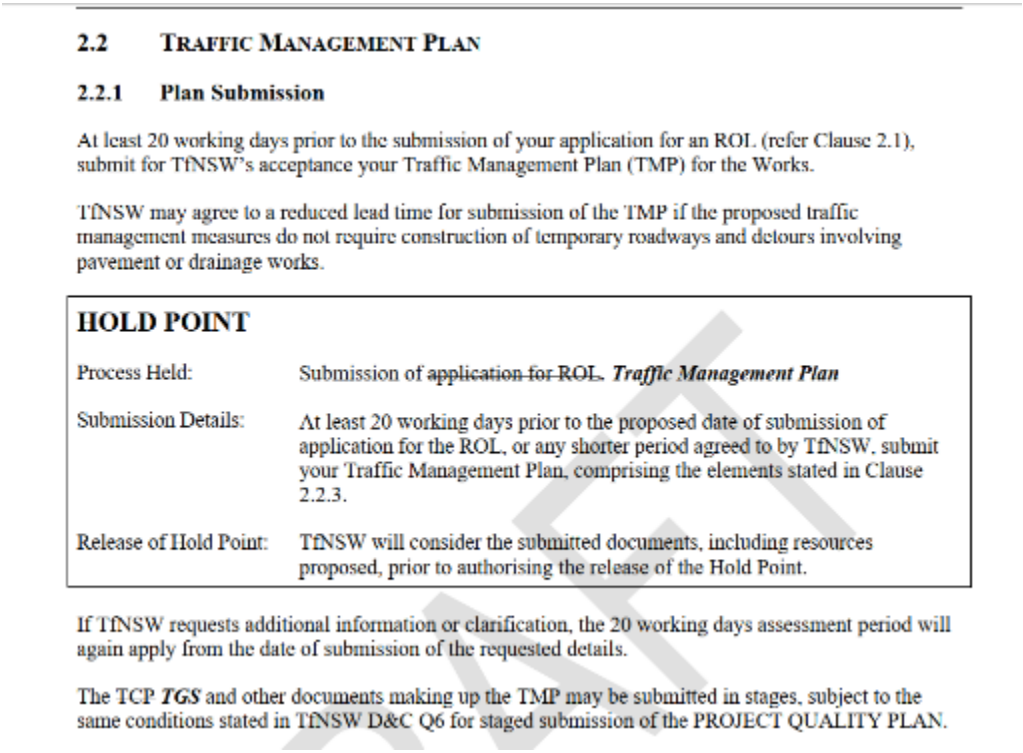
4.2.2 Construction Traffic, Transport and Access Management Plan (CTTAMP)

The Construction Traffic, Transport and Access Management Plan (CTTAMP) prepared under CoA C21 is the overarching traffic, transport and access management plan for the I2S Project.
Information to be included in CTTAMP (identified in Attachment 2 Inland Rail - Environmental Management and Traffic Management Plans - Outline - Illabo to Stockinbingal) and the referencing sections are listed in Table 2-2.

4.2.3 Traffic Management Plans (TMP)

TMP's are a secondary plan detailing operations that are a not related to the CTTAMP.

Extract below regarding Hold point process for relevance to TMP's that is separate to CTTAMP process.



2.2 TRAFFIC MANAGEMENT PLAN

2.2.1 Plan Submission

At least 20 working days prior to the submission of your application for an ROL (refer Clause 2.1), submit for TfNSW's acceptance your Traffic Management Plan (TMP) for the Works.

TfNSW may agree to a reduced lead time for submission of the TMP if the proposed traffic management measures do not require construction of temporary roadways and detours involving pavement or drainage works.

HOLD POINT

Process Held:	Submission of ~~application for ROL~~ ***Traffic Management Plan***
Submission Details:	At least 20 working days prior to the proposed date of submission of application for the ROL, or any shorter period agreed to by TfNSW, submit your Traffic Management Plan, comprising the elements stated in Clause 2.2.3.
Release of Hold Point:	TfNSW will consider the submitted documents, including resources proposed, prior to authorising the release of the Hold Point.

If TfNSW requests additional information or clarification, the 20 working days assessment period will again apply from the date of submission of the requested details.

The TCP ***TGS*** and other documents making up the TMP may be submitted in stages, subject to the same conditions stated in TfNSW D&C Q6 for staged submission of the PROJECT QUALITY PLAN.

Figure 4-2 Section from G10 specification (Traffic Management Plan).

Conforming to *G10, AS 1742.3* and the *TfNSW Traffic Control at Worksites (TCAWS) Manual* will be developed as a separate activity for approval by the relevant authority as described in Figure 4-1. These plans will detail the scope specific and/or work site specific traffic management requirements. Each TMP will include the following detail which has been outlined in various sections of this Plan as shown below:

- Details on the location and timing of the works. (Section 2.1 and Section 2.9)
- Proposed traffic management treatments. (Section 5)
- Impacts to traffic flow (including traffic analysis and modelling where required). (Section 5.2)
- Impacts to public transport. (Section 5.4)
- Impacts to pedestrians and cyclists. (Section 5.5)
- Impact to car parking. (Section 5.6)
- Impacts to over-dimensional loads and heavy vehicles. (Section 6.2 and Section 6.4)
- Site access points. (Section 6.5)
- Haulage routes. (Section 6.4)
- Road Safety Audits. (Section 4.2.7)
- Key contacts for emergency response.

TMPs will be discussed and developed with the relevant Road Authority and TfNSW for classified roads to determine any local and additional site impacts which may need to be considered in addition to the above.

An expected list of TMP's to be developed are listed below in Table 4-2.

Table 4-2: Expected List of TMPs to be developed

Scope/Work Area	Description
Temporary Workforce Accommodation Facility on Grogan Rd	Temporary works north of Stockinbingal to facilitate the construction and operation of the Temporary Workforce Accommodation Facility
Burley Griffin Way (BGW), Stockinbingal	Main works in the Stockinbingal precinct including the realignment of BGW, the BGW tie ins, temporary pavements and utilities. BGW
Cootamundra Gundagai Regional Council (CGRC)	All roads which the road authority is CGRC including but not limited to: • Dudauman Road • Old Cootamundra Road • Hibernia Street • Grogan Road
Junee Shire Council	All roads which the road authority is JSC (Junee Shire Council) including but not limited to: • Old Sydney Road • Ironbong Road • Dirnaseer Road • Blackgate Road • Warrens Lane
Olympic Hwy, Illabo	Main works along the Olympic Hwy, Illabo, a TfNSW state road

4.2.4 TMP Extracts

This will be developed by the engineer and submitted for approval by the coordinating Road Authority and TfNSW for classified roads for the use of traffic control devices (minor and major) on the road network. In conjunction with the TMP extract will be any working within the road reserve applications required at each location.

The TMP extracts will include:

- Details on the location, nature and duration of the works
- Contact details
- Hazard/risk assessment
- Traffic implementation checklist
- Installation and removal record
- Traffic Guidance Schemes (TGS) including detour and Variable Message Signs (VMS) plans
- VMP's and PMP's
- Road Authority approvals (once approved).

4.2.5 Traffic Guidance Schemes (TGS)

TGS will be developed to detail the provisions of traffic control devices and their placements to warn and guide traffic around, past, or as necessary through a work site or temporary hazard. TGS will be developed, installed and removed in accordance with:

- *TfNSW TS 05492 Traffic Controls at Work Sites (TCAWS) including all amendments*
- *TfNSW Austroads Supplement for Guide to Traffic Management Part 10 Traffic control and communications devices*
- *Austroads Guide to Traffic Management Part 10*

- *Austroads Guide to Temporary Traffic Management (AGTTM)*
- *NSW Roads Act 1993*
- *NSW Roads Act Regulation 2018*
- *AS 4852.2 Variable message Signs, Part 2: Portable Signs*
- *TfNSW Roads and Maritime Supplement to AS1742: Manual of Uniform Traffic Control Devices – Parts 1 to 15*
- *Safe Work Australia - Traffic management: Guide for construction work*

The general conditions from Road Authorities (Council and TfNSW) will detail the requirement to design and implement traffic management in accordance with the above standards and guides. Any additional site-specific requirements from Road Authorities will also be adhered to and the necessary details adjusted on site.

TMP's will be developed to include the traffic guidance schemes and VMP's associated with the works.

4.2.6 Construction Gate Roadwork Speed Zoning

The I2S Project will introduce speed zoning in/around construction gate access/egress, these speeds will range from 80km/hr–40km/hr subject to the below factors.

Monthly construction gate onsite auditing will be implemented with findings distributed to network asset owner.

I2S will submit a weekly ROL forecast as per TfNSW issued ROL-Conditions of Use. This will be distributed to all relevant stakeholders, e.g. TfNSW/IRPL/A2P & relevant LGA's. This forecast will assist with network planning/interface.

Roadwork speed zones will be implemented where applicable to assist in managing the risk to road workers or road users in case of a hazard on or surrounding the road.

This may include, but is not limited to the following:

- Where traffic travels past or through a work site or where workers are undertaking activities in or adjacent to the roadway;
- During an accident or an emergency;
- During situations of reduced visibility;
- Where loose material or stones are on the road surface, e.g. during spray sealing works;
- Where there is a reduction in quality of the road surface condition, including where vertical or horizontal alignment is inconsistent with the adjacent length of road;
- When traffic is diverted onto an opposing carriageway, detour or side-track;
- When controlling traffic in accordance with *Section 5.4 Traffic control;*
- Where road users are required to travel adjacent to excavations;

Compliance with Roadwork Speed Zones will be in accordance with *TfNSW TCAWS Issue 6.0* Section 4.5-Speed Zones.

4.2.7 Road Safety Audits (RSA's)

In accordance with CoA E106 and REMMs T-1, prior and post to a change in the road network, John Holland will perform a Road Safety Audit (RSA) This audit will be conducted by independent registered Road Safety Auditors for all areas identified by the Safe Systems Assessment, which forms part of the detailed RSA process, as requiring further assessment to identify potential road safety deficiencies and risk .

John Holland will submit a copy of the RSA to the Client Representative, within five (5) working days, including details of any corrective actions arising from the audit findings, and any subsequent correspondence with the road safety audit team.

5 Traffic Management

5.1 Road Network

5.1.1 Existing Road Network

The existing road network within the Project area consists of two state highways (Burley Griffin Way and Olympic Highway), local roads and private property access roads through primarily agricultural land.

Burley Griffin Way and the Olympic Highway are both two-lane, two-way classified roads.

Burley Griffin Way is a state-controlled road (by TfNSW). The road name changes to Hibernia Street through the township of Stockinbingal, however, remains a state-controlled road. Burley Griffin Way is about 289 kilometres(km) long, connecting the Hume Highway, South-East of Binalong in the East and Griffith in the West. The posted speed limit of Burley Griffin Way is 100 km per hour (km/hr) outside of settlements, and 60km/hr within Stockinbingal.

The Olympic Highway is about 318km in length (controlled by TfNSW), connecting to the Hume Highway North of Albury and Grenfell Road in Cowra. The highway has a posted speed limit of generally 100km/hr.

The existing local road network connects individual properties to major roads such as Burley Griffin Way and Olympic Highway. Table 5-1 below provides the background traffic volumes on local roads detailing the two-way average annual daily traffic (AAT) and both light & heavy vehicle numbers against predicted traffic with the additional construction vehicles.

Additional detail on background traffic is detailed in EIS Chapter 11 Traffic, Transport and access section 11.3.

The roadways which may require some form of traffic management are listed in Table 5-1. Geospatial reference for the key roads is shown in Figure 6-3.

5.1.2 Road Maintenance and Dilapidation

In accordance with E101, a dilapidation survey would be undertaken for all public roads or bridges within the proposed haulage routes and diversion roads prior to the commencement of construction. Reports will be provided to the relevant road authority and TfNSW for classified roads within one month of completion of the road dilapidation survey and at least two weeks before the road is used by heavy vehicles. Road dilapidation will be undertaken in accordance with the IRPL Specification Document 0-0000-900-IAC-00-SP-0001_1, Minimum Requirements for Road Condition Survey.

Where the existing roads that are impacted by the heavy vehicle construction and haulage routes require necessary upgrade, written approval from the relevant road authority and TfNSW for classified roads will be gained prior to commencing main construction works.

Mitigation and remedial measures to minimise and repair impacts on properties, stakeholders, private access roads/tracks and the relevant Road Authority's Road network may include the following where feasible and practicable:

- Consolidation of deliveries
- Utilisation of the Project's haul route along the Project corridor
- Selection of specific designated construction and haulage routes

Remedial measures will need to be assessed on a case-by-case basis in consultation with the applicable stakeholder(s).

John Holland will aim to repair any substantial defects to roads used to gain access to the site within a 24 hour period while in possession of the site unless not feasible (weather conditions, etc.). Consultation with IRPL, the relevant Road Authority and TfNSW for classified roads will be held regarding repairs. If condition is considered not feasible, the defect will still be repaired by John Holland in a timely manner as agreed to

with the relevant Road Authority and or TfNSW. The standard of repair would be equal or better than the condition before the damage (as per the initial dilapidation survey).

If damages to the road (other than haulage routes) that affects road safety or trafficability occur as a result of the construction, John Holland will rectify the damage as soon as practicable after the damage is identified. If the damage doesn't affect road safety, John Holland will act in accordance with the agreements with relevant road authorities, which include but not limited to:

- Restore the road to at least the condition it was in at the time of the dilapidation survey within six (6) months of the completion of construction.
- Leave, maintain or remunerate for damages to these roads at road authorities' discretion.

Refer to Mobilisation Management Plan 5-0019-220-PMA-00-PL-0023 (Appendix B: Condition Assessment Plan) for details regarding pavement condition assessments. mitigation and remedial measures to minimise and repair impacts on properties, stakeholders, private access roads/tracks and the relevant Road Authority's Road network.

5.2 Road Network Performance

5.2.1 Construction Link Assessment

Technical Paper 3 – Traffic, Transport and Access Impact Assessment provided an assessment of Level of Service (LOS) of the roads identified to form part of construction access vehicles routes (refer to Section 7). The results of the link assessments are shown below in Table 5-1.

Table 5-1: Construction Link Assessment

Road name	Background Traffic Data					Predicted Traffic Data with Construction				
	AADT two-way volumes	Peak hour volumes			Peak hour LOS	Peak hour construction volumes			Peak hour combined vehicle volume	Peak hour combined LOS
		LV	HV	Total		LV	HV	Total		
Burley Griffin Way (east of Temora Street)	859	49	29	77	B	87	44	131	209	B
Burley Griffin Way (west of Temora Street)	1,101	67	32	99	B	72	44	116	215	B
Grogan Road	86	5	3	8	B	80	66	146	153	B
Hibernia Street	1,229	82	29	111	B	159	100	259	370	C
Dudauman Road	86	5	3	8	B	80	96	176	183	B
Old Cootamundra Road	277	18	6	25	B	159	100	259	284	B
Dirnaseer Road (east of alignment)	69	5	1	6	B	87	44	131	138	B
Ironbong Road (east of alignment)	25	2	1	2	B	87	114	202	204	B
Old Sydney Road (east of alignment)	17	1	0	1	B	44	58	102	103	B
Olympic Highway (west of Bethungra)	1,774	126	34	160	B	87	114	202	361	C
Retreat Road	46	4	1	4	B	107	66	173	177	B
Junee Reefs Road	40	3	1	4	B	107	66	173	177	B
Goldfields Way	1,774	126	34	160	B	107	66	173	333	B

Road name	Background Traffic Data					Predicted Traffic Data with Construction				
	AADT two-way volumes	Peak hour volumes			Peak hour LOS	Peak hour construction volumes			Peak hour combined vehicle volume	Peak hour combined LOS
		LV	HV	Total		LV	HV	Total		
Stockinbingal Road	277	18	6	25	B	87	44	131	159	B

The assessment concluded that most roads experience no change to the existing LOS B with the addition of construction vehicles. Hibernia Street, Troy Street and Olympic Highway (West of Bethungra) witness a decline in LOS with the addition of construction vehicles, but remain at a satisfactory performance level, LOS C. Please refer to table below for the explanation of different level of LOS.

Table 5-2 – Level of Service Description (From Technical Paper 3 - Traffic, Transport and Access Impact Assessment)

Level of service	Average delay per vehicle (secs/veh)	Intersection performance	Description
A	<14	Good operation	Free flow in which individual drivers are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to manoeuvre within the traffic stream is extremely high, and the general level of comfort and convenience provided is excellent.
B	15 to 28	Good with acceptable delays and space capacity	Stable flow and drivers still have reasonable freedom to select their desired speed and to manoeuvre within the traffic stream, although the general level of comfort and convenience is a little less than that of the Level of Service A.
C	29 to 42	Satisfactory	Stable flow, but most drivers are restricted to some extent in their freedom to select their desired speed and to manoeuvre within the traffic stream. The general level of comfort and convenience declines noticeably at this level.
D	43 to 56	Operating near capacity	Close to the limit of stable flow but is approaching unstable flow. All drivers are severely restricted in their freedom to select their desired speed and to manoeuvre within the traffic stream. The general level of comfort and convenience is poor, and small increases in traffic flow will generally cause operational problems.
E	57 to 70	At capacity	Traffic volumes are a or close to capacity and there is virtually no freedom to select desired speeds or to manoeuvre within the traffic stream. Flow is unstable and minor disturbances within the traffic stream will cause a traffic-jam.
F	>70	At or over capacity	This service level is in the zone of forced flow. With it, the amount of traffic approaching the point under consideration exceeds that which can pass it. Flow break-down occurs and queuing and delays result

5.2.2 Construction Route Intersection Assessment

Technical Paper 3 – Traffic, Transport and Access Impact Assessment provided as assessment of intersection that form part of construction access vehicles routes (refer to Section 7).

The assessment found that all approaches on the existing intersections under assessment operate with very low levels of Degree of Saturation (DOS) and delay and most operate at a LOS A in both the AM and PM peak. With the addition of a worst-case scenario for construction traffic to each intersection, all approaches remain operational at a satisfactory level. That said, the assessment also noted that although it is not an issue found in the results on the analysis, at the Hibernia Street / Dudauman Street intersection the risk of vehicles queuing across the Dudauman Street level crossing should be considered by traffic control engaged at this site whilst the Troy Street diversion is in place.

5.2.3 Maintaining Network Performance

As documented above. the surrounding road network is not expected to be significantly impacted by construction traffic associated with Project works. To further ensure the safety of road users and efficiency of the road network, John Holland will apply the following key road safety and transport principles:

- Utilise the hierarchy of controls to eliminate/reduce the risk to workers on roads and balance the requirements for maintaining access for the community.
- Residents, businesses, and properties within the Project boundaries will always have access through or around the works.
- Ensuring potentially affected pedestrians, cyclists, road users, landowners and businesses are identified during the design and construction planning phase.
- Isolating work areas from traffic flows, through appropriate site planning, choice of construction methodologies and clear delineation of worksites that comply with Australian Standards and Council by-laws.
- Maximise working opportunity on the roads. Works will be sequenced so that the works can be carried out isolated from live traffic as much as feasibly possible.
- Minimise driver confusion by ensuring clear and concise traffic guidance schemes and by using existing and new communication networks to advise commuters and the public of upcoming changes on the road network, where applicable
- Effectively plan all construction vehicle movements including the provision of safe access and egress points at the interfaces with the existing road network
- Limit obstructions and restrictions on the existing road network, and when necessary, provide alternate routes to maintain access for the local community and businesses.
- Enforce a monitoring regime to measure and respond to the impacts of traffic changes and any identified road user or public safety issues.
- Engage traffic control to maintain vehicle flow and safe access where required on construction and diversion routes and at construction gate access/egress.
- Plans, manage and coordinate Construction Gate activities, where possible, that may fall within the direct catchment area of other gates.
- Traffic management during drilling and blasting which impact on TfNSW roads shall be carried out in accordance with *AS 1742: Manual of Uniform Traffic Control Devices*.

5.2.4 Temporary Road Closures

As per consultation with both LGAs, detours are the least preferred option. However, due to the nature of the works, both short-term and long-term road closures (i.e. diversions and detours) will be required to enable the construction of the Project. Temporary road closures may be required for but are not limited to the following construction activities:

- Re-alignment of a roadway and its associated tie-ins
- Works over the roadway such as the installation of bridge spans or concrete pours
- Roadworks within the road corridor
- Utility installation works such as for overhead powerlines

The Project has identified two (2) short-term necessary detours:

- Old Cootamundra Road ~ 70m west of Dudauman Road (266vpd, 2018) (duration ~12 hours) (7 shifts over 2-weeks)
- Dirnaseer Road ~ 890m east of Dudauman Road (66vpd, 2018) (duration ~12 hours) (7 shifts over 2-weeks)
- All planned short-term detours will occur under day shift only.
- To minimise impacts both roads will not be closed concurrently.

The Project requires several full closures of these roads to install precast elements that span both directions of traffic without a road closure these is no safe means of installing these elements. The installation of the Super T's will require the crane to set up on the roads and block them Construction has been sequenced to minimise these closures by offsetting the abutments from the roads thus avoiding extensive closures

Prior to any road closures, all relevant stakeholders, including planned community, landowners, the relevant Road Authority and TfNSW for classified roads, will be consulted.

Where emergency services need to utilise the road to respond to an incident works will be made safe and traffic control will allow the emergency services through the closure. Emergency services will be briefed on this arrangement prior to the closures

Other than the formal platform of TTLG meetings with LGAs and representatives from other relevant stakeholders, feedback channels, including Community information line, Project email address, physical Project information centre etc. will be utilised to receive potential complaints or advise from the public as per I2S Community Communication Strategy (https://inlandrail.com.au/wp-content/uploads/2024/10/i2s-community-communication-strategy-4.pdf). All complaints received during the I2S Project will be actioned and recorded through Consultation Manager and used as an improvement opportunity for future work.

The works will be planned in such a manner to ensure access is maintained and impacts are minimised so far as is reasonably practicable.

5.2.4.1 Old Cootamundra Road

A closure of approx. 200m of Old Cootamundra Road (~70m West of Dudauman Road) is required for the bridge construction. All planned short-term detours will occur under day shift only. The detour to travel from/to the immediate West/East end of the closure is about 59km, via Dudauman Rd, Burley Griffin Way, and Combaning Rd. The detour will take roughly 40 minutes to drive. Please refer to the figure below for detailed route.

Where emergency services need to utilise the road to respond to an incident works will be made safe and traffic control will allow the emergency services through the closure. Emergency services will be briefed on this arrangement prior to the closures



Figure 5-1: Old Cootamundra Rd Detour – From/To Immediate West/East End of Closure (unlikely)

However, it is unlikely traffic will travel all the way along this detour, given limited residents around. In addition, notification will be distributed, and VMS boards will be installed prior to the road closure at key intersections and surrounding towns to suggest traffic take alternative routes instead. The detours for traffic to travel to/from/between towns are listed below.

For traffic originally travelling between Temora and Cootamundra, a detour route has been identified, which only result in 2 extra km, and 4 extra minutes of driving time. Please refer to figure below for detailed routes.



Figure 5-2: Old Cootamundra Rd Detour – Travel Between Temora and Cootamundra

For locals immediately West of the closure, travelling to Temora will not be impacted by the closure. However, to travel to Cootamundra, the detour route will result in an extra 53 km travel distance, which takes an extra 35 minutes to drive. Please refer to figure below for detailed routes.



Figure 5-3: Old Cootamundra Rd Detour – Locals immediately west of the closure traveling to Cootamundra

For locals immediately East of the closure, travelling to Cootamundra will not be impacted by the closure. However, to travel to Temora, the detour route will result in an extra 7 km travel distance, which takes an extra 7 minutes to drive. Please refer to figure below for detailed routes.



Figure 5-4: Old Cootamundra Road Detour – Locals immediately east of the closure traveling to Temora

Considering the significant detour proposed for locals West of the closure travelling to Cootamundra, communication with affected local residents will be conducted to ensure the awareness of the closure, including but not limited to installation of VMS boards at main intersections and door knock / letterbox drop.

Please refer to Section 9.1 for detailed communication strategies. The above traffic detours will also be further consulted with LGAs to determine a suitable time to implement the detours which will have the least impact on traffic.

5.2.4.2 Dirnaseer Road

A closure of approx. 200m of Dirnaseer Road (~ 890m East of Dudauman Road) is required for the bridge construction. The detour to travel from/to the immediate West/East end of the closure is about 64km, via Blackgate Rd, Old Cootamundra Rd, Temora St, Boundary Rd, Hurley St, and Olympic Hwy. The detour will take roughly 50 minutes to drive. Please refer to the figure below for detailed route.



Figure 5-5: Dirnaseer Road Detour – From/To Immediate West/East End of Closure (unlikely)

However, it is unlikely traffic will travel all the way along this detour, given limited residents around. In addition, notification will be distributed, and VMS boards will be installed prior to the road closure at key intersections and surrounding towns to suggest traffic take alternative routes instead. The detours for traffic to travel to/from/between towns are listed below.

For locals immediately West of the closure, travelling to Temora will not be impacted by the closure. However, to travel to Cootamundra, the detour route will result in an extra 26 km travel distance, which takes an extra 19 minutes to drive. Please refer to figure below for detailed routes.

All planned short-term detours will occur under day shift only.

Where emergency services need to utilise the road to respond to an incident works will be made safe and traffic control will allow the emergency services through the closure. Emergency services will be briefed on this arrangement prior to the closures



Figure 5-6: Dirnaseer Road Detour – Locals immediately west of the closure travelling to Cootamundra

For locals immediately East of the closure, travelling to Cootamundra will not be impacted by the closure. However, to travel to Temora, the detour route will result in an extra 28 km travel distance, which takes an extra 21 minutes to drive. Please refer to figure below for detailed routes.

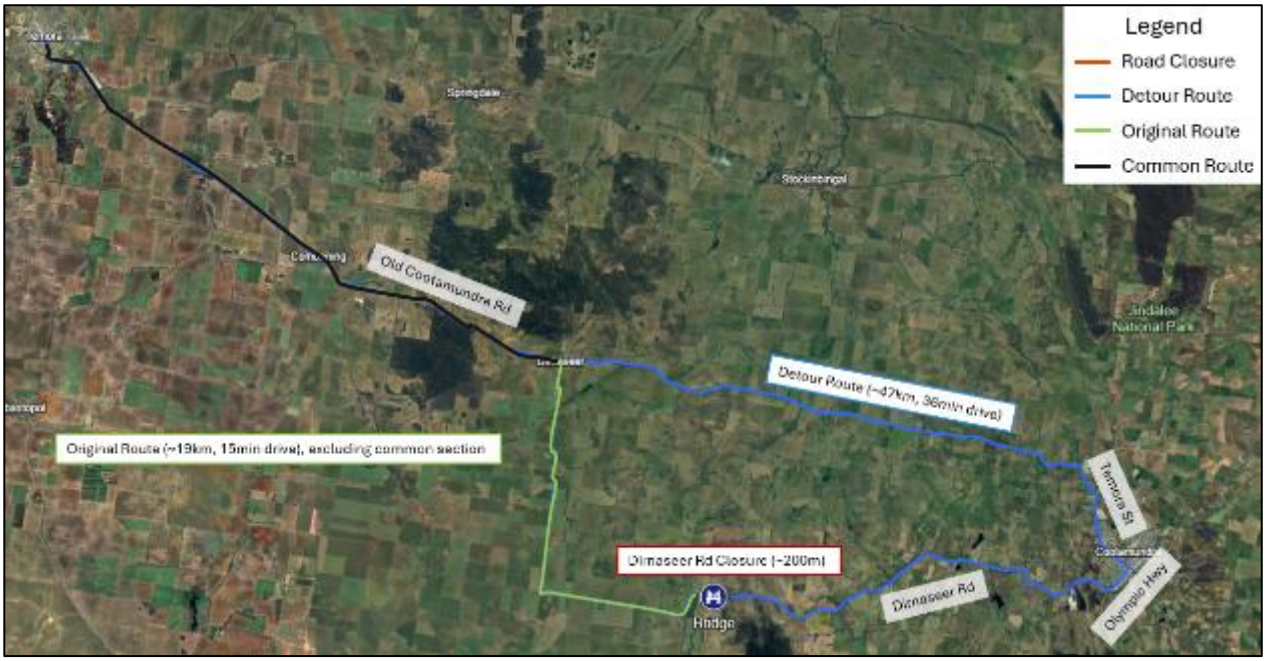


Figure 5-7: Dirnaseer Road Detour – Locals immediately east of the closure travelling to Temora

Considering the significant detour proposed, communication with affected local residents will be conducted to ensure awareness of the closure, including but not limited to installation of VMS boards at main intersections and door knock / letterbox drop. Please refer to Section 9.1 for detailed communication strategies. The above traffic detours will also be further consulted with LGAs to determine a suitable time to implement the detours which will have the least impact on traffic.

5.2.5 Community communication Strategy (CCS)

John Holland's Communications and Stakeholder Engagement team have prepared Community Communication Strategy (CCS). The CCS include:

- Principles to guide the overall approach to community and stakeholder involvement.
- Identification of the stakeholders and groups to be consulted during the Project.
- Identify details of the community and its demographics.
- Procedures and mechanisms for the for the distribution of information about the Project, such as regular updates about establishment activities, the program for establishment activities and key milestone dates.
- Opportunity for the community to visit Project establishment sites.
- A process for communication with adjacent/nearby developments for the management of potential cumulative impacts or omissions (noise, air or odour) from their sites.
- Methods for involving establishment personnel in engaging with the local community.
- Methods and tools for engaging with the local community, including community forums to discuss key traffic management issues of concerns for the Project.
- Construction activities, timing, expected impacts and mitigation measures will be communicated early, to enable the community and stakeholders to anticipate and plan around upcoming disruption.
- Notification will be provided through a range of methods, including SMS, email, door knocks, VMS and letter box drops.
- The Communication and Stakeholder Engagement team will implement a process to monitor and identify instances where works and activities may lead to construction fatigue or require respite and relocation offers. This will include reviewing the delivery program, identifying sensitive stakeholders, modelling impacts, undertaking 'health checks' and implementing strategies to reduce the impact.
- Communications about traffic and transport changes:
    - John Holland will engage with transport operators and authorities to agree and communicate changes to traffic and transport arrangements.
    - Information will be provided through a range of methods, including signage, advertising, media relations, digital channels and direct engagement.
    - The communication of significant changes or disruptions will be documented in Communication Action Plans.
- Seek feedback and advice from impacted stakeholders on the effectiveness of mitigation measures and support provided
- All compliant/ feedback received to be recorded and actioned through Consultation Manager and will be used as an improvement opportunity.
- Procedures and mechanisms:
    - Detailing how the community can discuss or provide feedback in relation to the Project
    - Detailing how the Project team will respond to community enquiries and feedback
    - Describing how issues will be resolved or disputes meditated in relation to traffic management and establishment of the Project
    - Identifying who will engage with the relevant stakeholders
    - Describing how to resolve any issues and mediate any disputes that may arise in relation to property and infrastructure impacts

The CCS will be implemented for the duration of the Project through the implementation of the Project Communication Management Plan. John Holland will prepare and implement a Complaints Management System (CoA B6) which aligns with the CS.

Additionally, John Holland will introduce the below tools to notify the community of any activities:

- John Holland will be installing signage fourteen (14) days prior any activities or interactions with road – Informational or directional signage at the location of the traffic change to give advice to road users and pedestrians on direction of change or alternative paths.
- To provide traffic alerts at least fourteen (14) days prior – communication to transport operators, relevant authorities and emergency services to be advised of changes to traffic and access arrangements including road or lane closures and detours as per the approved CTTAMP.
- VMS signs – Electronic variable message signs providing advanced notice to road users of traffic changes.
- Advertise if requested as part of the CTTAMP in local newspapers (that cover the area) or via the radio, significant traffic management changes, detours, traffic disruptions and work outside working hours contained in the Environmental Documents at least fourteen (14) days before any detour, disruption or change occurs.
- Face to Face tools:
    - Stakeholder Engagement Coordination Group (SECG)
    - Community Reference Group (CRG)
    - Information centres
    - Information sessions and pop-up displays
    - Meeting with individual/ groups
    - Hosts/ support community events

The reference of above have been included in Appendix M – Communications and Stakeholder Engagement Management Plan.

5.3 Management of Vehicular Traffic

5.3.1 General

John Holland will aim to minimise the Project's impact on the road networks through the following:

- Minimising the footprint of works on roads and identifying potential adverse impacts during design.
- Considering work durations during planning to minimise occupation times on roads for construction and maintenance.
- Detailing plans for route guidance via media releases and roadside VMS.
- Considering the modal priorities identified by the client and relevant stakeholders.
- Planning works to maximise capacity during peak periods.
- Identifying suitable alternative routes for diverted traffic.
- Working with TfNSW to develop strategies for the wider network to minimise impacts.
- Developing contingencies as part of the planning process for any potential delay event.

5.3.2 Variations in Traffic Flow

5.3.2.1 Approaches to Public Holiday Periods and Seasonality

John Holland acknowledges that seasonality and public holiday periods may see an increase in public road users. John Holland will assess this impact and make adjustments as required to ensure the allowable level of service (LoS) is maintained.

Controls may include:

- Time construction haulage to be during non-peak hours or low-traffic periods
- Additional signage to warn motorists of construction activities and movements
- VMS and RASS Boards travel time monitoring subject to approval from road authority.
- Coordination with highway patrol to promote speed compliance.

5.3.2.2 Management Measures for Various Harvesting Periods and Associated Oversize Vehicles

John Holland is aware of the increased agricultural related traffic on the road network during the following periods:

- Harvest period
  - Typically conducted from September through till December each year.
  - Likely a high level of truck movements transporting produce from the farms to the distribution silos
  - Likely to see oversize vehicles such as headers, tractors with chaser bins more frequently utilising the road network
- Sowing Period
  - Typically conducted during Quarter 2 each year.
  - Likely to see oversize machinery and vehicles more frequently utilising the road network

John Holland acknowledges that oversize agricultural vehicles are likely to utilise the road network year-round either to move machinery or goods between properties. While no direct impact has been identified on agricultural vehicles, special attention will be given to both peak periods and all year-round agricultural activities when planning the works to ensure the road network has been maintained with minimal influence. Mitigation and management measures proposed include:

- Install TfNSW approved signages with UHF# where necessary so that OSOM / agricultural vehicles can communicate prior to enter work zone and receive further instruction to proceed through site.
- In the areas with long-term work site in place (i.e. bridge construction), VMS boards will be installed with supplement of community notification
- Weekly TfNSW forecast showing location of works 7-day prior to implementation will be distributed to relevant parties upon request
- Workers will be informed of potential location with high harvesting activities at pre-start to increase the awareness.
- Considerations have been made to account for agricultural activities when planning the detour routes

5.4 Management of Public Transport

John Holland has identified that the two potential impact areas with public transportation services provided near construction access points are Stockinbingal and Illabo.

On the Stockinbingal end, there is one bus stop located on Hibernia St west of Dudauman Rd. Five buses operate at this bus stop, including 3 school bus services and 2 regional coach services (public bus services connecting regional areas).

The bus stop will not be affected by construction activities, and no alteration will be required for the current bus route. However, higher construction traffic volume is expected in this area, given several site access gates are located on Burley Griffin Way (on the bus operation route), and the worker accommodation facility is located off Grogan Road.

Contingency measures to be enabled to manage increased road traffic and pedestrian interface.

- Key periods of increased pedestrian activity, e.g.: school holidays, in-town school social and sporting events raised to Project workforce at daily pre-starts where applicable.
- Weekly drive though dash cam audit/assessment to monitor changes in increased road traffic and pedestrian activity.
- VMS strategy, if identified, to promote awareness for both pedestrians and vehicle interface subject to TfNSW/LGA approval..

- Advisory temporary signage installation subject to TfNSW/LGA approval.
- Speed reductions subject to risk assessment.
- Required Road safety Audits to independently assess vulnerable road user interface with public and construction traffic.

Refer to table below for details of the operation time for each bus and figure for the operation route map in the vicinity.

Table 5-3: Bus Services in the Vicinity of the Construction Footprint near Stockinbingal

Bus Route	Service Type	Operation Frequency	Time at Stop
S296 Stockinbingal to Grogan Rd via Hibernia St	School Bus	Monday to Friday During school terms	08:06 16:01
S650 Cootamundra to Cootamundra Schools via Stockinbingal	School Bus	Monday to Friday During school terms	08:08 16:01
S309 Stockinbingal Town to Stockinbingal Public School	School Bus	Monday to Friday During school terms	07:30 16:00
725 Cootamundra to Mildura	Regional Coach	Daily	15:14
726 Mildura to Cootamundra	Regional Coach	Daily	11:56

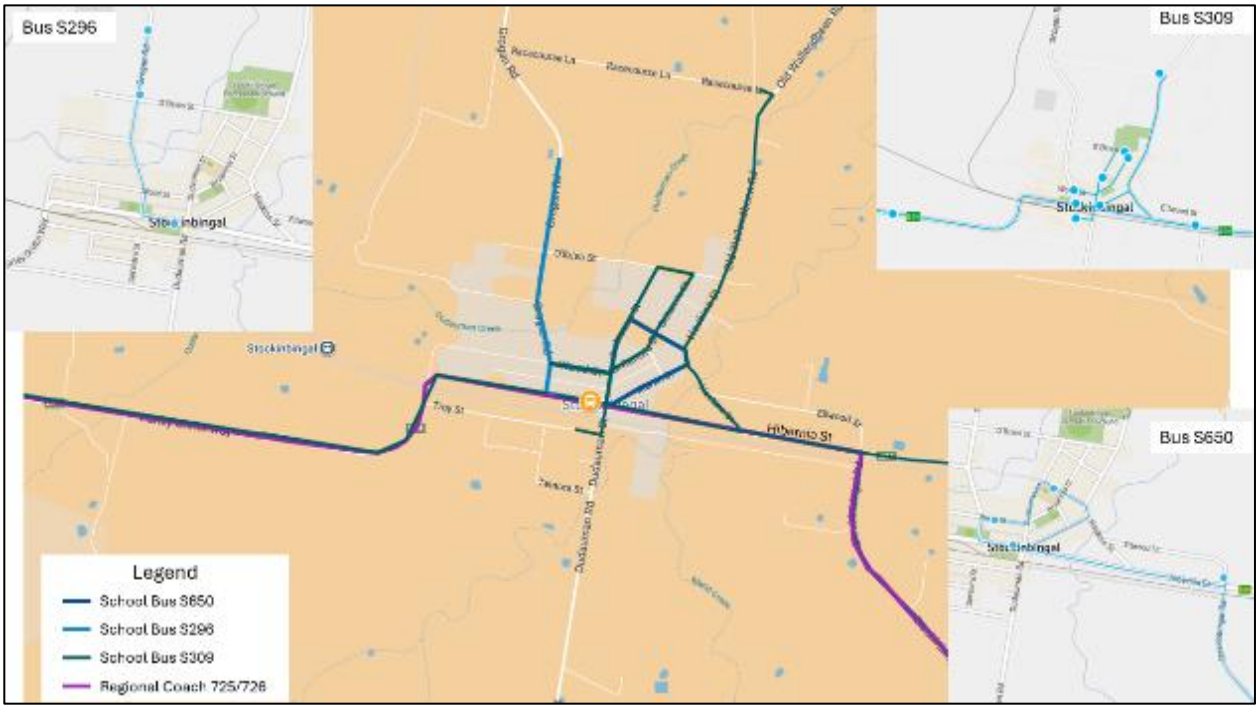


Figure 5-8: Bus Operation Route in the Vicinity of the Construction Footprint near Stockinbingal

Table 5-4: Bus Services in the Vicinity of the Construction Footprint near Illabo

Bus Route	Service Type	Operation Frequency	Time passing LX
S507 Illabo to Cootamundra Schools via Dirnaseer	School Bus	Monday to Friday During school terms	08:00 16:19
S437 Junee to Illabo Public	School Bus	Monday to Friday During school terms	08:28 – 08:57 15:28 – 15:56



Figure 5-9: Bus Operation Route in the Vicinity of the Construction Footprint near Illabo

To minimise the impact on the bus services, the below mitigation measures will be taken, including:

- Construction activities to be planned to avoid the time when buses are expected to be around (i.e. school zone hours) as much as possible.
- Ongoing consultation with local councils, schools, bus service companies, and TfNSW on all construction activities that might have an impact on the public transport.
- All traffic control measures to be consulted and approved by relevant authorities prior to implementation.
- Early notification to be distributed to all affected stakeholders to ensure sufficient notice has been provided to the public.
- Educating drivers and workers to increase the awareness of the school traffic.

All Management measures for public transportation routes will be aligned with the relevant Road Authority Standards.

5.5 Management of Vulnerable Road Users

Consideration for managing vulnerable road users, including pedestrians and cyclists, on the road network to ensure safe passage and accessibility have been taken. In circumstances where road conditions will change, advanced signage will be installed to alert pedestrians and cyclist of changing road conditions. Regular inspections of the carriageway will also be undertaken to ensure safety for all users.

To further improve the safety of vulnerable road users, training to promote positive driver behaviour will be provided, including implementing the Worker Code of Conduct and increasing the awareness of vulnerable road users. The location of sensitive receivers, including residential and school zones in the vicinity of the Project will also be provided to the workers.

Relevant surveillance measures as described within the CMP will assess any changes to this environment on a monthly reportable basis.

5.5.1 Pedestrians

Existing footpaths will be outside of the construction boundary, thus not affected by the proposal. All existing formal and informal pedestrian connectivity will be maintained under LGA jurisdiction.

The only area to monitor or potentially have traffic control in place is Hibernia Street, traffic control details to manage the safe passage of pedestrians will be included in the relevant Traffic Management Plan. School children alighting from local bus stops will also not be impeded.

5.5.2 Cyclists

While no existing cyclist routes have been identified within the footprint of the Project by John Holland, cyclists have been considered throughout the planning and implementation process. Note this is consistent with the findings of the EIS Chapter 11. In the case of any cycling events, John Holland will coordinate with local cyclists' groups and charity events (if applicable), to minimise any impacts construction might have.

5.6 Management of Parking

Outside of provisions for on street parking on Hibernia Street in Stockinbingal, there is no formalised public parking, or parking restrictions known along the extent of the Project site. Work traffic travelling from camp to site will be parked within work site compounds, including both LV and HVs. The parking capacity within the site compound will be sufficient for internal movement and will accommodate the traffic generated by the compound. Nonetheless, if required, John Holland will adopt management measures for parking in consultation with the relevant Road Authority and to the relevant Road Authority Standards.

5.7 Management of Emergency Services

Consultation with emergency services providers will continue throughout construction of the Project to minimise impacts on emergency services operations.

John Holland will include provisions for priority for emergency services vehicles to travel through the construction impact zone where possible. Access will be provided throughout the construction sites should an emergency arise on-site during the works. Signage will be implemented to ensure that all construction and adjusted property accesses are clearly signposted. Contact details of Local Emergency Service Providers including Police, Ambulance, Fire & Rescue operators can be swapped with John Holland key contacts if required to facilitate access.

Any detours will be detailed in a Traffic Guidance System and forwarded to each emergency service prior to the implementation of the scheme. The John Holland Traffic Manager and/or delegate will notify the emergency services providers when access to properties or traffic routes is expected to be impeded for any period of time.

5.8 Management of Property Access

In accordance with Condition E97, works directly in front of and/or affecting property access shall be carried out such that:

- If an alternate access/egress is not available, the Project will provide the property with temporary alternate access to an agreed standard determined through consultation with the landowner.

- Where properties have access at more than one location, access shall always be maintained at one location and other accesses shall be constructed in stages to minimise restrictions to traffic.
- All accesses to these properties shall be reinstated (in consultation with the landowner).
- The duration of works shall be minimised and shall be undertaken in consultation with the property owner and/or occupier.

The consultation associated with use of private property access or where construction may impact on access for landowners will be managed in accordance with Condition E94 and will provide a suitable alternative as outlined above that minimises and mitigates impacts to the following:

- safe and convenient stock and machinery movement across the rail corridor, including provision and maintenance of livestock holding pens;
- the safe and efficient operation of agricultural aerial activities;
- provision and maintenance of fencing of a type suited to stock and livestock husbandry operations conducted on the property (including barrier fencing where appropriate); and
- relocation of farm infrastructure necessitated by the CSSI.

The Individual Property Management Plan (IPMP) will incorporate the agreed management measures described in the process above and be updated and reviewed during the Project (from design to construction) to ensure the effectiveness of the access information and mitigation measures that are agreed between the Project and landowners.

Where the legal access to a property is permanently affected and a property has no other means of access, alternative access to/from a public road would be provided to an equivalent standard where feasible or practicable. Where an alternative access is not feasible or practicable, negotiations will be undertaken with the landowner in accordance with UMM LP-6.

In addition, John Holland will give notice in writing to occupants of properties prior to commencement of any operation affecting property access, this will be in accordance with the I2S Community Communication Strategy 4-0000-220-PCS-00-ST-0001_3.

5.9 Management of Freight Operators

John Holland notes that several roads surrounding the Project form part of the pre-approved freight network (i.e., B-double network, Oversize Overmass etc.). As part of catering for vehicles utilising the network, John Holland will liaise in writing with the appropriate authority to:

- Ensure that TfNSW and Local Government Areas are provided sufficient information about of the status of surrounding roads.
- Ensure that a suitable route or alternative route is available for the movements of freight vehicles
- Ensure that John Holland has warning of oversize and/or overmass vehicle movements.

With respect to oversize and/or overmass vehicles, John Holland will develop and implement an efficient process for issuing information to the Heavy Vehicle Road Operations Program Officer on temporary road closures to enable suitably conditioned permit for the movement of oversize and overmass vehicles. In addition, notification to local freight operators in surrounding LGAs will be distributed.

5.10 Management of Travelling Stock Reserves

Travelling stock reserves (TSR) are reserves of connected Crown land that are designated for the movement of stock between watering and grazing land but are also used for emergency stock refuge and transport of stock to market, providing biodiversity corridors, and access and connection to Country for Aboriginal peoples, and cultural heritage protection. Often the TSR will be along roads and consequently interface with road vehicles. A TSR, when on public roads, is referred to as a livestock highway. Livestock highways proximate the Project include sections of Goldfields Way, Old Cootamundra Road, Dudauman Road, Wood Street and Grogan Road.

These are depicted below.

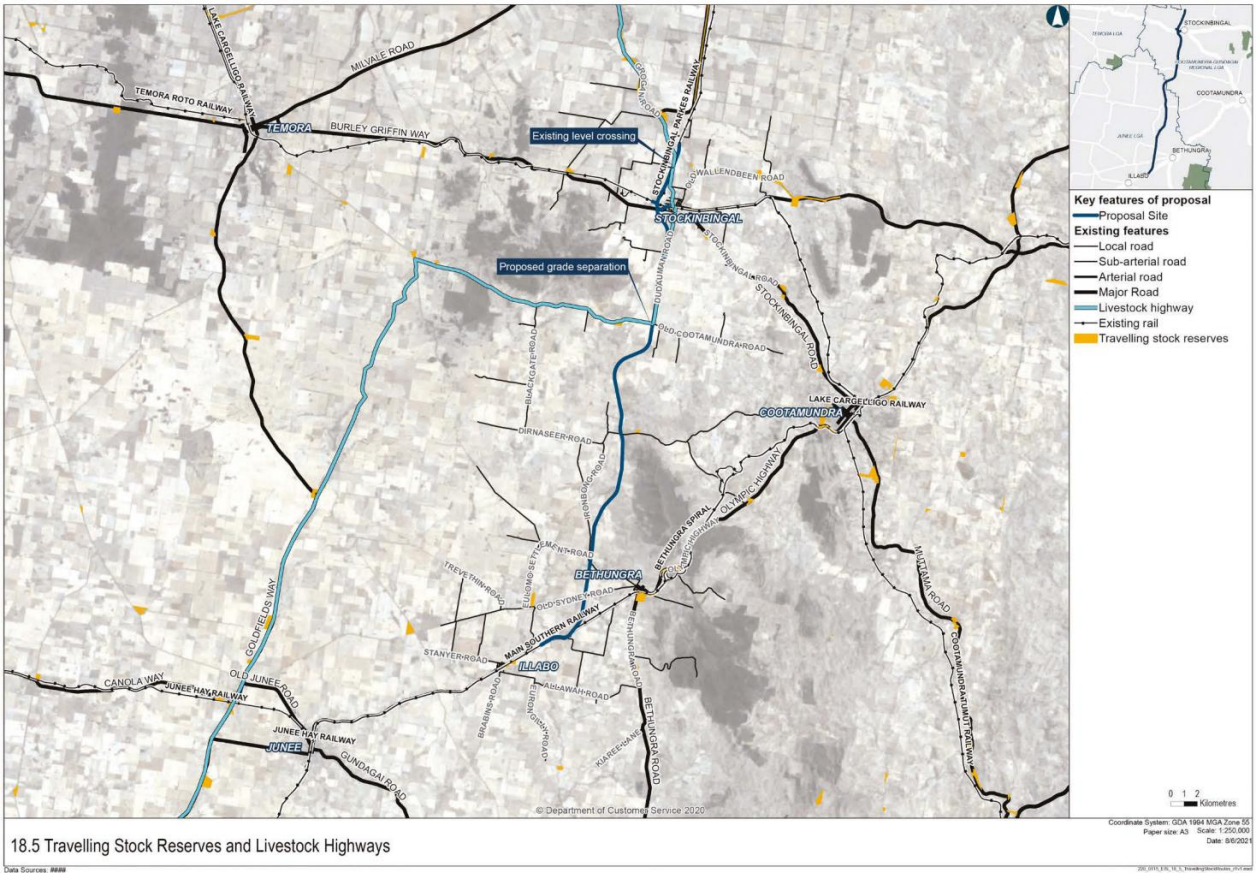


Figure 5-10:Travelling Stock Reserves and Livestock Highways

John Holland acknowledges the presence of travelling stock services and livestock highways throughout the region and will consult with IRPL regarding their management during construction (noting that an interface between IRPL and Local land Services (LLS) will be required to ensure the interface between farmers, livestock and construction vehicles movements is coordinated in a manner that is safe and prevents delays to construction and farmers or other associated parties utilising the livestock highways).

Generally, management measures will include:

- Identifying the location of travelling stock reserves and livestock highways.
- Communicating and briefing Project staff on the location of travelling stock reserves and livestock highways and the associated LLS standard protocols.
- Notifying Local Land Services (LLS) of increased heavy vehicle movements along livestock highways during the construction phase as well as periods of changed traffic operations.
- Take travelling stock timing into account when planning construction activities to decrease the adverse impact
- Consulting Local Land Services (LLS) or relevant authorities and local landowners prior to work commencing to ensure the impact is minimised and communicated

Additionally, in accordance with CoA E100, John Holland will notify LLS at least one (1) month prior to any access and/or movement restrictions on the Old Cootamundra Road underbridge to enable alternative stock routes to be used.

5.11 Management of Road Workers

The Project will provide physical or visual barriers to protect the work area reduces the risk of incidents between vehicles, road workers and vulnerable road users. Treatments to reduce the potential for unwanted intrusion into the work will include:

- Portable Traffic Control Devices (PTCDs)
- Traffic Controllers
- Safety buffers
- Temporary road safety barrier systems
- Reduced speed zoning
- Containment fences.

PTCDs are the preferred method to control traffic. They are used to enhance the safety and protection of road users and road workers, specifically traffic controllers and workers on foot.

When using PTCDs, and situations occur where vehicles can bypass the temporary traffic control station, the placement of additional cones along the centreline will be installed to provide a sufficient distance to prevent the vehicle passing the PTCD.

Before including a PTCD in a TGS, a risk assessment will be undertaken to ensure the suitability and choice of PTCD.

Work sites are hazardous areas so manual traffic control will only be used where PTCDs are insufficient to provide the safety, capacity and efficiency required for effective traffic control.

Safety buffers will provide additional protection for road workers on the approaches to and extending around the work area. No works or road workers will be permitted within the safety buffer, and the safety buffer shall be kept clear of all types of work vehicles, plant, equipment, storage and stockpiled material.

6 Construction Traffic and Access Management

6.1 Overview

John Holland will manage and conduct construction traffic and haulage operations in accordance with:

- Relevant Traffic Impact Assessments (TIAs)
- All relevant Approvals from NSW, TfNSW, Junee Shire Council, Cootamundra-Gundagai Regional Council Road Authorities
- The Construction Environment Management Plan (CEMP) 5-0019-220-PMA-00-PL-0031
- Applicable legislation and Australian Standards
- Relevant Third-Party Agreements regarding the use of state/local/private roads
  - Junee Shire Council
  - Cootamundra-Gundagai Regional Council
  - TfNSW
  - Landowners
- Relevant Australian Standard during drilling and blasting which impact on TfNSW roads

John Holland will aim so far as is reasonably practicable (SFAIRP) to minimise noise and amenity impacts of heavy vehicles when:

- Entering and exiting the construction compounds, and ancillary sites, and they are located within or adjacent to the construction boundary.
- Driving through populated areas, including school zones at speed limited times (school zone period).
- The following controls may be used to minimise such impacts:
- Promote positive driver behaviour through methods such as Project inductions, task risk assessments (TRAs) and toolboxes. Educate workers of sensitive receiver locations including residential and school zones within the Project footprint.
- Radar Activated Speed Sign (RASS) Boards with speed recognition capabilities.
- Limit heavy vehicle movements through school zones during the speed limited time periods

Additional, controls are contained within the following management plans:

- Construction Noise and Vibration Management Plan (5-0019-220-PMA-00-PL-0054); and
- Construction Environmental Management Plan (5-0019-220-PMA-00-PL-0037)

As per CoA C21 (d) the Project will schedule heavy vehicles movement to avoid movements on public roads outside the construction hours detailed in CoA Condition E1. John Holland notes that there may be situations where heavy vehicles will need to be scheduled outside of these construction hours due to instances such as oversize or over mass loads, this is typically dictated by NHVR requirements and TfNSW Freight Pass Approvals. In instances such as this where heavy vehicle movements are required outside of the defined construction hours, John Holland will plan and confirm these works can be undertaken in accordance with the Project Out of Hours Works Protocol (included in the NVMP) then an approved out of hours work permit will be required.

6.2 Heavy Vehicle Compliance

6.2.1 Overview

John Holland is committed to conducting the Project operations in compliance with national and state WHS and heavy vehicle laws, regulations, and codes of practice.

The Project will commit to informing all workers and subcontractors of their Heavy Vehicle National Law (HVNL) and Chain of Responsibility (CoR) obligations as they relate to their duties at all levels of inductions. Including that all haulage vehicles require a permit to travel through the National Heavy Vehicle Regulator and that the relevant Road Authority approval must be gained.

The Contractor shall ensure that all Heavy Vehicle Operators engaged by the Contractor provide an In Vehicle Monitoring System for all vehicles classified as heavy vehicles under the Heavy Vehicle National Law that includes:

- Real time notification of entry into no-go zones and unapproved public roads.
- Real time tracking of current construction and haulage vehicle locations.
- Historical reporting of used construction and haulage routes.
- Journey route planner of construction and haulage routes.
- Shared online access and reporting function for each relevant Road Authority, Independent Verifier where applicable, and IRPL to review the Contractor's construction and haulage vehicle movements; and
- Reports from these systems, which shall be made available to IRPL upon request.

6.2.2 Driver Behaviour and Code of Conduct

All drivers employed on the Project, whether direct employees or not, have a responsibility to drive safely, comply with State Road regulations and the Australian Road Rules and any other directives issued by I2S, before any deliveries are undertaken all heavy vehicle drivers will be required to read and endorse the Drivers Code of Conduct.

6.3 Oversize and/or Overmass (OSOM) Deliveries

Where OSOM deliveries are required for the Project, John Holland will ensure that all appropriate permits and/or notices have been obtained through the National Heavy Vehicle Regulator (NHVR). An appropriate heavy haulage contractor will be engaged to ensure compliance and specific vehicle configurations when transporting oversize and/or overmass deliveries. The haulage contractor is then responsible for preparing the OSOM application to NHVR, including route analysis, assessment of clearing heights, bridge weight limits and swept path analysis as required, and obtaining the NHVR permit for OSOM deliveries

The current OSOM network surrounding the Project area is shown below in Figure 6-1. The network map is available via the NHVR website.

- https://maps.nhvr.gov.au/?networkLayerContext=NATIONAL_MAP&view=Category&exemptionSetId=-2&networkIds=%5B2157%5D



Figure 6-1: NHVR Oversize and/or Overmass Network Map

6.4 Construction Traffic and Haulage Routes

6.4.1 Proposed Haulage and Construction Routes

The haulage and construction routes to be utilised during construction are shown in Figure 6-3 and Figure 6-4. And B-double approved routes are shown in Figure 6-2 for reference. These figures have been separated to show the hierarchy of traffic movements anticipated from the I2S Project:

- Construction vehicle movements from interstate or from the region surrounding the Project (e.g. deliveries and material haulage).
- Construction vehicle movements between various sections of the Project, and
- Designated vehicle routes based on vehicle size (e.g. B-double restrictions).

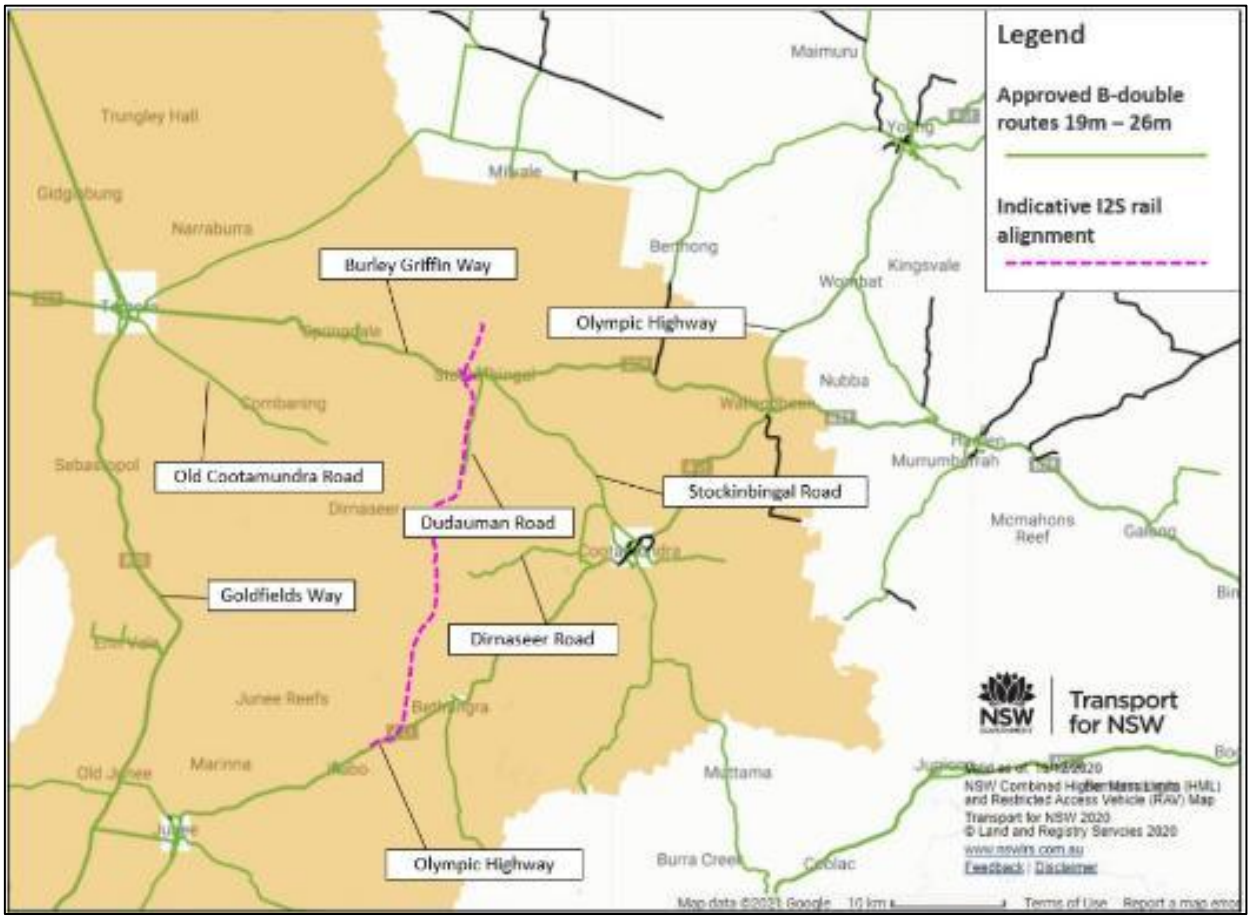


Figure 6-2: B-double approved routes

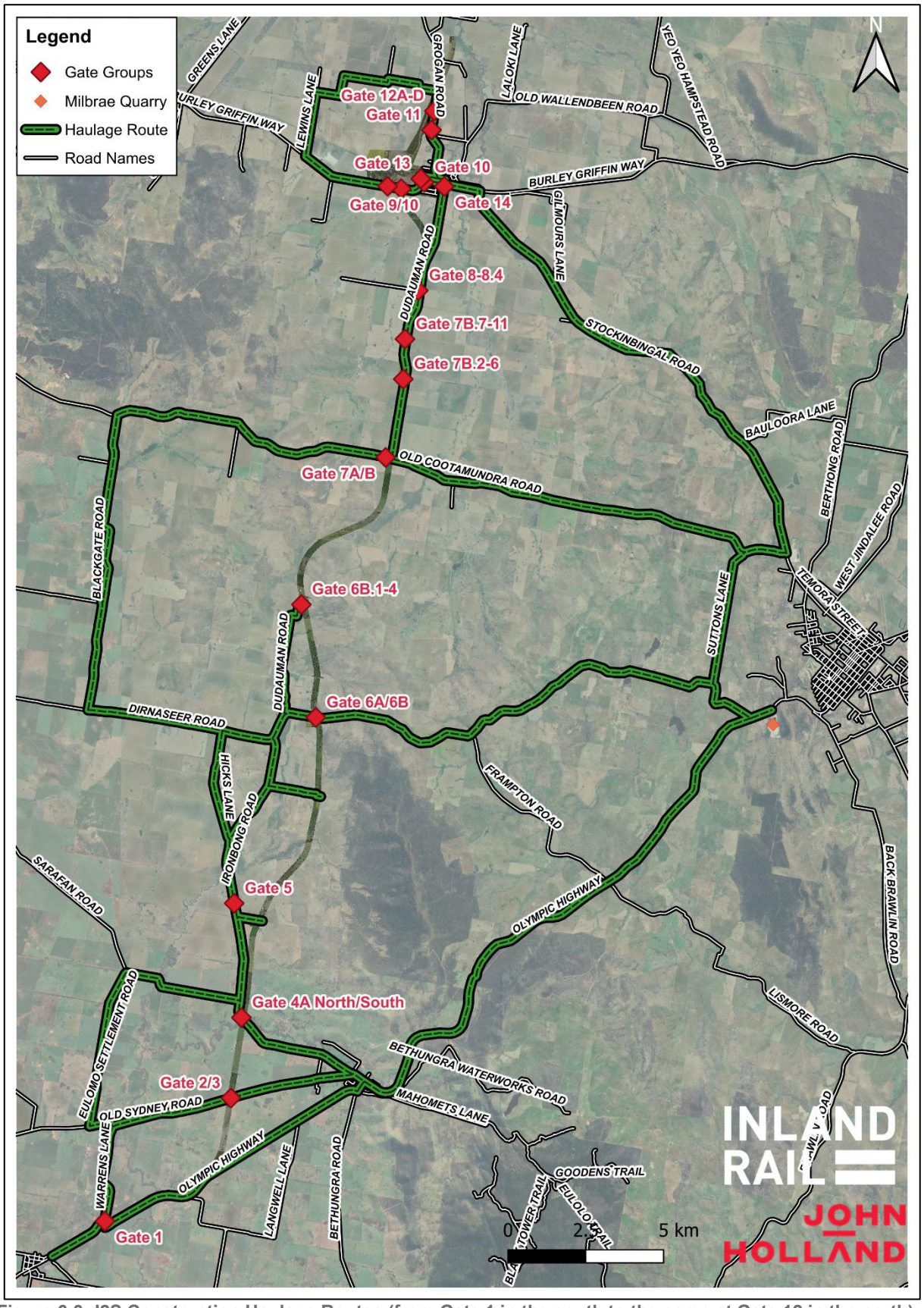


Figure 6-3: I2S Construction Haulage Routes (from Gate 1 in the south to the camp at Gate 12 in the north).

Heavy vehicles will be limited to designated haulage routes shown in Figure 6-3. Haulage routes and access points are listed below.

- Grogan Road
- Hibernia Street
- Burley Griffin Way
- Dudauman Street & Dudauman Rd (Between Old Cootamundra and Burley Griffin Way)
- Old Cootamundra Road
- Blackgate Road
- Dirnaseer Road
- Ironbong Road
- Baylis Street
- Old Sydney Road
- Warrens Lane
- Olympic Highway
- Eulomo Settlement Road
- Dudauman Lane (access to the north of Dirnaseer Road)
- Robinson Street
- Suttons Lane
- Stockinbingal Road
- Wood Street
- Mclaughlins Lane
- Corby's Lane
- Lewins Lane
- Unnamed Crown Road (Paper Road) off Ironbong Road at CH11390 (428900)
- Unnamed Crown Road (Paper Road) off Ironbong Road at CH15950 (433500)

The trucks delivering the materials will be operating under General Mass Limits (GML) requirements and compliant with council load restrictions (under 32t). The vehicles are eligible for the National Class 3 Truck and Dog Trailer Mass Exemption Notice, which grant access to all NSW roads except where specified otherwise.

Other construction traffic travelling between towns will utilise existing arterial. sub-arterial roads and in compliance with the relevant road restriction. An indicative map for construction route between neighbouring towns is shown below.

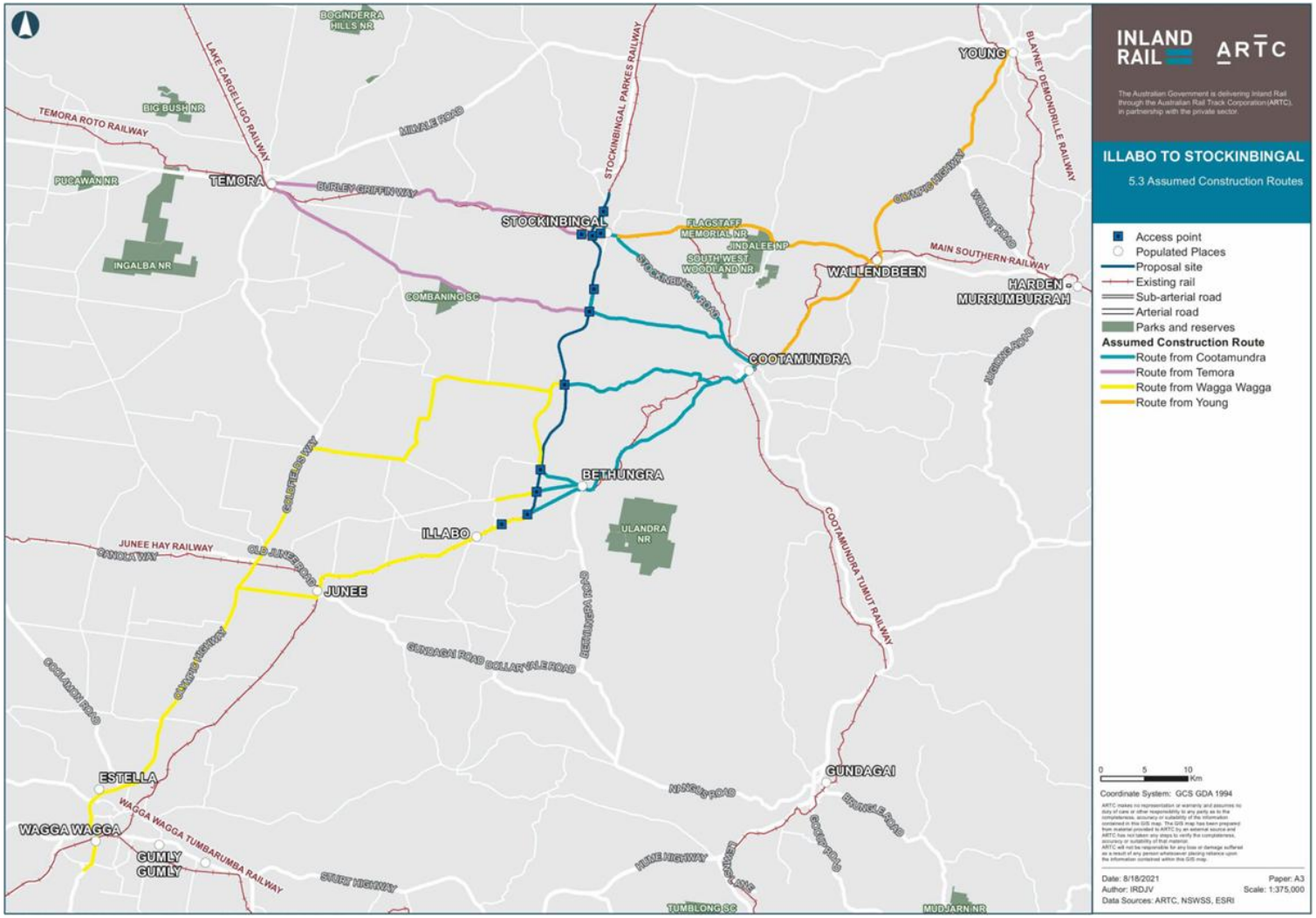


Figure 6-4 Construction routes from other towns

Haulage routes will also be to delivery drivers and site personnel through Project inductions.

6.4.2 Road Intersection Treatments

John Holland will utilise the following information to determine if and where road intersection treatments are necessary to accommodate construction traffic:

- Traffic Impact Assessments (TIA's) to determine effect on the network.
- Traffic counts undertaken internally by John Holland.
- Dilapidation assessments.
- Swept path checks.
- Tools such as the construction program histogram will be utilised to determine number of construction vehicles and the LV/HV split.
- Risk assessments.
- *Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management.* Section 6.5.2 of this plan provides further detail regarding proposed construction gate treatments. Treatments have been assessed on a case-by-case basis and treatments have been provided where deemed necessary by John Holland, TfNSW, and relevant LGAs.

Site conditions such as stockpiles which may affect driver visibility will be considered in these assessment controls such as limiting stockpile heights, locations or other measures may be employed at the discretion of John Holland. Consultation will be undertaken with the relevant road authorities if any treatments are proposed.

6.4.3 Bridge Structures Construction

There will be eight new bridges at watercourses, two road under bridges and one grade-separated bridge (road-over-rail) at Burley Griffin Way. The location of the bridges is shown in the figure below, where red boxes point out the two road underbridges (Old Cootamundra Road & Dirnaseer Rd).

All creeks along the alignment only carry water following rain events. During earthworks preparation, temporary creek crossings will be constructed at Billabong Creek, Ulandra Creek, Run Boundary Creek, Isobel Creek, Powder Horn Creek, and Dudauman Creek to enable movement of equipment, personnel, and materials across the alignment. This will be done in consultation with environmental team to make sure it meets the environmental constraints.

Bridges that are nearest to existing road access and require the least earthworks to commence (i.e. Ulandra Creek, Dirnaseer Road, and Burley Griffin Way) will be constructed first. Ulandra creek bridge has small spill through abutments and will be constructed as part of early earthworks. Burley Griffin Way and Dirnaseer Road abutments will be reinforced earth wall construction.

The proposal for the two underbridges at Old Cootamundra Road & Dirnaseer Road is to complete the bulk of the works without impacting the live traffic (pre-dressing Super-Ts and use of precast elements to reduce the construction duration and minimise work over the road).

Where work over the road is unavoidable extended hold/release of traffic with VMS strategy and community consultation including LGAs will apply. Initial consultation with both LGAs has deemed this a reasonable approach. Details for the works to be done with traffic control in place are outlined in the sub-sections below.

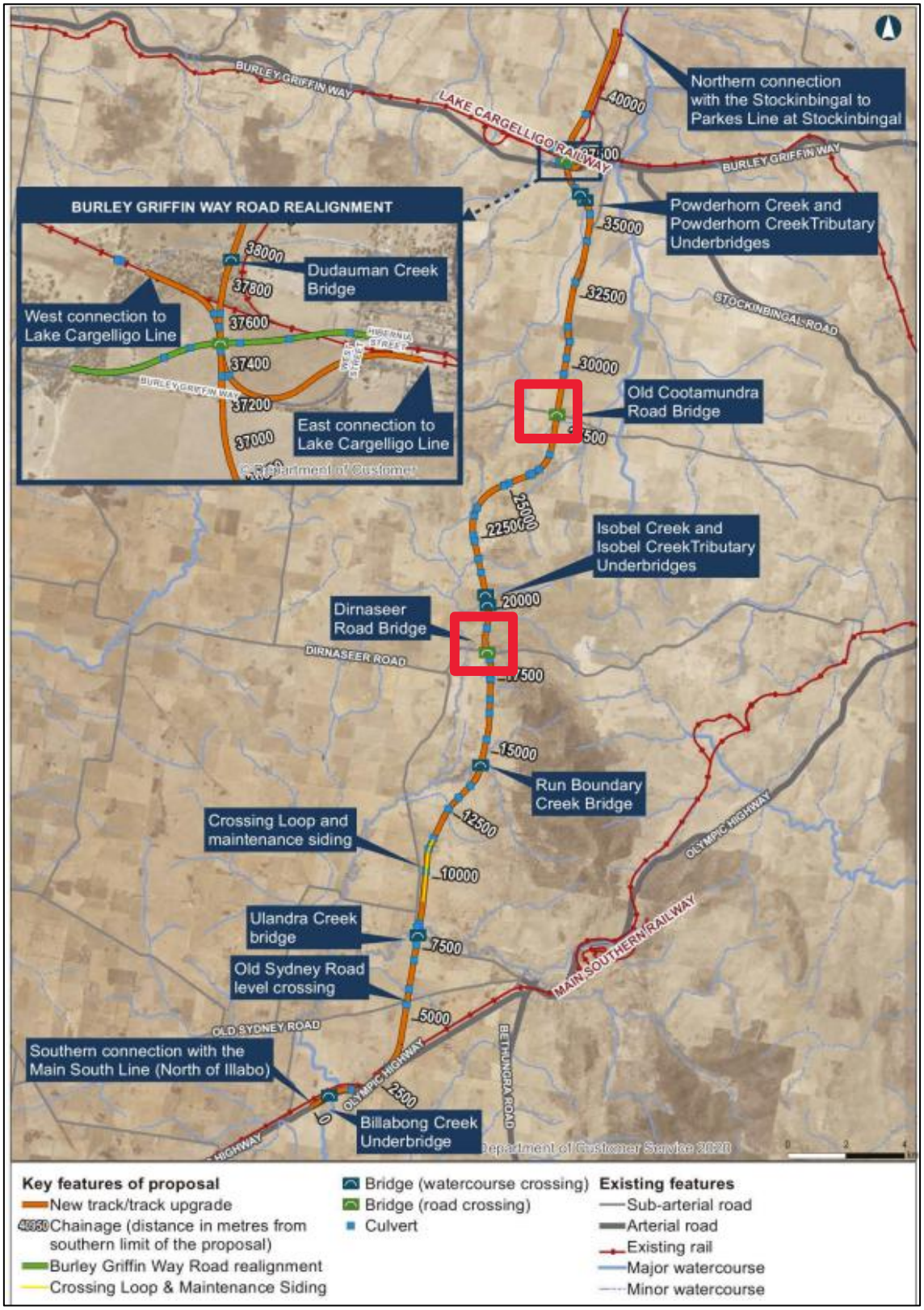


Figure 6-5: Road bridge locations

6.4.3.1 Dirnaseer Road Underbridge

The road underbridge at Dirnaseer Road will allow traffic on existing Dirnaseer Road to travel underneath the newly built track. To enable the girder lift and concrete pour at this location, road closure or extended hold release traffic control will be required.



Figure 6-6: Dirnaseer Road Underbridge Location

Activities requiring a Road Closure or Extended Hold Release traffic control.

- Super T Girder Lifting Operations - 7 shifts required.
- Crane Mobilisation – 1 shift required.
- Complete Girder Lift 1 - 1 shift required.
- Crane Re-Position to Pad 2 - 1 shift required.
- Complete Girder Lift 2 - 1 shift required.
- Crane De-Mobilisation - 1 shift required.
- Bridge Deck Concrete Pour and Formwork Strip - 1 shift required.
- Bridge Deck Pour - 1 shift required.
- Formwork Removal Eastern and Western Sides - 6 shifts required.

6.4.3.2 Old Cootamundra Road Underbridge

Similar to the Dirnaseer Road underbridge the road underbridge at Old Cootamundra Road will allow traffic on existing Old Cootamundra Road to travel underneath the newly built track. To enable the girder lift and concrete pour at this location, road closure or extended hold release traffic control will be required.

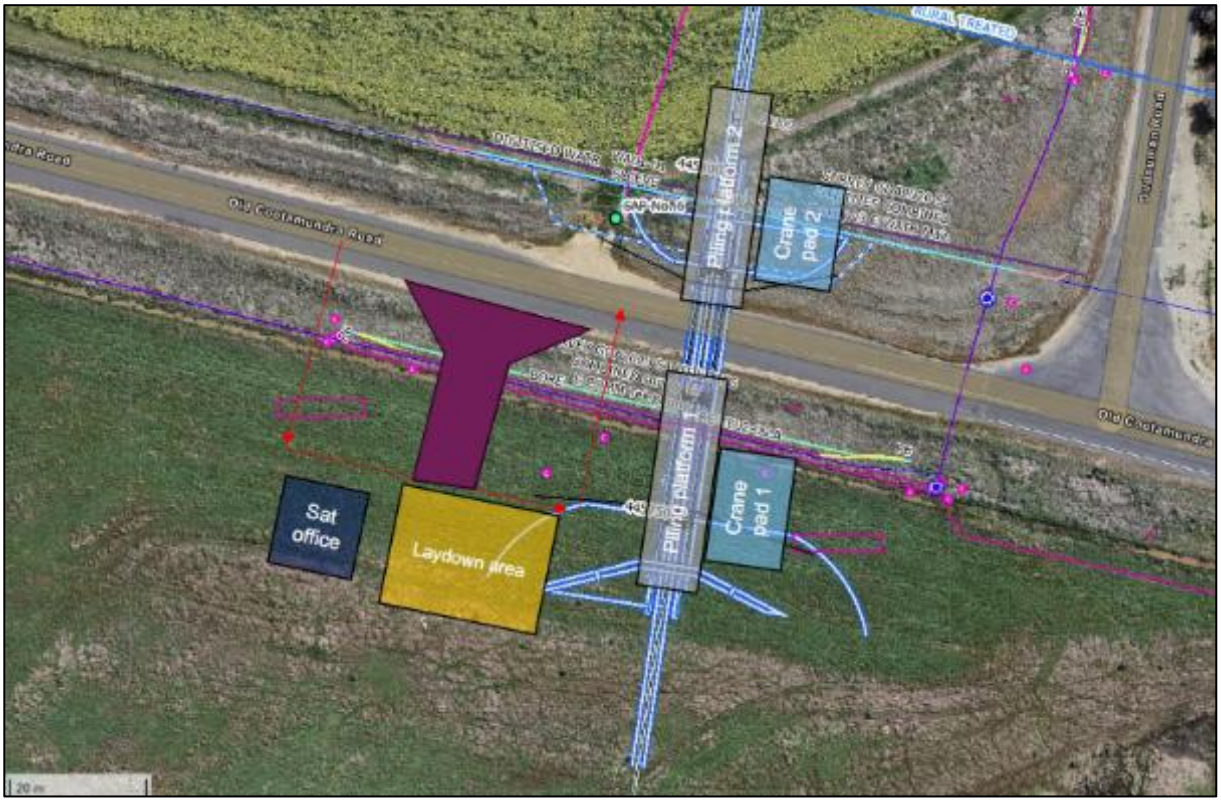


Figure 6-7: Old Cootamundra Road Underbridge Location

Activities requiring a Road Closure or Extended Hold Release traffic control.

- Super T Girder Lifting Operations - 7 shifts required.
- Crane Mobilisation - 1 shift required.
- Complete Girder Lift 1 - 1 shift required.
- Complete Girder Lift 2- 1 shift required.
- Crane Re-Position to Pad 2 - 1 shift required.
- Crane De-Mobilisation - 1 shift required.
- Bridge Deck Concrete Pour and Formwork Strip - 1 shift required.
- Bridge Deck Pour - 1 Shift required.
- Formwork Removal Eastern and Western Sides - 6 Shifts required.

6.4.4 Burley Griffin Way and Staging works

Burley Griffin Way is located between Dudauman Creek and Hibernia Street, directly west of the Stockinbingal town.The realigned section of Burley Griffin Way ties into the existing Hibernia Street to the east and the existing Burley Griffin Way to the west which enables the closure of the existing CRN (Country Rail Network) level crossing, realignment of the existing east-west CRN line and grade separation of the new north-south ARTC mainline.

Refer to below figure for existing level crossing around Burley Griffin Way.

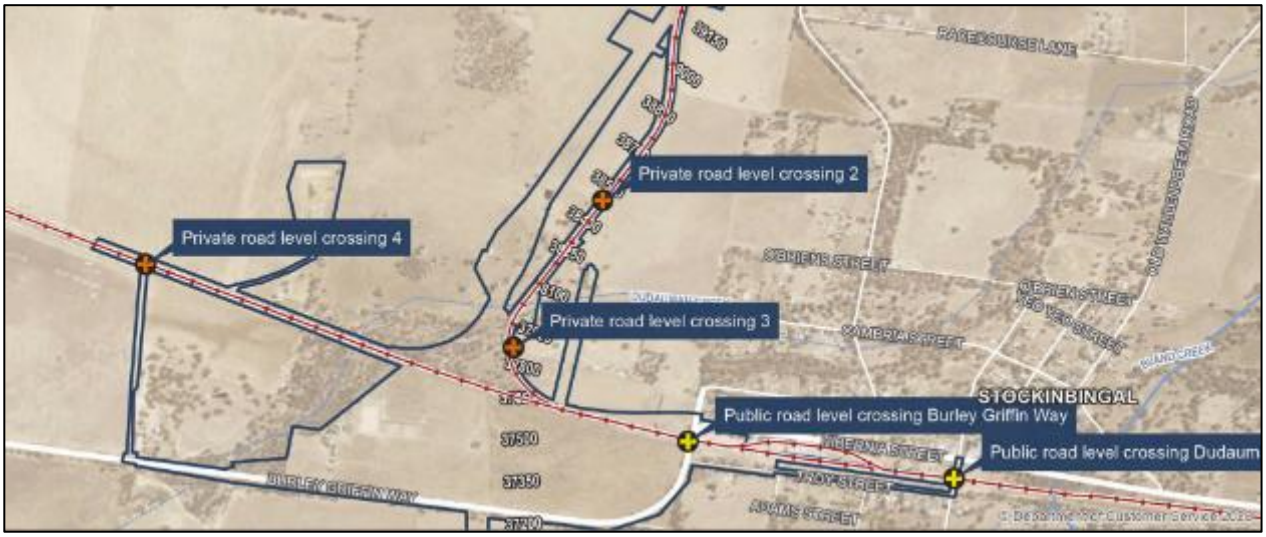


Figure 6-8: Existing Level Crossing around Burley Griffin Way

In order to minimise the impacts to the public and road network, the Burley Griffin Way realignment works will be constructed into different stages. These stages are summarised as below (refer to Appendix D – Burley Griffin Way Staging Plans).

As shown below in the staging of the Burley Griffin Way, works has been de-risked by providing additional contingency to switch road and rail traffic onto the new alignment. This will involve construction of a temporary road diversion and Burley Griffin Way Overbridge for new Burley Griffin Way and tie into West Street and Troy Street.

After construction of western tie-ins, temporary road diversion and overbridge, the traffic will be diverted from the existing Burley Griffin Way into the new alignment. This diversion will enable construction of the Cootamundra Lake Cargelligo CRN (Country Line Network) line and ARTC Stockinbingal to Parkes line across the existing main road

After completion of constructing the new section of the ARTC Stockinbingal to Parkes line, traffic will be switched onto the ultimate Burley Griffin Way and the temporary road diversion will be removed. Rail traffic will also be switched onto the new alignment, enabling removal of the redundant existing portion of the track. Following completion of wearing course, linemarking and road furniture, Burley Griffin Way will be opened to traffic facilitated by a minor traffic switch, in the final arrangement. And at last step, the level crossing will be removed.

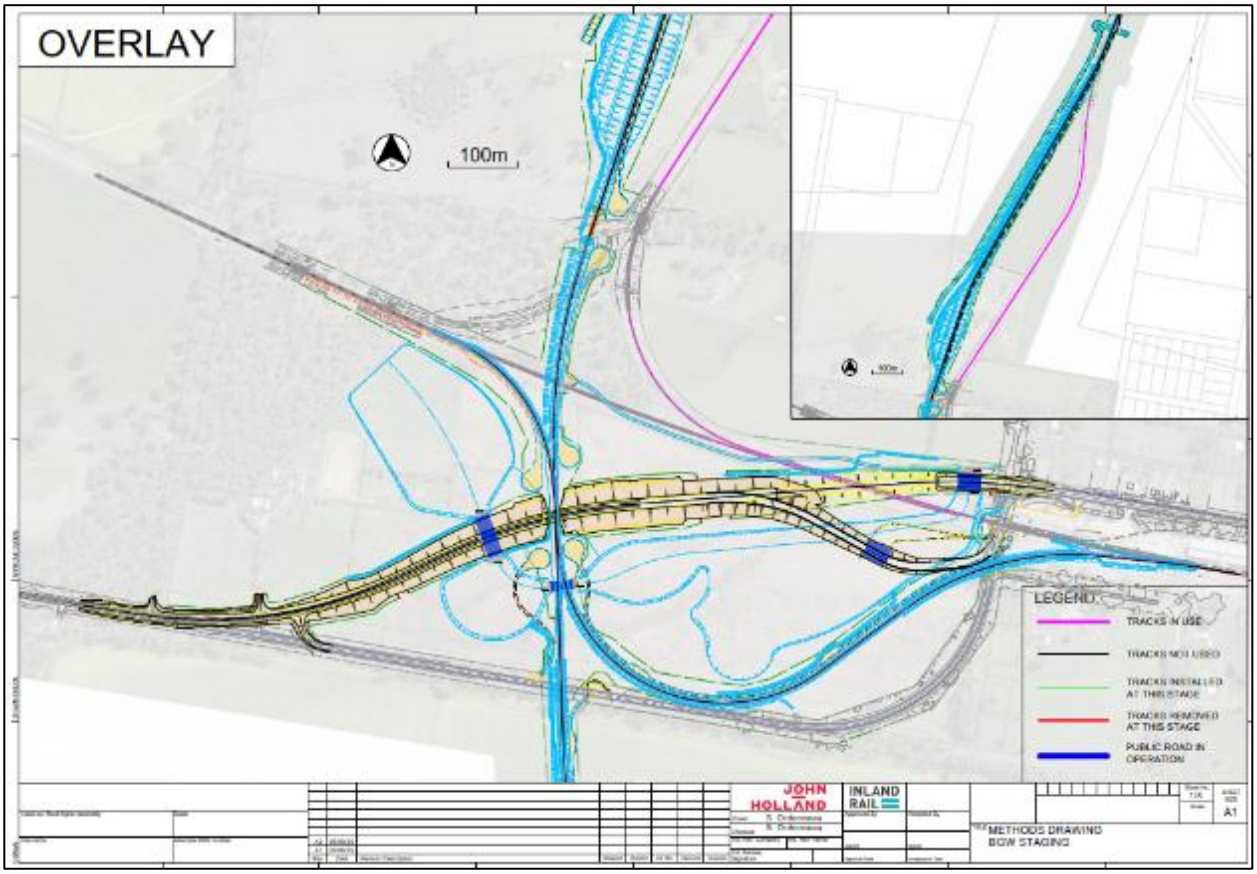
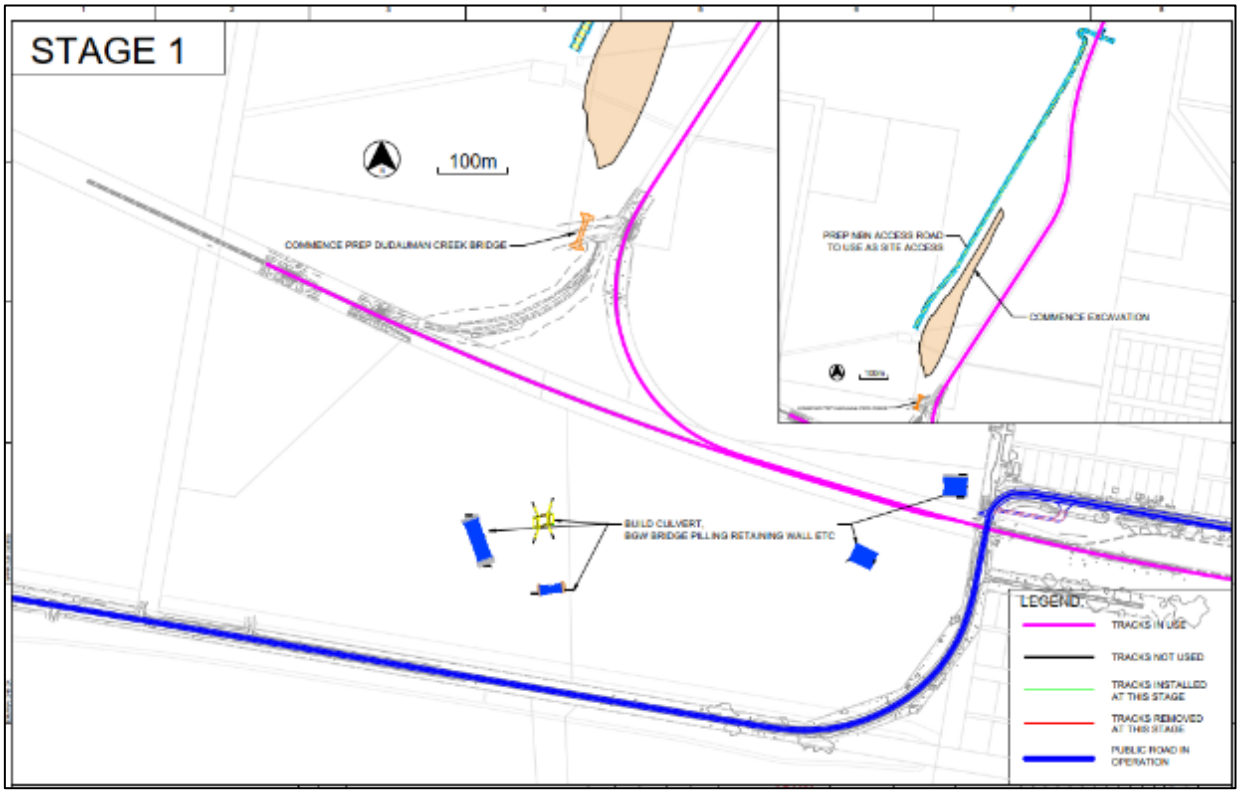
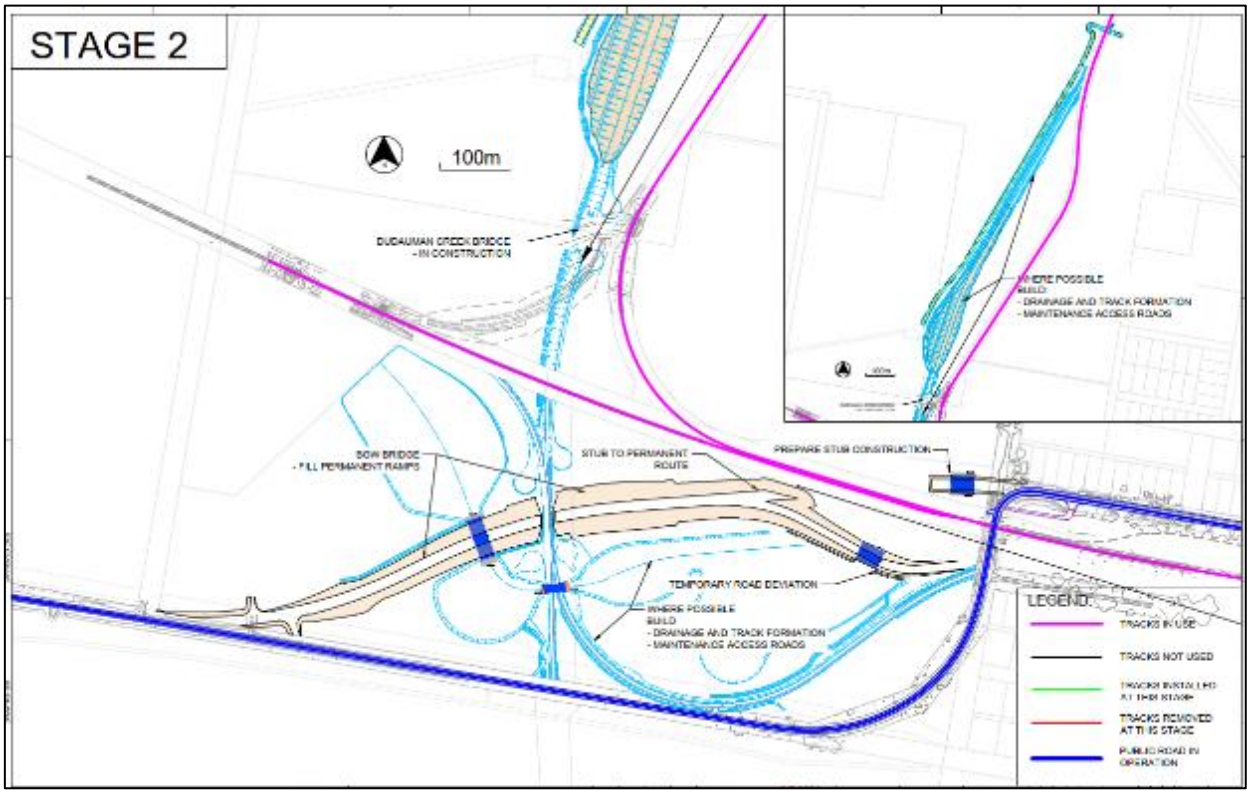


Figure 6-9: Burley Griffin Way Realignment

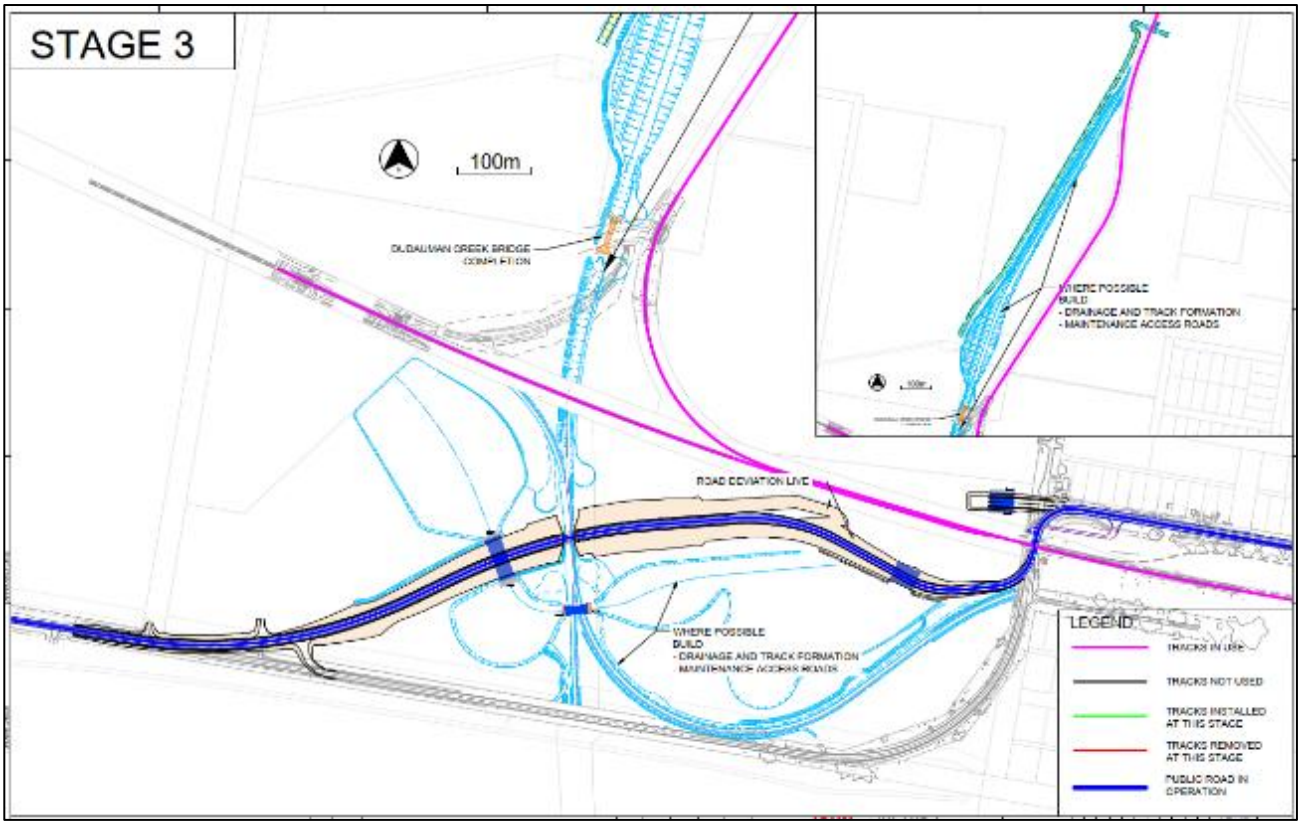
Stage 1 – Excavation for overbridge, culverts and preliminary works:



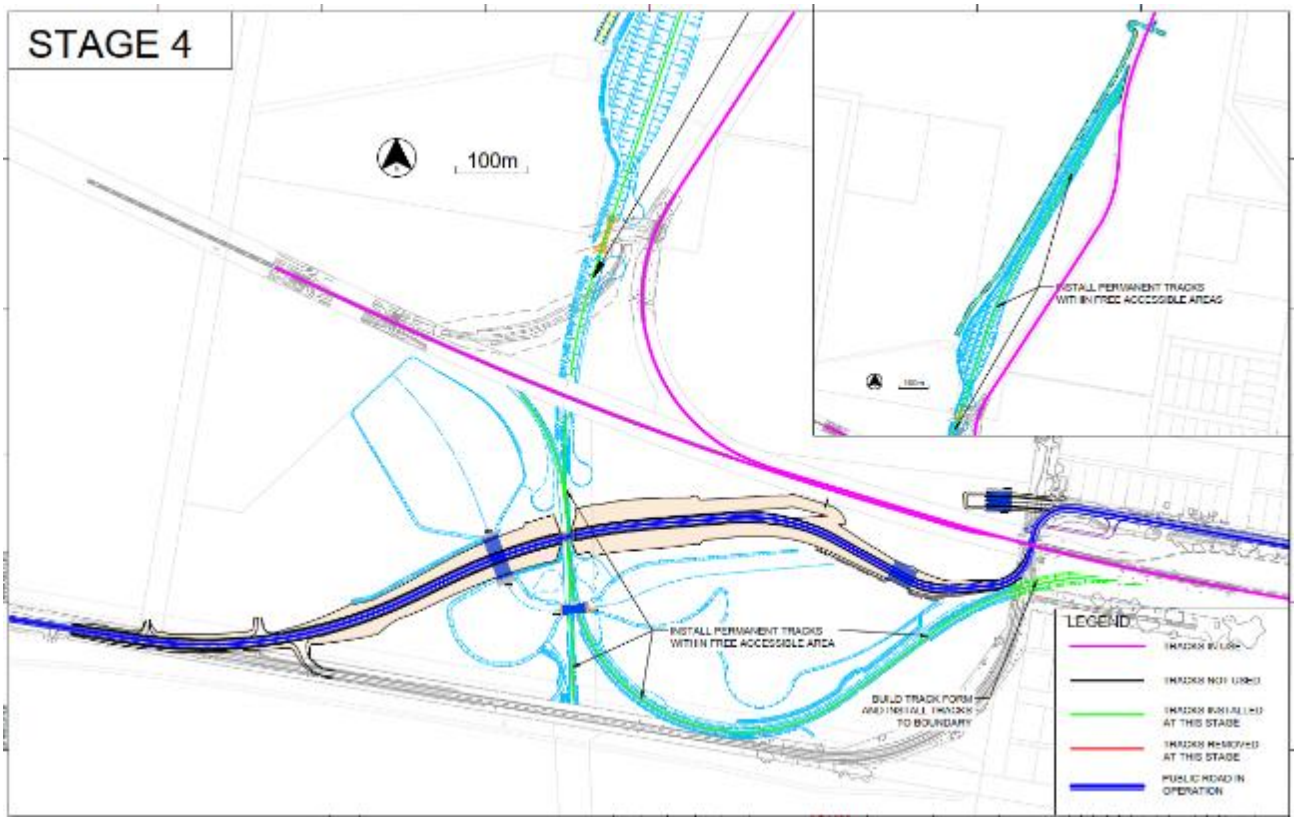
Stage 2 – Construction of main alignment, temporary road diversion and finishing works



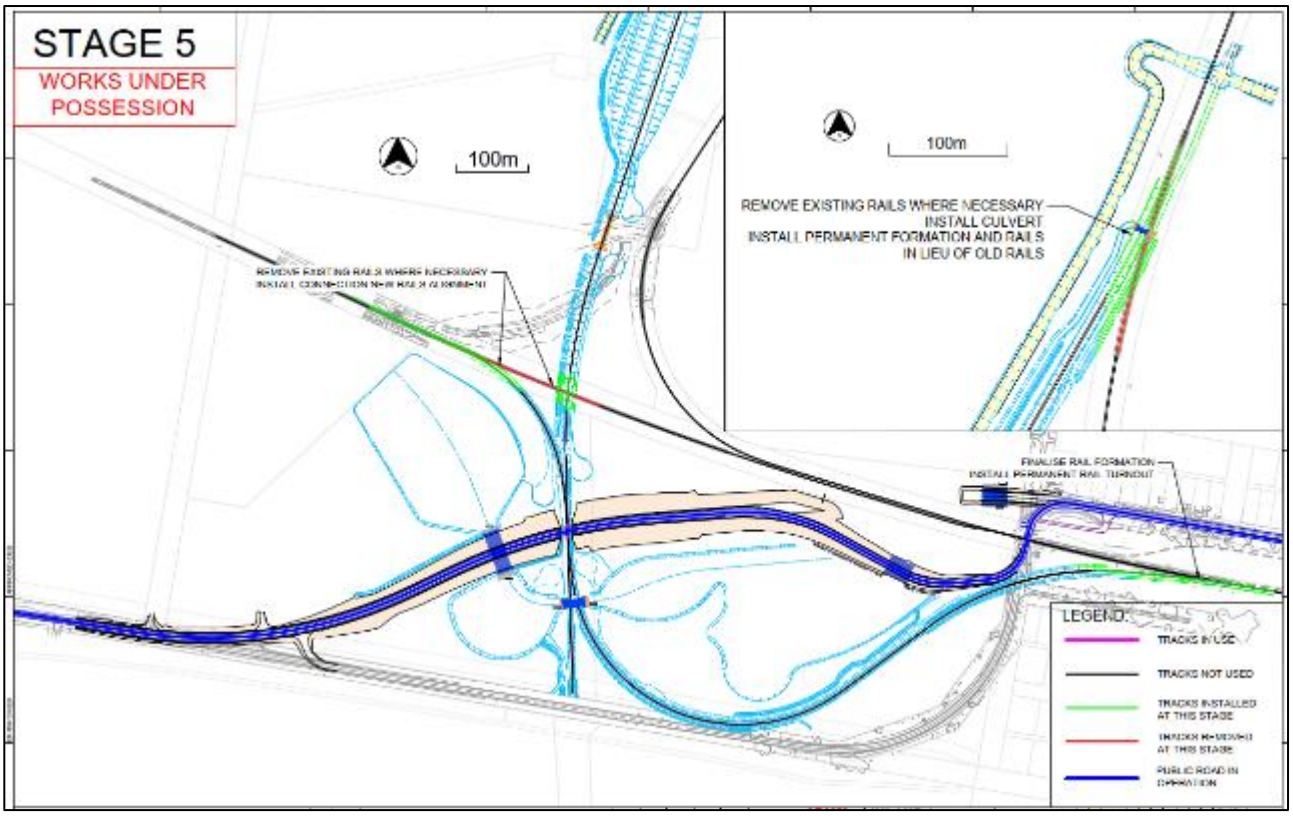
Stage 3 – Traffic switch into temporary road and close of existing Burley Griffin Way



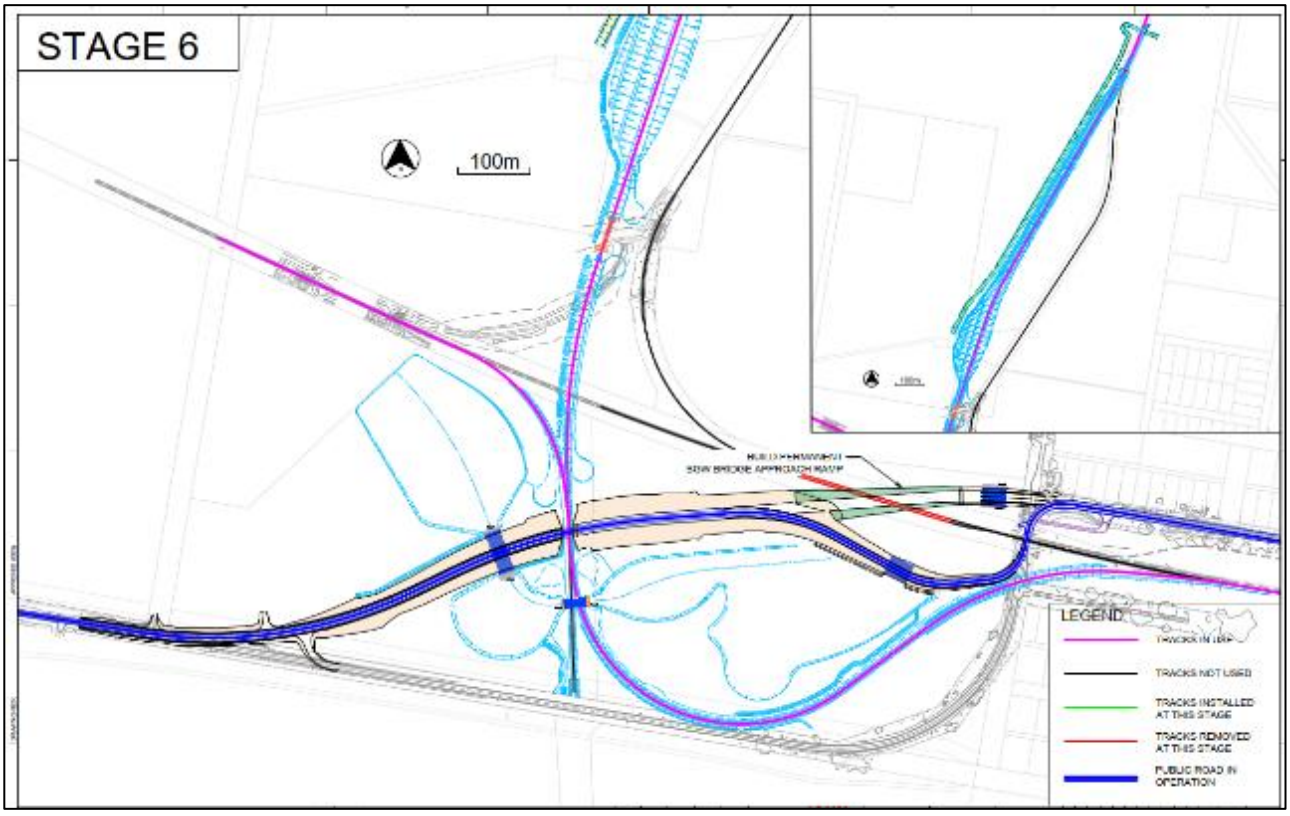
Stage 4 – Construction of new rail infrastructure



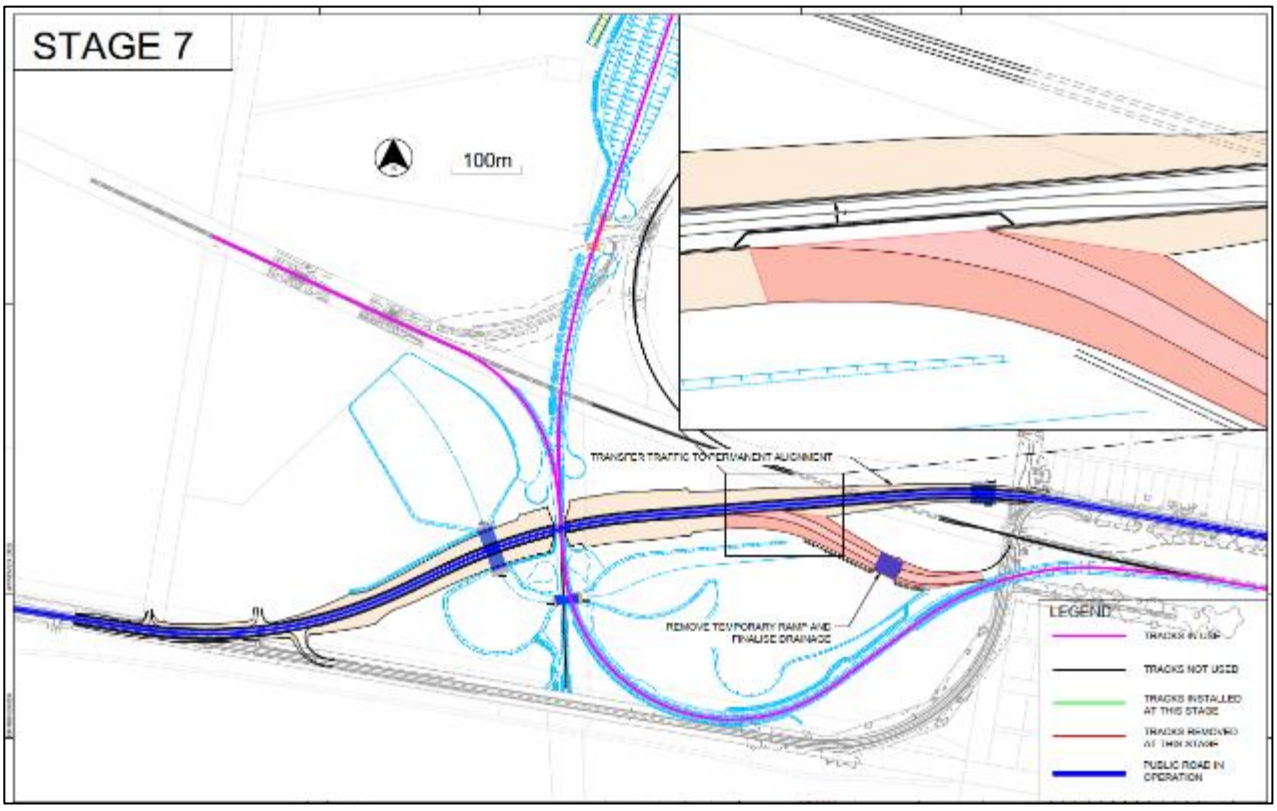
Stage 5 – Completion of track tie-ins and switch rail tracks to ultimate track alignment



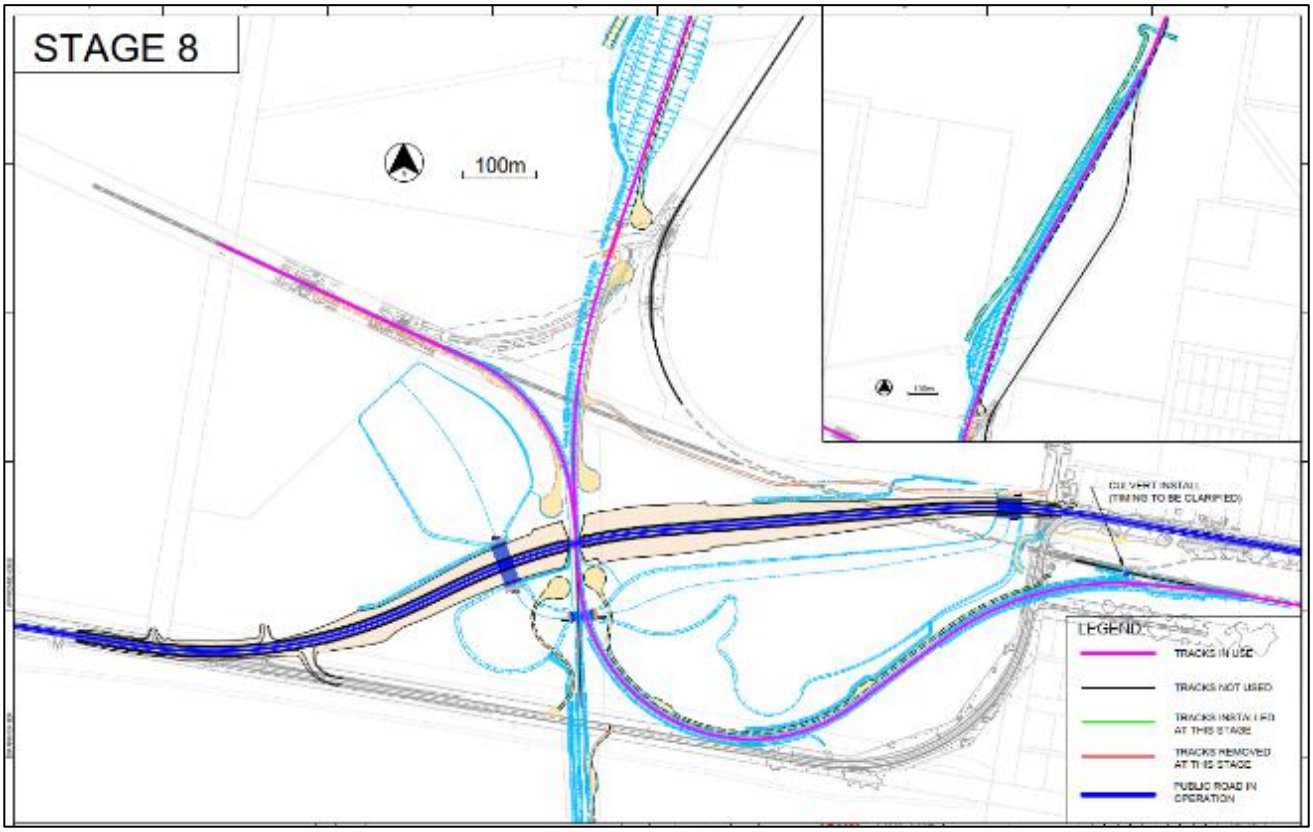
Stage 6 – Construction of Burley Griffin Way Eastern tie-ins into Hibernia Street



Stage 7 – Divert road to permanent alignment and completion of all remaining works



Stage 8 – Completion and Handover of New Burley Griffin Way



6.5 Construction Site Accesses

6.5.1 Overview

John Holland has adopted a strategy to utilise the rail maintenance access road (RMAR) to facilitate internal construction vehicle movements, thus keeping construction traffic off public roads as much as possible. There will be access points to the RMAR on public roads. An example for the RMAR and public road interface is shown in figure below (RMAR shown in pink).

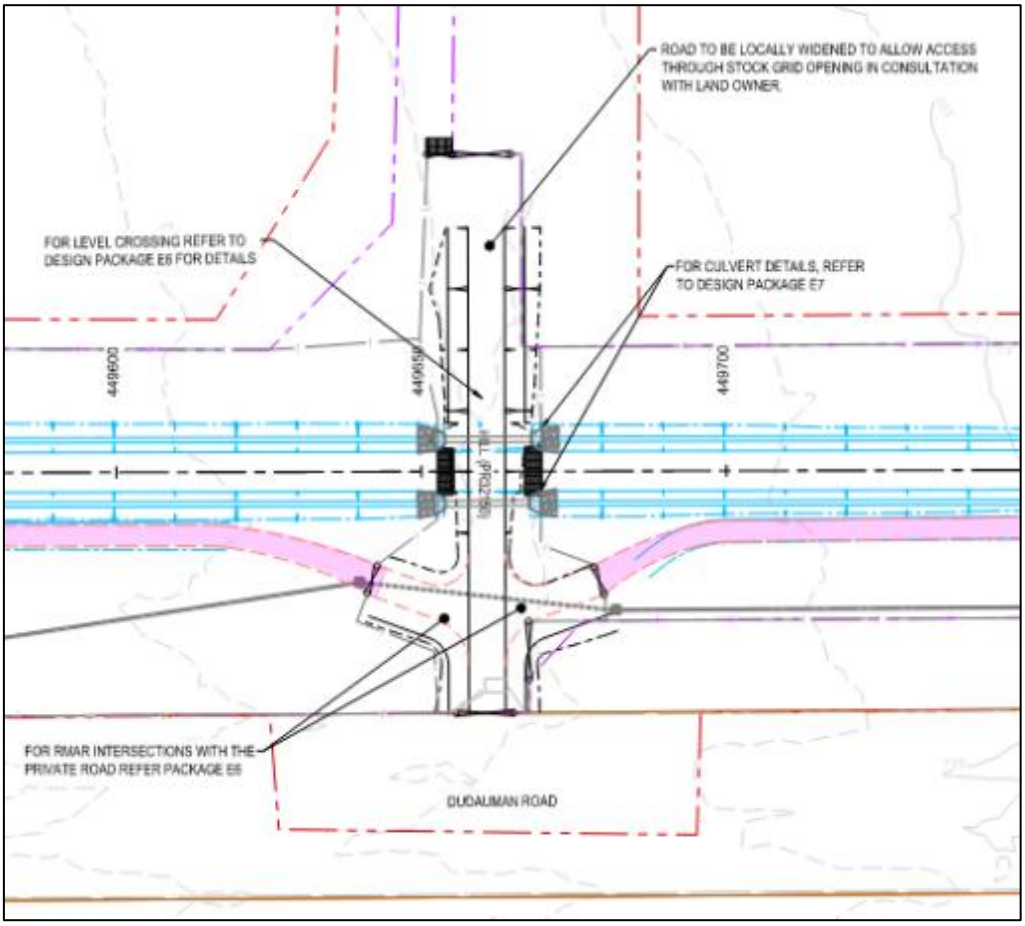


Figure 6-9 RMAR and Public Road Interface

In the case where the RMAR is not available, site access will be provided off public roads. A list of identified site access points is provided in the table below, and a preliminary assessment of identified site access points is provided in Section 6.5.3.

Table 6-1 lists the details for all construction access gates proposed. Figure 6-10 shows the location of all proposed gates. This table also includes the list of local roads that will be used by construction traffic during the Project in accordance with Condition E86. Local roads that are also to be utilised for access that do not have gate access to the Project alignment but will be required for use for vehicle movements between sections of the Project are also included in Table 6-2.

Section 6.5.2 describes the process for treatment and installation of long-term access. In addition to these locations outlined in Table 6-1 and Figure 6-10, it is noted in the Project Staging Report, Stage 1 activities within the Main Southern Railway Line corridor require access via the Olympic Highway. The works within the existing rail corridor have low vehicle movements and do not require construction of a long-term construction gate given the duration and vehicle numbers/day.
The location of the access points (SAPs) to the Main Southern Railway line are shown in green in Figure 6-11. It is noted that these SAPs are existing points used by ARTC for maintenance of the existing rail corridor and also the Albury to Illabo Project team as part of the corridor enhancement works being undertaken to facilitate the Inland Rail Program.

Table 6-1 Construction gates and local roads

Gate No.	Coordinates	Construction Section	Road (type)	Road Authority	Proposed treatment	Road work Speed Zone as per TfNSW/LGA SZA
1	-34.801949 147.765174	1	Warrens Lane	JSC	Section 138	40-80 Roadworks (Construction Hours only)
2 (Old Sydney Road South), 2.1 (Old Sydney Road South RMAR Access) 3 (Old Sydney Road North), 3.1 (Old Sydney Road North RMAR Access)	-34.765833, 147.809177	1 and 2	Old Sydney Road (local)	JSC	Section 138	40-80 Roadworks (Construction Hours only)
4A South (Ironbong Road South), 4A North (Ironbong Road North), 4.1 (Ironbong Road North RMAR Access)	-34.742317, 147.812450	2 and 3	Ironbong Road (local)	JSC	Section 138	40-80 Roadworks (Construction Hours only)
5	-34.709261, 147.809570	2	Ironbong Road (local)	JSC	Section 138	40-80 Roadworks (Construction Hours only)
6A (Dirnaseer Road South), 6B (Dirnaseer Road North), 6.1 (Dirnaseer Road South RMAR Access) 6.2 (Dirnaseer Road North RMAR Access)	-34.655287, 147.837430	3 and 4	Dirnaseer Road (local)	JSC	Section 138	40-80 Roadworks (Construction Hours only)
6B.2, 6B.3, 6B.4, 6B.5	-34.622646, 147.831653	4	Dudauman Lane (local)	JSC	Section 138	40-80 Roadworks (Construction Hours only)
7A (Old Cootamundra Road South), 7B (Old Cootamundra Road North), 7A.1 (Old Cootamundra Road South RMAR Access) 7B.1 (Old Cootamundra Road North RMAR Access)	-34.579713, 147.861216	4 and 5	Old Cootamundra Road & Dudauman Road	JSC	Section 138	40-80 Roadworks (Construction Hours only)
7B.2, 7B.3, 7B.4, 7B.5, 7B.6	-34.557117, 147.868124	5	Dudauman Road (local)	CGRC	Section 138	40-80 Roadworks

Gate No.	Coordinates	Construction Section	Road (type)	Road Authority	Proposed treatment	Road work Speed Zone as per TfNSW/LGA SZA
						(Construction Hours only)
7B.7, 7B.8, 7B.9, 7B.10, 7B.11	-34.545446, 147.868474	5	Dudauman Road (local)	CGRC	Section 138	40-80 Roadworks (Construction Hours only)
8, 8.1, 8.2, 8.3, 8.4	-34.531388, 147.873053	5	Corby's Lane (local)	CGRC	Section 138	40-80 Roadworks (Construction Hours only)
9 (Burley Griffin Way South), 10 (Burley Griffin Way North)	-34.50187, 147.866228	5 and 6	Burley Griffin Way (state)	TfNSW	Minor WAD	40-80 Roadworks (Construction Hours only)
9B	-34.501211, 147.861450	6	Burley Griffin Way (state)	TfNSW	Minor WAD	40-80 Roadworks (Construction Hours only)
10A, 10B, 10C, 10D, 10E, 10F	-34.499450, 147.875030	6	Burley Griffin Way (state)/ Hibernia Street (local)	TfNSW	Minor WAD	40 Roadworks (During Construction)
11	-34.484328, 147.876689	6	Grogan Road (local)	CGRC	Section 138	40-80 Roadworks (Construction Hours only)
12A, 12B, 12C, 12D	-34.478764, 147.877755	Camp	Grogan Road (local)	CGRC	Section 138	40-80 Roadworks (Construction Hours only)
13	-34.499009, 147.873099	6	West Street (local)	CGRC	Section 138	40-80 Roadworks (Construction Hours only)
14	-34.50116, 147.88141	6	Rail Yard – Dudauman Road (local)	CGRC	Section 138	40-80 Roadworks (Construction Hours only)
J2I Compound Access	-34.81633, 147.73892	A2I Project	Brabins Road (local)	JSC	Access as per Martinus Conditions (Albury to Illabo CSSI 10055 CTTAMP).	40-80 Roadworks (Construction Hours only)
J2I5	-34.807558, 147.755952	A2I Project	Olympic Highway (State)	TfNSW	Access as per Martinus Conditions (Albury to Illabo CSSI 10055 CTTAMP).and TCAWS, ROL and Traffic Control.	40-80 Roadworks (Construction Hours only)

Gate No.	Coordinates	Construction Section	Road (type)	Road Authority	Proposed treatment	Road work Speed Zone as per TfNSW/LGA SZA
J2I2	-34.803197, 147.764617	A2I Project	Olympic Highway (State)	TfNSW	Access as per Martinus Conditions (Albury to Illabo CSSI 10055 CTTAMP).and TCAWS, ROL and Traffic Control.	40-80 Roadworks (Construction Hours only)
J2I1	-34.803598, 147.764981	A2I Project	Olympic Highway (State)	TfNSW	Access as per Martinus Conditions (Albury to Illabo CSSI 10055 CTTAMP).and TCAWS, ROL and Traffic Control.	40-80 Roadworks (Construction Hours only)
I2S2	-34.803518, 147.765441	1	Olympic Highway (State)	TfNSW	Access under ROL and Traffic Control as per TCAWS.	40-80 Roadworks (Construction Hours only)
I2S1	-34.799384, 147.773384	1	Olympic Highway (State)	TfNSW	Access under ROL and Traffic Control as per TCAWS.	40-80 Roadworks (Construction Hours only)

Table 6-2 lists the local roads to be used to access the I2S Project alignment.

Table 6-2 Local roads used to access the Project alignment

Local Road	LGA	Identified in EIS?
Troy Street	CGRC	Yes
Blackgate Road	JSC	Yes
Retreat Road	JSC	Yes
Junee Reefs Road	JSC	Yes
Stockinbingal Road	CGRC	Yes
Warrens Lane	JSC	Yes
Brabins Road	JSC	Yes (Albury to Illabo EIS)

Figure 6-10 and Figure 6-11 show the location of each gate group identified in Table 6-1. Detailed locations are provided in Section 6.5.3.

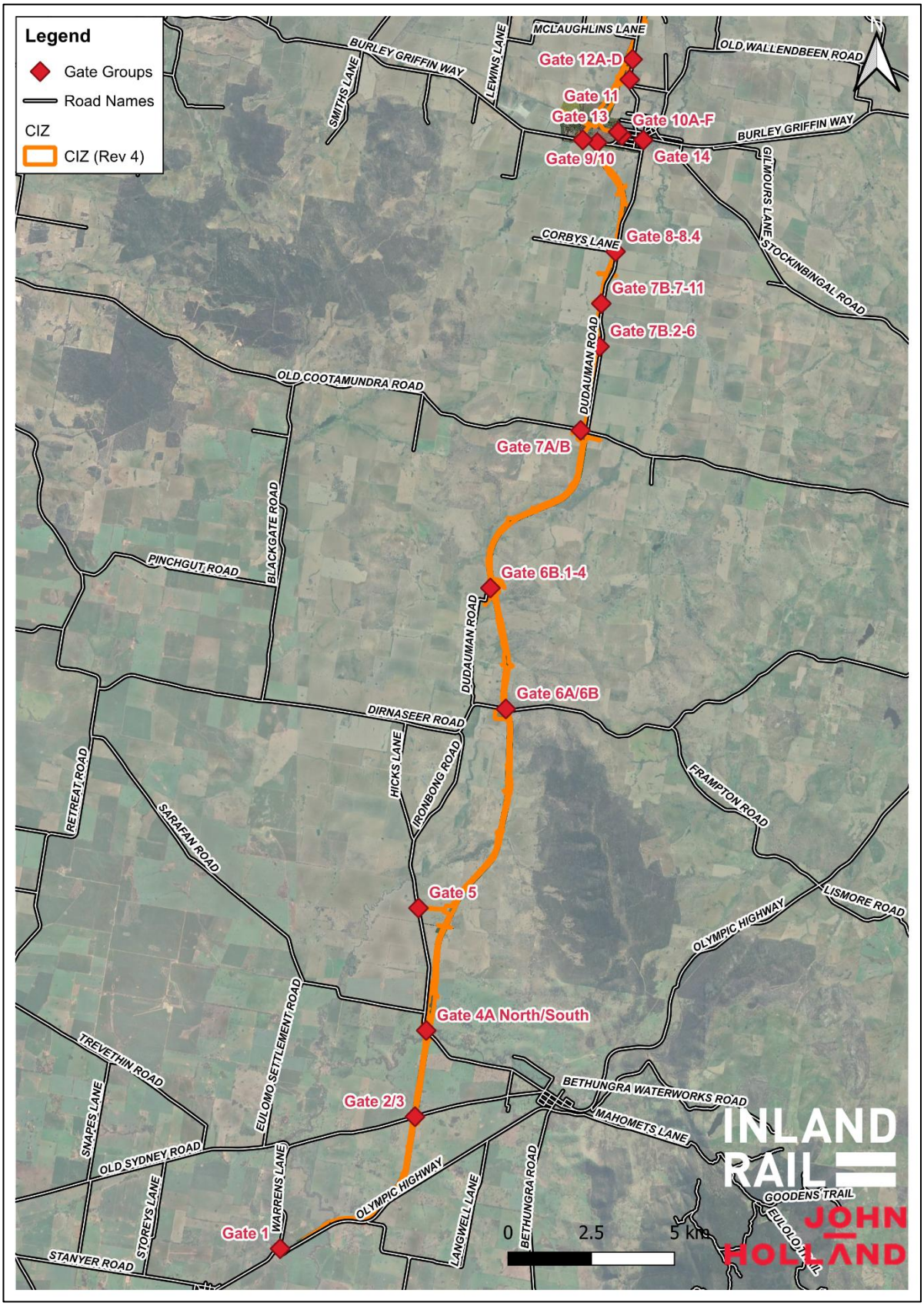


Figure 6-10 I2S gate location map



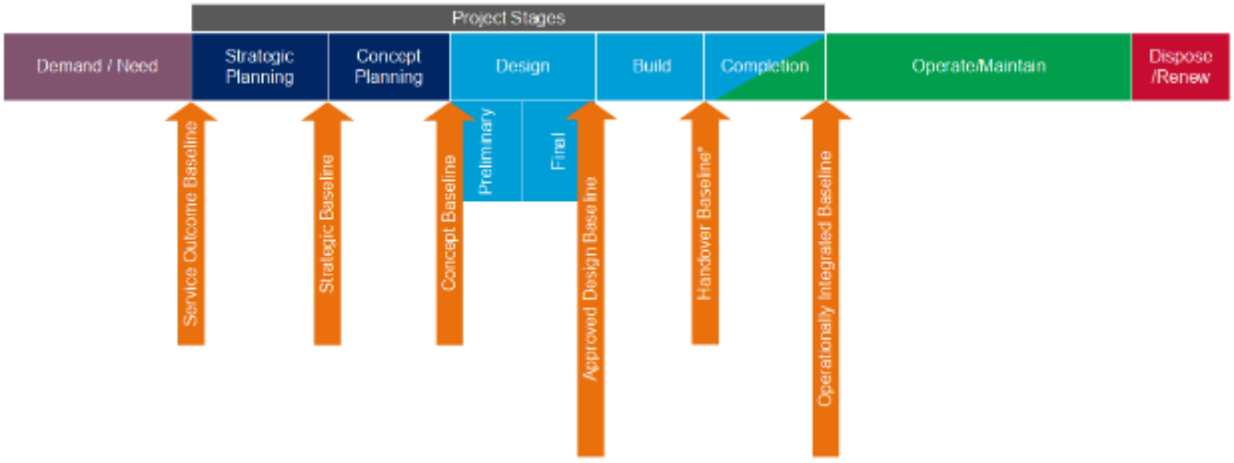
Figure 6-11 I2S and J2I site access points

6.5.2 Site Access Gate Treatment Selection Process

The site access gate treatment selection will be assessed and submitted through the below stages:

- Initial assessment and planning (included in CTTAMP)
- Design development and submission
- TfNSW/ LGA review and approval
- Construction
- Consultation and handover

Below figure further explains the above stages.



John Holland will undertake the following where long term temporary site access intersections are required for Construction Works (noting that this does not include Low Impact Works (LIW) due to the short-term use requirements, environmental approval requirements and low construction traffic volumes):

- Obtain written approval from the relevant Road Authority and/or TfNSW for classified roads for the proposed intersection treatment.
- Meet the relevant Road Authority's intersection requirements, including geometrical requirements, pavements, drainage, turn treatments that require acceleration and deceleration lanes, intersection lighting, road signage and other site-specific requirements.
- Construct the approved intersection upgrade requirements.
- Maintain the Site access intersection for the duration of the Contractor's Activities.
- Remove and reinstate the Site access to the written satisfaction of the IRPL Representative and the relevant Road Authority.

Terms referred to in the following section include:

- Minimum Gap Sight Distance (MGSD)
- Safe Intersection Sight Distance (SISD)
- Average Daily Traffic (ADT)
- Average Annual Daily Traffic (AADT)

6.5.3 Site Access Assessment

6.5.3.1 Gate 1 – Warrens Lane

Located on Warrens Lane, approximately 70m north of the Olympic Highway, Gate 1 will provide access to construction sections 1 and 2.

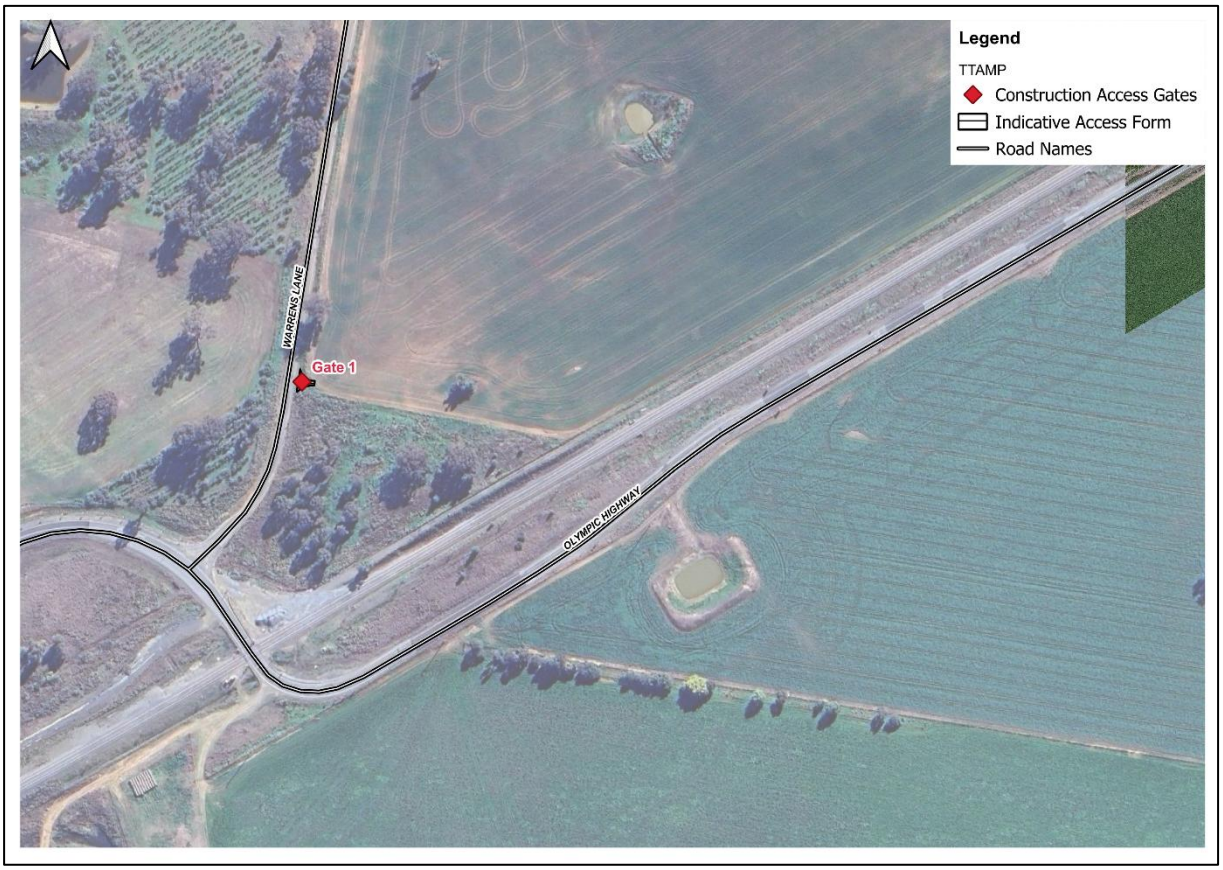


Figure 6-12 Gate 1 location

Details associated with the access are provided in the table below:

Table 6-3 Gate details - Gate 1

Gate #	Gate 1
Location	Warrens Lane
AADT	24 (2018)
Speed limit	Currently posted at 60km/hr. Operational speed managed at 40km/h road works.
Access duration	18 months
Construction ADT	35 to 40 (per gate)
Construction peak hour volume	4 (per gate)
Construction vehicle type	Truck and dog (19.0m)
Permitted movements	Heavy Vehicles Right In, Left Out Light Vehicles Left and right in, left and right out

The lane-swept path assessments for Olympic Highway and Warrens Lane are provided in E.

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-4 Sight Distance Assessment – Gate 1

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
	East	60km/hr	151m	Yes	139m	Yes
	West			Yes		Yes
	East	40km/hr	97m	Yes	139m	Yes
	West			Yes		Yes

As shown, available sight distance at Gate 1 to achieve the minimum requirements for a 60-40km/hr posted speed limit. Considering this and to ensure that vehicles can safely and efficiently manoeuvre into and out of the access, a potential mitigation measure would be to implement a maximum reduced speed limit of 60-40km/hr on approach to the accesses (temporary speed limits on approach to site access points would need to accommodate the necessary sight distance requirements (i.e., installed more than 97m from a site access point where the reduced speed limit is 60-40km/hr)). This approach to reduce the speed limit to 60-40km/h has been adopted for the development of the strategic design.

Traffic control and approved speed reductions would be engaged to maintain vehicle flow and safe access where required on construction and diversion routes and at construction accesses at either/both Warrens Lane and Olympic Highway.

Turn Treatments at Site Access

To undertake this assessment, background traffic volumes for Warrens Lane were obtained from traffic surveys undertaken by *Austraffic* on Tuesday 28th August 2018. Noting that data collection was undertaken 2018, to account for any population growth and subsequent increase in utilisation of the road network, a compounding annual growth rate of 0.5 percent per year has been used to determine future year background traffic volumes. The use of this growth rate is consistent with that adopted within *Technical Paper 3 – Traffic, Transport and Impact Assessment,* and is considered to provide a conservative assessment given the growth rate is above recorded population growth rates. Future year background traffic volumes at year 2025 and 2027 are presented below.

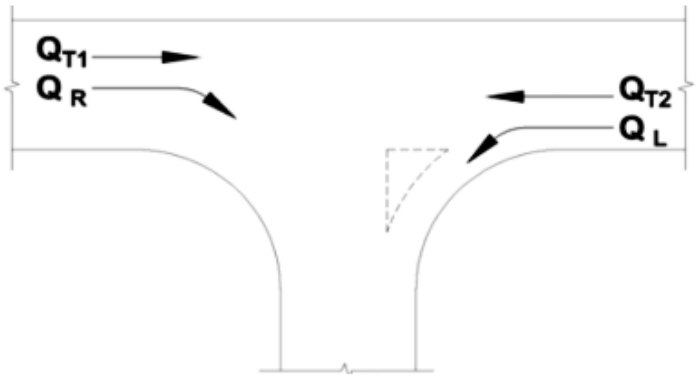
Table 6-5 Traffic Volumes – Warrens Lane

Road	Background AADT*	Year	Peak Hour Volumes		Growth Rate	2025 Design Year Volume			2027 Design Year Volume		
			AM Peak	PM Peak		AADT	AM Peak	PM Peak	AADT	AM Peak	PM Peak
Warrens Ln	24	2018	6	5	0.5%	25	7	6	26	7	6

* Weekday average

** Peak recorded volumes

In order to undertake the assessment, the major road traffic volume (Q_M) first needs to be calculated. On two-lane, two-way roads (without a splitter island), the value of the major road traffic volume parameter (Q_M) for a right turn is the total through traffic flow in both directions (Q_{T1} and Q_{T2}), plus the volume of left turning traffic (Q_L). For a left turn, the Q_M is equal to total of traffic flow in the direction of the left turn (Q_{T2}).



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 50% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 33% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 33% x Q_{T2}

Figure 6-32: Extract from AGTM Part 6 – Figure 3.26

With reference to the above, the volumes adopted for this assessment are detailed below, noting that, 2027 design year volumes have been adopted for the purpose of this assessment to ensure that the design of the site accesses remain suitable throughout construction. Note- volume have hourly data.

Table 6-6: Turn Warrants Parameters – Gate 1

Gate	Right turn		Left turn	
	Q_M	Q_R	Q_M	Q_L
Gate 1	10	2	4	2

1. A 50/50 split of traffic volumes has been assumed for traffic travelling along the road frontage
2. A 50/50 split of construction traffic volumes has been assumed for traffic turning into the access

Adopting these volumes, the warrants assessment is shown below for Gate 1.

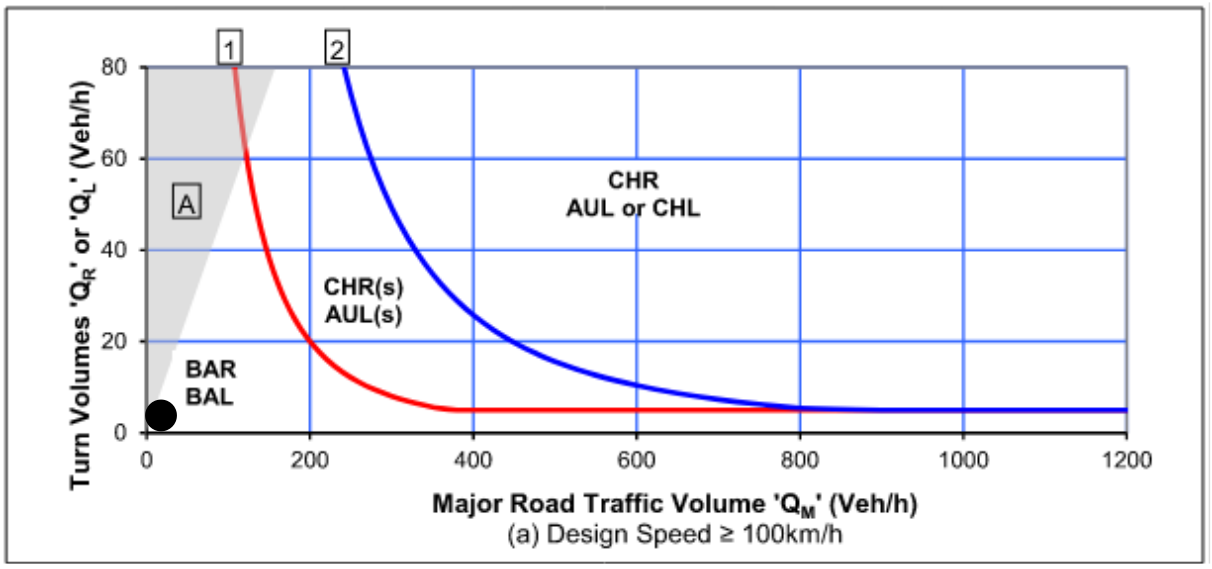


Figure 6-33: Turn Warrants Assessment – Gate 1 (Q_R)

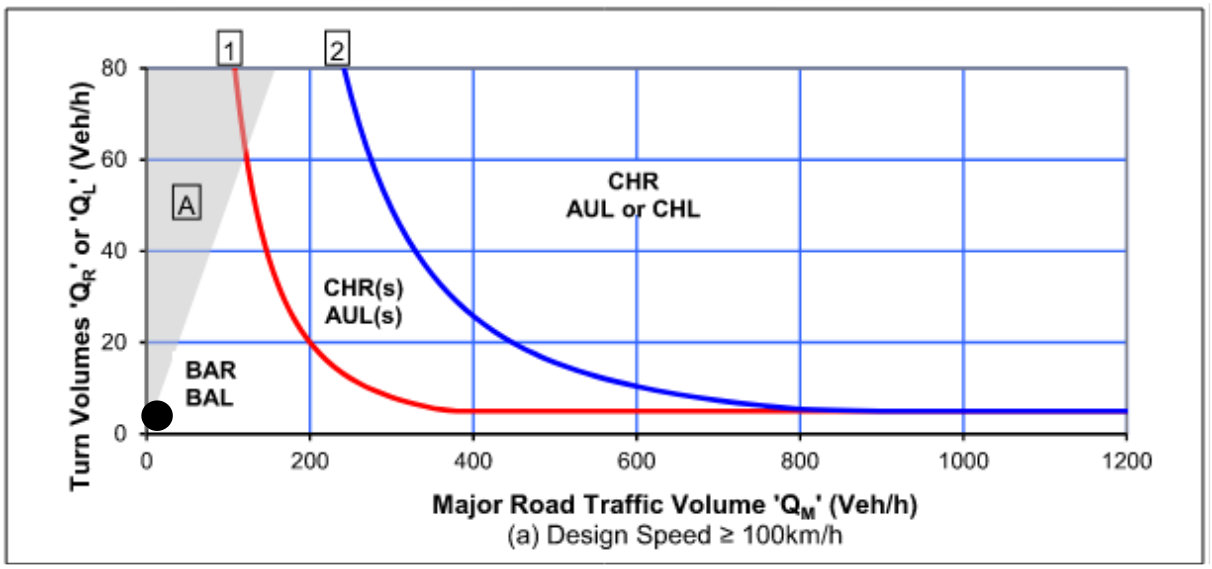


Figure 6-34: Turn Warrants Assessment – Gate 1 (Q_L)

6.5.3.2 Gate 2 and Gate 3 – Old Sydney Road

Located on Old Sydney Road, approximately 2.9km west of Lovers Lane, Gate 2 and Gate 3 consists of four (4) gates which will provide access to construction sections 1 and 2 and the rail maintenance access road (RMAR).

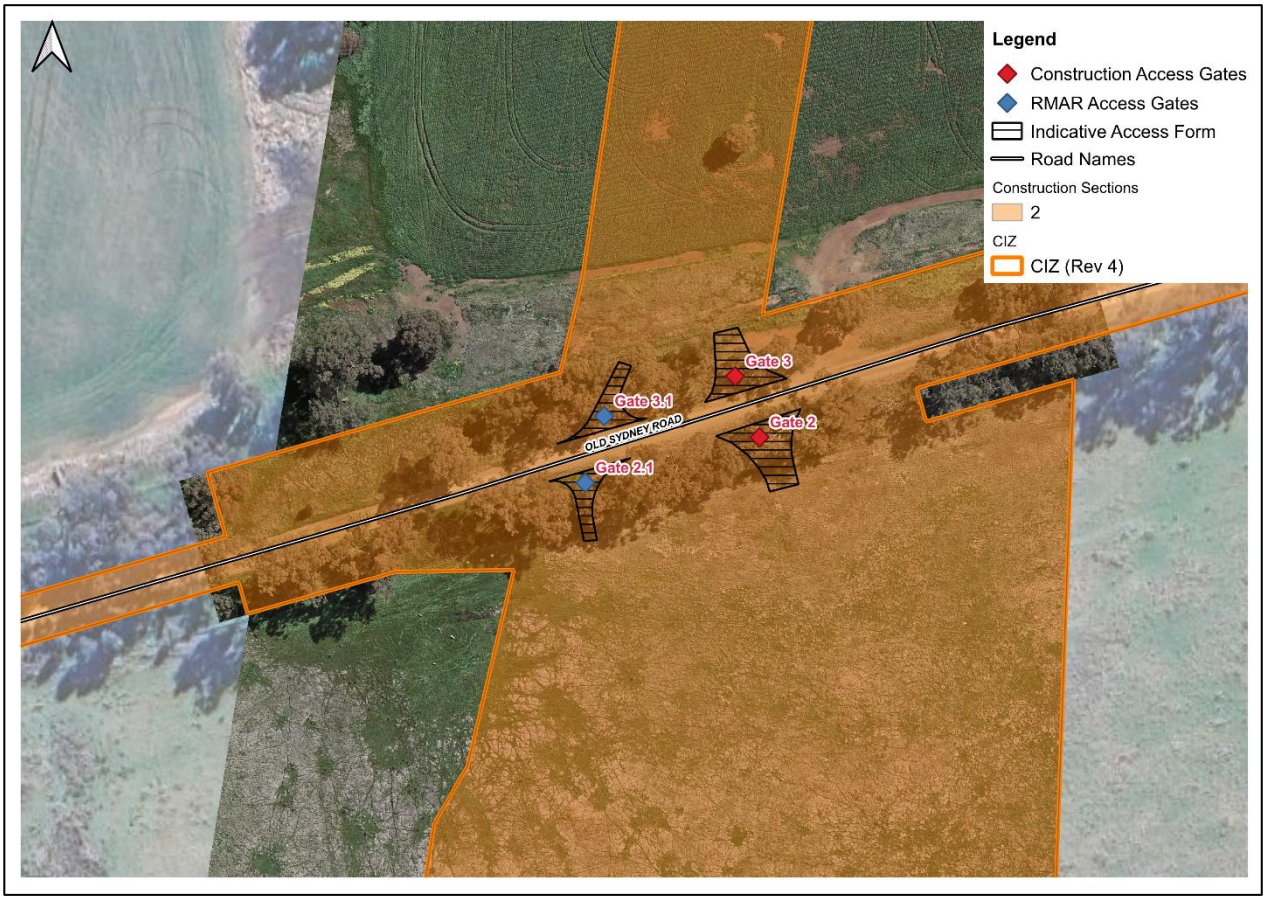


Figure 6-13 Gate 2 and 3 locations

Details associated with the access are provided in the table below:

Table 6-7: Gate Details – Gate 2 and 3

Gate #	Gate 3.1	Gate 3	Gate 2.1	Gate 2
Location	Old Sydney Road			
AADT	16 (2018)			
Speed limit	100km/hr			
Access duration	Eighteen (18) months			
Construction ADT	30 (per gate)			
Construction peak hour volume	4 (per gate)			
Construction vehicle type	Truck and dog (19.0m),			
Permitted movements	Left and right in, left and right out			

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-8: Sight Distance Assessment – Gate 3

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 3.1	East	100km/hr	285m	There is insufficient information available (Google Streetview) to make a determination on available sight distance	139m	There is insufficient information available (Google Streetview) to make a determination on available sight distance
	West					
Gate 3	East	100km/hr	285m		139m	
	West					
Gate 2.1	East	100km/hr	285m		139m	
	West					
Gate 2	East	100km/hr	285m		139m	
	West					

As detailed above, there is insufficient information available to make a determination on available sight distance at Gate 3.1, 3, 2.1 and 2. To ensure that suitable provisions are available, an on-site review of available sight distance will be undertaken and detailed within appropriate documentation (i.e., Section 138).

Turn Treatments at Site Access

An assessment against the warrants for turn treatments has been undertaken in line with the guidance provided within Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management,* to determine the need for basic, auxiliary and channelised turn treatments on the major road. Although it is noted that the warrants are based on the construction of intersections on new roads (i.e., Greenfield sites) and that the warrants are not intended for direct application to accesses and driveways, the warrants may be used as a reference for such.

To undertake this assessment, background traffic volumes for Old Sydney Road were obtained from traffic surveys undertaken by *Austraffic* on Tuesday 28th August 2018. Noting that data collection was undertaken 2018, to account for any population growth and subsequent increase in utilisation of the road network, a compounding annual growth rate of 0.5 percent per year has been used to determine future year background traffic volumes. The use of this growth rate is consistent with that adopted within *Technical Paper 3 – Traffic, Transport and Impact Assessment,* and is considered to provide a conservative assessment given the growth rate is above recorded population growth rates. Future year background traffic volumes at year 2025 and 2027 are presented below.

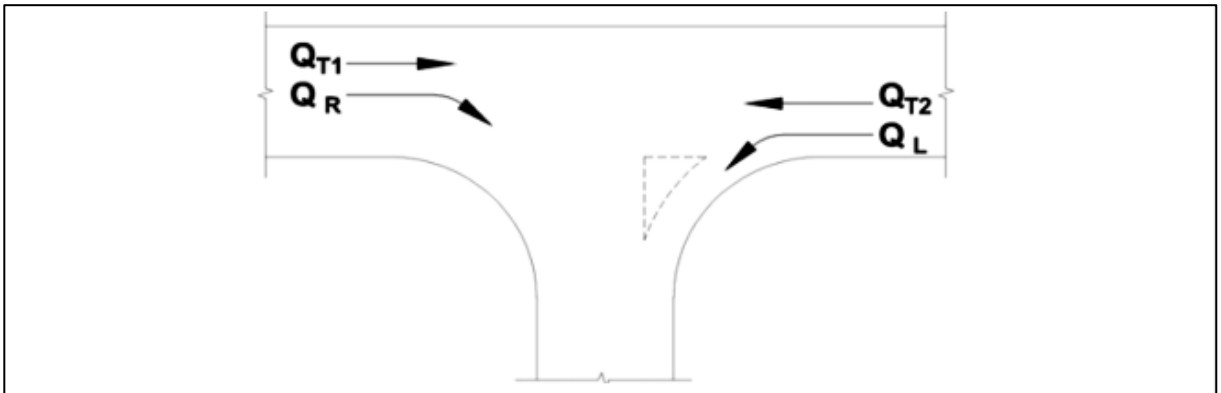
Table 6-9: Traffic Volumes – Old Sydney Road

Road	Background AADT*	Year	Peak Hour Volumes		Growth Rate	2025 Design Year Volume			2027 Design Year Volume		
			AM Peak	PM Peak		AADT	AM Peak	PM Peak	AADT	AM Peak	PM Peak
Old Sydney Road	16	2018	3	5	0.5%	17	4	6	17	4	6

* Weekday average

** Peak recorded volumes

In order to undertake the assessment, the major road traffic volume (Q_M) first needs to be calculated. On two-lane, two-way roads (without a splitter island), the value of the major road traffic volume parameter (Q_M) for a right turn is the total through traffic flow in both directions (Q_{T1} and Q_{T2}), plus the volume of left turning traffic (Q_L). For a left turn, the Q_M is equal to total of traffic flow in the direction of the left turn (Q_{T2}).



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= Q_{T1} + Q_{T2} + Q_L
		Yes	= Q_{T1} + Q_{T2}
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x Q_{T1} + Q_{T2} + Q_L
		Yes	= 50% x Q_{T1} + Q_{T2}
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x Q_{T1} + Q_{T2} + Q_L
		Yes	= 33% x Q_{T1} + Q_{T2}
	Left	Yes or no	= 33% x Q_{T2}

Figure 6-14: Extract from AGTM Part 6 – Figure 3.26

With reference to the above, the volumes adopted for this assessment are detailed below, noting that, 2027 design year volumes have been adopted for the purpose of this assessment to ensure that the design of the site accesses remain suitable throughout construction. Note- volume have hourly data.

Table 6-10: Turn Warrants Parameters – Gate 2 and Gate 3

Gate	Right turn		Left turn	
	Q_M	Q_R	Q_M	Q_L
Gate 3.1	4	10	3	4
Gate 3	4	10	3	4
Gate 2.1	4	10	3	4
Gate 2	4	10	3	4

1. A 50/50 split of traffic volumes has been assumed for traffic travelling along the road frontage

2. A 50/50 split of construction traffic volumes has been assumed for traffic turning into the access

Adopting these volumes, the warrants assessment is shown below for Gates Gate 3.1, 3, 2.1 and 2.

Note, each zone represents the corresponding turn treatment. Turn treatment include:

- Basic Turn Treatments (Type BA)
  - BAL - basic left-turn treatments
  - BAR - basic right-turn treatments
- Auxiliary Lane Turn Treatments (Type AU) - involve short lengths of auxiliary lane provided to improve safety
  - AUL - auxiliary left-turn
  - AUR - auxiliary right-turn

- Channelised Turn Treatments (Type CH)
  - CHL - channelised left-turn
  - CHR - channelised right-turn

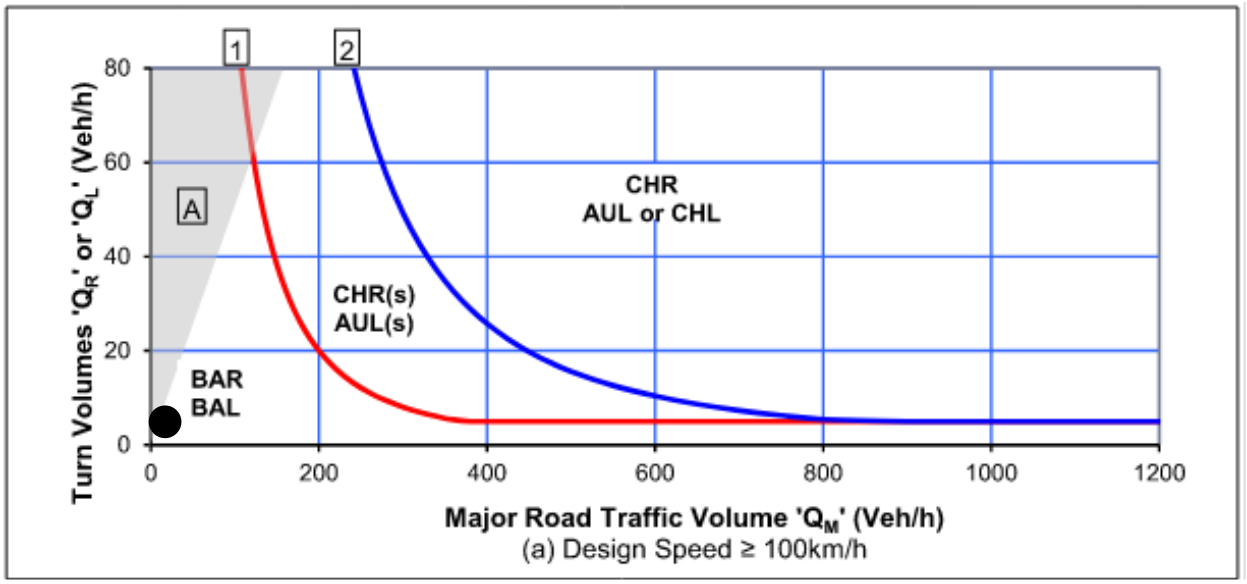


Figure 6-15: Turn Warrants Assessment – Gate 3.1 (Q_r)

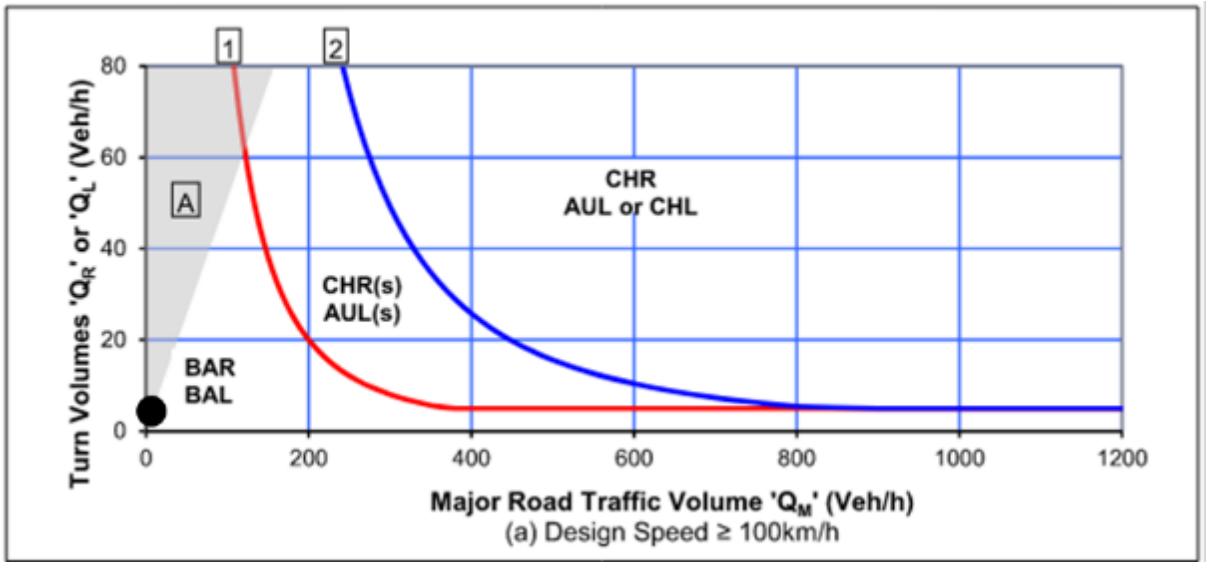


Figure 6-16: Turn Warrants Assessment – Gate 3.1 (Q_L)

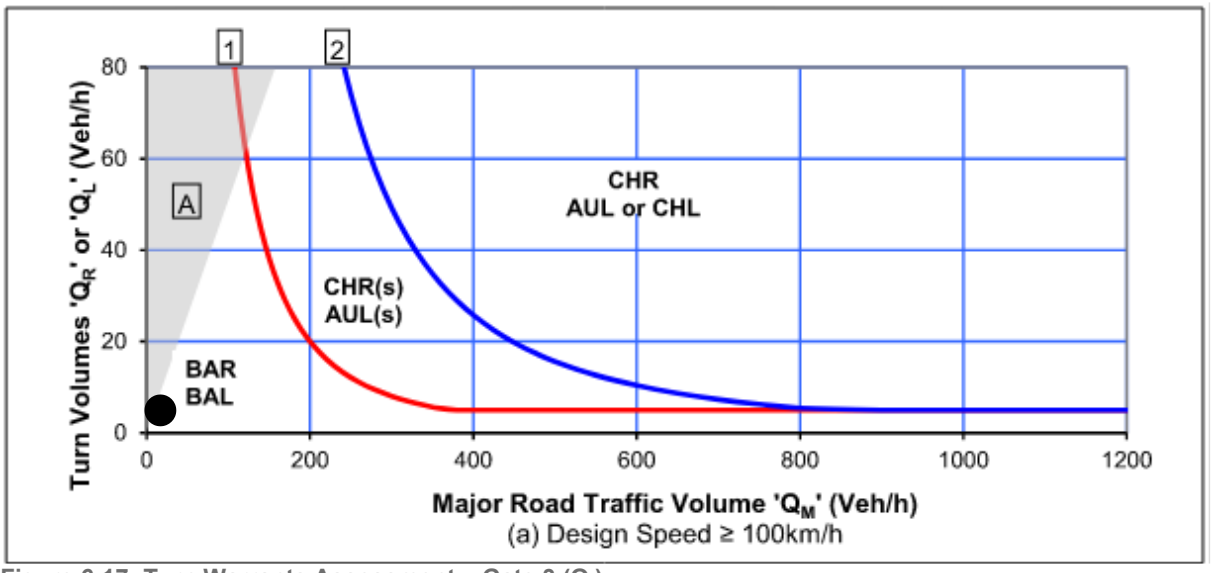


Figure 6-17: Turn Warrants Assessment – Gate 3 (Q_r)

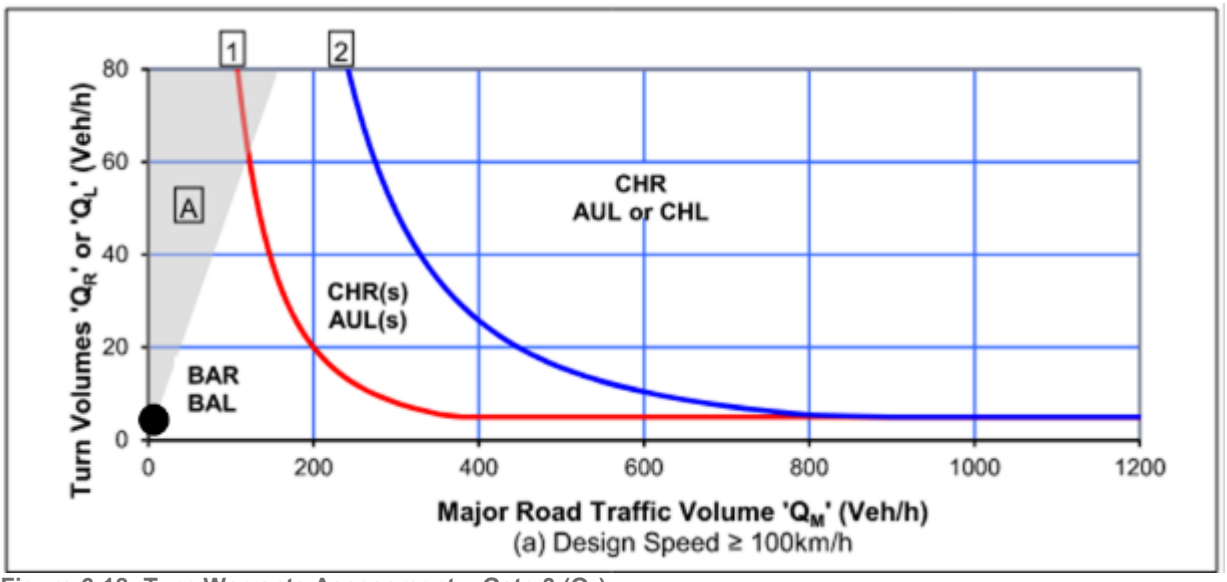


Figure 6-18: Turn Warrants Assessment – Gate 3 (Q_L)

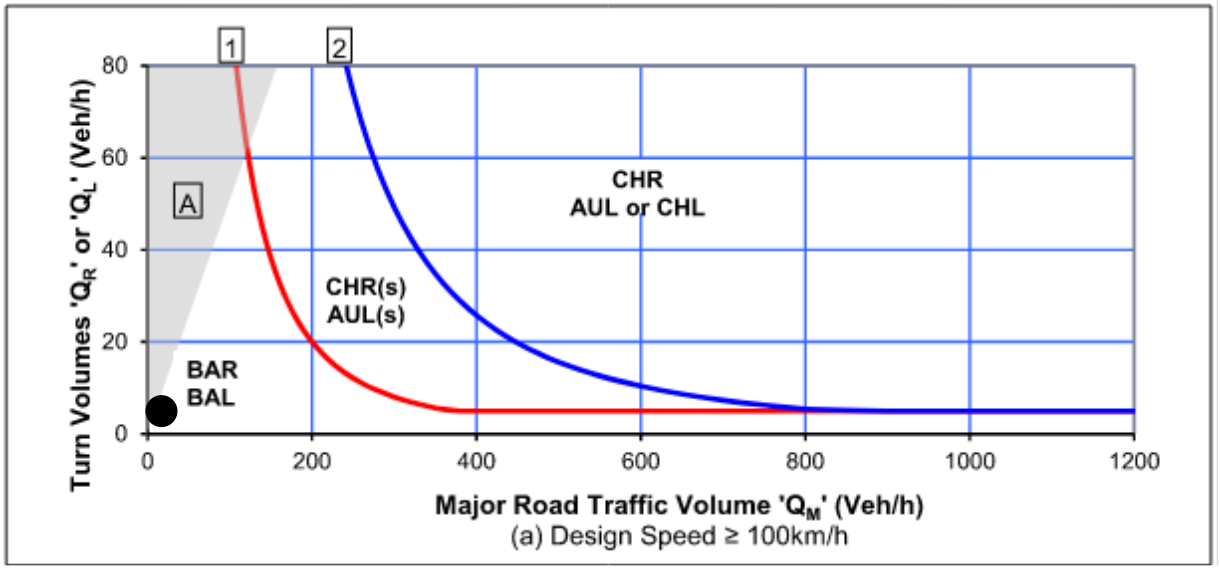


Figure 6-19: Turn Warrants Assessment – Gate 2.1 (Q_r)

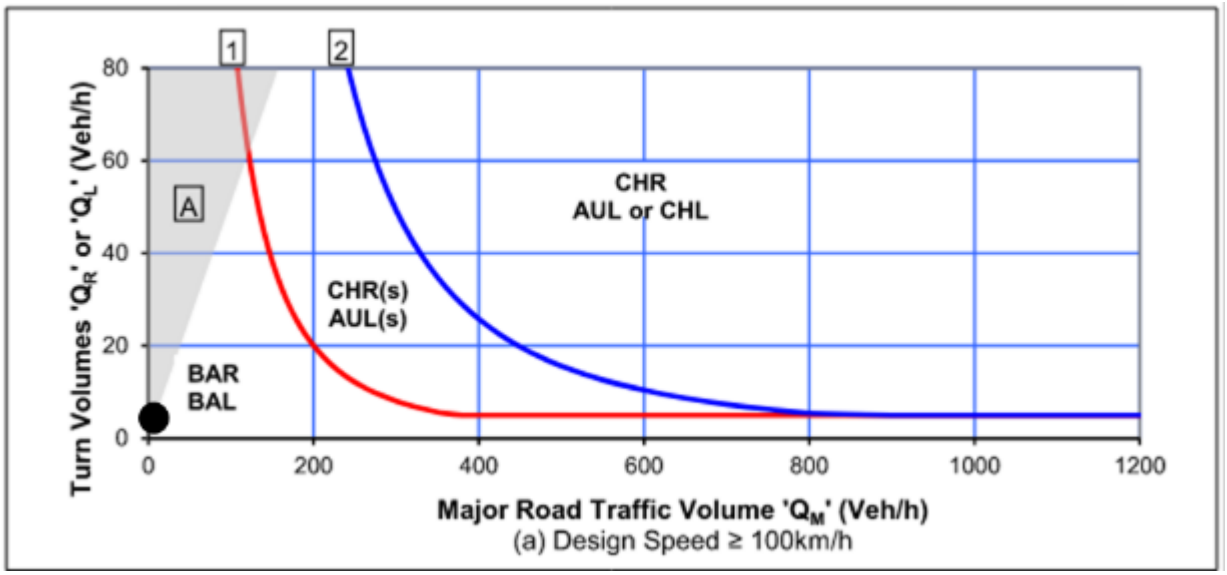


Figure 6-20: Turn Warrants Assessment – Gate 2.1 (Q_L)

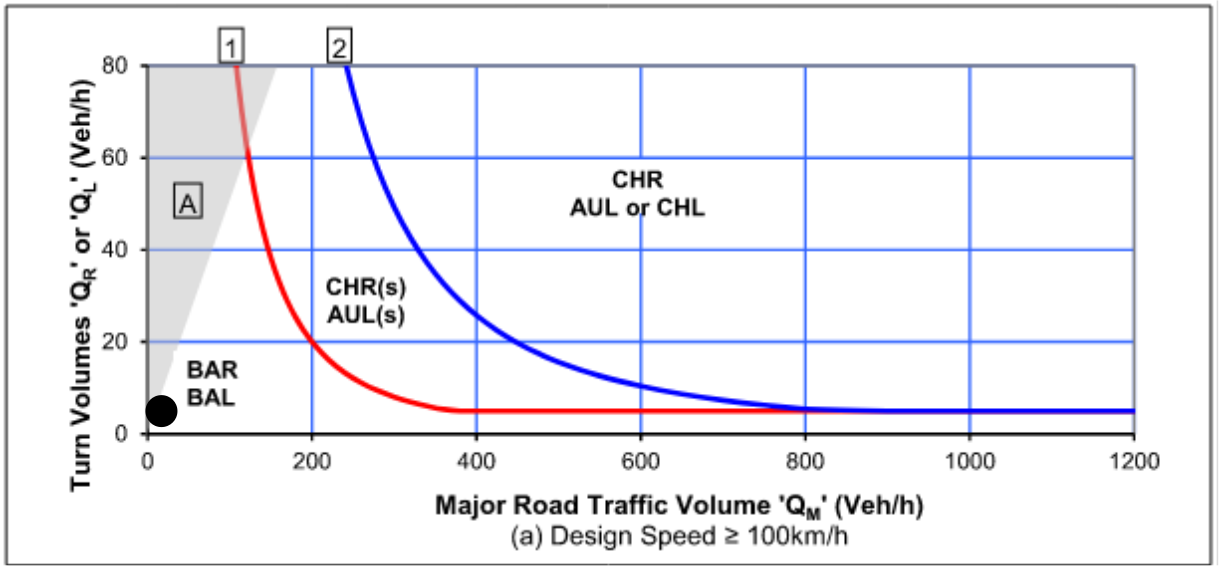


Figure 6-21: Turn Warrants Assessment – Gate 2 (Q_r)

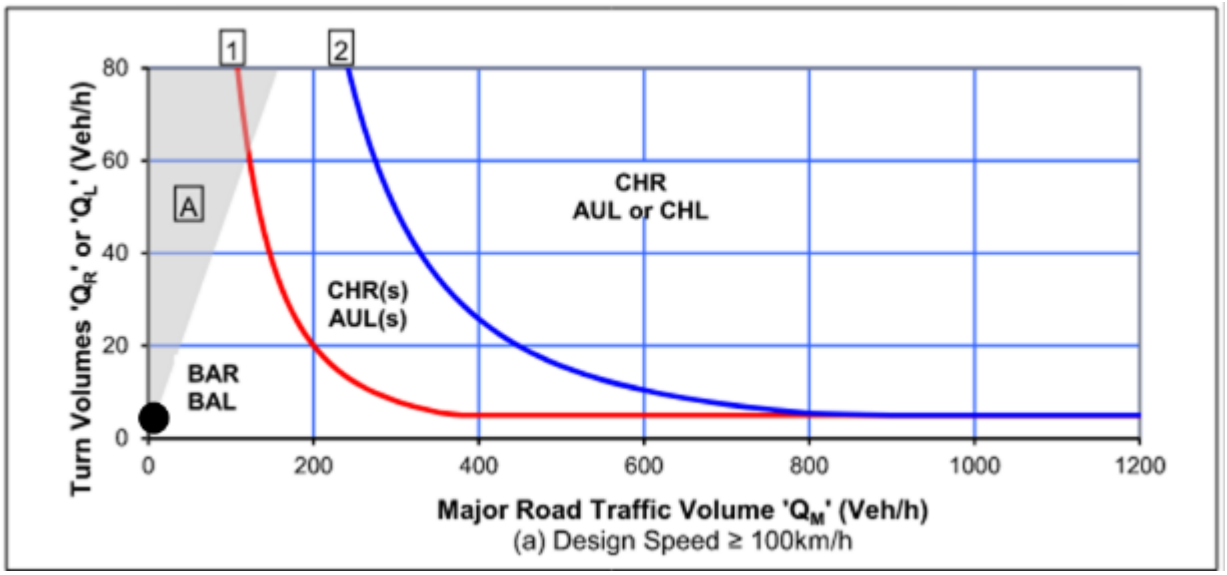


Figure 6-22: Turn Warrants Assessment – Gate 2 (Q_L)

A summary of the above assessments is provided below.

Table 6-11: Turn Warrants Assessment Summary – Gate 2 and Gate 3

Gate	Turn treatments
Gate 3.1	Basic left turn (BAL), Basic right turn (BAR)
Gate 3	Basic left turn (BAL), Basic right turn (BAR)
Gate 2.1	Basic left turn (BAL), Basic right turn (BAR)
Gate 2	Basic left turn (BAL), Basic right turn (BAR)

As detailed above, the assessment indicates that basic turn treatments (BAL, BAR) are warranted on Old Sydney Road (major road) at Gate 3.1, 3, 2.1 and Gate 2

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,
- Turning volumes are high (i.e., 300 to 500 veh/hour)
- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)
- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the approval process (i.e., Section 138).

6.5.3.3 Gate 4A North and Gate 4A South – Ironbong Road

Located on Ironbong Road, approximately 2.9km north-west of Lovers Lane, Gate 4 consists of three (3) gates which will provide access to construction sections 2 and 3 and the RMAR.

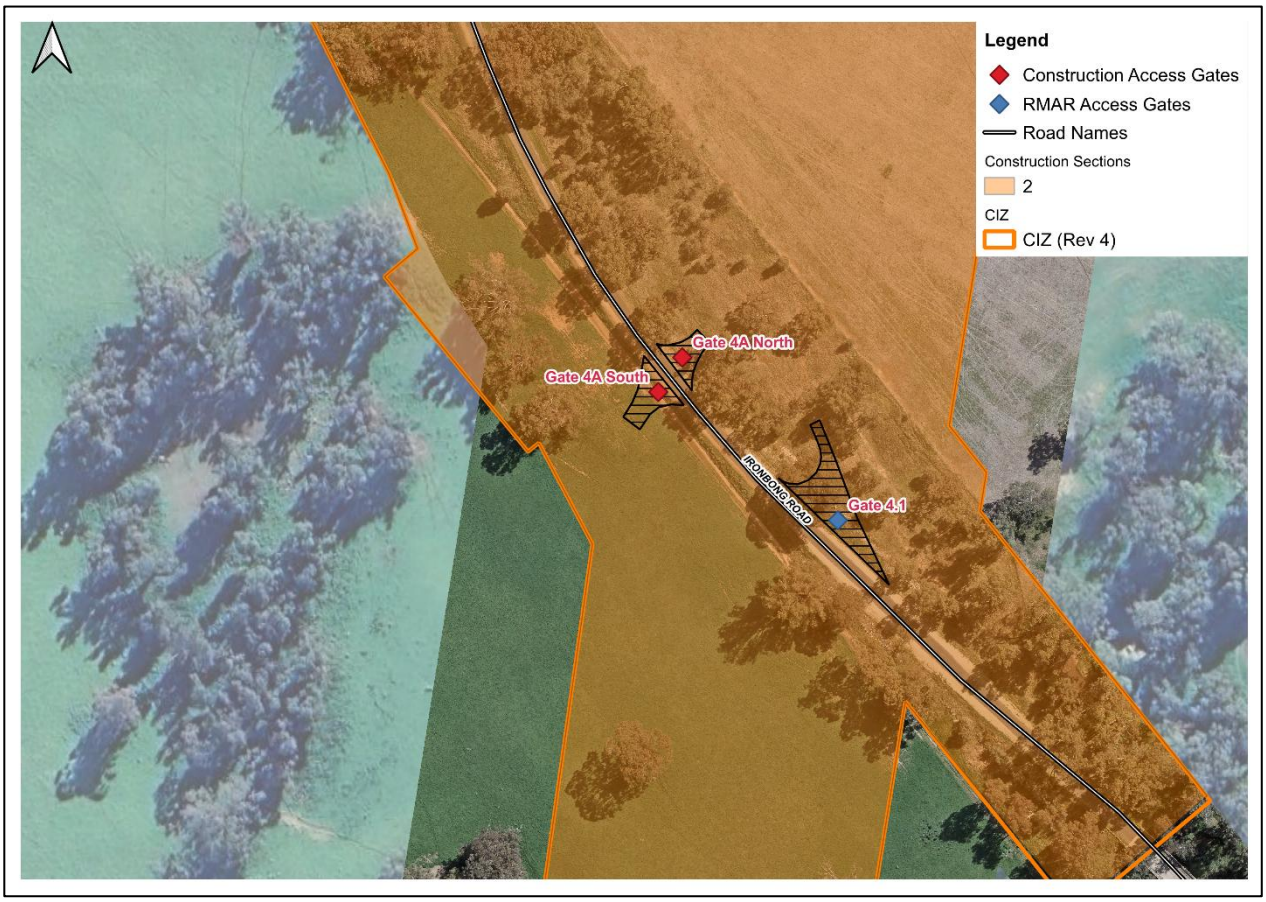


Figure 6-14 Gate 4A North and Gate 4A South locations

Details associated with the access are provided in the table below:

Table 6-12: Gate Details – Gate 4A North and Gate 4A South

Gate #	Gate 4A North	Gate 4.1	Gate 4A South
Location	Ironbong Road		
AADT	24 (2018)		
Speed limit	100km/hr		
Access duration	Eighteen (18) months		
Construction ADT	70 (per gate)		
Construction peak hour volume	7 (per gate)		
Construction vehicle type	Truck and dog (19.0m)		
Permitted movements	Left and right in, left and right out		

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-13: Sight Distance Assessment – Gate 4A North and 4A South

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 4A North	East	100km/hr	285m	Yes	139m	Yes
	West			No		No
Gate 4.1	East	100km/hr	285m	Yes	139m	Yes
	West			No		No
Gate 4A South	East	100km/hr	285m	Yes	139m	Yes
	West			No		No

As detailed above, sight distance requirements to the east of the accesses (Gate 4A North, 4.1 and 4A South) are able to be achieved, however sight distance to the west is obstructed, limiting available sight distance. As a potential mitigation measure and to ensure that appropriate sight distance is available at sight accesses, reduced speed limits approaching the access have been considered. An assessment considering the sight distance requirements of reduced speed limits (below the posted speed limit) is presented below.

Table 6-14: Further Sight Distance Assessment – Gate 4A North and 4A South

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 4A North	East	80km/hr	214m	Yes	111m	Yes
	West			No		No
	East	60km/hr	151m	Yes	83m	Yes
	West			No		Yes
	East	40km/hr	97m	Yes	55m	Yes
	West			Yes		Yes
Gate 4.1	East	80km/hr	214m	Yes	111m	Yes
	West			No		No
	East	60km/hr	151m	Yes	83m	Yes

	West			No		Yes
	East	40km/hr	97m	Yes	55m	Yes
	West			Yes		Yes
Gate 4A South	East	80km/hr	214m	Yes	111m	Yes
	West			No		No
	East	60km/hr	151m	Yes	83m	Yes
	West			No		Yes
	East	40km/hr	97m	Yes	55m	Yes
	West			Yes		Yes

As shown, available sight distance at Gates 4A North, 4.1 and 4A South achieve the minimum requirements for a 40km/hr posted speed limit. Considering this and to ensure that vehicles can safely and efficiently manoeuvre into and out of the access, a potential mitigation measure would be to implement a maximum reduced speed limit of 40km/hr on approach to the accesses (temporary speed limits on approach to site access points would need to accommodate the necessary sight distance requirements is being proposed (i.e., installed more than 97m from a site access point where the reduced speed limit is 40km/hr)). This approach to reduce speed limit to 40km/h has been adopted for the development of the strategic design.

Turn Treatments at Site Access

To undertake this assessment, background traffic volumes for Ironbong Road were obtained from traffic surveys undertaken by *Austraffic* on Tuesday 28th August 2018. Noting that data collection was undertaken 2018, to account for any population growth and subsequent increase in utilisation of the road network, a compounding annual growth rate of 0.5 percent per year has been used to determine future year background traffic volumes. The use of this growth rate is consistent with that adopted within *Technical Paper 3 – Traffic, Transport and Impact Assessment,* and is considered to provide a conservative assessment given the growth rate is above recorded population growth rates. Future year background traffic volumes at year 2025 and 2027 are presented below.

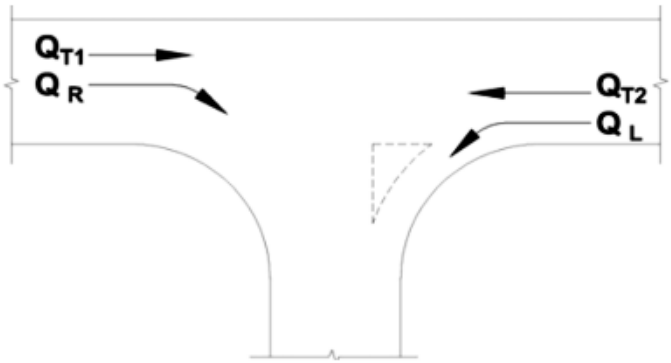
Table 6-15: Traffic Volumes – Ironbong Road

Road	Background AADT*	Year	Peak Hour Volumes		Growth Rate	2025 Design Year Volume			2027 Design Year Volume		
			AM Peak	PM Peak		AADT	AM Peak	PM Peak	AADT	AM Peak	PM Peak
Ironbong Road	24	2018	6	5	0.5%	25	7	6	26	7	6

* Weekday average

** Peak recorded volumes

In order to undertake the assessment, the major road traffic volume (Q_M) first needs to be calculated. On two-lane, two-way roads (without a splitter island), the value of the major road traffic volume parameter (Q_M) for a right turn is the total through traffic flow in both directions (Q_{T1} and Q_{T2}), plus the volume of left turning traffic (Q_L). For a left turn, the Q_M is equal to total of traffic flow in the direction of the left turn (Q_{T2}).



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= Q_{T1} + Q_{T2} + Q_L
		Yes	= Q_{T1} + Q_{T2}
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x Q_{T1} + Q_{T2} + Q_L
		Yes	= 50% x Q_{T1} + Q_{T2}
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x Q_{T1} + Q_{T2} + Q_L
		Yes	= 33% x Q_{T1} + Q_{T2}
	Left	Yes or no	= 33% x Q_{T2}

Figure 6-24: Extract from AGTM Part 6 – Figure 3.26

With reference to the above, the volumes adopted for this assessment are detailed below, noting that, 2027 design year volumes have been adopted for the purpose of this assessment to ensure that the design of the site accesses remain suitable throughout construction. Note- volume have hourly data.

Table 6-16: Turn Warrants Parameters – Gate 4A North and Gate 4A South

Gate	Right turn		Left turn	
	Q_M	Q_R	Q_M	Q_L
Gate 4A North	12	4	4	4
Gate 4.1	12	4	4	4
Gate 4A South	12	4	4	4

1. A 50/50 split of traffic volumes has been assumed for traffic travelling along the road frontage
2. A 50/50 split of construction traffic volumes has been assumed for traffic turning into the access

Adopting these volumes, the warrants assessment is shown below for Gates 4A North, 4.1 and 4A South.

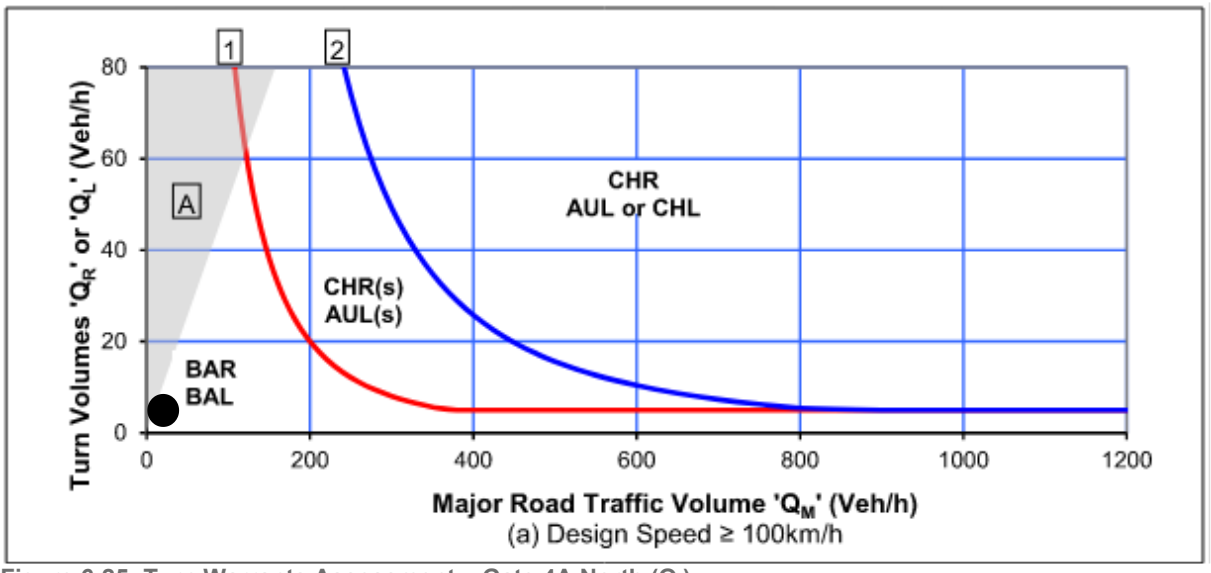


Figure 6-25: Turn Warrants Assessment – Gate 4A North (Q_r)

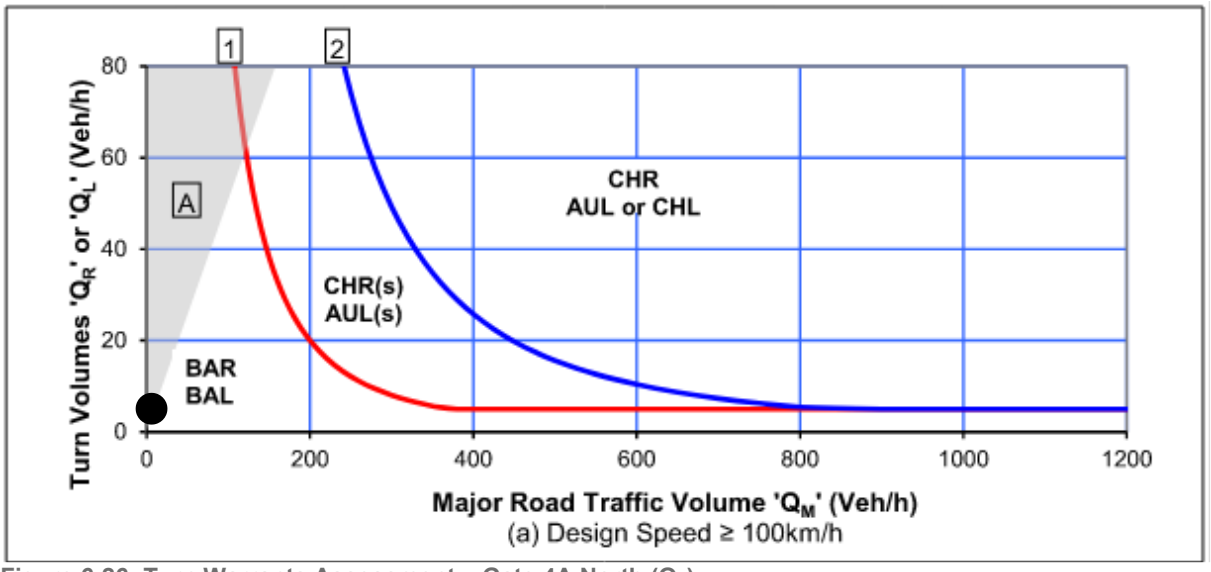


Figure 6-26: Turn Warrants Assessment – Gate 4A North (Q_L)

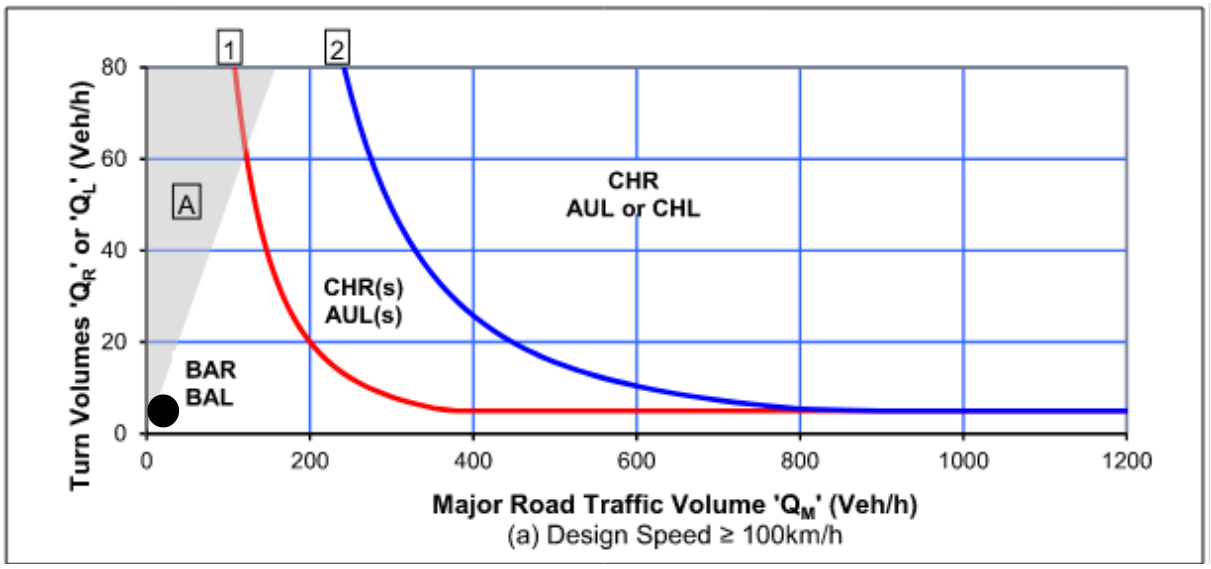


Figure 6-27: Turn Warrants Assessment – Gate 4.1 (Q_r)

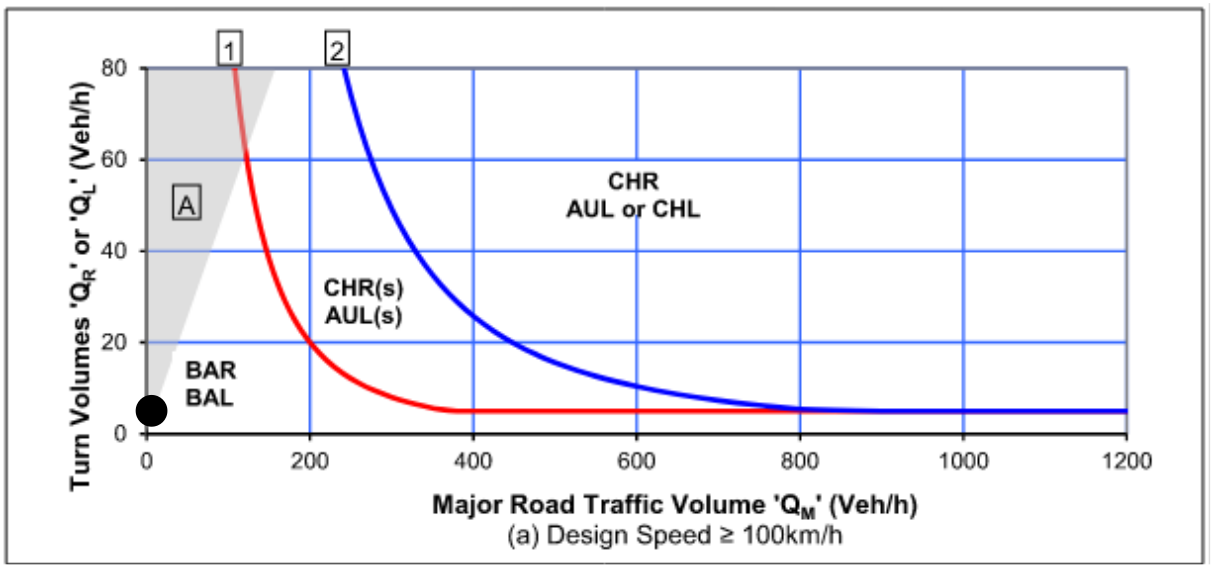


Figure 6-28: Turn Warrants Assessment – Gate 4.1 (Q_L)

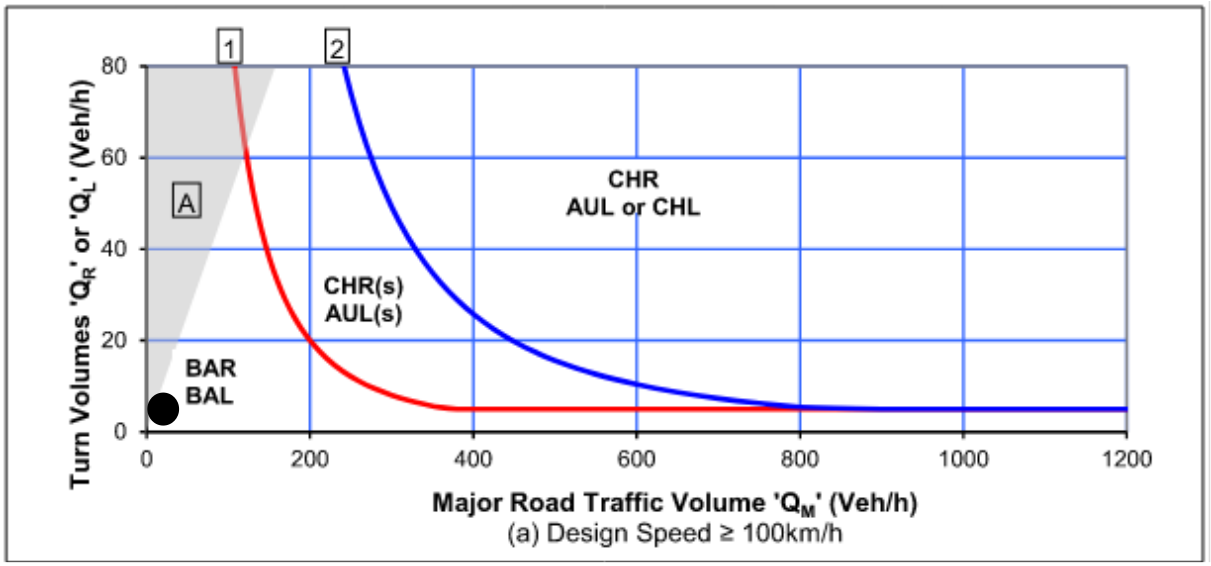


Figure 6-29: Turn Warrants Assessment – Gate 4A South (Q_r)

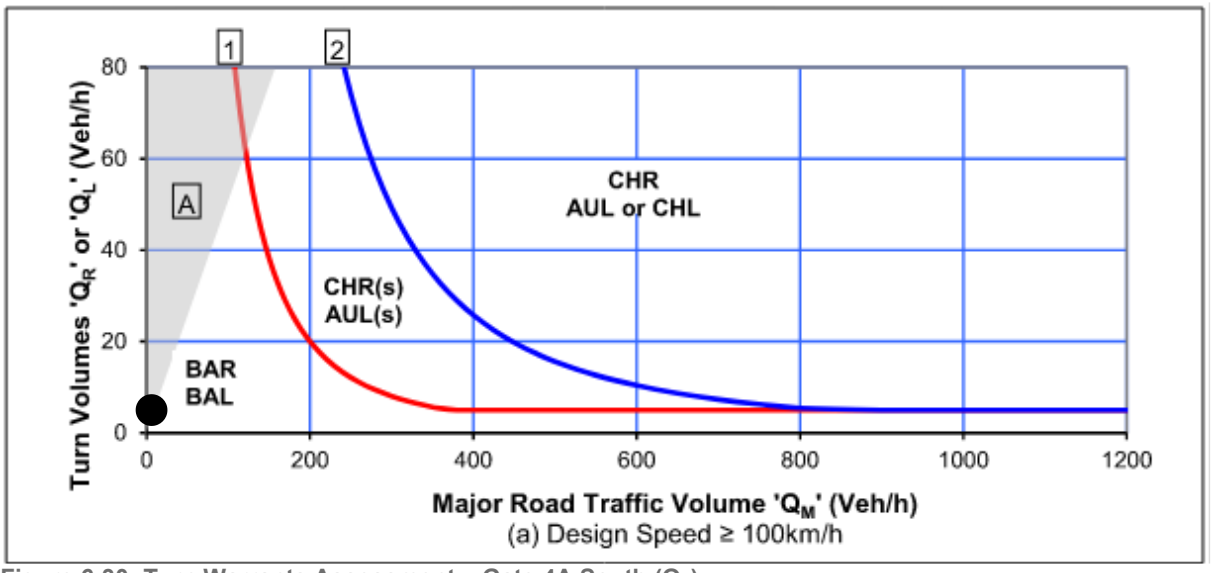


Figure 6-30: Turn Warrants Assessment – Gate 4A South (Q_L)

A summary of the above assessments is provided below.

Table 6-17: Turn Warrants Assessment Summary – Gate 4

Gate	Turn treatments
Gate 4A North	Basic left turn (BAL), Basic right turn (BAR)
Gate 4.1	Basic left turn (BAL), Basic right turn (BAR)
Gate 4A South	Basic left turn (BAL), Basic right turn (BAR)

As detailed above, the assessment indicates that basic turn treatments (BAL, BAR) are warranted on Ironbong Road (major road) at Gates 4A North, 4.1 and 4A South.

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,
- Turning volumes are high (i.e., 300 to 500 veh/hour)
- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)
- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the appropriate approval process (i.e., Section 138).

6.5.3.4 Gate 5 – Ironbong Road

Located on Ironbong Road, approximately 2.0km south of Hicks Lane, Gate 5 will provide access to construction section 3.

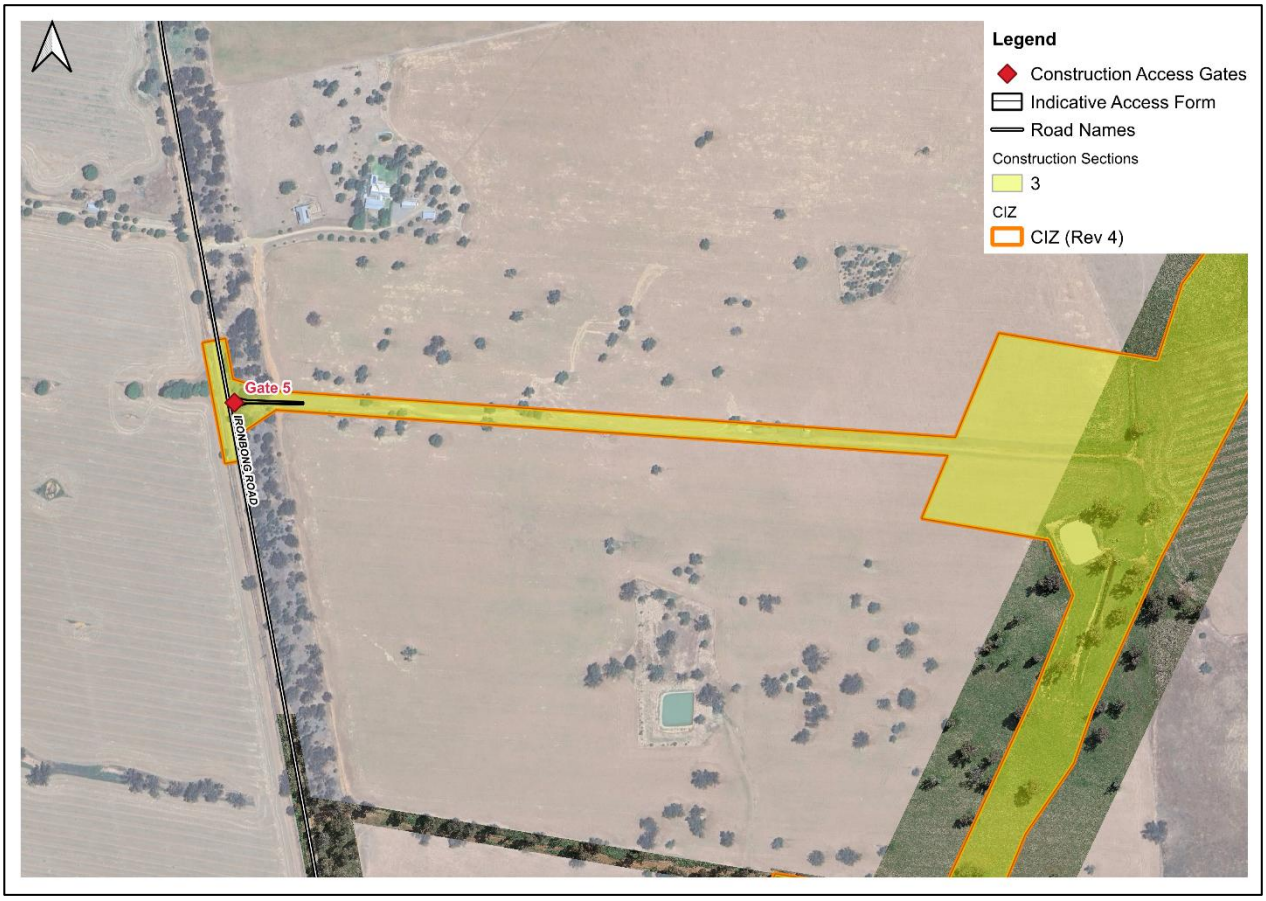


Figure 6-15 Gate 5 location

Details associated with the access are provided in the table below:

Table 6-18: Gate Details – Gate 5

Gate #	Gate 5
Location	Ironbong Road
AADT	24 (2018)
Speed limit	100km/hr
Access duration	Eighteen (18) months
Construction ADT	35 to 40 (per gate)
Construction peak hour volume	4 (per gate)
Construction vehicle type	Truck and dog (19.0m), B-double (26m)
Permitted movements	Left and right in, left and right out

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-19: Sight Distance Assessment – Gate 5

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 4A	North	100km/hr	285m	Yes	139m	Yes
	South			No		No

As detailed above, sight distance requirements to the north of the access are able to be achieved, however sight distance to the south is obstructed, limiting available sight distance. As a potential mitigation measure and to ensure that appropriate sight distance is available at sight accesses, reduced speed limits approaching the access have been considered. An assessment considering the sight distance requirements of reduced speed limits (below the posted speed limit) is presented below.

Table 6-20: Further Sight Distance Assessment – Gate 5

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 4A	North	80km/hr	214m	Yes	111m	Yes
	South			No		No
	North	60km/hr	151m	Yes	83m	Yes
	South			No		Yes
	North	40km/hr	97m	Yes	55m	Yes
	South			Yes		Yes

As shown, available sight distance at Gate 5 achieves the minimum requirements for a 40km/hr posted speed limit. Considering this and to ensure that vehicles can safely and efficiently manoeuvre into and out of the access, a potential mitigation measure would be to implement a maximum reduced speed limit of 40km/hr on approach to the accesses (temporary speed limits on approach to site access points would need to accommodate the necessary sight distance requirements (i.e., installed more than 97m from a site access point where the reduced speed limit is 40km/hr)). This approach to reduce speed limit to 40km/h has been adopted for the development of the strategic design.

Turn Treatments at Site Access

To undertake this assessment, background traffic volumes for Ironbong Road were obtained from traffic surveys undertaken by *Austraffic* on Tuesday 28th August 2018. Noting that data collection was undertaken 2018, to account for any population growth and subsequent increase in utilisation of the road network, a compounding annual growth rate of 0.5 percent per year has been used to determine future year background traffic volumes. The use of this growth rate is consistent with that adopted within *Technical Paper 3 – Traffic, Transport and Impact Assessment,* and is considered to provide a conservative assessment given the growth rate is above recorded population growth rates. Future year background traffic volumes at year 2025 and 2027 are presented below.

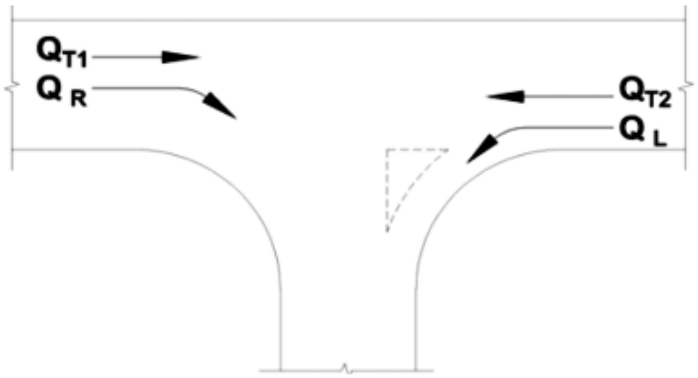
Table 6-21: Traffic Volumes – Ironbong Road

Road	Background AADT*	Year	Peak Hour Volumes		Growth Rate	2025 Design Year Volume			2027 Design Year Volume		
			AM Peak	PM Peak		AADT	AM Peak	PM Peak	AADT	AM Peak	PM Peak
Ironbong Road	24	2018	6	5	0.5%	25	7	6	26	7	6

* Weekday average

** Peak recorded volumes

In order to undertake the assessment, the major road traffic volume (Q_M) first needs to be calculated. On two-lane, two-way roads (without a splitter island), the value of the major road traffic volume parameter (Q_M) for a right turn is the total through traffic flow in both directions (Q_{T1} and Q_{T2}), plus the volume of left turning traffic (Q_L). For a left turn, the Q_M is equal to total of traffic flow in the direction of the left turn (Q_{T2}).



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 50% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 33% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 33% x Q_{T2}

Figure 6-32: Extract from AGTM Part 6 – Figure 3.26

With reference to the above, the volumes adopted for this assessment are detailed below, noting that, 2027 design year volumes have been adopted for the purpose of this assessment to ensure that the design of the site accesses remain suitable throughout construction. Note- volume have hourly data.

Table 6-22: Turn Warrants Parameters – Gate 5

Gate	Right turn		Left turn	
	Q_M	Q_R	Q_M	Q_L
Gate 5	10	2	4	2

1. A 50/50 split of traffic volumes has been assumed for traffic travelling along the road frontage
2. A 50/50 split of construction traffic volumes has been assumed for traffic turning into the access

Adopting these volumes, the warrants assessment is shown below for Gate 5.

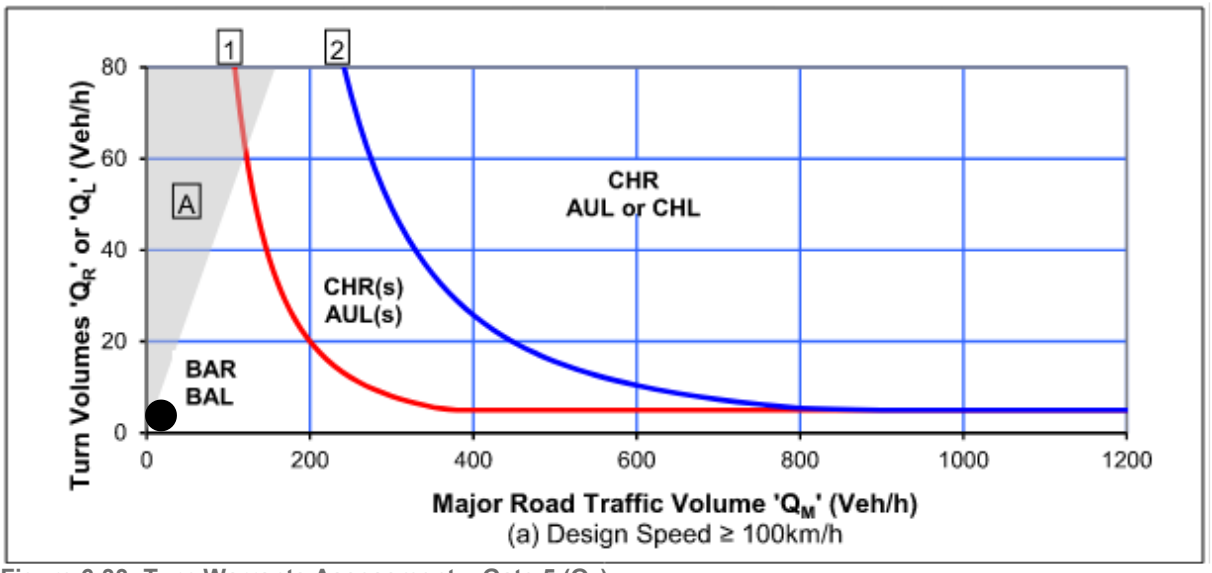


Figure 6-33: Turn Warrants Assessment – Gate 5 (Q_R)

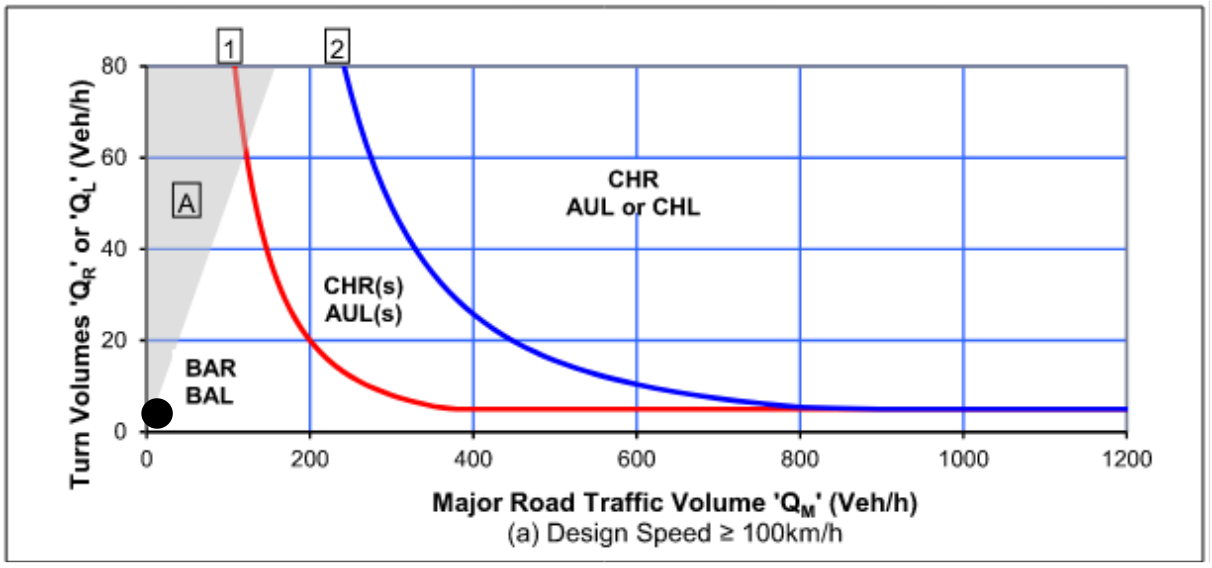


Figure 6-34: Turn Warrants Assessment – Gate 5 (Q_L)

A summary of the above assessments is provided below.

Table 6-23: Turn Warrants Assessment Summary – Gate 5

Gate	Turn treatments
Gate 5	Basic left turn (BAL), Basic right turn (BAR)

As detailed above, the assessment indicates that basic turn treatments (BAL, BAR) are warranted on Ironbong Road (major road) at Gate 5.

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,
- Turning volumes are high (i.e., 300 to 500 veh/hour)
- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)

- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the construction gate design development and the appropriate approval process (i.e., Section 138).

6.5.3.5 Gate 6A and Gate 6B – Diranseer Road

Located on Dirnaseer Road, approximately 950m east of Dudauman Road, Gate 6A and 6B consists of four (4) gates which will provide access to construction sections 3 and 4 and the RMAR.



Figure 6-16 Gate 6A and 6B locations

Details associated with the access are provided in the table below:

Table 6-24: Gate Details – Gate 6A and Gate 6B

Gate #	Gate 6B	Gate 6B.1	Gate 6A	Gate 6A.1
Location	Dirnaseer Road			
AADT	66 (2018)			
Speed limit	100km/hr			
Access duration	Eighteen (18) months			
Construction ADT	90 (per gate)			
Construction peak hour volume	9 (per gate)			
Construction vehicle type	Truck and dog (19.0m), B-double (26m)			
Permitted movements	Left and right in, left and right out			

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-25: Sight Distance Assessment – Gate 6A and 6B

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 6A	East	100km/hr	285m	Yes	139m	Yes
	West			No		Yes
Gate 6A.1	East	100km/hr	285m	Yes	139m	Yes
	West			No		Yes
Gate 6B	East	100km/hr	285m	Yes	139m	Yes
	West			No		Yes
Gate 6B.1	East	100km/hr	285m	Yes	139m	Yes
	West			No		Yes

As detailed above, sight distance requirements to the east of the access are able to be achieved, however sight distance to the west is obstructed, limiting available sight distance. As a potential mitigation measure and to ensure that appropriate sight distance is available at sight accesses, reduced speed limits approaching the access have been considered. An assessment considering the sight distance requirements of reduced speed limits (below the posted speed limit) is presented below.

Table 6-26: Further Sight Distance Assessment – Gate 6A and 6B

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 6A	East	80km/hr	214m	Yes	111m	Yes
	West			Yes		Yes
Gate 6A.1	East	80km/hr	214m	Yes	111m	Yes
	West			Yes		Yes
Gate 6B	East	80km/hr	214m	Yes	111m	Yes
	West			Yes		Yes
Gate 6B.1	East	80km/hr	214m	Yes	111m	Yes
	West			Yes		Yes

As shown, available sight distance at Gates 6A, 6A.1, 6B, 6B.1 achieve the minimum requirements for an 80km/hr posted speed limit. Considering this and to ensure that vehicles can safely and efficiently manoeuvre into and out of the access, a potential mitigation measure would be to implement a maximum reduced speed limit of 80km/hr on approach to the accesses (temporary speed limits on approach to site access points would need to accommodate the necessary sight distance requirements (i.e., installed more than 214m from a site access point where the reduced speed limit is 80km/hr)). This approach to reduce speed limit to 80km/h has been adopted for the development of the strategic.

Turn Treatments at Site Access

To undertake this assessment, background traffic volumes for Dirnaseer Road were obtained from traffic surveys undertaken by *Austraffic* on Tuesday 28th August 2018. Noting that data collection was undertaken 2018, to account for any population growth and subsequent increase in utilisation of the road network, a compounding annual growth rate of 0.5 percent per year has been used to determine future year background traffic volumes. The use of this growth rate is consistent with that adopted within *Technical Paper 3 – Traffic, Transport and Impact Assessment,* and is considered to provide a conservative assessment given the

growth rate is above recorded population growth rates. Future year background traffic volumes at year 2025 and 2027 are presented below.

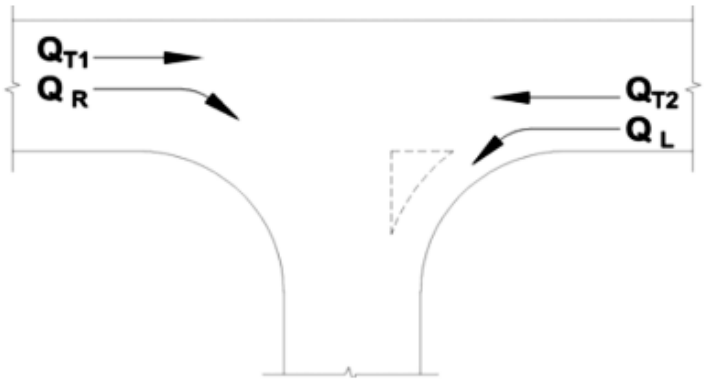
Table 6-27: Traffic Volumes – Dirnaseer Road

Road	Background AADT*	Year	Peak Hour Volumes		Growth Rate	2025 Design Year Volume			2027 Design Year Volume		
			AM Peak	PM Peak		AADT	AM Peak	PM Peak	AADT	AM Peak	PM Peak
Dirnaseer Road	66	2018	12	10	0.5%	69	13	11	70	13	11

* Weekday average

** Peak recorded volumes

In order to undertake the assessment, the major road traffic volume (Q_M) first needs to be calculated. On two-lane, two-way roads (without a splitter island), the value of the major road traffic volume parameter (Q_M) for a right turn is the total through traffic flow in both directions (Q_{T1} and Q_{T2}), plus the volume of left turning traffic (Q_L). For a left turn, the Q_M is equal to total of traffic flow in the direction of the left turn (Q_{T2}).



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 50% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 33% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 33% x Q_{T2}

Figure 6-36: Extract from AGTM Part 6 – Figure 3.26

With reference to the above, the volumes adopted for this assessment are detailed below, noting that, 2027 design year volumes have been adopted for the purpose of this assessment to ensure that the design of the site accesses remain suitable throughout construction. Note- volume have hourly data.

Table 6-28: Turn Warrants Assessment – Gate 6A and Gate 6B

Gate	Right turn		Left turn	
	Q_M	Q_R	Q_M	Q_L
Gate 6A	19	5	7	5
Gate 6A.1	19	5	7	5
Gate 6B	19	5	7	5
Gate 6B.1	19	5	7	5

1. A 50/50 split of traffic volumes has been assumed for traffic travelling along the road frontage
2. A 50/50 split of construction traffic volumes has been assumed for traffic turning into the access

Adopting these volumes, the warrants assessment is shown below for Gates 6A, 6A.1, 6B, 6B.1.

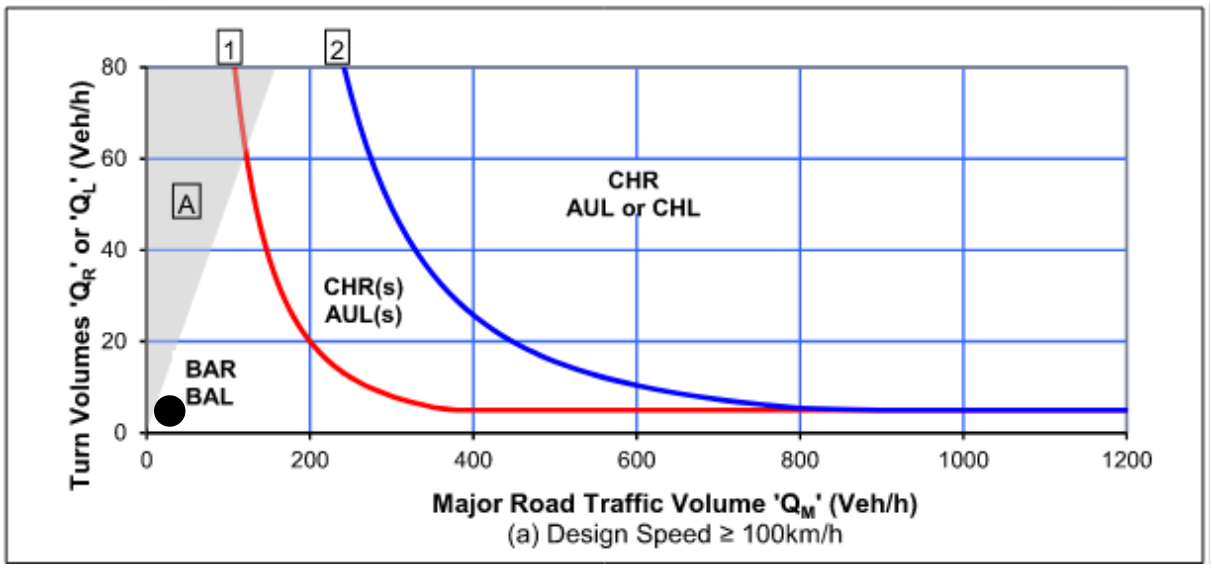


Figure 6-37: Turn Warrants Assessment – `Gate 6A (Q_R)

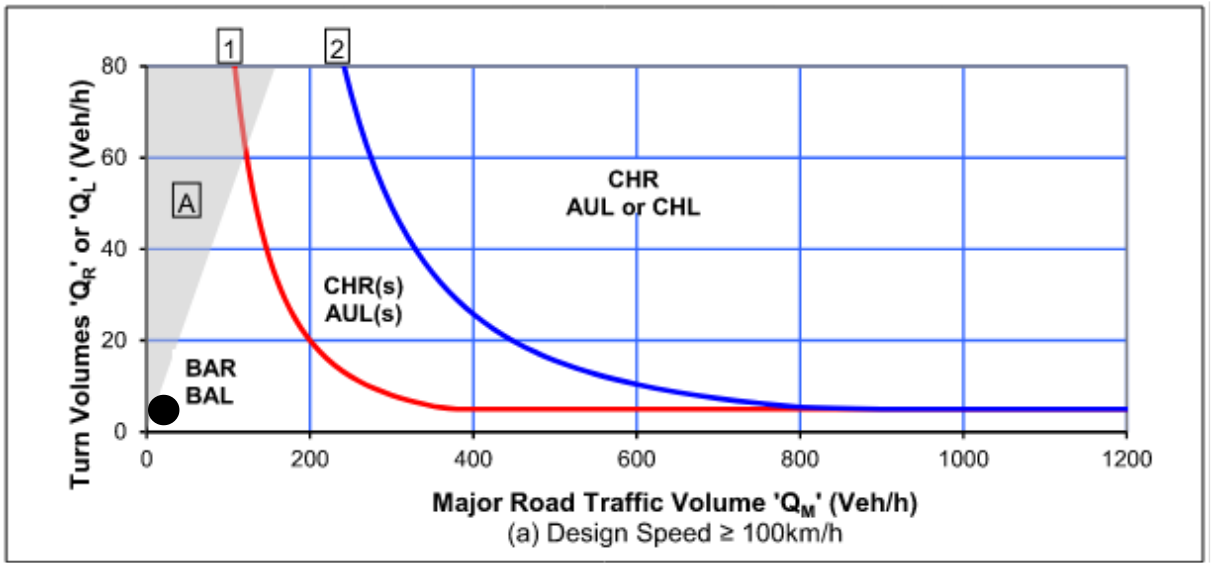


Figure 6-38: Turn Warrants Assessment – Gate 6A (Q_L)

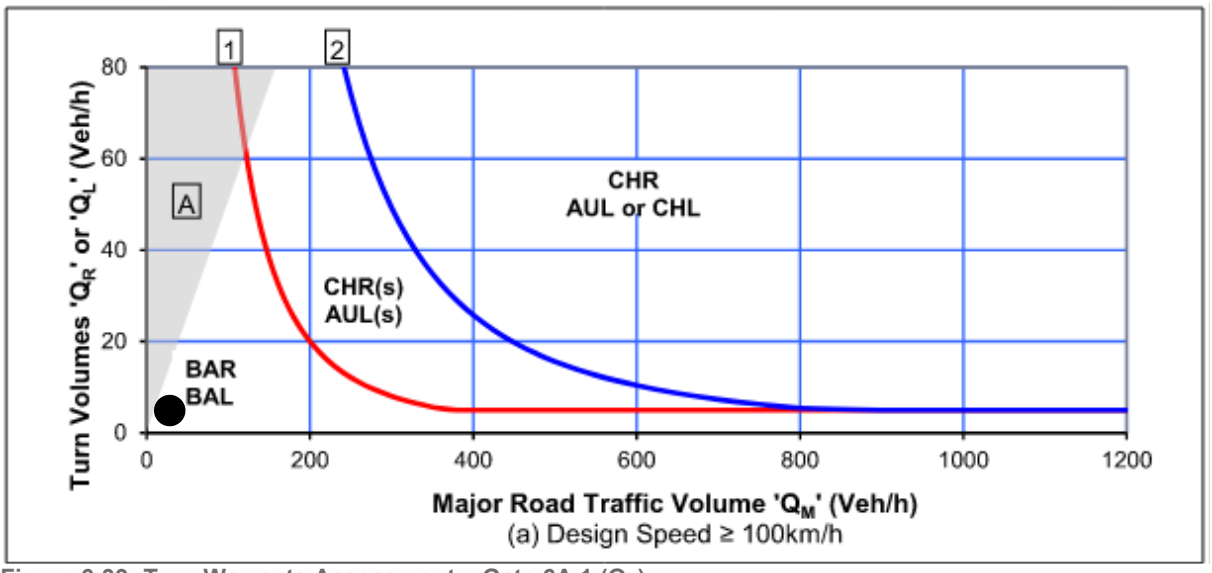


Figure 6-39: Turn Warrants Assessment – Gate 6A.1 (Q_R)

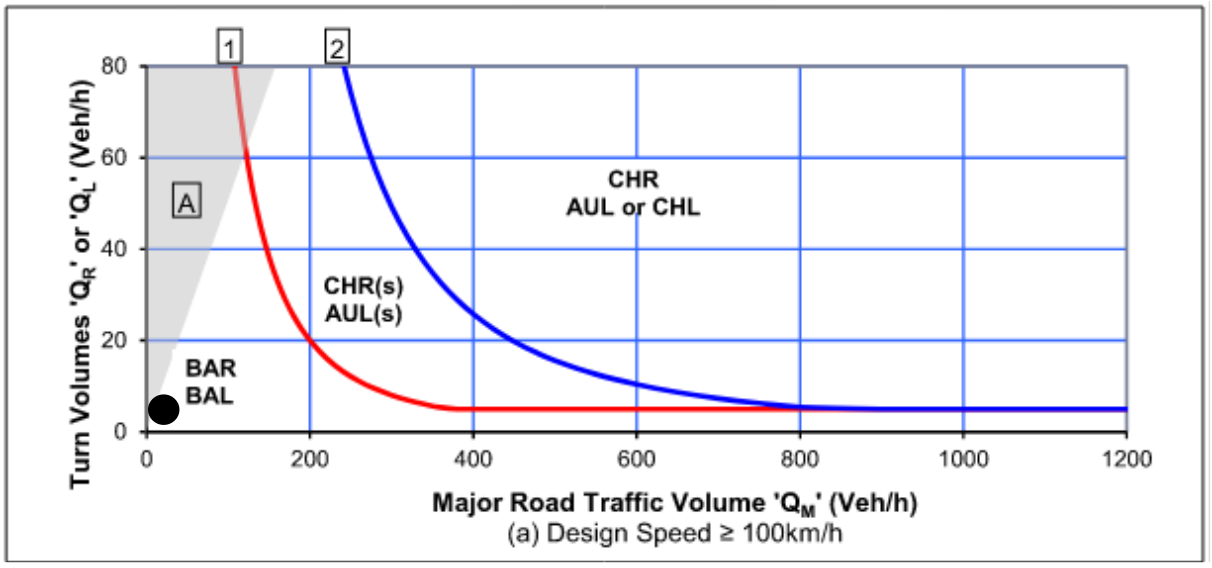


Figure 6-40: Turn Warrants Assessment – Gate 6A.1 (Q_L)

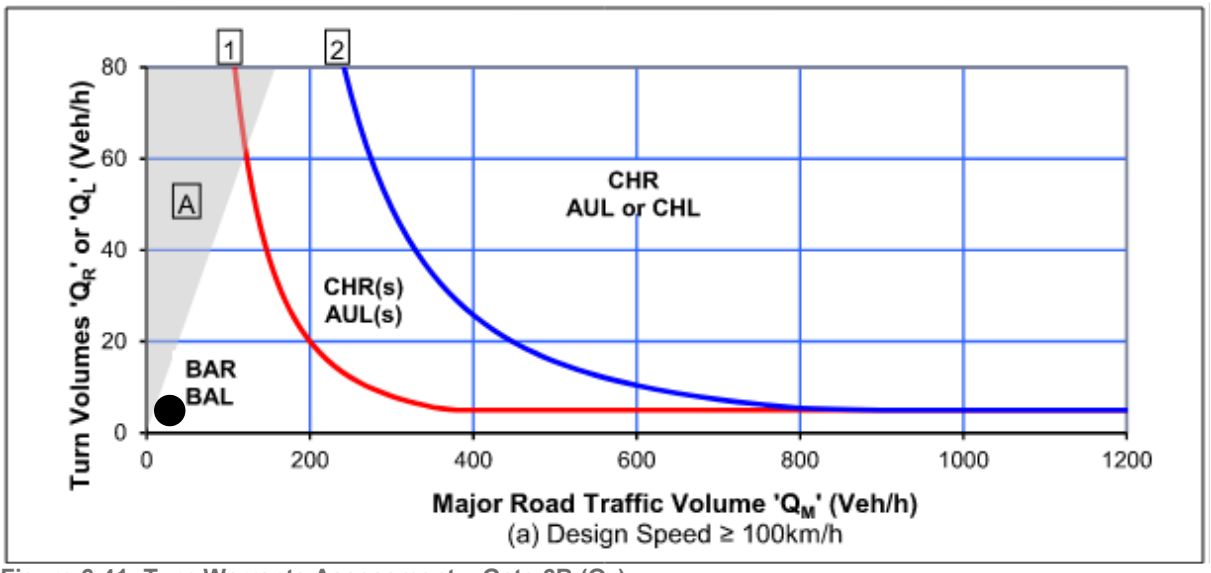


Figure 6-41: Turn Warrants Assessment – Gate 6B (Q_R)

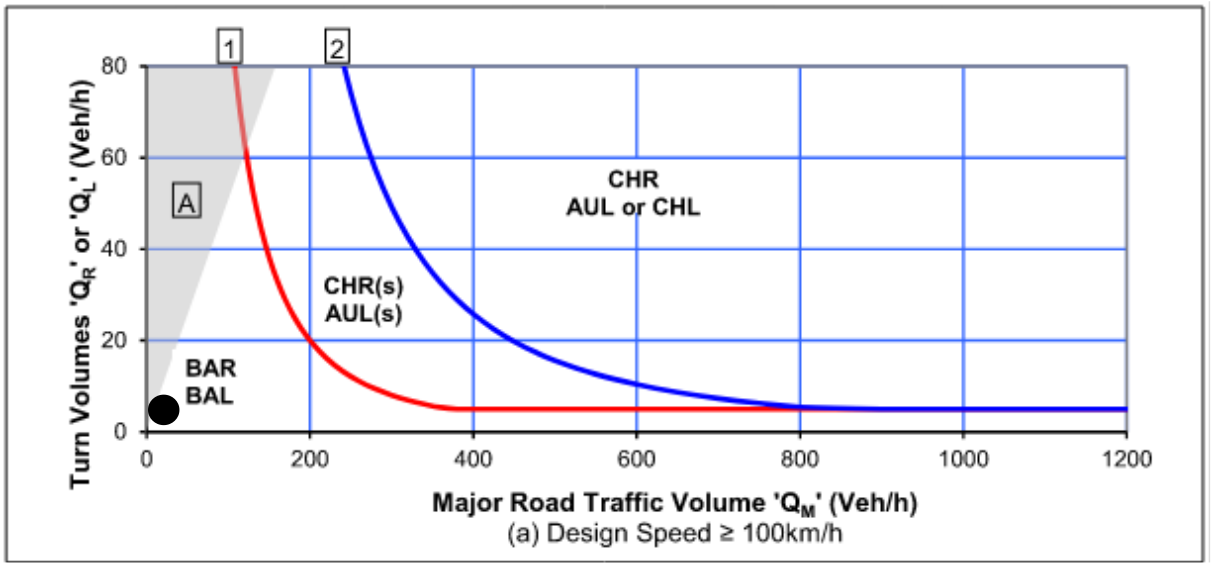


Figure 6-42: Turn Warrants Assessment – Gate 6B (Q_L)

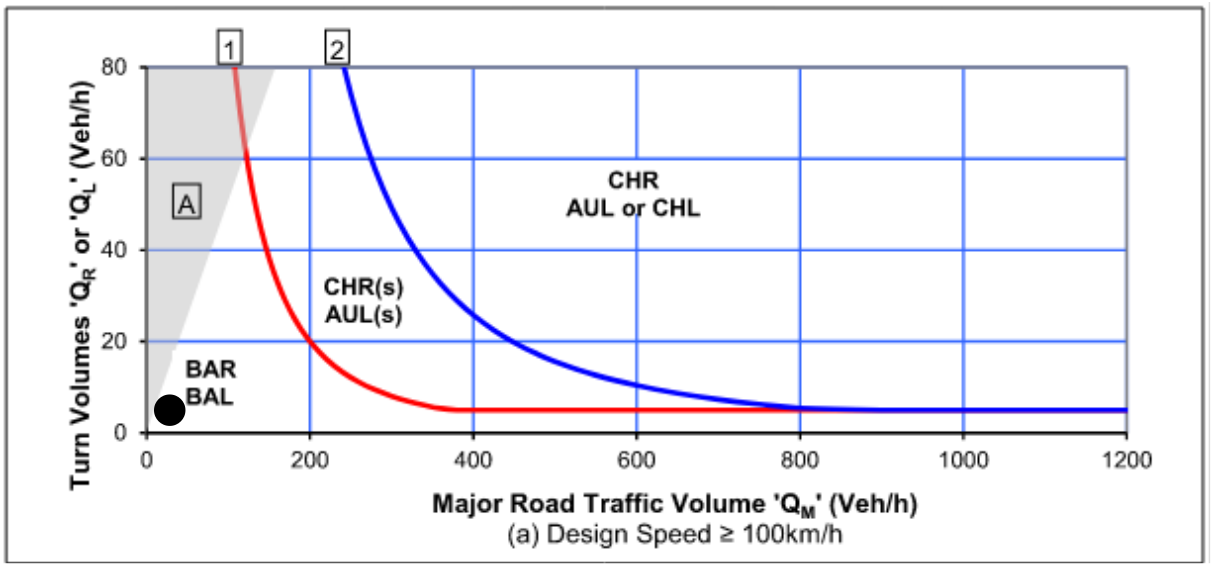


Figure 6-43: Turn Warrants Assessment – Gate 6B.1 (Q_R)

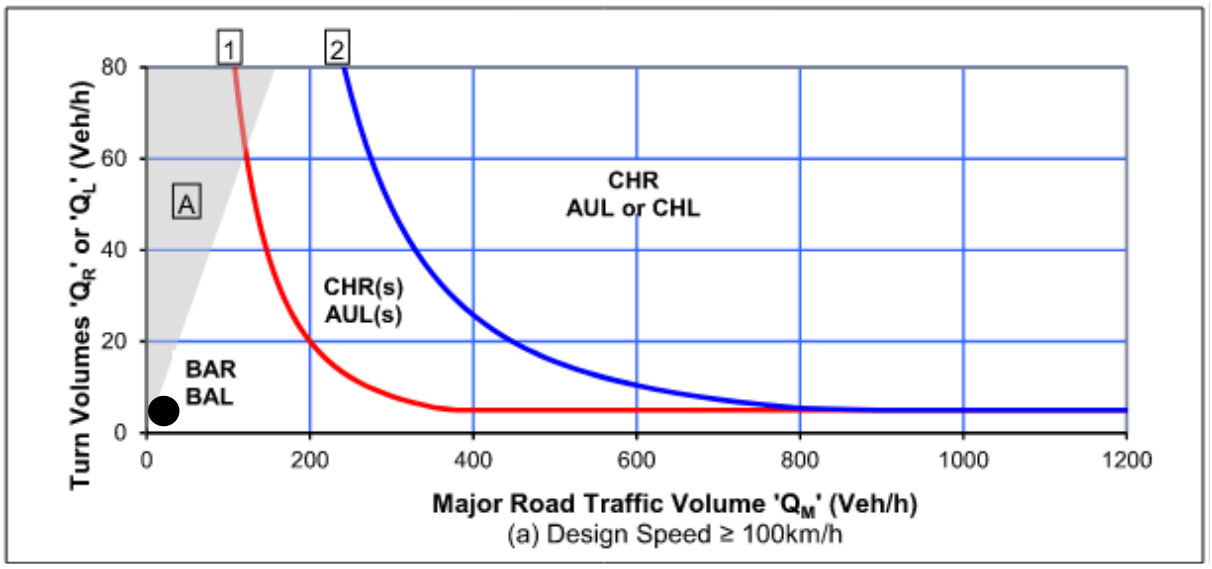


Figure 6-44: Turn Warrants Assessment – Gate 6B.1 (Q_L)

A summary of the above assessments is provided below.

Table 6-29: Turn Warrants Assessment Summary – Gate 5

Gate	Turn treatments
Gate 6A	Basic left turn (BAL), Basic right turn (BAR)
Gate 6A.1	Basic left turn (BAL), Basic right turn (BAR)
Gate 6B	Basic left turn (BAL), Basic right turn (BAR)
Gate 6B.1	Basic left turn (BAL), Basic right turn (BAR)

As detailed above, the assessment indicates that basic turn treatments (BAL, BAR) are warranted on Dirnaseer Road (major road) at Gates 6A, 6A.1, 6B, 6B.1.

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,
- Turning volumes are high (i.e. 300 to 500 veh/hour)
- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)
- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the construction gate design development and the appropriate approval process (i.e., Section 138).

6.5.3.6 Gate 6B.2 to Gate 6B.5

Located on Dudauman Lane, approximately 3.7km north of Dirnaseer Road, Gate 6B.2 to Gate 6B.5 consists of four (4) gates which will provide access to construction section 4.



Figure 6-17 Gate 6B.2 to Gate 6B.5 locations

Details associated with the access are provided in the table below:

Table 6-30: Gate Details – Gate 6B.2 to Gate 6B.5

Gate #	Gate 6B.2	Gate 6B.3	Gate 6B.4	Gate 6B.5
Location	Dudauman Lane			
AADT	Traffic data not available			
Speed limit	100km/hr			
Access duration	Eighteen (18) months			
Construction ADT	Low			
Construction peak hour volume	1 (per gate)			
Construction vehicle type	Truck and dog (19.0m), B-double (26m)			
Permitted movements	Left and right in, left and right out	Left in, right out	Left and right in, left and right out	Left in, right out

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-31: Sight Distance Assessment – Gate 6B.2 to Gate 6B.5

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 6B.2	East	100km/hr	285m	There is insufficient information available (Google Streetview) to make a determination on available sight distance	139m	There is insufficient information available (Google Streetview) to make a determination on available sight distance
	West					
Gate 6B.3	East	100km/hr	285m		139m	
	West					
Gate 6B.4	East	100km/hr	285m		139m	
	West					
Gate 6B.5	East	100km/hr	285m		139m	
	West					

As detailed above, there is insufficient information available to make a determination on available sight distance at Gate 6B.2, 6B.3, 6B.4 and 6B.5. To ensure that suitable provisions are available, an on-site review of available sight distance will be undertaken and detailed within appropriate documentation (i.e., Section 138).

Turn Treatments at Site Access

Traffic data for Dudauman Lane is not currently available, and therefore an assessment based on traffic volumes has not been undertaken. However, considering the volume of traffic travelling along the adjacent road network (i.e., Dirnaseer Road) and given the low volume of construction traffic expected to utilise the accesses, it is reasonable to assume that the requirements for turn treatments at the access will lie beneath Curve 1 (red) – see below.

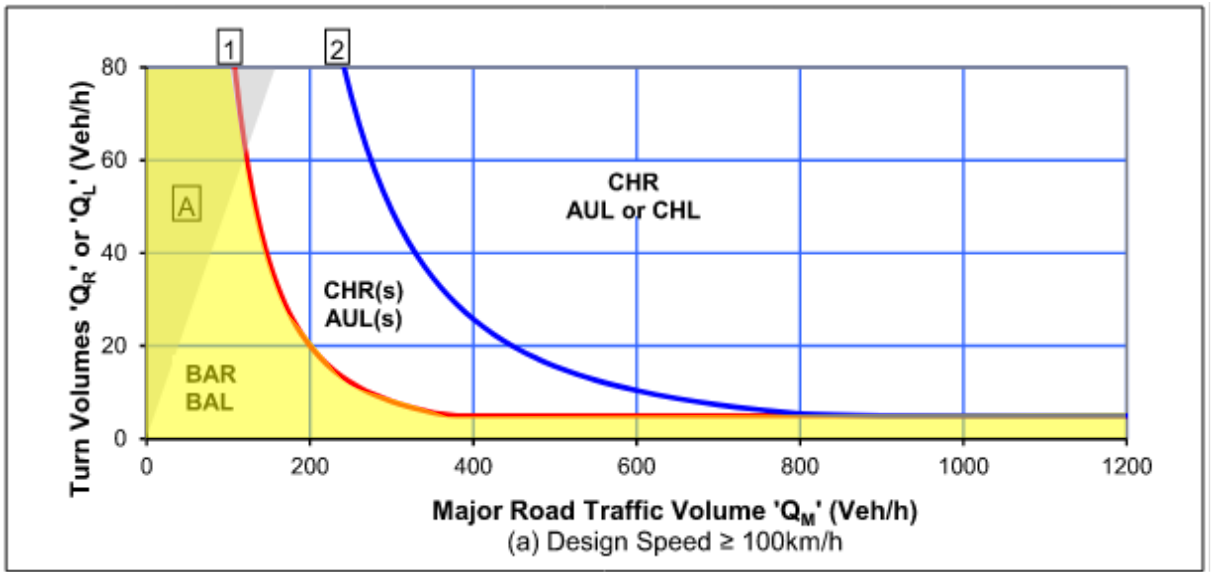


Figure 6-46: Turn Warrants Assessment – 6B.2

A summary of the above assessments is provided below.

Table 6-32: Turn Warrants Assessment Summary – Gate 6B.2 to Gate 6B.5

Gate	Turn treatments
Gate 6B.2	Basic left turn (BAL), Basic right turn (BAR)
Gate 6B.3	Basic left turn (BAL)
Gate 6B.4	Basic left turn (BAL), Basic right turn (BAR)
Gate 6B.5	Basic left turn (BAL)

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,
- Turning volumes are high (i.e., 300 to 500 veh/hour)
- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)
- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the construction gate design development and the appropriate approval process (i.e., Section 138).

6.5.3.7 Gate 7A and Gate 7B – Old Cootamundra Road and Dudauman Road

Located on Old Cootamundra Road and Dudauman Road, adjacent the Old Cootamundra Road / Dudauman Road intersection, Gate 6 consists of four (4) gates which will provide access to construction sections 4 and 5 and the RMAR.



Figure 6-18 Gate 7A and Gate 7B locations

Details associated with the access are provided in the table below:

Table 6-33: Gate Details – Gate 7A and 7B

Gate #	Gate 7B	Gate 7B.1	Gate 7A	Gate 7A.1
Location	Old Cootamundra Road	Dudauman Road	Old Cootamundra Road	
AADT	266 (2018)	83 (2018)	266 (2018)	
Speed limit	100km/hr	100km/hr	100km/hr	
Access duration	Eighteen (18) months			
Construction ADT	55 to 60 (per gate)			
Construction peak hour volume	6 (per gate)			
Construction vehicle type	Truck and dog (19.0m), B-double (26m)			
Permitted movements	Left and right in, left and right out			

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-34: Sight Distance Assessment – Gate 7A and Gate 7B

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 7B	East	100km/hr	285m	No	139m	Yes
	West			No		Yes
Gate 7B.1	North	100km/hr	285m	No	139m	No
	South			No		No
Gate 7A	East	100km/hr	285m	No	139m	Yes
	West			No		Yes
Gate 7A.1	East	100km/hr	285m	Yes	139m	Yes
	West			No		Yes

As detailed above:

- Sight distance to the east and west of Gate 7B is obstructed and does not allow for the minimum requirements (SISD) to be achieved at the posted speed limit.
- Sight distance to the north and south of Gate 7B.1 is obstructed and does not allow for the minimum requirements (SISD) to be achieved at the posted speed limit.
- Sight distance to the east and west of Gate 7A is obstructed and does not allow for the minimum requirements (SISD) to be achieved at the posted speed limit.
- Sight distance requirements to the east of Gate 7A.1 can be achieved, however sight distance to the west is obstructed and does not allow for the minimum requirements at the posted speed limit to be achieved.

As a potential mitigation measure and to ensure that appropriate sight distance is available at sight accesses, reduced speed limits approaching the access have been considered. An assessment considering the sight distance requirements of reduced speed limits (below the posted speed limit) is presented below.

Table 6-35: Further Sight Distance Assessment – Gate 7A and Gate 7B

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 7B	East	80km/hr	214m	Yes	111m	Yes
	West			Yes		Yes
Gate 7B.1	North	80km/hr	214m	Yes	111m	Yes
	South			Yes		Yes
	North	60km/hr	151m	No	83m	Yes
	South			No		Yes
	North	40km/hr	97m	Yes	55m	Yes
	South			See below		Yes
Gate 7A	East	80km/hr	214m	Yes	111m	Yes
	West			Yes		Yes
Gate 7A.1	East	80km/hr	214m	Yes	111m	Yes
	West			Yes		Yes

As shown, available sight distance at Gates 7A, 7A.1, 7B, 7B.1 achieve the minimum requirements for an 80km/hr reduced speed limit. Considering this and to ensure that vehicles can safely and efficiently manoeuvre into and out of the access, a potential mitigation measure would be to implement a maximum

reduced speed limit of 80km/hr on approach to the accesses (temporary speed limits on approach to site access points would need to accommodate the necessary sight distance requirements (i.e., installed more than 214m from a site access point where the reduced speed limit is 80km/hr)).

At Gate 7B.2, available sight distance north of the access achieve the minimum requirements for a 40km/hr reduced speed limit as set out by Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections*, however sight distance provisions south of the access are limited due to the proximity of the Old Cootamundra Road / Dudauman Road intersection. That said, it is reasonably expected that vehicles approaching the access will do so at speeds lower than 40km/hr as vehicles perform a left turn / right turn manoeuvre onto Dudauman Road from Old Cootamundra Road. On this basis, the provision of a reduced 40km/hr speed limit is considered appropriate given the requirements of MGSD can be achieved.

This approach to reduce speed limit to 80 or 40km/h has been adopted for the development of the strategic design.

Turn Treatments at Site Access

To undertake this assessment, background traffic volumes for Old Cootamundra Road and Dudauman Road were obtained from traffic surveys undertaken by *Austraffic* on Tuesday 28th August 2018. Noting that data collection was undertaken 2018, to account for any population growth and subsequent increase in utilisation of the road network, a compounding annual growth rate of 0.5 percent per year has been used to determine future year background traffic volumes. The use of this growth rate is consistent with that adopted within *Technical Paper 3 – Traffic, Transport and Impact Assessment,* and is considered to provide a conservative assessment given the growth rate is above recorded population growth rates. Future year background traffic volumes at year 2025 and 2027 are presented below.

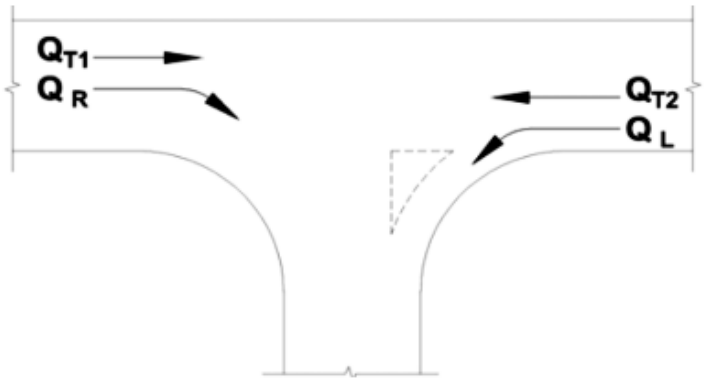
Table 6-36: Traffic Volumes – Old Cootamundra and Dudauman Road

Road	Background AADT*	Year	Peak Hour Volumes		Growth Rate	2025 Design Year Volume			2027 Design Year Volume		
			AM Peak	PM Peak		AADT	AM Peak	PM Peak	AADT	AM Peak	PM Peak
Old Cootamundra Road	266	2018	32	31	0.5%	276	34	333	279	34	33
Dudauman Road	86	2018	11	12	0.5%	86	12	13	87	12	13

* Weekday average

** Peak recorded volumes

In order to undertake the assessment, the major road traffic volume (Q_M) first needs to be calculated. On two-lane, two-way roads (without a splitter island), the value of the major road traffic volume parameter (Q_M) for a right turn is the total through traffic flow in both directions (Q_{T1} and Q_{T2}), plus the volume of left turning traffic (Q_L). For a left turn, the Q_M is equal to total of traffic flow in the direction of the left turn (Q_{T2}).



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 50% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 33% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 33% x Q_{T2}

Figure 6-48: Extract from AGTM Part 6 – Figure 3.26

With reference to the above, the volumes adopted for this assessment are detailed below, noting that, 2027 design year volumes have been adopted for the purpose of this assessment to ensure that the design of the site accesses remain suitable throughout construction. Note- volume have hourly data.

Table 6-37: Turn Warrants Parameters – Gate 7A and Gate 7B

Gate	Right turn		Left turn	
	Q_M	Q_R	Q_M	Q_L
Gate 7B	37	3	17	3
Gate 7B.1	17	3	7	3
Gate 7A	37	3	17	3
Gate 7A.1	37	3	17	3

1. A 50/50 split of traffic volumes has been assumed for traffic travelling along the road frontage
2. A 50/50 split of construction traffic volumes has been assumed for traffic turning into the access

Adopting these volumes, the warrants assessment is shown below for Gates 7B, 7B.1, 7A, 7A.1.

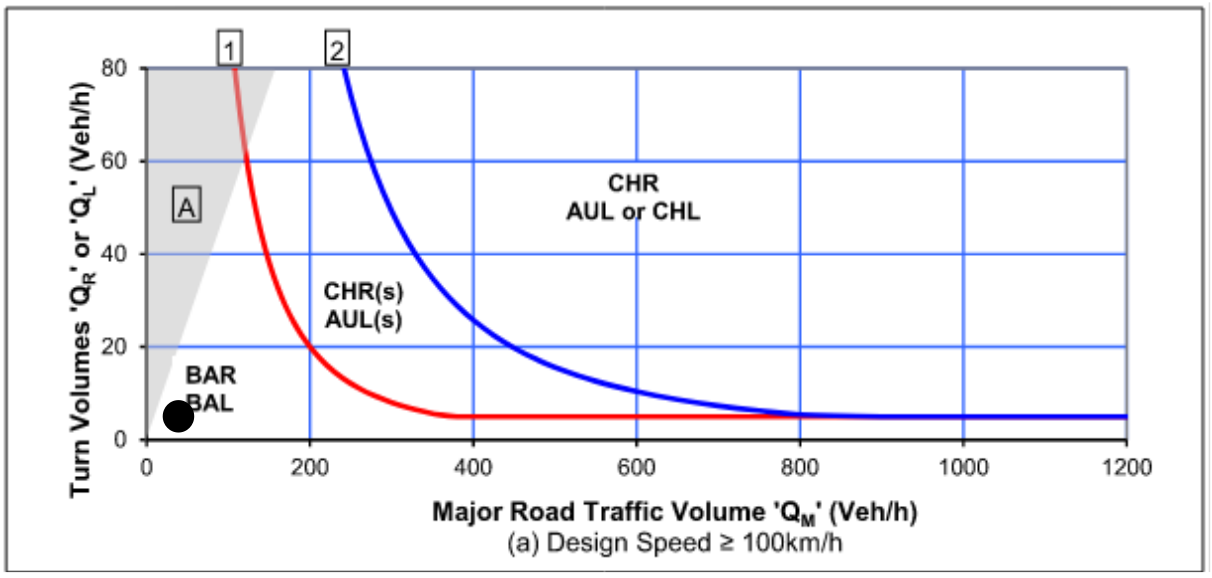


Figure 6-49: Turn Warrants Assessment – Gate 7B (Q_R)

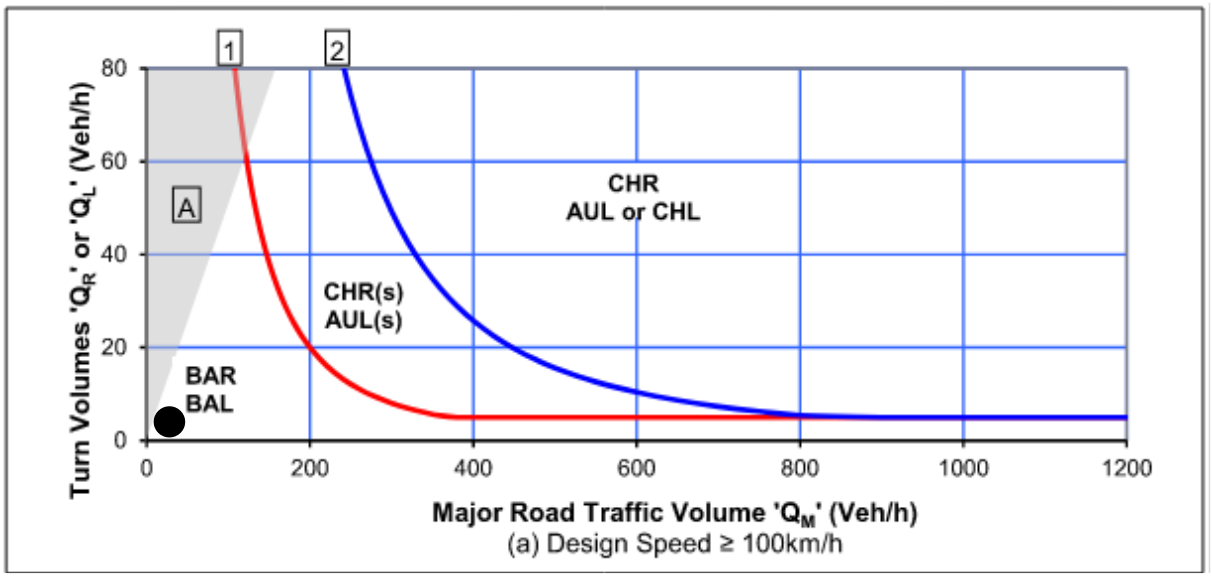


Figure 6-50: Turn Warrants Assessment – Gate 7B (Q_L)

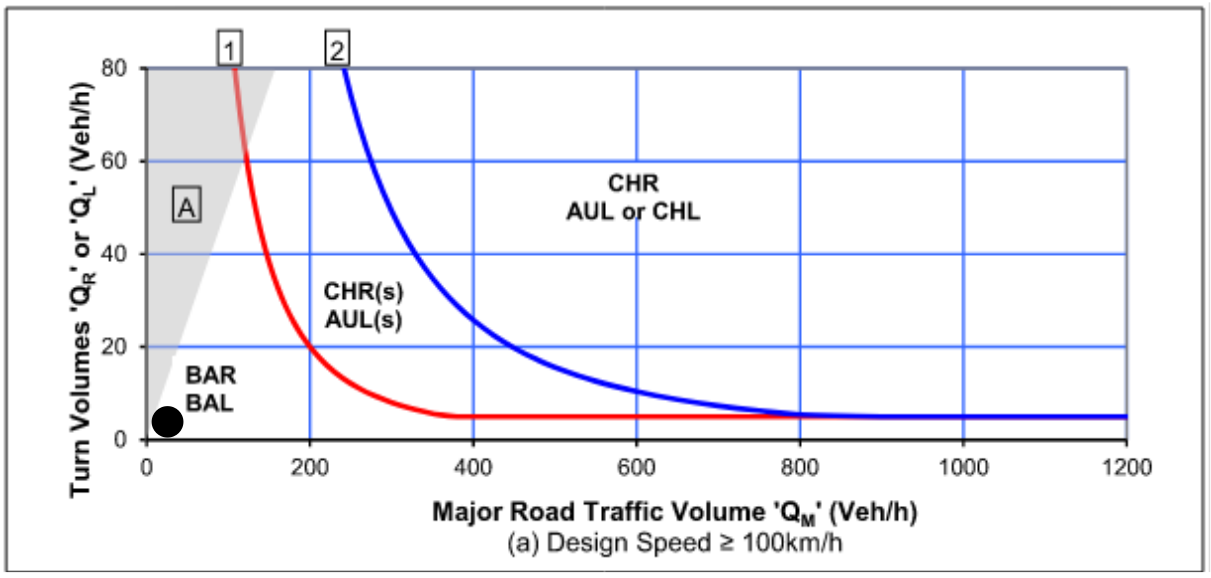


Figure 6-51: Turn Warrants Assessment – Gate 7B.1 (Q_R)

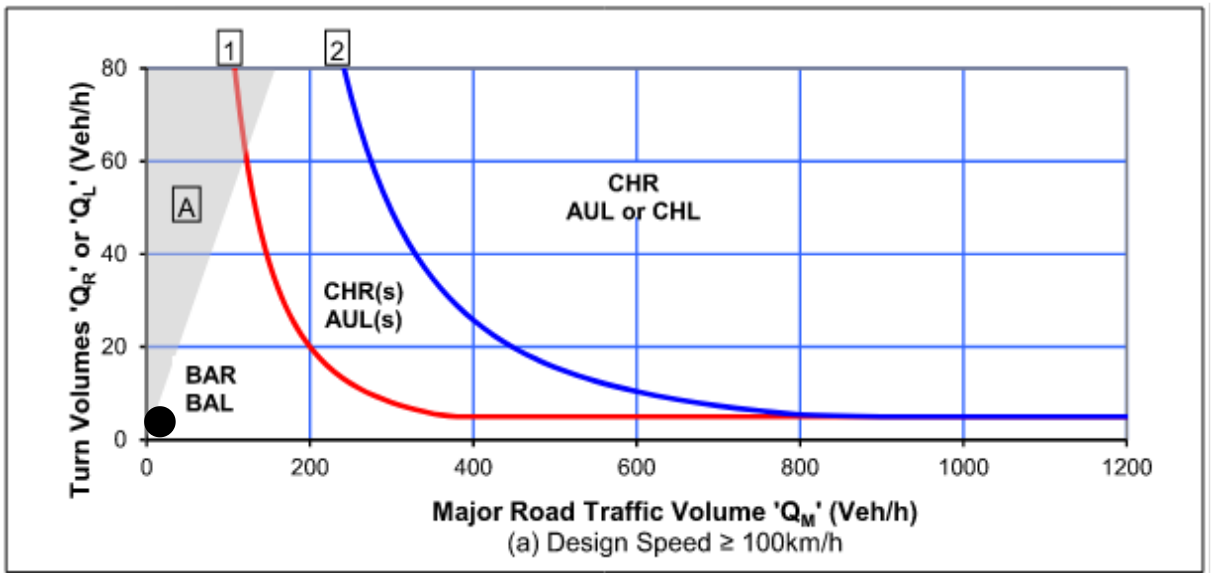


Figure 6-52: Turn Warrants Assessment – Gate 7B.1 (Q_L)

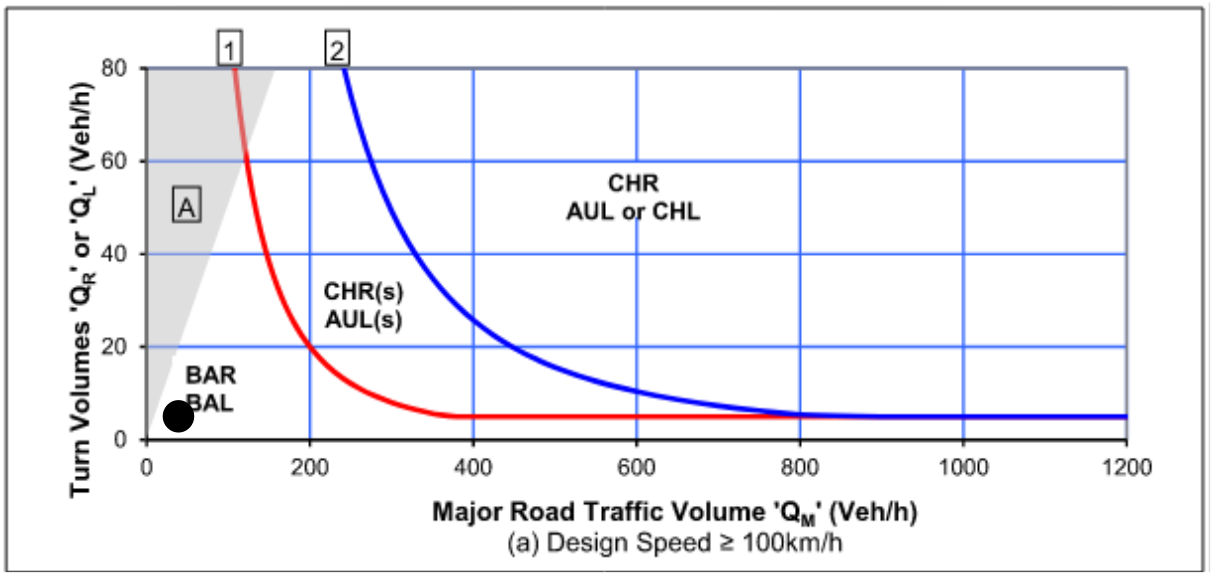


Figure 6-53: Turn Warrants Assessment – Gate 7A (Q_R)

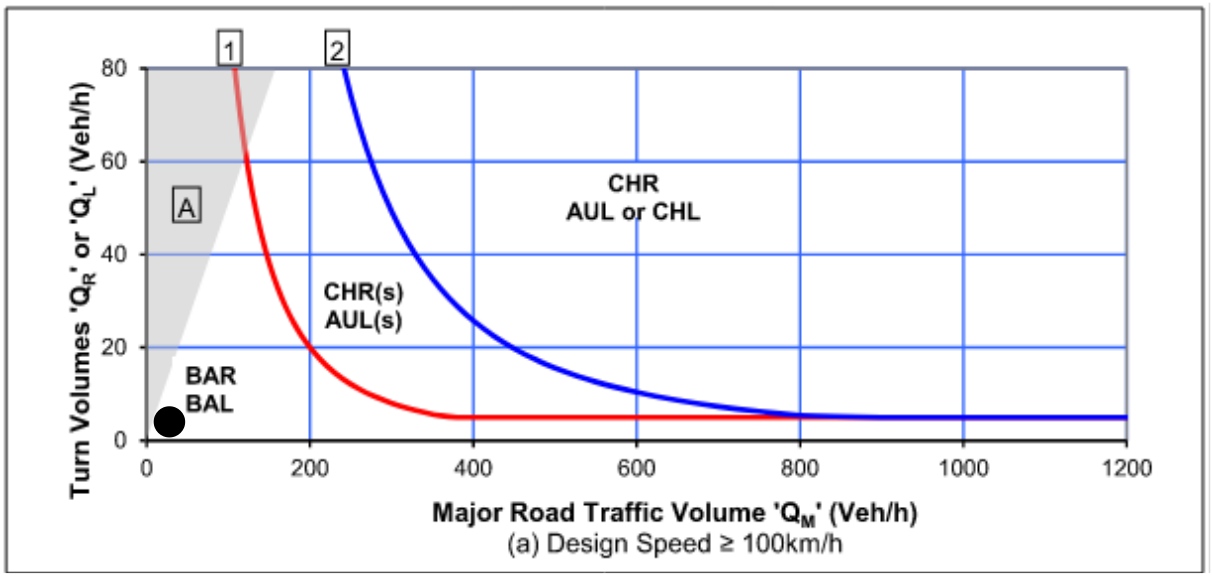


Figure 6-54: Turn Warrants Assessment – Gate 7A (Q_L)

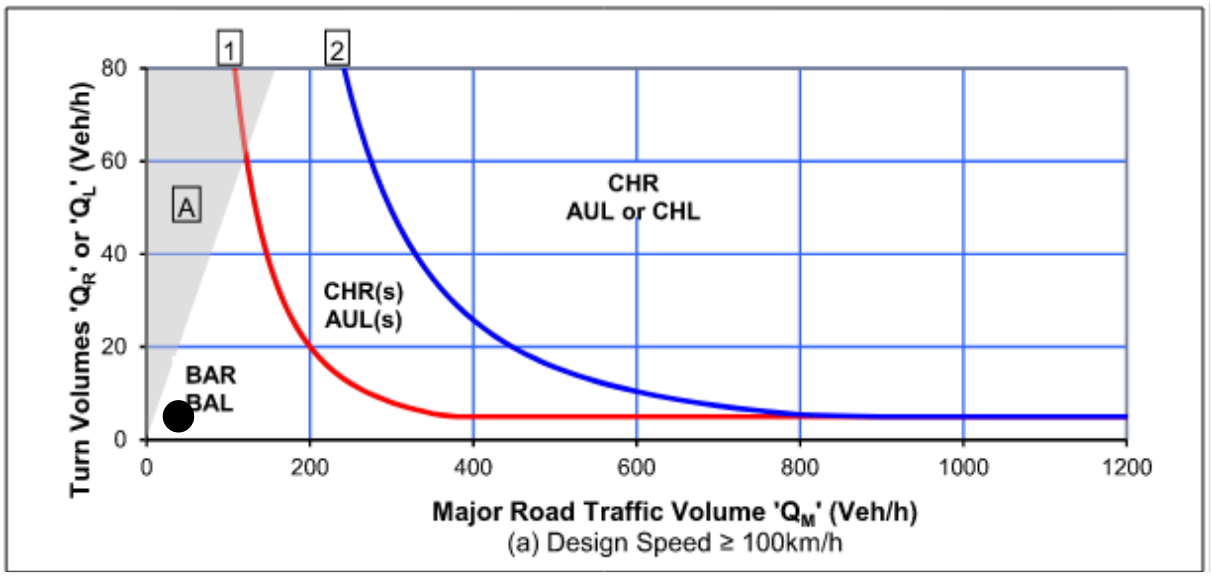


Figure 6-55: Turn Warrants Assessment – Gate 7A.1 (Q_R)

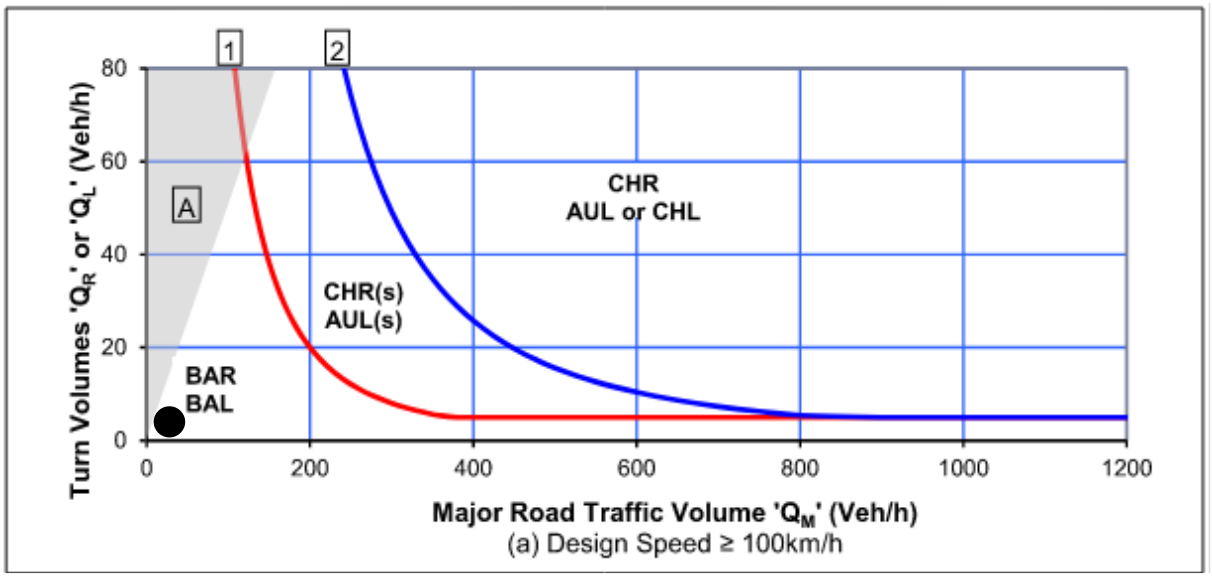


Figure 6-56: Turn Warrants Assessment – Gate 7A.1 (Q_L)

A summary of the above assessments is provided below.

Table 6-38: Turn Warrants Assessment Summary – Gate 7A and Gate 7B

Gate	Turn treatments
Gate 7B	Basic left turn (BAL), Basic right turn (BAR)
Gate 7B.1	Basic left turn (BAL), Basic right turn (BAR)
Gate 7A	Basic left turn (BAL), Basic right turn (BAR)
Gate 7A.1	Basic left turn (BAL), Basic right turn (BAR)

As detailed above, the assessment indicates that basic turn treatments (BAL, BAR) are warranted on Old Cootamundra Road and Dudauman Road (major roads) at Gates 7B, 7B.1, 7A, 7A.1.

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,

- Turning volumes are high (i.e., 300 to 500 veh/hour)
- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)
- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the construction gate design development and the appropriate approval process (i.e., Section 138).

6.5.3.8 Gate 7B.2 to Gate 7B.6 – Dudauman Road

Located on Dudauman Road, approximately 2.6km north of Dudauman Road, Gate 7B.2 provides access to an existing private road, where four (4) gates which will provide access to construction section 5 and the RMAR.



Figure 6-19 Gate 7B.**2** to Gate 7B.**6** locations

As part of this assessment, only the access on Dudauman Road will be considered. Details associated with the access are provided in the table below.

Table 6-39: Gate Details – Gate 7B.2

Gate #	**Gate 7B.2**
Location	Dudauman Road
AADT	83 (2018)
Speed limit	100km/hr
Access duration	Eighteen (18) months
Construction ADT	10 to 15 (per gate)
Construction peak hour volume	2 (per gate)

Construction vehicle type	Truck and dog (19.0m), B-double (26m)
Permitted movements	Left and right in, left and right out

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-40: Sight Distance Assessment – Gate 7B.2

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 7B.2	North	100km/hr	285m	Yes	139m	Yes
	South			Yes		Yes

As detailed above, sight distance provisions at the access achieve the minimum requirements for the existing posted speed limit.

Turn Treatments at Site Access

To undertake this assessment, background traffic volumes for Dudauman Road were obtained from traffic surveys undertaken by *Austraffic* on Tuesday 28th August 2018. Noting that data collection was undertaken 2018, to account for any population growth and subsequent increase in utilisation of the road network, a compounding annual growth rate of 0.5 percent per year has been used to determine future year background traffic volumes. The use of this growth rate is consistent with that adopted within *Technical Paper 3 – Traffic, Transport and Impact Assessment,* and is considered to provide a conservative assessment given the growth rate is above recorded population growth rates. Future year background traffic volumes at year 2025 and 2027 are presented below.

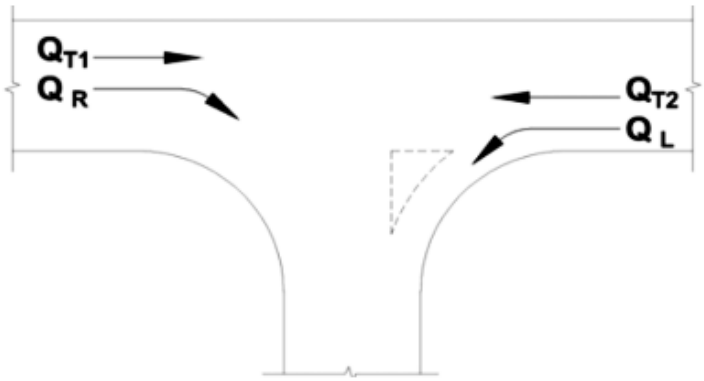
Table 6-41: Traffic Volumes – Dudauman Road

Road	Background AADT*	Year	Peak Hour Volumes		Growth Rate	2025 Design Year Volume			2027 Design Year Volume		
			AM Peak	PM Peak		AADT	AM Peak	PM Peak	AADT	AM Peak	PM Peak
Dudauman Road	86	2018	11	12	0.5%	86	12	13	87	12	13

* Weekday average

** Peak recorded volumes

In order to undertake the assessment, the major road traffic volume (Q_M) first needs to be calculated. On two-lane, two-way roads (without a splitter island), the value of the major road traffic volume parameter (Q_M) for a right turn is the total through traffic flow in both directions (Q_{T1} and Q_{T2}), plus the volume of left turning traffic (Q_L). For a left turn, the Q_M is equal to total of traffic flow in the direction of the left turn (Q_{T2}).



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 50% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 33% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 33% x Q_{T2}

Figure 6-58: Extract from AGTM Part 6 – Figure 3.26

With reference to the above, the volumes adopted for this assessment are detailed below, noting that, 2027 design year volumes have been adopted for the purpose of this assessment to ensure that the design of the site accesses remain suitable throughout construction. Note- volume have hourly data.

Table 6-42: Turn Warrants Parameters – Gate 7B.2

Gate	Right turn		Left turn	
	Q_M	Q_R	Q_M	Q_L
Gate 7B.2	15	1	7	1

1. A 50/50 split of traffic volumes has been assumed for traffic travelling along the road frontage
2. A 50/50 split of construction traffic volumes has been assumed for traffic turning into the access

Adopting these volumes, the warrants assessment is shown below for Gate 7B.2.

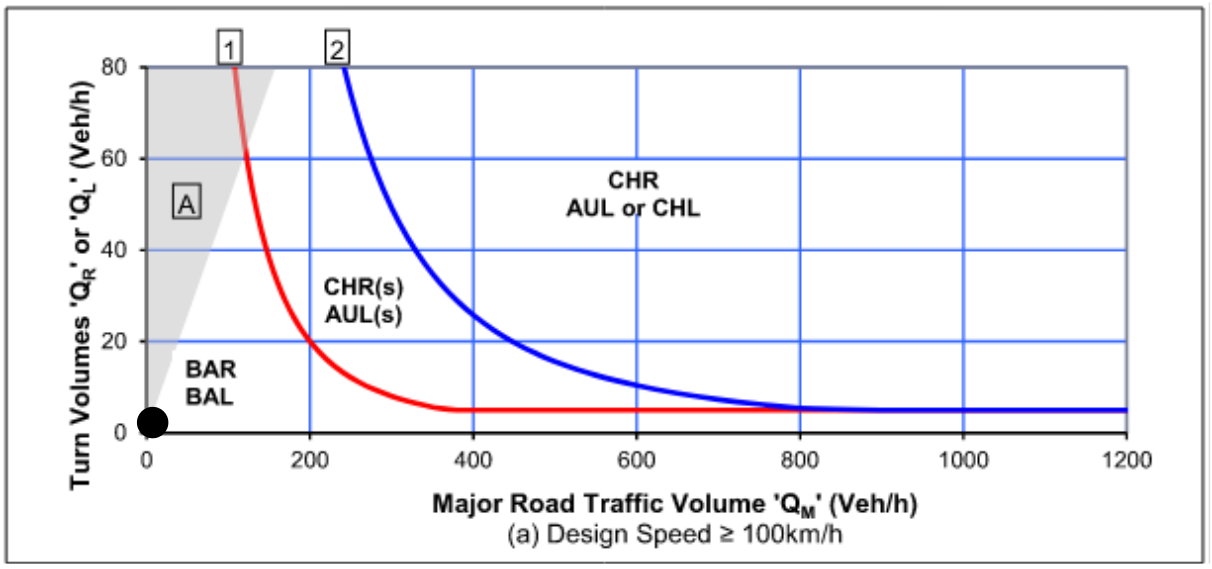


Figure 6-59: Turn Warrants Assessment – Gate 7B.2 (Q_R)

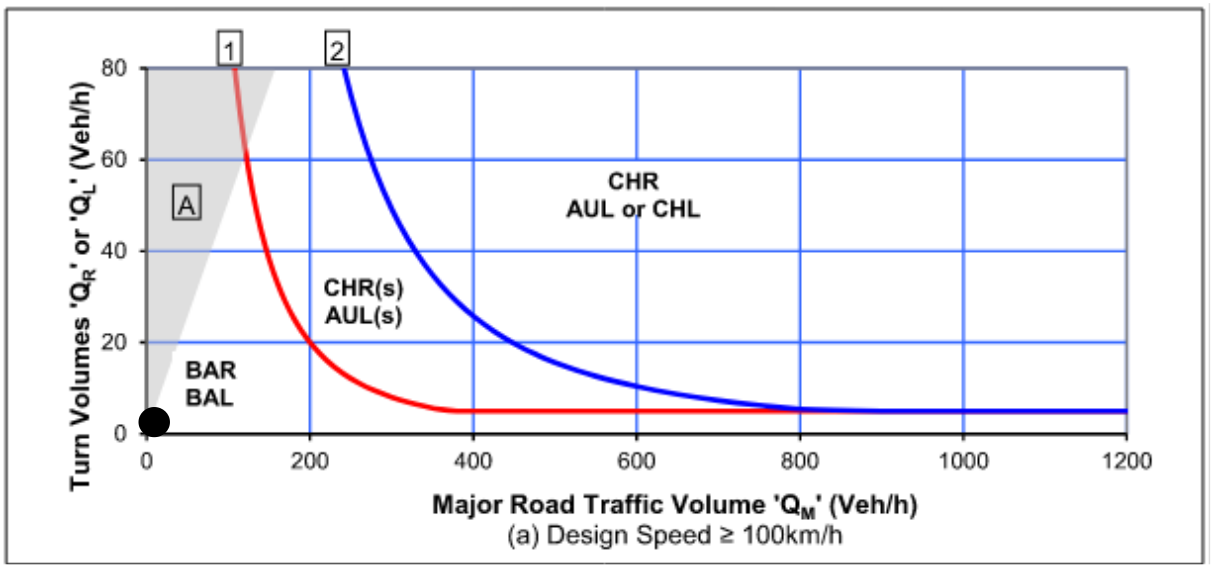


Figure 6-60: Turn Warrants Assessment – Gate 7B.2 (Q_L)

A summary of the above assessments is provided below.

Table 6-43: Turn Warrants Assessment Summary – Gate 7B.2

Gate	Turn treatments
Gate 7B.2	Basic left turn (BAL), Basic right turn (BAR)

As detailed above, the assessment indicates that basic turn treatments (BAL, BAR) are warranted on Dudauman Road (major road) at Gate 7.

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,
- Turning volumes are high (i.e., 300 to 500 veh/hour)
- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)
- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the construction gate design development and the appropriate approval process (i.e., Section 138).

6.5.3.9 Gate 7B.7 to 7B.11 – Dudauman Road

Located on Dudauman Road, approximately 3.9km north of Dudauman Road, Gate 7B.7 provides access to an existing private road, where four (4) gates which will provide access to construction section 5 and the RMAR.



Figure 6-20 Gate 7B.7 to Gate 7B.11 locations

As part of this assessment, only the access on Dudauman Road will be considered. Details associated with the access are provided in the table below:

Table 6-44: Gate Details – Gate 7B.7

Gate #	**Gate 7B.7**
Location	Dudauman Road
AADT	83 (2018)
Speed limit	100km/hr
Access duration	Eighteen (18) months
Construction ADT	10 to 15 (per gate)
Construction peak hour volume	2 (per gate)
Construction vehicle type	Truck and dog (19.0m), B-double (26m)
Permitted movements	Left and right in, left and right out

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-45: Sight Distance Assessment – Gate 7B.7

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 7B.7	North	100km/hr	285m	Yes	139m	Yes
	South			Yes		Yes

As detailed above, sight distance provisions at the access achieve the minimum requirements for the existing posted speed limit.

Turn Treatments at Site Access

To undertake this assessment, background traffic volumes for Dudauman Road were obtained from traffic surveys undertaken by *Austraffic* on Tuesday 28th August 2018. Noting that data collection was undertaken 2018, to account for any population growth and subsequent increase in utilisation of the road network, a compounding annual growth rate of 0.5 percent per year has been used to determine future year background traffic volumes. The use of this growth rate is consistent with that adopted within *Technical Paper 3 – Traffic, Transport and Impact Assessment,* and is considered to provide a conservative assessment given the growth rate is above recorded population growth rates. Future year background traffic volumes at year 2025 and 2027 are presented below.

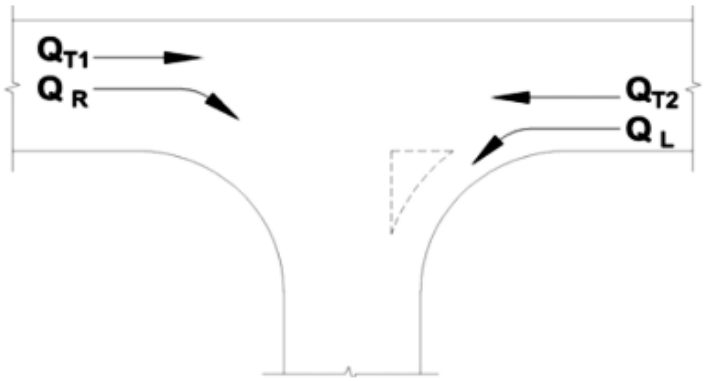
Table 6-46: Traffic Volumes – Dudauman Road

Road	Background AADT*	Year	Peak Hour Volumes		Growth Rate	2025 Design Year Volume			2027 Design Year Volume		
			AM Peak	PM Peak		AADT	AM Peak	PM Peak	AADT	AM Peak	PM Peak
Dudauman Road	86	2018	11	12	0.5%	86	12	13	87	12	13

* Weekday average

** Peak recorded volumes

In order to undertake the assessment, the major road traffic volume (Q_M) first needs to be calculated. On two-lane, two-way roads (without a splitter island), the value of the major road traffic volume parameter (Q_M) for a right turn is the total through traffic flow in both directions (Q_{T1} and Q_{T2}), plus the volume of left turning traffic (Q_L). For a left turn, the Q_M is equal to total of traffic flow in the direction of the left turn (Q_{T2}).



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 50% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 33% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 33% x Q_{T2}

Figure 6-62: Extract from AGTM Part 6 – Figure 3.26

With reference to the above, the volumes adopted for this assessment are detailed below, noting that, 2027 design year volumes have been adopted for the purpose of this assessment to ensure that the design of the site accesses remain suitable throughout construction. Note- volume have hourly data.

Table 6-47: Turn Warrants Parameters – Gate 7B.7

Gate	Right turn		Left turn	
	Q_M	Q_R	Q_M	Q_L
Gate 7B.7	15	1	7	1

1. A 50/50 split of traffic volumes has been assumed for traffic travelling along the road frontage
2. A 50/50 split of construction traffic volumes has been assumed for traffic turning into the access

Adopting these volumes, the warrants assessment is shown below for Gate 7B.7.

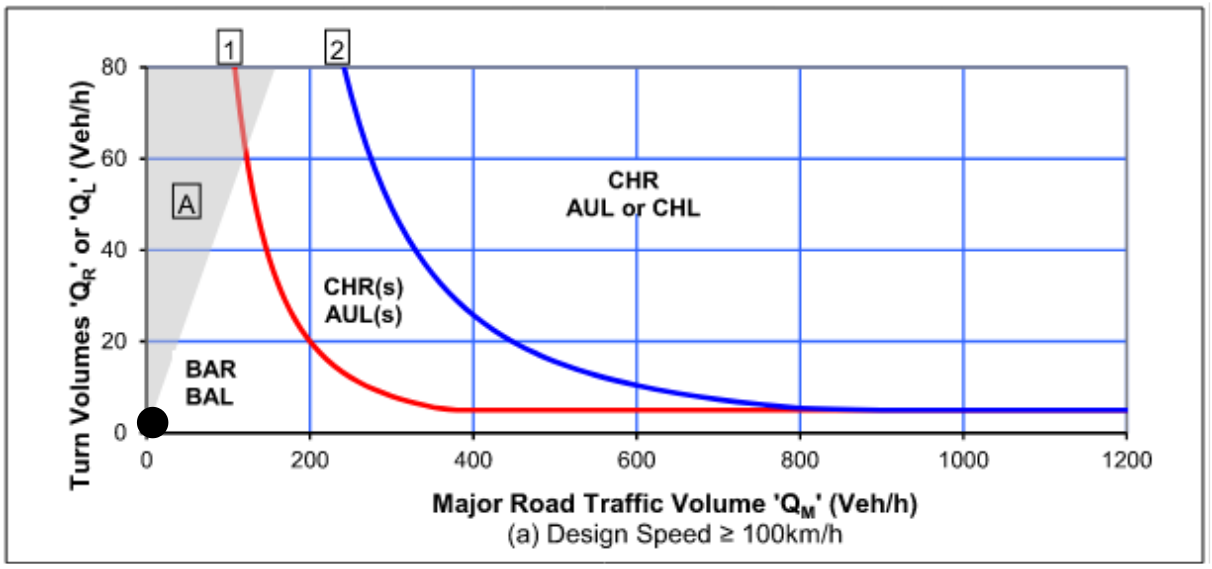


Figure 6-63: Turn Warrants Assessment – Gate 7B.7 (Q_R)

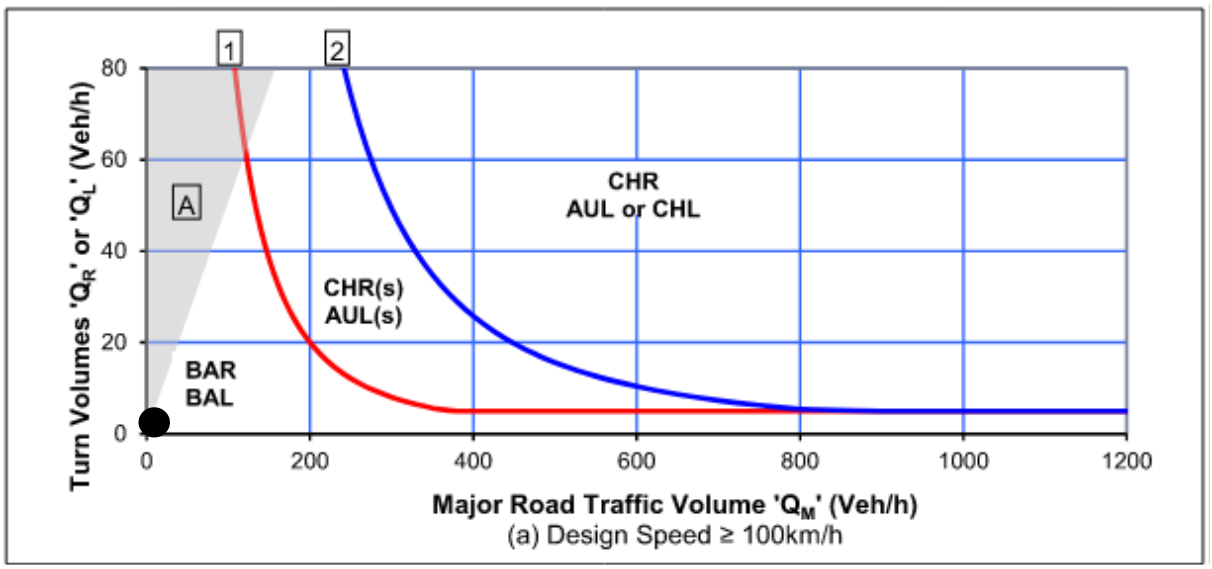


Figure 6-64: Turn Warrants Assessment – Gate 7B.7 (Q_L)

A summary of the above assessments is provided below.

Table 6-48: Turn Warrants Assessment Summary – Gate 7B.7

Gate	Turn treatments
Gate 7B.7	Basic left turn (BAL), Basic right turn (BAR)

As detailed above, the assessment indicates that basic turn treatments (BAL, BAR) are warranted on Dudauman Road (major road) at Gate 7B.7.

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, *Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,
- Turning volumes are high (i.e., 300 to 500 veh/hour)
- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)
- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the construction gate design development and the appropriate approval process (i.e., Section 138).

6.5.3.10 Gate 8 – Corby's Lane

Located on Corby's Lane at Dudauman Road, Gate 8 consists of four (4) gates which will provide access to construction section 5 and the RMAR.



Figure 6-21 Gate 8 to Gate 8.4 locations

Details associated with the access are provided in the table below:

Table 6-49: Gate Details – Gate 8 to Gate 8.4 locations

Gate #	Gate 8.1	Gate 8.2	Gate 8.3	Gate 8.4
Location	Corby's Lane			
AADT	25			
Speed limit	100km/hr			
Access duration	Eighteen (18) months			
Construction ADT	20 (per gate)			
Construction peak hour volume	2 (per gate)			
Construction vehicle type	Truck and dog (19.0m), B-double (26m)			
Permitted movements	Right in, left out	Left and right in, left and right out	Left in, right out	Left and right in, left and right out

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-50: Sight Distance Assessment – Gate 8

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 8.1	East	100km/hr	285m	Yes -see below	139m	Yes -see below
	West			Yes		Yes
Gate 8.2	North	100km/hr	285m	Yes -see below	139m	Yes -see below
	South			Yes		Yes
Gate 8.3	East	100km/hr	285m	Yes -see below	139m	Yes -see below
	West			Yes		Yes
Gate 8.4	East	100km/hr	285m	Yes -see below	139m	Yes -see below
	West			Yes		Yes

Sight distance provisions to the west of Gate 8.1, 8.2, 8.3 and 8.4 achieve the minimum requirements for the existing posted speed limit, However due to the location of the accesses on Corby's Lane, available sight distance along Corby's Lane to the east is limited due to the proximity of the Corby's Lane / Dudauman Road intersection That said, sight distance appears to be available towards to accesses for vehicles approaching Corby's Lane (and the accesses) on Dudauman Road.

Further consideration of sight distance requirements and appropriate mitigation measures (i.e., advanced warning signage) will be given as part of the construction gate design development, in consultation with the relevant authority.

Turn Treatments at Site Access

To undertake this assessment, background traffic volumes for Corby's Lane were obtained from traffic surveys undertaken by *Austraffic* on Tuesday 28th August 2018. Noting that data collection was undertaken 2018, to account for any population growth and subsequent increase in utilisation of the road network, a compounding annual growth rate of 0.5 percent per year has been used to determine future year background traffic volumes. The use of this growth rate is consistent with that adopted within *Technical Paper 3 – Traffic, Transport and Impact Assessment,* and is considered to provide a conservative assessment given the growth rate is above recorded population growth rates. Future year background traffic volumes at year 2025 and 2027 are presented below.

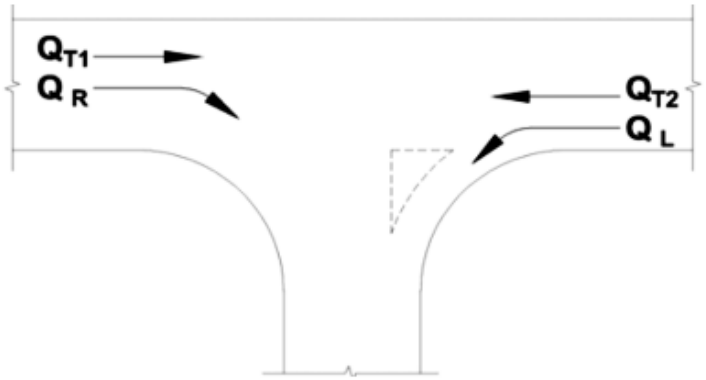
Table 6-51: Traffic Volumes – Corby's Lane

Road	Background AADT*	Year	Peak Hour Volumes		Growth Rate	2025 Design Year Volume			2027 Design Year Volume		
			AM Peak	PM Peak		AADT	AM Peak	PM Peak	AADT	AM Peak	PM Peak
Corby's Lane	25	2018	5	8	0.5%	26	6	9	27	6	9

* Weekday average

** Peak recorded volumes

In order to undertake the assessment, the major road traffic volume (Q_M) first needs to be calculated. On two-lane, two-way roads (without a splitter island), the value of the major road traffic volume parameter (Q_M) for a right turn is the total through traffic flow in both directions (Q_{T1} and Q_{T2}), plus the volume of left turning traffic (Q_L). For a left turn, the Q_M is equal to total of traffic flow in the direction of the left turn (Q_{T2}).



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= Q_{T1} + Q_{T2} + Q_L
		Yes	= Q_{T1} + Q_{T2}
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x Q_{T1} + Q_{T2} + Q_L
		Yes	= 50% x Q_{T1} + Q_{T2}
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x Q_{T1} + Q_{T2} + Q_L
		Yes	= 33% x Q_{T1} + Q_{T2}
	Left	Yes or no	= 33% x Q_{T2}

Figure 6-66: Extract from AGTM Part 6 – Figure 3.26

With reference to the above, the volumes adopted for this assessment are detailed below, noting that, 2027 design year volumes have been adopted for the purpose of this assessment to ensure that the design of the site accesses remain suitable throughout construction. Note- volume have hourly data.

Table 6-52: Turn Warrants Parameters – Gate 8

Gate	Right turn		Left turn	
	Q_M	Q_R	Q_M	Q_L
Gate 8.1	11	1	-	-
Gate 8.2	11	1	5	1
Gate 8.3	-	-	5	1
Gate 8.4	11	1	5	1

1. A 50/50 split of traffic volumes has been assumed for traffic travelling along the road frontage
2. A 50/50 split of construction traffic volumes has been assumed for traffic turning into the access

Adopting these volumes, the warrants assessment is shown below for Gates 7B.1, 7B.2, 7B.3 and 7B.4.

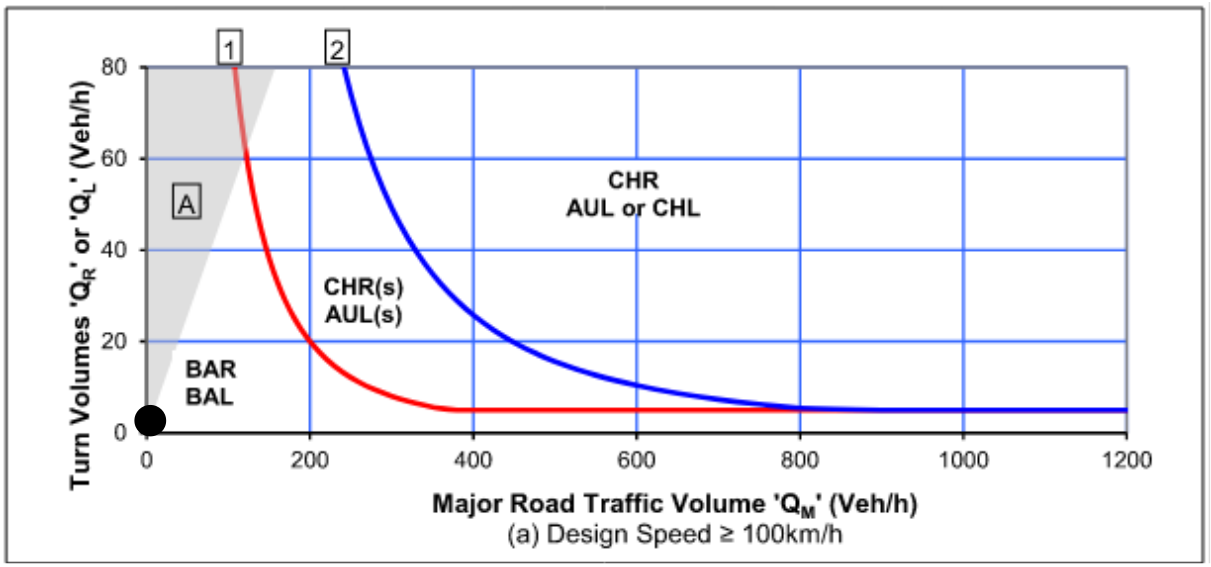


Figure 6-67: Turn Warrants Assessment – Gate 8.1 (Q_R)

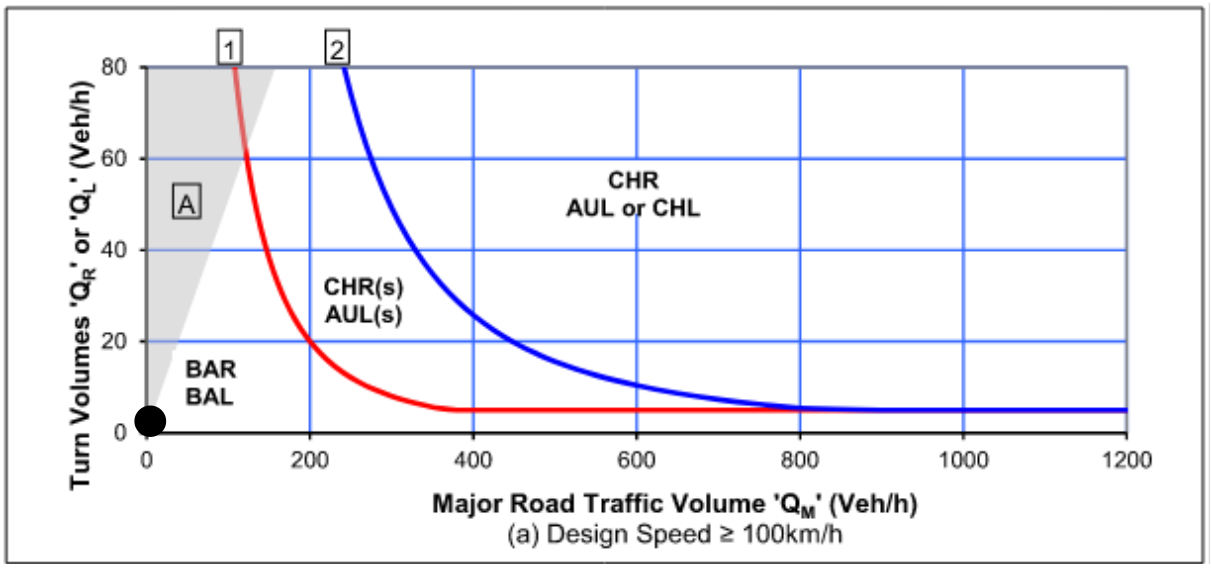


Figure 6-68: Turn Warrants Assessment – Gate 8.1 (Q_R)

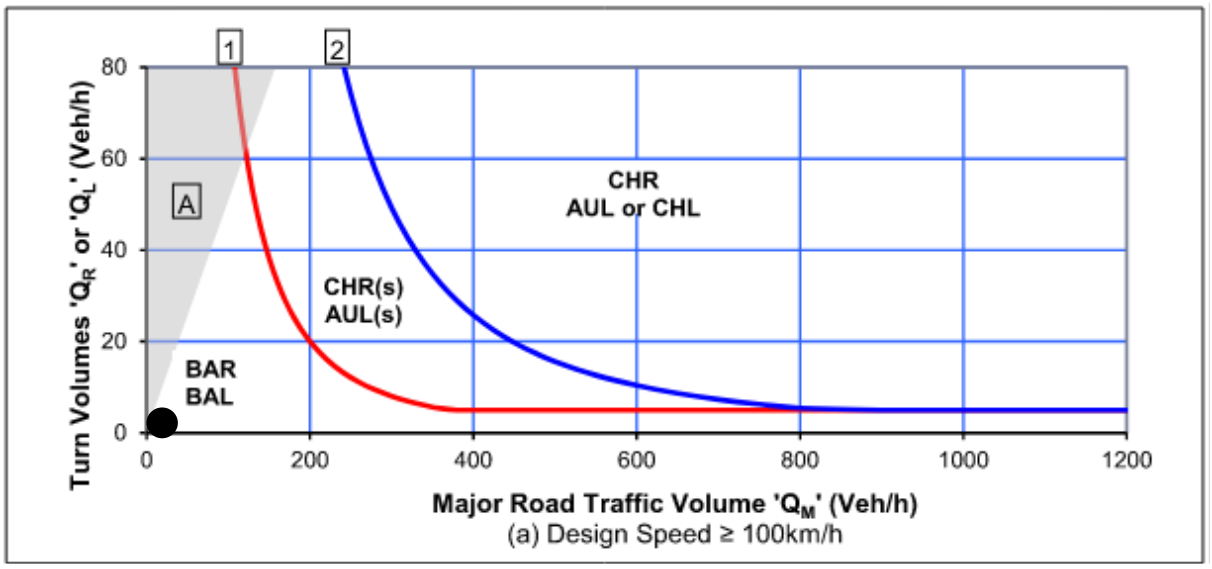


Figure 6-69: Turn Warrants Assessment – Gate 8.2 (Q_L)

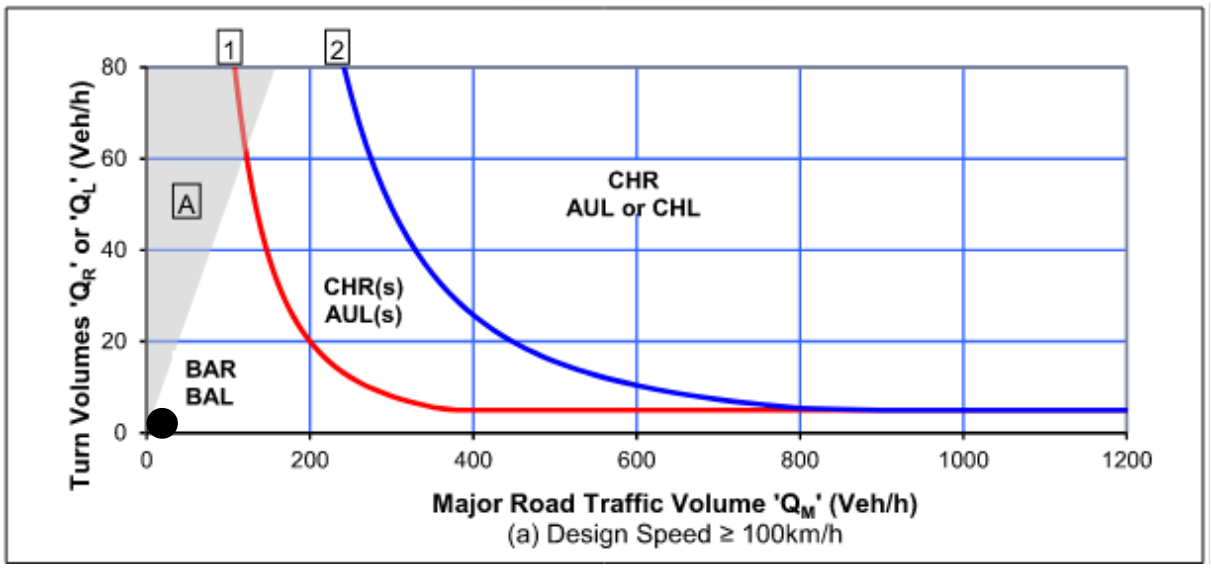


Figure 6-70: Turn Warrants Assessment – Gate 8.2 (Q_L)

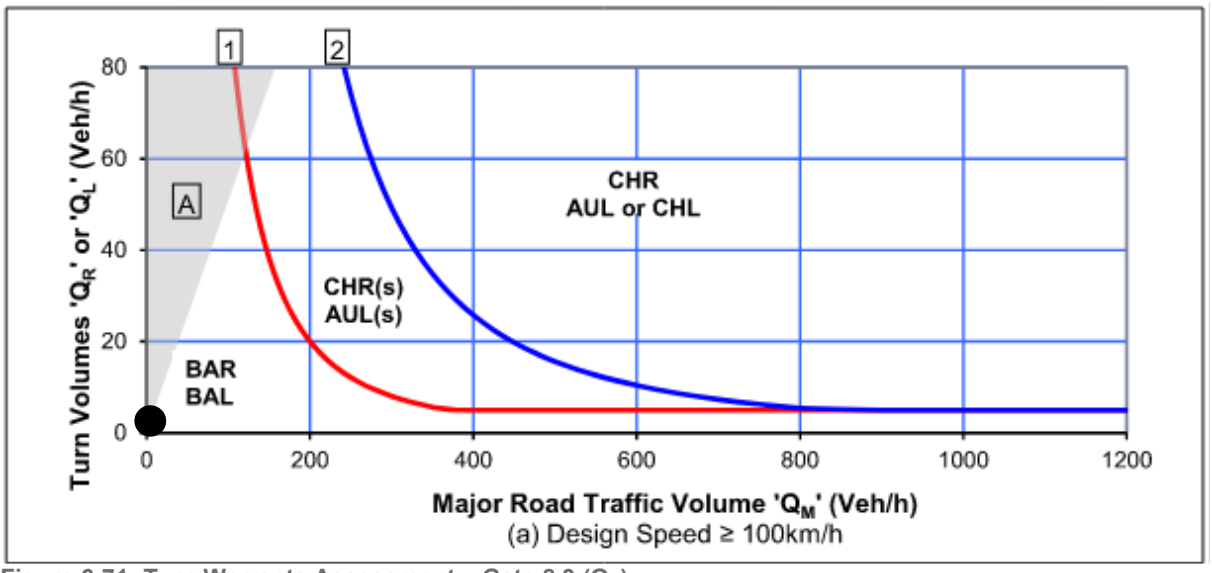


Figure 6-71: Turn Warrants Assessment – Gate 8.3 (Q_R)

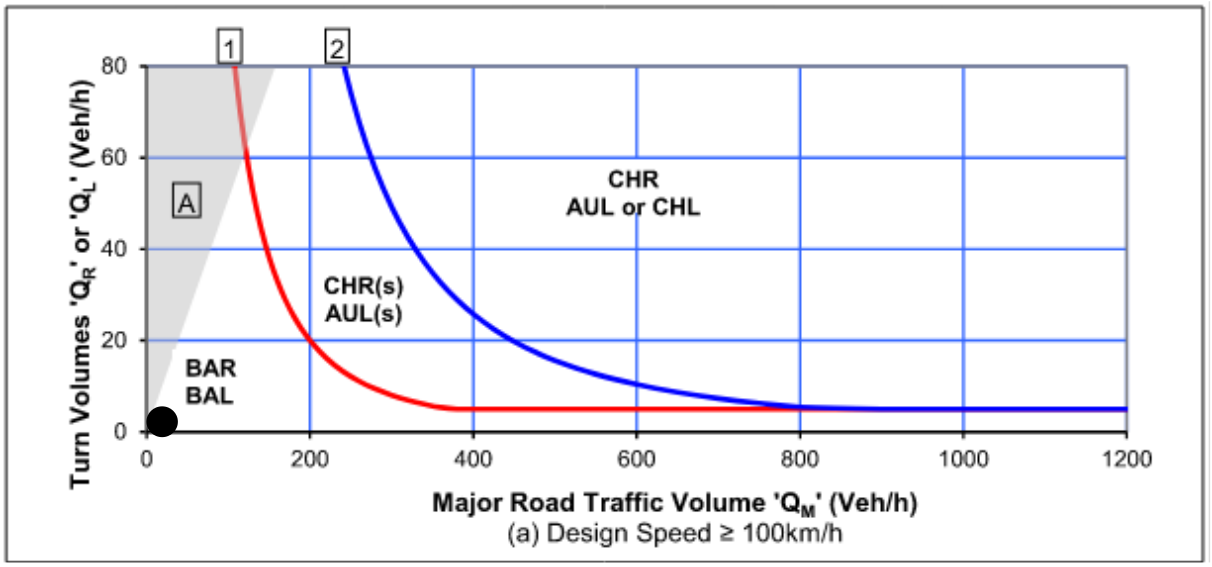


Figure 6-72: Turn Warrants Assessment – Gate 8.4 (Q_L)

A summary of the above assessments is provided below.

Table 6-53: Turn Warrants Assessment Summary – Gate 7B

Gate	Turn treatments
Gate 8.1	Basic left turn (BAL)
Gate 8.2	Basic left turn (BAL), Basic right turn (BAR)
Gate 8.3	Basic right turn (BAR)
Gate 8.4	Basic left turn (BAL), Basic right turn (BAR)

As detailed above, the assessment indicates that basic turn treatments (BAL, BAR) are warranted on Corby's Lane (major road) at Gates 8.1, 8.2, 8.3, 8.4.

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,
- Turning volumes are high (i.e., 300 to 500 veh/hour)

- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)
- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the construction gate design development and the appropriate approval process (i.e., Section 138).

6.5.3.11 Gate 9 and Gate 10 – Burley Griffin Way

Located on Burley Griffin Way, approximately 300m west of Temora Street, Gate 9 and Gate 10 consists of two (2) gates which will provide access to construction sections 5 and 6.

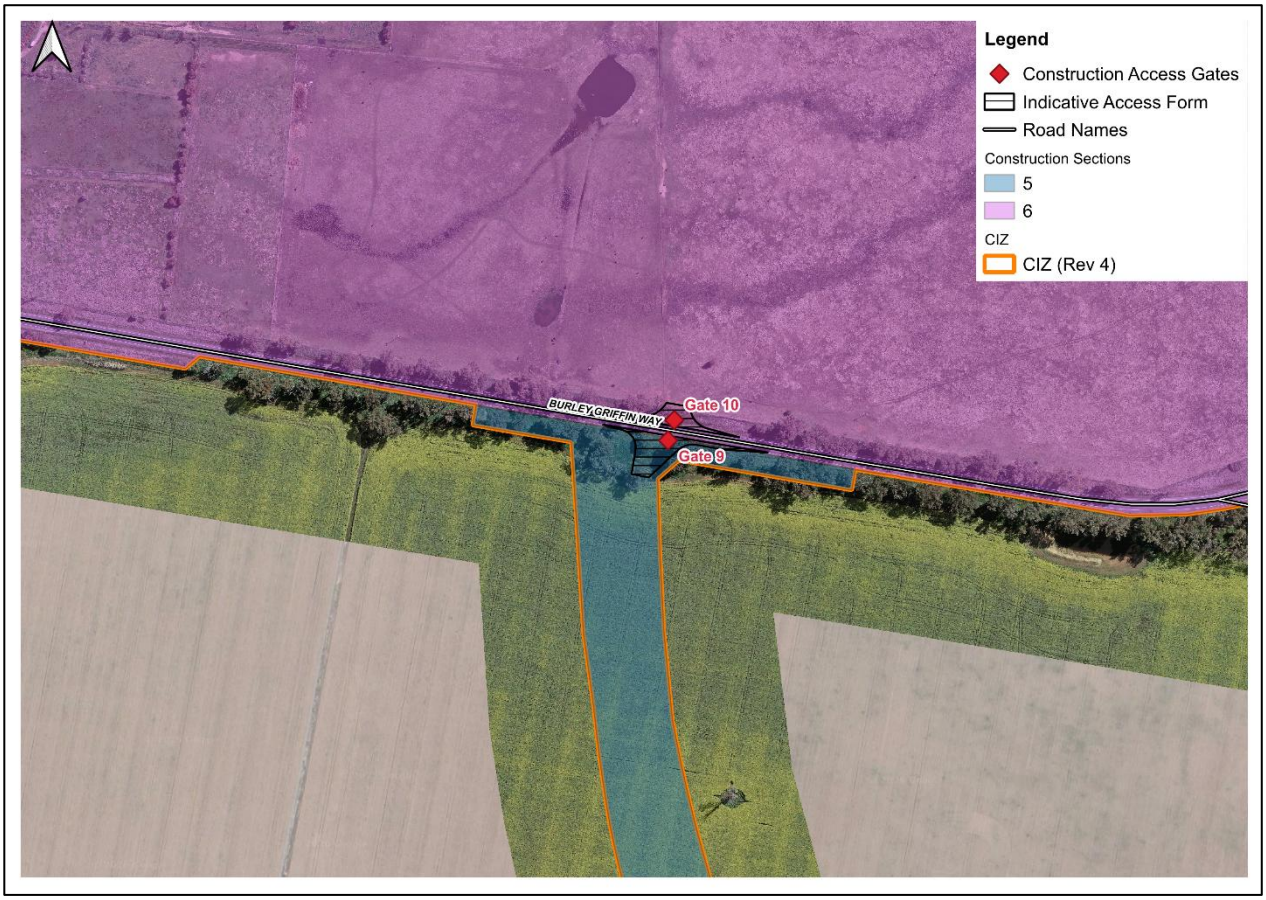


Figure 6-22 Gate 9 and Gate 10 locations

Details associated with the access are provided in the table below:

Table 6-54: Gate Details – Gate 9 and Gate 10

Gate #	Gate 9 and Gate 10
Location	Burley Griffin Way
AADT	1,058 (2018)
Speed limit	100km/hr
Access duration	Eighteen (18) months
Construction ADT	85 (per gate)
Construction peak hour volume	9 (per gate)
Construction vehicle type	Truck and dog (19.0m), B-double (26m)
Permitted movements	Left and right in, left and right out

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-55: Sight Distance Assessment – Gate 9 and Gate 10

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 10	East	100km/hr	285m	Yes	139m	Yes
	West			Yes		Yes
Gate 9	East	100km/hr	285m	Yes	139m	Yes
	West			Yes		Yes

As detailed above, sight distance provisions at the access achieve the minimum requirements for the existing posted speed limit.

Turn Treatments at Site Access

To undertake this assessment, background traffic volumes for Burley Griffin Way were obtained from traffic surveys undertaken by *Austraffic* on Tuesday 28th August 2018. Noting that data collection was undertaken 2018, to account for any population growth and subsequent increase in utilisation of the road network, a compounding annual growth rate of 0.5 percent per year has been used to determine future year background traffic volumes. The use of this growth rate is consistent with that adopted within *Technical Paper 3 – Traffic, Transport and Impact Assessment,* and is considered to provide a conservative assessment given the growth rate is above recorded population growth rates. Future year background traffic volumes at year 2025 and 2027 are presented below.

Table 6-56: Traffic Volumes – Burley Griffin Way

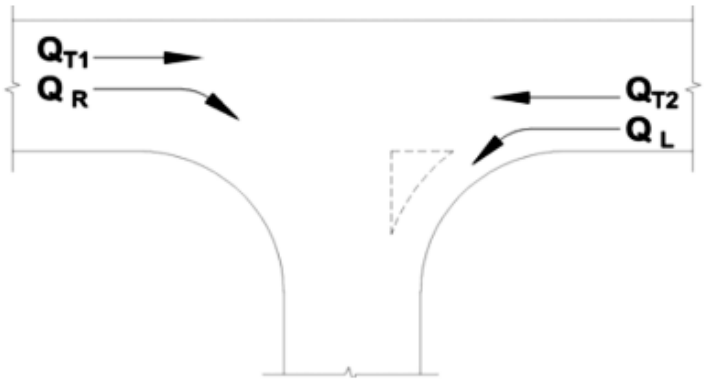
Road	Background AADT*	Year	Peak Hour Volumes		Growth Rate	2025 Design Year Volume			2027 Design Year Volume		
			AM Peak	PM Peak		AADT	AM Peak	PM Peak	AADT	AM Peak	PM Peak
Burley Griffin Way	1,058	2018	87	101	0.5%	1,096	91	105	1,107	91	106

* Weekday average

** Peak recorded volumes

In order to undertake the assessment, the major road traffic volume (Q_M) first needs to be calculated. On two-lane, two-way roads (without a splitter island), the value of the major road traffic volume parameter (Q_M)

for a right turn is the total through traffic flow in both directions (Q_{T1} and Q_{T2}), plus the volume of left turning traffic (Q_L). For a left turn, the Q_M is equal to total of traffic flow in the direction of the left turn (Q_{T2}).



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 50% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 33% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 33% x Q_{T2}

Figure 6-74: Extract from AGTM Part 6 – Figure 3.26

With reference to the above, the volumes adopted for this assessment are detailed below, noting that, 2027 design year volumes have been adopted for the purpose of this assessment to ensure that the design of the site accesses remain suitable throughout construction. Note- volume have hourly data.

Table 6-57: Turn Warrants Parameters – Gate 9 and Gate 10

Gate	Right turn		Left turn	
	Q_M	Q_R	Q_M	Q_L
Gate 10	111	5	53	5
Gate 9	111	5	53	5

1. A 50/50 split of traffic volumes has been assumed for traffic travelling along the road frontage
2. A 50/50 split of construction traffic volumes has been assumed for traffic turning into the access

Adopting these volumes, the warrants assessment is shown below for Gate 9 and Gate 10.

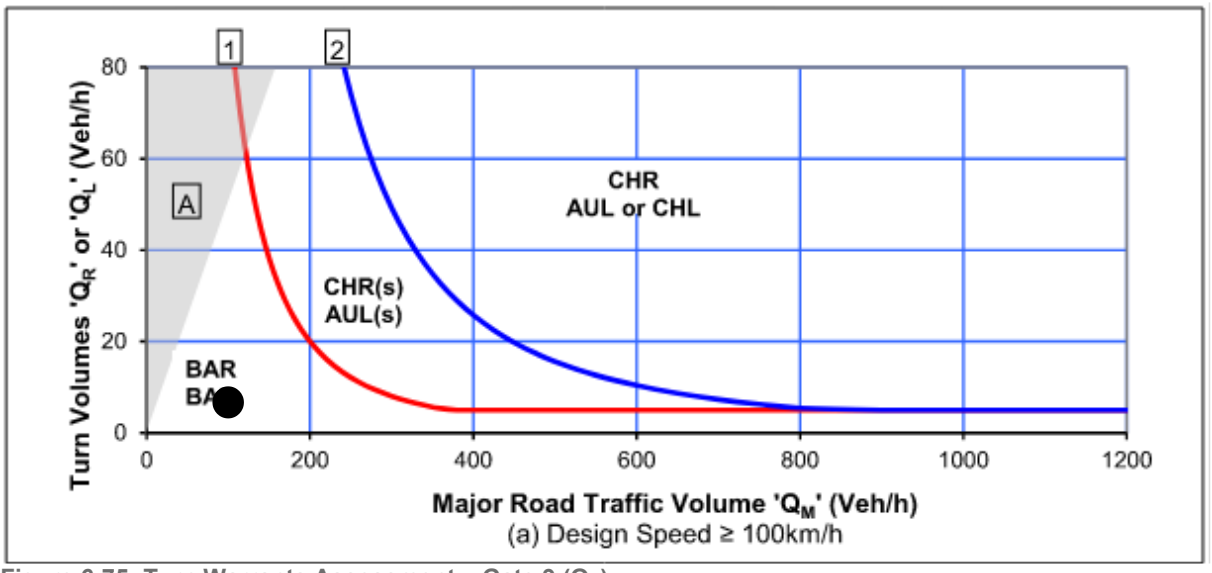


Figure 6-75: Turn Warrants Assessment – Gate 9 (Q_R)

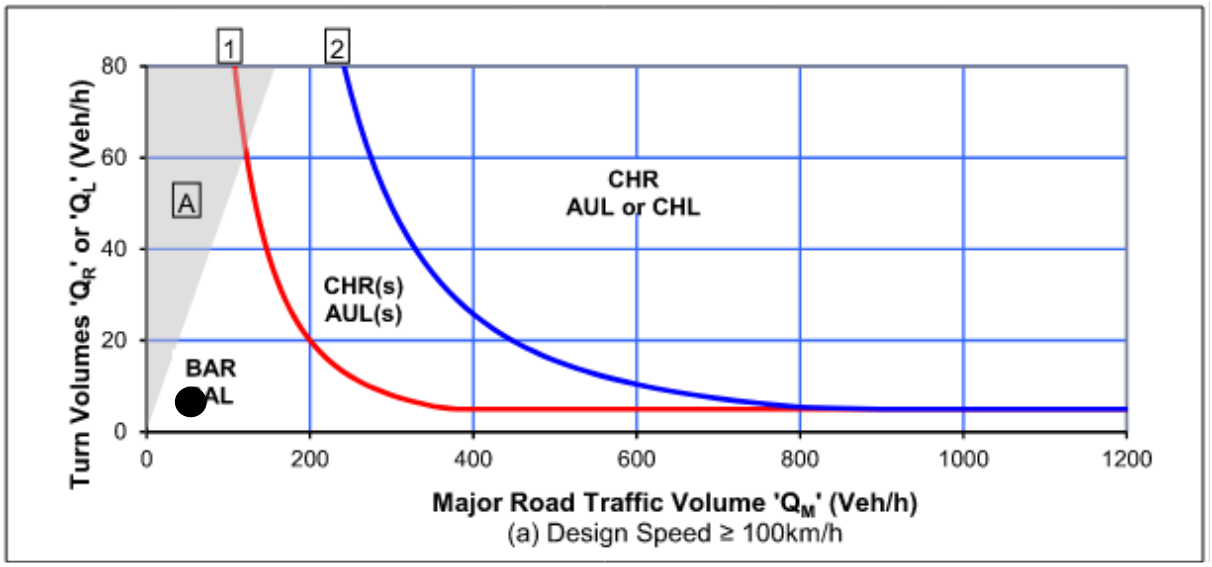


Figure 6-76: Turn Warrants Assessment – Gate 9 (Q_L)

A summary of the above assessments is provided below.

Table 6-58: Turn Warrants Assessment Summary – Gate 8

Gate	Turn treatments
Gate 10	Basic left turn (BAL), Basic right turn (BAR)
Gate 9	Basic left turn (BAL), Basic right turn (BAR)

As detailed above, the assessment indicates that basic turn treatments (BAL, BAR) are warranted on Burley Griffin Way (major road) at Gate 9 and Gate 10.

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,
- Turning volumes are high (i.e., 300 to 500 veh/hour)
- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)

- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the construction gate design development and the appropriate approval process (i.e., Section 138).

6.5.3.12 Gate 9B – Burley Griffin Way (West)

Located on Burley Griffin Way, approximately 800m west of Temora Street. This gate will be the main access to the Project site office and will facilitate access for LVs and small rigid trucks.



Figure 6-77: Gate 9B location

Details associated with the access are provided in the table below:

Table 6-59: Gate Details – Gate 9B

Gate #	**Gate 9B**
Location	Burley Griffin Way
AADT	1,058 (2018)
Speed limit	100km/hr
Access duration	Eighteen (18) months
Construction ADT	Low
Construction peak hour volume	1 (per gate)
Construction vehicle type	Light vehicles, rigid truck (12.5m), truck and dog (19.0m)
Permitted movements	Left and right in, left and right out

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-60: Sight Distance Assessment – Gate 9B

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 9B	East	100km/hr	285m	Yes	139m	Yes
	West			Yes		Yes

As detailed above, sight distance provisions at the access achieve the minimum requirements for the existing posted speed limit.

Turn Treatments at Site Access

To undertake this assessment, background traffic volumes for Burley Griffin Way were obtained from traffic surveys undertaken by *Austraffic* on Tuesday 28th August 2018. Noting that data collection was undertaken 2018, to account for any population growth and subsequent increase in utilisation of the road network, a compounding annual growth rate of 0.5 percent per year has been used to determine future year background traffic volumes. The use of this growth rate is consistent with that adopted within *Technical Paper 3 – Traffic, Transport and Impact Assessment,* and is considered to provide a conservative assessment given the growth rate is above recorded population growth rates. Future year background traffic volumes at year 2025 and 2027 are presented below.

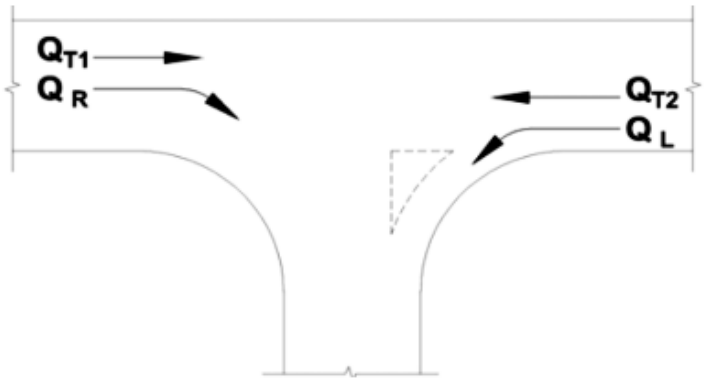
Table 6-61: Traffic Volumes – Burley Griffin Way

Road	Background AADT*	Year	Peak Hour Volumes		Growth Rate	2025 Design Year Volume			2027 Design Year Volume		
			AM Peak	PM Peak		AADT	AM Peak	PM Peak	AADT	AM Peak	PM Peak
Burley Griffin Way	1,058	2018	87	101	0.5%	1,096	91	105	1,107	91	106

* Weekday average

** Peak recorded volumes

In order to undertake the assessment, the major road traffic volume (Q_M) first needs to be calculated. On two-lane, two-way roads (without a splitter island), the value of the major road traffic volume parameter (Q_M) for a right turn is the total through traffic flow in both directions (Q_{T1} and Q_{T2}), plus the volume of left turning traffic (Q_L). For a left turn, the Q_M is equal to total of traffic flow in the direction of the left turn (Q_{T2}).



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 50% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 33% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 33% x Q_{T2}

Figure 6-78: Extract from AGTM Part 6 – Figure 3.26

With reference to the above, the volumes adopted for this assessment are detailed below, noting that, 2027 design year volumes have been adopted for the purpose of this assessment to ensure that the design of the site accesses remain suitable throughout construction. Note- volume have hourly data.

Table 6-62: Turn Warrants Parameters

Gate	Right turn		Left turn	
	Q_M	Q_R	Q_M	Q_L
Gate 9B	111	1	53	1

1. A 50/50 split of traffic volumes has been assumed for traffic travelling along the road frontage
2. A 50/50 split of construction traffic volumes has been assumed for traffic turning into the access

Adopting these volumes, the warrants assessment is shown below for Gate 9B.

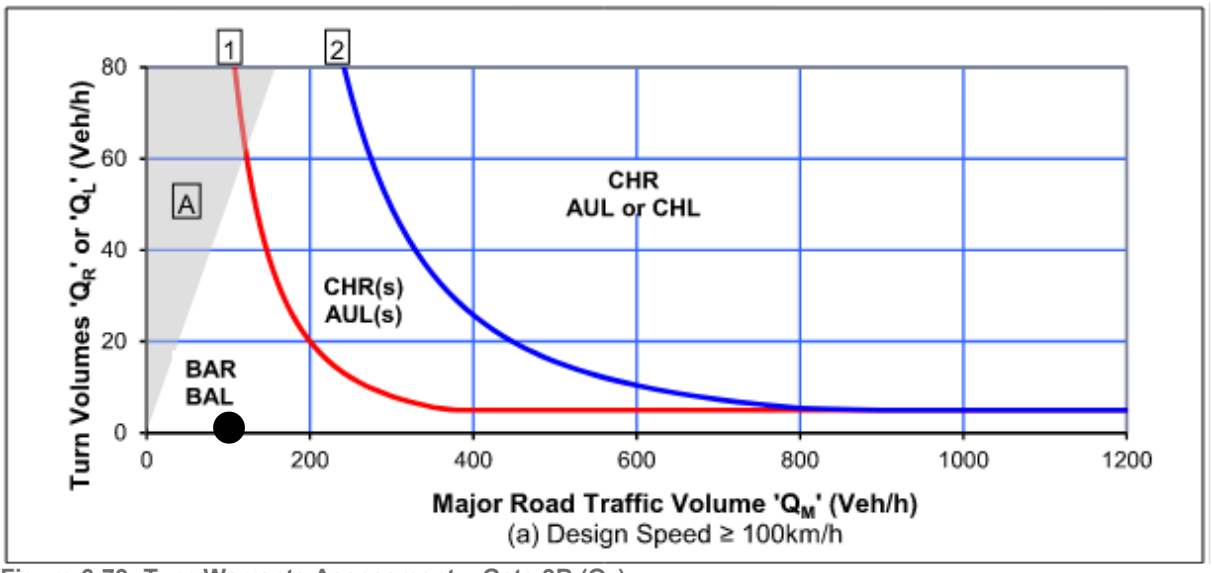


Figure 6-79: Turn Warrants Assessment – Gate 9B (Q_R)

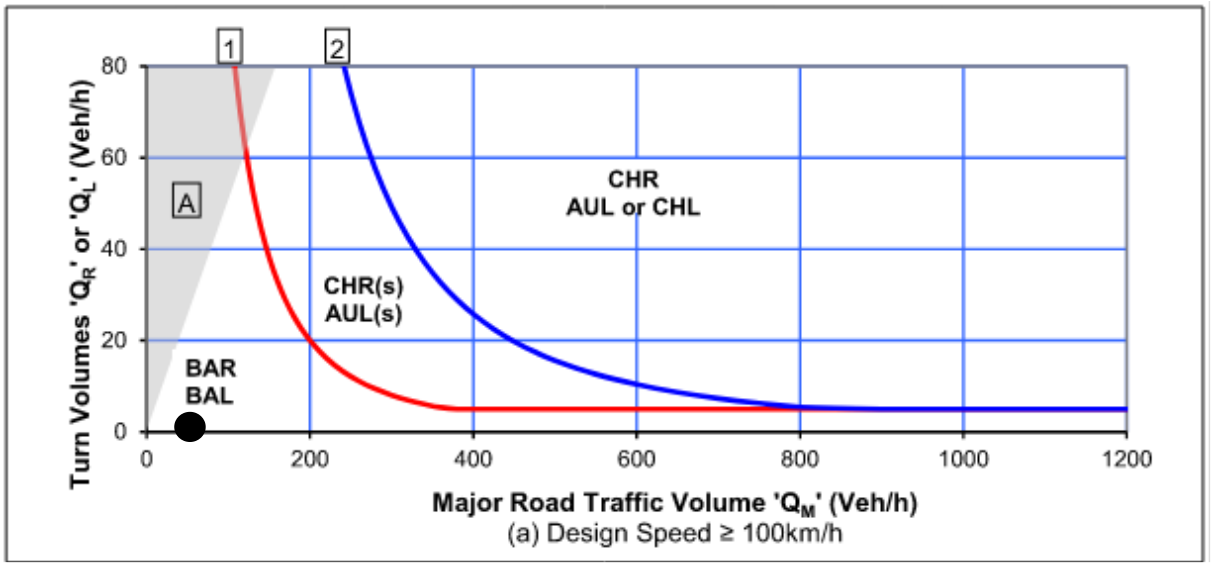


Figure 6-80: Turn Warrants Assessment – Gate 9B (Q_L)

A summary of the above assessments is provided below.

Table 6-63: Turn Warrants Assessment Summary – Gate 9B

Gate	Turn treatments
Gate 9B	Basic left turn (BAL), Basic right turn (BAR)

As detailed above, the assessment indicates that basic turn treatments (BAL, BAR) are warranted on Burley Griffin Way (major road) at Gate 9B.

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,
- Turning volumes are high (i.e., 300 to 500 veh/hour)
- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)
- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the construction gate design development and the appropriate approval process (i.e., Section 138, WAD).

6.5.3.13 Gate 10A to Gate 10F – Hibernia Street

Located on Hibernia Street between Troy Street and Cynthia Street, Gate 10 consists of six (6) gates which will provide access to construction section 6 and the Stockinbingal Yard.

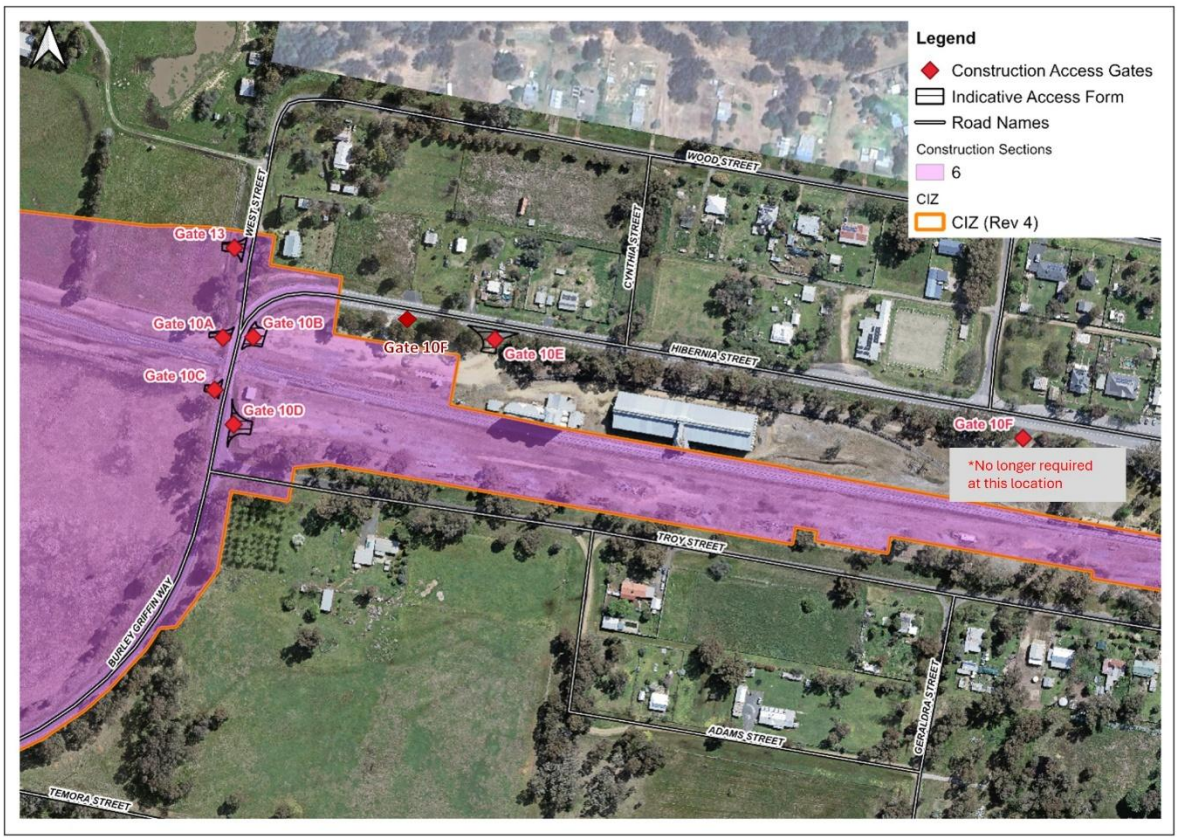


Figure 6-23 Gate 10A to Gate 10F locations

**Gate 10B &10C is no longer required*

Details associated with the access are provided in the table below:

Table 6-64: Gate Details – Gate 10

Gate #	Gate 10A	Gate 10B	Gate 10C	Gate 10D	Gate 10E	Gate 10F
Location	Hibernia Street					
AADT	1,187 (2018)					
Speed limit	60km/hr					
Access duration	Eighteen (18) months					
Construction ADT	Low					
Construction peak hour volume	1 (per gate)					
Construction vehicle type	Light vehicles, rigid truck (12.5m), truck and dog (19.0m)					
Permitted movements	Left in, left out					

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-65: Sight Distance Assessment – Gate 10

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 10	East	60km/hr	151m	Yes	83m	Yes
	West			Yes		Yes

As detailed above, sight distance provisions at the access achieve the minimum requirements for the existing posted speed limit.

Turn Treatments at Site Access

To undertake this assessment, background traffic volumes for Hibernia Street were obtained from traffic surveys undertaken by *Austraffic* on Tuesday 28th August 2018. Noting that data collection was undertaken 2018, to account for any population growth and subsequent increase in utilisation of the road network, a compounding annual growth rate of 0.5 percent per year has been used to determine future year background traffic volumes. The use of this growth rate is consistent with that adopted within *Technical Paper 3 – Traffic, Transport and Impact Assessment,* and is considered to provide a conservative assessment given the growth rate is above recorded population growth rates. Future year background traffic volumes at year 2025 and 2027 are presented below.

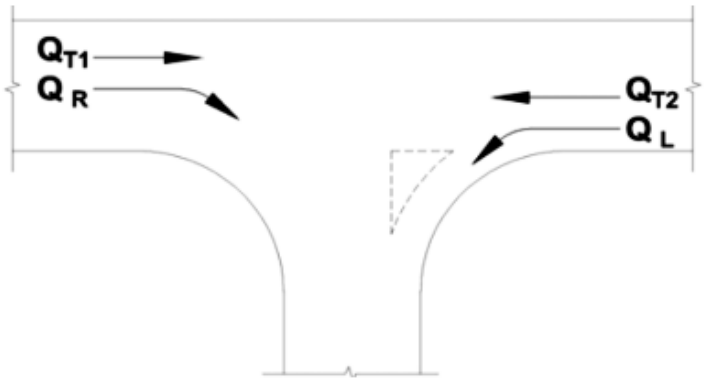
Table 6-66: Traffic Volumes – Hibernia Street

Road	Background AADT*	Year	Peak Hour Volumes		Growth Rate	2025 Design Year Volume			2027 Design Year Volume		
			AM Peak	PM Peak		AADT	AM Peak	PM Peak	AADT	AM Peak	PM Peak
Hibernia Street	1,166	2018	105	139	0.5%	1,208	109	144	1,220	110	146

* Weekday average

** Peak recorded volumes

In order to undertake the assessment, the major road traffic volume (Q_M) first needs to be calculated. On two-lane, two-way roads (without a splitter island), the value of the major road traffic volume parameter (Q_M) for a right turn is the total through traffic flow in both directions (Q_{T1} and Q_{T2}), plus the volume of left turning traffic (Q_L). For a left turn, the Q_M is equal to total of traffic flow in the direction of the left turn (Q_{T2}).



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= Q_{T1} + Q_{T2} + Q_L
		Yes	= Q_{T1} + Q_{T2}
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x Q_{T1} + Q_{T2} + Q_L
		Yes	= 50% x Q_{T1} + Q_{T2}
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x Q_{T1} + Q_{T2} + Q_L
		Yes	= 33% x Q_{T1} + Q_{T2}
	Left	Yes or no	= 33% x Q_{T2}

Figure 6-82: Extract from AGTM Part 6 – Figure 3.26

With reference to the above, the volumes adopted for this assessment are detailed below, noting that, 2027 design year volumes have been adopted for the purpose of this assessment to ensure that the design of the site accesses remain suitable throughout construction. Note- volume have hourly data.

Table 6-67: Turn Warrants Parameters – Gate 10

Gate	Right turn		Left turn	
	Q_M	Q_R	Q_M	Q_L
Gate 10A	-	-	73	1
Gate 10B	-	-	73	1
Gate 10C	-	-	73	1
Gate 10D	-	-	73	1
Gate 10E	147	1	73	1
Gate 10F	147	1	73	1

1. A 50/50 split of traffic volumes has been assumed for traffic travelling along the road frontage
2. A 50/50 split of construction traffic volumes has been assumed for traffic turning into the access

Adopting these volumes, the warrants assessment is shown below for Gate 10.

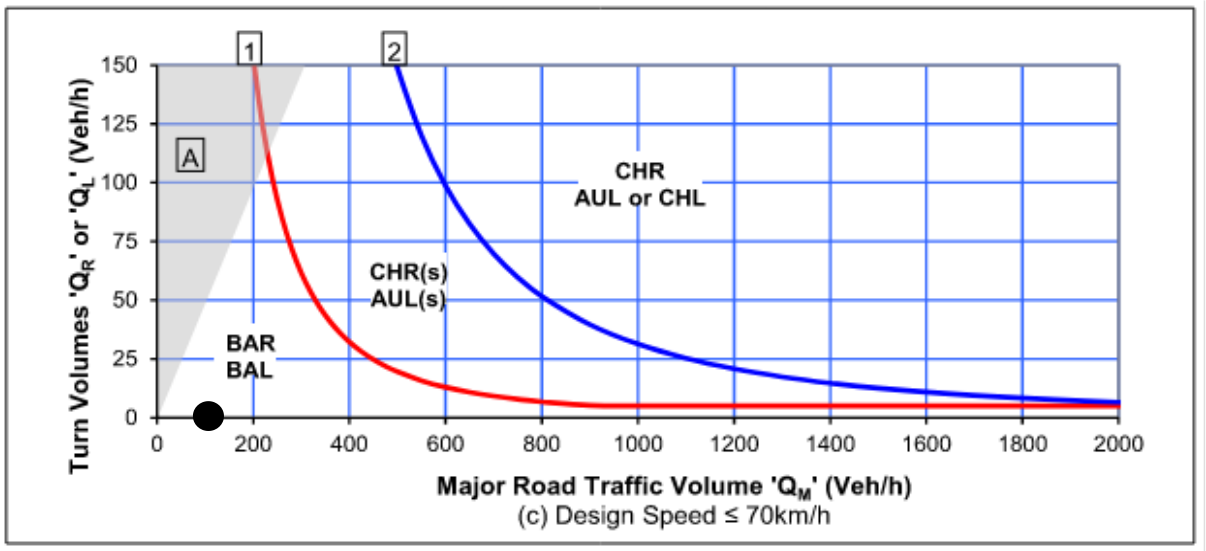


Figure 6-83: Turn Warrants Assessment – Gate 10A (Q_L)

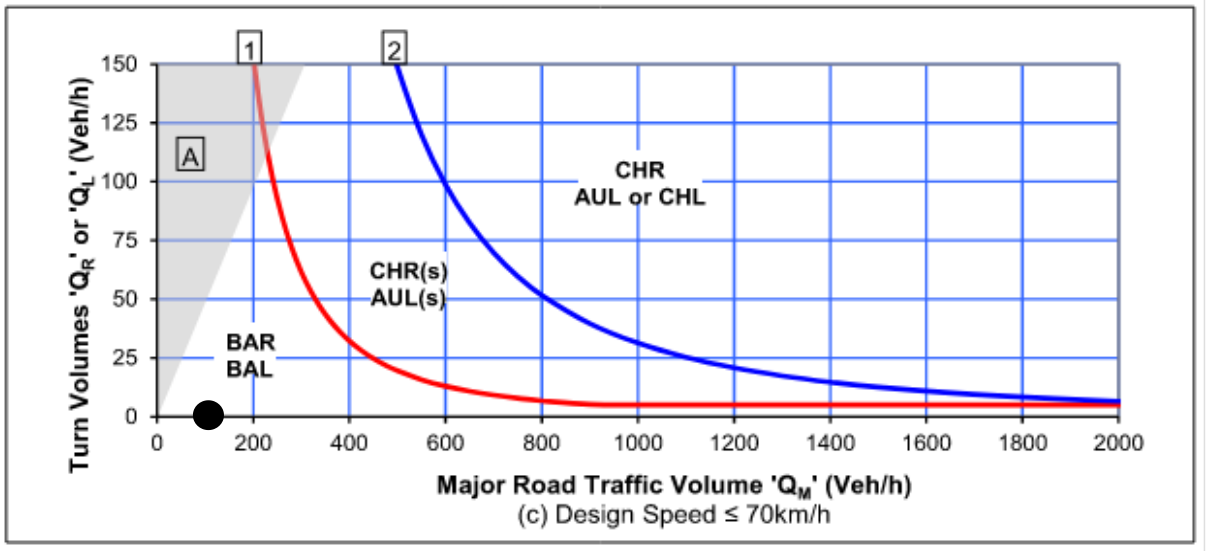


Figure 6-84: Turn Warrants Assessment – Gate 10B (Q_L)

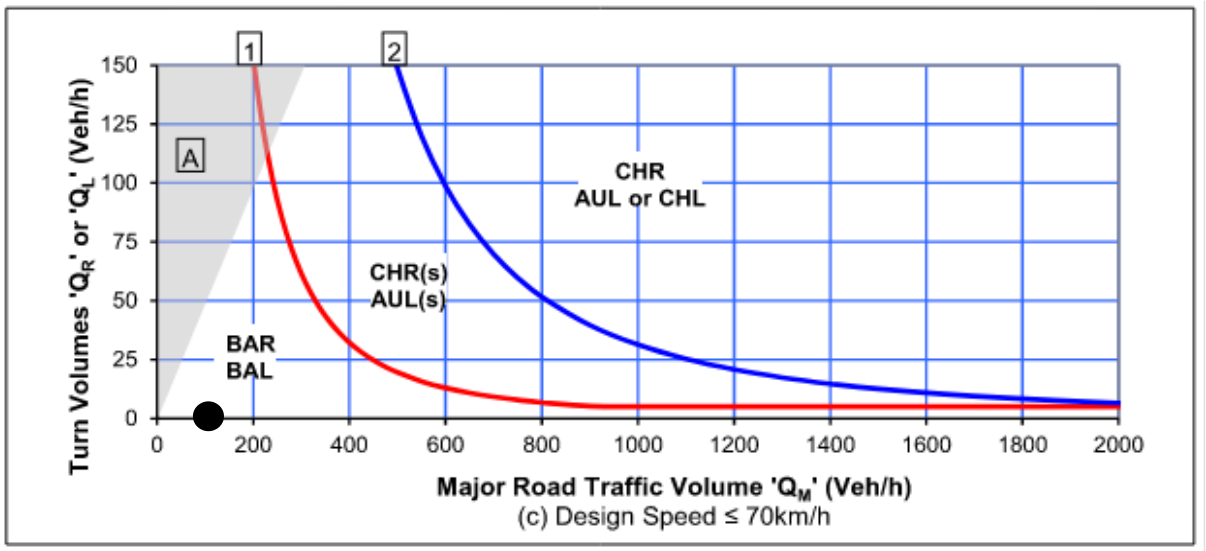


Figure 6-85: Turn Warrants Assessment – Gate 10C (Q_L)

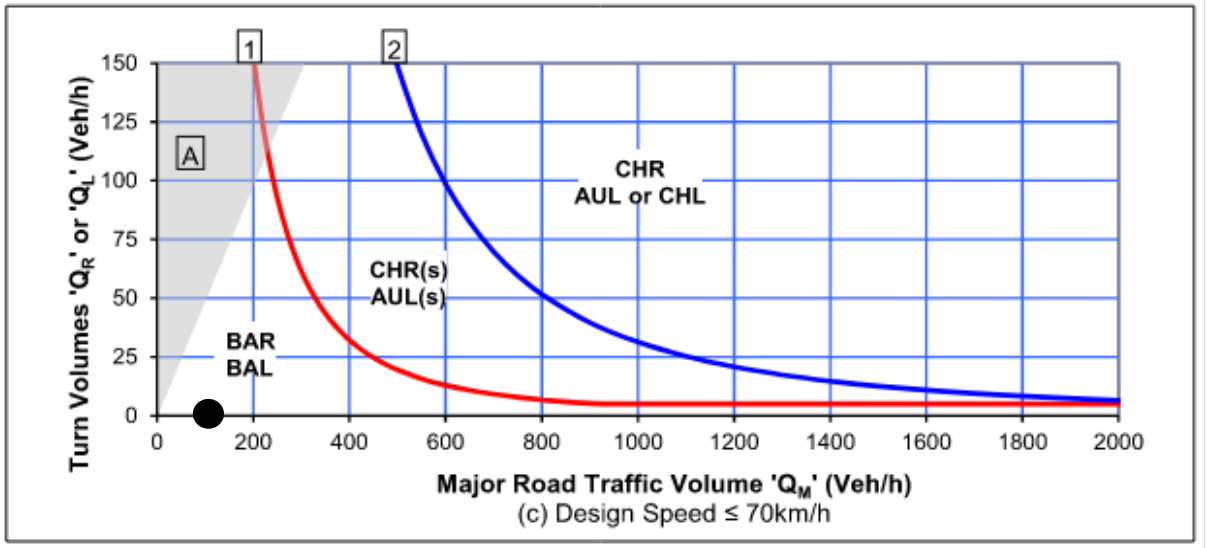


Figure 6-86: Turn Warrants Assessment – Gate 10D (Q_L)

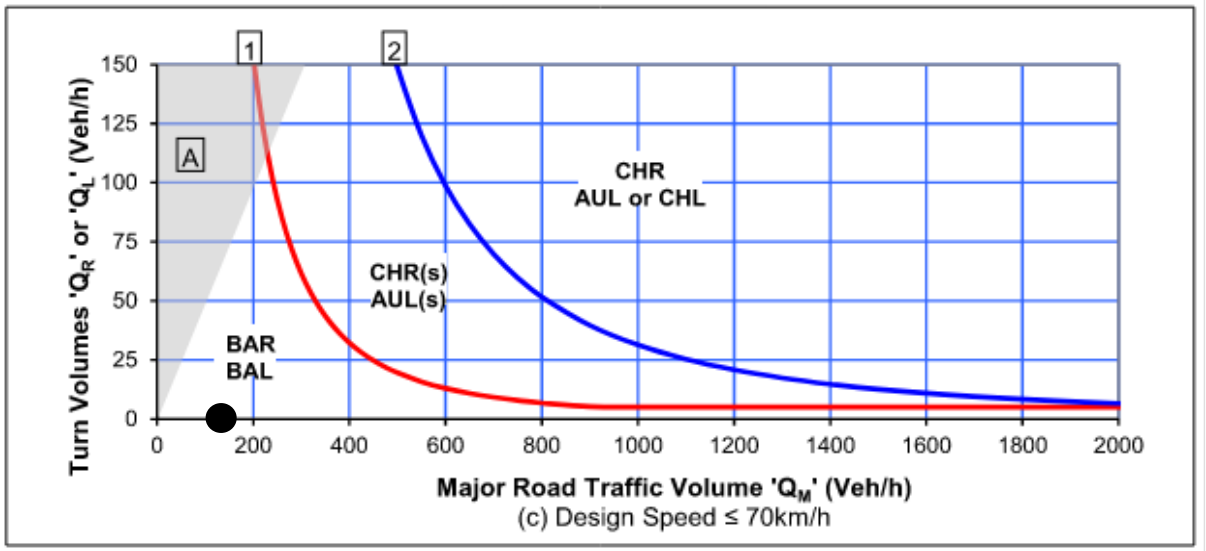


Figure 6-87: Turn Warrants Assessment – Gate 10E (Q_R)

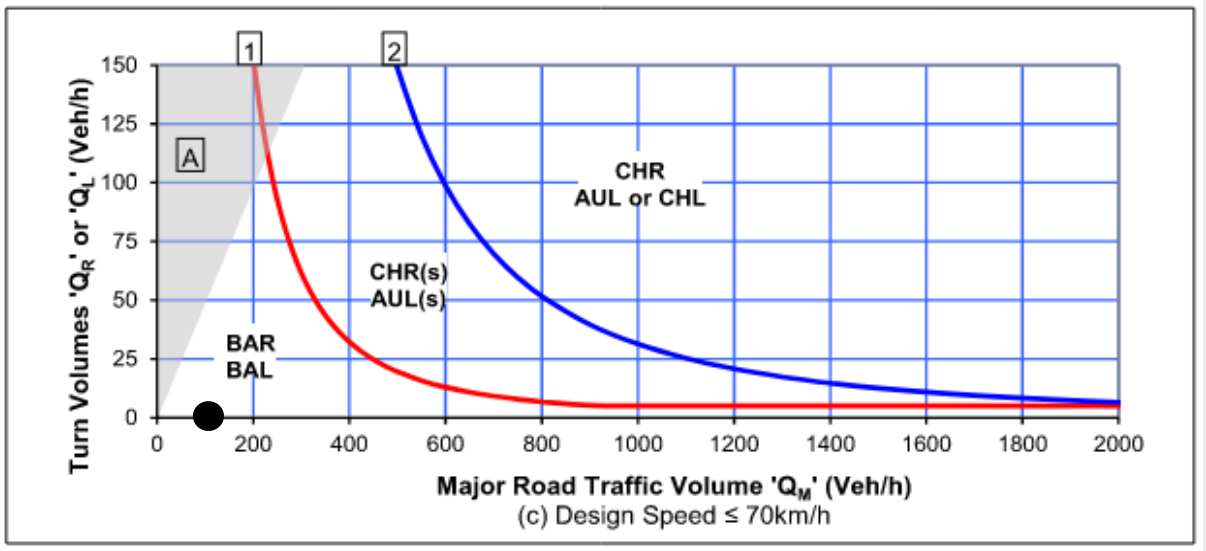


Figure 6-88: Turn Warrants Assessment – Gate 10E (Q_L)

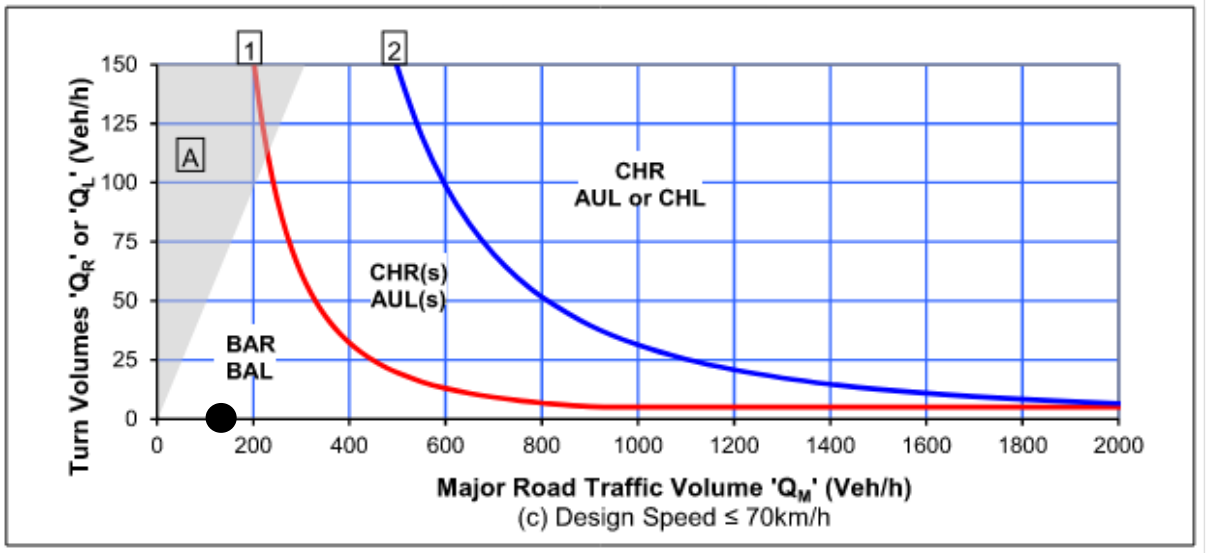


Figure 6-89: Turn Warrants Assessment – Gate 10F (Q_R)

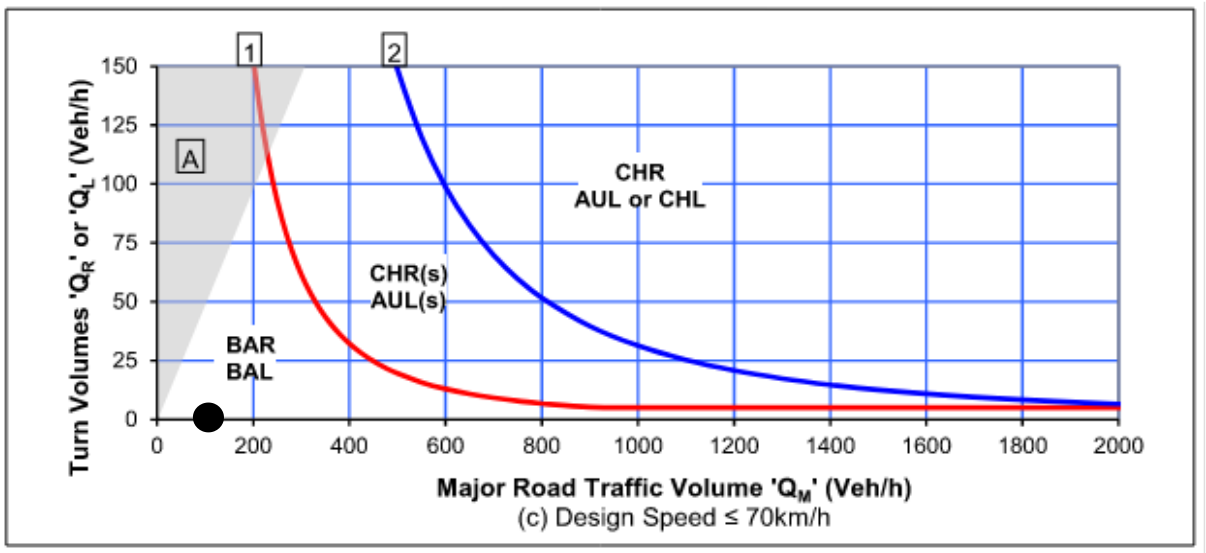


Figure 6-90: Turn Warrants Assessment – Gate 10F (Q_L)

A summary of the above assessments is provided below.

Table 6-68: Turn Warrants Assessment Summary – Gate 10

Gate	Turn treatments
Gate 10A	Basic left turn (BAL)
Gate 10B	Basic left turn (BAL)
Gate 10C	Basic left turn (BAL)
Gate 10D	Basic left turn (BAL)
Gate 10E	Basic left turn (BAL), Basic right turn (BAR)
Gate 10F	Basic left turn (BAL), Basic right turn (BAR)

As detailed above, the assessment indicates that basic turn treatments (BAL, BAR) are warranted on Hibernia Street (major road) at Gate 10.

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,
- Turning volumes are high (i.e., 300 to 500 veh/hour)
- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)
- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the construction gate design development and the appropriate approval process (i.e., Section 138, WAD).

6.5.3.14 Gate 11 – Grogan Road

Located on Grogan Road, approximately 160m north of Racecourse Lane, Gate 11 will provide access to construction section 6.



Figure 6-91: Gate 11 Location

Details associated with the access are provided in the table below:

Table 6-69: Gate Details – Gate 11

Gate #	**Gate 11**
Location	Grogan Road
AADT	83 (2018)
Speed limit	100km/hr
Access duration	Eighteen (18) months
Construction ADT	Low
Construction peak hour volume	1 (per gate)
Construction vehicle type	Light vehicles, rigid truck (12.5m), truck and dog (19.0m)
Permitted movements	Left and right in, left and right out

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-70: Sight Distance Assessment – Gate 11

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 11	North	100km/hr	285m	Yes	139m	Yes
	South			No		Yes

As detailed above, sight distance requirements to the north of the access are able to be achieved, however sight distance to the south is obstructed, limiting available sight distance. As a potential mitigation measure and to ensure that appropriate sight distance is available at sight accesses, reduced speed limits approaching the access have been considered. An assessment considering the sight distance requirements of reduced speed limits (below the posted speed limit) is presented below.

Table 6-71: Further Sight Distance Assessment – Gate 11

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 11	North	80km/hr	214m	Yes	111m	Yes
	South			No		Yes
	North	60km/hr	151m	Yes	83m	Yes
	South			Yes		Yes

As shown, available sight distance at Gate 11 achieves the minimum requirements for a 60km/hr posted speed limit. Considering this and to ensure that vehicles can safely and efficiently manoeuvre into and out of the access, a potential mitigation measure would be to implement a maximum reduced speed limit of 60km/hr on approach to the accesses (temporary speed limits on approach to site access points would need to accommodate the necessary sight distance requirements (i.e., installed more than 151m from a site access point where the reduced speed limit is 60km/hr)). This approach to reduce speed limit to 60km/h has been adopted for the development of the strategic design.

Turn Treatments at Site Access

Traffic data was not available for Grogan Road. As such, in order to undertake the assessment background demands on Grogan Road have been based on nearby roads of the same order that are expected to have similar or highway traffic demand characteristics. In this case, traffic volumes on Grogan Road have been based on Dudauman Road.

Background traffic volumes for Dudauman Road were obtained from traffic surveys undertaken by *Austraffic* on Tuesday 28th August 2018. Noting that data collection was undertaken 2018, to account for any population growth and subsequent increase in utilisation of the road network, a compounding annual growth rate of 0.5 percent per year has been used to determine future year background traffic volumes. The use of this growth rate is consistent with that adopted within *Technical Paper 3 – Traffic, Transport and Impact Assessment,* and is considered to provide a conservative assessment given the growth rate is above recorded population growth rates. Future year background traffic volumes at year 2025 and 2027 are presented below.

Table 6-72: Traffic Volumes – Grogan Road (Dudauman Road)

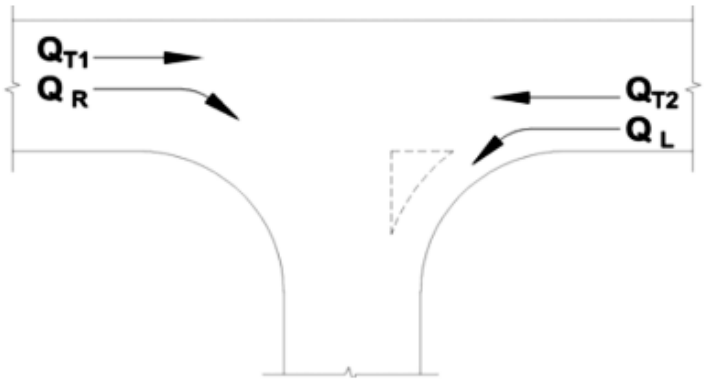
Road	Background AADT*	Year	Peak Hour Volumes		Growth Rate	2025 Design Year Volume			2027 Design Year Volume		
			AM Peak	PM Peak		AADT	AM Peak	PM Peak	AADT	AM Peak	PM Peak
Grogan Road (Dudauman Road)	83	2018	11	12	0.5%	86	12	13	87	12	13

* Weekday average

** Peak recorded volumes

In order to undertake the assessment, the major road traffic volume (Q_M) first needs to be calculated. On two-lane, two-way roads (without a splitter island), the value of the major road traffic volume parameter (Q_M)

for a right turn is the total through traffic flow in both directions (Q_{T1} and Q_{T2}), plus the volume of left turning traffic (Q_L). For a left turn, the Q_M is equal to total of traffic flow in the direction of the left turn (Q_{T2}).



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 50% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 33% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 33% x Q_{T2}

Figure 6-92: Extract from AGTM Part 6 – Figure 3.26

With reference to the above, the volumes adopted for this assessment are detailed below, noting that, 2027 design year volumes have been adopted for the purpose of this assessment to ensure that the design of the site accesses remain suitable throughout construction. Note- volume have hourly data.

Table 6-73: Turn Warrants Parameters – Gate 11

Gate	Right turn		Left turn	
	Q_M	Q_R	Q_M	Q_L
Gate 11	18	4	7	4

1. A 50/50 split of traffic volumes has been assumed for traffic travelling along the road frontage
2. A 50/50 split of construction traffic volumes has been assumed for traffic turning into the access

Adopting these volumes, the warrants assessment is shown below for Gate 11.

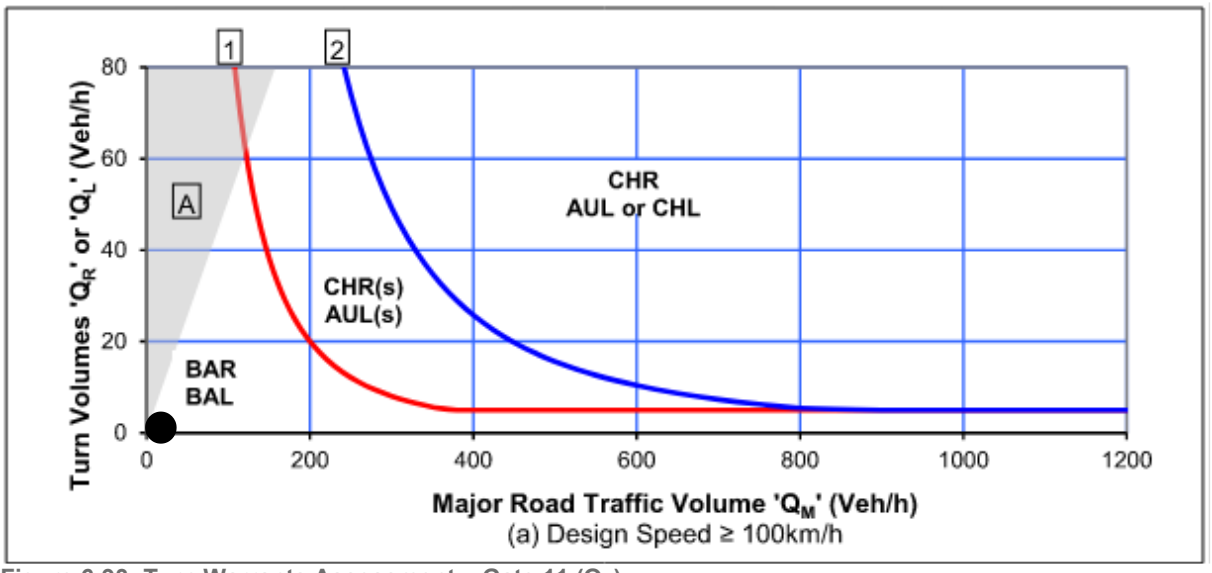


Figure 6-93: Turn Warrants Assessment – Gate 11 (Q_R)

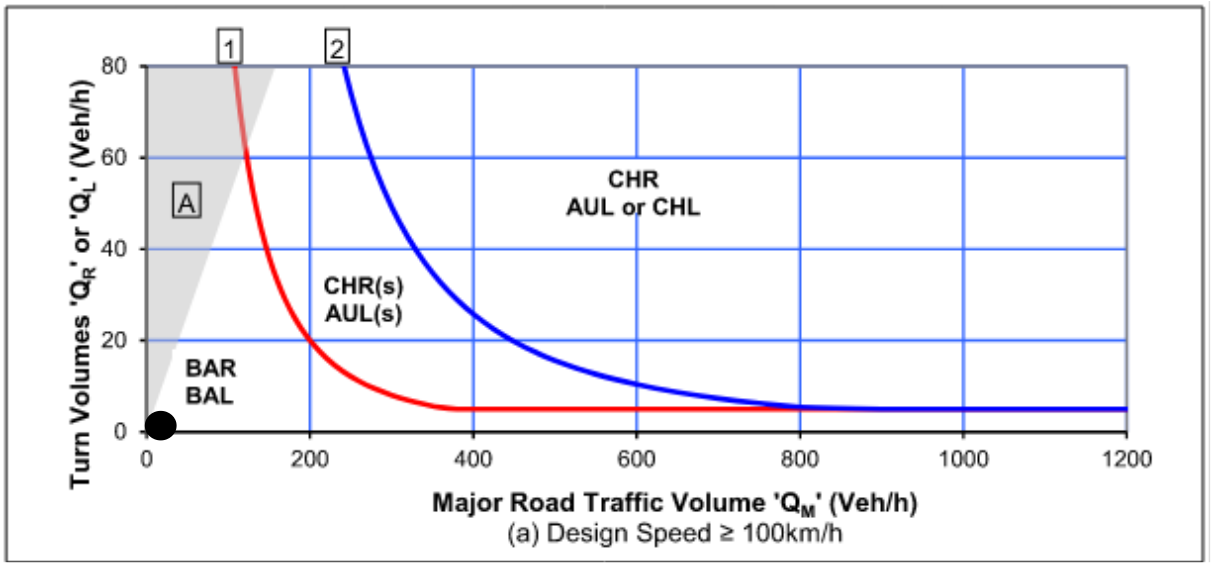


Figure 6-94: Turn Warrants Assessment – Gate 11 (Q_L)

A summary of the above assessments is provided below.

Table 6-74: Turn Warrants Assessment Summary – Gate 11

Gate	Turn treatments
Gate 11	Basic left turn (BAL), Basic right turn (BAR)

As detailed above, the assessment indicates that basic turn treatments (BAL, BAR) are warranted on Grogan Road (major road) at Gate 11.

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,
- Turning volumes are high (i.e., 300 to 500 veh/hour)
- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)

- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the construction gate design development and the appropriate approval process (i.e., Section 138).

6.5.3.15 Gate 12A to Gate 12D – Grogan Road

Located on Grogan Road, approximately 500m south of McLaughlin's Lane, Gate 12 will provide access to the Stockinbingal Camp.

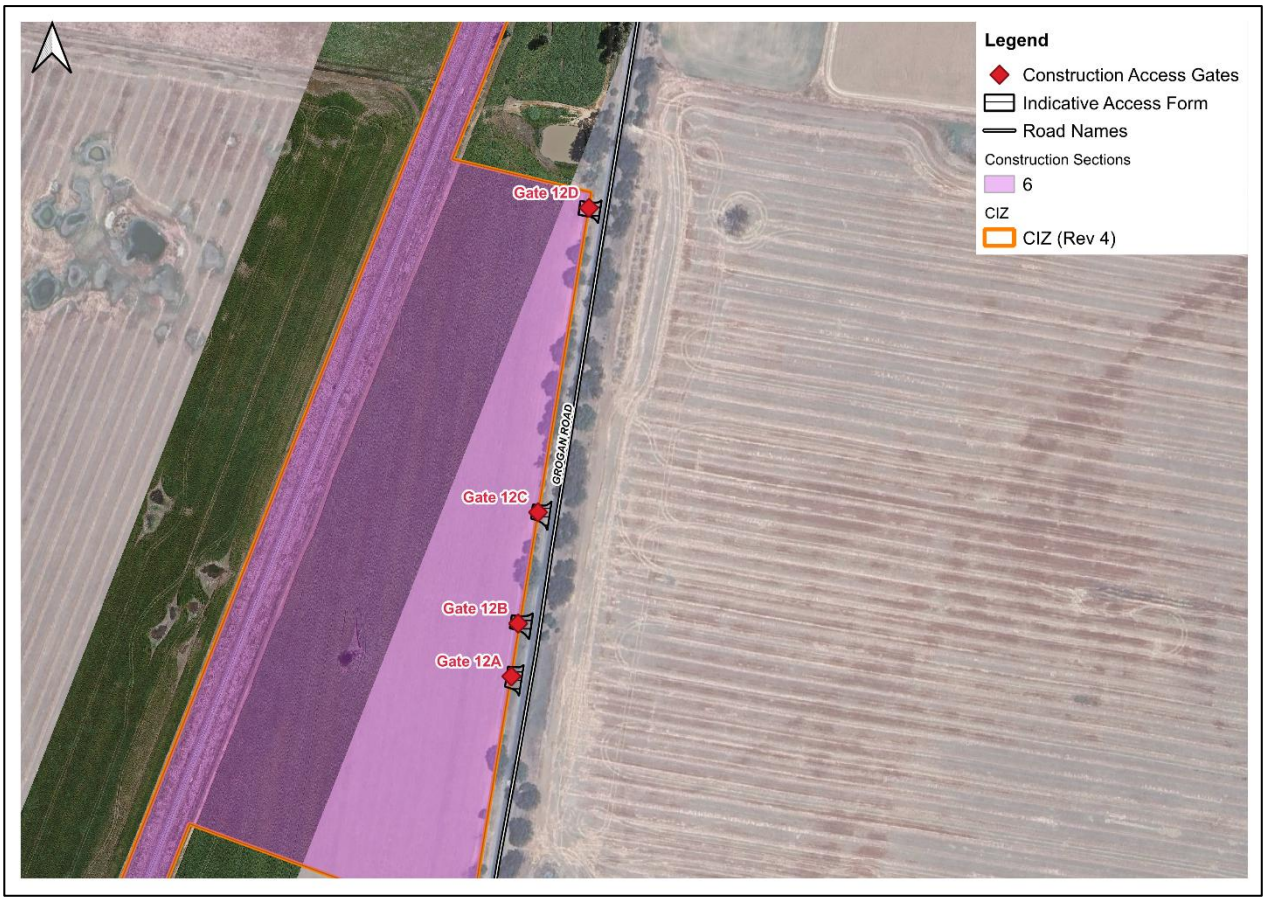


Figure 6-95: Gate 12A to Gate 12D locations

Details associated with the access are provided in the table below:

Table 6-75: Gate Details – Gate 12A to Gate 12F

Gate #	Gate 12A	Gate 12B	Gate 12C	Gate 12D
Location	Grogan Road			
AADT	83 (2018)			
Speed limit	100km/hr			
Access duration	Eighteen (18) months			
Construction ADT	500 (per gate)			
Construction peak hour volume	50 (per gate)			
Construction vehicle type	Light vehicles, rigid truck (12.5m), truck and dog (19.0m)			
Permitted movements	Left and right in, left and right out			

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-76: Sight Distance Assessment – Gate 12

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 12A	North	100km/hr	285m	There is insufficient information available (Google Streetview) to make a determination on available sight distance	139m	There is insufficient information available (Google Streetview) to make a determination on available sight distance
	South			Yes		Yes
Gate 12B	North	100km/hr	285m	There is insufficient information available (Google Streetview) to make a determination on available sight distance	139m	There is insufficient information available (Google Streetview) to make a determination on available sight distance
	South			Yes		Yes
Gate 12C	North	100km/hr	285m	There is insufficient information available (Google Streetview) to make a determination on available sight distance	139m	There is insufficient information available (Google Streetview) to make a determination on available sight distance
	South			Yes		Yes
Gate 12D	North	100km/hr	285m	There is insufficient information available (Google Streetview) to make a determination on available sight distance	139m	There is insufficient information available (Google Streetview) to make a determination on available sight distance
	South			Yes		Yes

As detailed above, there is insufficient information available to make a determination on available sight distance at Gate 12A, 12B, 12C and 12D. To ensure that suitable provisions are available, an on-site review of available sight distance will be undertaken in the construction gate design development and detailed within appropriate documentation (i.e., Section 138).

Turn Treatments at Site Access

Traffic data was not available for Grogan Road. As such, in order to undertake the assessment background demands on Grogan Road have been based on nearby roads of the same order that are expected to have

similar or highway traffic demand characteristics. In this case, traffic volumes on Grogan Road have been based on Dudauman Road.

Background traffic volumes for Dudauman Road were obtained from traffic surveys undertaken by *Austraffic* on Tuesday 28th August 2018. Noting that data collection was undertaken 2018, to account for any population growth and subsequent increase in utilisation of the road network, a compounding annual growth rate of 0.5 percent per year has been used to determine future year background traffic volumes. The use of this growth rate is consistent with that adopted within *Technical Paper 3 – Traffic, Transport and Impact Assessment,* and is considered to provide a conservative assessment given the growth rate is above recorded population growth rates. Future year background traffic volumes at year 2025 and 2027 are presented below.

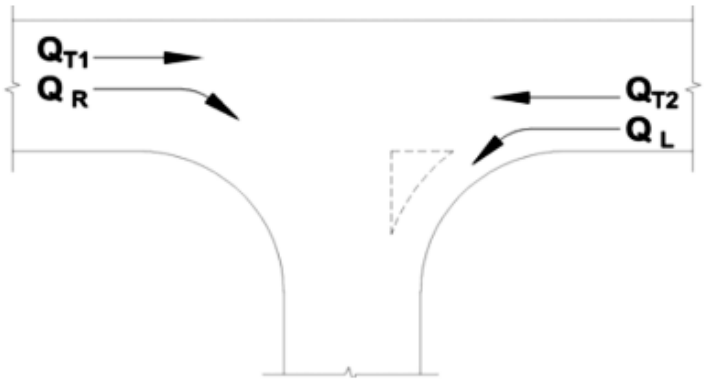
Table 6-77: Traffic Volumes – Grogan Road (Dudauman Road)

Road	Background AADT*	Year	Peak Hour Volumes		Growth Rate	2025 Design Year Volume			2027 Design Year Volume		
			AM Peak	PM Peak		AADT	AM Peak	PM Peak	AADT	AM Peak	PM Peak
Grogan Road (Dudauman Road)	83	2018	11	12	0.5%	86	12	13	87	12	13

* Weekday average

** Peak recorded volumes

In order to undertake the assessment, the major road traffic volume (Q_M) first needs to be calculated. On two-lane, two-way roads (without a splitter island), the value of the major road traffic volume parameter (Q_M) for a right turn is the total through traffic flow in both directions (Q_{T1} and Q_{T2}), plus the volume of left turning traffic (Q_L). For a left turn, the Q_M is equal to total of traffic flow in the direction of the left turn (Q_{T2}).



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 50% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 33% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 33% x Q_{T2}

Figure 6-96: Extract from AGTM Part 6 – Figure 3.26

With reference to the above, the volumes adopted for this assessment are detailed below, noting that, 2027 design year volumes have been adopted for the purpose of this assessment to ensure that the design of the site accesses remain suitable throughout construction. Note- volume have hourly data.

Table 6-78: Turn Warrants Parameters – Gate 12

Gate	Right turn		Left turn	
	Q_M	Q_R	Q_M	Q_L
Gate 12A	39	25	25	7
Gate 12B	39	25	25	7
Gate 12C	39	25	25	7
Gate 12D	39	25	25	7

1. A 50/50 split of traffic volumes has been assumed for traffic travelling along the road frontage
2. A 50/50 split of construction traffic volumes has been assumed for traffic turning into the access

Adopting these volumes, the warrants assessment is shown below for Gate 12.

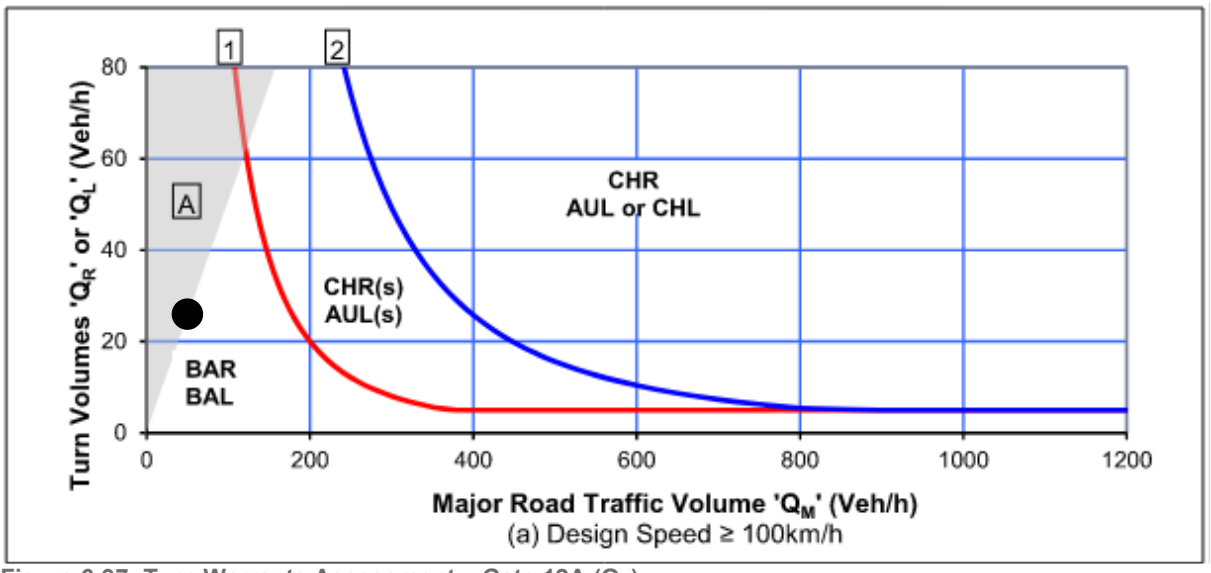


Figure 6-97: Turn Warrants Assessment – Gate 12A (Q_R)

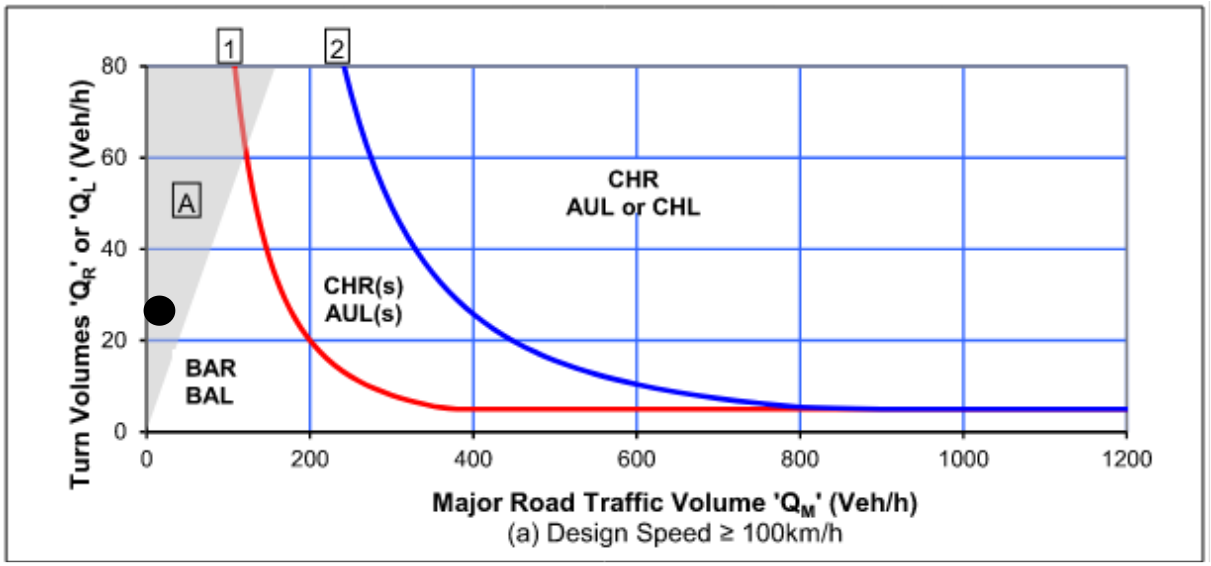


Figure 6-98: Turn Warrants Assessment – Gate 12A (Q_L)

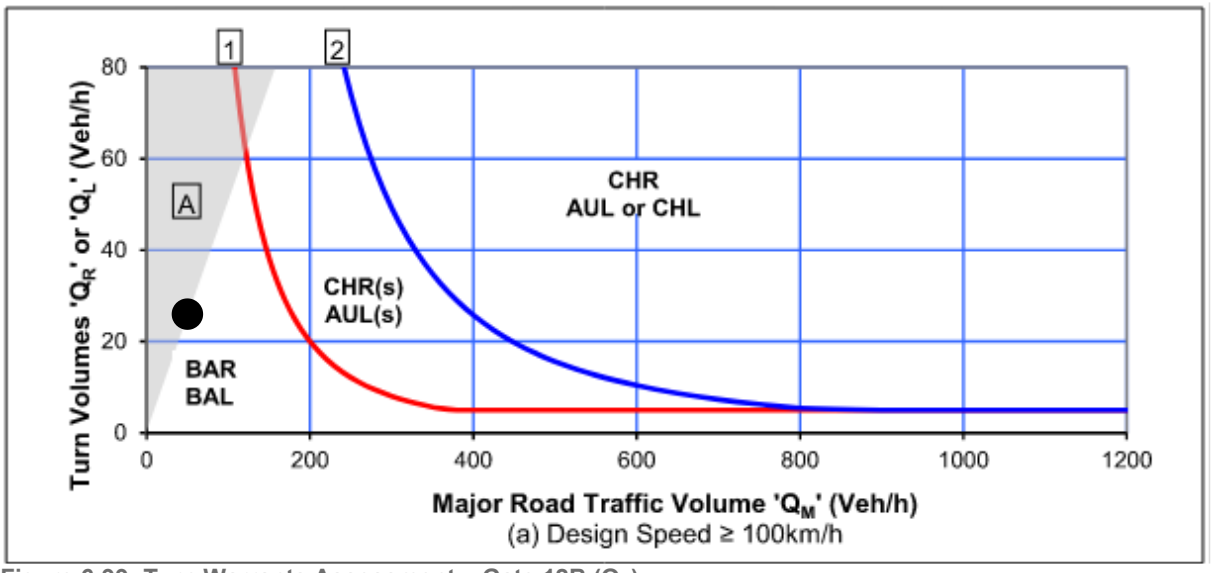


Figure 6-99: Turn Warrants Assessment – Gate 12B (Q_R)

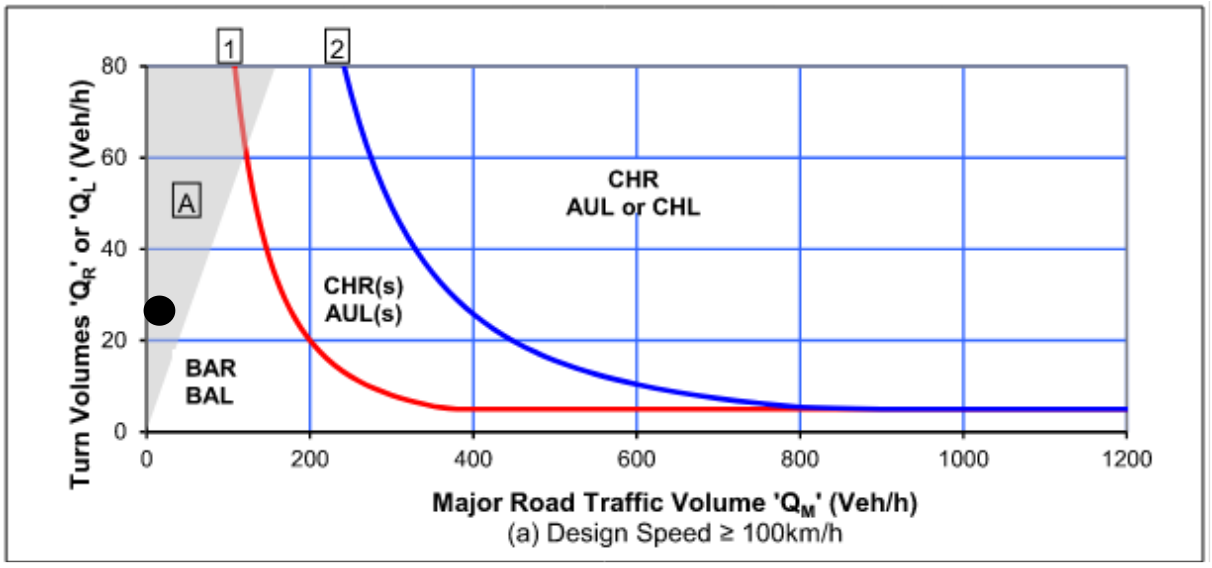


Figure 6-100: Turn Warrants Assessment – Gate 12B (Q_L)

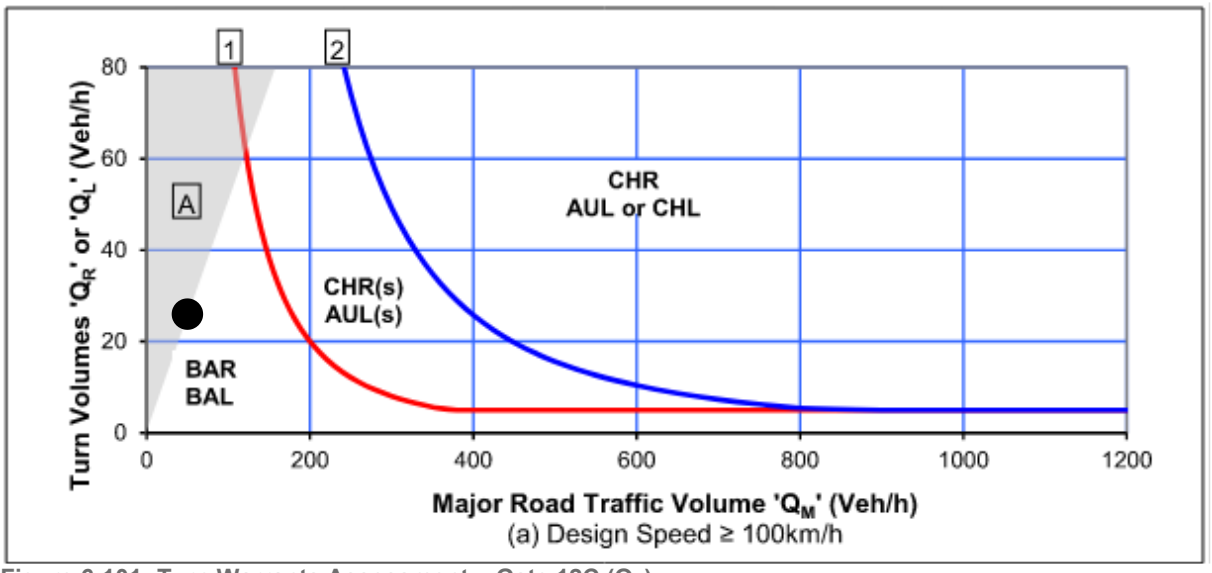


Figure 6-101: Turn Warrants Assessment – Gate 12C (Q_R)

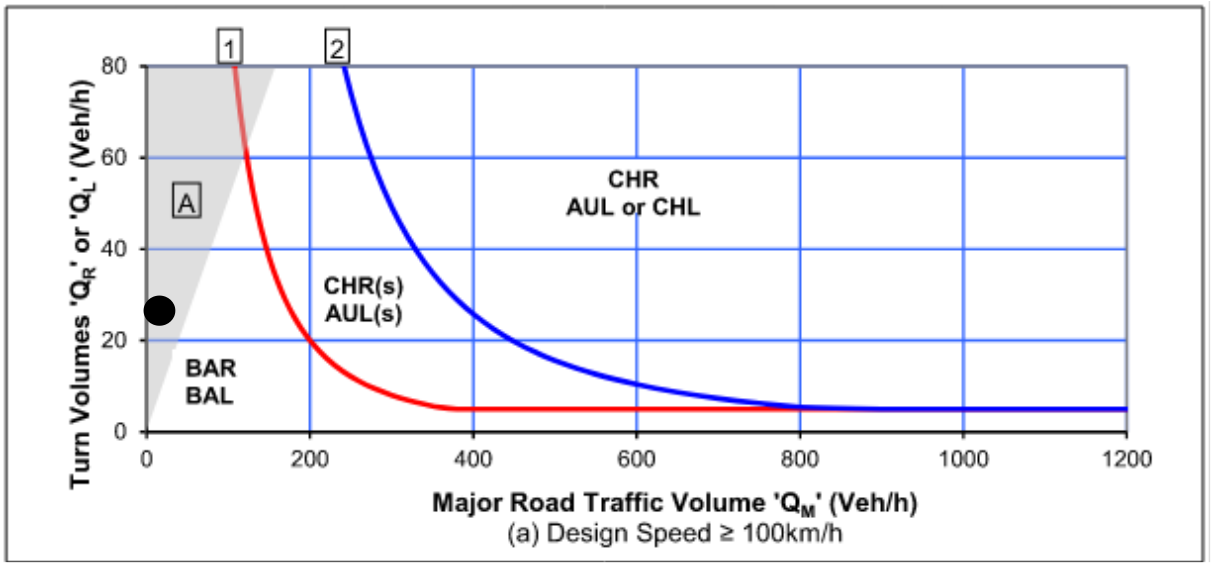


Figure 6-102: Turn Warrants Assessment – Gate 12C (Q_L)

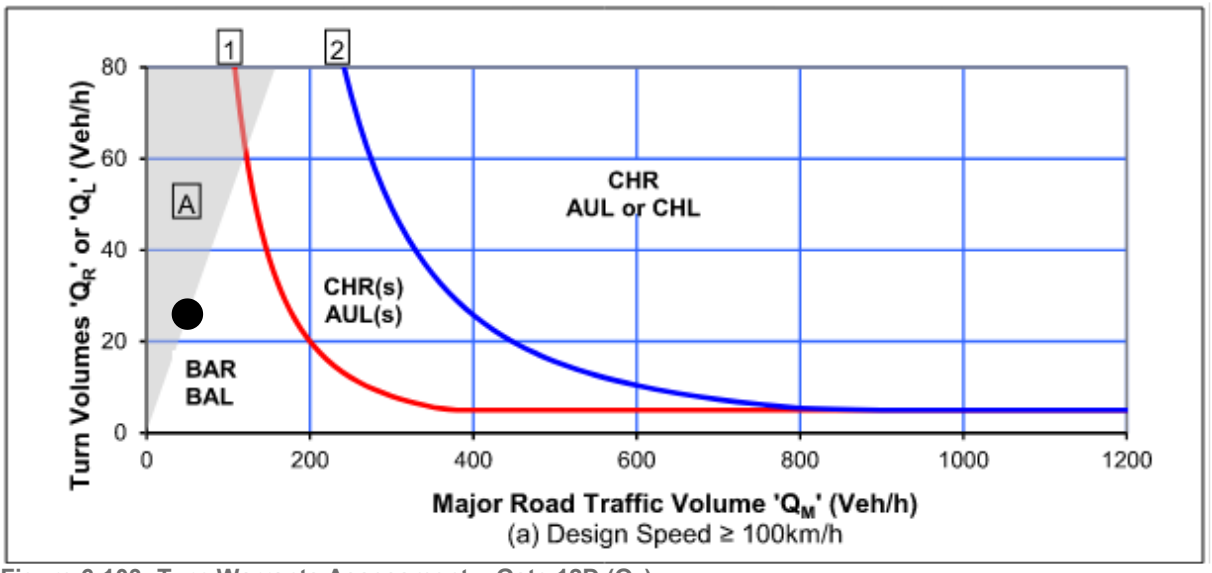


Figure 6-103: Turn Warrants Assessment – Gate 12D (Q_R)

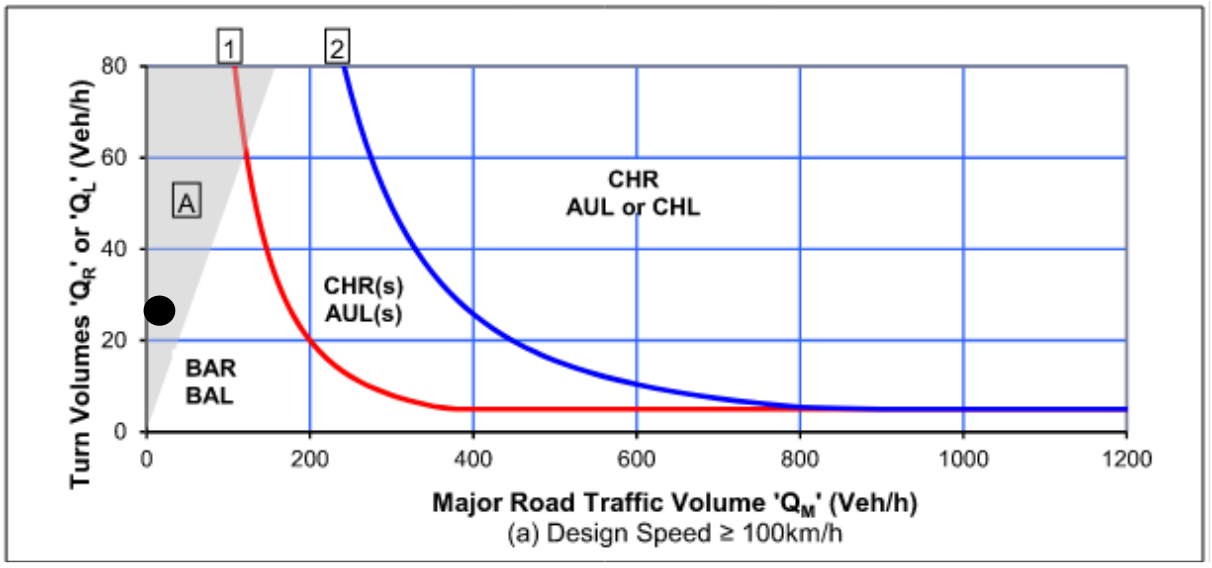


Figure 6-104: Turn Warrants Assessment – Gate 12D (Q_L)

A summary of the above assessments is provided below.

Table 6-79: Turn Warrants Assessment Summary – Gate 12

Gate	Turn treatments
Gate 12A	Basic left turn (BAL), Basic right turn (BAR)
Gate 12B	Basic left turn (BAL), Basic right turn (BAR)
Gate 12C	Basic left turn (BAL), Basic right turn (BAR)
Gate 12D	Basic left turn (BAL), Basic right turn (BAR)

As detailed above, the assessment indicates that basic turn treatments (BAL, BAR) are warranted on Grogan Road (major road) at Gate 12.

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,
- Turning volumes are high (i.e., 300 to 500 veh/hour)

- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)
- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the construction gate design development and the appropriate approval process (i.e., Section 138, WAD).

6.5.3.16 Gate 13 – West Street

Located on West Street, approximately 100m south of Wood Street, Gate 13 will provide access to construction section 6.



Figure 6-105: Gate 13 location

Details associated with the access are provided in the table below:

Table 6-80: Gate Details – Gate 13

Gate #	**Gate 13**
Location	West Street
AADT	Traffic data not available
Speed limit	50km/hr
Access duration	Eighteen (18) months
Construction ADT	Low
Construction peak hour volume	1 (per gate)
Construction vehicle type	Light vehicles, rigid truck (12.5m), truck and dog (19.0m)
Permitted movements	Right in, left out

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-81: Sight Distance Assessment – Gate 13

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 13	North	50km/hr	123m	No – see below	69m	Yes
	South			Sight distance is available to the end of the road		Sight distance is available to the end of the road

As detailed above, available sight distance to the north of Gate 13 does not meet the minimum safe intersection sight distance (SISD) requirements, however due to the horizontal curvature of Wood Street / West Street as it approaches Gate 13, it is reasonably expected that vehicles approaching the access will do so at speeds lower than that of the 50km/hr posted speed limit. On this basis, the existing 50km/hr speed limit approaching Gate 13 is considerate appropriate given the requirements of minimum gap sight distance (MGSD) are achieved.

Turn Treatments at Site Access

Traffic data for West Street is not currently available, and therefore an assessment based on traffic volumes has not been undertaken. However, considering the volume of traffic travelling along the adjacent road network (i.e., Hibernia Street, Grogan Road) and given the low volume of construction traffic expected to utilise the accesses, it is reasonable to assume that the requirements for turn treatments at the access will lie beneath Curve 1 (red) – see below.

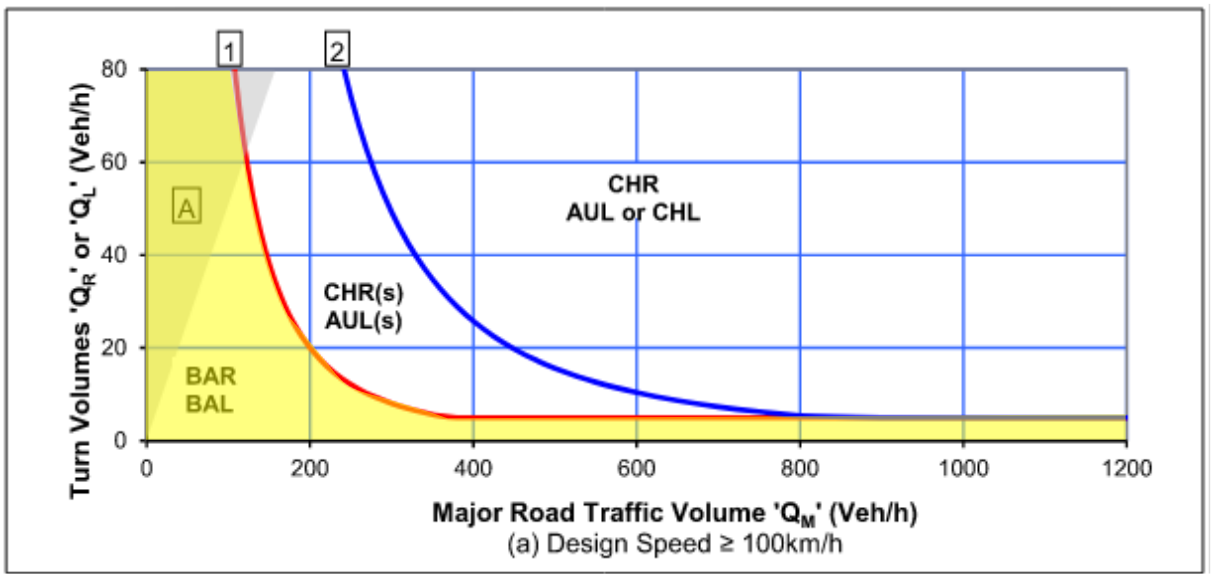


Figure 6-106: Turn Warrants Assessment – Gate 13

A summary of the above assessments is provided below.

Table 6-82: Turn Warrants Assessment Summary – Gate 13

Gate	Turn treatments
Gate 13	Basic right turn (BAR)

As detailed above, the assessment indicates that basic turn treatments (BAR) are warranted on West Street (major road) at Gate 13.

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,

- Turning volumes are high (i.e., 300 to 500 veh/hour)
- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)
- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the construction gate design development and the appropriate approval process (i.e., Section 138, WAD).

6.5.3.17 Gate 14 – Dudauman Street

Located on Dudauman Street, approximately 80m south of Hibernia Street, Gate 14 will provide access to construction section 6 and the Stockinbingal Yard.



Figure 6-107: Gate 14 location

Details associated with the access are provided in the table below:

Table 6-83: Gate Details – Gate 14

Gate #	Gate 14
Location	Dudauman Road
AADT	83 (2018)
Speed limit	50km/hr
Access duration	Eighteen (18) months
Construction ADT	Low
Construction peak hour volume	1 (per gate)
Construction vehicle type	Light vehicles, rigid truck (12.5m), truck and dog (19.0m)
Permitted movements	Left and right in, left and right out

Sight Distance Assessment

A sight distance assessment against the requirements stipulated within Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* has been undertaken using aerial imagery (where available) to ensure construction vehicles can safely manoeuvre into and out of the access. This assessment is summarised below.

Table 6-84: Sight Distance Assessment – Gate 14

Gate	Direction	Speed Limit	SISD		MGSD	
			Requirement	Achieved	Requirement	Achieved
Gate 14	North	50km/hr	123m	Sight distance is available to the Hibernia Street / Dudauman Road intersection - see below	69m	Yes
	South			Yes		Yes

As detailed above, available sight distance to the north of Gate 14 is available to the Hibernia Street / Dudauman Road intersection, however the proximity of the access to the intersection does not allow for the minimum safe intersection sight distance (SISD) requirement to be achieved. That said, it is reasonably expected that vehicles approaching the access will do so at speeds lower than that of the 50km/hr posted speed limit when manoeuvring through the intersection. On this basis, the existing 50km/hr speed limit approaching Gate 14 is considerate appropriate given the requirements of minimum gap sight distance (MGSD) are achieved.

Turn Treatments at Site Access

To undertake this assessment, background traffic volumes for Dudauman Road were obtained from traffic surveys undertaken by *Austraffic* on Tuesday 28th August 2018. Noting that data collection was undertaken 2018, to account for any population growth and subsequent increase in utilisation of the road network, a compounding annual growth rate of 0.5 percent per year has been used to determine future year background traffic volumes. The use of this growth rate is consistent with that adopted within *Technical Paper 3 – Traffic, Transport and Impact Assessment,* and is considered to provide a conservative assessment given the growth rate is above recorded population growth rates. Future year background traffic volumes at year 2025 and 2027 are presented below.

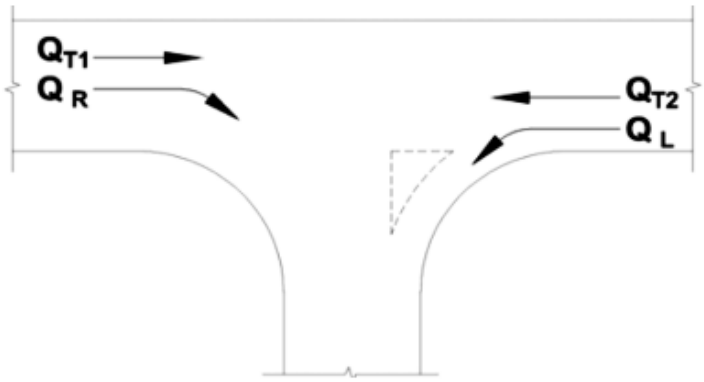
Table 6-85: Traffic Volumes – Dudauman Road

Road	Background AADT*	Year	Peak Hour Volumes		Growth Rate	2025 Design Year Volume			2027 Design Year Volume		
			AM Peak	PM Peak		AADT	AM Peak	PM Peak	AADT	AM Peak	PM Peak
Dudauman Road	83	2018	11	12	0.5%	86	12	13	87	12	13

* Weekday average

** Peak recorded volumes

In order to undertake the assessment, the major road traffic volume (Q_M) first needs to be calculated. On two-lane, two-way roads (without a splitter island), the value of the major road traffic volume parameter (Q_M) for a right turn is the total through traffic flow in both directions (Q_{T1} and Q_{T2}), plus the volume of left turning traffic (Q_L). For a left turn, the Q_M is equal to total of traffic flow in the direction of the left turn (Q_{T2}).



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 50% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 33% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 33% x Q_{T2}

Figure 6-108: Extract from AGTM Part 6 – Figure 3.26

With reference to the above, the volumes adopted for this assessment are detailed below, noting that, 2027 design year volumes have been adopted for the purpose of this assessment to ensure that the design of the site accesses remain suitable throughout construction. Note- volume have hourly data.

Table 6-86: Turn Warrants Parameters – Gate 14

Gate	Right turn		Left turn	
	Q_M	Q_R	Q_M	Q_L
Gate 14	15	1	7	1

1. A 50/50 split of traffic volumes has been assumed for traffic travelling along the road frontage

2. A 50/50 split of construction traffic volumes has been assumed for traffic turning into the access

Adopting these volumes, the warrants assessment is shown below for Gate 14.

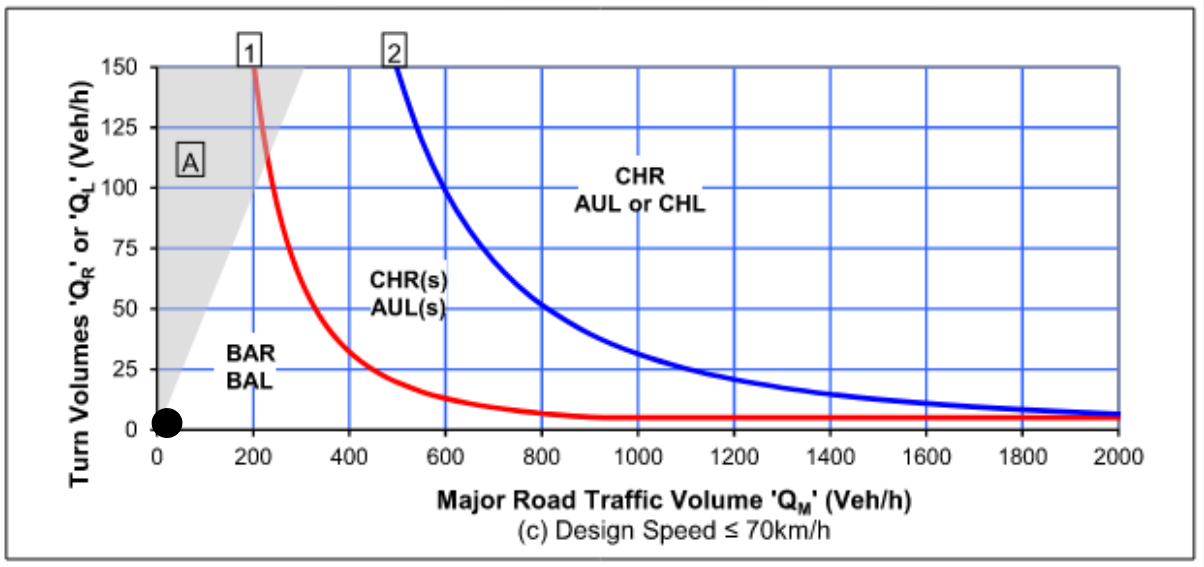


Figure 6-109: Turn Warrants Assessment – Gate 14 (Q_R)

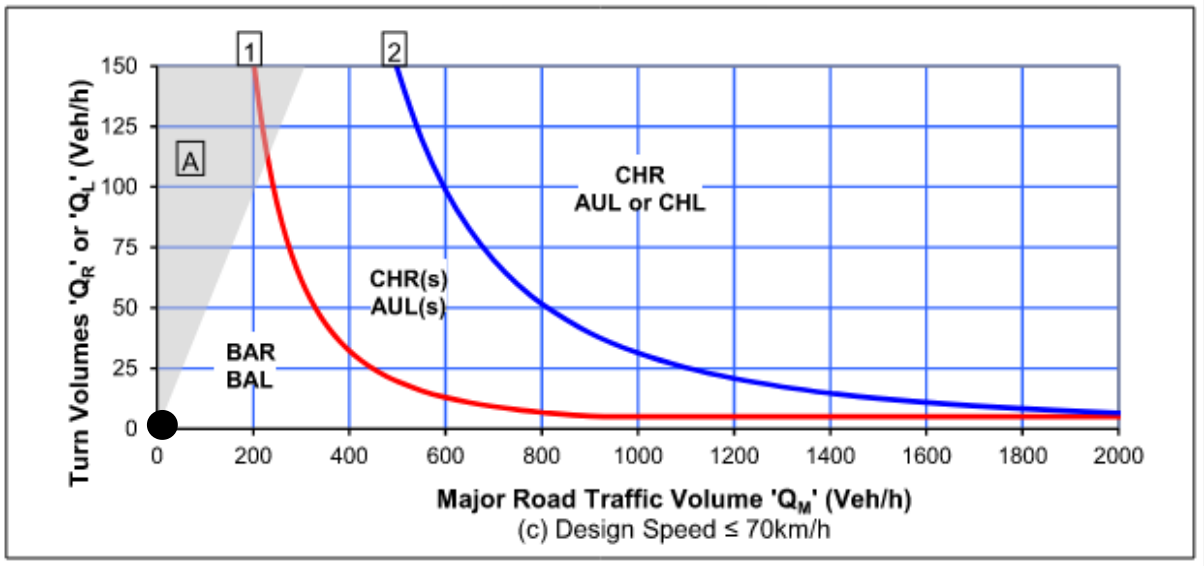


Figure 6-110: Turn Warrants Assessment – Gate 14 (Q_L)

A summary of the above assessments is provided below.

Table 6-87: Turn Warrants Assessment Summary – Gate 14

Gate	Turn treatments
Gate 14	Basic left turn, Basic right turn (BAR)

As detailed above, the assessment indicates that basic turn treatments (BAL, BAR) are warranted on Dudauman Road (major road) at Gate 14.

For egressing vehicles, there are no simple warrants for the provision of acceleration lanes. That said, Austroads *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management* provides guidance where they may be provided, including where:

- Insufficient gaps exist for vehicles to enter a traffic stream,
- Turning volumes are high (i.e., 300 to 500 veh/hour)
- The observation angle falls below the requirements of the minimum gap sight distance model (for example, inside of horizontal curves)
- Heavy vehicles pulling into the traffic stream would cause excessive slowing of major road vehicles.

Further consideration of provisions at site accesses will be documented as part of the construction gate design development and the appropriate approval process (i.e., Section 138).

6.5.3.18 Site Access Points - J2I1, J2I2, J2I5, J2I Compound Access, I2S1 and I2S2

Existing ARTC access/egress points are in place to provide maintenance points for workers utilising the existing RMAR and do not require construction treatment measures.

J2I1, J2I2, J2I5, J2I Compound Access are approved for the A2I Project and the I2S Project will access under these existing approvals. The works been performed are to integrate the two Projects into each other. I2S1 and I2S2 are access points that are not included in the A2I Project Approvals.

The process for managing access/egress for the I2S Project to utilise these existing locations will include:

- Approval from the road authority via an I2S ROL/SZA (TfNSW or JSC/CGRC Council) for each relevant location.
- Approved Traffic Guidance Scheme (TGS) where applicable.
- Reduced speed arrangement (where applicable).
- Implementation of traffic Control (where applicable).
- Compliance with this approach will be managed under the TCAWS Section 5.2, Table 5-2 site access options.
- Each location will have a Vehicle Movement Plan (VMP) that will be approved and distributed prior to use of the relevant access/egress point.
- Approval to the below access location/s will be strictly subject to the I2S Traffic Manager's approval.
- Access points will not have gate signage installed to reinforce the controlled access nature of them.
- Coordination will be undertaken with the A2I Project as per Section 9.2 to ensure compliance with access conditions.

Compliance with this approach will be managed under the TCAWS Section 5.2, Table 5-2 site access options. Activities include

- Cable Pulling.
- Footings and signal installation.
- Termination and testing.
- CSR Works.

These short-term discrete activities will be minimal durations however and will occur on an ad-hoc basis until the final commissioning. Vehicle movements are expected to be several per day when required and will primarily be light vehicles.

For J2I1, J2I2, J2I5, J2I Compound Access points please refer to – *Martinus/Inland Rail-PRECINCT TRAFFIC MANAGEMENT SUB PLAN - STAGE B - JUNEE LGA GENERAL- CONTRACT NUMBER: 0052 PROJECT DOCUMENT NUMBER: 5-0052-210-PMA-J0-PL-0002_0.*

Table 6-88: A2I Site Access Point Approval Summary

SAP #	Vehicle Type	Permitted Movements	Vehicle Movement per Shift (one way)	Vehicle Movement peak per hour
J2I1 LV	Light Vehicle	Left in, left out	4	2
J2I1 HV	Up to19m Semi Trailer	Left in, left out	4	2
J2I2 LV	Light Vehicle	Left in, left out	10	2
J2I2 HV	Up to 19m Semi Trailer	Left in, left out	10	2
J2I5 LV	Light Vehicle	All Movements	4	2
J2I5 HV	Only Permitted under Traffic Control and ROL.			
J2I Compound LV	Light Vehicle	Left in, right out	40	15
J2I Compound HV	19m Truck and Dog	Left in, right out	20	10

Table 6-89: Gate Details I2S1 and I2S2

Gate #	I2S1 and I2S2
Location	Olympic Highway
AADT	1718
Speed limit	60km/hr (I2S2) 100km/hr (I2S1).
Access duration	18 months
Construction ADT	Low less than 10 movements per day at peak.
Construction peak hour volume	2 (per gate)
Construction vehicle type	Light vehicles, rigid truck (12.5m)
Permitted movements	Left in, left out. Movements only permitted with ROL, speed reductions and Traffic Management as required in accordance with TCAWS.

The location of I2S1 and I2S2 and the J2I access points are provided in Figure 6-24 and Figure 6-25.



Figure 6-24 Site Access Point J2I1, J2I2, I2S1 and I2S2 locations



Figure 6-25 Site Access Point J2I5 and J2I site compound access locations

6.5.4 Swept Path Analysis

To ensure the suitability of construction site accesses, a swept path analysis will be undertaken to demonstrate the ability for the construction vehicles to manoeuvre into and out of nominated site access points.

A preliminary analysis is provided in Appendix

E for all access gates. Further analysis will be undertaken and documented as part of the construction gate design development and the appropriate approval process (i.e., Section 138). Additionally, Appendix E shows Swept paths specifically for Gate 1 and associated movements onto Olympic Highway. No swept paths have been provided for I2S1 and I2S2 as they will be manager under ROL, traffic control and associated TCAWS, as detailed in Table 6-89.

6.6 Ancillary Facilities

Temporary construction site compounds and ancillary facilities will be required to support construction of the Project. These facilities will accommodate most of the management, engineering, specialist, and administrative personnel. These facilities are enclosed areas that are not open to the public and are used to support construction works in nearby areas.

Access to ancillary facilities will be managed in accordance with CoA C7, C8 and C21 b). Temporary compounds and ancillary facilities are generally located with immediate access to the local road network to minimise the need for dedicated access tracks on privately-owned roads. Temporary compounds and ancillary facilities are identified in the CEMP.

In the case where ancillary facilities cannot be accessed by existing public roads and/or the existing rail corridor, approval will be sought from the adjacent landowner prior to using any private access tracks on private property. The road surface will be to the standard necessary as agreed with landowners, asset owner(s) and/or the relevant roads authority in accordance with CoA C7 and C8. Site compound access to ancillary facilities will be managed to minimise noise and amenity impacts of heavy vehicles entering and exiting construction compounds, and ancillary sites, and driving through populated areas, including school zones at speed limited times.

Further consideration of provisions at ancillary facility site accesses will be documented as part of the construction gate design development and the appropriate approval processes outlined in Section 8.

6.7 Worker Travel and Parking Strategy

6.7.1 Workforce Accommodation Camp

In order to reduce impacts on the road network of the arrival and departure of the workforce to the accommodation camp the following controls may be utilised to minimise peak congestion.

- Traffic management arrangements:
  - 4 x 12-seater minibuses will be used daily to transport workers between the camp and the construction site. The remaining personnel are assumed to travel using light vehicles, such as 4WDs or similar, with an average occupancy of four persons per vehicle.
  - Varying pre-start locations so those who are local or not staying at the camp can go straight to the pre-start location on site.
  - The minibuses will be used for pick and drop off at morning and afternoon when going and coming from site is not expected to occur concurrently as roster changes when the coach will go to major centres. This will be subject to the phase of the Project. The working crews will be assessed and number of minibuses will be increased or decreased.
  - John Holland will provide the minibuses described as above for transporting workers to/ from the TWAF after completion of the final rostered day to catch public transport home to their normal place of residence. Buses will provide pick up/ drop off services for staff in Cootamundra (to catch the train or coach) for staff returning to Sydney, Melbourne or elsewhere.

To improve road safety either side of the accommodation camp on Grogan Rd will be speed reduced to 60/km/h. Speed limit signage associated with the level crossing on Grogan Rd will be temporarily extended south to incorporate both access points during the establishment and operation. The speed will be clearly signposted at the accommodation camp access points and on Grogan Road.

The design of the two-way access points to the accommodation camp will be undertaken with regard to relevant standards and guidelines, and in consultation with the Cootamundra -Gundagai Regional Council.

Route analysis, including an assessment of clearance heights, bridge weight limits and swept path analysis would be undertaken for Oversize Overmass (OSOM) load-carrying vehicles used in the establishment of the accommodation camp. Refer to Section 4.2.1.

6.7.2 Workforce Traffic Routes and Parking

As per the Mobilisation Management Plan 5-0019-220-PMA-00-PL-0023, the workforce accommodation will be located north of Stockinbingal off Grogan Road, as such most workforce traffic routes will be to and from this location daily. Given the location of the accommodation, Grogan Road would be a main route for workforce traffic. To minimise the traffic impact, many of the workers will be moved by shuttle buses. Additional local workforce will be commuting from the surrounding areas utilising public roads. Estimated number of light vehicles at peak construction is 250> per day.

Workforce parking will be planned in such a way to not adversely impact the existing available parking. Refer to the Mobilisation Management Plan 5-0019-220-PMA-00-PL-0023 for details regarding parking. Site parking will be developed in conjunction with a vehicle management plan (VMP).

7 Traffic Management Devices

7.1 Pavement Markings and Signs

During the works, John Holland will utilise temporary road works signage as part of implementing the traffic guidance schemes. All temporary signs will be checked prior to installation to ensure that they are suitable for use (i.e., not broken, overnight signs are reflective, etc.). All signs will be installed as per the approved traffic guidance scheme and positioned so that they are visible, without obstructing any lines of sight. Furthermore, any pre-existing signs that conflict with the temporary signs or are no longer relevant will be covered or removed. The erection of temporary road works signage will be undertaken in the following sequence:

- Advanced warning and regulatory signs including any temporary speed zone signs.
- All intermediate warning and regulatory signs and devices required in advance of the taper or start of the work area.
- All delineating devices required to form the taper including illuminated flashing arrow sign where required.
- Delineation of the work area or side track.
- Other required warning and regulatory signs including termination and end of temporary speed zone signs.

In addition to temporary road works signage for implementing traffic guidance schemes, John Holland will ensure that existing information and direction signage is maintained. Where signage is required to be removed to permit works, it will either be re-erected in an alternative location, or replaced with an alternative sign (i.e., VMS board). Details of any adjustments to existing signs (including layout, sizing, location, etc.) will be included in the relevant TGS for approval by TfNSW or relevant LGA, prior to implementation.

Where temporary speed limits are to be implemented, John Holland will ensure that:

- The need for the speed limit is in accordance with the approved Traffic Guidance Scheme.
- That the length of zone is the minimum required.
- Where the speed zone is for workers safety that workers are present.
- If the speed zone is required for road user safety, that the reason is either self-evident or communicated through other signage.

For signage that forms part of the long-term traffic guidance scheme, the sign will be installed in a permanent manner (i.e., mounted on posts either sunk into the ground or fixed). For signage that forms part of a short-term traffic guidance scheme, the signs will be installed on temporary supports (legs) and weighted as required to ensure they are not blown over.

7.2 Variable Message Signs (VMS)

John Holland will provide mobile variable message signs as part of the Project's traffic management on approach to the Project works. Typically, VMS will be installed two (2) weeks prior to any major traffic change. VMS locations will be detailed on a TGS, prepared by a suitably qualified person.

VMS shall be located:

- Where there is a kerb, the VMS should be positioned behind it.
- Where practical, located behind a suitable barrier and outside of the barrier's deflection zone
- Located where it does not interfere with pedestrians or cyclists.
- Located where it does not impact upon sight distance.

The implementation of VMS will comply with the following requirements:

- RMS Intelligent Transport System, Traffic Systems, Specification No. TSI-SP-008 Variable Message Signs; and
- *Austroads Guide to Traffic Management Part 10: Transport Control – Types of Devices*.

- All proposed VMS messages are to be pre-approved by the relevant road authority and TfNSW for classified roads prior to implementation.

7.3 Road Safety Barrier Systems and Devices

Unless approved by the relevant road authority, the road safety barrier system and devices will be selected and designed in accordance with *Austroads Guide to Road Design Part 6*, and TfNSW supplements, including *TfNSW TS 00028:3.0 Accepted Road Safety Barrier Systems and Devices*.

8 Permits and Approvals

8.1 Road Authority Approvals

John Holland will obtain all relevant Approvals from the applicable State and Local Government Road Authorities prior to commencing construction and haulage operations.

As part of the planning process to conduct works John Holland will assess the impacts around the proposed works and extent of impact on the rural road network.

This will include the submission of TGS' to Council and/or TfNSW as the responsible road authority for approval.

Where there are any road opening activities a working within road reserve permit will be applied for through Council and/or TfNSW as the responsible road authority.

As part of the approval process, each John Holland submission may include:

- A completed permit application form
- Brief details of the works to be undertaken
- Any relevant design drawings of the works
- Program of the works
- Copies of TGS
- If applicable, details of speed zone amendments sought.
- Contact details of a site representative
- Traffic modelling (if required).

The submission process for Councils will utilise the relevant Councils process to submit via their contact email or as agreed.

The submission process for TfNSW will utilise the OPLINC Online System available via:

- https://myrta.com/oplinc2/pages/security/oplincLogin.jsf

8.2 Road Occupancy Licences (ROLs)

Where an ROL if required, a ROL under section 138 of the Roads Act 1993 will be sought by John Holland for the relevant Road Authority either TfNSW or council. This will allow John Holland to occupy a portion of the road network for an approved period.

8.3 Speed Zone Authorisation (SZA)

The I2S Project will require a combination of both short term and long-term temporary road work speed zones to facilitate safety for road users and construction personnel. John Holland will apply for an SZA from the relevant road authority to enable the temporary work speed zones via platforms, including OPLINC and LGA's platform.

9 Communications

9.1 Communications to Public

The Traffic Manager will coordinate with Community and Stakeholder Engagement Team to ensure the planned impacts are communicated in an appropriate timeframe to the public. This would include regular meetings to provide information on upcoming traffic planning and details of any impacts to the road network.

Depending on the impact and notification requirements, the Community and Stakeholder Engagement team will determine the appropriate notification format. This may include:

- Distribution of a construction notification to properties directly affected by works via door knock / letterbox drop,
- Direct liaison with key stakeholders (e.g. Schools, Emergency Services),
- Construction notification emailed to subscribed stakeholders; and
- Installation of VMS on roads as required

For additional information refer to I2S Community Communication Strategy 4-0000-220-PCS-00-ST-0001_3. The CCS is publicly available at: https://inlandrail.com.au/wp-content/uploads/2024/10/i2s-community-communication-strategy-4.pdf.

9.2 Coordination with other Projects

The cumulative impacts have been an important consideration given the potential overlap of construction with other Projects in the vicinity of the proposal—specifically, the other adjoining Inland Rail Projects - Stockinbingal to Parkes (S2P) to the north and Albury to Illabo (A2I) to the south.

For S2P and other small Projects, except for the increased vehicles and traffic in the regional area during construction, no other significant cumulative impacts to haul roads utilised by the proposal are identified. A2I, on the other hand, will requires constant / regular interface due to more overlapping work interface.

The I2S Project has already commenced weekly meeting with Martinus Rail who are delivering the IRPL A2I Project. Part of further coordination, the A2I Project is currently receiving I2S' weekly TfNSW ROL Forecast and will continue to for the duration of construction activities. IRPL A2I representatives will also be invited the IRPL I2S Traffic Management Risk Workshop. Whilst coordinating the usage of shared Access Points (Site Access Points between Junee and Illabo) the respective traffic managers from the Projects will meet weekly to ensure compliance with approvals are maintained.

Coordination and consultation would occur with the proponents of any current construction interface works with potential for cumulative impacts at the appropriate Project stages.

- provision of regular updates on construction planning for the proposal
- identification of key potential conflict points with other construction Projects
- Developing mitigation strategies to manage conflicts

Depending on the nature of the conflict, this could involve coordination of traffic management arrangements between Projects, where reasonable and feasible. The cumulative impacts are also included in the monitoring program to keep track of the performance.

9.3 Traffic Management Risk Workshop

Before any work begins that impacts traffic, a risk assessment workshop will be conducted to identify potential hazards and develop appropriate traffic management plans.

Participants include traffic manager, TfNSW, emergency services, Local Police, LGAs, affected bus companies, utility owners, local schools, and representatives from other Projects with potential interface.

9.4 Coordination with Utility Providers

A detailed search is being conducted to identify third-party utilities along the alignment. Clash assessments conducted during design development will prioritize minimal impact on assets. For any identified treatment required for the utility assets, JHG will have early engagement with utility providers and authorities to ensure that proposed treatments are acceptable and meet requirements.

For the assets remain in place, space-proofing and authority liaison will also start early to meet operational requirements, including providing access to necessary maintain works.

Regular meetings (i.e. TTLG meetings) and other discussion sessions will also be held to address any potential work conflicts and other access/ work accommodation requirements.

9.5 Coordination with Affected Landowners

In accordance with CoA E94 and E95, all potential impacts on the operations or access to properties will be consulted with landowners prior to minimise the adverse impacts. Individual Property Management Plans have been prepared to address detailed requirements regarding this matter.

10 Incident Management and Response

10.1 Incident Response

In the event of a complaint, non-compliance or incident, an investigation will be undertaken to determine the cause of the problem led by the Traffic/Safety & Environmental Manager. Any incidents that directly or indirectly impact traffic, transport or access will be managed in accordance with the John Holland Incidents and Emergencies processes and procedures detailed in Section 8 of the CEMP. Management of any incidental impacts will be undertaken in consultation with a Certified Professional in Erosion and Sediment Control (CPESC) or other expert matters as required. Any incidents will be reported in accordance with Section 8 of the CEMP.

Non-conformance and corrective action will be managed in accordance with Section 9 of the CEMP.

This process will be detailed further at the I2S Traffic Management Risk Workshop as per site specific G10.

The broader EMP incident response process is discussed further in Section 8 of John Holland's CEMP.

11 Monitoring, Inspections and Audits

11.1 Monitoring Program

This monitoring program has been prepared in accordance with CoA C27 and C28, in consultation with Junee Shire Council, Cootamundra-Gundagai Regional Council and TfNSW to keep track of the actual performance of the construction.

11.1.1 Baseline Data

Baseline traffic data was collected as part of the preparation of the EAD, a summary of background data is summarised in section 5.1 and is detailed in:

- Chapter 11 of the EIS (Traffic, transport and access), Section 11.3 – existing environment
- Technical Paper 3 of the EIS – (Traffic, Transport and Access Impact Assessment), Section 4 – existing environment

Note: Background traffic data was obtained from the following sources:

- Traffic Volume Viewer (*TfNSW, 2021*)
- Traffic surveys provided by Junee Shire Council completed between 2006 to 2016
- Project specific traffic surveys undertaken in August 2018 and February 2019

Road condition will be based on the dilapidation surveys conducted prior to the use of local roads.

11.1.2 Surveillance

To monitor the effects of the construction activity on affected roads and the surrounding network John Holland will utilise field staff and traffic control Subcontractors. Their objective will be to detect and report any unsafe traffic conditions, incidents, and unusual congestion.

Any findings from planned road surveillance will be forwarded to the designated road authority for transparency, action and or further monitoring by I2S

The surveillance staff will be regularly briefed on all changes implemented in the surrounding road network and the seasonal variations expected in traffic flows. As per the communications protocol, these staff will immediately report issues to the Project Manager. Communication is an important part of traffic operations, for both planned and unplanned incidents. John Holland field resources will report all incidents or issues to the Project Manager immediately.

Please refer to Appendix C for working template of I2S Traffic management CMP & Traffic compliance Checklist.

11.1.3 Key Monitoring Items and Reporting

John Holland will undertake regular inspections to ensure the safety of all road users and the performance of the road network during the implementation of this CTTAMP. Findings will be recorded using the Forms listed below:

Table 11-1: Key Monitoring Items

Issues	Key Monitoring Parameters	Frequency of Monitoring	Location of Monitoring	Analysis Methods	Mitigation Measures
Road user safety at changes to the road network General impact on pedestrians and cyclists	Road safety	Road safety audits prior and post to any traffic changes	Affected road	Identify any potential hazards on road	Address all risks identified in the audit
		Daily Implementation Checklist	All TGS set-ups	Compare with TGS plans	Rectify any discrepancies identified
		Weekly Inspection Checklist	All long-term sites	Compare with relevant drawings	Rectify any discrepancies identified
General impacts on traffic flow	Traffic Volume Congestion	Weekly drive time assessment	Key intersection with potential queuing issues	Compare with current LOS.	Adjust traffic management measures as required
General impacts on property access	Accessibility	Weekly drive through	Interface with property access	Identify if any property access is affected	Retain access as soon as possible
Heavy vehicles damaging local roads	Pavement and road condition	• Quarterly or more frequently dash cam drive through videos based on level of impact • Monthly joint inspection with IRPL, John Holland, LGA as per MIRDA agreement	Affected road	Compare with baseline dilap report	Refer to Section 5.2.
Impacts to emergency services through delays in access	Emergency Services Access	Daily Implementation Checklist	All TGS set-ups with emergency access point	Identify any affected emergency access	Ensure all emergency access can be accommodated when needed
Impacts to bus routes and services due to increased road use and diversions due to road realignment	Bus Services	Monthly VMP audit	All construction works facilitated by long term VMP's for the Project	Compare with long term VMPs	Consult with relevant operator to discuss mitigation measures if needed.
Compliance with reduced speed	Speed Compliance	Daily RASS boards data	Reduced speed zone with higher safety risks	Compare with posted speed	Install additional signage/ VMS to increase road users' awareness if required.
Cumulative impacts with other Projects	Cumulative impact	Weekly review of ROL forecast sheet	Overlapping Project footprint	Identify any potential conflicts	Coordinate with A2I to avoid clash of work

Issues	Key Monitoring Parameters	Frequency of Monitoring	Location of Monitoring	Analysis Methods	Mitigation Measures
Major road upgrades	Traffic Volume Congestion & Road Safety	Weekly drive time assessment Road safety audits prior and post to any traffic changes	Key intersection with potential queuing issues Affected road	Compare with current LOS Identify any potential hazards on road	Adjust traffic management measures and site surveillance as required. Address all risks identified in the audit.
Road Detours	Road Safety	Road safety audits prior and post to detours	Affected road	Identify any potential hazards on road	Adjust traffic management measures and site surveillance as required.

With respect to dilapidation reports, John Holland will maintain a maintenance log to record damage such as potholes and when they have been repaired. This will be an internal John Holland document. All records for the monitoring will be submitted to TfNSW, LGAs, and relevant stakeholders on a monthly basis.

The information listed will be part of the construction monitoring program and submitted to ER for endorsement and to Planning Secretary for approval at least one month prior to the commencement of construction. And the approved CMP will be in place implemented for the duration of construction and for any longer period set out in the monitoring program or specified by the Planning Secretary. Details associated with incident reporting and notifications are captured in Section 9 of the CEMP.

11.2 Auditing

The I2S Quality Management Plan 5-0019-220-PMA-00-PL-0004 details the processes for assuring quality on the Project through the planning, implementation, monitoring and continual improvement of all functional activities undertaken by John Holland.

Internal and external audits will be undertaken in accordance with Section 9.4 of the CEMP. An internal audit program and internal audit schedule have been established and is coordinated through the Quality Team. The audit schedule will be maintained throughout the Project duration for all management plans.

Independent auditing will be conducted by Independent Auditors on those management plans that are subject to additional auditing requirements in accordance with CoAs A28-A33. The management plan Sponsor will arrange independent auditing as required, with the assistance of the Quality Team if needed.

This management plan will remain relevant for the duration of the Project and will be reviewed and updated as events and continuous improvements dictate.

12 Reporting

Reporting will include monthly internal Project reports and six-monthly compliance reports as required by the conditions of approval. The six-monthly reports will track compliance against the conditions and the revised environmental management measures and will be reported in accordance with, the relevant Compliance Reporting requirements (DPE 2018) as per, Schedule 4, Conditions 7 and 8.

Reporting requirements and responsibilities are summarised below:

- 6-monthly Construction Environmental Monitoring Report to ER. The report will be made publicly available in accordance with Condition C36
- Annual Compliance Report to IRPL, ER, Commonwealth and DCCEEW
- The broader reporting process under EPL - discussed further in Section 9 of John holland's CEMP.
- Compliance and other environment reporting as per Section 9 of John Holland's CEMP.
- Traffic related reporting, including:
    - Level Crossing Treatment Reports submitted (public & private) submitted to and approved by the Planning Secretary at least one (1) month prior to the establishment or closure of level crossing
    - Road Safety Audits Reports submitted to relevant road authorities within 5 working days from the audit is conducted
    - Road Dilapidation Reports submitted to relevant road authorities within one month of completion of the road dilapidation survey and at least two weeks before the road is used by heavy vehicles associated with construction (as per Condition E101).
    - Incident Summary Report submitted to relevant road authorities if a road incident occurs within the boundaries of an approved TGS.
    - All reports listed in the monitoring program (Section 11.1.3)

The six-monthly compliance reports that are required in accordance with CoA C27 and C28 as part of the Monitoring Program will be available on the Inland Rail Project website (see Project link below).

Illabo to Stockinbingal: Planning Approval Documents - Inland Rail

13 Record Keeping

Appendix A of AS1742.3 requires all John Holland supervisory personnel engaged in the implementation of TGS, keep the following records:

- Daily, weekly and end of shift records.
- Incidents
- Dash Cam site drive-through uploaded to I2S SharePoint.

More details regarding Record keeping can be found in Section 9.6 of the CEMP.

14 Review and Improvement

Continuous improvement of this Plan will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement.

Issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed through SMART principles.

The continuous improvement process will be designed to further minimise impacts to road users, pedestrians and active transport users:

- Identify areas of opportunity for improvement of environmental management and performance.
- Identify environmental risks not already included in the risk register.
- Determine the cause or causes of non-conformances and deficiencies.
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies.
- Verify the effectiveness of the corrective and preventative actions.
- Document any changes in procedures resulting from process improvement.
- Make comparisons with objectives and targets.

John Holland will be responsible for ensuring that Project environmental risks are identified and included in the register of Environmental Aspects and Impacts (Appendix A2 of CEMP) and appropriate mitigation measures implemented throughout the construction of the Project, as part of the continuous improvement process. The register of Environmental Aspects and Impacts will be updated when a new risk has been identified. Associated control measures will be put in place to eliminate or minimise the level of risk. Monitoring and review of the effectiveness of control measures will be carried out during weekly environmental inspections and may include consultation with site personnel involved in managing the identified risks.

The process for continuous identification and analysis of new risks associated with traffic, transport and access that may arise during construction will be facilitated by:

- Construction traffic monitoring program.
- Regular inspections and observations by site personnel.
- Revision of this Plan and/or traffic, transport and access management measures as required in response to community complaints or requests from regulatory agencies, the ER or the Planning Secretary.
- Regular review of the plan every six (6) months or as otherwise required by the Project Management Requirements or requested by Inland Rail in accordance with the design and construct deed, and update when deemed necessary.
- Risk assessment workshop conducted prior to any work that impacts traffic (refer to Section 9.3)

This continuous risk analysis approach will ensure prompt identification of new risks and ensure efficient mitigation through implementation of appropriate management measures. More details regarding the review and improvement of the plan can be found in Section 9.7.2 of the CEMP.

Appendix A - Definitions and Abbreviations

Term/Abbreviation	Acronym	Definition
85th percentile		The speed at or below which 85% of vehicles are observed to travel under free-flowing conditions past a nominated point.
Average Annual Daily Traffic	AADT	Annual average daily traffic. The total volume of traffic passing a roadside observation point over the period of a calendar year, divided by the number of days in that year (365 or 366 days).
Austroads Guide to Temporary Traffic Management	AGTTM	
adjacent clearance area		The area immediately adjacent to the traffic lane, and typically between the traffic lane and the worksite that should be kept free from features that would be potentially hazardous to errant vehicles.
advance warning area		Area in advance of the worksite where advance warning traffic control devices are erected to warn and inform of changes to traffic conditions ahead and to give road users time to adjust their driving behaviour.
advance warning distance		Distance measured between successive signs in the advance warning area and the distance from the beginning of the taper or closure or work area to the first advance sign.
Albury to Illabo	A2I	IRPL project being delivered by Martinus Rail with a southern interface with the IRPL I2S Project being delivered by John Holland.
around the worksite		Methods of hazard elimination, when the entire work area (including all vehicles and plant) is located 6 m or more clear from the nearest edge of a traffic lane.
Australian Rail Track Corporation	ARTC	
arterial road		A road that predominantly carries through traffic from one region to another, forming principal avenues of travel for traffic movements. Sub-definitions as follows:
		Rural - A general term for the main road carrying mostly long-distance traffic, as distinct from local traffic.
		Urban - A general term for a main traffic route but specifically referring to certain streets so designated in a local authority's district scheme.
Australian Standard	AS	
Australian / New Zealand Standard	AS/NZS	
auxiliary lane		A portion of the roadway adjoining the through traffic lanes, used for speed change or for other purposes supplementary to through traffic movement.
B-double		A combination consisting of a prime mover towing two semitrailers, with the first semitrailer being attached directly to the prime mover by a fifth wheel coupling and the second semitrailer being mounted on the rear of the first semitrailer by a fifth wheel coupling on the first semitrailer.
B-triple		A prime mover towing three semitrailers. The first and second semitrailers are connected to the following semitrailer by a fifth wheel permanently located toward the rear of the semitrailer. Under the Heavy Vehicle National Law, a B-triple is categorised as a road train.

Term/Abbreviation	Acronym	Definition
barricade		Barricades comprise either barrier boards or stand-alone non-interconnected lightweight modules. They shall be used to inhibit access to a work area.
barrier board		Boards 150 mm to 200 mm in height and not more than 4 m in length. They are mounted on trestles or fixed posts at about 1 m above the pavement. The colour combination used for barrier boards shall be alternate diagonal stripes of black and retroreflective yellow, terminating in yellow at each end.
barrier line		A pair of longitudinal lines marked on the roadway to prohibit overtaking movement in one or both directions.
buffer zone		An advance warning area if speed on the approach to a temporary speed zone is more than 30 km/h higher than the temporary speed limit and needs to be reduced in stages.
built-up area		In relation to a length of road, means an area in which either of the following is present for a distance of at least 500 metres, for the whole of the road: buildings, not over 100 metres apart on land next to the road and/or streetlights not over 100 metres apart (see *urban road)* or, if the length of road is shorter than 500 metres.
Burley Griffin Way	BGW	
centreline		The line which defines the axis or alignment of the centre of a road or other work.
		In relation to any portion of a roadway not marked with a flush median –a dotted or solid line or lines of paint or raised studs (or any combination of those lines or studs) intended to separate opposing traffic.
		In relation to any portion of a roadway marked with a flush median –the longitudinal white line that forms the left side of the median as viewed by a driver facing forward.
		In relation to an unmarked roadway – the inferred line down the longitudinal centre of the roadway.
Construction Environmental Management Plan	CEMP	Document which is required to be produced by John Holland as part of the Conditions of Approval
chicane		The lateral movement of traffic from one or more lanes onto another alignment before a shift back toward the original road alignment but not necessarily into the original lane or lanes. Typically applied to reduce the speed of traffic.
closure		The physical area from which the road users are to be excluded. This includes but is not limited to shoulder closures, lane closures and road closures.
competent person		A person who has, through a combination of training, qualification, and experience, acquired knowledge and skills enabling that person to correctly perform a specified task.
containment fence		Physical barrier sufficient to provide separation between the travelled path, or paths used by cyclists and pedestrians, from the work area, but not as rigid as to become a hazard if struck by vehicles, or to act as a safety barrier.
contractor		A person, organisation, or company responsible for implementation of an activity on or affecting a road. Examples include but are not limited to construction and maintenance crews, utility companies, surveyors, filming crews and event management.

Term/Abbreviation	Acronym	Definition
contraflow		Traffic flow in a direction opposite to the normal flow, where two-way flow is always maintained.
Council		Refers to either Cootamundra-Gundagai Regional Council or Junee Shire Council depending upon the site-specific location.
Certified Professional in Erosion and Sediment Control (CPESC)	CPESC	
Critical State significant Infrastructure	CSSI	The critical State significant infrastructure, as generally described in CoA Schedule 1, the carrying out of which is approved under the terms of this approval.
detour		A temporary, alternative route to guide road users around a worksite operation, most commonly during temporary closure of a road or path.
divided road		A road with separate roadways for traffic travelling in opposite directions.
dividing line		A road marking formed by a line, or two parallel lines, whether broken or continuous, designed to indicate the parts of the road to be used by vehicles travelling in opposite directions.
Department of Planning, Industry and Environment.	DPIE	
Degree of Saturation	DOS	
dynamic deflection		The largest transverse deflection of a road safety barrier system during an actual crash or during a full-scale impact test (i.e. the amount the road safety barrier deflects from its initial position during impact).
Early Commencement Work	ECW	
Environmental Assessment Documentation	EAD	
Environmental Impact Statement	EIS	
emergency services		An entity that has a statutory responsibility to respond to an emergency and includes the following:
		• an ambulance service
		• a fire brigade, including a volunteer fire brigade
		• a police force or police service
		• a disaster or emergency organisation of the Commonwealth or a State or Territory.
gore		A triangular area where two roads either meet or split.
TfNSW Specification D&C	G10	A TfNSW model specification that contractors must adapt for specific projects.
hazard (roadside)		Any object or feature located between the edge of a traffic lane and the road reserve boundary, or within a median, that could cause significant personal injury

Term/Abbreviation	Acronym	Definition
		(including fatal injury) to road users when impacted by an errant vehicle.
Illabo to Stockinbingal	I2S	Project which forms a portion of the larger inland rail scheme
intersection		The place at which two or more roads meet or cross.
Inland Rail Pty Ltd	IRPL	Inland Rail Proprietary Limited
John Holland Group	JHG	John Holland Group
lane line		A line (usually painted), other than the centreline, that divides adjacent traffic lanes travelling in the same direction. This line may be raised delineating devices.
long term		The description which applies when a traffic guidance scheme is required to operate both day and night and may be left unattended.
median		A strip of road, not intended for use by traffic, which separates carriageways for traffic in opposite directions. Usually formed by painted lines, kerbed, and paved areas, grassed areas, etc.
minimum gap sight distance	M.G.S.D	The minimum sight distance required for a driver to safely accept a gap in traffic when making a manoeuvre like crossing or turning at an intersection. It's the distance a driver needs to see to determine if there's enough space and time to safely complete their intended movement
mobile work		Work that entails vehicles moving progressively along the roadway at speeds significantly lower than other traffic, with all traffic control devices being either vehicle mounted or regularly moved along the road.
motorway		A divided highway, freeway, expressway, controlled access highway etc. for through traffic with no access for traffic between interchanges and with grade separation at some interchanges. Certain activities may be restricted or prohibited by legislative provision.
multilane		Two or more running lanes in one direction.
off-peak period		The periods that have low demand volumes of traffic during the day (see *peak period)*.
offset speed zone		Temporary speed zones which result in speed limits which are different for each direction of travel at a particular location.
open road area		Roadside development less frequent than that specified for a built-up area.
Out Of Hours Work	OOHW	
past the worksite		Methods of hazard control, when the entire work area (including all vehicles and plant) is located within 6 m from the nearest edge of a traffic lane.
peak period		The period that has the highest demand volume of traffic and/or number of passengers during the day (peak hour, peak half hour, etc.) (see *off-peak period)*.

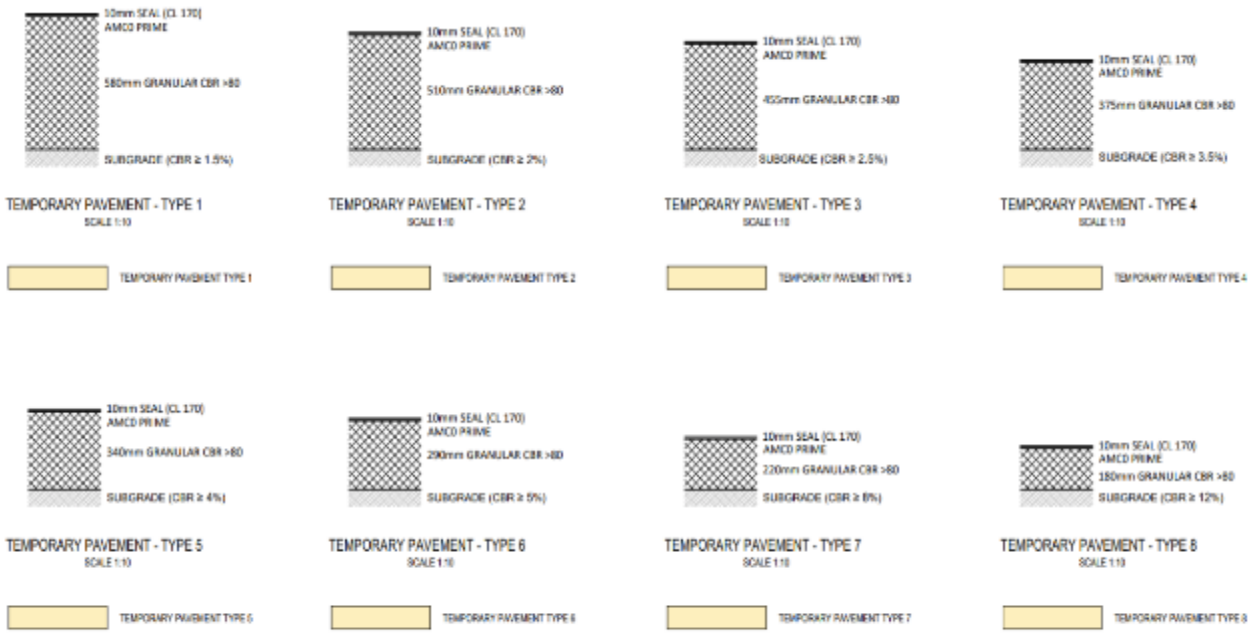
Term/Abbreviation	Acronym	Definition
permanent speed limit		The maximum legal speed limit for a specific section of road indicated by permanent speed limit signs. These signs are in place 24 hours a day, seven days a week and have been implemented after a speed limit review has been carried out.
Portable Traffic Control Device	PTCD	An approved portable device used to control traffic to enhance the safety and protection of road users and road workers at the worksite, specifically an option to improve safety for traffic controllers. Portable traffic controller devices may include PTSS or boom barriers.
Portable Traffic Signal Systems	PTSS	An approved portable traffic signal device allowing traffic controllers to perform their roles at a safe distance from traffic in high-risk environments.
primary sign		The first sign closest to the worksite, work area or hazard. This sign is followed by repeater signs placed further from the worksite, work area or hazard.
radar activated speed signs	RASS	
road reserve		An area of land between the legal road boundaries, usually a fence line to fence line. This typically includes the roadway, footpaths, other access ways and unpaved areas, which allow the passage of road users. The road reserve also includes an airspace of six metre directly above the road surface.
Road Safety Audit	RSA	A formal examination of a road or intersection, existing or proposed, to identify potential safety issues and opportunities for improvement. It's conducted by an independent, multidisciplinary team that qualitatively assesses and reports on safety risks for all road users.
road train		A combination, other than a B-double, consisting of a motor vehicle towing at least two trailers, excluding any converter dolly supporting a semitrailer.
road user		Any driver, rider, passenger, or pedestrian using the road.
roadway		Any one part of the width of a road devoted particularly to the use of vehicles, inclusive of shoulders and auxiliary lanes.
Road Occupancy Licence	ROL	A permit which allows the applicant to use or occupy a specified road space at approved times, provided that certain conditions are met.
running lane		The portion of the roadway allotted for the use of a single line of vehicles. Cyclists operating in these lanes are considered vehicles.
rural road		A general term for the road carrying mostly long-distance traffic, as distinct from local traffic and located in open road areas.
safety buffer		The unoccupied space between the additional warning area and work area which allows for an errant vehicle to pull up before reaching the work area.
safe intersection sight distance	S.I.S.D	the minimum distance a driver needs to see a vehicle entering or leaving a side road to safely stop before a

Term/Abbreviation	Acronym	Definition
		collision at an intersection. It's crucial for ensuring safe road operations, especially at unsignalized intersections.
safe work method statement	SWMS	A document which identifies the type of work being undertaken, the risks, the hazards, and controls to be implemented to eliminate the risk.
short term (traffic control)		Description that applies when a traffic guidance scheme is required only while work personnel are in attendance and is generally limited to the duration of a single work shift.
shoulder		A sealed or unsealed part of the road outside the edge line, or inferred edge line, which is trafficable, adjacent to the traffic lane and flush with the surface of the pavement.
shuttle flow		Where a portion of the roadway is closed so that a single lane is used alternately by traffic from opposite directions. It is one-way flow with one direction first, then the other. This is used where insufficient width is available for maintaining two-way flow at all times.
sight distance		The distance, measured along the road over which visibility occurs between a driver or rider and an object or between two drivers at specific heights above the roadway in their lane of travel.
speed		Distance travelled per unit of time (km per hour).
speed of traffic		The posted speed limit at a location when being adhered to by the majority of road users (see *85th percentile*). This can be checked by travelling in the stream of vehicles and comparing to the posted speed limit.
Speed Zone Application	SZA	
(traffic speed)		If the speed of the majority of vehicles is travelling significantly slower or faster than the posted speed limit (±10 km/h), apply this speed limit when making any decisions regarding design.
static works		All works which are greater in scope and duration than can be handled by short term, low impact methods or mobile works and are contained within a fixed area.
swept path		The area bounded by lines traced by the extremities of the bodywork of a vehicle while turning.
taper		A straight or smoothly curved row of delineation devices used to shift traffic laterally, e.g. from a lane to the shoulder.
temporary speed limit		A speed limit that is applied on some sections of road as a result of roadworks, school zones or other variable speed limits which are in place to suit driving and travel conditions. These are not permanent speed limits.
termination area		Where road users have passed the work area and normal traffic conditions resume.
Transport Management Centre	TMC	
Transport for NSW	TfNSW	NSW Highway & State Road Manager

Term/Abbreviation	Acronym	Definition
through the worksite		Methods of hazard separation by stopping all road user's movement for short periods when workers need to occupy the roadway.
traffic controller	TC or TCR	A competent person whose duty it is to control traffic at a worksite.
Traffic Control at Worksites	TCAW's	TfNSW TS 05492 Traffic Controls at Work Sites (TCAWS) including all amendments
traffic control device	TCD	Any traffic sign, road marking, traffic signal, or other device, placed or erected under public authority for the purpose of regulating, directing, warning or guiding traffic.
Traffic Guidance Scheme	TGS	An arrangement of temporary traffic control devices to warn traffic and guide it around, through or past a worksite or temporary hazard.
Traffic Management Plan	TMP	A document describing all essential traffic management matters associated with roadworks or works on roads. This includes risk assessment, traffic demand and accommodation, traffic routing and control and provision for vulnerable road users and special vehicles such as buses, trams, or over-dimensional vehicles.
travelled path		That part of the roadway which is made available to vehicles, and which may consist of one of more running lanes.
Truck mounted attenuator	TMA	Safety device designed to reduce the severity of collision that should be fitted to slow moving or stationary vehicles which are exposed to potential impact from behind by approaching traffic. Also referred to as a "bump truck"
Traffic, Transport Liaison Group	TTLG	This group is formed to facilitate communication and coordination between different stakeholders involved in major transport projects.
two-way roadway		A roadway having running lanes allotted for use by traffic in opposing directions.
undivided road		A road without a median (see *divided road).*
unsealed road		A road that does not have a hard or smooth surface. Unsealed road surfaces include gravel, sand or dirt.
Vehicle Management Plan	VMP	Document detailing the internal vehicle and workforce movements within sites and compounds. It includes and barriers/barricading required to protect and direct workers around site.
Variable Message Signs	VMS	Variable message signs can be changed to display information messages to alert drivers of on-road incidents on the road ahead. They are also used to warn road users about weather conditions and other important information
vehicles per day	vpd	The number of vehicles observed passing a point in both directions on a road for 24 hours
vehicles per hour	vph	The number of vehicles observed passing a point in both directions on a road for one hour
vulnerable road user		Pedestrians, cyclists, motorcyclists.

Term/Abbreviation	Acronym	Definition
work area		Area where maintenance or construction work is being done.
worksite		An area which includes the work area(s), and any additional length of road required for advance signing, tapers, side-tracks or other areas needed for associated purposes.

Appendix B Pavement Types Examples for Gate Construction



TEMPORARY PAVEMENT

Appendix C Traffic Management Monitoring and Compliance – E3,4 & 5 Inspection Checklists

E3 – Weekly TTM inspection checklist

E4 – Shift/Daily TTM inspection checklist

E5 – Post completion inspection checklist

E.3 Weekly TTM inspection checklist

Weekly inspections must only be carried out by a PWZTMP qualified person. Weekly inspections must be carried out when a site is first open and at least once every week thereafter.

Completed by:				
Name:		Signature:		
TMP Reference:		TGS Reference:		
Date:		Inspection type	☐ Pre-opening	☐ Weekly
Desktop review				
Is a copy of the location TMP and relevant TGS available? ***If no inspection must not be undertaken until documents are obtained***			☐ Yes ☐ No	
Details of TMP and TGS:				
Are the location TMP and relevant TGS approved? ***If no, work must be stopped until documents are approved***			☐ Yes ☐ No	
Comments or details of action taken:				
Site Inspection				
Inspection completed:	☐During the day ☐During the night			
Signs and devices positioned as prescribed and commanding attention? ***If no provide details and rectify signs***			☐ Yes ☐ No	
Comments or details of action taken:				

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Site Inspection	
Sign sizes as prescribed? ***If no provide details and rectify signs***	☐ Yes ☐ No
Comments or details of action taken:	
Signs are mounted level and suitably clear of travel lanes? ***If no provide details and rectify signs***	☐ Yes ☐ No
Comments or details of action taken:	
Has temporary delineation been applied as prescribed, with permanent markings obliterated? ***If no provide details of action required to rectify delineation***	☐ Yes ☐ No
Comments or details of action taken:	
Are registered trailers i.e. VMS / light towers; suitably clear of travel lanes and delineated? ***If no provide details and rectify location***	☐ Yes ☐ No
Comments or details of action taken:	
Are temporary speed zones operating as prescribed? ***If no provide details and discuss with work supervisor***	☐ Yes ☐ No
Comments or details of action taken:	
Are PTCD positioned as prescribed in TGS? ***If no provide details of action required to rectify***	☐ Yes ☐ No
Comments or details of action taken:	

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Site Inspection	
Are manual traffic controllers clear of travel lane, have suitable escape route? ***If no provide details of action required to rectify***	☐ Yes ☐ No
Comments or details of action taken:	
Are site accesses and egresses well defined and safe for work vehicles? ***If no provide details of action required to rectify***	☐ Yes ☐ No
Comments or details of action taken:	
Termination signs are suitably located? i.e. D downstream of last activity. ***If no provide details of action required to rectify***	☐ Yes ☐ No
Comments or details of action taken:	

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Post site inspection confirmation		
Is worksite layout operating safely as intended? ***If no provide details and implement controls to rectify***		☐ Yes ☐ No
Comments or details of action taken:		
Has TMP identified and addressed key TTM risks? ***If no provide details and implement controls to rectify***		☐ Yes ☐ No
Comments or details of action taken:		
Have key TTM risks been addressed on site? ***If no provide details of additional hazards and controls required***		☐ Yes ☐ No
Comments or details of action taken:		
Have copies of Shift Inspections been sighted as completed as required? ***If no provide details and discuss with nominated rep completing Shift Inspections***		☐ Yes ☐ No ☐ N/A
Comments or details of action taken:		

Additional comments:

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E.4 Shift/Daily TTM inspection checklist

Shift inspections must be undertaken by a person holding the PWZTMP or ITCP qualification when a TGS is installed, changed or updated, to ensure the TGS is implemented as designed. This includes at a minimum, twice per shift (recommended every 2 hours). This form can also be used for inspecting 'Aftercare' arrangements.

Completed by:					
Name:		Signature:			
TMP Reference:		TGS Reference:			
Date:		Time/s	*Inspection 1*	*Inspection 2*	*Inspection 3*
			00-00	00-00	00-00

Drive through TGS inspection		*Inspection 1*	*Inspection 2*	*Inspection 3*
Have any adjustments been made to the approved TGS?		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
If yes, provide details:	Are changes within tolerances? ***If no, TGS must be reviewed by a PWZTMP***	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
	Have changes been approved? ***If no, TGS must be approved***	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Comments or details of action taken:				
Have all signs and devices been installed in accordance with approved TGS? ***If no, provide detail of action taken***		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Comments or details of action taken:				

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Drive through TGS inspection		Inspection 1	Inspection 2	Inspection 3
Are PTCD positioned as prescribed in TGS? ***If no, provide detail of action taken***		☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A
Comments or details of action taken:				
Are manual traffic controllers clear of travel lane, have suitable escape route? ***If no, provide detail and reposition manual traffic controllers***		☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A
Comments or details of action taken:				
Are sign and devices in good condition, clearly visible to road users? ***If no, provide detail of action taken***		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Comments or details of action taken:				
Are all signs mounted level and suitably clear of travel lanes? ***If no, provide detail of action taken***		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Comments or details of action taken:				
Are conflicting or non-applicable signs covered or removed? ***If no, provide detail and remove or cover signs***		☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A
Comments or details of action taken:				

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Drive through TGS inspection		Inspection 1	Inspection 2	Inspection 3
Is temporary delineation installed as prescribed i.e. straight line forming taper? ***If no provide details and rectify delineation***		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Comments or details of action taken:				
Have site conditions changed due to shade, park vehicles, glare etc. ***If yes provide details and note if action is required***		☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Comments or details of action taken:				
Are registered trailers i.e. VMS / light towers; suitably clear of travel lanes and delineated? ***If no provide details and rectify location***		☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A
Comments or details of action taken:				
Are temporary speed zones operating as prescribed? ***If no provide details and discuss with work supervisor***		☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A
Comments or details of action taken:				
Are workers on foot / plant clearances been applied / observed? ***If no provide details and implement controls to rectify***		☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☐ N/A
Comments or details of action taken:				

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Post drive through confirmation	*Inspection 1*	*Inspection 2*	*Inspection 3*
Is TGS valid for the site activity and operating safely as intended? ***If no provide details and implement controls to rectify***	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Comments or details of action taken:			
Is TGS is appropriate for the current traffic conditions? ***If no provide details and implement controls to rectify***	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Comments or details of action taken:			
Have potential hazards identified in TGS been addressed? i.e. end-of-queue management ***If no provide details of additional hazards and controls required***	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Comments or details of action taken:			

Additional comments:

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E.5 Post completion inspection checklist

Completed by:			
Name:		Road name/Staging Plan number:	
Signature:		Date / time:	
ITCP or PWZTMP card number			

Drive through post completed inspection		
Item		**Comments / Action**
Have all work activities been completed?	☐ Yes ☐ No	
Has all plant and equipment been removed?	☐ Yes ☐ No	
Have all TTM signs and devices been removed?	☐ Yes ☐ No	
Has all TTM linemarking been obliterated?	☐ Yes ☐ No	
Have existing permanent speed limits been reinstated?	☐ Yes ☐ No	
Have all TTM site hazards been removed?	☐ Yes ☐ No	
Other	☐ Yes ☐ No	

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Desktop post completion inspection		
Have all TGSs for completed tasks been retained?	☐ Yes ☐ No	
Have all TMP required documents been placed in relevant folders?	☐ Yes ☐ No	
Has TMP/TGS designer requested addition information post TTM removal?	☐ Yes ☐ No	
Is the road safe for opening to road users?	☐ Yes ☐ No	

Additional comments:

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E.6 Portable variable message sign (VMS)/variable speed limit sign (VSLS) location and placement checklist

Proposed site location	
Road Details /Intersections /property numbers	
Purpose of the VMS/VSLS	
Proposed period of use	
Is this integrated with TMC?	

Checklist details for VMS/VSLS location	Yes, No or N/A	Comments/reasons for non-compliance
Planning		
Will the location of the proposed VMS/VSLS be in the road reserve?		
Will the proposed VMS/VSLS be visible from a road or road related area?		
Is the proposed VMS/VSLS being used as part of a major event?		
Safety		
Will the proposed location allow safe and easy access to the site for deployment of the portable VMS/VSLS?		
Is the proposed site located near any utilities (overhead or underground)?		
Will the proposed site cause personnel to be unsafely exposed to traffic?		
Will traffic control be required to safely place or remove the portable VMS/VSLS?		

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Checklist details for VMS/VSLS location	Yes, No or N/A	Comments/reasons for non-compliance
Are there any other safety considerations at the proposed site? e.g. bore drains, culverts etc.		
Placement		
Is the proposed location likely to affect or change the patterns of any vulnerable road user movements?		
Is the proposed location likely to affect or change the pattern of cyclist movements?		
Will the proposed location be behind Transport approved safety barriers or as far away from the edge of the traffic lane as is practical in a position determined suitable based on a documented risk assessment and detailed in the TMP? For more information refer to Austroads *Guide to Road Design Part 6: Roadside Design, Safety and Barriers*.		
Is the proposed location at least 300m from the nearest permanent VMS?		
Is the proposed location at least 200-300m from significant static signs?		
Is the proposed location at least 200-300m from any signalised intersections?		
Will the proposed location cause driver distraction?		
Is the proposed location a suitable distance from any speed zoning signage?		
Is the proposed location in the direct run off carriageway path of a vehicle?		
Will the proposed location affect any residential or commercial properties?		

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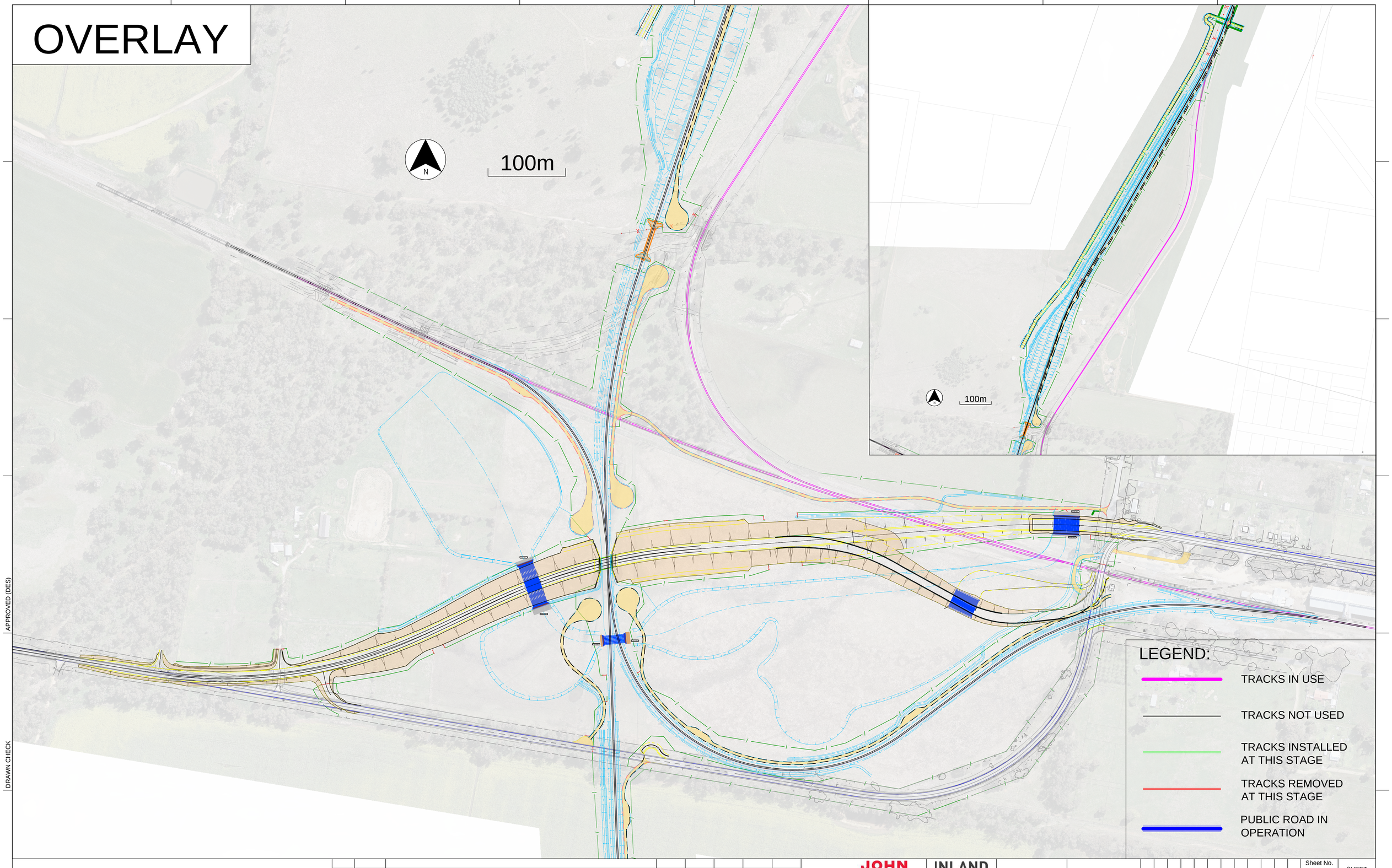
Checklist details for VMS/VSLS location	Yes, No or N/A	Comments/reasons for non-compliance
Will the proposed location affect any accesses or legal rights of way?		
Is the proposed location within 200m of any intersection or merging lane?		

Structures		
Will the proposed location be behind guard rail?		
Will the proposed location be behind wire rope fence?		
Is the proposed location close to significant road side furniture?		

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Appendix D Burley Griffin Way Staging Plan

OVERLAY



APPROVED (DES)

DRAWN CHECK

DRAWN

Rev	Date	Revision Description	Designed	Checked	Ind. Rev.	Approved	Accepted
A2	06/08/25						
A1	05/06/25						

Used on / Next higher assembly

Scale

File name

Alternate DMS number

JOHN HOLLAND

Drawn S. Ordonneau

Checked S. Ordonneau

Ind. Rev. Company

Ind. Rev. Name

Ind. Review Signature

INLAND RAIL

Approved By

Signed

Approval Date

Accepted By

Signed

Acceptance Date

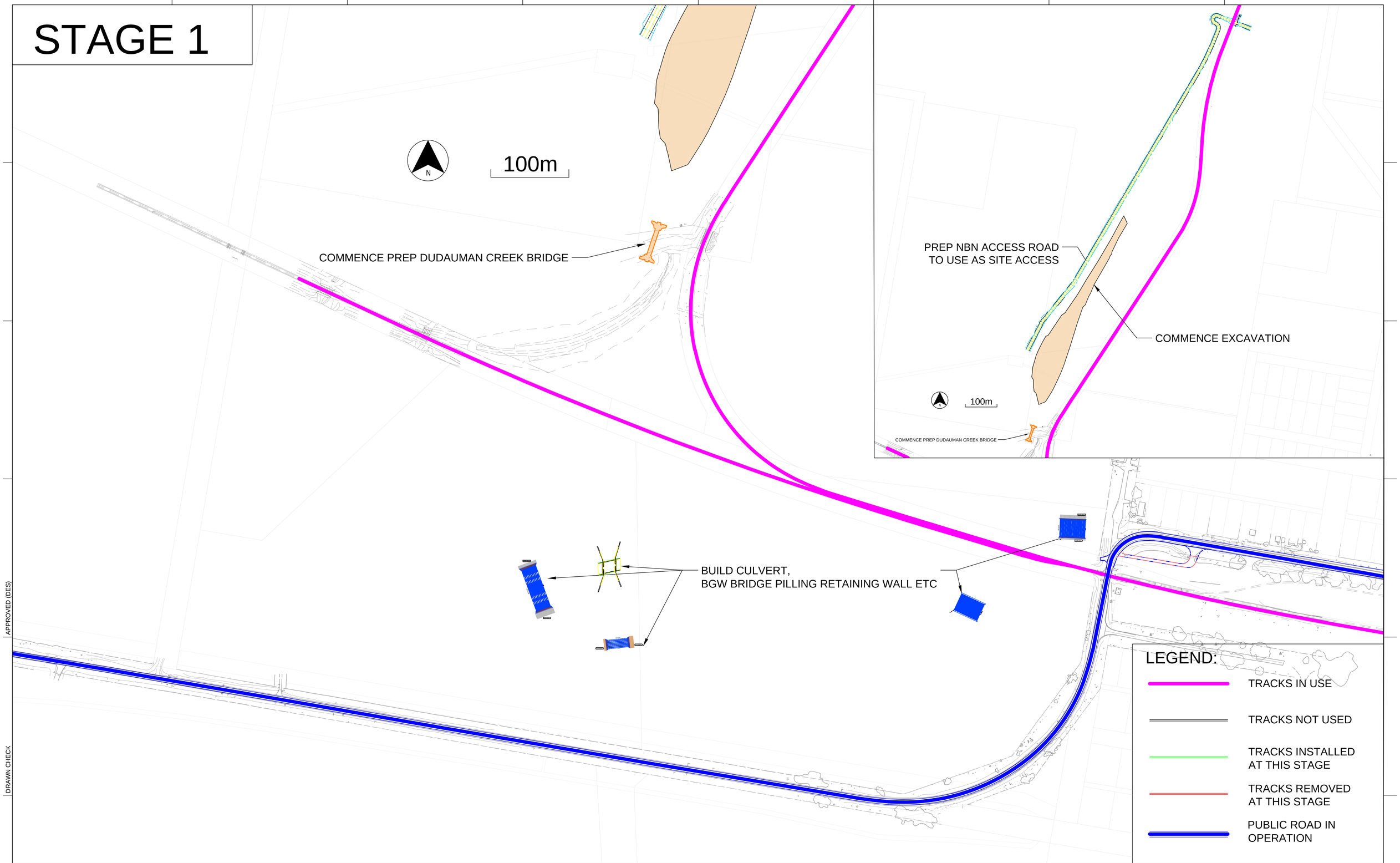
TITLE METHODS DRAWING BGW STAGING

Sheet No. 1/X

Scale

SHEET SIZE A1

STAGE 1



LEGEND:

- TRACKS IN USE
- TRACKS NOT USED
- TRACKS INSTALLED AT THIS STAGE
- TRACKS REMOVED AT THIS STAGE
- PUBLIC ROAD IN OPERATION

APPROVED (DES)

DRAWN CHECK

DRAWN

Rev	Date	Revision Description	Designed	Checked	Ind. Rev.	Approved	Accepted
A2	06/08/25						
A1	05/06/25						

Used on / Next higher assembly

Scale

File name

Alternate DMS number

JOHN HOLLAND

INLAND RAIL

Drawn S. Ordonneau

Checked S. Ordonneau

Ind. Rev. Company

Ind. Rev. Name

Ind. Review Signature

Approved By

Signed

Approval Date

Accepted By

Signed

Acceptance Date

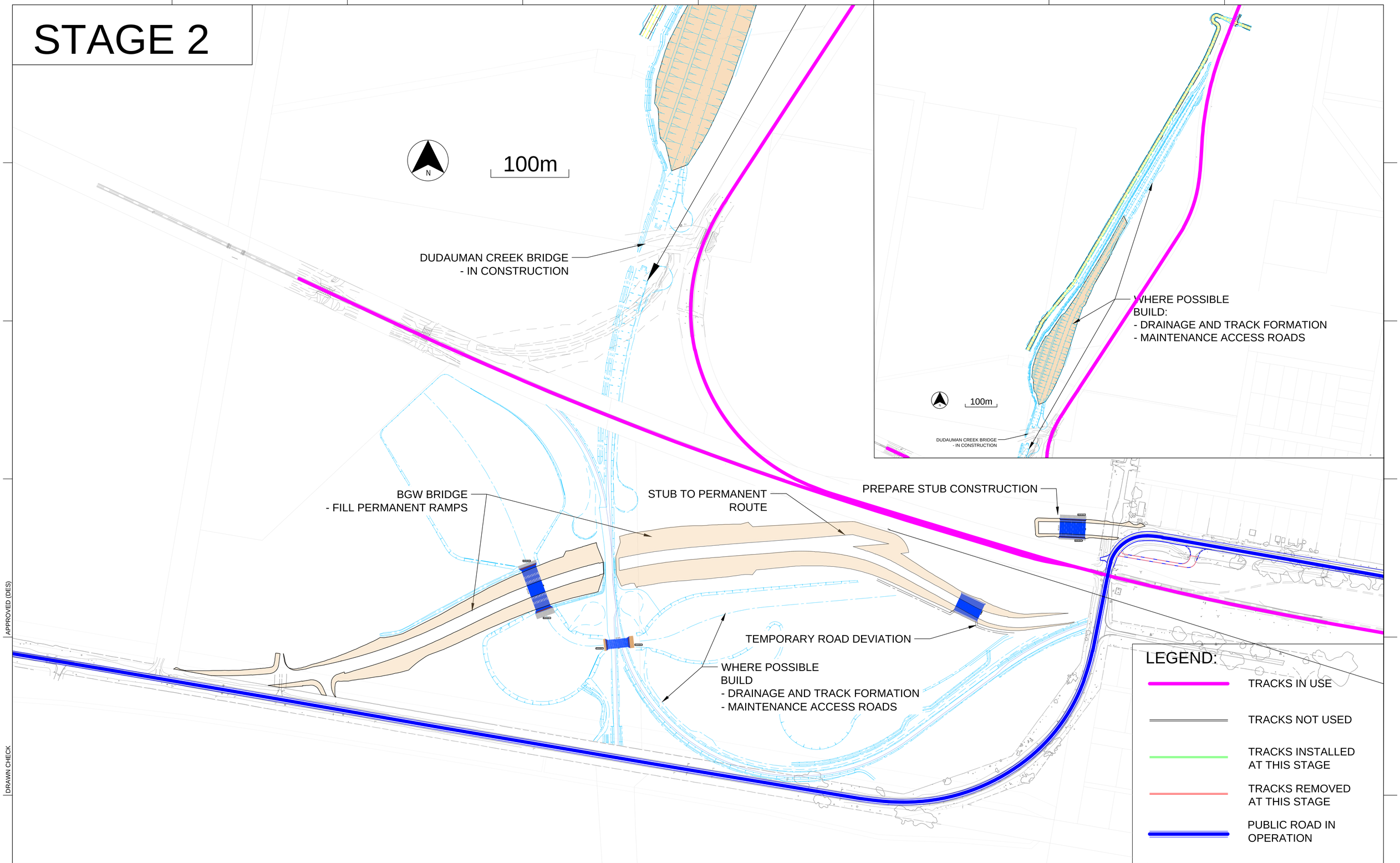
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BGW STAGING

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Scale

SHEET SIZE A1

STAGE 2



APPROVED (DES)

DRAWN CHECK

DRAWN

Rev	Date	Revision Description	Designed	Checked	Ind. Rev.	Approved	Accepted
A2	06/08/25						
A1	05/06/25						

Used on / Next higher assembly

Scale

File name

Alternate DMS number

JOHN HOLLAND

INLAND RAIL

Drawn S. Ordonneau

Checked S. Ordonneau

Ind. Rev. Company

Ind. Rev. Name

Ind. Review Signature

Approved By

Signed

Approval Date

Accepted By

Signed

Acceptance Date

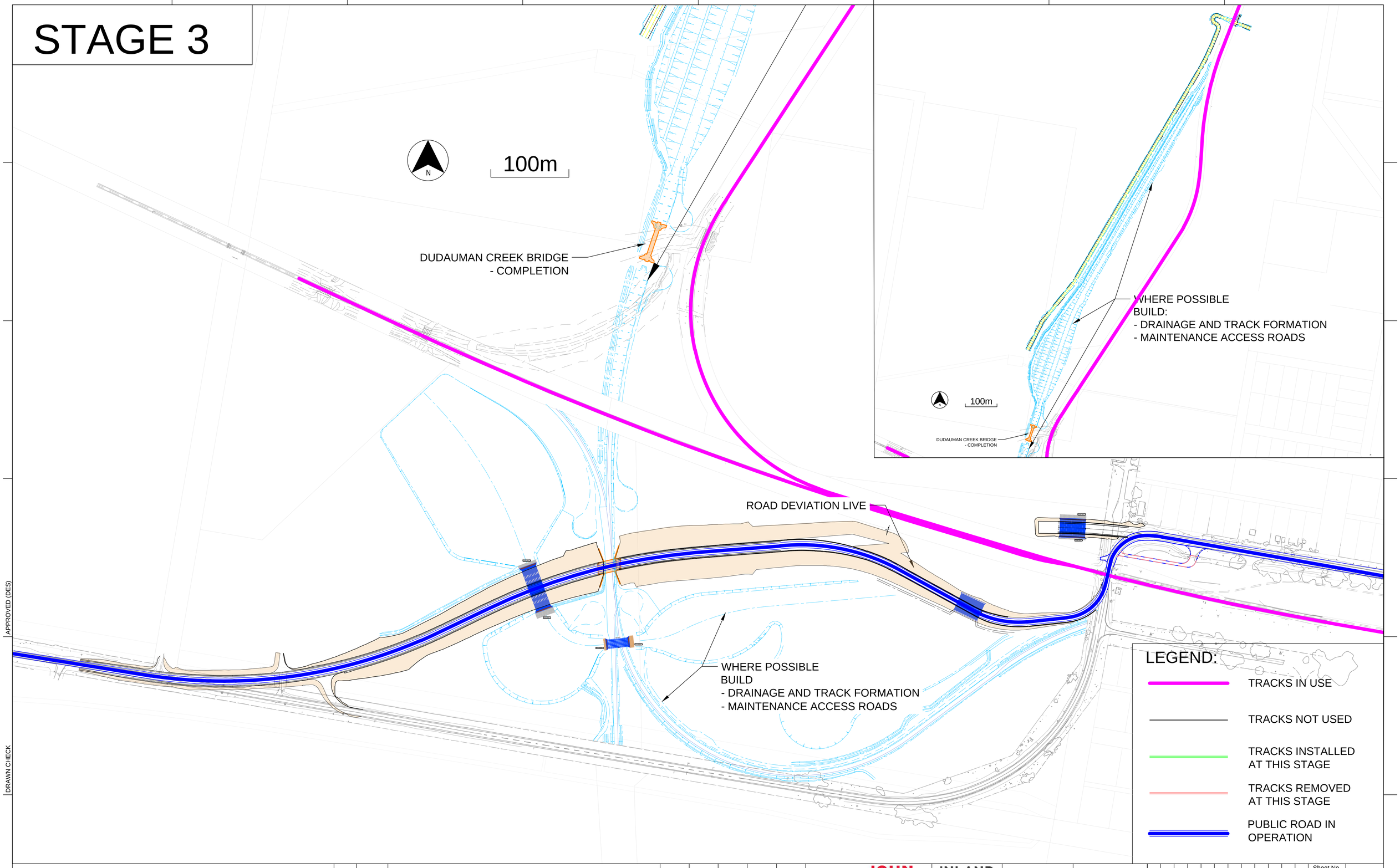
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SHEET SIZE A1

TITLE METHODS DRAWING
BGW STAGING

STAGE 3



APPROVED (DES)

DRAWN CHECK

DRAWN

Used on / Next higher assembly	Scale									
File name	Alternate DMS number	A2	06/08/25							
		A1	05/06/25							
		Rev	Date	Revision Description	Designed	Checked	Ind. Rev.	Approved	Accepted	

JOHN HOLLAND

INLAND RAIL

Drawn	S. Ordonneau	Approved By	Accepted By
Checked	S. Ordonneau		
Ind. Rev. Company	Ind. Rev. Name	Signed	Signed
Ind. Review Signature		Approval Date	Acceptance Date

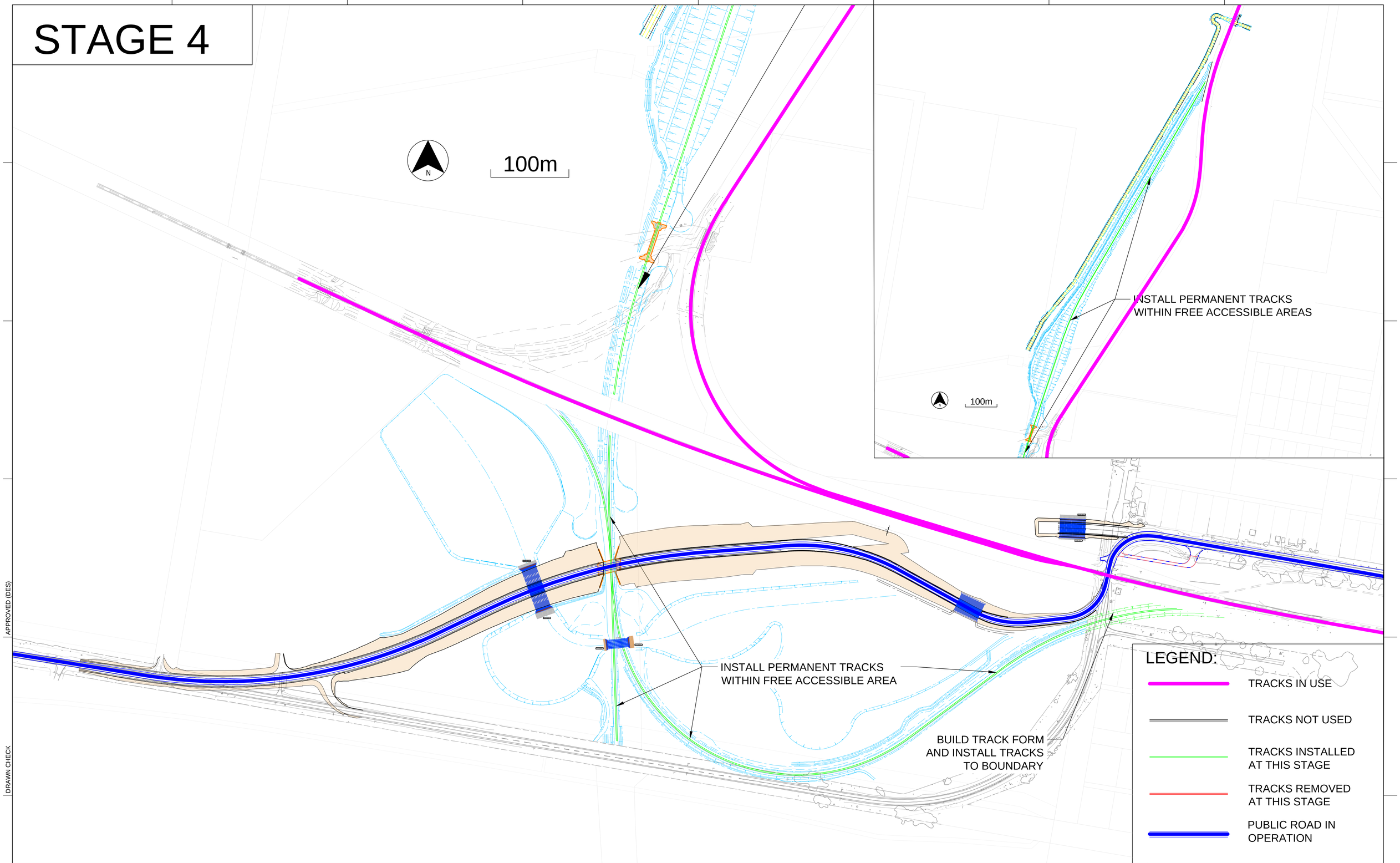
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SHEET SIZE A1

TITLE METHODS DRAWING
BGW STAGING

STAGE 4



APPROVED (DES)

DRAWN CHECK

DRAWN

Rev	Date	Revision Description	Designed	Checked	Ind. Rev.	Approved	Accepted
A2	06/08/25						
A1	05/06/25						

Used on / Next higher assembly

Scale

File name

Alternate DMS number

JOHN HOLLAND

INLAND RAIL

Drawn S. Ordonneau

Checked S. Ordonneau

Ind. Rev. Company

Ind. Rev. Name

Ind. Review Signature

Approved By

Signed

Approval Date

Accepted By

Signed

Acceptance Date

TITLE METHODS DRAWING
BGW STAGING

Sheet No. 1/X

Scale

SHEET SIZE A1

STAGE 5

WORKS UNDER POSSESSION

N

100m

REMOVE EXISTING RAILS WHERE NECESSARY
INSTALL CONNECTION NEW RAILS ALIGNMENT

N

100m

REMOVE EXISTING RAILS WHERE NECESSARY
INSTALL CULVERT
INSTALL PERMANENT FORMATION AND RAILS
IN LIEU OF OLD RAILS

FINALISE RAIL FORMATION
INSTALL PERMANENT RAIL TURNOUT

LEGEND:

- TRACKS IN USE
- TRACKS NOT USED
- TRACKS INSTALLED AT THIS STAGE
- TRACKS REMOVED AT THIS STAGE
- PUBLIC ROAD IN OPERATION

APPROVED (DES)

DRAWN CHECK

DRAWN

Rev	Date	Revision Description	Designed	Checked	Ind. Rev.	Approved	Accepted
A2	06/08/25						
A1	05/06/25						

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Scale

File name

Alternate DMS number

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INLAND RAIL

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Ind. Rev. Company

Ind. Rev. Name

Ind. Review Signature

Approved By

Signed

Approval Date

Accepted By

Signed

Acceptance Date

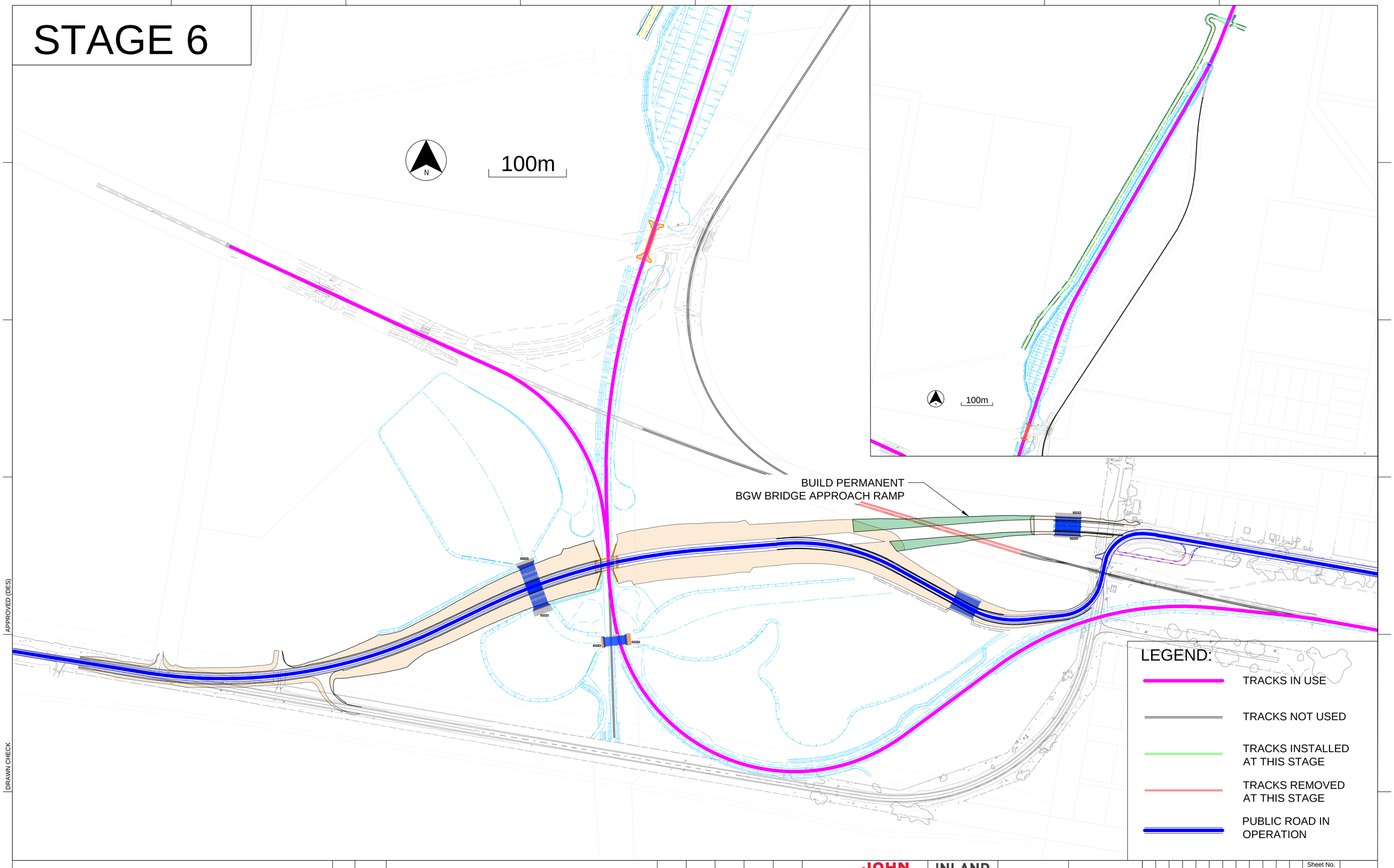
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SHEET SIZE A1

TITLE METHODS DRAWING
BGW STAGING

STAGE 6



APPROVED (DES)

DRAWN CHECK

DRAWN

Used on / Next higher assembly	Scale									
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		A1	05/06/25							
		Rev	Date	Revision Description	Designed	Checked	Ind. Rev.	Approved	Accepted	

JOHN HOLLAND

INLAND RAIL

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Checked	S. Ordonneau		
Ind. Rev. Company	Ind. Rev. Name	Signed	Signed
Ind. Review Signature		Approval Date	Acceptance Date

TITLE METHODS DRAWING
BGW STAGING

Sheet No. 1/X

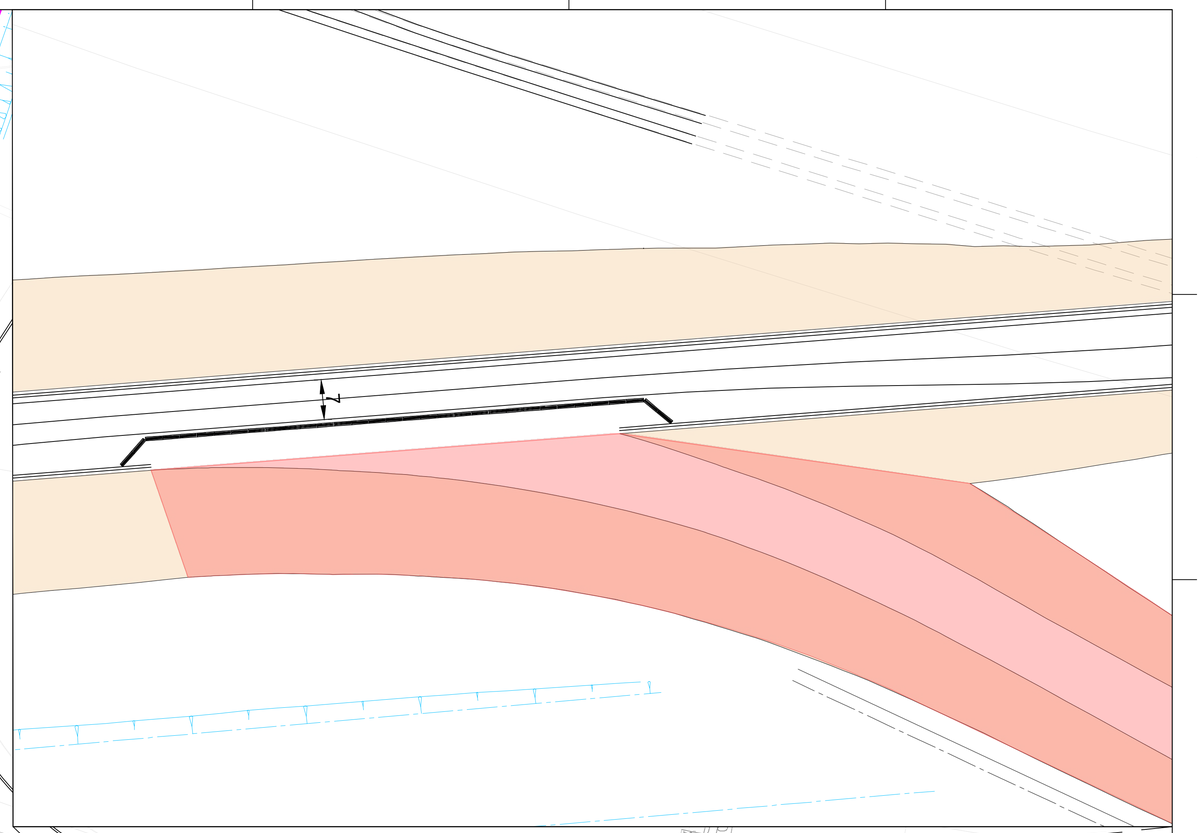
Scale

SHEET SIZE A1

STAGE 7

N

100m



TRANSFER TRAFFIC TO PERMANENT ALIGNMENT

REMOVE TEMPORARY RAMP AND
FINALISE DRAINAGE

LEGEND:

- TRACKS IN USE
- TRACKS NOT USED
- TRACKS INSTALLED AT THIS STAGE
- TRACKS REMOVED AT THIS STAGE
- PUBLIC ROAD IN OPERATION

APPROVED (DES)

DRAWN CHECK

DRAWN

Used on / Next higher assembly	Scale
File name	Alternate DMS number

Rev	Date	Revision Description	Designed	Checked	Ind. Rev.	Approved	Accepted
A2	06/08/25						
A1	05/06/25						

JOHN HOLLAND

INLAND RAIL

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Checked	S. Ordonneau		
Ind. Rev. Company	Ind. Rev. Name	Signed	Signed
Ind. Review Signature		Approval Date	Acceptance Date

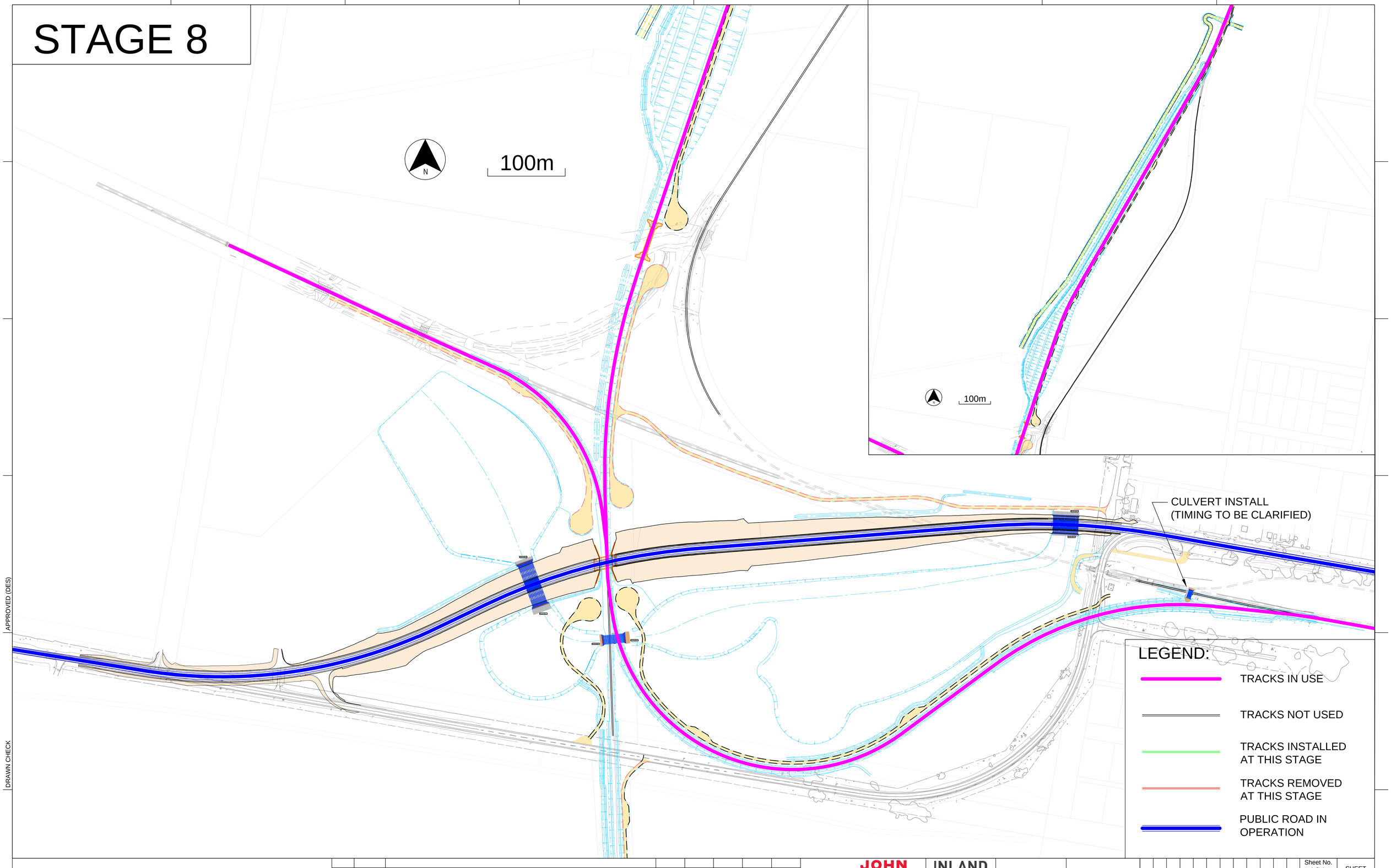
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BGW STAGING

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Scale

SHEET SIZE A1

STAGE 8



APPROVED (DES)

DRAWN CHECK

DRAWN

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		A1	05/06/25							
		Rev	Date	Revision Description	Designed	Checked	Ind. Rev.	Approved	Accepted	

JOHN HOLLAND

INLAND RAIL

Drawn	S. Ordonneau	Approved By	Accepted By
Checked	S. Ordonneau		
Ind. Rev. Company	Ind. Rev. Name	Signed	Signed
Ind. Review Signature		Approval Date	Acceptance Date

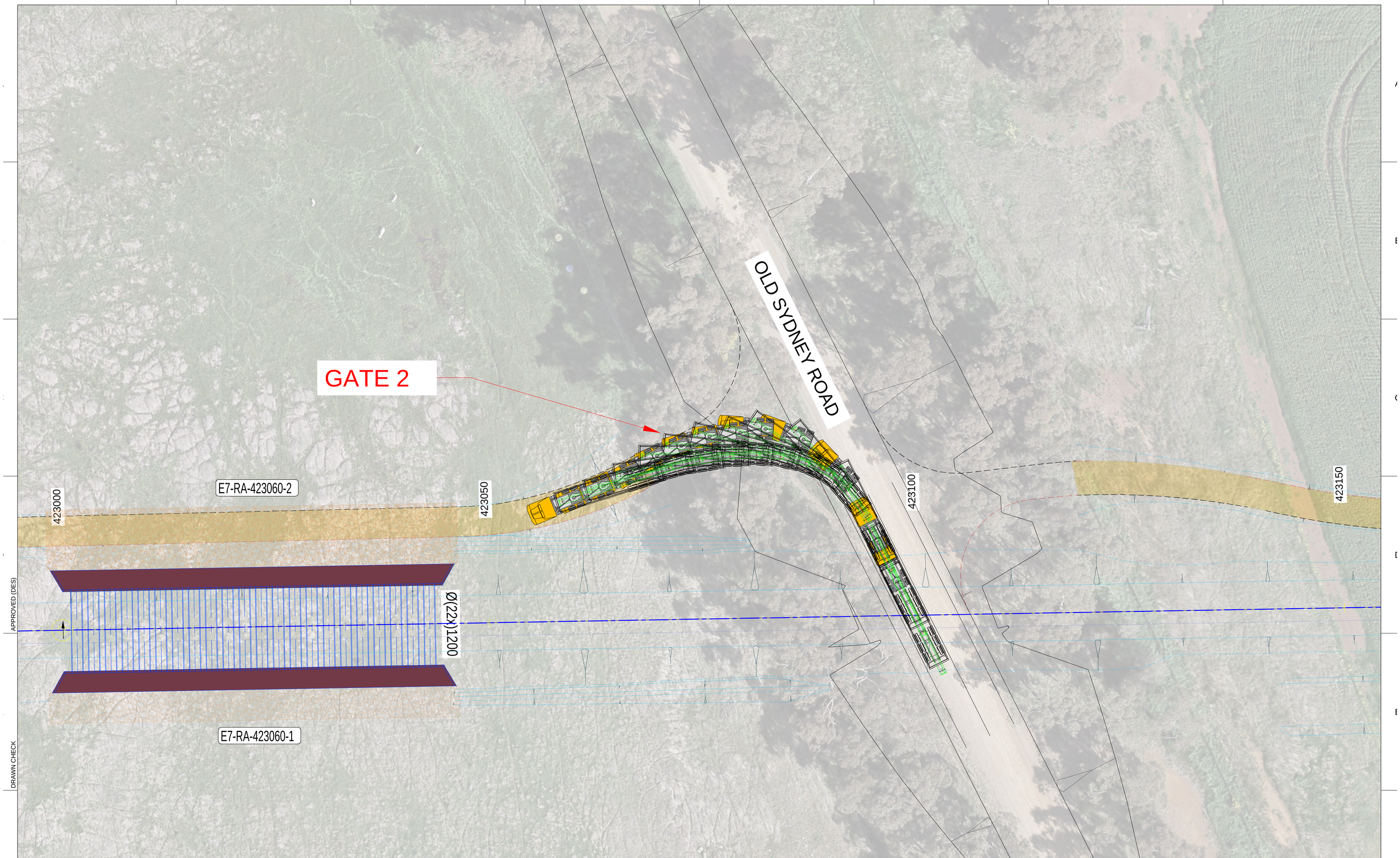
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TITLE METHODS DRAWING
BGW STAGING

Appendix E Swept Path Analysis



APPROVED (DES)

DRAWN CHECK

DRAWN

Rev	Date	Revision Description	Designed	Checked	Ind. Rev.	Approved	Accepted
A1	10/07/25						

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Scale

File name

Alternate DMS number

JOHN HOLLAND

INLAND RAIL

Designed S. ORDONNEAU

Checked S. ORDONNEAU

Ind. Rev. Company

Ind. Rev. Name

Ind. Review Signature

Approved By

Signed

Approval Date

Accepted By

Signed

Acceptance Date

Sheet No. 3/7

Scale

SHEET SIZE A0

TITLE METHODS DRAWING
SWEPT PATH ENTRY OLD SYDNEY ROAD

N

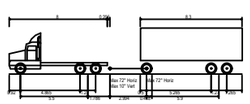
ACCESS TO BE OF SUFFICIENT WIDTH TO ACCOMMODATE CONSTRUCTION VEHICLE MANOEUVRES

OLD SYDNEY ROAD

560e

RDS300

VEHICLE PROFILE



Tipper&Tri-Dog (aka Truck&Dog)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

LEGEND

VEHICLE BODY

VEHICLE BODY PATH

VEHICLE WHEEL PATH

VEHICLE CLEARANCE

FOR INFORMATION

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								***	***	***			
								***	***	***	PREPARED FOR L. MCGOLDRICK	-	-
								***	***	***			
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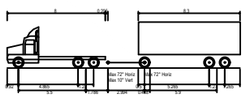
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ACCESS TO BE OF SUFFICIENT WIDTH TO ACCOMMODATE CONSTRUCTION VEHICLE MANOEUVRES

OLD SYDNEY ROAD

PU5600

VEHICLE PROFILE



Tipper&Tri-Dog (aka Truck&Dog)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY	CLIENT	A3
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								*** *** ***	ILLABO TO STOCKINBINGAL
								*** *** ***	GATE 3
								*** *** ***	TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG
								PREPARED FOR: L. MCGOLDRICK	- / -
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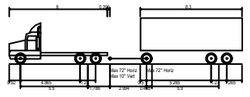
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OLD SYDNEY ROAD

PL5600

PL5600

VEHICLE PROFILE



Tipper&Tri-Dog (aka Truck&Dog)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.540m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

ACCESS TO BE OF SUFFICIENT WIDTH TO ACCOMMODATE CONSTRUCTION VEHICLE MANOEUVRES

FOR INFORMATION

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CO-ORDINATE SYSTEM: MGA ZONE 55 | HEIGHT DATUM: -

DRAWINGS / DESIGN PREPARED BY: case TRAFFIC & TRANSPORT

PLOT DATE / TIME	PLOT BY
-	-

TITLE	NAME	DATE
DESIGNED	J. BUNN	14.04.25
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***	***	***
***	***	***
***	***	***

CLIENT

PREPARED FOR: L. MCGOLDRICK

JUNEE SHIRE COUNCIL
OLD SYDNEY ROAD
INLAND RAIL
ILLABO TO STOCKINBINGAL
GATE 2
TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG

A3

-

-

ISSUE STATUS	SHEET No.	OF SHEET	ISSUE
INITIAL REVISION	3		1



VEHICLE PROFILE

Tipper&Tri-Dog (aka Truck&Dog)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

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						CO-ORDINATE SYSTEM MGA ZONE 55	HEIGHT DATUM -	PREPARED FOR L. MCGOLDRICK			
								ISSUE STATUS INITIAL REVISION	SHEET No. 4	OF SHEET	ISSUE 1

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ACCESS TO BE OF SUFFICIENT WIDTH TO ACCOMMODATE CONSTRUCTION VEHICLE MANOEUVRES

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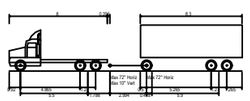
425700

PU8160

425650

IRONBONG ROAD

VEHICLE PROFILE



Tipper&Tri-Dog (aka Truck&Dog)

Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY	CLIENT
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						CO-ORDINATE SYSTEM: MGA ZONE 55	HEIGHT DATUM: -	

TITLE	NAME	DATE
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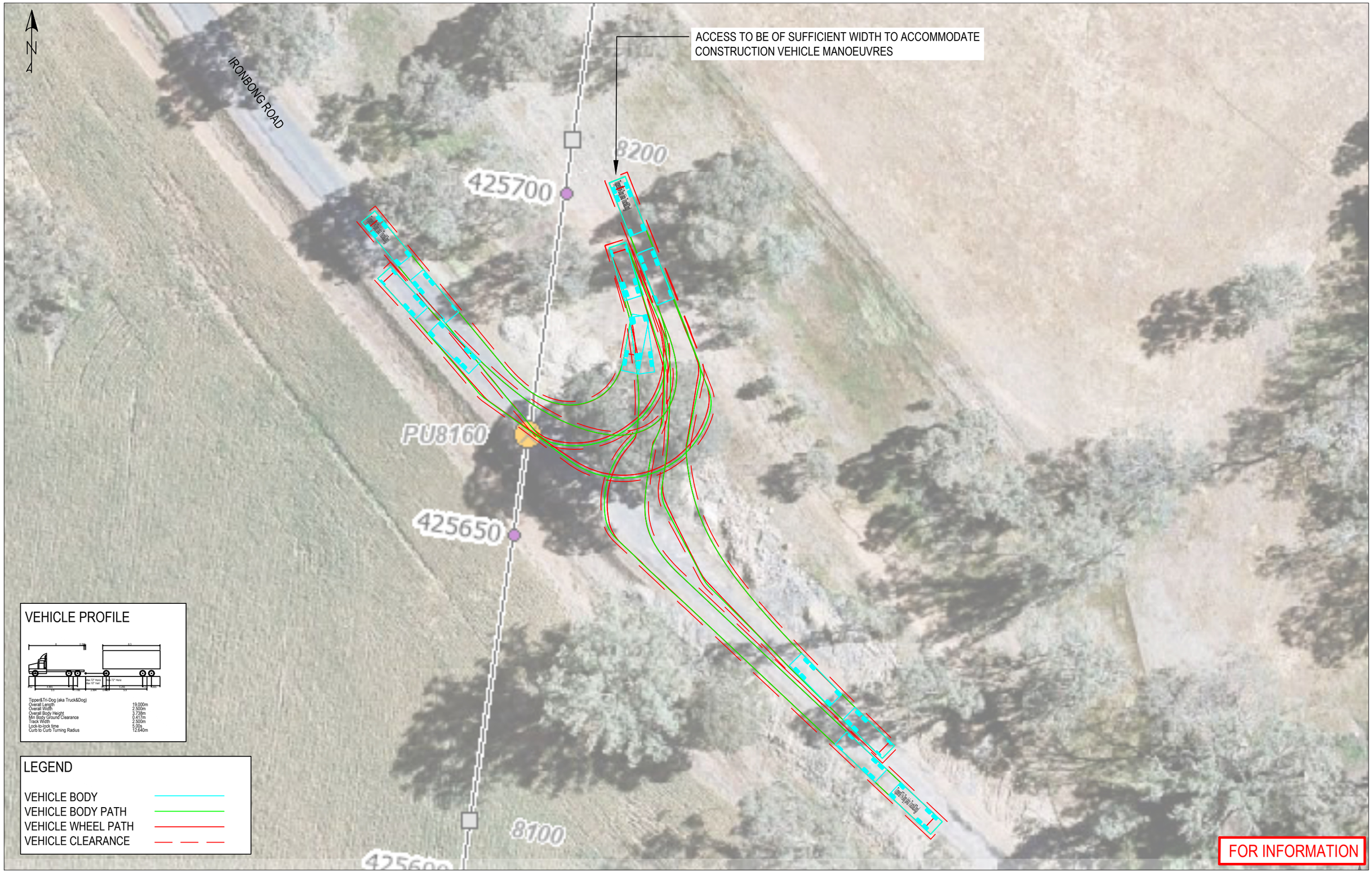
PREPARED FOR: L. MCGOLDRICK

JUNEE SHIRE COUNCIL
IRONBONG ROAD
INLAND RAIL
ILLABO TO STOCKINBINGAL
GATE 4A-North
TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG

A3

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ISSUE STATUS	SHEET No.	OF SHEET	ISSUE
INITIAL REVISION	5		1



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				-	-		-		-		A3
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE	PREPARED FOR L. MCGOLDRICK	-
	1	14.04.25	INITIAL REVISION			0 5 10 Meters	case TRAFFIC & TRANSPORT	DESIGNED	J. BUNN	14.04.25		-
								***	***	***		
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						CO-ORDINATE SYSTEM MGA ZONE 55	HEIGHT DATUM -				ISSUE STATUS INITIAL REVISION	SHEET No. 6 / OF SHEET / ISSUE 1



DRAWING FILE LOCATION / NAME			DESIGN LOT CODE: -	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: -	PLOT DATE / TIME: - PLOT BY: -
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL
	1	14.04.25	INITIAL REVISION		

SCALES ON A3 SIZE DRAWING: 0 5 10 Meters

CO-ORDINATE SYSTEM: MGA ZONE 55 HEIGHT DATUM: -

DRAWINGS / DESIGN PREPARED BY: case TRAFFIC & TRANSPORT

TITLE	NAME	DATE
DESIGNED	J. BUNN	14.04.25
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CLIENT: JUNEE SHIRE COUNCIL

PREPARED FOR: L. MCGOLDRICK

JUNEE SHIRE COUNCIL
IRONBONG ROAD
INLAND RAIL
ILLABO TO STOCKINBINGAL
GATE 4A-South
TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG

A3

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ISSUE STATUS: INITIAL REVISION | SHEET No.: 7 | OF SHEET: | ISSUE: 1



DRAWING FILE LOCATION / NAME			DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME / PLOT BY
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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL
	1	14.04.25	INITIAL REVISION		

SCALES ON A3 SIZE DRAWING: 0 5 10 Meters

CO-ORDINATE SYSTEM: MGA ZONE 55 — HEIGHT DATUM: -

DRAWINGS / DESIGN PREPARED BY: case TRAFFIC & TRANSPORT

	TITLE	NAME	DATE
	DESIGNED	J. BUNN	14.04.25
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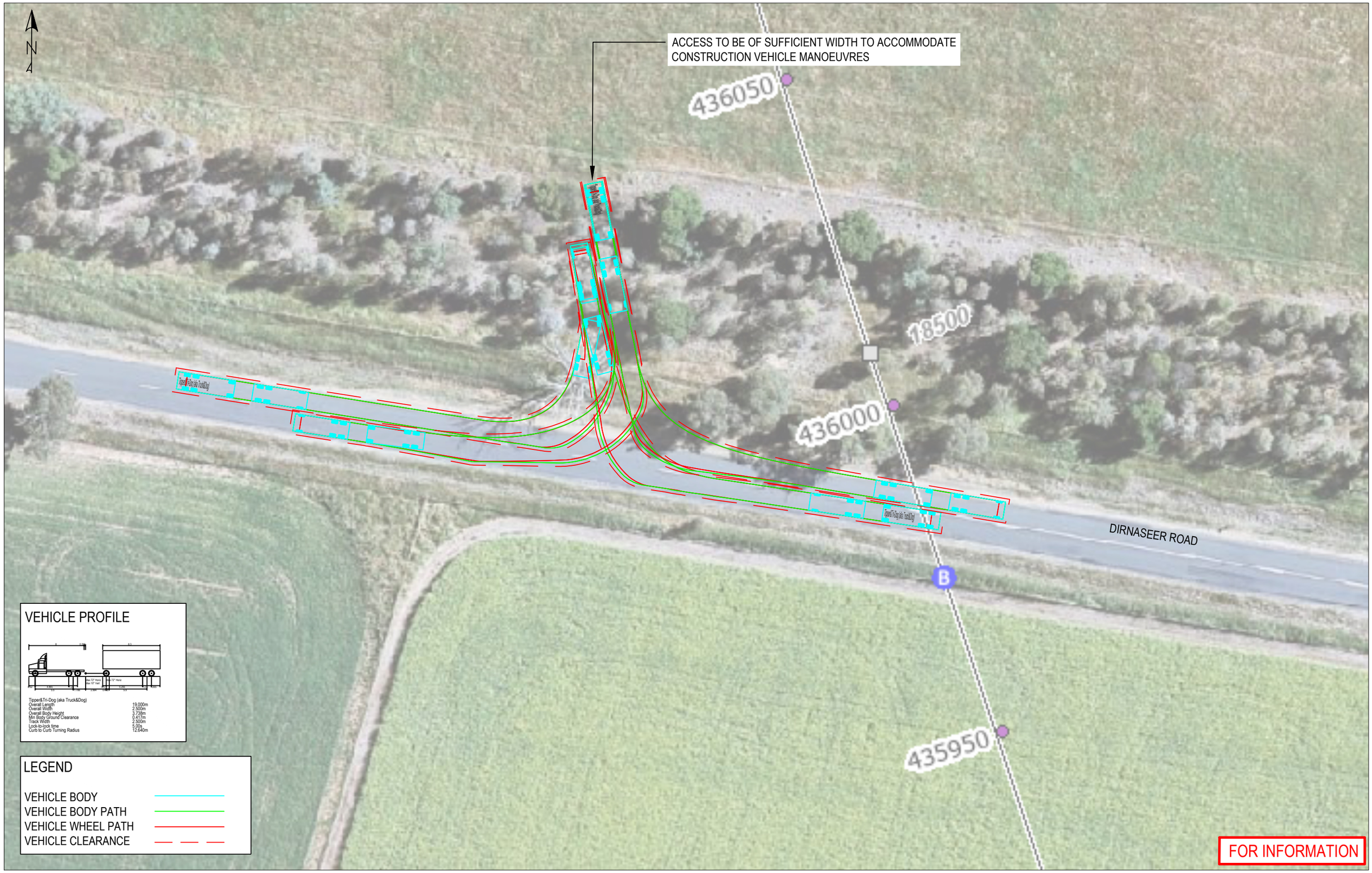
CLIENT: PREPARED FOR L. MCGOLDRICK

JUNEE SHIRE COUNCIL
IRONBONG ROAD
INLAND RAIL
ILLABO TO STOCKINBINGAL
GATE 5
TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG

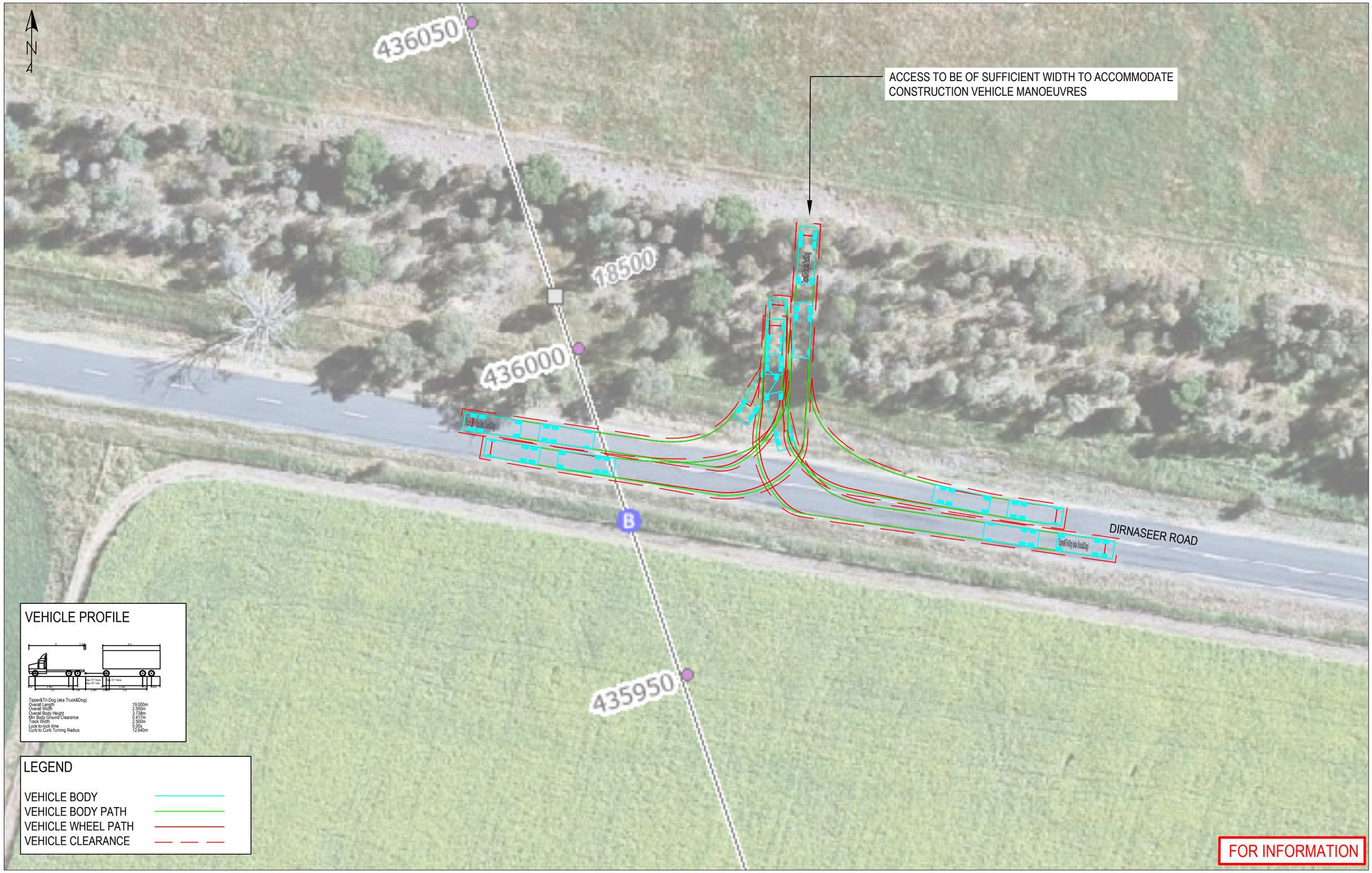
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ISSUE STATUS	SHEET No.	OF SHEET	ISSUE
INITIAL REVISION	8		1

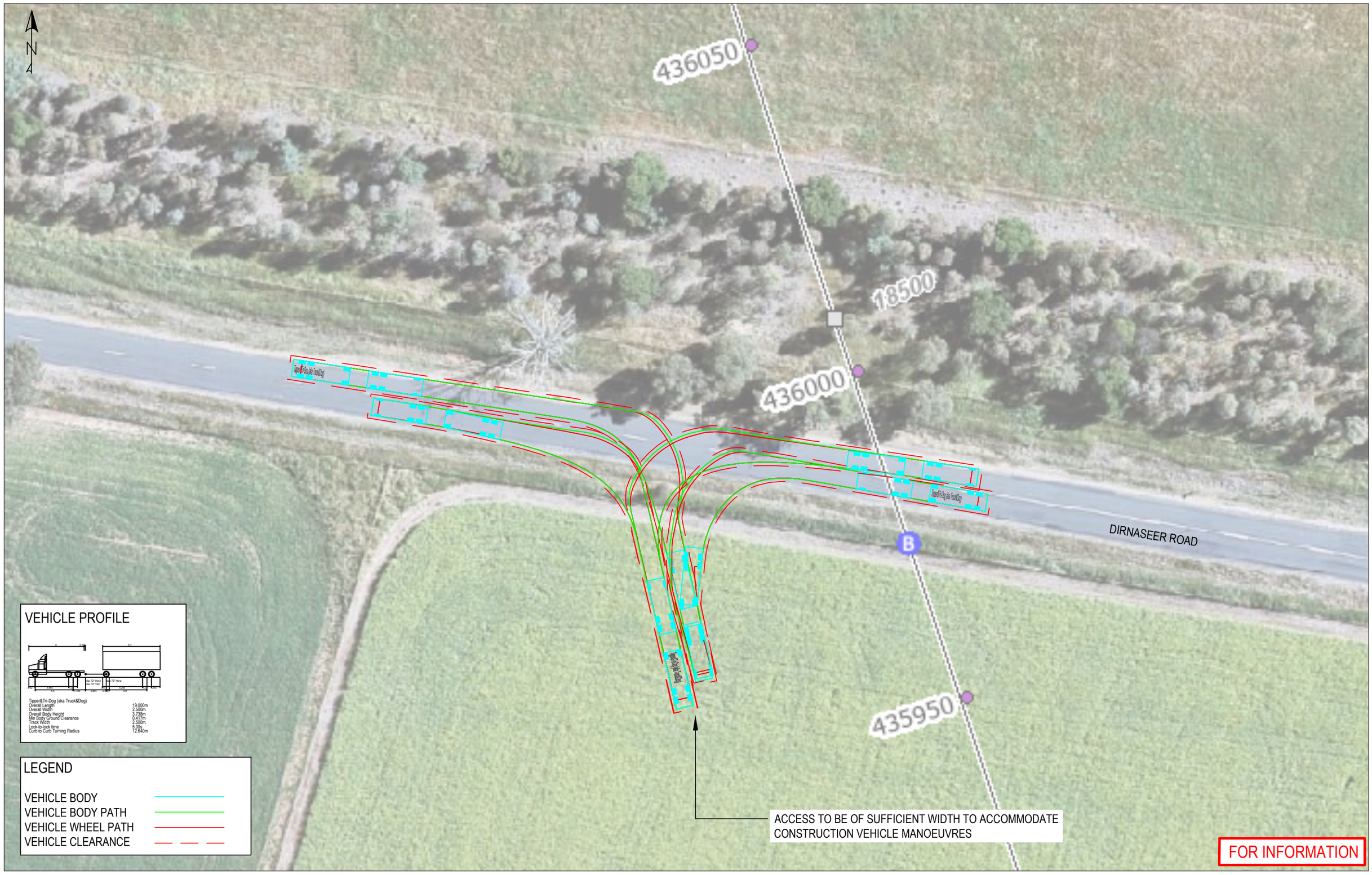


DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING		PLOT DATE / TIME	PLOT BY	CLIENT	JUNEE SHIRE COUNCIL DIRNASEER ROAD INLAND RAIL ILLABO TO STOCKINBINGAL GATE 6B TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG	A3
				-	-		-	-			
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE	
	1	14.04.25	INITIAL REVISION			0 5 10 Meters	case TRAFFIC & TRANSPORT	DESIGNED	J. BUNN	14.04.25	
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						CO-ORDINATE SYSTEM MGA ZONE 55	HEIGHT DATUM -				
									PREPARED FOR L. MCGOLDRICK		-
										ISSUE STATUS INITIAL REVISION	SHEET No. 9	OF SHEET	ISSUE 1



DRAWING FILE LOCATION / NAME				DESIGN LOT CODE		DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING		PLOT DATE / TIME		PLOT BY	CLIENT
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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE	JUNEE SHIRE COUNCIL DIRNASEER ROAD INLAND RAIL ILLABO TO STOCKINBINGAL GATE 6B TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG
	1	14.04.25	INITIAL REVISION			0 5 10 Meters	case TRAFFIC & TRANSPORT	DESIGNED	J. BUNN	14.04.25	
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								***	***	***	
								***	***	***	PREPARED FOR
								***	***	***	L. MCGOLDRICK
						CO-ORDINATE SYSTEM: MGA ZONE 55	HEIGHT DATUM: -				ISSUE STATUS: INITIAL REVISION

A3 | - | SHEET No. 10 | OF SHEET | ISSUE 1



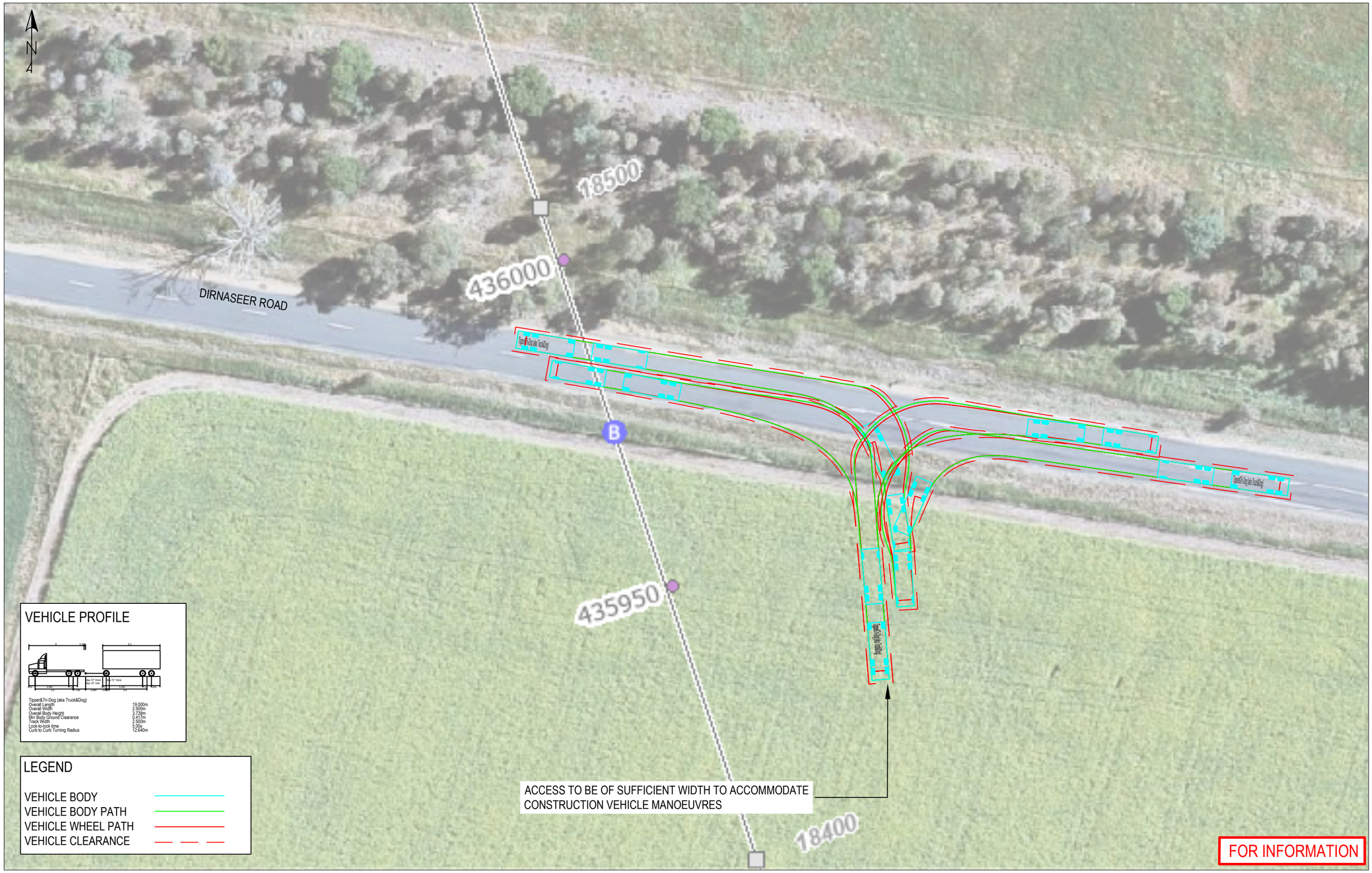
VEHICLE PROFILE

Tipper&Tri-Dog (aka Truck&Dog)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY	CLIENT	A3
				-	-	-	-	JUNEE SHIRE COUNCIL	
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE / NAME / DATE				DIRNASEER ROAD INLAND RAIL ILLABO TO STOCKINBINGAL GATE 6A TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG	
	1	14.04.25	INITIAL REVISION			0 5 10 Meters	case TRAFFIC & TRANSPORT	DESIGNED J. BUNN 14.04.25				PREPARED FOR L. MCGOLDRICK	-
						CO-ORDINATE SYSTEM: MGA ZONE 55	HEIGHT DATUM: -					ISSUE STATUS: INITIAL REVISION	SHEET No.: 11 / OF SHEET / ISSUE: 1

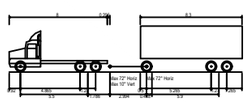


DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY	CLIENT	JUNEE SHIRE COUNCIL OLD SYDNEY ROAD DIRNASEER ROAD ILLABO TO STOCKINBINGAL GATE 6A TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG	A3	
				-	-	-	-				
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE	
	1	14.04.25	INITIAL REVISION			0 5 10 Meters	CASE TRAFFIC & TRANSPORT	DESIGNED	J. BUNN	14.04.25	
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						CO-ORDINATE SYSTEM MGA ZONE 55	HEIGHT DATUM -	PREPARED FOR L. MCGOLDRICK	-	-	
									ISSUE STATUS INITIAL REVISION	SHEET No. 12	OF SHEET ISSUE 1

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ACCESS TO BE OF SUFFICIENT WIDTH TO ACCOMMODATE CONSTRUCTION VEHICLE MANOEUVRES

VEHICLE PROFILE



Tipper&Tri-Dog (aka Truck&Dog)

Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

LEGEND

VEHICLE BODY

VEHICLE BODY PATH

VEHICLE WHEEL PATH

VEHICLE CLEARANCE

FOR INFORMATION

DRAWING FILE LOCATION / NAME				DESIGN LOT CODE		DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING		PLOT DATE / TIME	PLOT BY
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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE
	1	14.04.25	INITIAL REVISION			0 5 10 Meters	case TRAFFIC & TRANSPORT	DESIGNED	J. BUNN	14.04.25
						CO-ORDINATE SYSTEM: MGA ZONE 55		***	***	***
						HEIGHT DATUM: -		***	***	***
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CLIENT

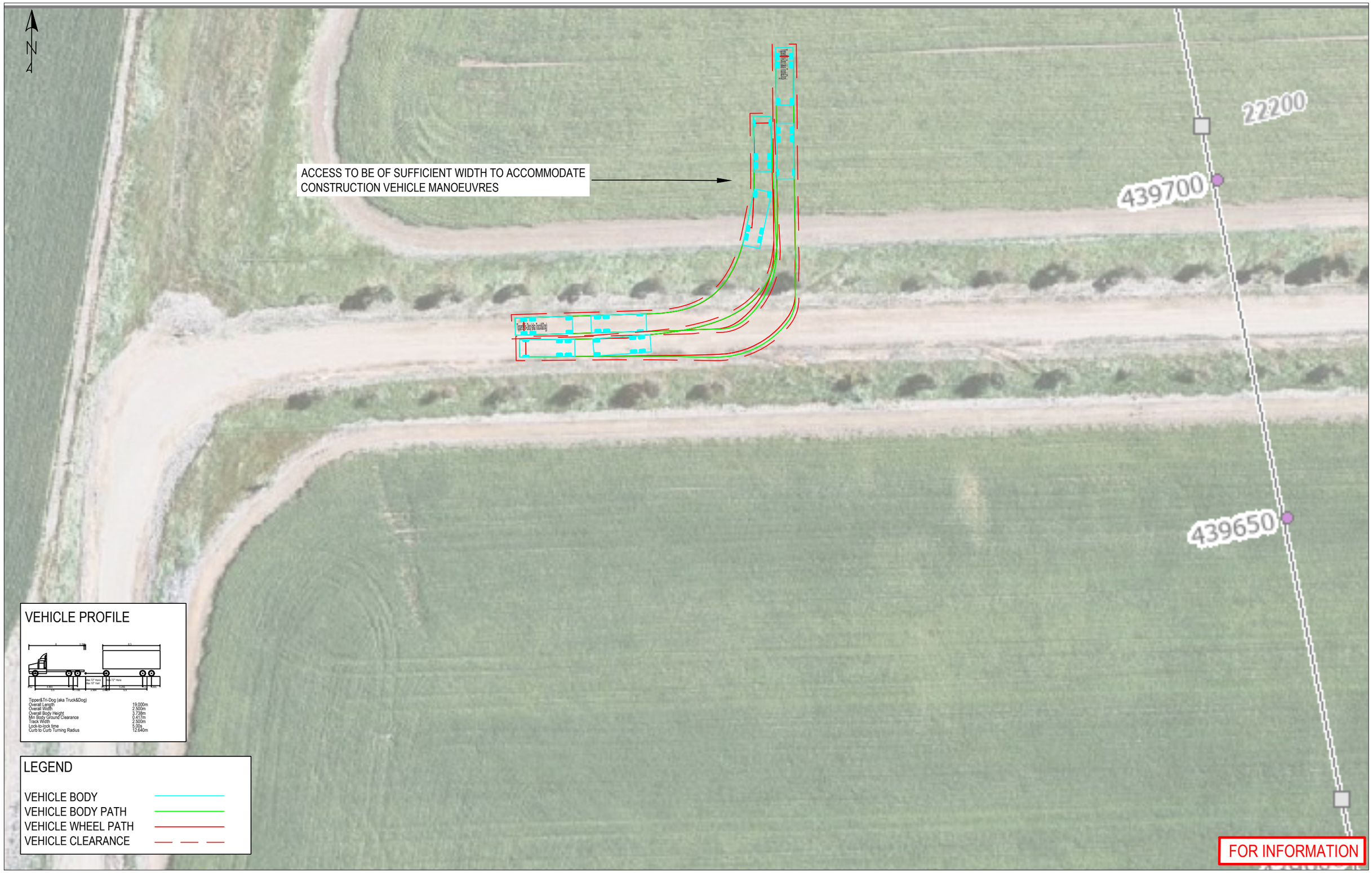
PREPARED FOR
L. MCGOLDRICK

JUNEE SHIRE COUNCIL
DUDAUMAN LANE
INLAND RAIL
ILLABO TO STOCKINBINGAL
GATE 6B.2
TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG

A3

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ISSUE STATUS	SHEET No.	OF SHEET	ISSUE
INITIAL REVISION	13		1



VEHICLE PROFILE

Tipper&Tri-Dog (aka Truck&Dog)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

LEGEND

VEHICLE BODY

VEHICLE BODY PATH

VEHICLE WHEEL PATH

VEHICLE CLEARANCE

DRAWING FILE LOCATION / NAME

DESIGN LOT CODE: -

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: -

PLOT DATE / TIME: -

PLOT BY: -

CLIENT

JUNEE SHIRE COUNCIL
DUDAUMAN LANE
INLAND RAIL
ILLABO TO STOCKINBINGAL
GATE 6B.3
TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG

A3

EXTERNAL REFERENCE FILES

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL
1	14.04.25	INITIAL REVISION		

SCALES ON A3 SIZE DRAWING: 0 5 10 Meters

CO-ORDINATE SYSTEM: MGA ZONE 55

HEIGHT DATUM: -

DRAWINGS / DESIGN PREPARED BY: case TRAFFIC & TRANSPORT

	TITLE	NAME	DATE
	DESIGNED	J. BUNN	14.04.25
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PREPARED FOR: L. MCGOLDRICK

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ISSUE STATUS: INITIAL REVISION

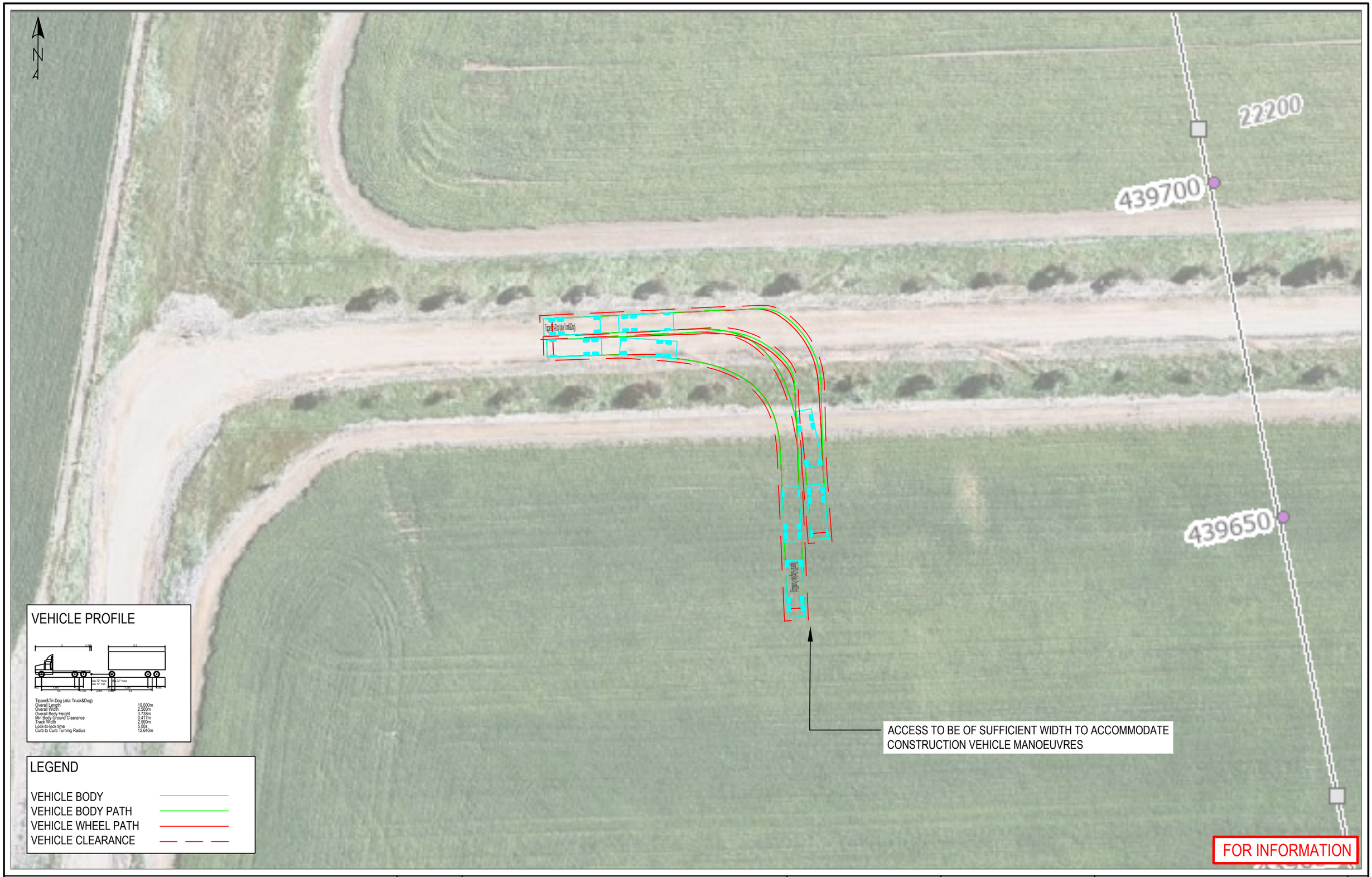
SHEET No.: 14

OF SHEET:

ISSUE: 1



DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY	CLIENT	JUNEE SHIRE COUNCIL DUDAUMAN LANE INLAND RAIL ILLABO TO STOCKINBINGAL GATE 6B.4 TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG		A3
				-	-	-	-				
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE	
	1	14.04.25	INITIAL REVISION			0 5 10 Meters	CASE TRAFFIC & TRANSPORT	DESIGNED	J. BUNN	14.04.25	
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						CO-ORDINATE SYSTEM MGA ZONE 55	HEIGHT DATUM -	PREPARED FOR L. MCGOLDRICK	-		-
									ISSUE STATUS INITIAL REVISION	SHEET No. 15	OF SHEET	ISSUE 1



VEHICLE PROFILE

Tipper&Tri-Dog (aka Truck&Dog)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

DRAWING FILE LOCATION / NAME	DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY	CLIENT	
	-	-	-	-		A3

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL
	1	14.04.25	INITIAL REVISION		

SCALES ON A3 SIZE DRAWING: 0 5 10 Meters

CO-ORDINATE SYSTEM: MGA ZONE 55 — HEIGHT DATUM: -

DRAWINGS / DESIGN PREPARED BY: case TRAFFIC & TRANSPORT

TITLE	NAME	DATE
DESIGNED	J. BUNN	14.04.25
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JUNEE SHIRE COUNCIL
DUDAUMAN LANE
INLAND RAIL
ILLABO TO STOCKINBINGAL
GATE 6B.5
TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG

PREPARED FOR: L. MCGOLDRICK

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ISSUE STATUS	SHEET No.	OF SHEET	ISSUE
INITIAL REVISION	16		1



VEHICLE PROFILE

Tipper&Tri-Dog (aka Truck&Dog)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

DRAWING FILE LOCATION / NAME				DESIGN LOT CODE		DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY
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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	
	1	14.04.25	INITIAL REVISION			0 5 10 Meters		
						CO-ORDINATE SYSTEM: MGA ZONE 55	HEIGHT DATUM: -	

TITLE	NAME	DATE
DESIGNED	J. BUNN	14.04.25
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CLIENT

PREPARED FOR
L. MCGOLDRICK

COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL
OLD COOTAMUNDRA ROAD
INLAND RAIL
ILLABO TO STOCKINBINGAL
GATE 7B
TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG

A3

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ISSUE STATUS	SHEET No.	OF SHEET	ISSUE
INITIAL REVISION	17		1



VEHICLE PROFILE

Tipper&Tri-Dog (aka Truck&Dog)

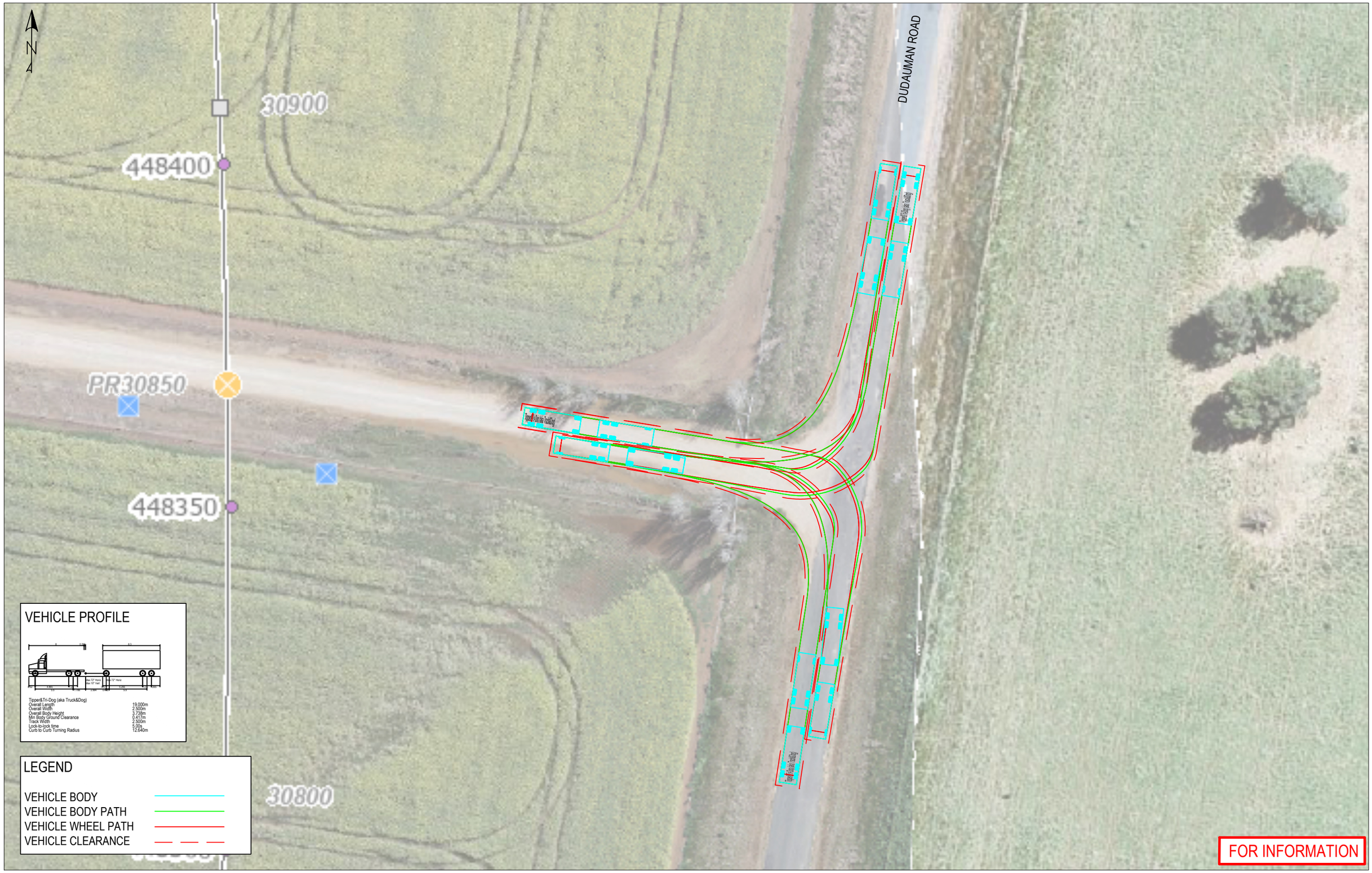
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY	CLIENT	A3
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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE / NAME / DATE	COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL OLD COOTAMUNDRA ROAD INLAND RAIL ILLABO TO STOCKINBINGAL GATE 7A TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG
	1	14.04.25	INITIAL REVISION			0 5 10 Meters	case TRAFFIC & TRANSPORT	DESIGNED J. BUNN 14.04.25 *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***	
						CO-ORDINATE SYSTEM: MGA ZONE 55	HEIGHT DATUM: -	PREPARED FOR: L. MCGOLDRICK	-
								ISSUE STATUS: INITIAL REVISION	SHEET No.: 18 OF SHEET	ISSUE: 1



VEHICLE PROFILE

Tipper&Tri-Dog (aka Truck&Dog)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY	CLIENT	A3
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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE / NAME / DATE	
	1	14.04.25	INITIAL REVISION			0 5 10 Meters	CASE TRAFFIC & TRANSPORT	DESIGNED J. BUNN 14.04.25	
						CO-ORDINATE SYSTEM MGA ZONE 55		HEIGHT DATUM -	

COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL
DUDAUMAN ROAD
INLAND RAIL
ILLABO TO STOCKINBINGAL
GATE 7B.2
TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG

PREPARED FOR: L. MCGOLDRICK

ISSUE STATUS: INITIAL REVISION | SHEET No. 21 | OF SHEET | ISSUE 1

ACCESS TO BE OF SUFFICIENT WIDTH TO ACCOMMODATE CONSTRUCTION VEHICLE MANOEUVRES

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DUDAUMAN ROAD

449700

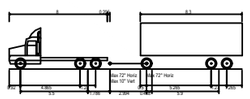
32200

PK32150

449650

32100

VEHICLE PROFILE



Tipper&Tri-Dog (aka Truck&Dog)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING		PLOT DATE / TIME	PLOT BY
				-	-		-	-
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	
	1	14.04.25	INITIAL REVISION			0 5 10 Meters	case TRAFFIC & TRANSPORT	
						CO-ORDINATE SYSTEM: MGA ZONE 55		HEIGHT DATUM: -

TITLE	NAME	DATE
DESIGNED	J. BUNN	14.04.25
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***	***	***
***	***	***

CLIENT

PREPARED FOR: L. MCGOLDRICK

COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL
DUDAUMAN ROAD
INLAND RAIL
ILLABO TO STOCKINBINGAL
GATE 7B.3
TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG

A3

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ISSUE STATUS	SHEET No.	OF SHEET	ISSUE
INITIAL REVISION	22		1



DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
				-	-
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL
	1	14.04.25	INITIAL REVISION		

SCALES ON A3 SIZE DRAWING: 0 5 10 Meters

CO-ORDINATE SYSTEM: MGA ZONE 55 — HEIGHT DATUM: -

DRAWINGS / DESIGN PREPARED BY: case TRAFFIC & TRANSPORT

PLOT DATE / TIME		PLOT BY
-		-
TITLE	NAME	DATE
DESIGNED	J. BUNN	14.04.25
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CLIENT

PREPARED FOR: L. MCGOLDRICK

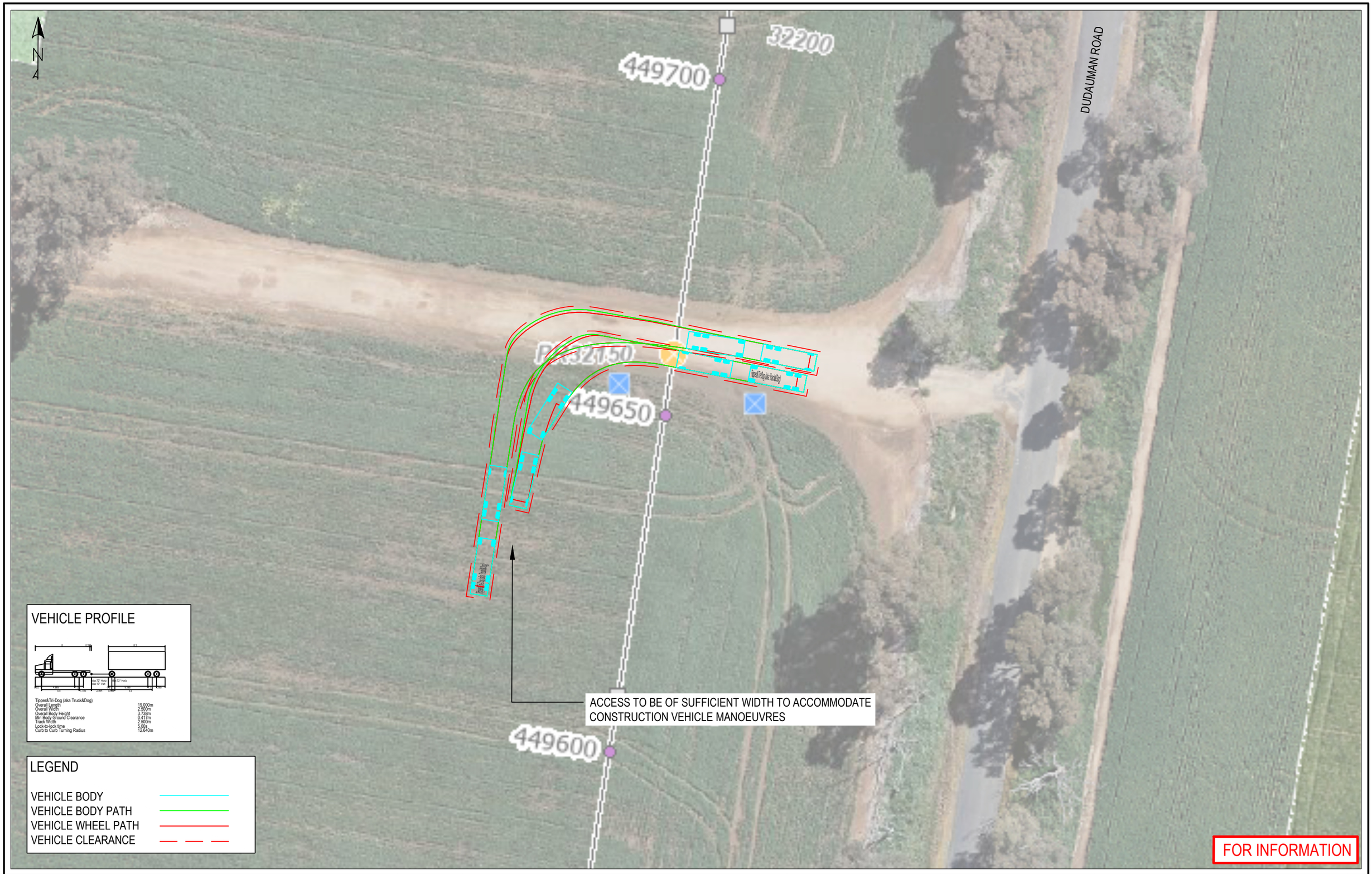
COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL
DUDAUMAN ROAD
INLAND RAIL
ILLABO TO STOCKINBINGAL
GATE 7B.4
TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG

A3

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ISSUE STATUS: INITIAL REVISION | SHEET No.: 23 | OF SHEET | ISSUE: 1

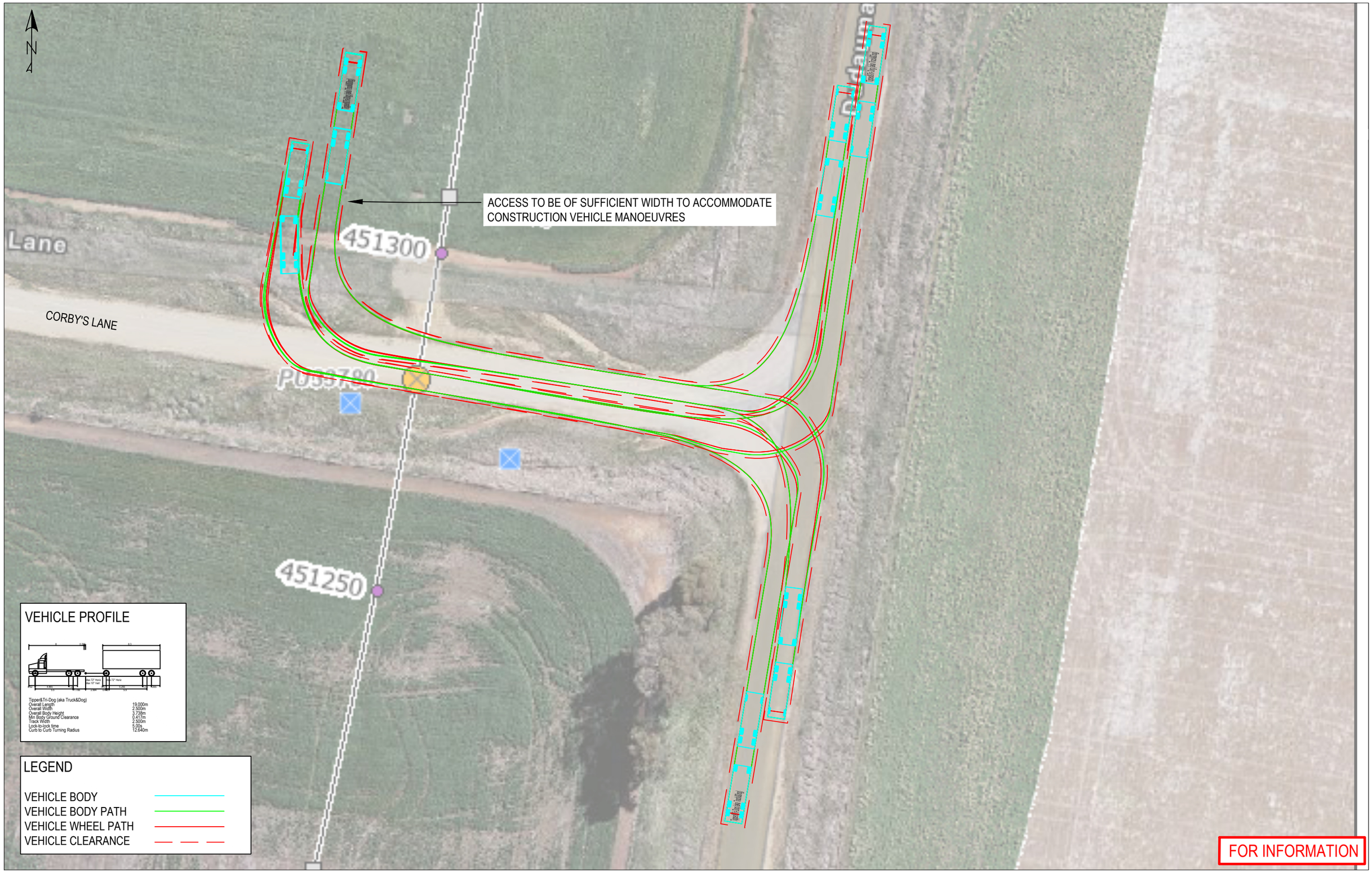


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						CO-ORDINATE SYSTEM: MGA ZONE 55	HEIGHT DATUM: -				
									PREPARED FOR: L. MCGOLDRICK		-
									ISSUE STATUS: INITIAL REVISION	SHEET No.: 24	OF SHEET	ISSUE: 1



DRAWING FILE LOCATION / NAME				DESIGN LOT CODE		DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING		PLOT DATE / TIME		PLOT BY	CLIENT
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						HEIGHT DATUM: -		***	***	***	-
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								***	***	***	SHEET No.: 25
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											ISSUE: 1

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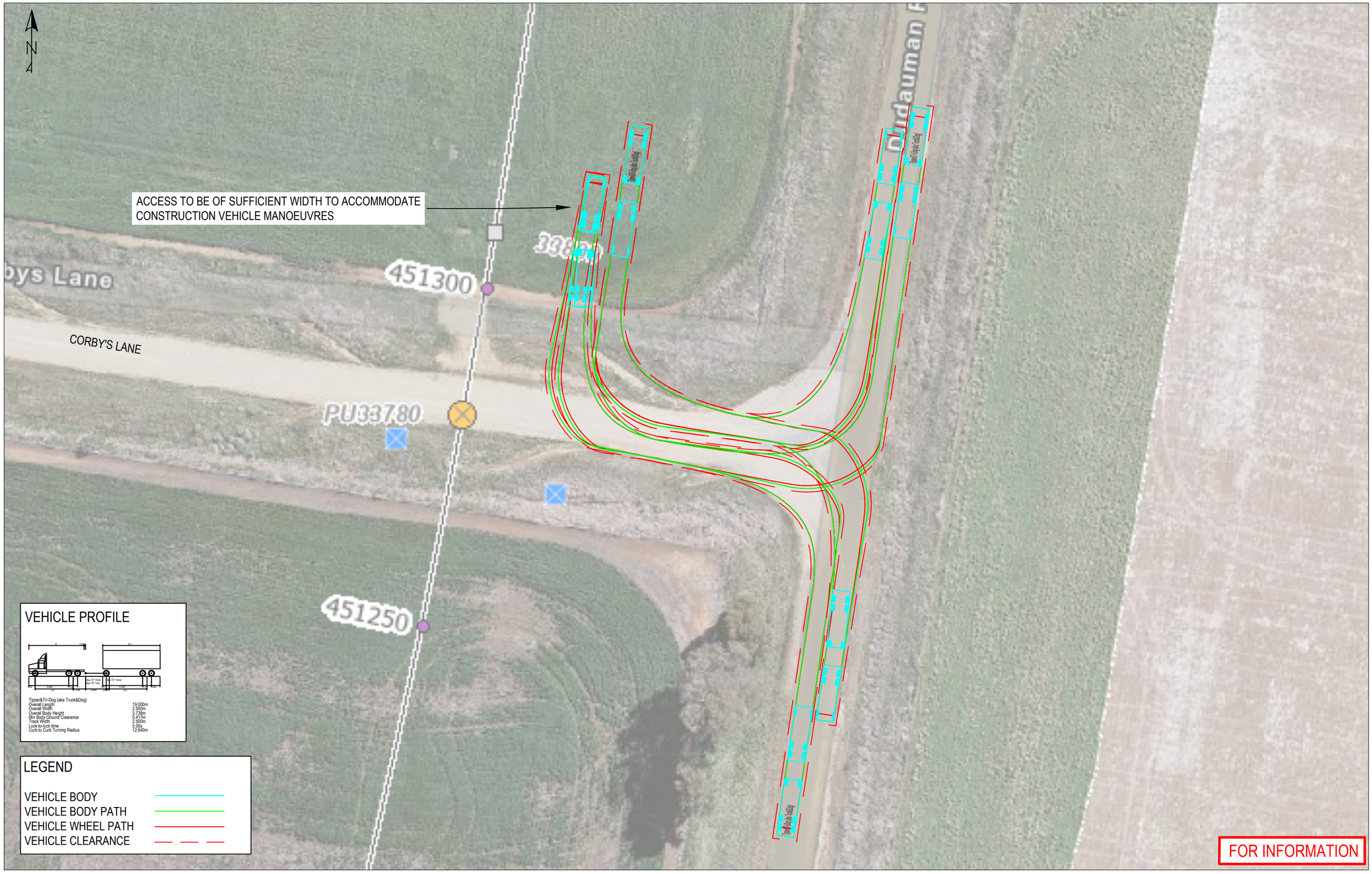


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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE	CORBY'S LANE INLAND RAIL ILLABO TO STOCKINBINGAL GATE 8.1 TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG
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								***	***	***	
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								***	***	***	
						CO-ORDINATE SYSTEM: MGA ZONE 55	HEIGHT DATUM: -				PREPARED FOR: L. MCGOLDRICK

A3

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ISSUE STATUS: INITIAL REVISION | SHEET No.: 26 | OF SHEET | ISSUE: 1



DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY	CLIENT	COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL CORBY'S LANE INLAND RAIL ILLABO TO STOCKINBINGAL GATE 8.2 TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG	A3
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						CO-ORDINATE SYSTEM MGA ZONE 55	HEIGHT DATUM -	PREPARED FOR L. MCGOLDRICK			
								ISSUE STATUS INITIAL REVISION	SHEET No. 27	OF SHEET	ISSUE 1

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Corbys Lane

CORBY'S LANE

33800

451300

PI 33780

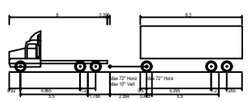
ACCESS TO BE OF SUFFICIENT WIDTH TO ACCOMMODATE CONSTRUCTION VEHICLE MANOEUVRES

451250

33700

451200

VEHICLE PROFILE



Tipper&Tri-Dog (aka Truck&Dog)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

DRAWING FILE LOCATION / NAME

DESIGN LOT CODE: -

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: -

PLOT DATE / TIME: -

PLOT BY: -

CLIENT

COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL

A3

CORBY'S LANE
INLAND RAIL
ILLABO TO STOCKINBINGAL
GATE 8.3
TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL
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CO-ORDINATE SYSTEM: MGA ZONE 55

HEIGHT DATUM: -

DRAWINGS / DESIGN PREPARED BY: case TRAFFIC & TRANSPORT

TITLE	NAME	DATE
DESIGNED	J. BUNN	14.04.25
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PREPARED FOR: L. MCGOLDRICK

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ISSUE STATUS: INITIAL REVISION

SHEET No.: 28

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ISSUE: 1



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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL
	1	14.04.25	INITIAL REVISION		

SCALES ON A3 SIZE DRAWING: 0 5 10 Meters

CO-ORDINATE SYSTEM: MGA ZONE 55 HEIGHT DATUM: -

DRAWINGS / DESIGN PREPARED BY: case TRAFFIC & TRANSPORT

TITLE	NAME	DATE
DESIGNED	J. BUNN	14.04.25
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***	***	***
***	***	***

CLIENT

PREPARED FOR: L. MCGOLDRICK

COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL
CORBY'S LANE
INLAND RAIL
ILLABO TO STOCKINBINGAL
GATE 8.4
TURNING PATH ANALYSIS - 19.0m TRUCK AND DOG

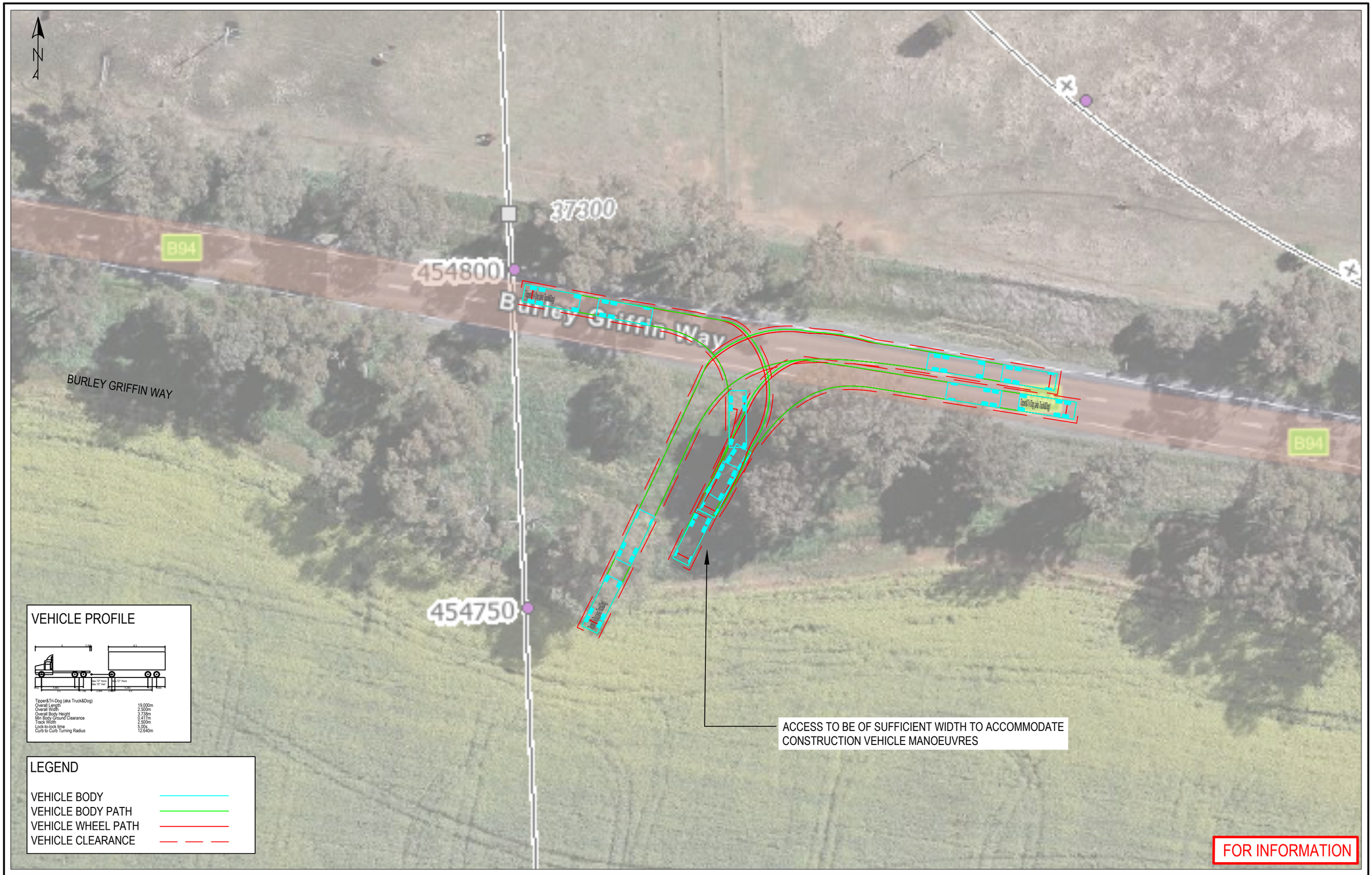
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						CO-ORDINATE SYSTEM MGA ZONE 55		PREPARED FOR L. MCGOLDRICK			
						HEIGHT DATUM -		ISSUE STATUS INITIAL REVISION	SHEET No. 30	OF SHEET	ISSUE 1



VEHICLE PROFILE

Tipper&Tri-Dog (aka Truck&Dog)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING		PLOT DATE / TIME	PLOT BY	CLIENT
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									ISSUE STATUS: INITIAL REVISION
									SHEET No.: 45
									OF SHEET: -
									ISSUE: 1

TITLE	NAME	DATE
DESIGNED	J. BUNN	14.04.25
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A3

WITT Consulting

Witt Consulting Pty Ltd
ABN: 76 102 953 515
mail@witt.com.au
witt.com.au
44 City Road Chippendale NSW 2008

Confluence ID: 1372492728

Version	Prepared By	Approved By	Date	Change Summary
1.0	SD	YW	07 May 2026	

Re: Design Variation for Access Gate Design 1
Advice Reference: WittC-John Holland-BJF-218-L-1.0

Attention **Vincent Chong**

Vincent.Chong@jhg.com.au

At the request of Vincent Chong, Design Manager, for John Holland Pty Ltd, Witt Consulting have prepared this assessment. The brief, fee acceptance and completed scope of works are summarised below in Table 1.

Client Name	John Holland Pty Ltd
Project Name	I2S Illabo to Stockinbingal Inland Rail
Project Key	BJF
Contract Reference	7688-116-01
Design Item(s)	Design Variation for Access Gate Design 1
Location	The location of the proposed design item is shown in **Appendix A**.
Other Information Documents	• *I2S - Gate 1 (Updated from Olympic Hwy to Warrens Ln).eml*
Fee Reference	WittC-John Holland-BJF-209-P-1
List of Appendices	Appendix A - Swept Path Analysis

Table 1 - Brief

1. Introduction

We understand John Holland require additional turn path assessments to be completed at the intersection of Olympic Highway and Warrens Lane, refer to Figure 1 below. Moreover, we understand the existing posted speed limit on Olympic Highway is 100 km/h, however, it is reduced to a posted speed limit of 60 km/h when approaching the level crossing.



Figure 1 - Location

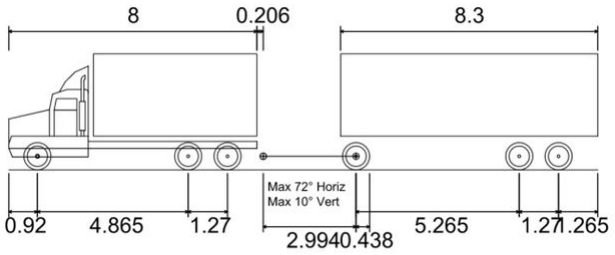
2. Design Standards, Specifications and Guidelines

We have undertaken the swept path analysis at the intersection of Olympic Highway and Warrens Lane with consideration of the following standards, specifications and guidelines.

- Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (2023)
- Austroads Design Vehicles and Turning Path Templates Guide (2023)

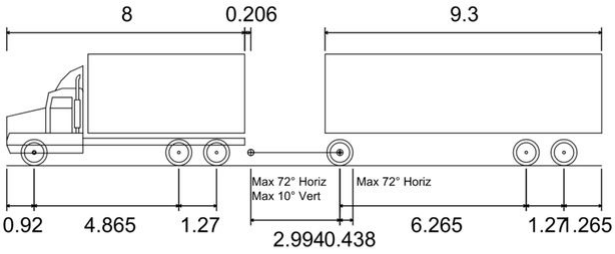
3. Swept Path Analysis

The swept path analysis has been undertaken at the intersection of Olympic Highway and Warrens Lane. Both the 19.0 m and 20.0 m truck and dog vehicle configurations were used as the critical vehicles for this location, refer to Figure 2 and 3 below. The assessments are presented in **Appendix A**.



Truck-Dog (GENERAL)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

Figure 2 - Truck and Dog (19.0 m)



Truck-Dog (PBS C3)	
Overall Length	20.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

Figure 3 - Truck and Dog (20.0 m)

Based on our review of the results, the assessments indicate that simultaneous movement for these heavy vehicles appear satisfactory at the intersection of Olympic Highway and Warrens Lane. However, we do note further down Warrens Lane adjacent to the access point of Gate 1, the existing road width reduces to approximately 4.5 m wide. Therefore, simultaneous movement will not be possible for heavy vehicles of this size within this section of the road. We recommend John Holland to implement additional traffic controls and restrict these type of heavy vehicles to single flow traffic when entering and exiting Gate 1.

Should you have any questions regarding this matter please do not hesitate to contact the undersigned.

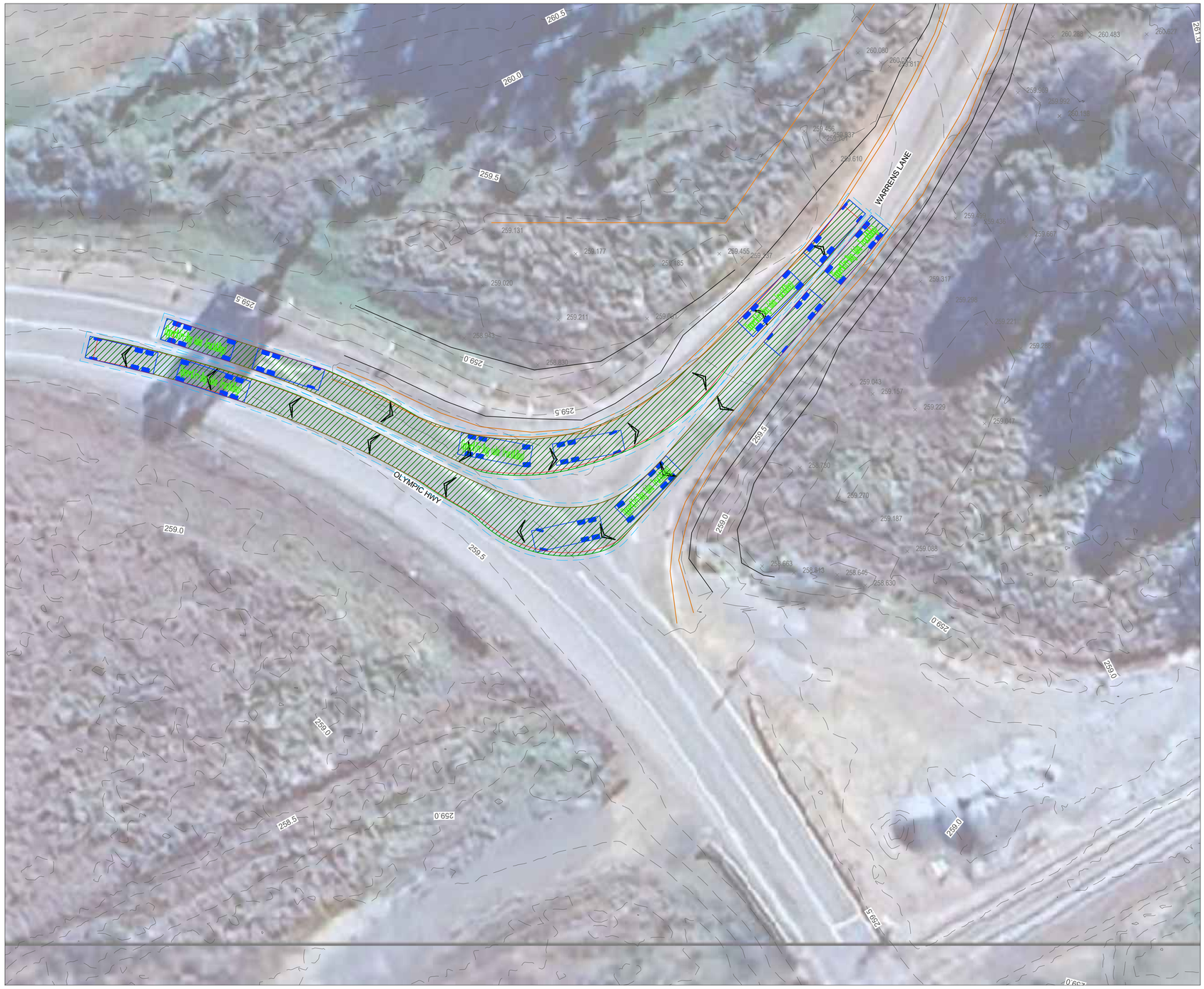
Regards,

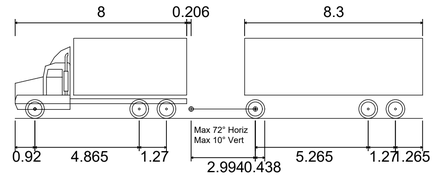


Yantao Wei
Principal Engineer, CPEng (Civil&Structural), NPER 4158657, RIW 20-00160463
Witt Consulting Pty Ltd
Mobile: 0451 850 928
Email: yantao.wei@witt.com.au

Appendix A. Swept Path Analysis







Truck-Dog (GENERAL)

Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

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COORDINATE SYSTEM: GDA

HEIGHT DATUM: AHD

SCALE: AS SHOWN

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1:250

DESIGN LOT CODE:

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PREPARED FOR:

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JOHN HOLLAND

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DESIGNED	J.YU	06/05/2026
DRG CHECK	Y.WEI	06/05/2026
DESIGN CHECK	Y.WEI	06/05/2026
PROJ/DES MNGR	S.DUJAKOVIC	06/05/2026
APPROVED	Y.WEI	06/05/2026

JUNEE SHIRE COUNCIL

72 WARRENS LANE, ILLABO

OLYMPIC HWY & WARRENS LANE INTERSECTION

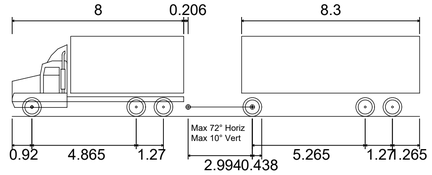
SWEPT PATH - TRUCK AND DOG (19m) - LEFT IN & RIGHT OUT

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FILE NAME: 0089 SK12.dwg

PLOT DATE & TIME: 06-May-26 9:18:20 PM





Truck-Dog (GENERAL)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

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A	CONCEPT ISSUE	J.Y. 06/05/26	Y.W. 06/05/26	Y.W. 06/05/26

COORDINATE SYSTEM: GDA
HEIGHT DATUM: AHD

SCALE: AS SHOWN
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1:250

DESIGN LOT CODE:

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DESIGN CHECK	Y.WEI	06/05/2026
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APPROVED	Y.WEI	06/05/2026

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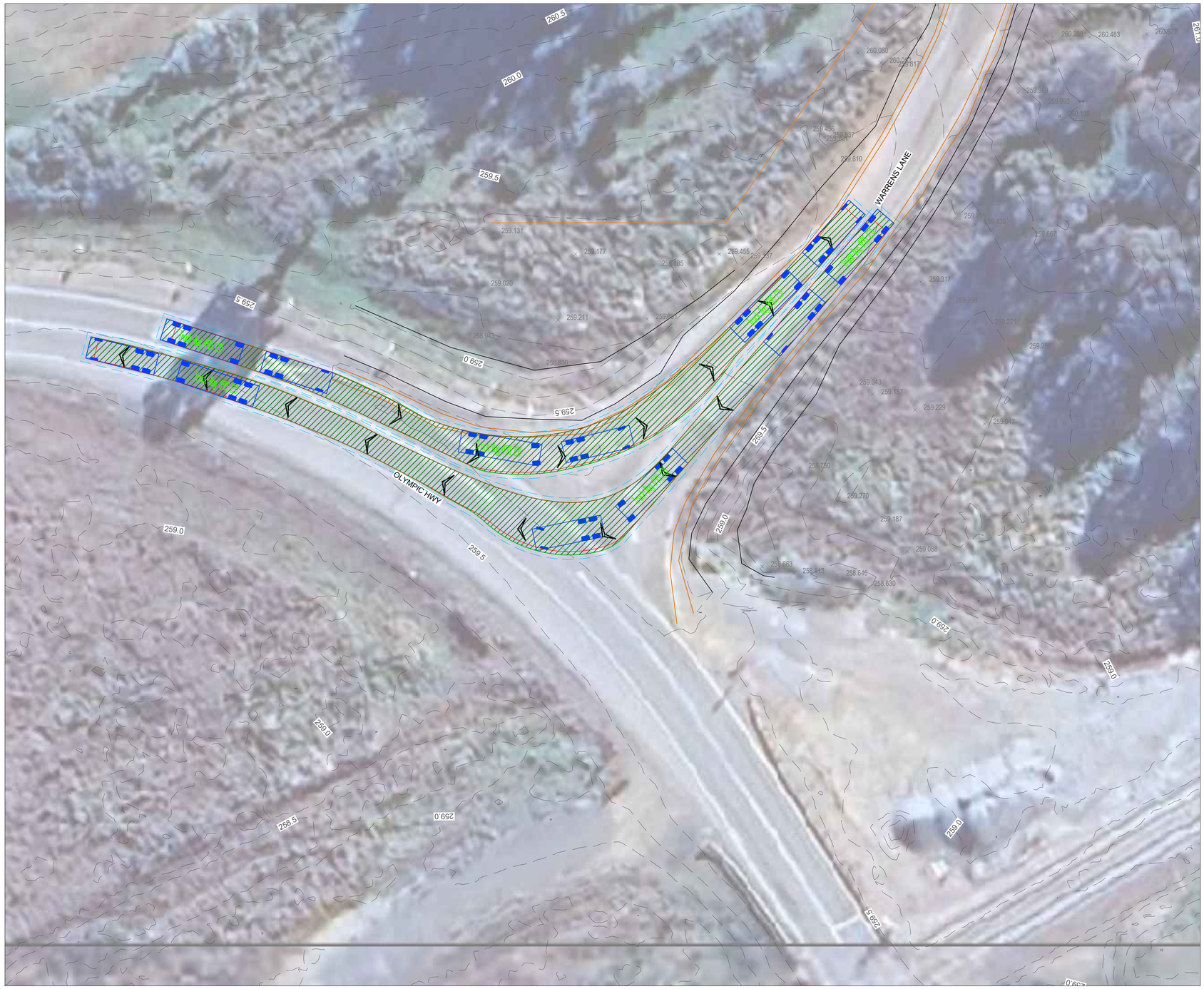
72 WARRENS LANE, ILLABO

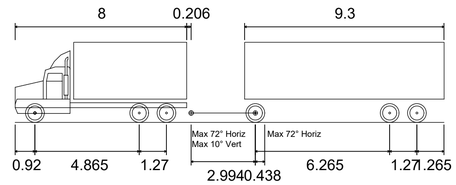
OLYMPIC HWY & WARRENS LANE INTERSECTION
SWEPT PATH - TRUCK AND DOG (19m) - RIGHT IN & LEFT OUT

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FILE NAME: 0089 SK13.dwg
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Truck-Dog (PBS C3)

Overall Length	20.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

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HEIGHT DATUM: AHD
DESIGN LOT CODE:

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1:250

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DESIGN CHECK	Y.WEI	06/05/2026
PROJ/DES MNGR	S.DUJAKOVIC	06/05/2026
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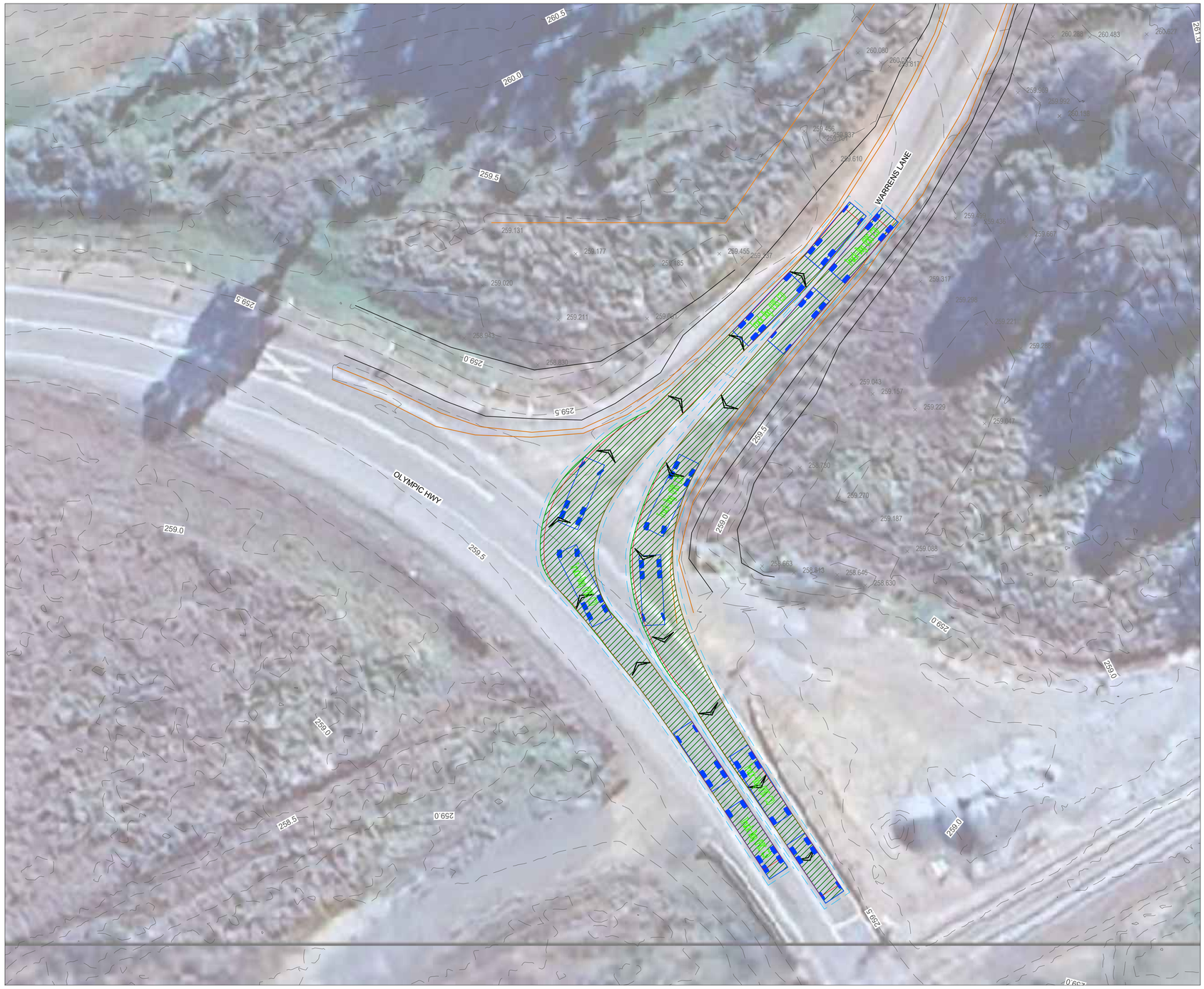
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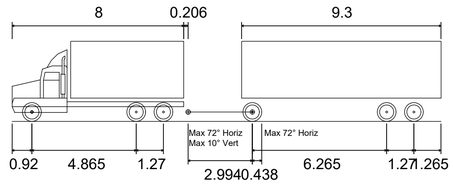
72 WARRENS LANE, ILLABO

OLYMPIC HWY & WARRENS LANE INTERSECTION
SWEPT PATH - TRUCK AND DOG (20m)- LEFT IN & RIGHT OUT

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FILE NAME: 0089 SK14.dwg
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Truck-Dog (PBS C3)	
Overall Length	20.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

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REFERENCES:
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REV	DESCRIPTION	DESIGNER INITIAL/DATE	VERIFIED INITIAL/DATE	APPROVED INITIAL/DATE
A	CONCEPT ISSUE	J.Y. 06/05/26	Y.W. 06/05/26	Y.W. 06/05/26

COORDINATE SYSTEM: GDA
HEIGHT DATUM: AHD

SCALE: AS SHOWN
0 2.5 5 7.5 10 15m
1:250

DESIGN LOT CODE:

CHECK PRINT
06/05/26 9:18 PM ZHOU

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JHG

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JOHN HOLLAND
WITT

DRAWN	J.YU	06/05/2026
DESIGNED	J.YU	06/05/2026
DRG CHECK	Y.WEI	06/05/2026
DESIGN CHECK	Y.WEI	06/05/2026
PROJ/DES MNGR	S.DUJAKOVIC	06/05/2026
APPROVED	Y.WEI	06/05/2026

WORK IN PROGRESS

JUNEE SHIRE COUNCIL

72 WARRENS LANE, ILLABO
OLYMPIC HWY & WARRENS LANE INTERSECTION
SWEPT PATH - TRUCK AND DOG (20m) - RIGHT IN & LEFT OUT

DRAWING SET No:	PART:	SHEET:	OF	A1
STATUS: CONCEPT	BRIDGE No:			©

DRG No.	REV	VER	EDMS No.	AMD No.
0089 SK15	A	A		

FILE NAME: 0089 SK15.dwg
PLOT DATE & TIME: 06-May-26 9:18:37 PM



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ModelReference				0 5 10 15 20 30m 1:500
	A CONCEPT ISSUE	J.Y. 15/04/26	Y.W. 15/04/26	Y.W. 15/04/26
	REV DESCRIPTION	DESIGNER INITIAL/DATE	VERIFIED INITIAL/DATE	APPROVED INITIAL/DATE
	COORDINATE SYSTEM: GDA	HEIGHT DATUM: AHD		DESIGN LOT CODE:

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DESIGNED	J.YU	15/04/2026
DRG CHECK	Y.WEI	15/04/2026
DESIGN CHECK	Y.WEI	15/04/2026
PROJ/DES MNGR	S.DUJAKOVIC	15/04/2026
APPROVED	Y.WEI	15/04/2026

JUNEE SHIRE COUNCIL

72 WARRENS LANE, ILLABO
GATE 1
KEY PLAN

DRAWING SET No:		PART:	SHEET: 01 OF 24		A1
STATUS: CONCEPT		BRIDGE No:			©
DRG No. 0089 SK01	REV A	VER A	EDMS No.	AMD No.	

FILE NAME: 0089 SK01.dwg
PLOT DATE & TIME: 16-Apr-26 9:01:58 PM



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ModelReference					0 2.5 5 7.5 10 15m 1:250
	A	CONCEPT ISSUE	J.Y. 15/04/26	Y.W. 15/04/26	Y.W. 15/04/26
	REV	DESCRIPTION	DESIGNER INITIAL/DATE	VERIFIED INITIAL/DATE	APPROVED INITIAL/DATE
	COORDINATE SYSTEM: GDA		HEIGHT DATUM: AHD		DESIGN LOT CODE:

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16/04/26 9:02 PM ZHOU

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DESIGNED	J.YU	15/04/2026
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DESIGN CHECK	Y.WEI	15/04/2026
PROJ/DES MNGR	S.DUJAKOVIC	15/04/2026
APPROVED	Y.WEI	15/04/2026

JUNEE SHIRE COUNCIL

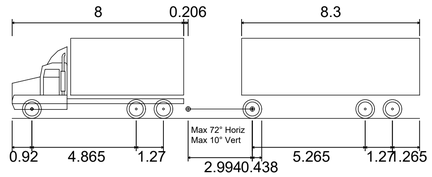
72 WARRENS LANE, ILLABO
GATE 1
GENERAL ARRANGEMENT PLAN

DRAWING SET No:	PART:	SHEET: 02 OF	A1
STATUS: CONCEPT	BRIDGE No:		Ⓒ

DRG No.	REV	VER	EDMS No.	AMD No.
0089 SK02	A	A		

FILE NAME: 0089 SK02.dwg
PLOT DATE & TIME: 16-Apr-26 9:02:05 PM





Truck-Dog (GENERAL)	
Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

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REFERENCES:

ModelReference

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REV	DESCRIPTION	DESIGNER INITIAL/DATE	VERIFIED INITIAL/DATE	APPROVED INITIAL/DATE
A	CONCEPT ISSUE	J.Y. 15/04/26	Y.W. 15/04/26	Y.W. 15/04/26

COORDINATE SYSTEM: GDA

HEIGHT DATUM: AHD

SCALE: AS SHOWN

0 2.5 5 7.5 10 15m
1:250

DESIGN LOT CODE:

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16/04/26 9:02 PM ZHOU

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DRAWN	J.YU	15/04/2026
DESIGNED	J.YU	15/04/2026
DRG CHECK	Y.WEI	15/04/2026
DESIGN CHECK	Y.WEI	15/04/2026
PROJ/DES MNGR	S.DUJAKOVIC	15/04/2026
APPROVED	Y.WEI	15/04/2026

WORK IN PROGRESS

JUNEE SHIRE COUNCIL

72 WARRENS LANE, ILLABO

GATE 1

SWEPT PATH - TRUCK AND DOG (19m)

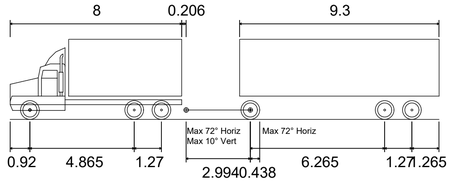
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STATUS: CONCEPT	BRIDGE No:		©

DRG No.	REV	VER	EDMS No.	AMD No.
0089 SK03	A	A		

FILE NAME: 0089 SK03.dwg

PLOT DATE & TIME: 16-Apr-26 9:02:10 PM





Truck-Dog (PBS C3)	
Overall Length	20.000m
Overall Width	2.500m
Overall Body Height	3.738m
Min Body Ground Clearance	0.417m
Track Width	2.500m
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	12.640m

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A	CONCEPT ISSUE	J.Y. 15/04/26	Y.W. 15/04/26	Y.W. 15/04/26

COORDINATE SYSTEM: GDA

HEIGHT DATUM: AHD

SCALE: AS SHOWN

0 2.5 5 7.5 10 15m
1:250

DESIGN LOT CODE:

CHECK PRINT

16/04/26 9:02 PM ZHOU

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DESIGNED	J.YU	15/04/2026
DRG CHECK	Y.WEI	15/04/2026
DESIGN CHECK	Y.WEI	15/04/2026
PROJ/DES MNGR	S.DUJAKOVIC	15/04/2026
APPROVED	Y.WEI	15/04/2026

WORK IN PROGRESS

JUNEE SHIRE COUNCIL

72 WARRENS LANE, ILLABO

GATE 1

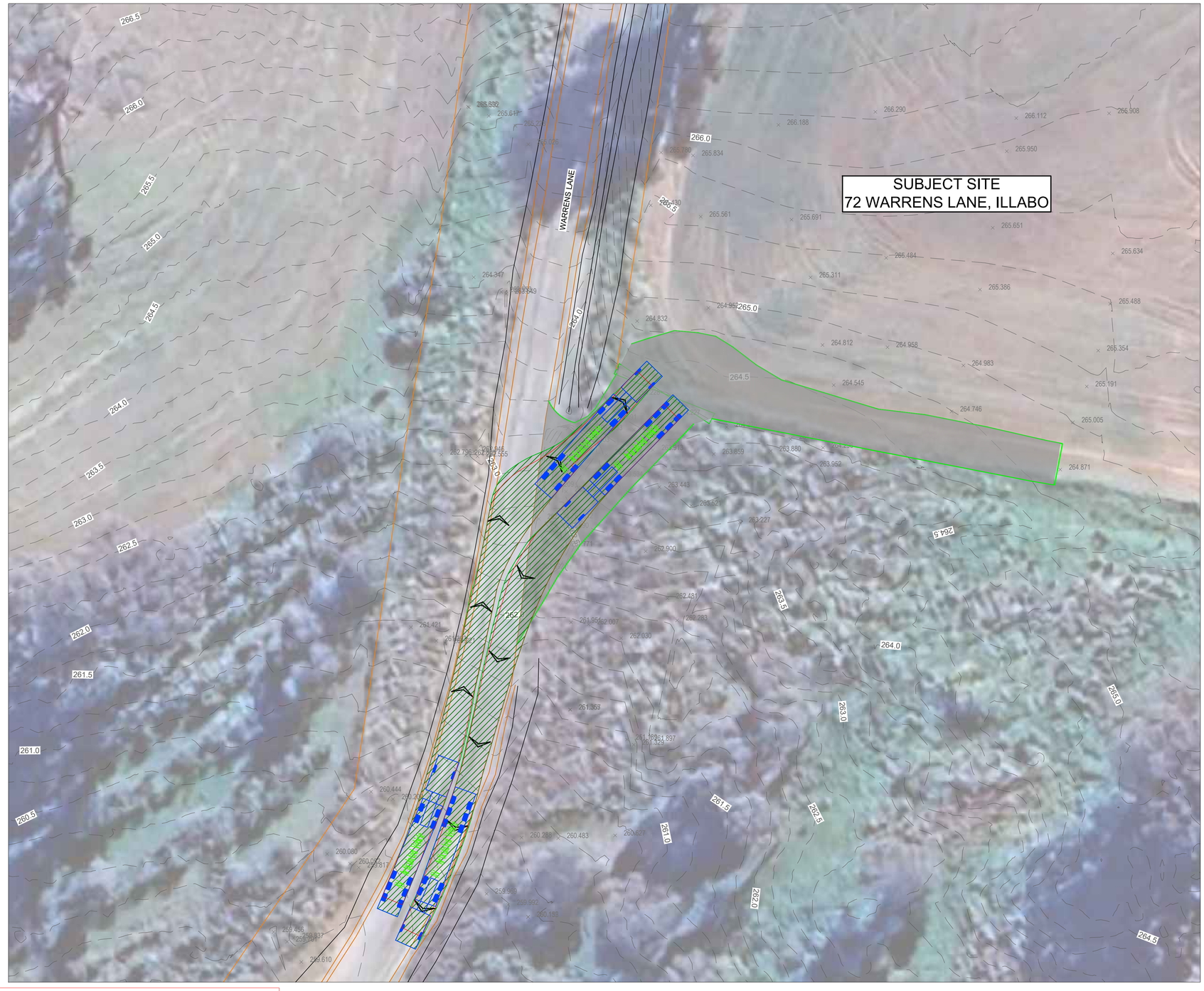
SWEPT PATH - TRUCK AND DOG (20m)

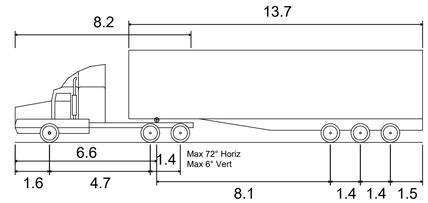
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STATUS: CONCEPT	BRIDGE No:		©

DRG No.	REV	VER	EDMS No.	AMD No.
0089 SK04	A	A		

FILE NAME: 0089 SK04.dwg

PLOT DATE & TIME: 16-Apr-26 9:02:13 PM





AV - Articulated Vehicle

Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.301m
Min Body Ground Clearance	0.418m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

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A	CONCEPT ISSUE	J.Y. 15/04/26	Y.W. 15/04/26	Y.W. 15/04/26

COORDINATE SYSTEM: GDA

HEIGHT DATUM: AHD

SCALE: AS SHOWN

0 2.5 5 7.5 10 15m
1:250

DESIGN LOT CODE:

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DESIGNED	J.YU	15/04/2026
DRG CHECK	Y.WEI	15/04/2026
DESIGN CHECK	Y.WEI	15/04/2026
PROJ/DES MNGR	S.DUJAKOVIC	15/04/2026
APPROVED	Y.WEI	15/04/2026

JUNEE SHIRE COUNCIL

72 WARRENS LANE, ILLABO

GATE 1

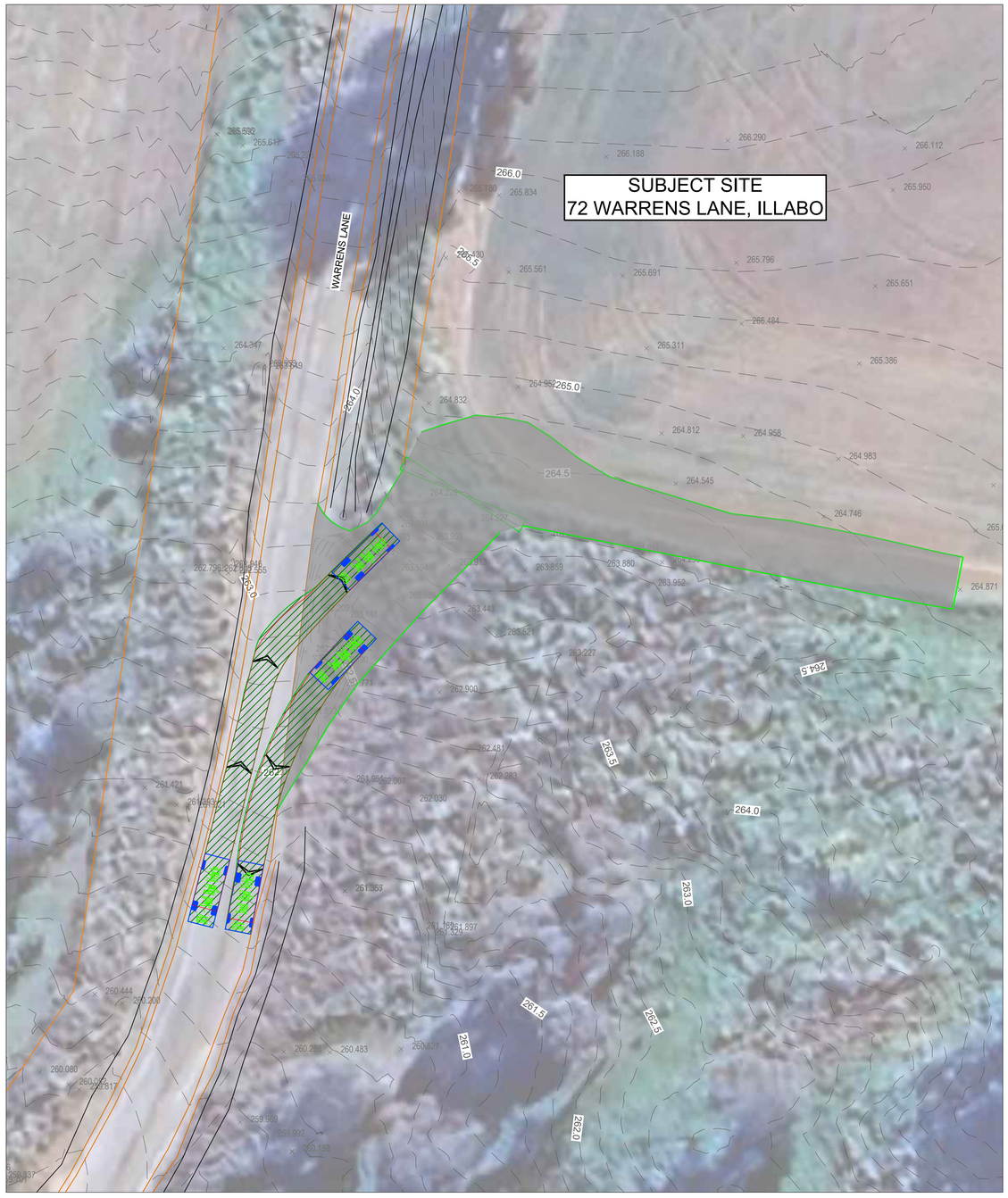
SWEPT PATH - AV (19m)

DRAWING SET No:	PART:	SHEET: 05 OF	A1
STATUS: CONCEPT	BRIDGE No:		©

DRG No.	REV	VER	EDMS No.	AMD No.
0089 SK05	A	A		

FILE NAME: 0089 SK05.dwg

PLOT DATE & TIME: 16-Apr-26 9:02:17 PM





SRV - Small Rigid Vehicle	
Overall Length	6.400m
Overall Width	2.330m
Overall Body Height	3.500m
Min Body Ground Clearance	0.398m
Track Width	2.330m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7.100m

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A	CONCEPT ISSUE	J.Y. 15/04/26	Y.W. 15/04/26	Y.W. 15/04/26

COORDINATE SYSTEM: GDA

HEIGHT DATUM: AHD

SCALE: AS SHOWN

0 2.5 5 7.5 10 15m
1:250

DESIGN LOT CODE:

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DESIGNED	J.YU	15/04/2026
DRG CHECK	Y.WEI	15/04/2026
DESIGN CHECK	Y.WEI	15/04/2026
PROJ/DES MNGR	S.DUJAKOVIC	15/04/2026
APPROVED	Y.WEI	15/04/2026

WORK IN PROGRESS

JUNEE SHIRE COUNCIL

72 WARRENS LANE, ILLABO

GATE 1

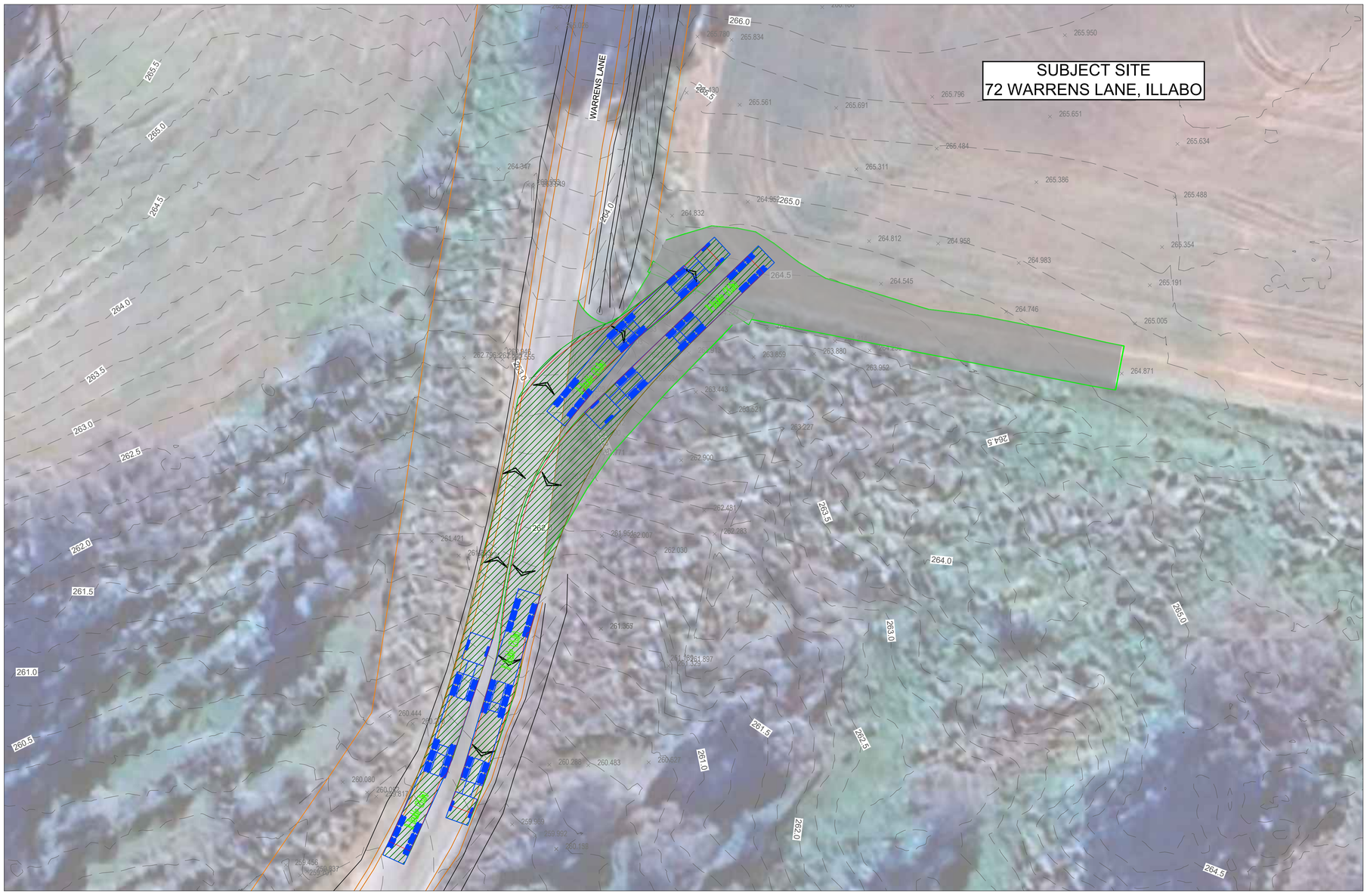
SWEPT PATH - SRV (6.4m)

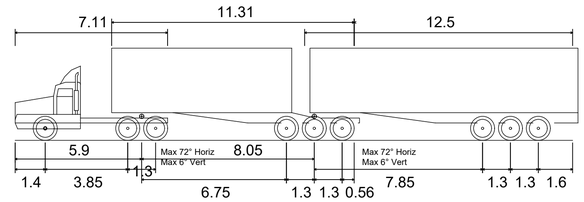
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STATUS: CONCEPT	BRIDGE No:	©

DRG No.	REV	VER	EDMS No.	AMD No.
0089 SK06	A	A		

FILE NAME: 0089 SK06.dwg

PLOT DATE & TIME: 16-Apr-26 9:02:23 PM





B-Double (26.0m)

Overall Length	26.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m

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A	CONCEPT ISSUE	J.Y. 15/04/26	Y.W. 15/04/26	Y.W. 15/04/26

COORDINATE SYSTEM: GDA

HEIGHT DATUM: AHD

SCALE: AS SHOWN

0 2.5 5 7.5 10 15m
1:250

DESIGN LOT CODE:

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16/04/26 9:02 PM ZHOU

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DESIGN CHECK	Y.WEI	15/04/2026
PROJ/DES MNGR	S.DUJAKOVIC	15/04/2026
APPROVED	Y.WEI	15/04/2026

JUNEE SHIRE COUNCIL

72 WARRENS LANE, ILLABO

GATE 1

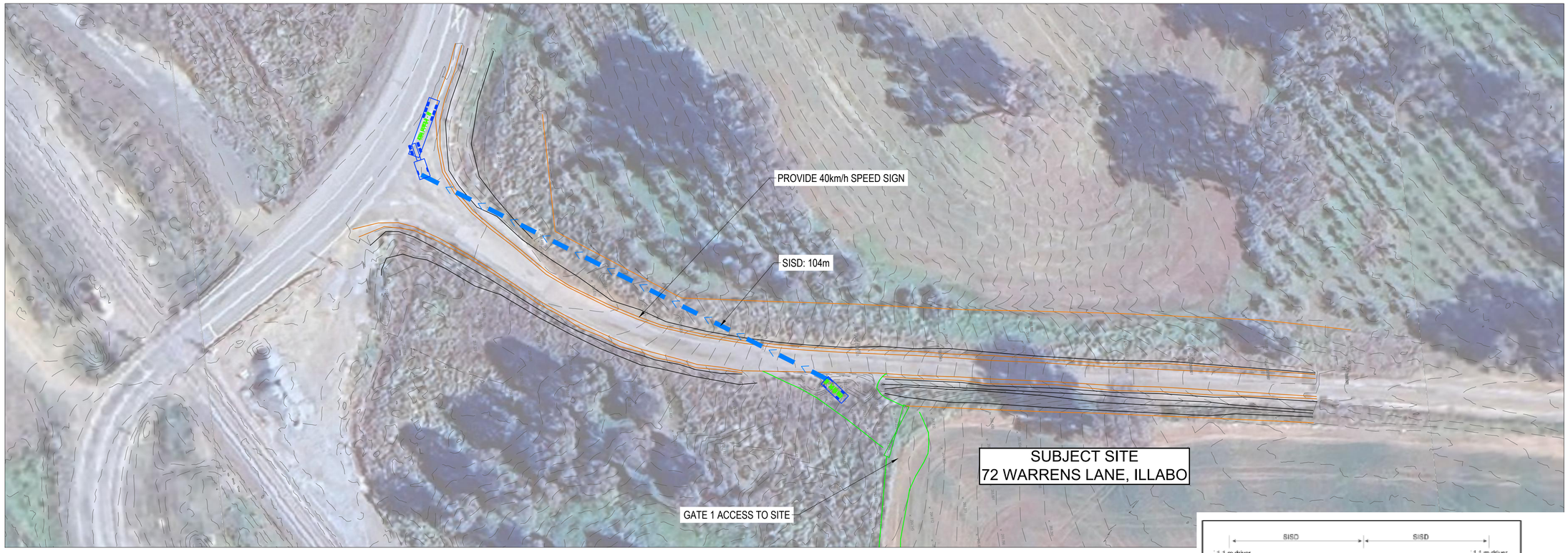
SWEPT PATH - B-DOUBLE (26m)

DRAWING SET No:	PART:	SHEET: 07 OF	A1
STATUS: CONCEPT	BRIDGE No:		©

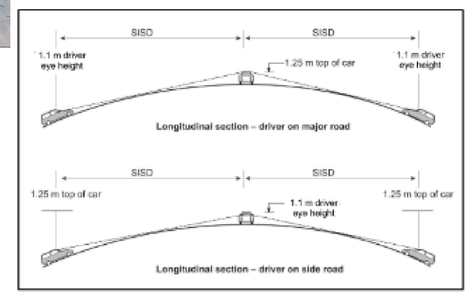
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0089 SK07	A	A		

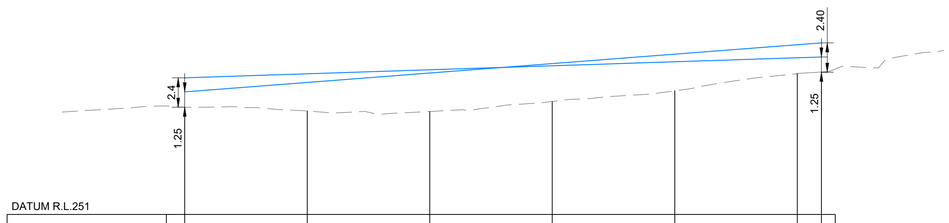
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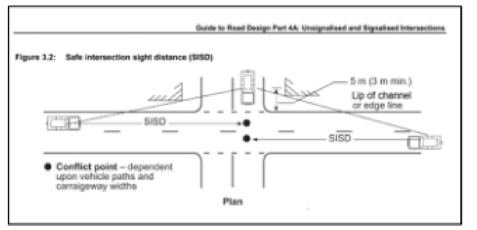


SAFE INTERSECTION SIGHT DISTANCE (SISD) - NORMAL DESIGN DOMAIN (NDD)
DESIGN SPEED = 50km/h (WITH SIGN POSTED SPEED OF 40km/h)
REQUIRED SISD = 104M (0% GRADE CORRECTION)
EMARKS = ACHIEVED





LONGITUDINAL SECTION - SISD LINES
HORIZONTAL SCALE - 1:500
VERTICAL SCALE - 1:250



Minimum SISD capability provided by the crest vertical curve size[1]	Car at night[2]	d = 0.46, h_1 = 0.65 m, h_2 = 1.25 m, observation time = 2.6 sec (car headlight to top of car)
		d = 0.46, h_1 = 1.1 m, h_2 = 0.8 m, observation time = 2.5 sec (car driver eye height to car taillight)
	Truck	d = 0.24, h_1 = 2.4 m, h_2 = 1.25 m, observation time = 3.0 sec (truck driver height to top of car)
	Truck at night[2]	d = 0.29, h_1 = 1.05 m, h_2 = 1.25 m, observation time = 1.8 sec (commercial vehicle headlight to top of car)
		d = 0.29, h_1 = 2.4 m, h_2 = 0.8 m, observation time = 3.0 sec (truck driver eye height to car taillight)

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A	CONCEPT ISSUE	J.Y. 15/04/26	Y.W. 15/04/26	Y.W. 15/04/26

COORDINATE SYSTEM: GDA
HEIGHT DATUM: AHD
DESIGN LOT CODE:

SCALE: AS SHOWN
0 5 10 15 20 30m
1:500

CHECK PRINT
16/04/26 9:02 PM ZHOU

PREPARED FOR:
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WORK IN PROGRESS

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DESIGNED	J.YU	15/04/2026
DRG CHECK	Y.WEI	15/04/2026
DESIGN CHECK	M.OET	15/04/2026
PROJ/DES MNGR	S.DUJAKOVIC	15/04/2026
APPROVED	Y.WEI	15/04/2026

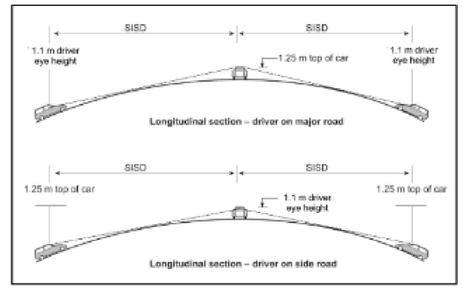
JUNEE SHIRE COUNCIL

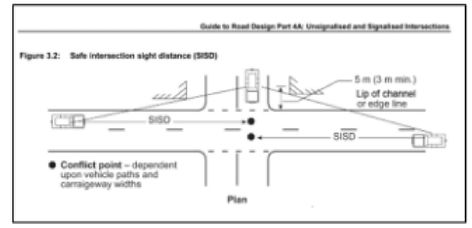
72 WARRENS LANE, ILLABO
GATE 1
SISD CHECK (RIGHT OUT)

DRAWING SET No:	PART:	SHEET: 08 OF		A1
STATUS: CONCEPT	BRIDGE No:			Ⓒ
DRG No. 0089 SK08	REV A	VER A	EDMS No.	AMD No.

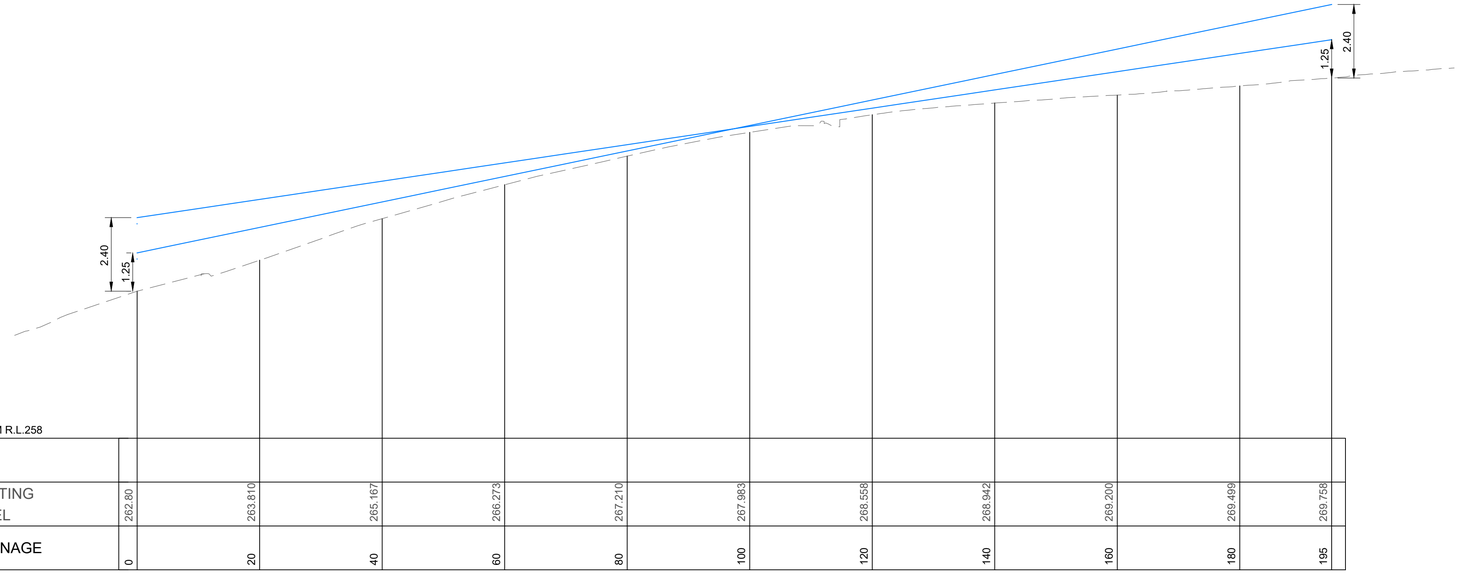
FILE NAME: 0089 SK08.dwg
PLOT DATE & TIME: 16-Apr-26 9:02:31 PM







Minimum SISD capability provided by the crest vertical curve size[1]	Car at night[2]	d = 0.46, h_1 = 0.65 m, h_2 = 1.25 m, observation time = 2.6 sec (car headlight to top of car) d = 0.46, h_1 = 1.1 m, h_2 = 0.8 m, observation time = 2.5 sec (car driver eye height to car taillight)
	Truck	d = 0.24, h_1 = 2.4 m, h_2 = 1.25 m, observation time = 3.0 sec (truck driver height to top of car)
	Truck at night[2]	d = 0.29, h_1 = 1.05 m, h_2 = 1.25 m, observation time = 1.8 sec (commercial vehicle headlight to top of car) d = 0.29, h_1 = 2.4 m, h_2 = 0.8 m, observation time = 3.0 sec (truck driver eye height to car taillight)



LONGITUDINAL SECTION - SISD NORTH
HORIZONTAL SCALE - 1:500
VERTICAL SCALE - 1:100

SAFE INTERSECTION SIGHT DISTANCE (SISD) - NORMAL DESIGN DOMAIN (NDD)
DESIGN SPEED = 70km/h (WITH SIGN POSTED SPEED OF 40km/h)
REQUIRED SISD = 195M (-6% GRADE CORRECTION)
EMARKS = ACHIEVED

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FOR REVIEW AND COMMENT

REFERENCES:
ModelReference

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REV	DESCRIPTION	DESIGNER INITIAL/DATE	VERIFIED INITIAL/DATE	APPROVED INITIAL/DATE
A	CONCEPT ISSUE	J.Y. 15/04/26	Y.W. 15/04/26	Y.W. 15/04/26

COORDINATE SYSTEM: GDA
HEIGHT DATUM: AHD

SCALE: AS SHOWN
0 5 10 15 20 30m
1:500

DESIGN LOT CODE:

CHECK PRINT
16/04/26 9:02 PM ZHOU

PREPARED FOR:
JHG

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JOHN HOLLAND
WITT

DRAWN	J.YU	15/04/2026
DESIGNED	J.YU	15/04/2026
DRG CHECK	Y.WEI	15/04/2026
DESIGN CHECK	Y.WEI	15/04/2026
PROJ/DES MNGR	S.DUJAKOVIC	15/04/2026
APPROVED	Y.WEI	15/04/2026

WORK IN PROGRESS

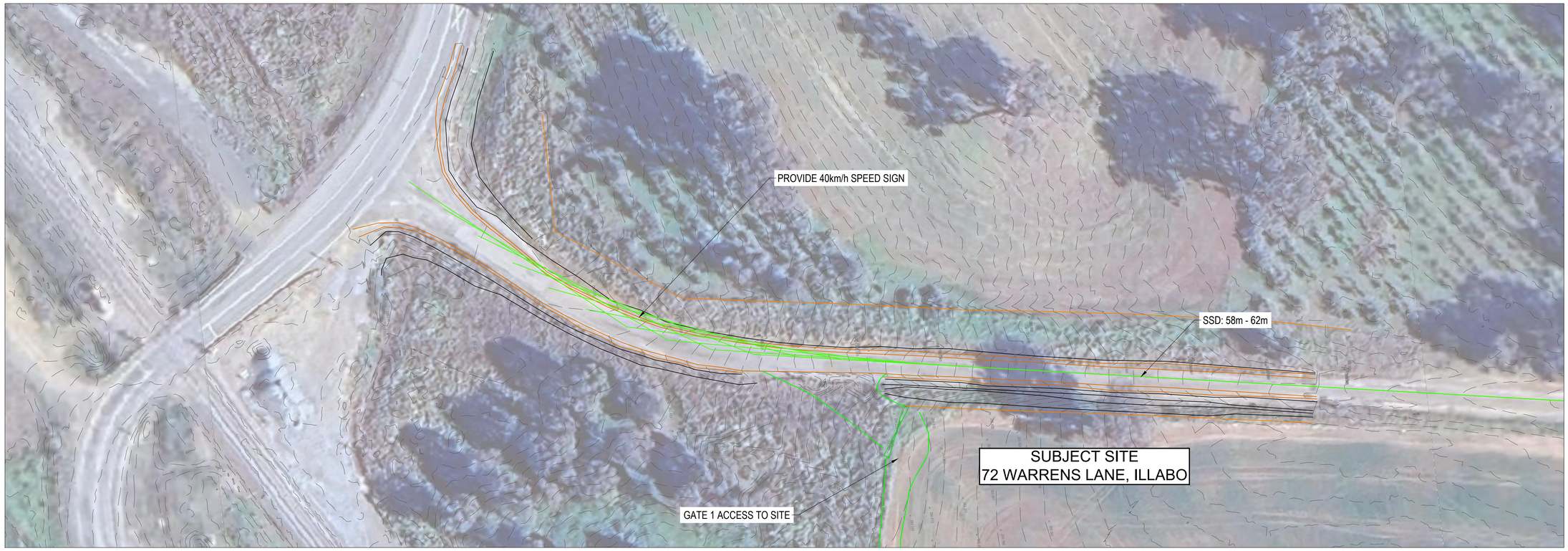
JUNEE SHIRE COUNCIL

72 WARRENS LANE, ILLABO
GATE 1
SISD CHECK (LEFT OUT)

DRAWING SET No:	PART:	SHEET: 09 OF	A1
STATUS: CONCEPT	BRIDGE No:		Ⓒ

DRG No.	REV	VER	EDMS No.	AMD No.
0089 SK09	A	A		

FILE NAME: 0089 SK09.dwg
PLOT DATE & TIME: 16-Apr-26 9:02:35 PM



STOPPING SIGHT DISTANCE (SSD) - NORMAL DESIGN DOMAIN (NDD)
DESIGN SPEED = 50km/h (WITH SIGN POSTED SPEED OF 40km/h)
REQUIRED SSD FOR TRUCK = 62m (0% GRADE CORRECTION)
REQUIRED SSD FOR TRUCK = 58m (4% GRADE CORRECTION)
EMARKS = ACHIEVED

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REFERENCES:
ModelReference

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REV	DESCRIPTION	DESIGNER INITIAL/DATE	VERIFIED INITIAL/DATE	APPROVED INITIAL/DATE
A	CONCEPT ISSUE	J.Y. 15/04/26	Y.W. 15/04/26	Y.W. 15/04/26

COORDINATE SYSTEM: GDA
HEIGHT DATUM: AHD

SCALE: AS SHOWN
0 5 10 15 20 30m
1:500

DESIGN LOT CODE:

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16/04/26 9:02 PM ZHOU

PREPARED FOR:
JHG

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JOHN HOLLAND
WITT

DRAWN	J.YU	15/04/2026
DESIGNED	J.YU	15/04/2026
DRG CHECK	Y.WEI	15/04/2026
DESIGN CHECK	Y.WEI	15/04/2026
PROJ/DES MNGR	S.DUJAKOVIC	15/04/2026
APPROVED	Y.WEI	15/04/2026

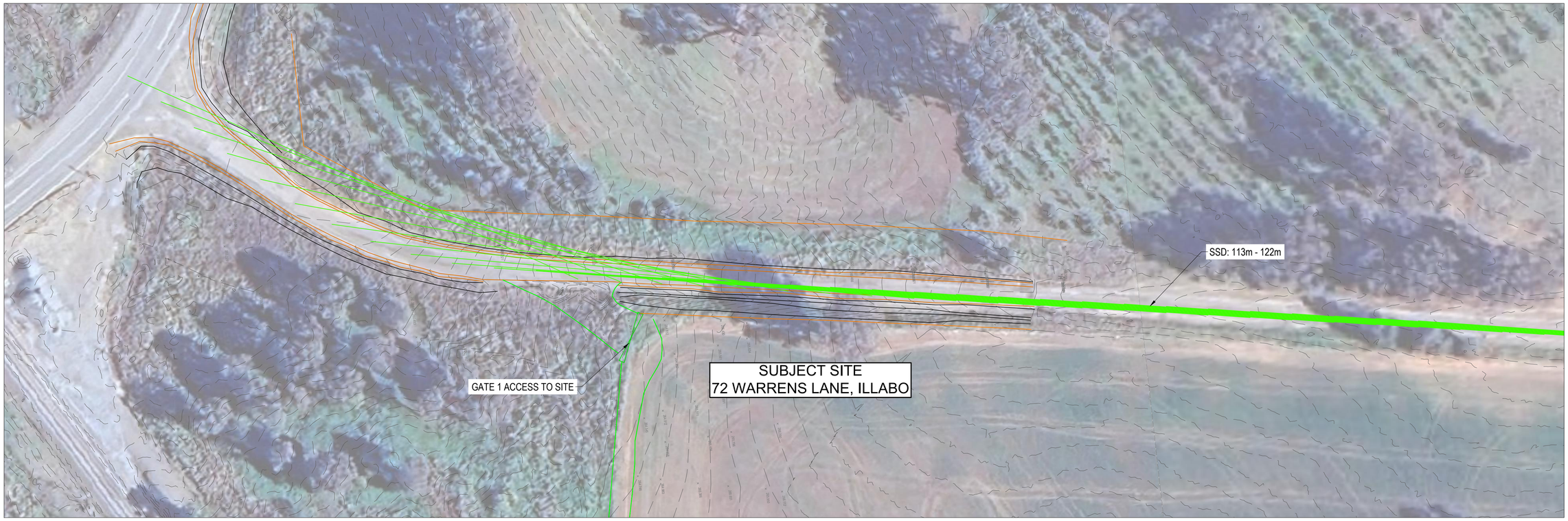
WORK IN PROGRESS

JUNEE SHIRE COUNCIL

72 WARRENS LANE, ILLABO
GATE 1
SSD CHECK (NORTH BOUND)

DRAWING SET No:	PART:	SHEET: 10 OF		A1
STATUS: CONCEPT	BRIDGE No:			©
DRG No. 0089 SK10	REV A	VER A	EDMS No.	AMD No.

FILE NAME: 0089 SK10.dwg
PLOT DATE & TIME: 16-Apr-26 9:02:39 PM



STOPPING SIGHT DISTANCE (SSD) - SOUTH BOUND
DESIGN SPEED = 70km/h
REACTION TIME = 2s
REQUIRED SSD FOR TRUCK = 122m (-6% GRADE CORRECTION)
REQUIRED SSD FOR TRUCK = 113m (-3% GRADE CORRECTION)
EMARKS = ACHIEVED

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REFERENCES:
ModelReference

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REV	DESCRIPTION	DESIGNER INITIAL/DATE	VERIFIED INITIAL/DATE	APPROVED INITIAL/DATE
A	CONCEPT ISSUE	J.Y. 15/04/26	Y.W. 15/04/26	Y.W. 15/04/26

COORDINATE SYSTEM: GDA
HEIGHT DATUM: AHD

SCALE: AS SHOWN
0 5 10 15 20 30m
1:500

DESIGN LOT CODE:

CHECK PRINT
16/04/26 9:02 PM ZHOU

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JHG

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JOHN HOLLAND
WITT

DRAWN	J.YU	15/04/2026
DESIGNED	J.YU	15/04/2026
DRG CHECK	Y.WEI	15/04/2026
DESIGN CHECK	M.WEI	15/04/2026
PROJ/DES MNGR	S.DUJAKOVIC	15/04/2026
APPROVED	Y.WEI	15/04/2026

WORK IN PROGRESS

JUNEE SHIRE COUNCIL

72 WARRENS LANE, ILLABO
GATE 1
SSD CHECK (SOUTH BOUND)

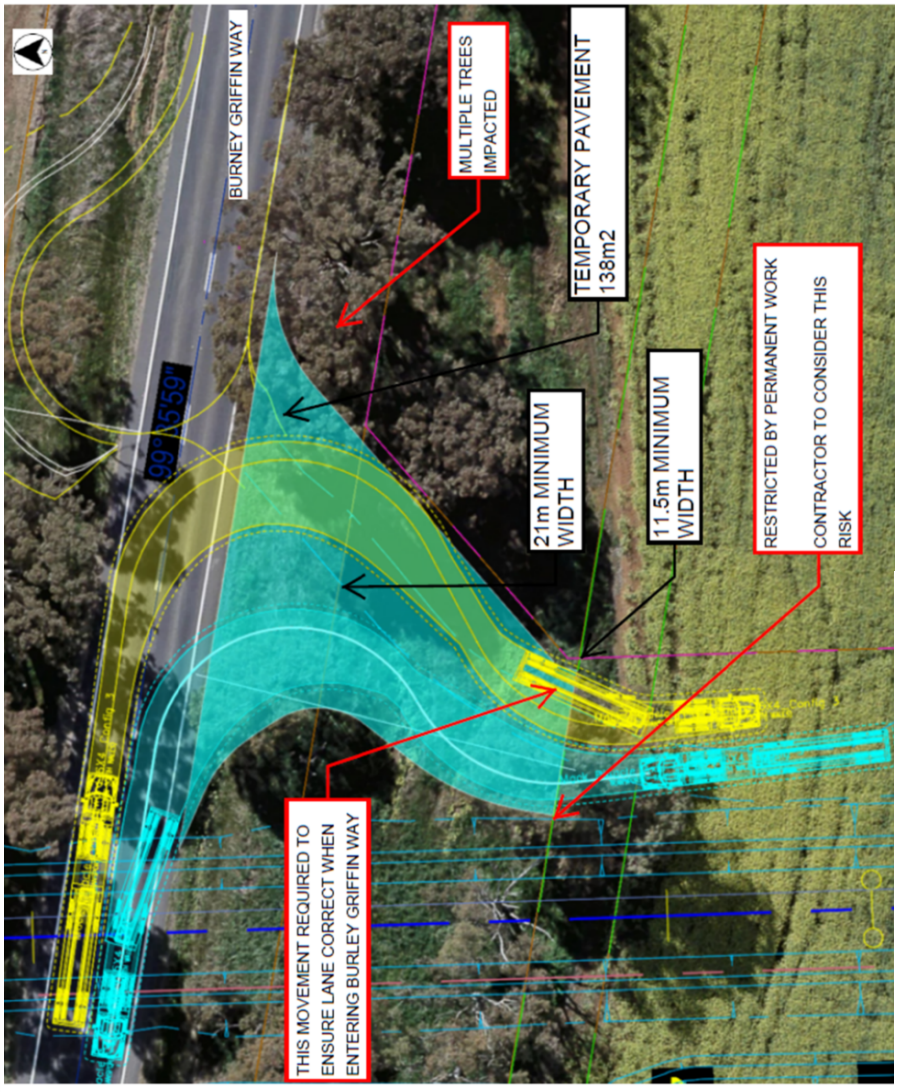
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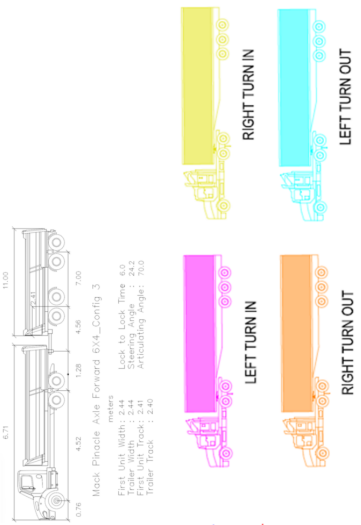
DRG No.	REV	VER	EDMS No.	AMD No.
0089 SK11	A	A		

FILE NAME: 0089 SK11.dwg
PLOT DATE & TIME: 16-Apr-26 9:02:43 PM

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Client John Holland	**Project** BJF-11	**Date**	08/07/2025
Job TW-1068 Temp Road Turnouts - BGW Hibernia St		**Sheet**	Sheet 8 of 10
		Designed	-
Description Gate 9 - TP BGW South Gate Left Out Right In		**Checked**	-



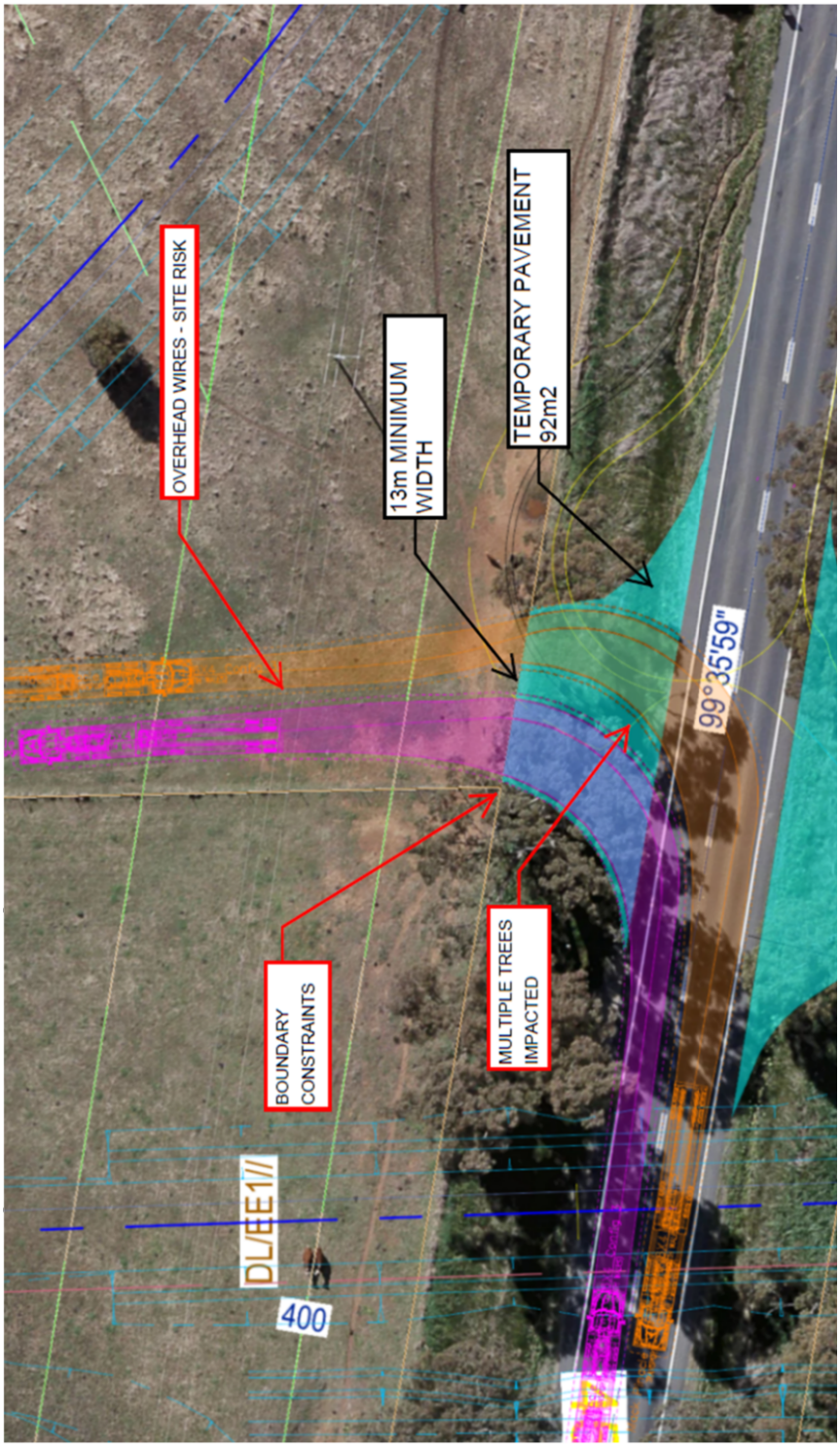


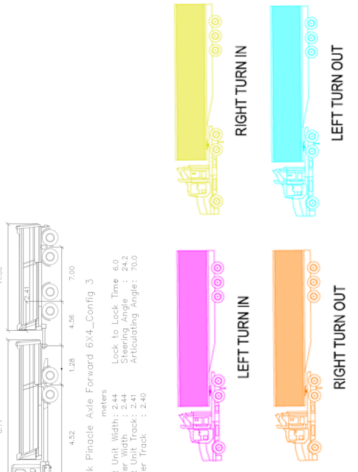
GENERAL NOTES

1. SWEPT PATH ANALYSIS HAS BEEN UNDERTAKEN IN ACCORDANCE WITH THE FOLLOWING APPLICABLE STANDARDS AND GUIDELINES:
   - AUSTROADS GUIDE TO ROAD DESIGN PART 4A: UNSIGNALISED AND SIGNALISED INTERSECTIONS
   - TFNSW SUPPLEMENTS TO AUSTROADS AND RELEVANT TECHNICAL DIRECTIONS
   - LOCAL COUNCIL ENGINEERING DESIGN GUIDELINES AND VEHICLE ACCESS STANDARDS
2. THE ASSESSMENT WAS PERFORMED USING APPROVED SWEPT PATH SIMULATION SOFTWARE: OPENROADS DESIGNER
3. DESIGN VEHICLE IS AUSTROADS 19.0M ARTICULATED VEHICLE
4. PRIORITY HAS BEEN GIVEN TO VEHICLE TURNING MOVEMENTS FROM THE MAIN ROAD, WHERE CONFLICT WITH MINOR ROAD TRAFFIC EXISTS, SWEPT PATH DESIGN HAS BEEN OPTIMISED TO:
   - MINIMISE ENCROACHMENT ON OPPOSING LANES
   - REDUCE INTERSECTION CLEARANCE TIME
   - ENSURE SAFE AND EFFICIENT HEAVY VEHICLE ACCESS UNDER CONSTRAINED GEOMETRY
5. A MINIMUM CLEARANCE OF 500MM HAS BEEN MAINTAINED BETWEEN THE VEHICLE BODY AND FIXED OBJECTS SUCH AS KERBS, RETAINING STRUCTURES, SIGNS, OR BARRIERS.
6. VERTICAL GEOMETRY, ROADSIDE INFRASTRUCTURE, AND EDGE CONSTRAINTS WERE CONSIDERED IN THE VEHICLE PATH FEASIBILITY.
7. SIGHT DISTANCE CHECKS HAVE BEEN CARRIED OUT PER:
   - AUSTROADS GUIDE TO ROAD DESIGN, PART 3: GEOMETRIC DESIGN
   - TFNSW SUPPLEMENTS TO AUSTROADS
8. THE REQUIRED STOPPING SIGHT DISTANCE (SSD) AND SAFE INTERSECTION SIGHT DISTANCE (SISD) VALUES ARE BASED ON DESIGN SPEEDS, TYPICAL DRIVER REACTION TIME OF 2.0s AND A DECELERATION RATE OF 0.36 g (3.5 m/s²).
9. MEASURED SIGHT DISTANCES ARE TAKEN FROM:
   - SSD: EYE HEIGHT = 1.1m, OBJECT HEIGHT = 0.2m
   - SISD: CAR EYE HEIGHT = 1.1m, TOP OF CAR HEIGHT= 1.25m, TRUCK EYE HEIGHT = 2.4m

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Client John Holland	**Project** BJF-11	**Date**	08/07/2025
Job TW-1068 Temp Road Turnouts - BGW Hibernia St		**Sheet**	Sheet 9 of 10
Description Gate 10 - TP BGW North Gate Left In Right Out		**Designed**	-
		Checked	-



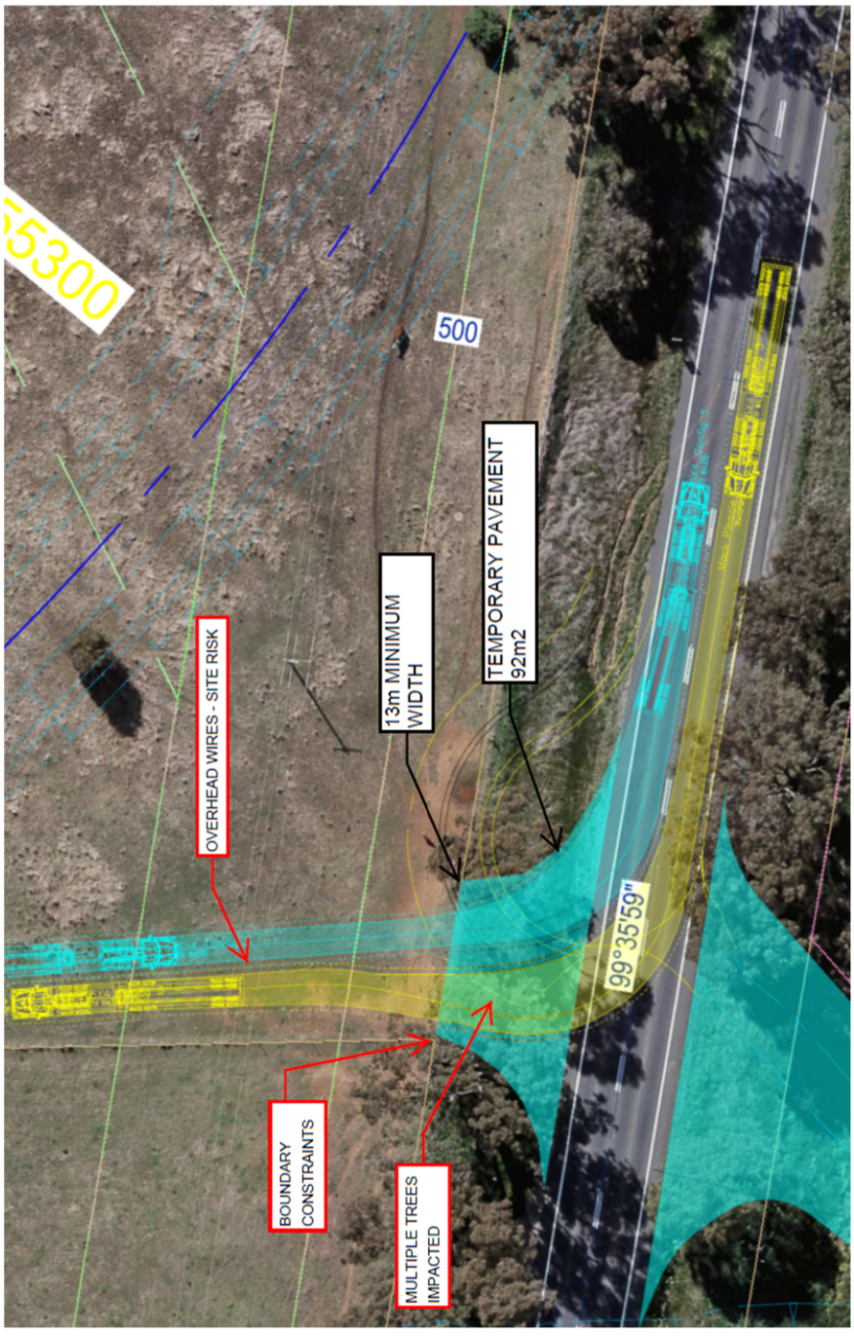


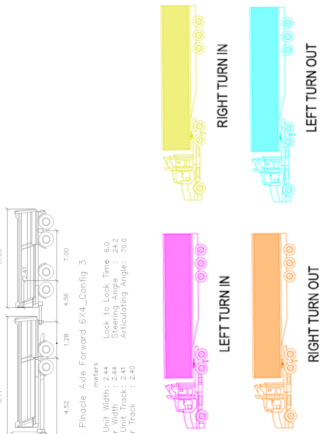
GENERAL NOTES

1. SWEPT PATH ANALYSIS HAS BEEN UNDERTAKEN IN ACCORDANCE WITH THE FOLLOWING APPLICABLE STANDARDS AND GUIDELINES:
   - AUSTROADS GUIDE TO ROAD DESIGN PART 4A: UNSIGNALISED AND SIGNALISED INTERSECTIONS
   - TFNSW SUPPLEMENTS TO AUSTROADS AND RELEVANT TECHNICAL DIRECTIONS
   - LOCAL COUNCIL ENGINEERING DESIGN GUIDELINES AND VEHICLE ACCESS STANDARDS
2. THE ASSESSMENT WAS PERFORMED USING APPROVED SWEPT PATH SIMULATION SOFTWARE: OPENROADS DESIGNER
3. DESIGN VEHICLE IS AUSTROADS 19.0M ARTICULATED VEHICLE
4. PRIORITY HAS BEEN GIVEN TO VEHICLE TURNING MOVEMENTS FROM THE MAIN ROAD.
   WHERE CONFLICT WITH MINOR ROAD TRAFFIC EXISTS, SWEPT PATH DESIGN HAS BEEN OPTIMISED TO:
   - MINIMISE ENCROACHMENT ON OPPOSING LANES
   - REDUCE INTERSECTION CLEARANCE TIME
   - ENSURE SAFE AND EFFICIENT HEAVY VEHICLE ACCESS UNDER CONSTRAINED GEOMETRY
5. A MINIMUM CLEARANCE OF 500MM HAS BEEN MAINTAINED BETWEEN THE VEHICLE BODY AND FIXED OBJECTS SUCH AS KERBS, RETAINING STRUCTURES, SIGNS, OR BARRIERS.
6. VERTICAL GEOMETRY, ROADSIDE INFRASTRUCTURE, AND EDGE CONSTRAINTS WERE CONSIDERED IN THE VEHICLE PATH FEASIBILITY
7. SIGHT DISTANCE CHECKS HAVE BEEN CARRIED OUT PER:
   - AUSTROADS GUIDE TO ROAD DESIGN, PART 3; GEOMETRIC DESIGN
   - TFNSW SUPPLEMENTS TO AUSTROADS
8. THE REQUIRED STOPPING SIGHT DISTANCE (SSD) AND SAFE INTERSECTION SIGHT DISTANCE (SISD) VALUES ARE BASED ON DESIGN SPEEDS, TYPICAL DRIVER REACTION TIME OF 2.0s AND A DECELERATION RATE OF 0.36 g (3.5 m/s²).
9. MEASURED SIGHT DISTANCES ARE TAKEN FROM:
   - SSD: EYE HEIGHT = 1.1m, OBJECT HEIGHT = 0.2m
   - SISD: CAR EYE HEIGHT = 1.1m, TOP OF CAR HEIGHT= 1.25m, TRUCK EYE HEIGHT = 2.4m

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Client John Holland	**Project** BJF-11	**Date**	08/07/2025
Job TW-1068 Temp Road Turnouts - BGW Hibernia St		**Sheet**	Sheet 10 of 10
		Designed	-
Description Gate 10 - TP BGW North Gate Left Out Right In		**Checked**	-



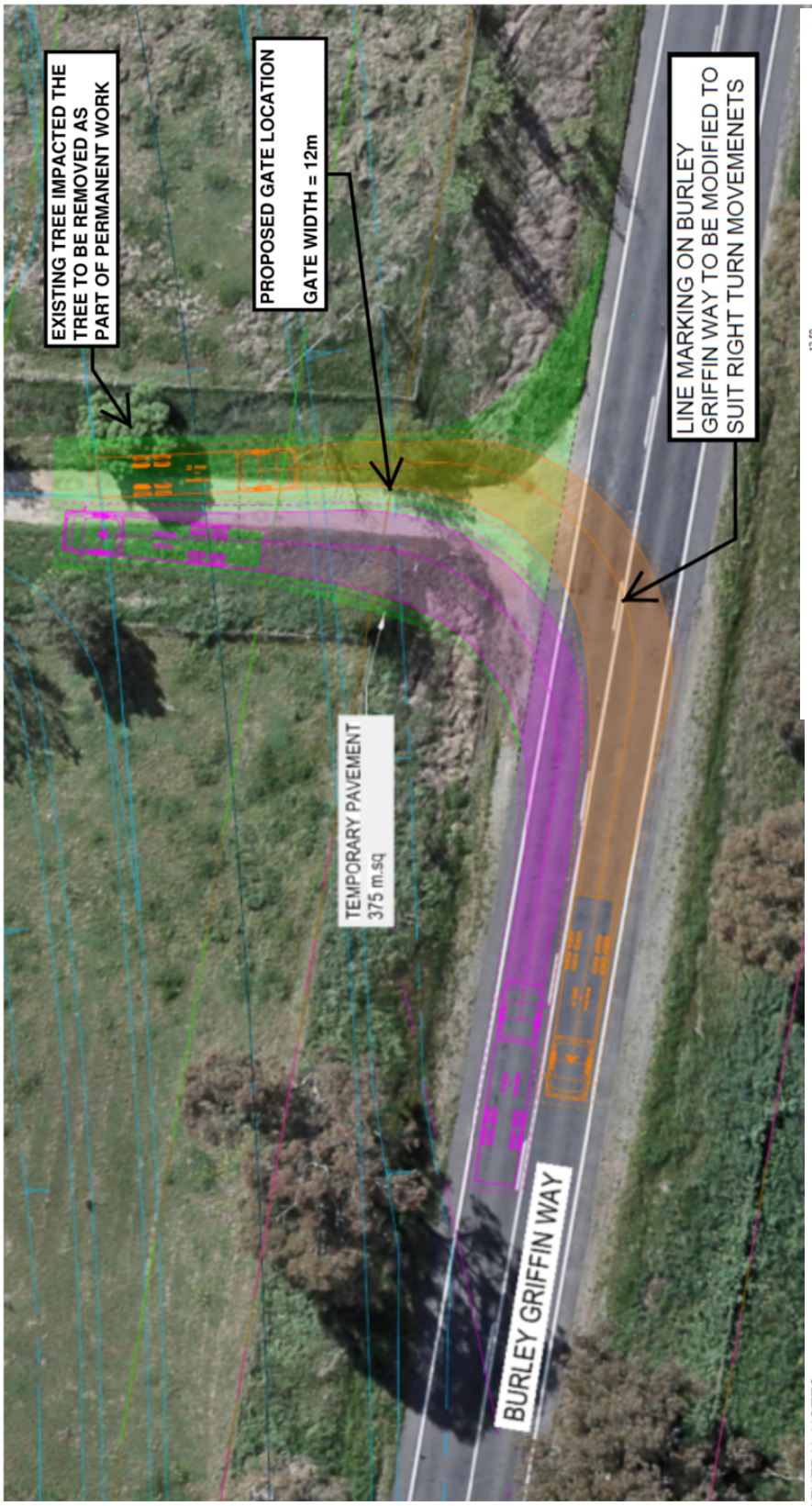


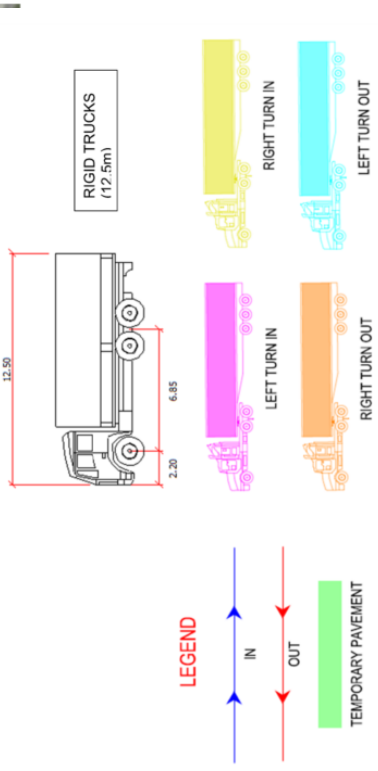
GENERAL NOTES

1. SWEPT PATH ANALYSIS HAS BEEN UNDERTAKEN IN ACCORDANCE WITH THE FOLLOWING APPLICABLE STANDARDS AND GUIDELINES:
   - AUSTROADS GUIDE TO ROAD DESIGN PART 4A: UNSIGNALISED AND SIGNALISED INTERSECTIONS
   - TFNSW SUPPLEMENTS TO AUSTROADS AND RELEVANT TECHNICAL DIRECTIONS
   - LOCAL COUNCIL ENGINEERING DESIGN GUIDELINES AND VEHICLE ACCESS STANDARDS
2. THE ASSESSMENT WAS PERFORMED USING APPROVED SWEPT PATH SIMULATION SOFTWARE: OPENROADS DESIGNER
3. DESIGN VEHICLE IS AUSTROADS 19.0M ARTICULATED VEHICLE
4. PRIORITY HAS BEEN GIVEN TO VEHICLE TURNING MOVEMENTS FROM THE MAIN ROAD, WHERE CONFLICT WITH MINOR ROAD TRAFFIC EXISTS, SWEPT PATH DESIGN HAS BEEN OPTIMISED TO:
   - MINIMISE ENCROACHMENT ON OPPOSING LANES
   - REDUCE INTERSECTION CLEARANCE TIME
   - ENSURE SAFE AND EFFICIENT HEAVY VEHICLE ACCESS UNDER CONSTRAINED GEOMETRY
5. A MINIMUM CLEARANCE OF 500MM HAS BEEN MAINTAINED BETWEEN THE VEHICLE BODY AND FIXED OBJECTS SUCH AS KERBS, RETAINING STRUCTURES, SIGNS, OR BARRIERS.
6. VERTICAL GEOMETRY, ROADSIDE INFRASTRUCTURE, AND EDGE CONSTRAINTS WERE CONSIDERED IN THE VEHICLE PATH FEASIBILITY.
7. SIGHT DISTANCE CHECKS HAVE BEEN CARRIED OUT PER:
   - AUSTROADS GUIDE TO ROAD DESIGN PART 3; GEOMETRIC DESIGN
   - TFNSW SUPPLEMENTS TO AUSTROADS
8. THE REQUIRED STOPPING SIGHT DISTANCE (SSD) AND SAFE INTERSECTION SIGHT DISTANCE (SISD) VALUES ARE BASED ON DESIGN SPEEDS, TYPICAL DRIVER REACTION TIME OF 2.0s AND A DECELERATION RATE OF 0.36 g (3.5 m/s²).
9. MEASURED SIGHT DISTANCES ARE TAKEN FROM:
   - SSD: EYE HEIGHT = 1.1m, OBJECT HEIGHT = 0.2m
   - SISD: CAR EYE HEIGHT = 1.1m, TOP OF CAR HEIGHT= 1.25m, TRUCK EYE HEIGHT = 2.4m

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Client John Holland	**Project** BJF-11	**Date**	08/07/2025
Job TW-1068 Temp Road Turnouts - BGW Hibernia St		**Sheet**	Sheet 5 of 6
		Designed	-
Description Gate 9B - TP Left In Right Out		**Checked**	-



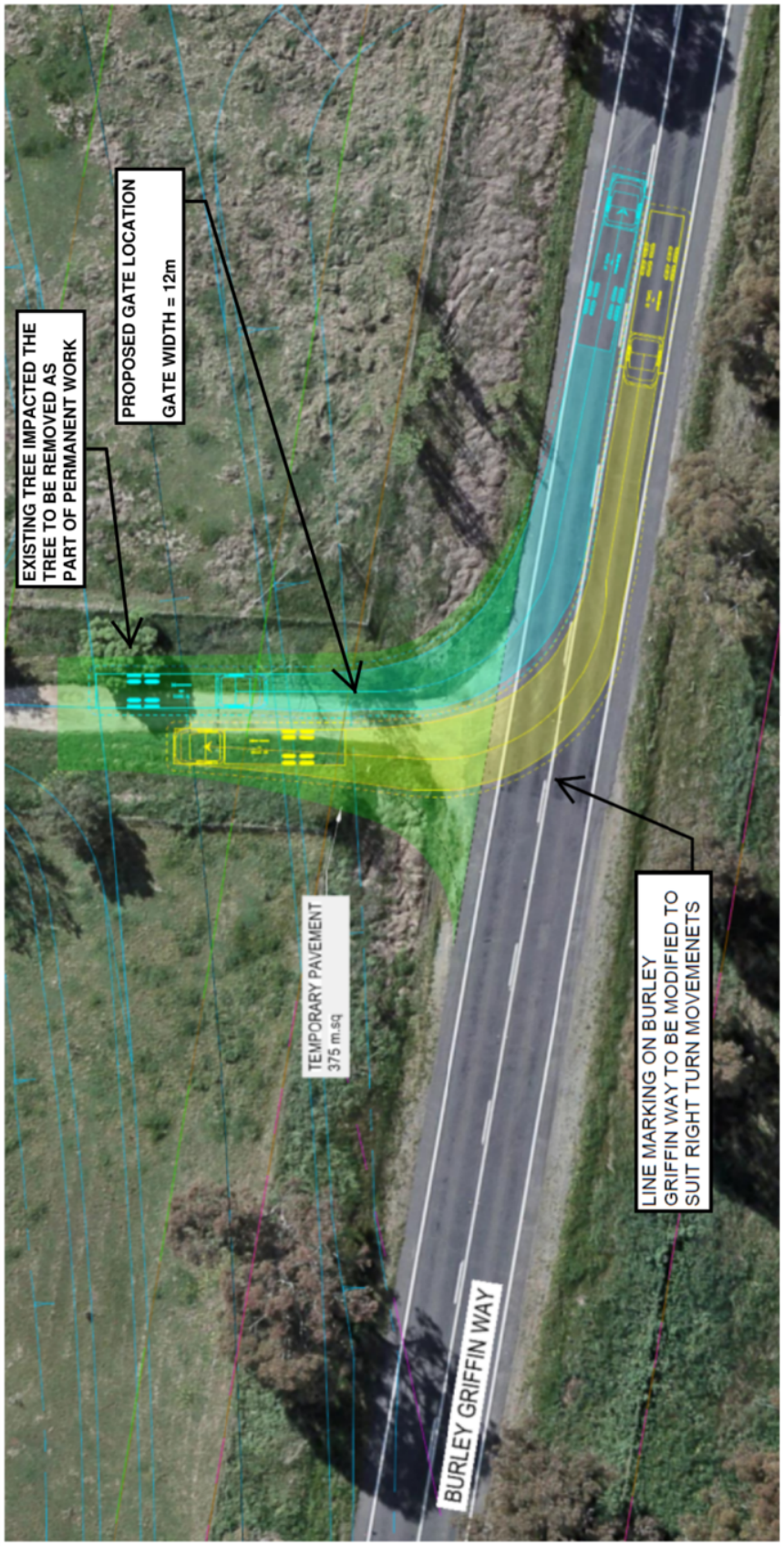


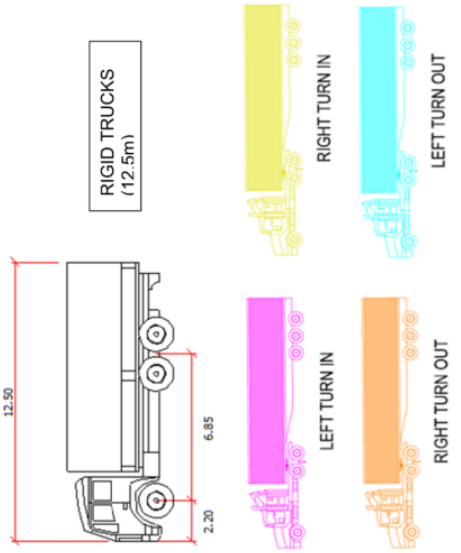
GENERAL NOTES

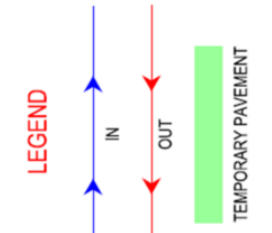
1. SWEPT PATH ANALYSIS HAS BEEN UNDERTAKEN IN ACCORDANCE WITH THE FOLLOWING APPLICABLE STANDARDS AND GUIDELI
   - AUSTROADS GUIDE TO ROAD DESIGN PART 4A: UNSIGNALISED AND SIGNALISED INTERSECTIONS
   - TFNSW SUPPLEMENTS TO AUSTROADS AND RELEVANT TECHNICAL DIRECTIONS
   - LOCAL COUNCIL ENGINEERING DESIGN GUIDELINES AND VEHICLE ACCESS STANDARDS
2. THE ASSESSMENT WAS PERFORMED USING APPROVED SWEPT PATH SIMULATION SOFTWARE: OPENROADS DESIGNER
3. DESIGN VEHICLE IS AUSTROADS 19.0M ARTICULATED VEHICLE
4. PRIORITY HAS BEEN GIVEN TO VEHICLE TURNING MOVEMENTS FROM THE MAIN ROAD,
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   - MINIMISE ENCROACHMENT ON OPPOSING LANES
   - REDUCE INTERSECTION CLEARANCE TIME
   - ENSURE SAFE AND EFFICIENT HEAVY VEHICLE ACCESS UNDER CONSTRAINED GEOMETRY
5. A MINIMUM CLEARANCE OF 500MM HAS BEEN MAINTAINED BETWEEN THE VEHICLE BODY
   AND FIXED OBJECTS SUCH AS KERBS, RETAINING STRUCTURES, SIGNS, OR BARRIERS.
6. VERTICAL GEOMETRY, ROADSIDE INFRASTRUCTURE, AND EDGE CONSTRAINTS WERE CONSIDERED IN THE VEHICLE PATH FEAS
7. SIGHT DISTANCE CHECKS HAVE BEEN CARRIED OUT PER:
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9. MEASURED SIGHT DISTANCES ARE TAKEN FROM:
   - SSD: EYE HEIGHT = 1.1m, OBJECT HEIGHT = 0.2m
   - SISD: CAR EYE HEIGHT = 1.1m, TOP OF CAR HEIGHT= 1.25m, TRUCK EYE HEIGHT = 2.4m

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Client John Holland	**Project** BJF-11	**Date**	08/07/2025
Job TW-1068 Temp Road Turnouts - BGW Hibernia St		**Sheet**	Sheet 6 of 6
		Designed	-
Description Gate 9B - TP Left Out Right In		**Checked**	-





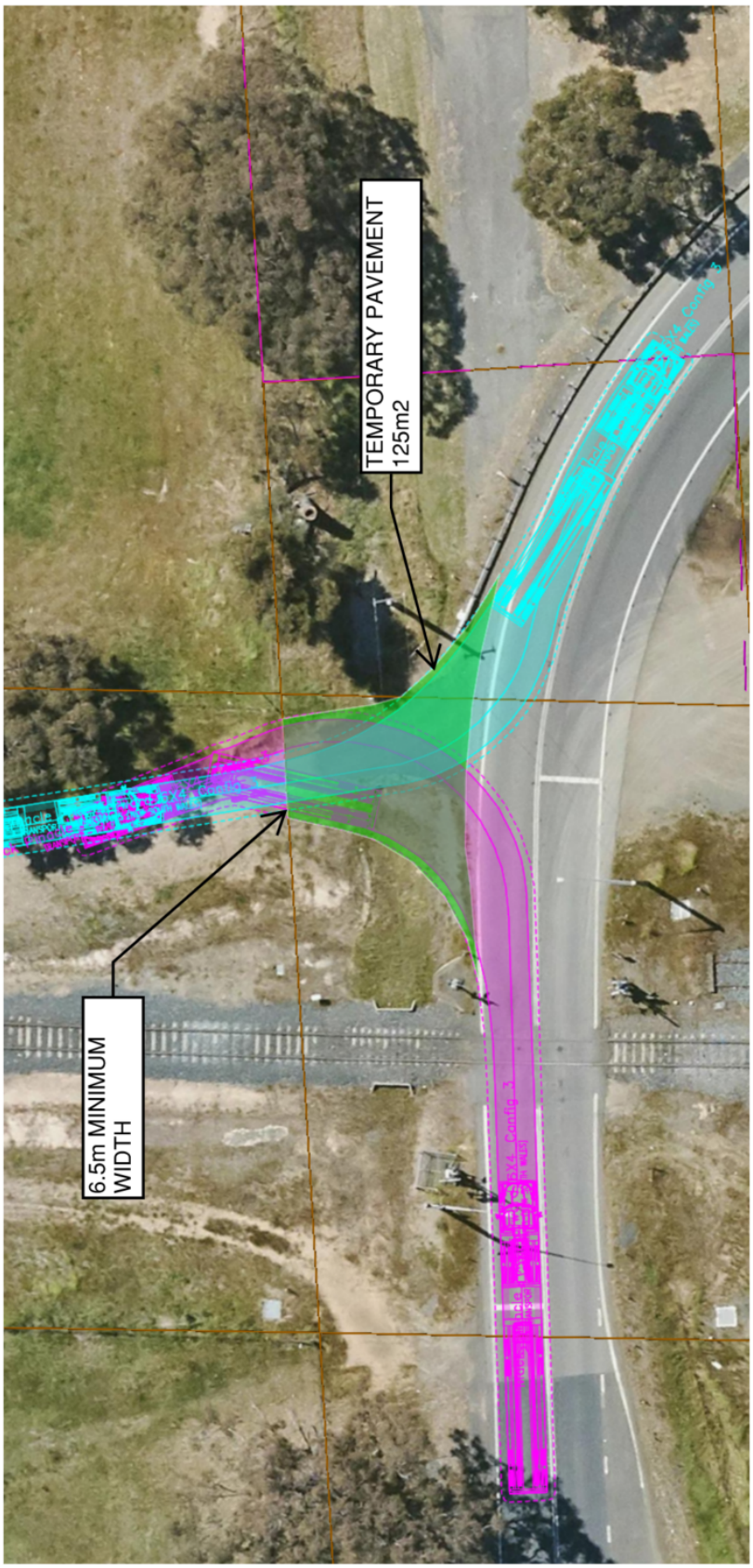


GENERAL NOTES

1. SWEPT PATH ANALYSIS HAS BEEN UNDERTAKEN IN ACCORDANCE WITH THE FOLLOWING APPLICABLE STANDARDS A
   - AUSTROADS GUIDE TO ROAD DESIGN PART 4A: UNSIGNALISED AND SIGNALISED INTERSECTIONS
   - TFNSW SUPPLEMENTS TO AUSTROADS AND RELEVANT TECHNICAL DIRECTIONS
   - LOCAL COUNCIL ENGINEERING DESIGN GUIDELINES AND VEHICLE ACCESS STANDARDS
2. THE ASSESSMENT WAS PERFORMED USING APPROVED SWEPT PATH SIMULATION SOFTWARE: OPENROADS DESIGN
3. DESIGN VEHICLE IS AUSTROADS 19.0M ARTICULATED VEHICLE
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   WHERE CONFLICT WITH MINOR ROAD TRAFFIC EXISTS, SWEPT PATH DESIGN HAS BEEN OPTIMISED TO:
   - MINIMISE ENCROACHMENT ON OPPOSING LANES
   - REDUCE INTERSECTION CLEARANCE TIME
   - ENSURE SAFE AND EFFICIENT HEAVY VEHICLE ACCESS UNDER CONSTRAINED GEOMETRY
5. A MINIMUM CLEARANCE OF 500MM HAS BEEN MAINTAINED BETWEEN THE VEHICLE BODY AND FIXED OBJECTS SUCH AS KERBS, RETAINING STRUCTURES, SIGNS, OR BARRIERS.
6. VERTICAL GEOMETRY, ROADSIDE INFRASTRUCTURE, AND EDGE CONSTRAINTS WERE CONSIDERED IN THE VEHICLE
7. SIGHT DISTANCE CHECKS HAVE BEEN CARRIED OUT PER:
   - AUSTROADS GUIDE TO ROAD DESIGN, PART 3; GEOMETRIC DESIGN
   - TFNSW SUPPLEMENTS TO AUSTROADS
8. THE REQUIRED STOPPING SIGHT DISTANCE (SSD) AND SAFE INTERSECTION SIGHT DISTANCE (SISD) VALUES ARE BA
   DESIGN SPEEDS, TYPICAL DRIVER REACTION TIME OF 2.0s AND A DECELERATION RATE OF 0.36 g (3.5 m/s²).
9. MEASURED SIGHT DISTANCES ARE TAKEN FROM:
   - SSD; EYE HEIGHT = 1.1m, OBJECT HEIGHT = 0.2m
   - SISD; CAR EYE HEIGHT = 1.1m, TOP OF CAR HEIGHT= 1.25m, TRUCK EYE HEIGHT = 2.4m

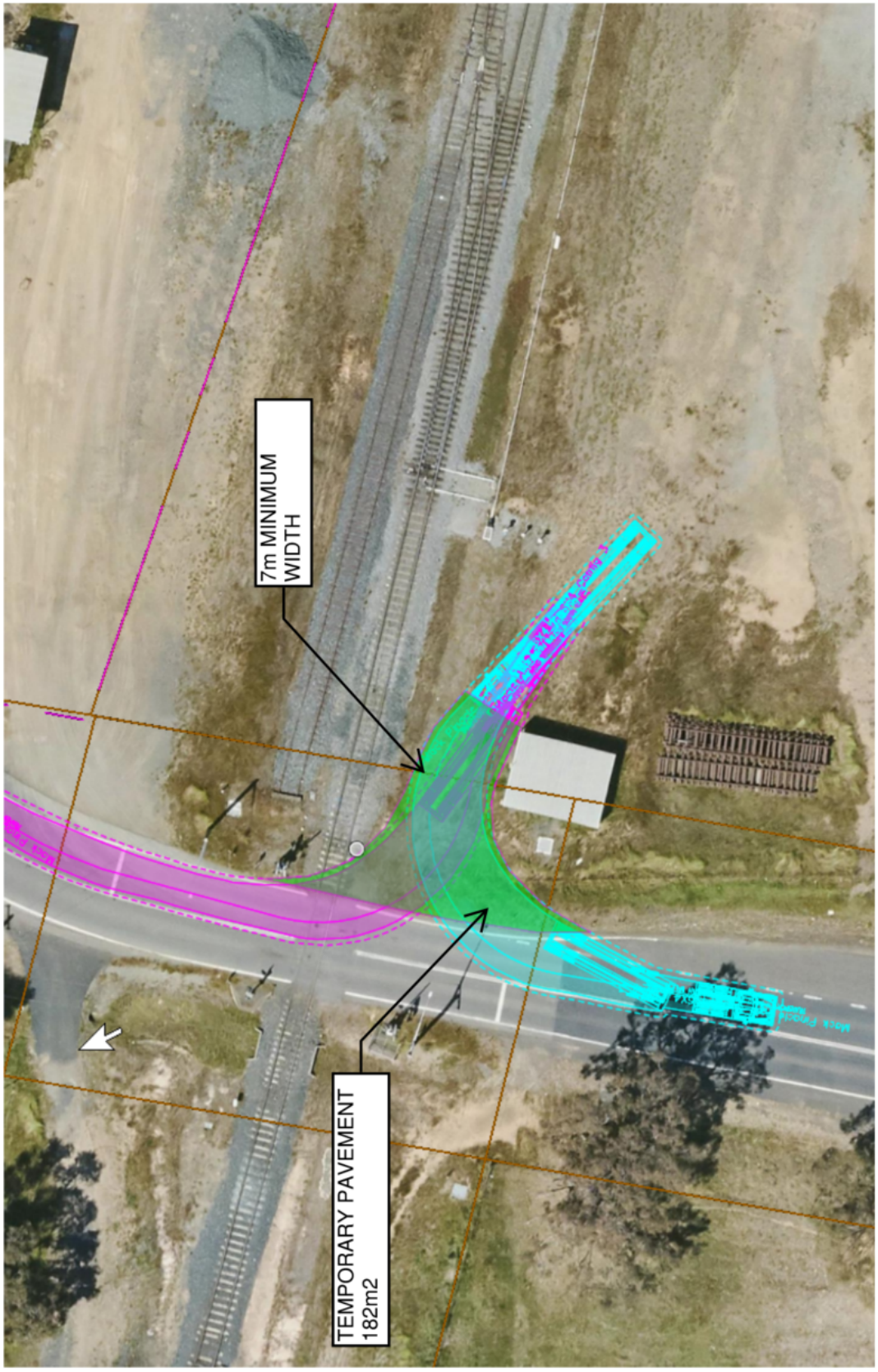
Witt Consulting Pty Ltd
ABN 76 102 953 515
witt.com.au

Client John Holland	**Project** BJF-11	**Date**	08/07/2025
Job TW-1068 Temp Road Turnouts - BGW Hibernia St		**Sheet**	Sheet 8 of 15
		Designed	-
Description Gate 10A - TP		**Checked**	-



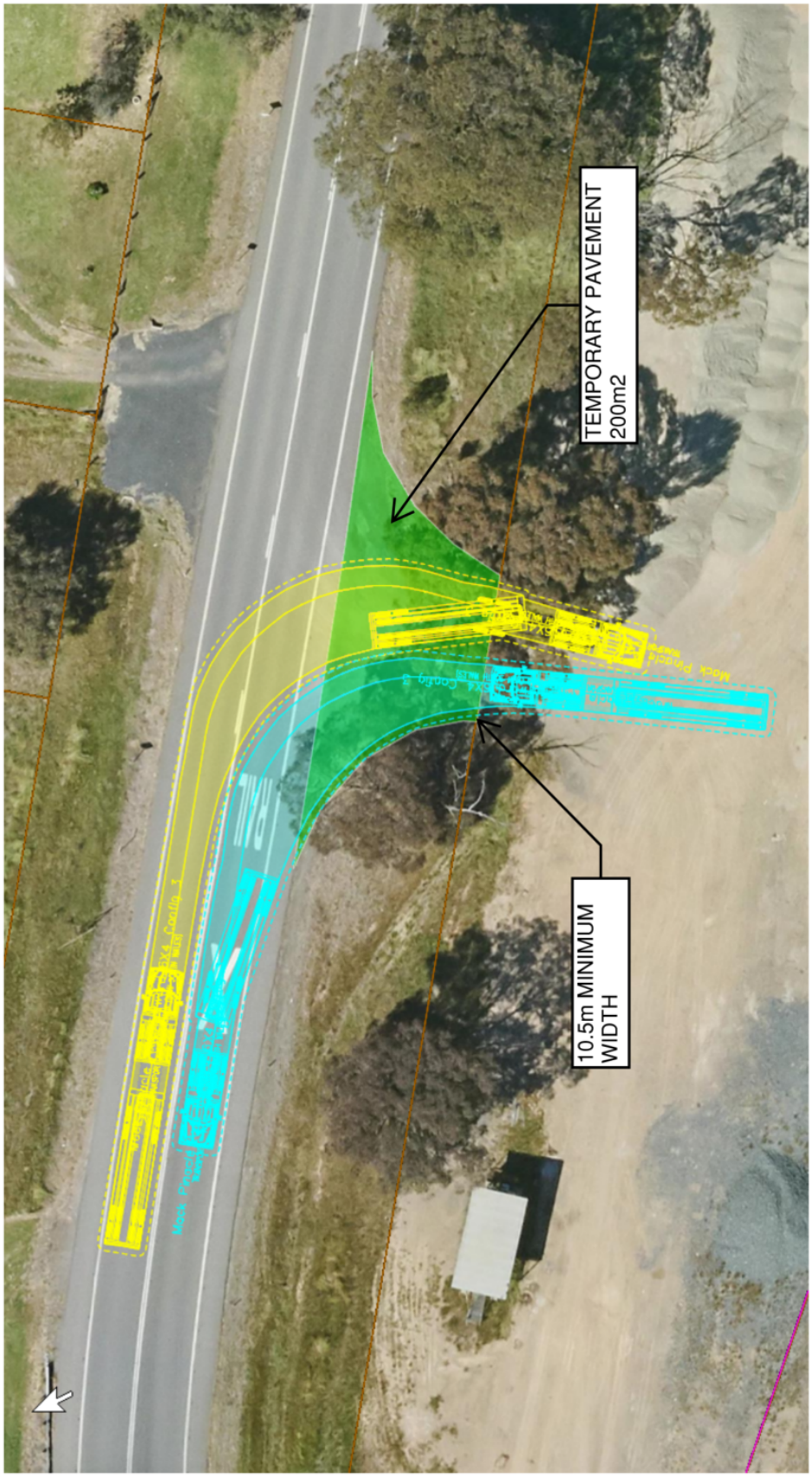
Witt Consulting Pty Ltd
ABN 76 102 953 515
witt.com.au

Client John Holland	**Project** BJF-11	**Date**	08/07/2025
Job TW-1068 Temp Road Turnouts - BGW Hibernia St		**Sheet**	Sheet 11 of 15
		Designed	-
Description Gate 10D - TP		**Checked**	-



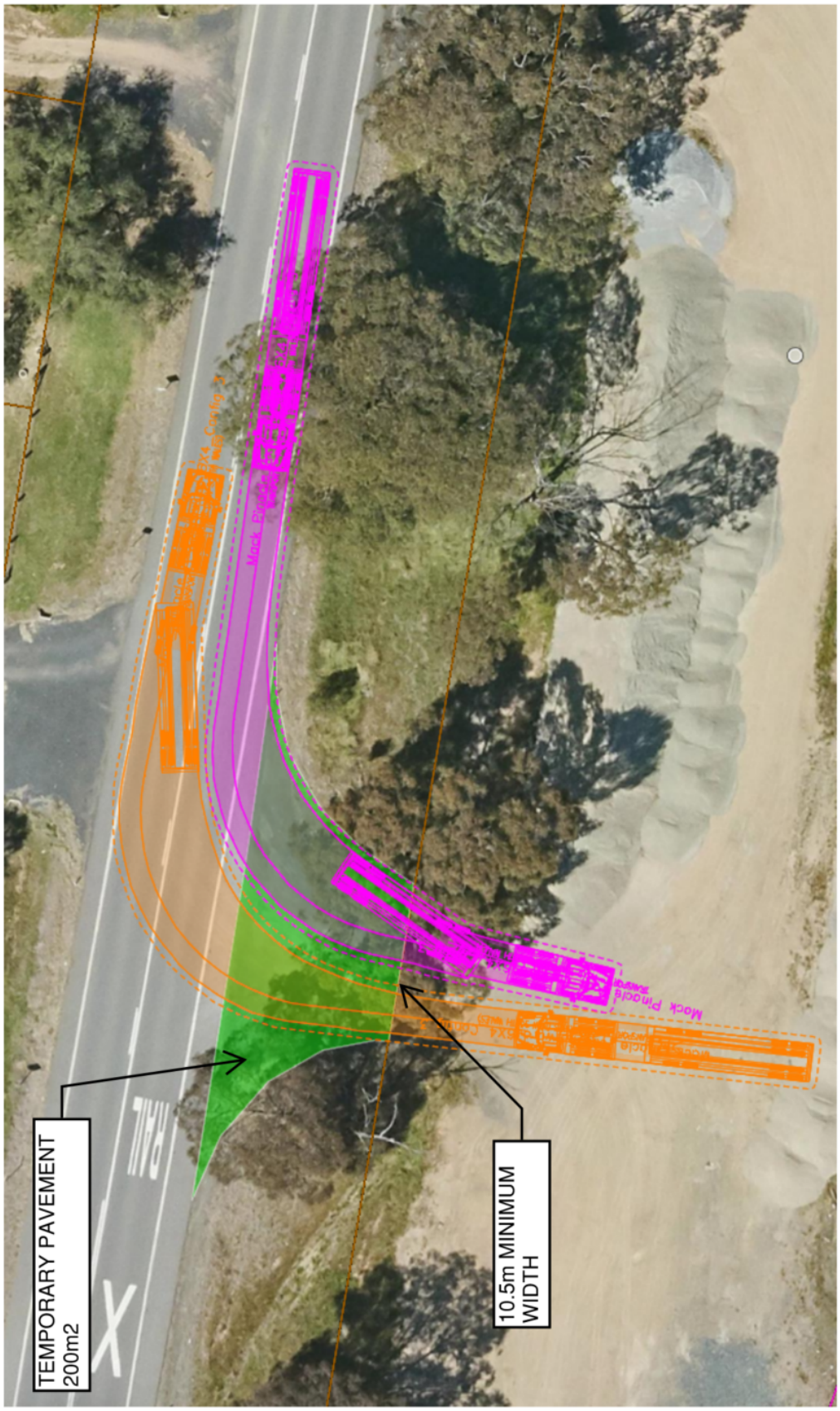
Witt Consulting Pty Ltd
ABN 76 102 953 515
witt.com.au

Client John Holland	**Project** BJF-11	**Date**	08/07/2025
Job TW-1068 Temp Road Turnouts - BGW Hibernia St		**Sheet**	Sheet 12 of 15
		Designed	-
Description Gate 10E - TP		**Checked**	-



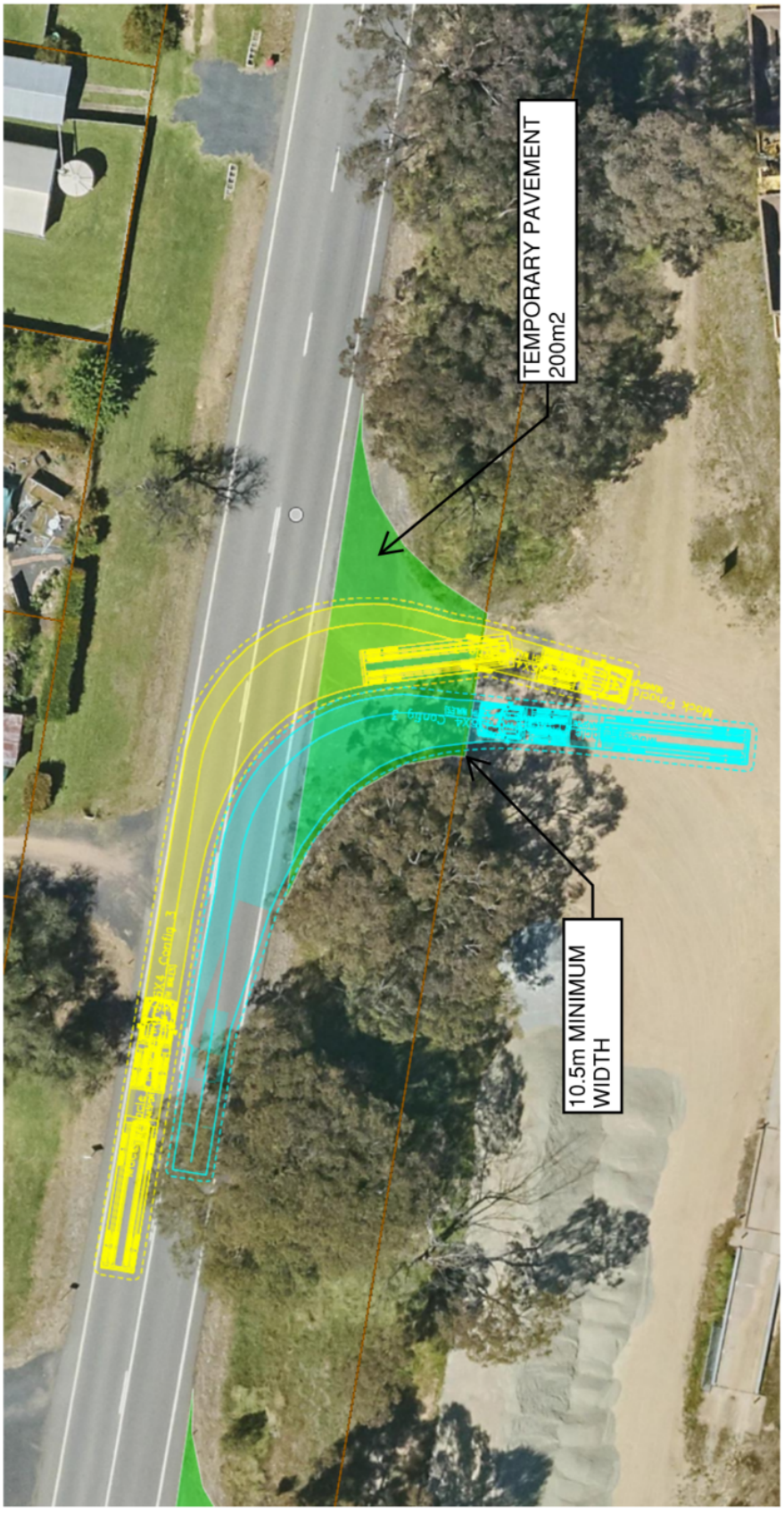
Witt Consulting Pty Ltd
ABN 76 102 953 515
witt.com.au

Client John Holland	**Project** BJF-11	**Date**	08/07/2025
Job TW-1068 Temp Road Turnouts - BGW Hibernia St		**Sheet**	Sheet 13 of 15
		Designed	-
Description Gate 10F - TP		**Checked**	-



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ABN 76 102 953 515
witt.com.au

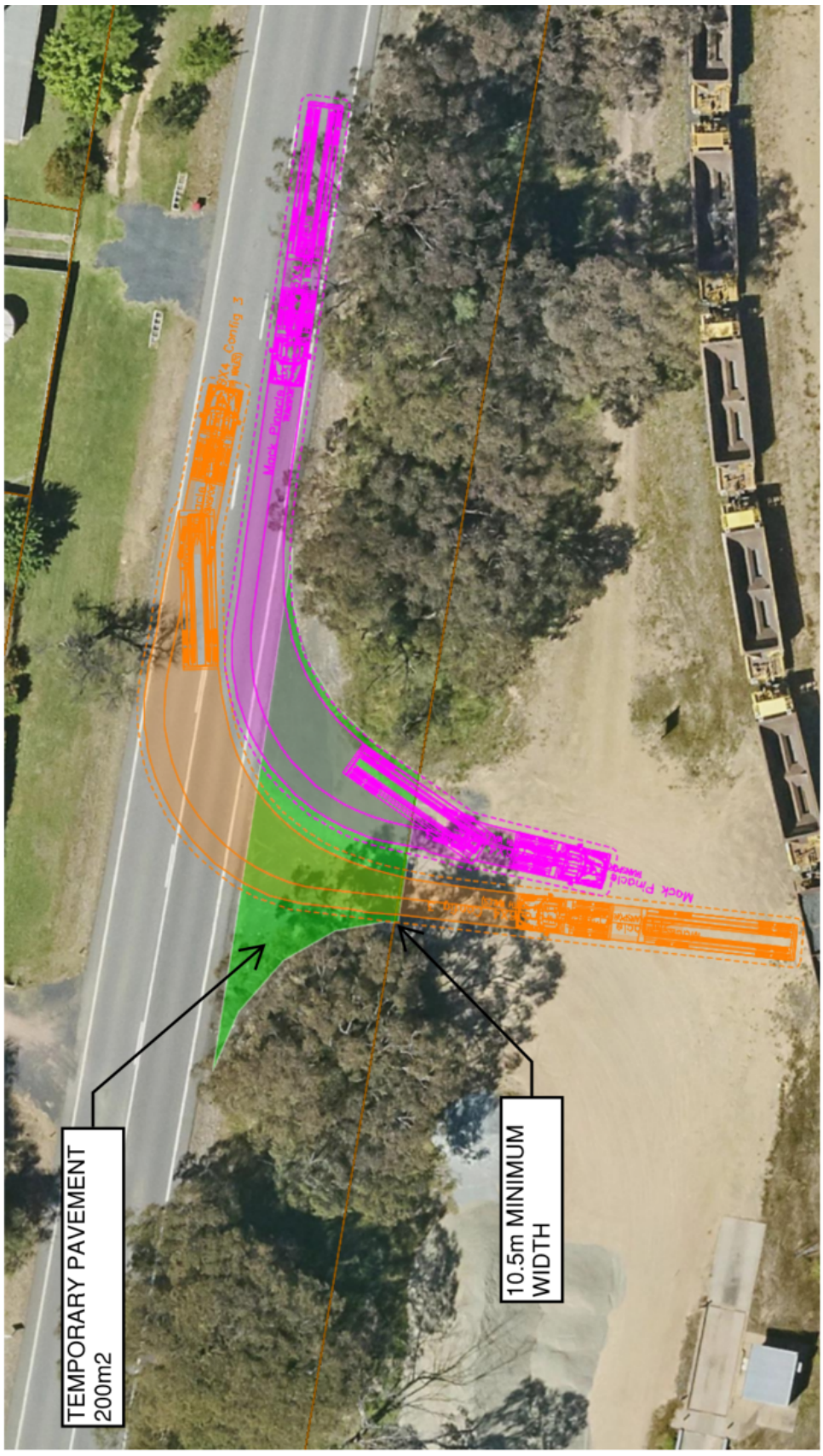
Client John Holland	**Project** BJF-11	**Date**	08/07/2025
		Sheet	Sheet 14 of 15
Job TW-1068 Temp Road Turnouts - BGW Hibernia St		**Designed**	-
Description Gate 10.6-1 - TP		**Checked**	-



WITT Consulting

Witt Consulting Pty Ltd
ABN 76 102 953 515
witt.com.au

Client John Holland	**Project** BJF-11	**Date**	08/07/2025
Job TW-1068 Temp Road Turnouts - BGW Hibernia St		**Sheet**	Sheet 15 of 15
		Designed	-
Description Gate 10.6-2 - TP		**Checked**	-





VEHICLE PROFILE

Single Unit Truck/Bus (12.5 m)	
Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.490m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

DRAWING FILE LOCATION / NAME				DESIGN LOT CODE: -	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING: -
PLOT DATE / TIME: -	PLOT BY: -	CLIENT	COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL GROGAN ROAD INLAND RAIL ILLABO TO STOCKINBINGAL GATE 11 TURNING PATH ANALYSIS - 12.5M RIGID TRUCK		A3

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL
	1	14.04.25	INITIAL REVISION		

SCALES ON A3 SIZE DRAWING: 0 5 10 Meters

CO-ORDINATE SYSTEM: MGA ZONE 55 — HEIGHT DATUM: -

DRAWINGS / DESIGN PREPARED BY: case TRAFFIC & TRANSPORT

	TITLE	NAME	DATE
	DESIGNED	J. BUNN	14.04.25
	***	***	***
	***	***	***
	***	***	***
	***	***	***
	***	***	***

PREPARED FOR: L. MCGOLDRICK

-

ISSUE STATUS	SHEET No.	OF SHEET	ISSUE
INITIAL REVISION	38		1



VEHICLE PROFILE

Single Unit Truck/Bus (12.5 m)	
Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.490m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

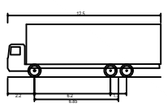
DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY	CLIENT	COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL GROGAN ROAD INLAND RAIL ILLABO TO STOCKINBINGAL GATE 12A TURNING PATH ANALYSIS - 12.5M RIGID TRUCK	A3
				-	-	-	-			
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE	PREPARED FOR	
	1	14.04.25	INITIAL REVISION			0 5 10 Meters	case TRAFFIC & TRANSPORT	DESIGNED	J. BUNN	14.04.25	L. MCGOLDRICK	-
						CO-ORDINATE SYSTEM: MGA ZONE 55		***	***	***		ISSUE STATUS: INITIAL REVISION / SHEET No.: 39 / OF SHEET / ISSUE: 1
						HEIGHT DATUM: -		***	***	***		
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								***	***	***		

N

GROGAN ROAD

ACCESS TO BE OF SUFFICIENT WIDTH TO ACCOMMODATE CONSTRUCTION VEHICLE MANOEUVRES

VEHICLE PROFILE



Single Unit Truck/Bus (12.5 m)	
Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.490m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY	CLIENT	COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL GROGAN ROAD INLAND RAIL ILLABO TO STOCKINBINGAL GATE 12B TURNING PATH ANALYSIS - 12.5M RIGID TRUCK
				-	-	-	-		A3
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE / NAME / DATE	
	1	14.04.25	INITIAL REVISION			0 5 10 Meters	CASE TRAFFIC & TRANSPORT	DESIGNED J. BUNN 14.04.25 *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***	PREPARED FOR L. MCGOLDRICK
						CO-ORDINATE SYSTEM: MGA ZONE 55 HEIGHT DATUM: -			- / -
									ISSUE STATUS: INITIAL REVISION SHEET No.: 40 OF SHEET: ISSUE: 1



DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY	CLIENT	COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL GROGAN ROAD INLAND RAIL ILLABO TO STOCKINBINGAL GATE 12C TURNING PATH ANALYSIS - 12.5M RIGID TRUCK	A3
				-	-	-	-			
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE / NAME / DATE			
	1	14.04.25	INITIAL REVISION			0 5 10 Meters	CASE TRAFFIC & TRANSPORT	DESIGNED J. BUNN 14.04.25 *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***	PREPARED FOR L. MCGOLDRICK	-	-
						CO-ORDINATE SYSTEM MGA ZONE 55	HEIGHT DATUM -		ISSUE STATUS INITIAL REVISION	SHEET No. 41 OF SHEET	ISSUE 1



VEHICLE PROFILE

Single Unit Truck/Bus (12.5 m)	
Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.490m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

LEGEND

- VEHICLE BODY
- VEHICLE BODY PATH
- VEHICLE WHEEL PATH
- VEHICLE CLEARANCE

FOR INFORMATION

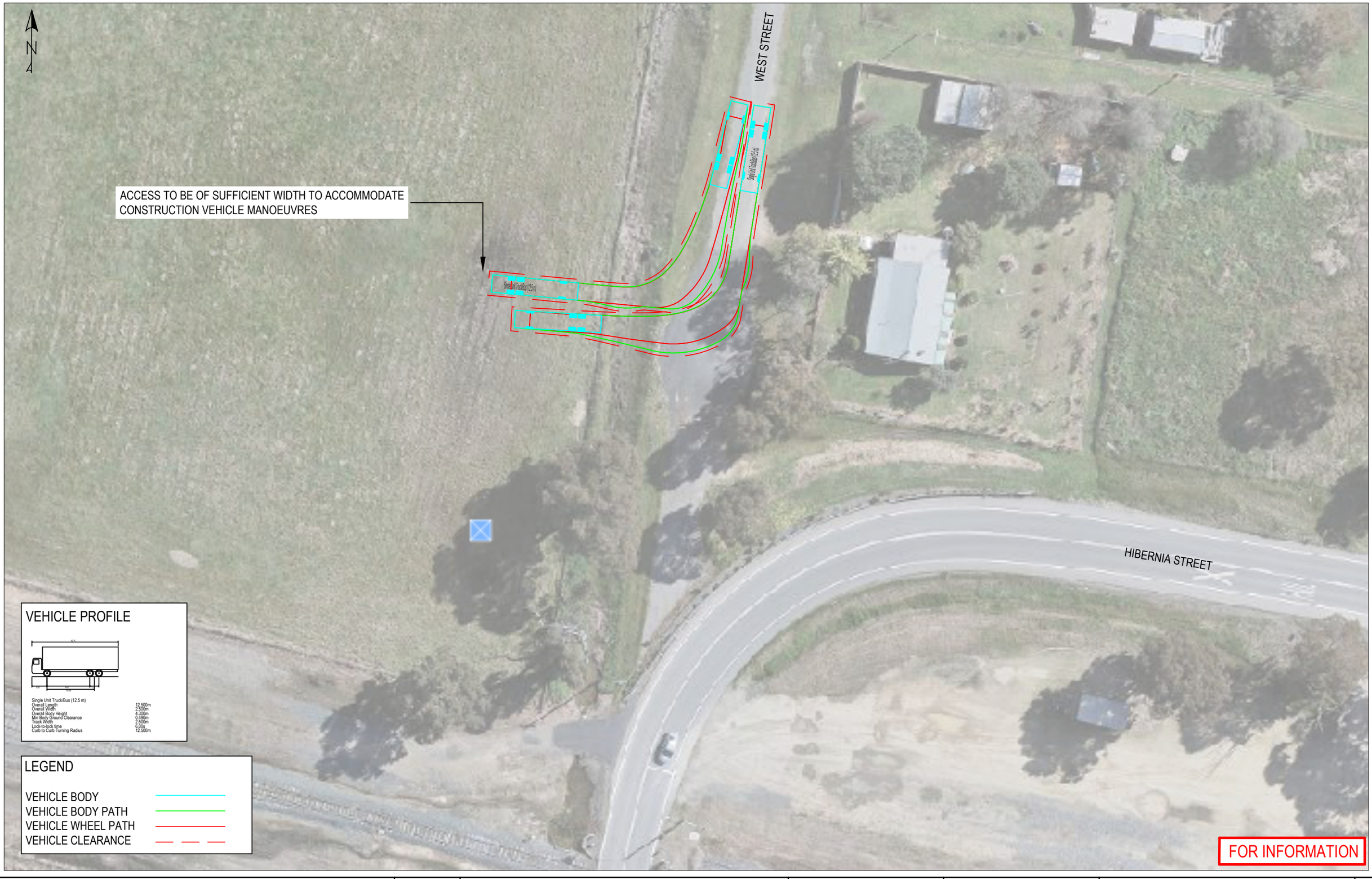
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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY		
	1	14.04.25	INITIAL REVISION			0 5 10 Meters			
						CO-ORDINATE SYSTEM: MGA ZONE 55	HEIGHT DATUM: -		

TITLE	NAME	DATE
DESIGNED	J. BUNN	14.04.25
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***	***	***
***	***	***
***	***	***

GROGAN ROAD
INLAND RAIL
ILLABO TO STOCKINBINGAL
GATE 12D
TURNING PATH ANALYSIS - 12.5M RIGID TRUCK

PREPARED FOR: L. MCGOLDRICK

-	-
ISSUE STATUS: INITIAL REVISION	SHEET No.: 42 OF SHEET	ISSUE: 1



DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING		PLOT DATE / TIME		PLOT BY	CLIENT	A3
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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE	NAME	DATE	WEST STREET INLAND RAIL ILLABO TO STOCKINBINGAL GATE 13 TURNING PATH ANALYSIS - 12.5M RIGID TRUCK
	1	14.04.25	INITIAL REVISION			0 5 10 Meters	case TRAFFIC & TRANSPORT	DESIGNED	J. BUNN	14.04.25	
								***	***	***	
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						CO-ORDINATE SYSTEM MGA ZONE 55	HEIGHT DATUM -				PREPARED FOR L. MCGOLDRICK

-	-		
ISSUE STATUS	SHEET No.	OF SHEET	ISSUE
INITIAL REVISION	43		1



DRAWING FILE LOCATION / NAME				DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	PLOT DATE / TIME	PLOT BY	CLIENT	COOTAMUNDRA-GUNDAGAI REGIONAL COUNCIL DUDAUMAN STREET INLAND RAIL ILLABO TO STOCKINBINGAL GATE 14 TURNING PATH ANALYSIS - 12.5M RIGID TRUCK	A3
				-	-	-	-			
EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL	SCALES ON A3 SIZE DRAWING	DRAWINGS / DESIGN PREPARED BY	TITLE / NAME / DATE			
	1	14.04.25	INITIAL REVISION			0 5 10 Meters	case TRAFFIC & TRANSPORT	DESIGNED J. BUNN 14.04.25			
						CO-ORDINATE SYSTEM MGA ZONE 55	HEIGHT DATUM -	PREPARED FOR L. MCGOLDRICK			
								ISSUE STATUS INITIAL REVISION	SHEET No. 44	OF SHEET	ISSUE 1

Appendix F Consultation Summary

This Consultation Summary has been prepared to meet the requirements of the Infrastructure Approval (CSSI-9406), in particular Condition of Approval (CoA) A10. CoA A10 outlines the requirements for undertaking and documenting consultation undertaken during the preparation of approval documents or monitoring programs required under relevant CoA for those documents.

The key stakeholders to be consulted include:

Junee Shire Council (JSC);

Cootamundra Gundagai Regional Council (CGRC);

TfNSW, and Martinus (for cumulative impacts with adjacent Project A2I).

Ongoing consultation has already been taken to discuss potential impact on high level. All other necessary traffic related consultation with more specific impacts and scopes will be conducted during the TTLG meetings or through email prior to the work commencement (i.e. with emergency services, local bus services, local schools, etc.). The consultation regarding the traffic monitoring program will be ongoing with LGAs and TfNSW as per CoA C27.

Consultation Process

Consultation with stakeholders and agencies was undertaken using the following means:

Formal correspondence (DPHI Portal Notifications);

Formal correspondence (standard email);

Phone Calls; and

Meetings (meeting minutes and presentations).

Agency Consultation

The Consultation Summary Report will cover all consultations undertaken with each of the stakeholders and agencies. It contains and consultation log that identifies the following:

Consultation dates (actual and attempted);

Form of consultation;

Whether responses and/or comments were received; and

Summary of the issues raised, including how they have been addressed.

Table below provides a summary of engagement between relevant agencies. And the issues raised are demonstrated in the comment sheets provided to this CTTAMP.

Agency	Date Raised	Comment Raised/ How Addressed	Where Addressed	Status
TfNSW & Martinus	25/02/2025	Joint session with Martinus and John Holland to run through lessons learnt from N2NS and general CTTAMP expectations/ must have from TfNSW.	Meeting & Presentation	Closed
CGRC	24/03/2025	Workshop to run through key traffic impact in the area.	Presentation	Closed
JSC	27/03/2025	Workshop to run through key traffic impact in the area.	Presentation	Closed
TfNSW	27/03/2025	Workshop to run through key focus of the CTTAMP.	Meeting	Closed
CGRC	30/04/2025	Issuing of the first draft CTTAMP for review to CGRC	Aconex	Closed
JSC	30/04/2025	Issuing of the first draft CTTAMP for review to JSC	Aconex	Closed
TfNSW	30/04/2025	Issuing of the first draft CTTAMP for review to TfNSW	Aconex	Closed
CGRC	22/05/2025 24/06/2025 15/07/2025	Discussion of construction impacts on CGRC and platform to raise any questions	Monthly Meeting	Closed
JSC	29/05/2025 26/06/2025	Discussion of construction impacts on JSC and platform to raise any questions	Monthly Meeting	Closed
Martinus	09/04/2025	Discussion of traffic management impacts between John Holland and Martinus and forum to raise any questions	Weekly Meeting	Closed
CGRC	22/05/2025 24/06/2025 15/07/2025	Discussion of construction impacts on CGRC and platform to raise any questions	Monthly Meeting	Closed
JSC	29/05/2025 26/06/2025	Discussion of construction impacts on JSC and platform to raise any questions	Monthly Meeting	Closed
JSC	01/07/2025	I2S | Junee Shire Council Monthly Meeting - 29 May 2025 - Issued for INFORMATION	Monthly Meeting	Closed
CGRC	21/07/2025 25/07/2025 30/07/2025	Discussion of construction impacts on CGRC and platform to raise any questions	Monthly Meeting	Closed
CGRC	08/08/2025 25/08/2025	Discussion of construction impacts on CGRC and platform to raise any questions	Monthly Meeting	Closed
TfNSW	02/09/2025	I2S | TfNSW Fortnightly Meeting Minutes - 14 Aug 2025 - Issued for INFORMATION	Aconex	Closed
CGRC	01/10/2025	Discussion of construction impacts on CGRC and platform to raise any questions	Monthly Meeting	Closed
TfNSW	16/09/2025	I2S | TfNSW Fortnightly Meeting Minutes - 11 Sep 2025 - Issued for INFORMATION	Aconex	Closed
JSC	26/11/2026	I2S | Junee Shire Council Monthly Meeting - 30 Oct 2025 - Issued for INFORMATION	Aconex	Closed
TfNSW	13/10/2025	I2S | TfNSW Fortnightly Meeting Minutes - 9 Oct 2025 - Issued for INFORMATION	Aconex	Closed
TfNSW	11/11/2025	I2S | TfNSW Fortnightly Meeting Minutes - 23 Oct 2025 - Issued for INFORMATION	Aconex	Closed

Agency	Date Raised	Comment Raised/ How Addressed	Where Addressed	Status
TfNSW	09/12/2026	I2S | TfNSW Development Services and Developer Works Fortnightly Meeting Minutes - Rev 0 - Issued for INFORMATION	Aconex	Closed
CGRC	27/01/2026	Discussion of construction impacts on CGRC and platform to raise any questions	Monthly Meeting	Closed
TfNSW	27/01/2026	I2S | TfNSW Fortnightly Meeting Minutes - 22 Jan 2026 - Issued for INFORMATION	Aconex	Closed
JSC	02/02/2026	I2S | Junee Shire Council Monthly Meeting - 29 Jan 2026 - Issued for INFORMATION	Monthly Meeting	Closed
TfNSW	10/02/2026	I2S | TfNSW Fortnightly Meeting Minutes - 05 Feb 2026 - Issued for INFORMATION	Aconex	Closed
TfNSW	18/02/2026	I2S | TfNSW Development Services and Developer Works Fortnightly Meeting Minutes 12 Feb 2026 - Issued for INFORMATION	Aconex	Closed
CGRC	20/02/2026	Discussion of construction impacts on CGRC and platform to raise any questions	Monthly Meeting	Closed
TfNSW	02/03/2026	I2S | TfNSW Development Services Fortnightly Meeting Minutes 26 Feb 2026 - Issued for INFORMATION	Aconex	Closed
TfNSW	09/03/2026	I2S | TfNSW Fortnightly Meeting Minutes - 05 Mar 2026 - Issued for INFORMATION	Aconex	Closed
JSC	09/03/2026	I2S | Junee Shire Council Monthly Meeting - 05 Mar 2026 - Issued for INFORMATION	Aconex	Closed
CGRC	19/03/2026	I2S | IRPL_JH_Cootamundra Gundagai Regional Council Meeting Minutes 17 Mar 2026 - Issued for INFORMATION	Aconex	Closed
TfNSW	07/04/2026	I2S | TfNSW Fortnightly Meeting Minutes - 02 Apr 2026 - Issued for INFORMATION	Aconex	Closed
CGRC	16/04/2026	Discussion of construction impacts on CGRC and platform to raise any questions	Monthly Meeting	Closed
JSC	01/05/2026	I2S | Junee Shire Council Monthly Meeting - 30 April 2026 - Issued for INFORMATION	Aconex	Closed
CGRC	18/05/2026	I2S | IRPL_JH_Cootamundra Gundagai Regional Council Meeting Minutes 17 Mar 2026 - Issued for INFORMATION	Aconex	Ongoing
JSC	28/05/2026	I2S | Junee Shire Council Monthly Meeting - 28 May 2026 - Issued for INFORMATION	Aconex	Ongoing
Martinus	10/06/2025	Discussion of traffic management impacts between John Holland and Martinus and forum to raise any questions	Weekly Meeting	Ongoing
TfNSW	12/06/2026	5-0019-220-PMA-00-MM-0003 - I2S | TfNSW Fortnightly Meeting Minutes - 11 June 2026 - Issued for INFORMATION	Aconex	Ongoing

The evidence of the consultation records with LGAs, TfNSW, and Martinus have been included below. The issues raised are included in separate comment sheets, which are addressed in this document.

Junee Shire Council

Subject: Minutes of Meeting | JSC CTTAMP Consultation
Sent: 27/03/2025, 8:54:35 PM
From: Luke McGoldrick-JHG<Luke.McGoldrick@jhg.com.au>
To: Stephen Targett
Cc: Steph Raad-JHG; Harrison Heycott-JHG
Attachments: I2S - CTTAMP Consultation TfNSW 27032025.pdf

Hi Stephen,

Appreciate your time this week and following on from our initial I2S introduction meeting held on Wednesday 29th January 2025.

Please see minutes of meeting summarised below:

- Old Cootamundra Road Bridge is at the boundary of JSC and CGRC – interface may be required
- ST preference to use detours where justified. When planning the works, considerations also to be made around seasons
  - Harvest season (Nov – December)
  - Sewing season (March – April)
  - Livestock movements all year round
- Council has no concerns with upgraded intersections being kept in place after the project is completed.
- When workers are on the road, a speed reduction to 40km/hr is required. Post works (end of shift) speed to be posted at 60-80km/hr with after care TGS and signage required.
- Preference to group all S138 into 1 submission.
- Review duration for S138 is approximately 10 business days.
- JSC expressed interest in constructing the gates under lump sum arrangement.
- ST is interested in collectively reviewing the proposed HV route between the quarry and site access gates.

We will continue to work through the access gates and re-present once finalised.

I have also attached CTTAMP Presentation.

If you require anything else, please contact me at anytime.

Kind Regards,

Luke McGoldrick
Traffic Manager
Inland Rail | Illabo to Stockinbingal (I2S)
Rail and Transport

JOHN
HOLLAND

Level 5, 15 Bourke Road
Mascot, NSW 2020

M. +61 413 777 563
E. luke.mcgoldrick@jhg.com.au
W. johnholland.com.au

Cootamundra-Gundagai Regional Council

Subject: RE: Minutes of Meeting | CGRC CTTAMP Consultation
Sent: 27/03/2025, 9:00:09 PM
From: Luke McGoldrick-JHG<Luke.McGoldrick@jhg.com.au>
To: david.brodie@cgrc.nsw.gov.au
Cc: Harrison Heycott-JHG; Steph Raad-JHG
Attachments: I2S - CTTAMP Consultation TfNSW 27032025.pdf

Hi David,

Please also see CTTAMP Presentation as promised.

Kind Regards,

Luke McGoldrick
Traffic Manager
Inland Rail | Illabo to Stockinbingal (I2S)
Rail and Transport

JOHN
HOLLAND

Level 5, 15 Bourke Road
Mascot, NSW 2020

M. +61 413 777 563
E. luke.mcgoldrick@jhg.com.au
W. johnholland.com.au

John Holland acknowledges the Traditional Custodians of the lands on which we work and live. We pay our respects to their Elders both past and present and extend that respect to all Aboriginal and Torres Strait Islander Peoples.

From: Steph Raad-JHG <Steph.Raad@jhg.com.au>
Sent: Tuesday, 25 March 2025 10:39 AM
To: david.brodie@cgrc.nsw.gov.au
Cc: Luke McGoldrick-JHG <Luke.McGoldrick@jhg.com.au>; Harrison Heycott-JHG <Harrison.Heycott@jhg.com.au>
Subject: Minutes of Meeting | CGRC CTTAMP Consultation

Hi David,

Appreciate your time yesterday. Please see minutes of meeting summarised below

- Old Cootamundra Road Bridge
  - DB: preference was to utilise a side track or stop/go traffic. Detour was the least favourable option. When planning the works, considerations also to be made around seasons
  - Harvest season (Nov – December)
  - Sewing season (March – April)
  - Live stock movements all year round

- For intersection upgrades that are in proximity, preference is to put them under the same S138

- For all state roads, TfNSW own and maintain the area between the lanes (fog line to fog line), council look after the shoulders e.g. Hibernia St

- Council has no concerns with upgraded intersections being kept in place after the project is completed.

- Corby's Lane (Gate 7B)
  - 3-4 active farms use Corbys Lane for access
  - When planning the works, considerations also to be made around seasons
  - Access will need to be maintain during construction, likely need to be managed under traffic control

- Burley Griffin Way
  - Regarding Gate 8 – DB advised, it is unlikely TfNSW will approve a through movement across BGW. TfNSW will want to see sighting distances as trees line the road
  - DB noted that even existing driveways had issues getting the design across the line
  - In the past when BGW was closed and trucks detoured onto non-truck paths. Consider driver behaviour

- Speed reductions – longer term reduced speed reduction (over 1km for example) might be the better option that a 10km stretch, compliance by the locals will likely be an issue)

Actions

David: Provide the latest traffic count data for the following locations if available

- Old Cootamundra Road
- Burley Griffin Way
- Dudauman Rd

Harrison/Luke: Continue to work through the access gates and re-present to David / CGRC once finalised

Regards,

Stephanie Raad
Senior Design Coordinator
Inland Rail | Illabo to Stockinbingal (I2S)

JOHN HOLLAND
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Appendix G I2S Mobilisation Management Plan



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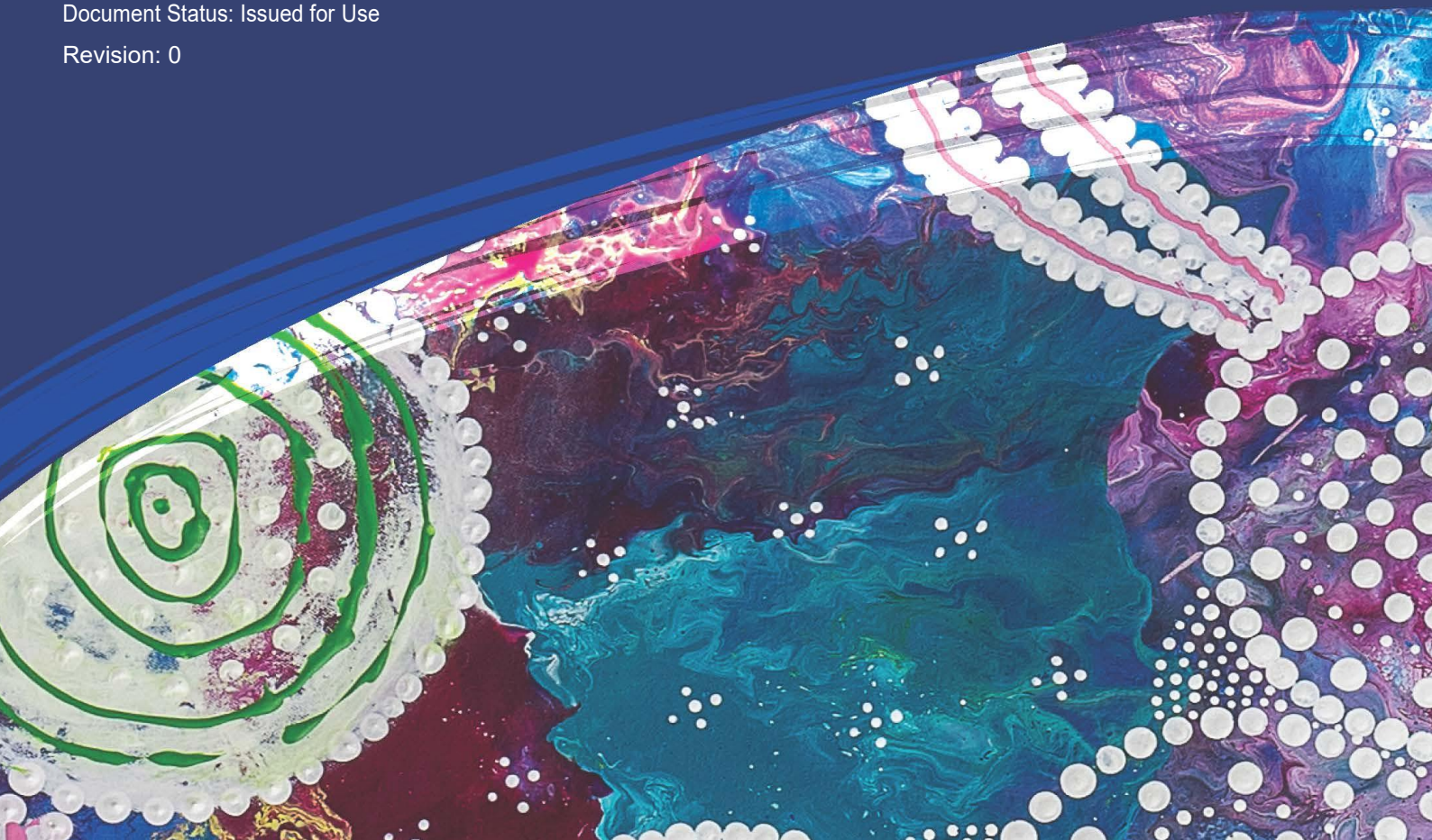
INLAND RAIL
ILLABO TO STOCKINBINGAL PROJECT

Sub Plan: Mobilisation Management Plan

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Document Control

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Document Owner	Chad Bevan	
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Signature **Date**	JOHN HOLLAND Document Number 5-0019-220-PMA-00-PL-0023 Revision 0 Approved Mr Jake Mossman - John Holland Pty Ltd Jun 16, 2025, 10:19 PM GMT+10:00 This review has been completed using Aconex Workflow for the Inland Rail - Illabo to Stockinbingal (I2S) Project.	JOHN HOLLAND Document Number 5-0019-220-PMA-00-PL-0023 Revision 0 Approved Mr Chad Bevan - John Holland Pty Ltd Jun 18, 2025, 2:48 PM GMT+10:00 This review has been completed using Aconex Workflow for the Inland Rail - Illabo to Stockinbingal (I2S) Project.

Revision History

REVISION	DATE ISSUED	DESCRIPTION
A	8/11/2024	Issued for Review
B	05/02/2025	Issued for Review
C	11/04/2025	Issued for Review
0	13/06/2025	Issued for Use

Document Control

The current reviewed and approved version of this management plan is available on the I2S Project's IMS platform and within SharePoint. Downloaded management plans are deemed uncontrolled and it is the responsibility of the user to ensure they are using the latest revision.

Sponsors should contact I2S's Document Control Team to obtain the latest revision of the management plan before commencing changes to the plan for the next revision.

Reviews and Amendments

This plan is to be reviewed periodically, minimum yearly ensuring the plan is kept updated and remains relevant to the I2S scope of work and consistent with policies, compliance standards and best practice.

Any major revisions or amendments must be approved by the Project Director and/or Senior Leadership Team representative before being distributed/implemented.

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1 Revisions and Distribution

1.1 Revisions

Draft issues of this document are identified as Revision A, B, C etc. Following acceptance by the document approver, the first finialled revision will be Revision 0. Subsequent revisions revision will have an increase of “1” in the revision number (1, 2, 3 etc.).

1.2 Distribution

The controlled master version of this document is available for distribution as appropriate and maintained on the document management system being used on the project. All circulated hard copies of this document are deemed to be uncontrolled.

Client’s Representative	Conrad Strachan
Project Director	Rob Pitt
Construction Manager	Chad Bevan
Rail Systems Manager	Andy Buchanan
Quality & Completions Manager (Project Quality Representative)	Rao Talada
Engineering Manager	Jerome Cargnino
Project Personnel	Aconex Distribution

2 References, Definitions and Abbreviations

2.1 Compliance Roadmap

The following is a tabular representation of the Mobilisation Management Plan requirements as described in the PSR and a reference link to detail how I2S intend to comply.

Table 1: Compliance Roadmap

Reference (DOORS ID OR Specification name/clause)	Requirement	Applicable Section in the QMP
2685002	1.3.2 Without limiting the requirements of clause 20.3 of the Deed, the Contractor shall ensure that Management Plans set out in Table 1 remain at all times relevant and are updated, as a minimum, at each update interval identified in Table 1 for the period from initial submission until:	N/A
2685004	b) in the case of each other Management Plan, until the Date of Final Completion.	N/A
2685009	NO. | CONTRACTOR MANAGEMENT PLAN TITLE | SUBMISSION TIMELINE | CRITICALITY RATING AND UPDATE INTERVAL	N/A
2685037	| SUB-PLAN: MOBILISATION PLAN | WITHIN 30 BUSINESS DAYS AFTER THE DATE OF THIS DEED | LOW / AS REQUIRED	N/A
2685669	5.9.1 The Mobilisation Plan shall:	N/A
2685670	a) describe the mobilisation process, including the Contractor's mobilisation requirements at each part of the Site that the Contractor's Activities will be performed and relevant conditions and timeframes;	Section 6
2685671	b) provide assurance that critical Contractor's Activities will be able to commence at each part of the Site as planned;	Section 6.4, 6.5, 6.6
2685672	c) describe all pre-construction activities required;	Section 6.7
2685673	d) address mobilisation of all key personnel, whether Contractor or Subcontractor personnel required to achieve pre-construction and construction activities including any key recruitment activities;	Section 6.3
2685674	e) describe relevant Approvals required prior to mobilising to Site and commencing any on-Site Contractor's Activities;	Section 6.8
2685675	f) provide the intended program and construction method statement for the relevant Construction Packages in accordance with the environmental management requirements in section 6.1;	Section 6.7 **Ref:** Construction Management Plan (5-0019-220-PMA-00-PL-0020)

Reference (DOORS ID OR Specification name/clause)	Requirement	Applicable Section in the QMP
2685676	g) ensure the construction method statements are sufficient to inform a person about the nature, duration, scale and intensity of work for each Construction Package;	Section 6.7 **Also Ref:** Construction Management Plan (5-0019-220-PMA-00-PL-0020)
2685677	h) identify all Site access points and connections to the local road and pathway networks;	Section 6.4, 6.5, 6.8 **Also Ref:** CTTAMP (Construction Traffic Transport and Access Management Plan) (5-0019-220-PMA-00-PL-0056)
2685678	i) identify all existing infrastructure and third-party assets required to be removed, relocated or replaced to facilitate site establishment; and	Section 6.9
2685679	j) identify those condition assessments which are to be undertaken for all existing infrastructure and assets within or adjacent to the work sites likely to be impacted by the Works or the Contractor's Activities.	Section 6.10

2.2 Definitions and Abbreviations

Definitions and abbreviations to be applied to the Sub Plan: Mobilisation Management Plan are listed below.

Table 2: Definitions

Term/Abbreviation	Description
Client (Principal)	The party to whom John Holland is contracted for a Project. For this project the Client is Inland Rail Pty Ltd (IRPL).
Client's Representative	The person appointed by the Client to perform the duties of the "Project Manager" as defined in the contract.
Contractor	John Holland Pty Ltd (John Holland) as the organisation responsible for the total performance of the works under the Head Contract.
Consultant	The Engineering Consultant who has been engaged or novated to John Holland to perform the design, preparation of detailed "For Construction" documentation and necessary certification to meet contractual requirements.
Subcontractor	Any company, body or person who is contracted to John Holland for the purpose of supplying goods or services. Categories such as manufacturer, fabricator and supplier are considered Subcontractors.
Project Management Plan (PMP) (5-0019-220-PMA-00-PL-0001)	A document setting out the specific management issues, performance outcomes, practices, resources, activities and responsibilities relevant to a particular project or contract i.e. this document.

Table 3: Abbreviations

Term/Abbreviation	Description
AMS	Activity Method Statement
ARTC	Australian Rail Track Corporation
BAU	Business As Usual
CCB	Change Control Board
CEMP	Construction Environmental Management Plan
CMP	Construction Management Plan
DEMP	Design Engineering Management Plan
DRMP	Document & Records Management Plan
EHM	Environmental & Heritage Manager
EOT	Extension of Time
EPA	Environment Protection Agencies
ERIMP	Emergency Response & Incident Management Plan
HSES	Health, Safety, Environment & Sustainability

Term/Abbreviation	Description
HR/IR	Human Resources/Industrial Relations
I2S	Illabo to Stockinbingal Project
ICT	Information & Communications Technology
IFC	Issued for Construction
IFU	Issued for Use
IMS	Integrated Management System
ITP	Inspection & Test Plan
IRPL	Inland Rail Pty Ltd
JH	John Holland
JHPL	John Holland Pty Ltd
KPI	Key Performance Indicator
NCR	Non-Conformance Record
OH&S	Occupational Health & Safety
PCR	Project Cost Reporting
PPE	Personal Protective Equipment
PMP	Project Management Plan
PMT	Project Management Team
PQMP	Project Quality Management Plan
PSR	Project Scope & Requirements
PWRR	Project Wide Risk Register
QMS	Quality Management System
R&O	Risk & Opportunity
SEP	Site Environmental Plan
SFAIRP	So Far As Is Reasonably Practicable
SIT	System Integration Team
SLT	Senior Leadership Team
SQE	Safety Quality Environment
TMP	Traffic Management Pan
TRA	Task Risk Analysis
WBS	Work Breakdown Structure
Work	Any physical work for the purpose of the CSSI including construction and low impact work but not including operational and maintenance work.
WRA	Workplace Risk Assessment

Term/Abbreviation	Description
WSC	Workplace Safety Committee
MMP	Mobilisation Management Plan
CHMP	Cultural Heritage Management Plan

2.3 References

Design and Construct Deed No: 2200-0019

Relevant Australian and International Standards

Relevant Acts, Regulations, Codes and Ordinances

3 Introduction

3.1 Project Scope

The Inland Rail - Illabo to Stockinbingal (I2S) Project is a 39-kilometre greenfield section where a new track will be constructed in a newly established rail corridor, just east of Illabo, tracking north to Stockinbingal, NSW.

This new section of rail corridor will provide a direct route from Illabo to Stockinbingal through to the existing Forbes line. The line will bypass Cootamundra and the steep and windy Bethungra Range with the Bethungra Spiral.

Bypassing the Bethungra Spiral will improve reliability and reduce travel distance by approximately 23 kilometres.

Burley Griffin Way will undergo a major realignment and a new road over rail bridge will be built. This will enable the closure of one of the existing rail level crossings in Stockinbingal, improving safety. In addition, Ironbong Road will undergo a minor realignment around the proposed level crossing to improve safety.

The project connects with the Albury to Illabo (A2I) and Stockinbingal to Parkes (S2P) enhancement projects.

This design and construct project works will include:

- New track construction
- Earthworks
- Bridge construction
- Culvert and drainage installation
- Road works
- Activated and passive level crossings
- Installation of rail systems
- Utility Adjustments

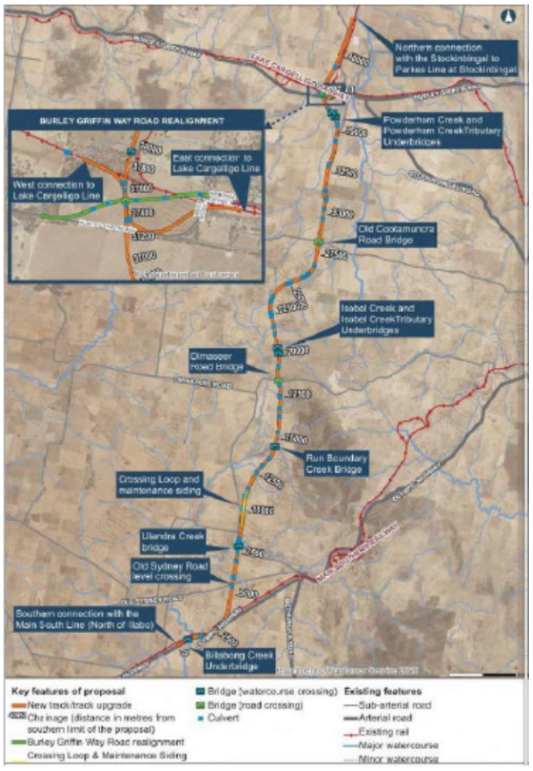




Figure 1: Inland Rail Map (left), I2S Project Map (right)

4 Roles and Responsibilities

4.1 Management Representatives and Roles

I2S is structured into functional areas headed by the Project Management Team (PMT) member reporting to the Project Director (PD). The PD has nominated the Project Manager to oversee this management plan. For the I2S reporting structure, refer to the I2S Organisational Chart.

4.2 Responsibilities

The Project Team responsibilities with respect to mobilisation management are detailed in Table 1.

Position descriptions are created, agreed and executed between all staff and their direct reports on the Project to ensure clear responsibilities and accountabilities are maintained.

Table 1: Roles and Responsibilities

Key People	Key Accountability and Responsibilities
Project Manager	Develop, implement and ensure compliance with this Mobilisation Management Plan
Construction Manager (Site)	Oversee, coordinate and manage mobilisation activities for I2S Lead the team responsible for mobilisation activities
Occupational Safety Manager	Responsible for safety inductions and training for personnel involved in the performance of activities Ensure all works are delivered in accordance with WH&S requirements
Senior Project Engineer	Planning of works, ensuring compliance with quality and procedures Ensure safety and environmental controls are observed and followed on site Provide technical assistance to the foreman and workforce Develop and monitor work plans in close consultation with the supervisor
Supervisor/Foreman	Workforce management, monitoring safety and environmental controls and site operations Manage and track program and ensure site constraints do not affect sequencing and construction program
Environmental Manager	Ensure all works are delivered in accordance with Environmental & Cultural Heritage requirements.

5 Management System

5.1 Management System Documents

Please refer to the I2S Project Management Plan (5-0019-220-PMA-00-PL-0001) for details on the management system documents for the I2S Project.

5.2 Interface with Other Planning Documents

The figure below shows the major I2S plans identified under the PSR. Sub-plans have been developed as needed.

I2S Management Plans	
Project	**Engineering**
Project Management Plan	Safety Assurance Plan
Sub-Plan: Pandemic Management Plan	Competency Management Plan
Project Controls Management Plan	Interface Management Plan
Quality Management Plan	Integration Management Plan
Project Risk Management Plan	Digital Engineering Execution Plan
Subcontract Packaging and Procurement Management Plan	Systems Engineering Management Plan
Information Management Plan	Sub-Plan: Requirements Management Plan
Master Information Deliverables Plan	Innovation and Value Management Plan
Construction	**Design**
Construction Management Plan	Design Management Plan
Sub-Plan: Construction Traffic Management Plan	"Sub-Plan: Construction Phase Services (CPS) Management Plan"
Sub-Plan: Construction Packages and Construction Staging Plans	Sub-Plan: Electromagnetic Compatibility Management Plan
Sub-Plan: Mobilisation Plan	**Safety**
Sub-Plan: Demobilisation Plan	Project Safety Management Plan
Sub-Plan: Demolition Plan	Sub-Plan: Emergency Management Plan
Sub-Plan: Construction Water Management Plan	Sub-Plan: Occupational Health, Hygiene and Wellness Management Plan
Sub-Plan: Rail Access Management Plan	Sub-Plan: Security Management Plan
Sub-Plan: Construction Monitoring Management Plan	Sub-Plan: Asbestos Management Plan
Sub-Plan: Materials Management Plan	Sub-Plan: Heavy Vehicle Chain of Responsibility Management Plan
Sub-Plan: Surveying Management Plan	
Environmental, Sustainability and Social Performance Management Plans	**Communication and Stakeholder Engagement Management Plans**
Construction Environmental Management Plan as required by IRPL in accordance with the Construction Environmental Management Framework described in section 6.1.	Communication and Stakeholder Engagement Management Plan
Other plans and sub-plans required by the CoA or any other planning authorisation in accordance with section 6.1	Incident Management Plan
Social Delivery Management Plan	**Industrial Relations Management**
Sub-Plan: Local and Indigenous industry participation	Industrial Relations Management Plan
Sub-Plan: Workforce management	**Completion and Handover Plans**
Sub-Plan: Housing and accommodation	Completion and Handover Management
Sub-Plan: Community health and wellbeing	**Configuration Management**
Sustainability Management Plan	Configuration Management Plan

Figure 2: I2S Management Plans

This plan is a sub-plan to the Construction Management Plan. This plan should be read in conjunction with the I2S Project Management Plan and any other interface documents identified in Figure 2.

Table 2: Interface Documents

Planning Document	Interface
Project Management Plan (5-0019-220-PMA-00-PL-0001)	Parent plan to this management plan. Acts as an umbrella document to the Project Management System and ties together the project delivery documents, such as management plans, procedures, forms, work instructions and other planning documents. It also outlines the infrastructure and practices required to deliver the detailed design, procurement, construction and handover of the Project.
Construction Management Plan (5-0019-220-PMA-00-PL-0020)	Provides the approach to construction of the I2S Project
Construction Traffic Transport and Access Management Plan (CTTAMP) (5-0019-220-PMA-00-PL-0056)	Construction Traffic Transport and Access Management Plan (CTTAMP) addresses the process and requirements to facilitate the construction of the Inland Rail I2S Project through minimising impacts on the road users and the road network.
Project Safety Management Plan (5-0019-220-PMA-00-PL-0031)	Provides the approach to WHS for all works
Emergency Management Plan (5-0019-220-PMA-00-PL-0032)	Provides an approach to managing emergency responses and incidents for project works
Quality Management Plan (5-0019-220-PMA-00-PL-0004)	Provides the overall approach to quality management for the Project
Construction Environmental Management Plan (5-0019-220-PMA-00-PL-0037)	Provides the overall approach to environmental management for the Project
Design Engineering Management Plan (5-0019-220-PMA-00-PL-0017)	Outlines the project management practices that will be implemented by the project team in delivery, in order to comply with all contractual and corporate management system requirements relating to Design and Engineering in accordance with PSR

Planning Document	Interface
Information Management Plan (5-0019-220-PMA-00-PL-0007)	Details the management of information throughout the project life cycle from origination, creation, registration, transmission, storage and retrieval, through to maintenance and disposal

6 Site Mobilisation

6.1 Location of Project Office

The co-location of the team is essential to successful integration and productive teamwork. At the start, the I2S team will be co-located at the Mascot Office at Level 5, 15 Bourke Rd, Mascot, NSW 2020.

The construction team will remain at the Mascot Office until such time the site offices are ready for the teams to mobilise to their respective sites for their site works. The project management team will remain at the Mascot Office at Level 5, 15 Bourke Rd, Mascot, NSW 2020.

6.2 Project Sites

Considerations for the selection of a site compound include:

- Disruption - minimising disruption and impact to the surrounding community, stakeholders and rail users
- Access, logistics and productivity – careful planning for moving staff and workforce from nominated access points to amenities, and then to/from work front locations
- Access control – ensuring control over access to the work area(s) is always maintained
- Pre-construction works – evaluating the extent of works required for site establishment in relation to site security, clearing, utility accessibility, supply, and fencing
- Laydown and parking – assessing and provisioning based on optimising use of available area
- Utilities – Access to power, water, sewer, and communications
- Availability of land for utilisation by the project
- Any environmental or heritage restrictions or compliance requirements

Site compound establishment objectives include:

- Work areas to be fully fenced to safely separate the public from the works. Fencing will be by hoarding or chain mesh fence panels with in-ground post foundations wherever possible
- Access to work areas will be via designated gated points, each providing dedicated pedestrian access separated from plant access and vehicle movement paths.
- Establish cribbing as close as possible to the work front to minimise walking time and maximise sitting time during meal breaks – as the site is narrow and constrained, crib facilities will sometimes be separate from work areas
- Walking routes that do not conflict with public walking routes to be established wherever possible. When separate routes are not possible, establish controls to reduce conflicts
- Staff and workforce car parking to be established (where possible) at locations that do not adversely affect the public
- Light Vehicle parking will be separated from Heavy Vehicle & plant. Light vehicle parking will be clearly separated from the laydown areas.
- The overall site will have a fall to allow for stormwater drainage. Chemicals and other products will be stored in bunds and containers to ensure no contamination can occur to existing waterways

- All compounds will be temporary and demobilised after the project finishes. All areas will be reinstated and left in a similar or improved condition to the original state
- All site offices will be compliant with the Worksafe Compliance Code (Workplace amenities and work environment).
- Loud equipment such as generators will be placed away from property boundaries. All noisy equipment will be assessed by the Environmental team and controls will be put in place where required to ensure the community is not affected.
- All staff and subcontractors to act in accordance with the I2S Code of Conduct (5-0019-220-PHR-00-SM-0001).

The I2S site team will establish 6 separate site Offices (including the site accommodation compound) from where works will be managed across the project alignment. A primary project office will be established adjacent to the camp facility at Grogan Road, Stockinbingal to accommodate construction staff; IRPL staff; and the Independent Verifier and Project Verifier (as required); and house the Project Information Centre. Smaller satellite compounds with crib sheds and portable ablutions will be established at CH3000, CH9000, CH18400, CH28200, 351000 and CH40000 for engineers, superintendents, and general workforce. Rail Industry Worker (RIW) login kiosks will be installed at nominated site compounds. Mobile caravans will move along the alignment to accommodate the work front. A full list of site compounds / offices, mobile caravan sites and nominated stockpile/laydown areas can be seen in the table below:

Table 3: Site Offices, Caravan sites and Laydown Locations

Site No.	Chainage	Main Functions	Address	Area (m2)	Site Office	Caravan	Laydown
1	40000	Site Camp / Accommodation Site Office, RIW	Grogan Rd, Stockinbingal	83,206	X		
2	39300	Stockpile / Laydown	Grogan Rd, Stockinbingal	8,421			X
3	38500	Caravan Stockpile / Laydown	Grogan Rd, Stockinbingal	97,087		X	X
4	37500	Stockpile / Laydown	Burley Griffin Way, Stockinbingal	>100,000			X
5	36300	Stockpile / Laydown	Dudauman Rd, Stockinbingal (South of BGW)	3,634			X
6	36050	Stockpile / Laydown	Dudauman Rd, Stockinbingal (South of BGW)	6,301			X
7	35850	Stockpile / Laydown	Dudauman Rd, Stockinbingal (North of LX PR34950)	3,808			X
8	35650	Stockpile / Laydown	Dudauman Rd, Stockinbingal (North of LX PR34950)	4,529			X
9	35100	Site office, RIW Stockpile / Laydown	Dudauman Rd, Stockinbingal (North of Corbys Ln & LX PR34950)	34,417	X		X
10	34000	Stockpile / Laydown	Dudauman Rd, Stockinbingal (North of Corbys Ln &LX PU33780)	4,887			X

Site No.	Chainage	Main Functions	Address	Area (m2)	Site Office	Caravan	Laydown
11	33200	Stockpile / Laydown	Dudauman Rd, Stockinbingal (South of Corbys Ln &LX PU33780)	44,316			X
12	32000	Stockpile / Laydown	Dudauman Rd, Stockinbingal (South of Corbys Ln & LX PR32150)	3,793			X
13	31200	Caravan Stockpile / Laydown	Dudauman Rd, Stockinbingal (North of LX PR30850)	36,309		X	X
14	30600	Stockpile / Laydown	Dudauman Rd, Stockinbingal (South of LX PR30850)	14,326			X
15	28200	Site office, RIW Stockpile / Laydown	SW Corner of Dudauman Rd & Old Cootamundra Rd, Cootamundra	40,361	X		X
16	24400	Stockpile / Laydown	South of Old Cootamundra Rd, Cootamundra	11,908			X
17	22200	Caravan Stockpile / Laydown	Dudauman Rd North of Dudauman La, Dirnaseer	55,378		X	X
18	20000	Caravan Stockpile / Laydown	Dudauman La, Dirnaseer (West Side of alignment)	12,113		X	X
19	18400	Site office, RIW Stockpile / Laydown	Dirnaseer Rd, Bethungra	100,748	X		X
20	16100	Caravan Stockpile / Laydown	East of Ironbong Rd, Bethungra	27,996		X	X
21	14700	Caravan Stockpile / Laydown	East of Hicks Ln / Ironbong Rd Intersection, Bethungra	6,354		X	X
22	12000	Caravan Stockpile / Laydown	South of Hicks Ln / Ironbong Rd Intersection, Bethungra	39,751		X	X
23	9000	Stockpile / Laydown	NE corner of Ironbong Rd / Eulomo Settlement Rd Intersection, Bethungra (East side of rail alignment)	42,795			X
24	9000	Site office, RIW Stockpile / Laydown	NE corner of Ironbong Rd / Eulomo Settlement Rd Intersection, Bethungra (East side of road)	57,282	X		X
25	8400	Stockpile / Laydown	NE corner of Ironbong Rd Intersection, Bethungra (East side of road)	11,824			X

Site No.	Chainage	Main Functions	Address	Area (m2)	Site Office	Caravan	Laydown
26	5500	Caravan Stockpile / Laydown	Old Sydney Rd, Bethungra	22,355		X	X
27	3000	Site office, RIW	North of PR2800 Olympic Hwy, Bethungra	10,360	X		
28	1300	Stockpile / Laydown	Southwest of PR2800 Olympic Hwy	7,063			X

A full mark-up of all locations listed in the table above is illustrated in Appendix A – Site Offices, Caravan Sites and Laydown .

The accommodation camp is to meet the requirement of the CoA, which is addressed in detail in the Site Establishment Management Plan (5-0019-220-PMA-00-PL-0053)

Each of the Minor Ancillary Facilities listed above are to meet the requirements of Condition C9 by satisfying the following:

- Are located within the construction boundary
- Have been assessed by the ER to have:
  - minimal amenity impacts to surrounding residences and businesses, after consideration of matters such as compliance with the Interim Construction Noise Guideline (DECC, 2009), traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts, and
  - minimal environmental impact with respect to waste management and flooding, and
  - no impacts on biodiversity, soil and water, and heritage items beyond those already approved under other terms of the approval

6.3 Project Accommodation/Camp

Due to the limited availability of accommodation in the local area, workforce accommodation demand is likely to extend to other nearby townships including Cootamundra, Junee Temora, Gundagai, Wagga Wagga and Young. Wagga and Young have a relatively long travel time to site, and so would be appropriate only for short-stay accommodation. Based on the limited capability of local accommodation, one workforce accommodation camp will be required for construction. The nominated location for the camp is at Stockinbingal at ~CH 40.000.

A small construction crew, including subcontractors, will be housed in local motel accommodation during camp establishment and other Low Impact Works. The camp in Stockinbingal will provide the main accommodation for the delivery team, workforce, and camp management personnel. By encapsulating the workforce in one discrete area, we will avoid impacts to the community from noise and light spill, crowding, and overparking, and reduce demand for limited local rental accommodation.

Approved under the Environmental Impact Statement (EIS), the camp facility does not pose a high risk to the environment or ecology. The project will retain any trees not directly impacted by the camp footprint and will reduce clearing, wherever possible, through a review of design and layout plans. The site will operate in accordance with project approvals and the EIS, including all traffic, access, and erosion and sediment control requirements.

For any unforeseen surges during construction, short-term accommodation at local townships will be considered (e.g. Albion Hotel at Cootamundra). Surge capacity accommodation will extend to surrounding townships if required to meet demand during construction, providing local economic benefit.

The camp accommodation is to be constructed in full to accommodate the peak construction workforce capacity, however, the operational management will be scaled, as required, to meet the construction program. Civil construction workers will reside at the camp ahead of the track team (since track works will commence at the near completion of the main civil works). As track personnel move into camp accommodation, a portion of the civil team will be demobilising, which will reduce the overall camp population and achieve cost savings.

The accommodation camp site would include the following facilities/items:

1. Reception / Office
2. Kitchen / Dining
3. Accommodation
4. First Aid Room
5. Ablutions Building
6. Recreation Area / Ice Room
7. Gym
8. Laundry / Linen
9. Security Hut
10. Bin Storage Area
11. Generator / Fuel Store
12. Water Treatment Plant
13. Wastewater Treatment Plant
14. Media Room / Rec Room
15. Prayer Room

An indicative layout for the camp can be seen in the figure below:

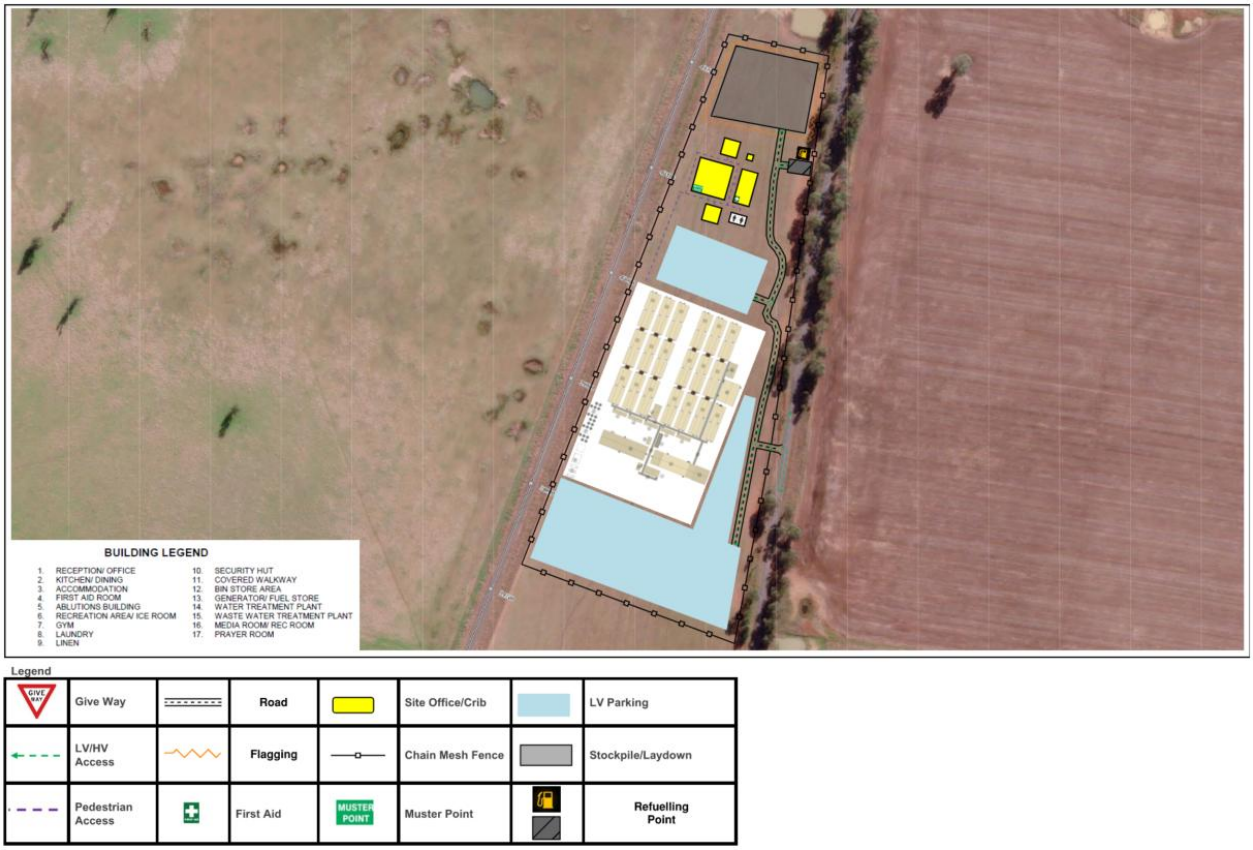


Figure 3: Indicative Layout of the Accommodation Camp

The camp site is to be run on generators with back-up systems to ensure a constant power supply. Water is to be stored in tanks on-site for distribution to the camp facilities. General waste to be managed on site via onsite waste collection and recycling facilities, and then transported to a licenced landfill facility. Wastewater would be collected on site and removed for treatment at a licenced wastewater treatment facility. Facilities for recycling of paper, plastic and metal to be in operation during camp operations.

The accommodation camp is to be accessed from Grogan Road, which is a two-way local road of approximately 6m width. It has a speed limit of 100kms per hour, which reduces to 80kms per hour near a level crossing located approximately 600m to the north of the accommodation camp.

Construction of the accommodation camp would require delivery of prefabricated components including some oversized loads. Grogan Road is not a NSW Oversize Over mass Load Carrying Vehicle approved road; therefore, an access permit would be required from the National Heavy Vehicle Regulator or Cootamundra-Gundagai Regional Council.

The accommodation camp is to be constructed prior to the commencement of main construction works and demobilised once construction of the I2S project has been completed. Rehabilitation of the site would be carried out in accordance with the Inland Rail Landscape and Rehabilitation Strategy to be undertaken during detailed design (refer to the Demobilisation Sub-Management Plan [5-0019-220-PMA-00-PL-0024] for further details).

For further details on the accommodation camp refer to the following Management Plans:

- Site Establishment Management Plan (5-0019-220-PMA-00-PL-0053)
- Sub-Plan: Housing and Accommodation (5-0019-220-PMA-00-PL-0042)

In the event of any contradictions between plans, all information in this Mobilisation Plan regarding the accommodation camp is superseded by the plans listed above.

6.4 Project Site Offices

As stated in Section 6.2, the I2S site team will establish 6 separate Site Offices (including the site accommodation compound) from where works will be managed across the project alignment. A primary project office will be established adjacent to the camp facility at CH40000 at Grogan Road, Stockinbingal to accommodate construction staff; IRPL staff; and the Independent Verifier and Project Verifier (as required). Smaller satellite compounds with crib sheds and portable ablutions will be established at CH3000, CH9000, CH18400, CH28200 and CH35100 for engineers, superintendents, and general workforce.

6.4.1 Compound #1 – Stockinbingal Site Office (~CH40.000)

The primary I2S project site office will be established at the Northern end of the camp facility at Grogan Road, Stockinbingal to accommodate construction staff; IRPL staff; the Independent Verifier and Project Verifier (as required); and house the Project Information Centre. The site office location in the camp is illustrated in the figure below:

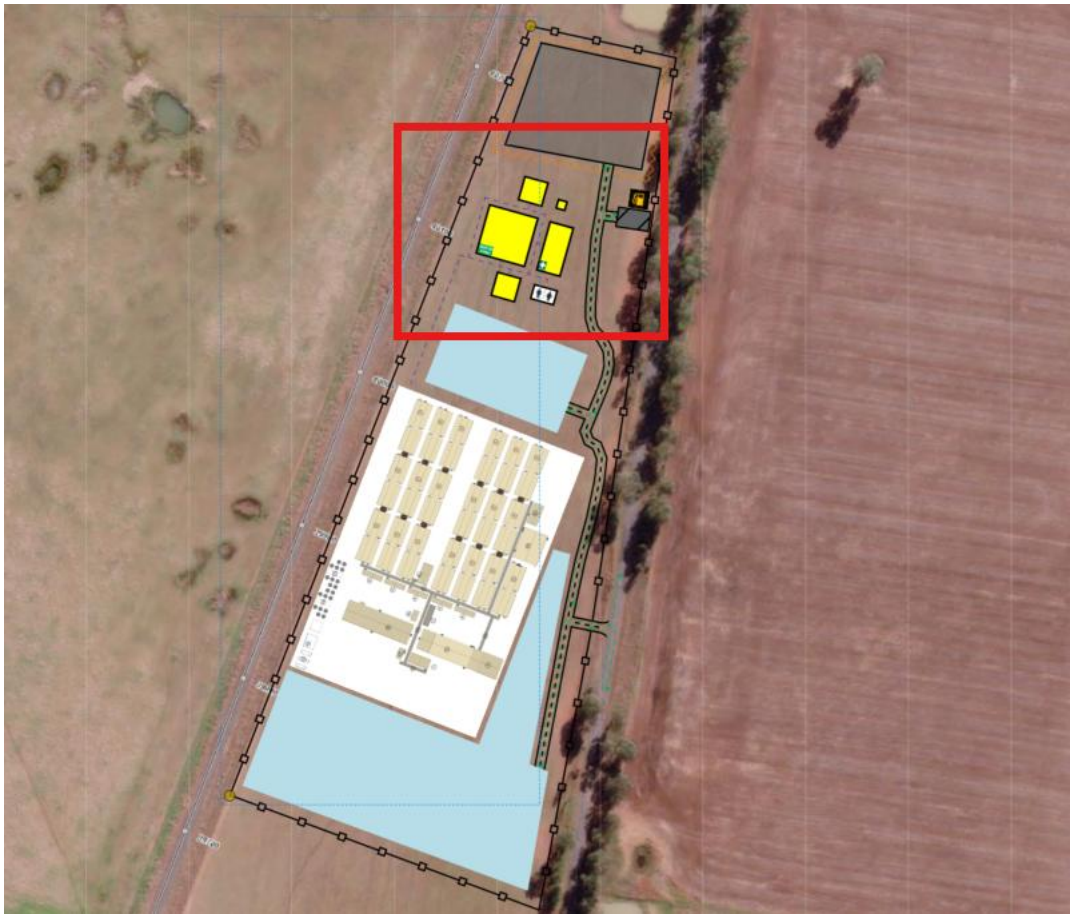


Figure 4: Compound #1 - Indicative Stockinbingal Site Office

The access point for this site office is to be SAP11, directly from Grogan Rd. Further details on the SAP's are outlined in the Construction Traffic Transport and Access Management Plan, CTTAMP (5-0019-220-PMA-00-PL-0056).

The main construction works to be completed from this office are all associated works to Burley Griffin Way and the adjacent trackwork's. This includes, but is not limited to the following:

- Burley Griffin Way Bridge & Roadworks
- Track works at Burley Griffin Way
- Dudauman Creek Bridge
- Various drainage culverts
- Utility relocations
- Large Earthworks Cut areas

6.4.2 Compound #9 – Dudauman Rd Site Office (~CH35.100)

The site office at Dudauman Rd at approximate chainage 35.100 will consist of the following:

- A site office (with RIW Sign-in)
- Lunchroom
- Change rooms, Male & Female toilets
- First Aid Facility
- Tool storage & Bins
- Laydown Area

The location of this site office can be seen in yellow in the figure below:

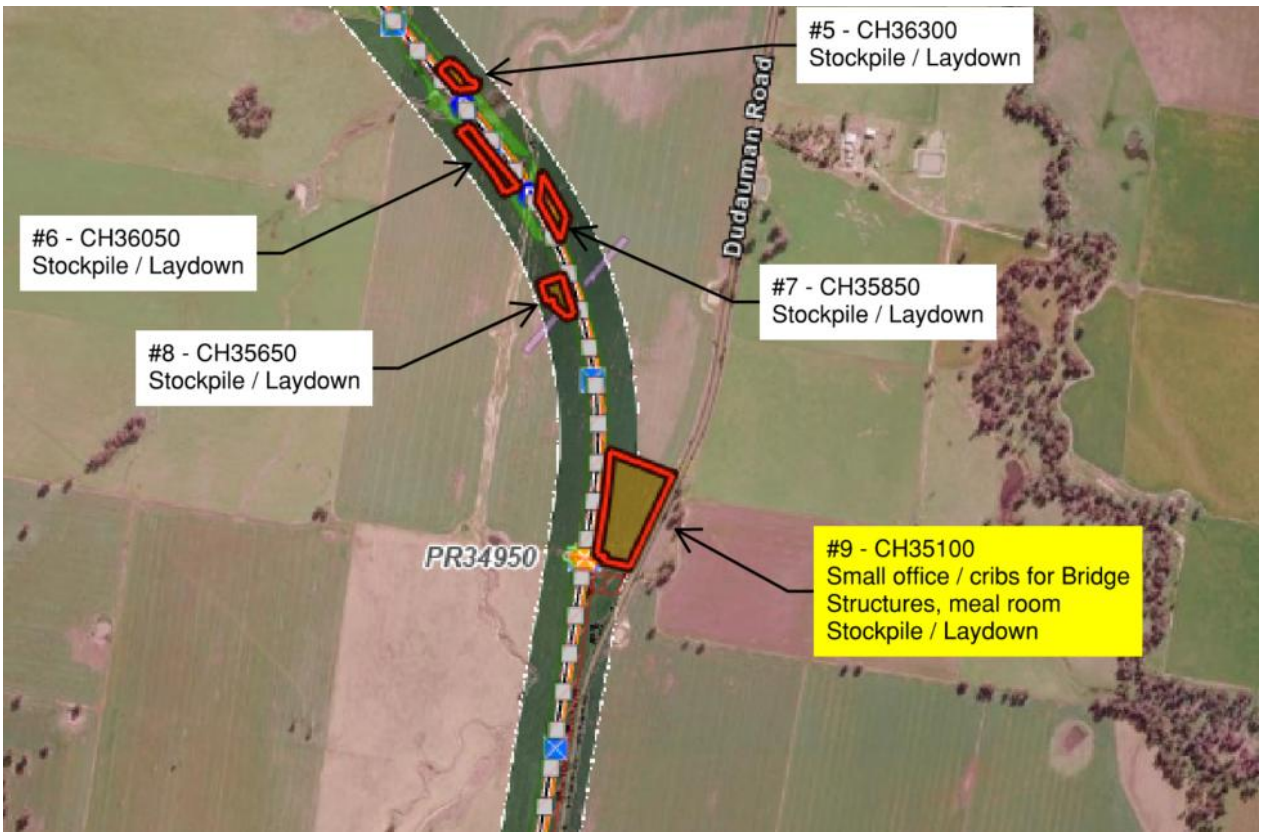


Figure 5: Compound #9 –Dudauman Rd Site Office

The access point for this site office is SAP 7A, which is directly from Dudauman Rd, Stockinbingal. Further details on the SAP's are outlined in the Construction Traffic Transport and Access Management Plan, CTTAMP (5-0019-220-PMA-00-PL-0056).

The main construction works to be completed from this office include, but are not limited to the following:

- Powder Horn Creek Underbridge
- Powder Horn Tributary Creek Underbridge
- Level Crossings PR34950 & PU33780
- Multiple drainage culverts

6.4.3 Compound #15 – Old Cootamundra Rd Site Office (~CH28.200)

The site office at Old Cootamundra Rd at approximate chainage 28.200 will consist of the following:

- A site office (with RIW Sign-in)
- Lunchroom
- Change rooms, Male & Female toilets
- First Aid Facility
- Tool storage & Bins
- Laydown Area

The access point for this site office is SAP6, which is directly from Old Cootamundra Rd. Further details on the SAP's are outlined in the Construction Traffic Transport and Access Management Plan, CTTAMP (5-0019-220-PMA-00-PL-0056).

The location of this site office can be seen in yellow in Figure 6 with an indication of the site compound layout in Figure 7 below:

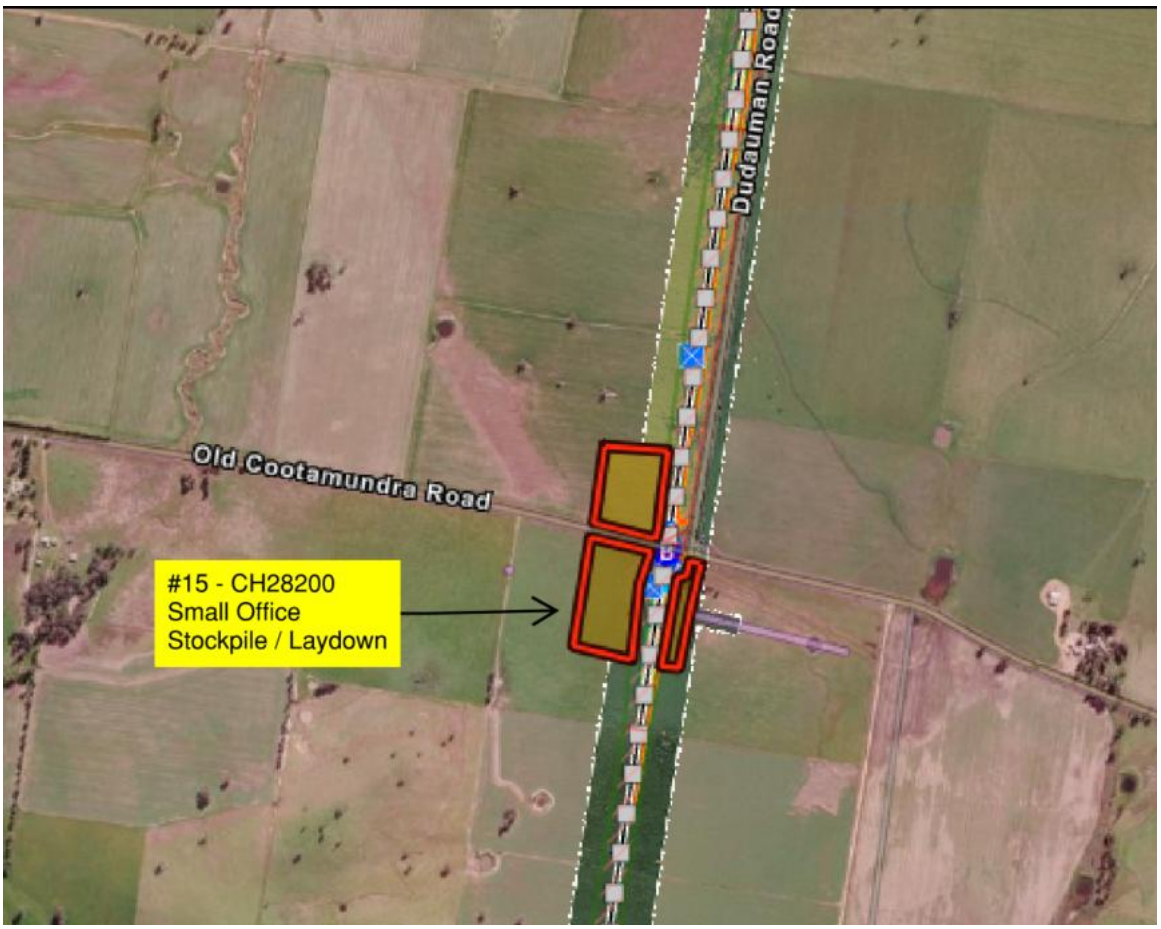


Figure 6: Compound #15 –Old Cootamundra Rd Site Office

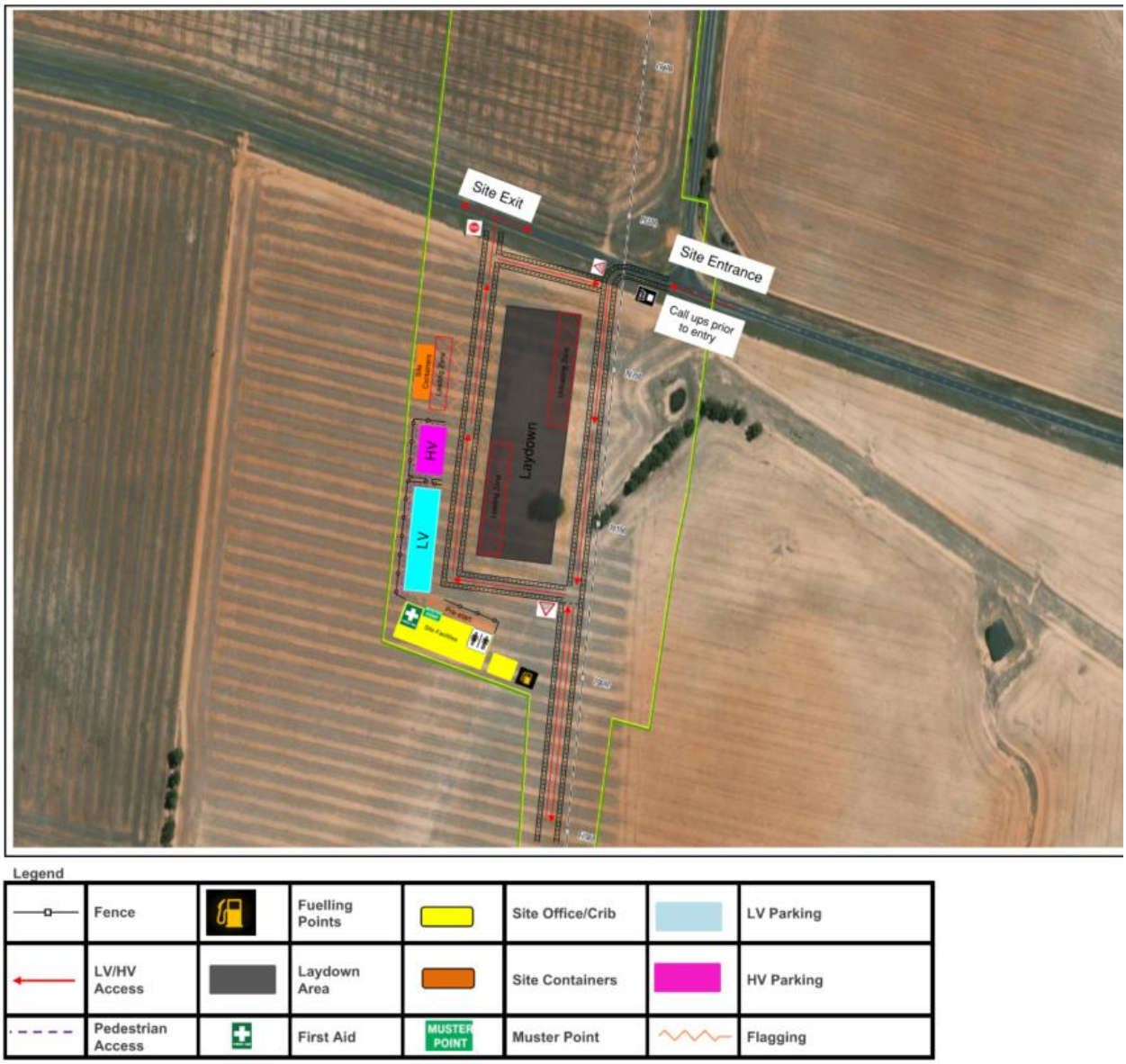


Figure 7: Compound #15 - Indicative Site Office Layout

The main construction works to be completed from this office include, but are not limited to the following:

- Old Cootamundra Road Underbridge (including Retaining Structure)
- Multiple Drainage Culverts & Stock Crossings
- Level Crossing PR24500

An interface with existing services has been identified at this site compound that must be managed during the construction phase. These existing services are to be investigated further during the Low Impact Works to ensure they will not be impacted by site establishment and ongoing activities.

Affected existing services:

- Underground Telstra
- Underground Goldenfields Water
- Overhead Essential Energy – Existing pole in Licensed Project Area
  - To be surveyed -> Raised above rail alignment
  - Pole to be protected with physical barriers (e.g. Jersey Kerb)

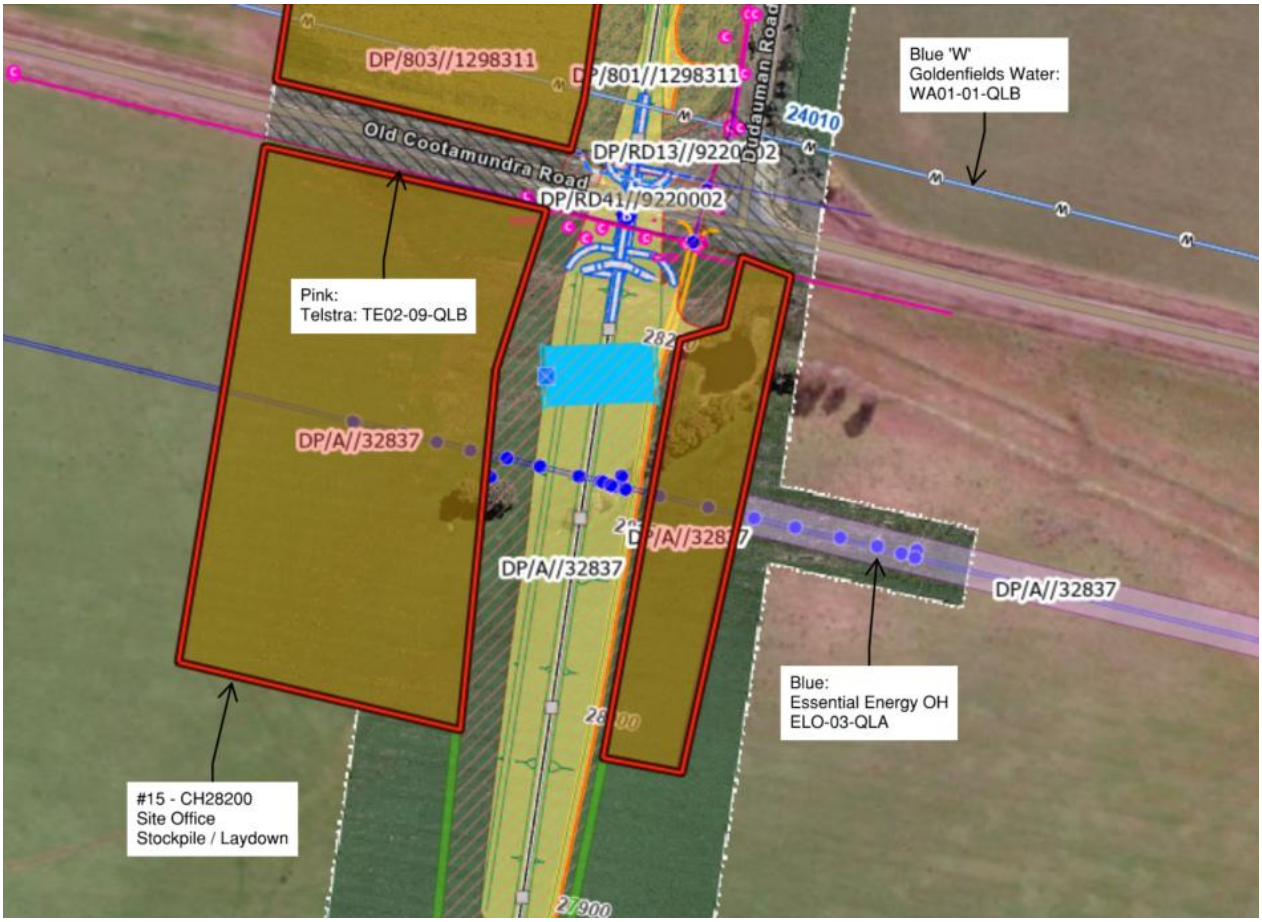


Figure 8: Utility Interface at Site Office (Compound #15)

6.4.4 Compound #19 – Dirnaseer Rd Site Office – (~CH18.400)

The site office at Dirnaseer Rd at approximate chainage 18.400 will consist of the following:

- A site office (with RIW Sign-in)
- Lunchroom
- Change rooms, Male & Female toilets
- First Aid Facility
- Tool storage & Bins
- Laydown Area

The access point for this site office is SAP5, which is directly from Dirnaseer Rd. Further details on the SAP's are outlined in the Construction Traffic Transport and Access Management Plan, CTTAMP (5-0019-220-PMA-00-PL-0056).

The location of this site office can be seen in yellow in Figure below:



Figure 9: Compound #19 – Dirnaseer Rd Site Office

The main construction works to be completed from this office include, but are not limited to the following:

- Dirnaseer Rd Bridge
- Level Crossing PR19800 & PU15950
- Multiple Drainage Culverts & Stock Underpasses
- Isobel Creek & Isobel Creek Tributary Bridges (likely Caravan site for these outlined in Section **Error! Reference source not found.**)

6.4.5 Compound #24 – Ironbong Rd Site Office (~CH9.000)

The site office at Ironbong Rd at approximate chainage 9.000 will consist of the following:

- A site office (with RIW Sign-in)
- Lunchroom
- Change rooms, Male & Female toilets
- First Aid Facility
- Tool storage & Bins
- Laydown Area

The access point for this site office is SAP4, or directly from Ironbong Rd. Further details on the SAP's are outlined in the Construction Traffic Transport and Access Management Plan, CTTAMP (5-0019-220-PMA-00-PL-0056).

The location of this site office can be seen in yellow in Figure below:



Figure 10: Compound #24 – Ironbong Rd Site Office

The main construction works to be completed from this office include, but are not limited to the following:

- Level Crossings PU8160 & PU11390
- Ironbong Rd realignment
- Run Boundary Creek Underbridge
- Ullandra Creek Underbridge
- Various Drainage Culverts & Stock Underpasses

Note: the use of this laydown area shall consider the impacts of flooding to and from Ulandra Creek. Special consideration shall be made when developing Erosion and Sediment Control Plans (ESCP's)

6.4.6 Compound #27 – Illabo Site Office (~CH3.000)

The site office at Olympic Hwy at approximate chainage 3.000 will consist of the following:

- A site office (with RIW Sign-in)
- Lunchroom
- Male & Female toilets
- First Aid Facility

The access point for this site office is SAP2, which is directly from Olympic Hwy. This access point also requires the existing level crossing to be utilised at ~CH2800, which is currently closed. Further details on the SAP's are outlined in the Construction Traffic Transport and Access Management Plan, CTTAMP (5-0019-220-PMA-00-PL-0056).

The location of this site office can be seen in yellow in Figure 11 below, with an indicative site compound layout shown in Figure 12 below:

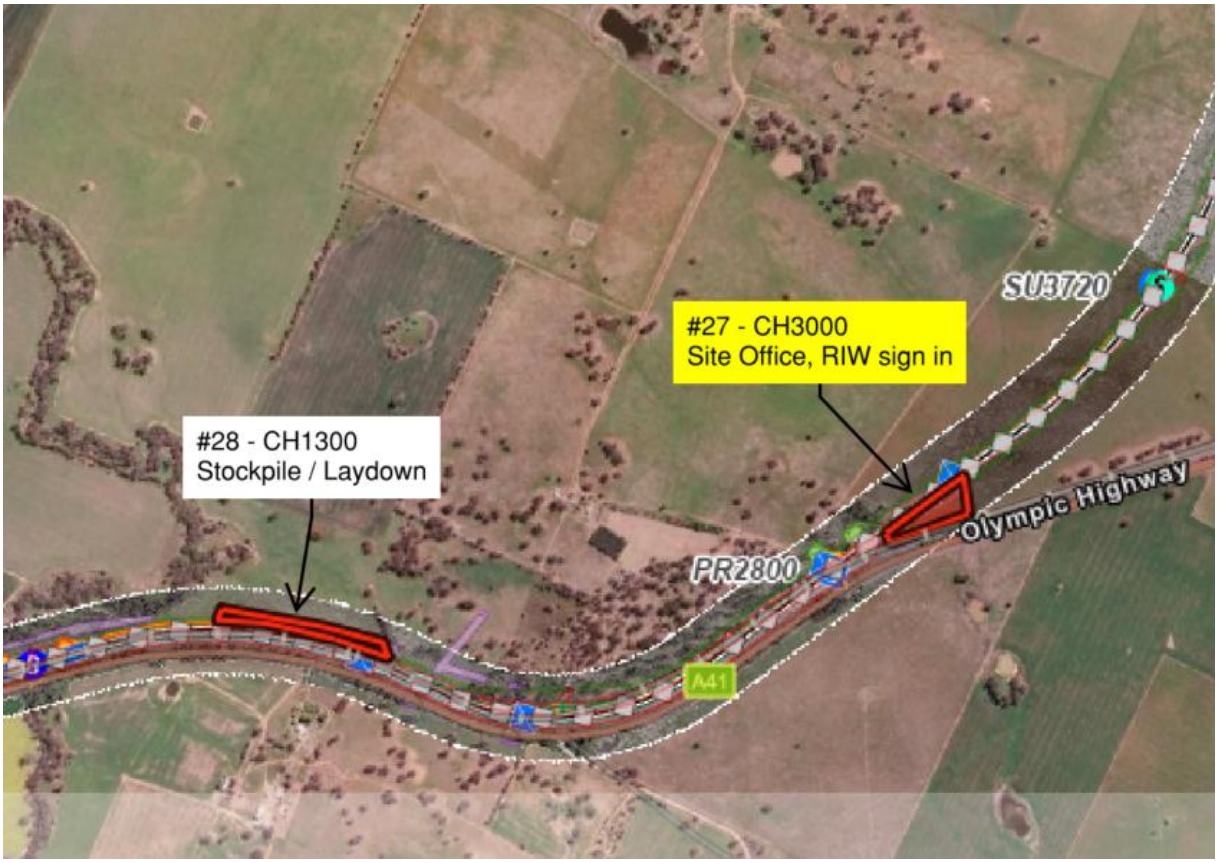


Figure 11: Compound #27 – Olympic Hwy Site Office

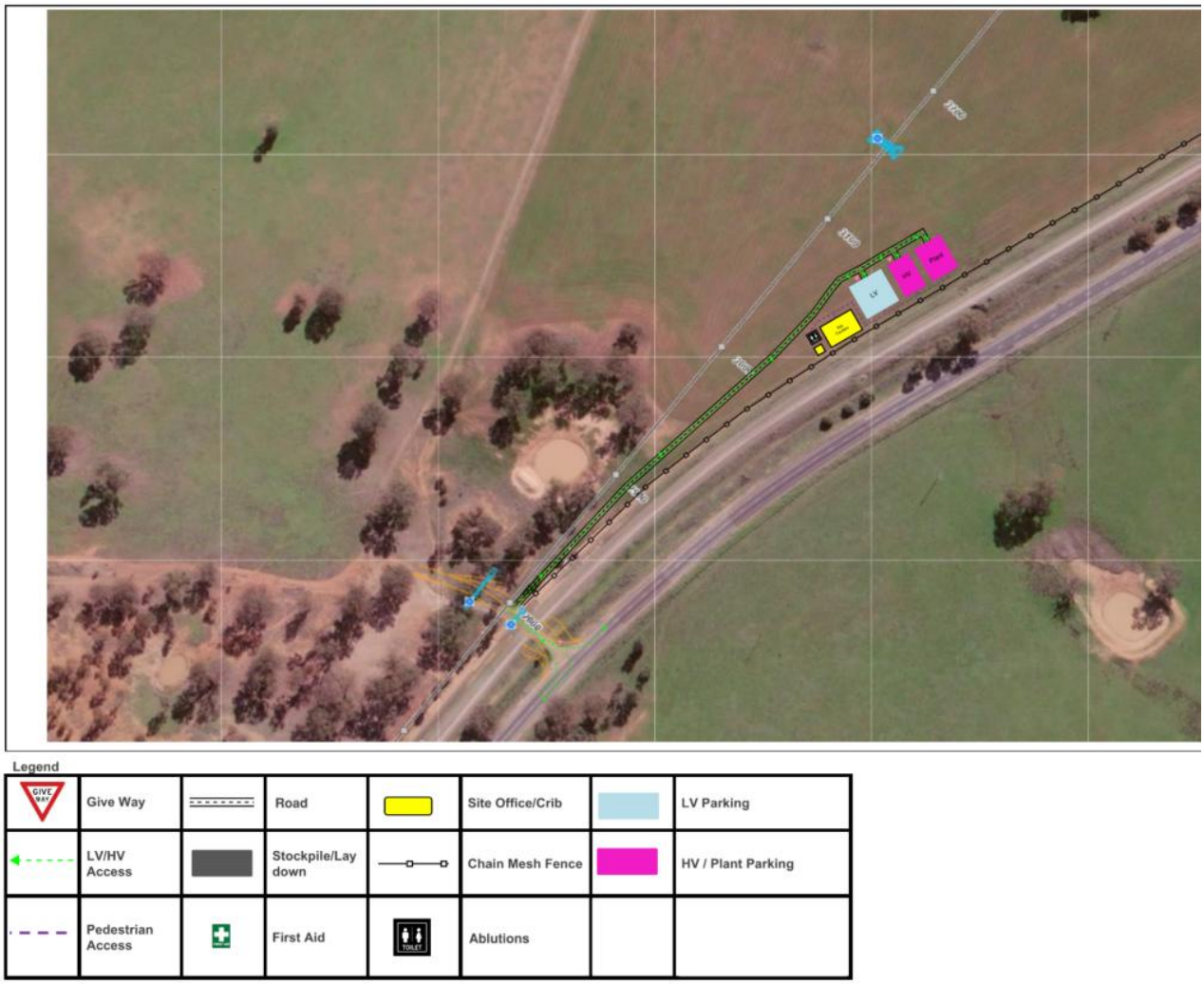


Figure 12: Compound #27 - Indicative Site Office Layout

The main construction works to be completed from this office include, but are not limited to the following

- All Illabo tie in works
- Billabong Creek Underbridge
- Multiple drainage culverts and stock underpasses

An interface with an existing service has been identified at this site compound that must be managed during the construction phase. There is an existing underground Optus fibre optics along the edge of the proposed compound that will be investigated further during the Low Impact Works to ensure it will not be impacted by site establishment and ongoing activities. This Optus service can be seen in the figure below:

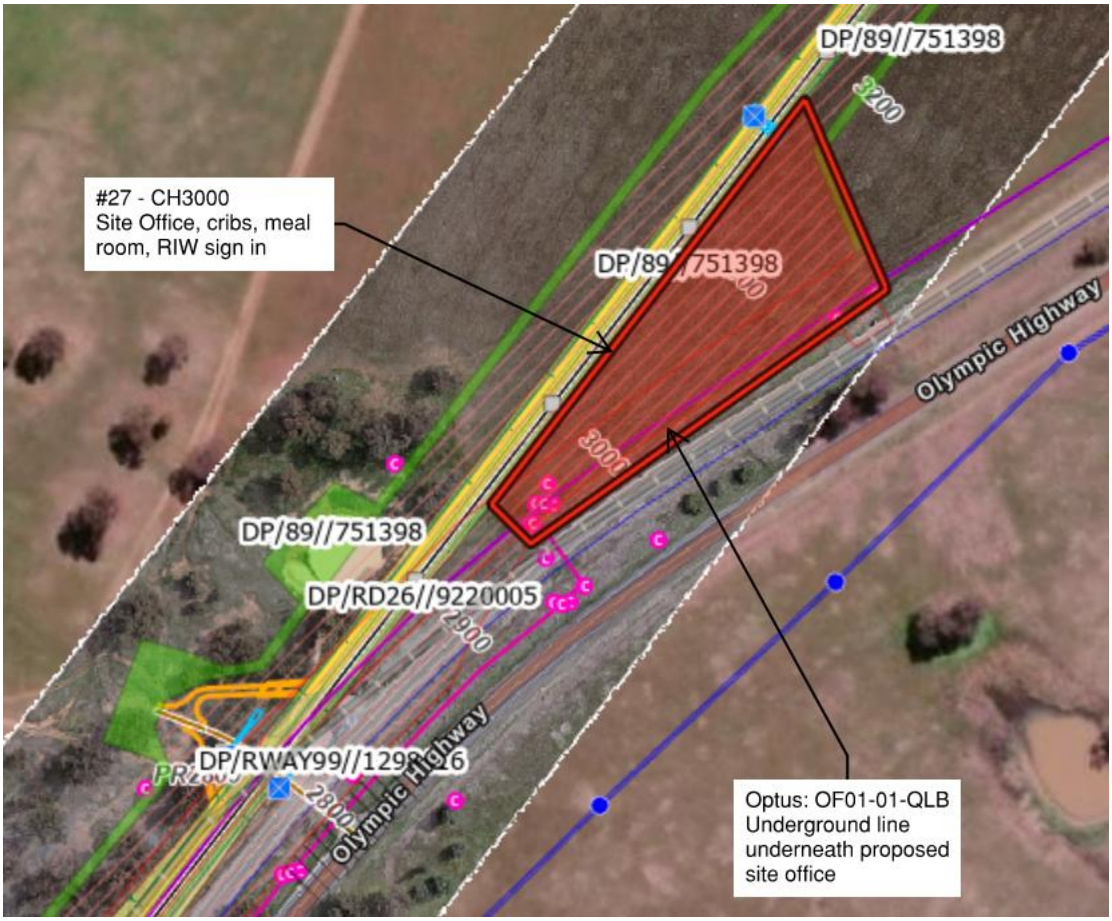


Figure 13: Underground Optus located under Illabo Site Office

6.5 I2S Project Caravan locations

Mobile caravans will move along the alignment at nominated locations between site offices to accommodate the work front. The criteria for selecting these sites were the location of major works, such as bridges, and to reside within large areas of the Licensed Project Area in order to provide parking and establish large laydown areas adjacent to the caravan. Several suitable sites for the caravans that meet these criteria are shown in Appendix A – Site Offices, Caravan Sites and Laydown and a typical layout of a caravan site can be seen in Figure 15 & Figure 15 below.



Figure 14: Compound #26 – Proposed Caravan Site & Laydown



Figure 15: Typical Caravan Site Layout (Compound #9 - Old Sydney Rd)

6.6 Laydown Areas and Storage Warehousing

The I2S project team will establish several laydown areas and storage warehousing/tool shed locations across different sites to ensure adequate space to store required construction materials. A combination of covered/uncovered areas have been secured for storing various materials. These locations are shown in Appendix A – Site Offices, Caravan Sites and Laydown , with compounds nominated as laydowns only listed in the sections below.

Relevant Site Engineers or Project Engineers and Site Supervisors for the work package will be responsible for coordination and checking all equipment and materials being delivered to these laydown areas and storage areas to confirm receipt and complete any QA (Quality Assurance) requirements prior to incorporating these materials into the works. This will be carried out utilising the equipment/materials delivery checklist within the relevant works-specific ITP.

6.7 Start Up Activities

The key activities during I2S Project start-up will be:

- feature/Cadastral survey
- service investigations
- geotechnical investigations
- dilapidation survey
- site compound setup
- fencing

The Communication and Stakeholder Engagement Management plan (5-0019-220-PMA-00-PL-0045) will cover the interface and interactions between the stakeholders during these start-up activities.

Various Activity Method Statements (AMS) and work packs will be developed and used to manage all works on-site. For the start -up activities there will be a ‘Site Investigation’ AMS, which will cover all Low Impact Works (LIW), and there will be a ‘Site Mobilisation’ AMS, which will cover the site establishment construction activities of setting up site compounds and detail all existing infrastructure and third-party assets required to be removed, relocated or replaced to facilitate the site mobilisation works.

6.8 Site Access and Approvals

6.8.1 General

In general, the following are required in order to access the Licensed Project Area:

- CAA approvals – all works within the ARTC and CRN network requires CAA approval by ARTC
- Communication and Stakeholder Engagement Management Plan
- Communication Action Plan
- Project Safety Management Plan
- Temporary Workforce Accommodation Facility Management Plan (Condition A18)
- The location and set-up of any compound will be communicated to IRPL to verify location of site facilities, muster point and high-level vehicle movements within the site.

6.8.2 Environmental Approvals

Table 4 below outlines the relevant environmental deliverables to be in place prior to the commencement of site activities (Work), as per Table 1 of the Minister’s Conditions of Approval (CSSI-9406). All Deliverables outlined below will be written and submitted in accordance with the PSR Requirements and timings.

Table 4: Environmental Deliverables prior to the commencement of Work.

Condition (CoA CSSI-9406)	How the condition has been satisfied
A17 Prior to the commencement of low impact work, an Unexpected and Incidental Finds Protocol must be developed for: a) threatened species and threatened ecological communities; b) contamination, hazards and contaminated land; c) Aboriginal Cultural Heritage; and d) non-Aboriginal Heritage. The Unexpected and Incidental Finds Protocol must include procedures for: i) all Work in the associated location to stop to prevent further impact; and ii) notifying the Planning Secretary and relevant state agencies in writing. Work must not recommence until the relevant state agencies have been consulted and any required approvals have been obtained. The Unexpected and Incidental Finds Protocol must be made publicly available prior to low impact work commencing and must be implemented during low impact work.	An Unexpected and Incidental Finds Protocol has been developed for the project in accordance with CoA A17. The Protocol has been made publicly available. Aconex reference: **5-0019-220-PES-00-PR-0001**
E117 The Proponent must prepare and implement a Workforce Code of Conduct for employees and contractors involved in the construction of the CSSI. The Code of Conduct must be prepared by a suitably qualified and experienced person(s) in the human resources sector and made publicly available prior to work commencing. The Code of Conduct sets out the ethical standards that employees are expected to adhere to in the construction site and interaction with the local community.	The Workforce Code of Conduct has been made publicly available. The approved Workforce Code of Conduct is available via Aconex reference: **5-0019-220-PHR-00-SM-0001**
B3 The Community Communication Strategy must be submitted to the Planning Secretary for approval no later than one (1) month before the commencement of any Work.	The Community Communication Strategy was approved by the Planning Secretary on the 13/11/24. Aconex reference: **6-0001-220-EEC-00-LT-0003**
B12 A Community Complaints Mediator that is: a) independent of the design and construction personnel; and b) accredited under the National Mediator Accreditation System, administered by the Mediator Standards Board must be nominated by the Proponent, approved by the Planning Secretary and engaged while the Complaints Management System required by Condition B6 is in operation. The nomination of the Community Complaints Mediator must be submitted to the	A Community Complaints Mediator (Jack Ellis) was appointed to the project by the DPHI on 1/10/2024. Aconex reference: **IR2200-DCACT-000879**

Condition (CoA CSSI-9406)	How the condition has been satisfied
Planning Secretary for approval within one month before the commencement of Work.	
A7 The Department must be notified in writing of the dates of commencement of Work (in relation to low impact works), construction and operation at least one (1) month before those dates.	Notification of commencement of LIW was issued to the Department on 4/10/24
B18 A website or webpage providing information in relation to the CSSI must be established before commencement of Work and maintained for the duration of construction, and for a minimum of 24 months following the completion of construction, or unless otherwise agreed with the Planning Secretary. Up-to-date information (excluding confidential commercial information) must be published before the relevant work commencing and maintained on the website or dedicated pages including: • information on the current implementation status of the CSSI; • a copy of the documents listed in Condition A1 of this approval, and any documentation relating to any modifications made to the CSSI or the terms of this approval; • a copy of this approval in its original form, a current consolidated copy of this approval (that is, including any approved modifications to its terms), and copies of any approval granted by the Minister to a modification of the terms of this approval; • a copy of each statutory approval, licence or permit required and obtained in relation to the CSSI; • a current copy of each document required under the terms of this approval must be published before the commencement of any work to which they relate or before their implementation, as the case may be; and • a copy of the compliance and audit reports required under this approval. A copy of each document required to be made publicly available under this approval must be published within 14 days of the finalisation or approval of the relevant document unless an alternate timeframe is prescribed by another condition of this approval. Where the information / document relates to a particular work or is required to be implemented, it must be published before the commencement of the relevant work to which they / it relates or before its implementation.	A website has been established for the project, available at: https://inlandrail.com.au

Condition (CoA CSSI-9406)	How the condition has been satisfied
All information required in this condition is to be provided on the Proponent's website, ordered in a logical sequence and be easy to navigate. *Notes:* 1. *The intention of this condition is to increase transparency and for information/documents required as part of the approval to be provided proactively and publicly in an easily accessible manner. Where information is excepted by this condition, it is intended that these documents are provided in their redacted form.* 2. *The Planning Secretary may instruct the Proponent to finalise and upload any report or documents to the Project's website in accordance with Condition A4.* 3. *The publishing of documents should occur a minimum of a week before the relevant Work / activity is going to commence.* 4. *In determining what information should be published under this condition, the proponent should have regard to the principles in Division 2 of Part 2 of the Government Information (Public Access) Act, 2009.* 5. *Documents should be named to be consistent with the conditions of approval where possible. The name should also give an overall impression of what the document is about. The names should be simple and concise (no more than 50 characters) without any unnecessary punctuation or under scoring in the title.*	
B7 The Complaints Management System must make the following information publicly available to facilitate community enquiries and manage complaints, from one (1) month before the commencement of Work and for 12 months following the completion of construction of the CSSI: • a 24- hour telephone number for the registration of complaints and enquiries about the CSSI; • a postal address to which written complaints and enquires may be sent; • an email address to which electronic complaints and enquiries may be transmitted; and • a mediation system for complaints unable to be resolved. This information must be accessible to all in the community regardless of age, ethnicity, disability or literacy level.	Complaints Management System prepared and information under the Complaints Management System made publicly available on the following website: https://inlandrail.com.au/
The following conditions must be met prior to Works, however, may not be applicable for all of Works proposed.	
E5 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 E1 and E2, and that is not subject to an EPL. The Protocol must be approved by the Planning Secretary before commencement of any	The Out of Hours Work Protocol will be prepared and approved by the Planning Secretary prior to the commencement of any out-of-hours work in consultation with the EPA.

Condition (CoA CSSI-9406)	How the condition has been satisfied
out-of-hours work. The Protocol must be prepared in consultation with the EPA. The Protocol must: • provide a process for the consideration of out-of-hours work against the relevant noise • provide a process for the identification and implementation of mitigation measures for residual impacts, including respite periods in consultation with the community at each affected location; • identify procedures to facilitate the coordination of out-of-hours work approved by an EPL to ensure appropriate respite is provided; • identify an approval process that considers the risk of activities, proposed mitigation, management, and coordination, including where: i) the ER review all proposed out of hours activities and confirm their risk levels; ii) low risk activities can be approved by the ER, and iii) high risk activities that are approved by the Planning Secretary; and identify Department, EPA and community notification arrangements for approved out-of-hours work, which maybe detailed in the Communication Strategy.	
E135 Prior to the commencement of any ground disturbance work within areas identified as requiring archaeological investigation or salvage identified in documents listed in Condition A1, the Proponent must prepare and implement an Additional Aboriginal Archaeological Survey Methodology and an Aboriginal Archaeological Test Excavation Methodology. The methodology must include procedures for additional archaeological survey of Zones 5, 6, 9 and 10, and management protocols including consultation with the Registered Aboriginal Parties, for any Aboriginal objects and sites identified during the survey.	No ground disturbance Works are to occur within the Indigenous Survey Zones outlined in the EIS (Zones 1-11), including those identified as requiring archaeological investigations or salvage.
E145 Before commencement of any work, a structural engineer must undertake condition surveys of all buildings, structures, utilities and the like identified in the documents listed in Condition A1 as being at risk of damage. 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 owners of the items surveyed,	Buildings or structures identified in the EIS as being at risk of damage will undergo a condition survey. The results of the survey will be documented in a Condition Survey Report.

Condition (CoA CSSI-9406)	How the condition has been satisfied
and no later than one month before the commencement of construction.	For DPHI correspondence on the interpretation of this condition, please see Aconex reference: **IR2200-CA-000017**

6.9 Existing Infrastructure Interfaces

6.9.1 Utilities

An assessment of the entire alignment has been conducted to identify all services that will be affected by the I2S Project. A number of these services are to be relocated due to their orientation and/or existing cover to the proposed design finished surface level (FSL). The I2S project team includes a staff member nominated as Utility Manager to manage existing services and be the point of contact and communication for all Utility Service Providers (USP). The Utility Manager will also facilitate the service relocation process with the Utility Service Providers to establish a program, set dates for submissions to Authorities, oversee service relocation designs and obtain final sign-offs.

In addition to the services affected by the permanent works, there are also several utilities that interface with site compounds and laydown areas. These services are to be positively identified and protected for the duration of the project, rather than relocated. A brief overview of the investigation process is outlined below:

- Existing services to be positively identified:
  - Underground services to be located via NDD methods and surveyed by an accredited surveyor
  - Overhead services and poles to be surveyed by an accredited surveyor
- A-Class survey data to be fed back into the site mobilisation strategy to determine if the services require protection or if the site compounds & laydowns can be modified to eliminate the interface
- Potential protection methods for existing services:
  - Underground services: if services are deemed to be too shallow then protection slabs may be installed as a protective measure
  - Overhead Services: tiger tails may be installed on overhead cables and physical barriers such as Jersey Kerbs may be installed to physically delineate/protect utility poles from damage

Several locations that have an interface between site establishment and existing utilities have been identified, with most already being outlined in sections 6.4 and 6.5. However, a full list can be seen in the table below:

Compound No.	Chainage	Main Function	Utilities
1	40000	Site Camp / Accommodation	Telstra: Western verge of Grogan Rd
2	39300	Stockpile / Laydown	Telstra: Western verge of Grogan Rd
4	37500	Stockpile / Laydown	Essential Energy: OH Power ELO-05-QLA ELO-06-QLD
8	35650	Stockpile / Laydown	Essential Energy OH: ELO-04-QLD
10	34000	Stockpile / Laydown	Telstra: TE02-11-QLB

Compound No.	Chainage	Main Function	Utilities
15	28200	Site Office Stockpile / Laydown	North: Goldenfields Water: WA01-01-QLB South: Essential Energy OH: ELO-03-QLA South: Telstra: TE02-09-QLB
17	22200	Caravan Stockpile / Laydown	Telstra - 220-00-1-TE02-08-QLB
20	16100	Caravan Stockpile / Laydown	Telstra - 220-00-1-TE02-06-QLD
26	5500	Caravan Stockpile / Laydown	Telstra - 220-00-1-TE02-02-QLB
27	3000	Site Office	Optus: OF01-01-QLB
28	1300	Stockpile / Laydown	Essential Energy OH: ELO-01-QLD Telstra: TE02-01-QLB Optus: OF01-01-QLB

6.9.2 Track Infrastructure

Most of the I2S project is designated as greenfield, however the Northern and Southern tie-in points at Stockinbingal and Illabo respectively are brownfield areas due to the interface with live rail infrastructure. When it comes to site establishment, the main interface of concern is with the live rail traffic itself. As such, the there are two main areas where this interface is to be managed, which are outlined below:

6.9.2.1 Live Track Interface at Illabo

Two main risks have been identified at Illabo: the first being the works are on the opposite side of the live tracks from Olympic Hwy, resulting in construction traffic having to cross the tracks; the second being that the site office at ~CH3000 (Compound #27) is located adjacent to the live tracks.

The construction access from Sydney Olympic Hwy is to be via the existing level crossing at ~CH2800, which is listed as SAP2. This private level crossing is currently closed but will be reopened for construction purposes and will be managed by a PO and/or traffic control, as required. Refer to the Construction Traffic Transport and Access Management Plan, CTTAMP (5-0019-220-PMA-00-PL-0056) for further details on this access point.

The close proximity of the site office to the live tracks, especially at the designated parking areas, necessitates clear delineation in the form of a chain link fence (or similar) in most areas, but a physical barrier such as concrete Jersey Barriers (or similar) in high traffic areas. The figure below illustrates this:

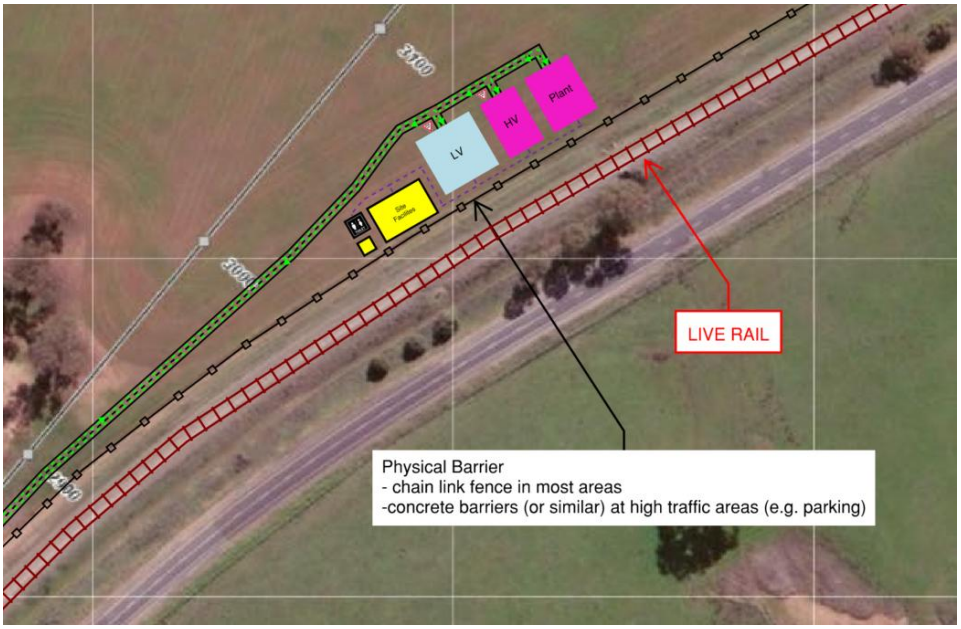


Figure 16: Illabo Site Office Delineation

6.9.2.2 Live Track Interface at Stockinbingal

Similar to Illabo, the main construction works are on the opposite side of the live tracks from Stockinbingal. The site access point SAP xxix is via the Mclaughlins Lane Level Crossing, which is to be managed by a PO and/or traffic control, as required. Refer to the Construction Traffic Transport and Access Management Plan, CTTAMP (5-0019-220-PMA-00-PL-0056) for further details on this access point.

Also similar to Illabo, the Camp / Accommodation site at Stockinbingal is immediately adjacent to the live rails. Therefore, physical barriers are to be used to delineate high traffic areas from the rail danger zone. This can be seen in the figure below:

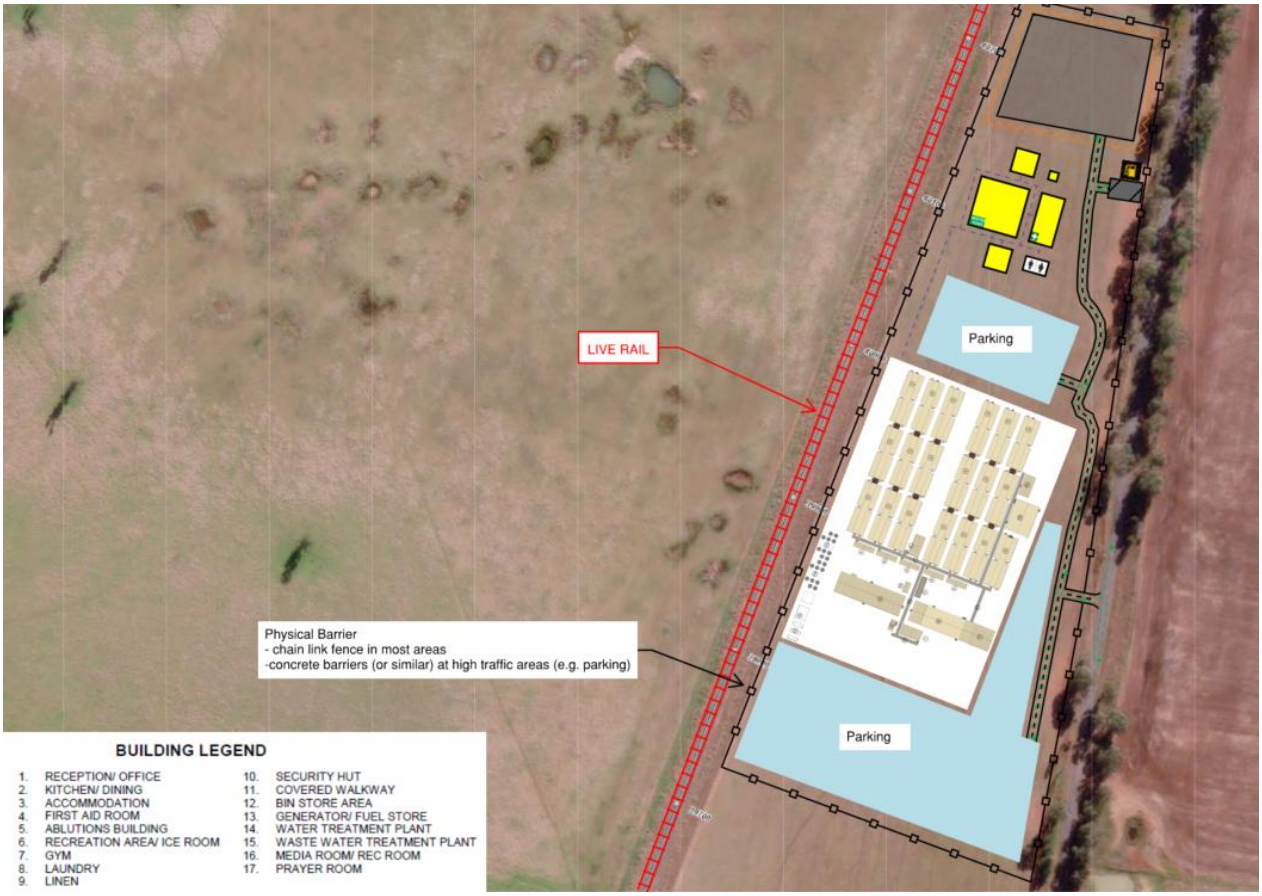


Figure 17: Stockinbingal Camp Delineation

6.10 Dilapidation Survey/Reports

An assessment is to be conducted to determine all existing infrastructure and assets within or adjacent to the work sites likely to be impacted by the Works. A dilapidation survey will be undertaken prior to construction works for all nominated areas, including but not limited to the following:

Access roads - all roads in the immediate vicinity of the alignment, from Illabo to Stockinbingal, that will be used during the project lifecycle

Private Roads – any roads that may be used as temporary access routes prior to setting up the main construction routes

Residential & Commercial – all residential building, commercial buildings and assets, Utility assets, open areas etc.

Rail & Signalling – Rail infrastructure, signalling locations, cable routes, lineside equipment etc.

The dilapidation survey reports will provide a baseline condition assessment for the project and will nominate any monitoring requirements and frequencies to be conducted, as per the Construction Monitoring Plan (5-0019-220-PMA-00-PL-0028).

The pre-construction condition assessment is to be provided to the asset owner within twenty (20) Business Days after the condition assessment and/or dilapidation survey has been completed and a minimum of twenty (20) Business Days before any Construction Activities which may affect that existing Site Condition, may commence.

For further details on the dilapidation survey/reports, including relevant CoA's, refer to Appendix B – Condition Assessment Plan.

Appendix H I2S Country Regional Network/ Inland Interface Management Plan



JOHN HOLLAND

INLAND RAIL

ILLABO TO STOCKINBINGAL PROJECT

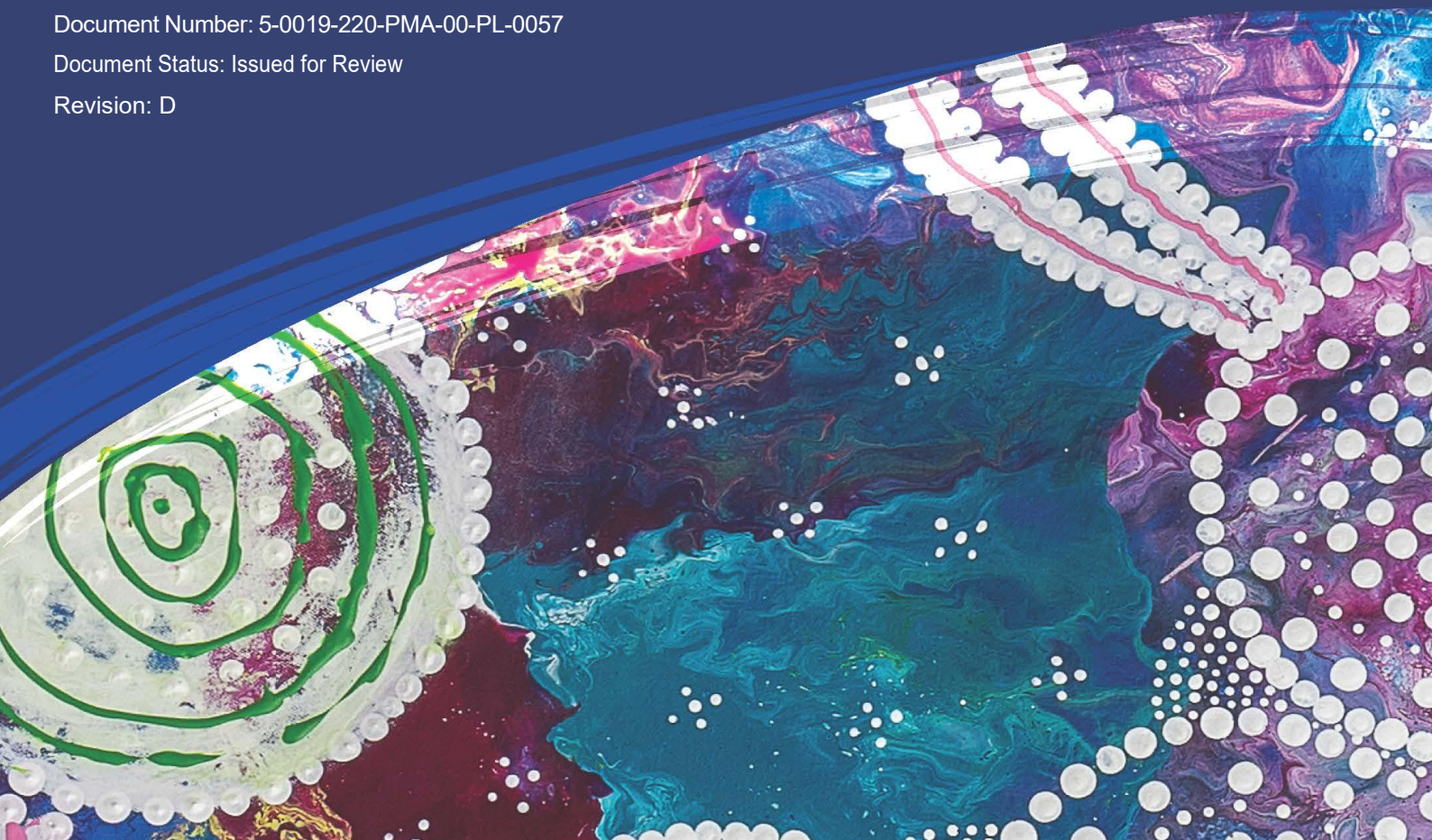
Country Regional Network / Inland Rail

Interface Management Plan

Document Number: 5-0019-220-PMA-00-PL-0057

Document Status: Issued for Review

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Document Control

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1 Revisions and Distribution

1.1 Revisions

Draft issues of this document are identified as Revision A, B, C etc. Following acceptance by the document approver, the first finalised revision will be Revision 0. Subsequent revisions will have an increase of “1” in the revision number (1, 2, 3 etc.).

1.2 Distribution

The controlled master version of this document is available for distribution as appropriate and maintained on the document management system being used on the project. All circulated hard copies of this document are deemed to be uncontrolled.

Client’s Representative	Harry Mercer
Project Director	Justin McCarthy
Construction Manager	Timothy Cook
Quality Representative	Sharon Winter
Engineering Manager	Vincent Chong
Project Personnel	Aconex Distribution

2 References, Definitions and Abbreviations

2.1 Compliance Roadmap

The following is a tabular representation of the Schedule 8 of the Deed-I2S CSSI requirements as described in IRPL Contract No. 2200C0019 and a reference link to detail how I2S intend to comply.

Table 1: Compliance Roadmap

Reference (DOORS ID OR Specification name/clause)	**Requirement**	**Applicable Section in this Plan**
Schedule 8 -I2S CSSI Conditions C21 (k)	Prepare a Country Regional Network/ Inland Rail Interface Management Plan to address potential impacts to Country Regional Network/ Inland Rail Interfaces.	This Plan

2.2 Definitions and Abbreviations

Definitions and abbreviations to be applied to the Country Regional Network/ Inland Rail Interface Management Plan are listed below.

Table 2: Definitions and Abbreviations

Term/Abbreviation	Definition
ARTC	Australian Rail Track Corporation
CCB	Change Control Board
CRN	Country Regional Network
D&C	Design & Construction
IRPL	Inland Rail Pty Ltd
I2S	Illabo to Stockinbingal
JH	John Holland
JHPL	John Holland Pty Ltd
QA	Quality Assurance
CTTAMP	Construction Traffic & Transport Management Plan
TMP	Traffic Management Pan
TRA	Task Risk Assessment
UGLRL	UGL Regional Linx
TfNSW	Transport for NSW

2.3 References

- Design and Construct Deed No: 2200-0019
- RAIL / RAIL INTERFACE AGREEMENT IA3000 Appendix 09 Inland Rail Specification UGL Regional Linx and Australian Rail Track Corporation Limited for the Stockinbingal - (Temora Branch Line) at Stockinbingal
- UGL Regional Linx Third party work enquiries process
- UGL Regional Linx Accessing the Country Regional Network CRN-PRC-RLS-459032646-213
- UGLRL CCB process Configuration Management Procedure (Attached in Appendix B)
- UGLRL CRN-MAN-AMS-713026361-8242 - Asset Change Request Process

3 Introduction

3.1 Purpose

The purpose of this Country Regional Network / Inland Rail Interface Management Plan is to describe the approach how the Construction Team will manage and control the impact of construction of permanent and temporary works for the Illabo to Stockinbingal (I2S) Inland Rail Project to ensure it complies with the contract.

This will remain a live document throughout the life of the project, being amended and updated as required.

This Country Regional Network / Inland Rail Interface Management Plan will describe the Impact of the I2S project works which includes but not limited to

- During design development-
    - Ensuring design review and approval by Country Regional Network (CRN)
    - Ensuring Country Regional Network (CRN) configuration change process is followed
- During construction-
    - Ensuring all required access permissions are acquired
    - Managing all access during construction as per relevant process and procedures and as per the agreement
    - Managing all construction works as per relevant process and procedures and as per the agreement
- At handover-
    - Ensuring commissioning of all works as per relevant process and procedures
    - Ensuring Country Regional Network (CRN) configuration change process is followed
    - Ensuring all handover is done and relevant documentations submitted as per relevant process and procedures

3.2 Project Scope

The Inland Rail - Illabo to Stockinbingal (I2S) Project is a 39-kilometre greenfield section where a new track will be constructed in a newly established rail corridor, just east of Illabo, tracking north to Stockinbingal, NSW.

This new section of rail corridor will provide a direct route from Illabo to Stockinbingal through to the existing Forbes line. The line will bypass Cootamundra and the steep and windy Bethungra Range with the Bethungra Spiral.

Bypassing the Bethungra Spiral will improve reliability and reduce travel distance by approximately 23 kilometres.

Burley Griffin Way will undergo a major realignment and a new road over rail bridge will be built. This will enable the closure of one of the existing rail level crossings in Stockinbingal, improving safety. In addition, Ironbong Road will undergo a minor realignment around the proposed level crossing to improve safety.

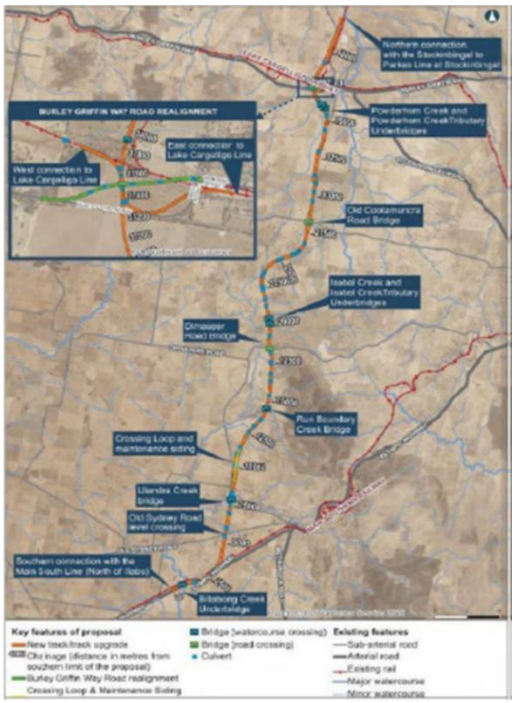
The project connects with the Albury to Illabo (A2I) and Stockinbingal to Parkes (S2P) enhancement projects.

This design and construct project works will include:

- New track construction
- Earthworks
- Bridge construction

- Culvert and drainage installation
- Road works
- Activated and passive level crossings
- Installation of rail systems
- Utility Adjustments





3.3 Relevant Scope of Works within Country Regional Network

Scope of works include-

- Change in existing track alignment with ARTC line towards Cootamundra which includes
  - Removal of track infrastructure
  - Connection of new alignment to existing resulting in track slew
  - Change in ARTC/CRN interface (refer to Km Strategy)
- Associated signalling works-correlation, interface wiring into CRN location cases as required, relocation of signalling equipment as required
- Any signalling support required for track and civil works

Location	Scope Description
CRN Connection (towards Temora) Inland Rail mainline connection with the existing CRN line (towards Temora)	➢ 1 x mainline turnout to connect into the existing CRN line. This will not be within CRN boundary ➢ New track construction from turnout connection of Inland Rail mainline to tie in-to existing CRN line. ➢ Partial demolition and/or modification of existing CRN line to allow slewed connection.



4 Interface Management Approach, Structure & Key Personnel

John Holland's Interface Management processes for I2S comprises the processes and procedures used to manage the interfaces associated with the Works and Activities throughout the Project life cycle. John Holland understands that the interface between the project works, and Country Regional Network (CRN) operated by UGL Regional Linx (UGLRL). We understand successful project delivery requires us to establish effective interface with UGLRL. Our approach to interface cooperation and coordination will be based on proactive, goal-oriented, and open communication, with clear interface ownership.

We are committed to the active engagement of UGLRL to deliver a best-for-project solution.

Interface issues, risks and risk treatments or resolutions will be captured in the centralised Interface Register 5-0019-220-PEN-00-RG-0001 as described in Section 4.7 of Interface and Integration Management Plan (5-0019-220-PMA-00-PL-0011). Issues will be discussed, reviewed and updated in the fortnightly meetings with IRPL and UGLRL and an updated version will be sent to UGLRL through IRPL via Aconex.

4.1 Current Interface Agreement

We'll follow current RAIL / RAIL INTERFACE AGREEMENT IA3000 Appendix 09 between UGL Regional Linx and Australian Rail Track Corporation Limited for the Stockinbingal at all times. Current Interface location will be changed as part of the work and will be presented and communicated to UGLRL through various stages of design and associated design reports.

4.2 Key interfaces to be managed

The key interfaces for the Project, their associated considerations, and our proposed management approaches are summarised in the below Table.

Interface and key interface points	Key considerations	Management approach
• Access • Design • Possession/non-possession works and worksite access plans • Rail Safety Management System. • Commissioning and Handover	• Access permission for any works within CRN corridor • Design co-ordination and relevant CCB process • Possession Approval and non-possession works approval • Timely and effective possession planning across the short and medium term • Rail safety and security of the rail corridor must be maintained at all times and aligned with adjoining projects • Assessed and consistent scenario approach to worksite protection methodology.	• Regular co-ordination meeting with IRPL to discuss our approach • Access permission application as per UGLRL 3rd party access requirement • Design co-ordination meetings with UGLRL and send the relevant design packages to UGLRL for review. • Follow UGLRL CCB process where required. • Works to be delivered by a brownfield rail-experienced team, with experience delivering works in the ARTC rail corridor • T-minus possession planning process between Project team, and UGLRL will involve: – Interactive sessions through briefing of work scope and program – T- possession planning meetings and Works Coordination, Works Finalisation, Pre-Possession Whiteboard Meetings (T-1 weeks), and Possession De-brief (T+) where required • Safeworking coordination, including review and approval of safeworking worksite protection plans and collaborative implementation of the plan • Alignment with UGLRL access permission and worksite protection plan (WPP) processes, John Holland to incorporate appropriate lead time for works approvals

4.3 Key Personnel

This Interface management will be addressed at all levels of the organisation, with different managers across different interfaces. The Construction Manager will essentially be across all of these interfaces, but the remainder of the team will play and big part in the ongoing management of specific interfaces, resolving issues in their area of expertise.

Refer to 5-0019-220-PMA-00-PL-0001 Project Management Plan for Organisation Structure and roles and responsibilities details.

5 Interface Management

5.1 Interface Identification

This interface management identifies various design packages impacting CRN infrastructure and operations at various stages over the project life cycle.

Project Stage	Key Interface	Management Treatment
• Investigation Stage	• Access permission • Safeworking Management	• Access Permission be managed as per relevant application requirement stated in UGL Regional Linx Third party work enquiries procedure

Project Stage	Key Interface	Management Treatment
		• Access to UGLRL will be in accordance to requirement as in UGL Regional Linx Accessing the Country Rail Regional Network CRN-PRC-RLS-459032646-213 • Safeworking Management detailed in Rail Access Management Plan 5-0019-220-PMA-00-PL-0027
• Design Stage	• Design review and Approval- Various Stages • CCB-Various Stages	• Design Review and Approval be managed as per Design Management Plan 5-0019-220-PMA-00-PL-0017 • CCB at various stages over the project life cycle will be managed as per UGLRL CCB process Configuration Management Procedure (0-0000-900-PIG-00-PR-0001). • Interface Boundary (Operational, Property and Maintenance) to be proposed and defined by John Holland through Signal Functional Specification Document (SFS). Once endorsed by IRPL, IRPL to get the approval from UGLRL and TfNSW. • UGLRL to be invited in the Safety in Design Workshop to discuss any relevant hazards within/impacting UGLRL network related to relevant design packages. • A Joint Operational Safety Review (JOSR) meeting with UGLRL to be organised to discuss and endorse the residual risks.
• Construction	• Access Permission • Possession management • Safeworking management • Construction Management	• Access Permission be Managed as per relevant application requirement stated in UGL Regional Linx Third party work enquiries procedure • Access to UGLRL and possession management will be in accordance to UGL Regional Linx Accessing the Country Rail Regional Network CRN-PRC-RLS-459032646-213 • Safeworking Management detailed in Rail Access Management Plan 5-0019-220-PMA-00-PL-0027 • Construction Management be as per Construction Management Plan 5-0019-220-PMA-00-PL-0020 • Construction as per relevant UGLRL Standards and Procedures • John Holland to inspect and certify track as per CRN Standard where required as per the relevant license conditions. If any defect is identified resulting from John Holland works, John Holland will communicate the details to UGLRL in writing. If any emergency defects identified, John Holland will communicate immediately to UGLRL Local Maintenance Team with details and to Network Controls if this impacts the train operation. • If any pre-existing defect is identified by John Holland as part of dilapidation survey and/or during construction period, this will be communicated to UGLRL with details.

Project Stage	Key Interface	Management Treatment
		• John Holland will provide look ahead program and progress update of the construction works within CRN corridor in a regular basis in the Interface Meeting. • John Holland will follow the conditions accordingly as per the relevant Construction License.
• Commissioning and Handover	• CCB Commissioning and Asset Handover • Commissioning and approval • Handover infrastructure and required documentations	• CCB for commissioning and handover will be managed as per UGLRL CCB process Configuration Management Procedure (as attached in Appendix B). • Handover of documents as part of Gate 4 and 5 CCB Gate Submission as stated CCR Checklist for CCB Gateway Submissions IRPL #: 0-0000-220-PIG-00-CL-0001_0 (CRN-CHK-AMS-713026361-3966) • Interface Co-ordination Plan-Signalling Work-UGL Regional Linx CRN (Aconex correspondence JH-TRANSMIT-000171) for details on how the interface will be managed for the signalling works • Handover of infrastructure will be managed as per Completion and Handover Management Plan 5-0019-220-PMA-00-PL-0048 • Operational Readiness will be managed as per relevant standard requirements. • Asset Update will be managed as per UGLRL CRN-MAN-AMS-713026361-8242 - Asset Change Request Process • Regular Interface meetings with UGLRL to update on Operational requirement • Interface Agreement to be updated between ARTC and UGLRL/TfNSW to reflect the new Interface Boundary. This will be led by IRPL. • As part of the Interface Agreement, relevant update on asset register, property and asset handover between ARTC and UGLRL, Safeworking agreement update be agreed and implemented. • The new Interface Boundary (Operational, Property and Maintenance) for the variation of the NSW Deed of Lease will be approved by ARTC and TfNSW. This approval will be coordinated by IRPL • For the implementation of the Interface Agreement/Deed of Variation Agreement (DOVA) between ARTC and UGLRL/TfNSW, John Holland will do asset update as per UGLRL CRN-MAN-AMS-713026361-8242 - Asset Change Request Process and as per ARTC Operational Readiness Process which will be managed through Operational Readiness tracker.

5.2 Stakeholder Engagement

The project will adopt several structured and staged forums with UGLRL and IRPL to facilitate and capture key Interface conversations and agreements. These will provide a collaborative setting for all parties to identify, discuss and resolve interface issues in forums facilitating effective integration of solution at the working level. Meeting minutes and other information as required will be sent to all parties through Aconex by John Holland.

A TfNSW representative, as owner of the network, will also be engaged as part of the meeting.

5.3 Access Permission

John Holland will work closely with UGLRL and IRPL to ensure access permission is requested and approved before any works and/or access to CRN corridor. Regular meetings will take place with UGRL to discuss upcoming works, status update of any works.

John Holland will follow the below agreement, process and procedures for any access to CRN corridor-

- RAIL / RAIL INTERFACE AGREEMENT IA3000 Appendix 09 Inland Rail Specification UGL Regional Linx and Australian Rail Track Corporation Limited for the Stockinbingal - (Temora Branch Line) at Stockinbingal
- UGL Regional Linx Third party work enquiries process
- UGL Regional Linx Accessing the Country Regional Network CRN-PRC-RLS-459032646-213

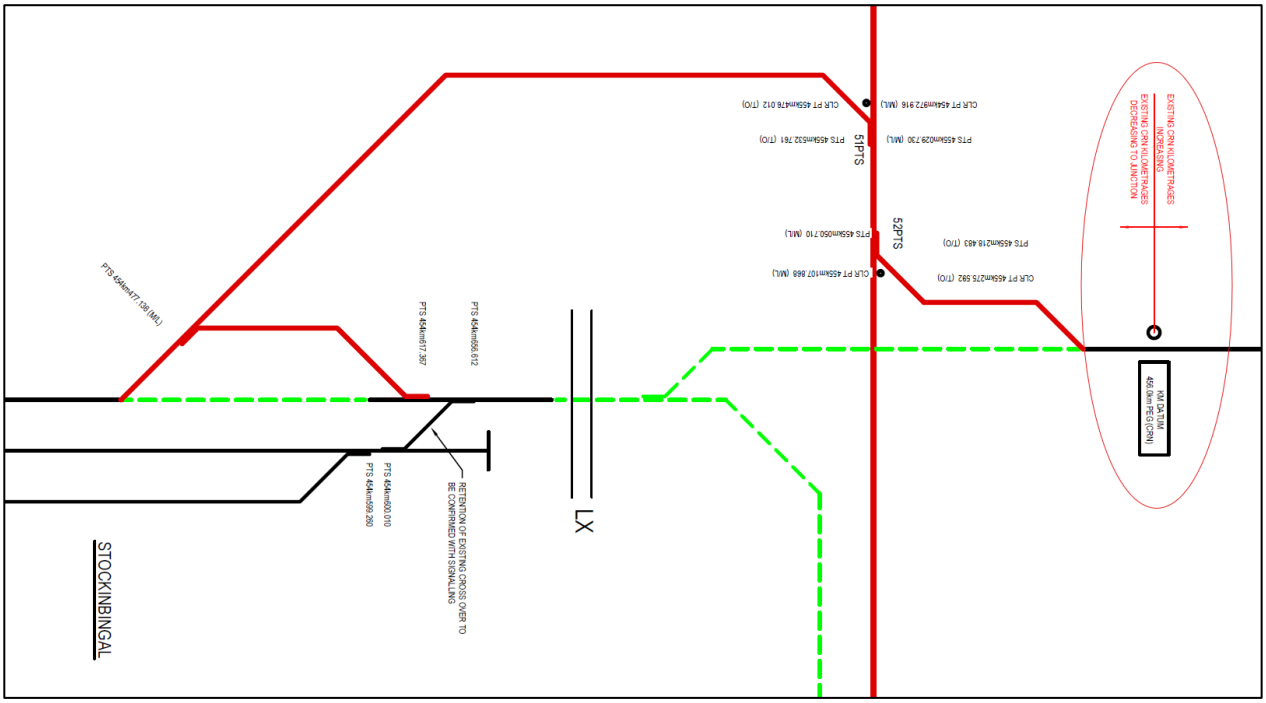
All works within CRN corridor will be as per CRN Network Rules and Procedures.

5.4 Work Program

Work program and status will be communicated to UGRL in our regular meeting.

5.5 Interface-Km Strategy

Current Track Maintenance and property Interface is located at 455.072km as per RAIL / RAIL INTERFACE AGREEMENT IA3000 Appendix 09. A new kilometre strategy is being developed to capture the new interface location and the change in kilometre location at the interface be managed. Kilometre strategy schematic is attached in Appendix A.



5.6 Investigation works

The Site Investigation scope includes the following:

- Preliminary Site Investigation (Site Visit)
- Site Survey
- Environmental surveys, investigations and site works such as:
    - Contamination investigations
    - Heritage survey, test and salvage excavation
    - Biodiversity surveys
    - Erosion and sediment control site review
    - Noise and vibration monitoring / modelling
    - Opportunistic seed collection.
    - General environmental management inspections and reviews (multiple disciplinary i.e. Both JHG environment team, IRPL environment team and relevant SMEs).
- Dam survey work
- Geotechnical Investigations
    - Boreholes
    - Test Pits
    - Geophysics
    - Pavement Cores
    - Auger Holes
- Utility Investigations
    - Underground Utility Locating & Survey
    - Overhead Utility survey
- Dilapidation Survey

- Rail Systems Dilapidation / Condition Assessment Report consisting of but not limited to:
  - Signalling locations, cable routes, lineside equipment

John Holland will request access permission for the investigation works. Once permission is granted, John Holland will co-ordinate with UGLRL and network operations before going to the corridor ensuring no impact on rail operations. All track infrastructure will be certified by competent personnel before handing over. Refer to Activity Method Statement (AMS) for details methodology, scope details and risk assessment and controls. AMS will be provided to UGLRL as part of the access application.

5.7 Design

Our interface approach is tailored to stakeholder's needs, as outlined in Table below. Further interface and integration strategy are detailed in the Interface and Integration Management Plan (5-0019-220-PMA-00-PL-0011).

Summary Approach	Approvals & Closeout
• Specify and agree requirements. • Provide relevant design packages • Workshop risks and controls • Review of design phases • Requirements verification	• Comment Closeout • Validation that requirements delivered. • Provision of testing and commissioning results • Handover acceptance process

5.7.1 Design Standards

The implementation of the design involves the application design principles, rules and standards to meet the requirements of a specification altered infrastructure. As such, selection and use of appropriate design standards is a key requirement in ensuring the resultant design meets the specification requirement, complies with statutory regulations and is fit for intended purpose.

- Relevant CRN Standard/s applicable to the design shall be assessed and approved by the designer SME/s prior to commencement of design.
- The project specific standards and legislation that apply to the project are defined in PSR Annexure B Technical Requirement and Annexure G Section 3 Reference Documents
- Any deviation to an approved "Standard/s" represents a potential change to the configuration of the infrastructure and hence, the change shall be managed in accordance with Configuration Management Plan (5-0019-220-PMA-00-PL-0049).
- Changes to standards will be escalated to IRPL for direction as to include or not in accordance with change management and contractual mechanisms

5.7.2 Design Development Stages

Design stages are described in detail in Design Management Plan 5-0019-220-PMA-00-PL-0017. In summary, below are the various stages of design relevant to this Interface and what John Holland will provide to UGLRL for review and approval.

- Feasibility Design Documentation (FDD)- approximately 30% stage
- Preliminary Design Documentation (PDD)- approximately 70% stage
- Detailed Design Documentation (DDD)- 100% design stage

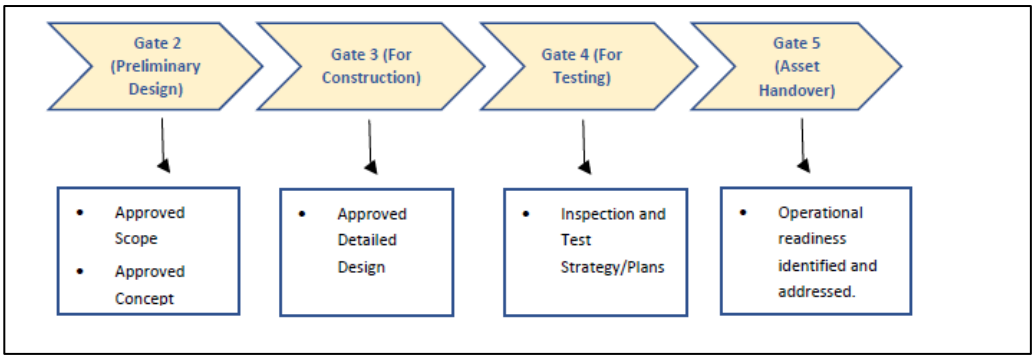
- For Construction Documentation (IFC) - final stage in the development of the Design Documentation
- As Built (ASB)

John Holland, in consultation with IRPL and UGLRL, will determine relevant design packages which will have interface with CRN. Specific part of the design packages relevant to CRN corridor will be provided to IRPL to transmit to UGLRL for review and comments. Comments register will be provided to capture, address and close out any comments. For details refer to Design Management Plan 5-0019-220-PMA-00-PL-0017.

5.7.3 Configuration Change Board (CCB)

We understand Configuration management is essential for ensuring safety and reliability of infrastructure. During the design development, design packages relevant to the configuration of the railway are to follow the Configuration Management Procedure (Attached in Appendix B) which outlines the Configuration Management methods and techniques for maintaining the integrity of the CRN networks during the delivery of Inland Rail within CRN corridor.

John Holland will follow UGLRL Configuration Management Procedure. UGLRL have four defined configuration gates. Gate 0 and Gate 1 are not applicable for CRN configuration changes.



To keep it consistent with our Design Gates and IRPL CCB process, the gateway definition as in above figure (as per UGLRL Configuration Management Procedure), John Holland's interpretation is-

- CCB gate 2 at Feasibility Design Documentation (FDD) phase (equivalent to Gate 3 for IRPL)
- CCB gate 3 at Detailed Design Documentation (DDD) phase (equivalent to Gate 4 for IRPL)
- Gate 4 before Commissioning and testing (equivalent to Gate 5 for IRPL)
- Gate 5 at handover (equivalent to Gate 6 for IRPL)

John Holland will go for CRN CCB meetings in discussion with UGLRL and IRPL where it is determined as required. Where CCB gate is not deemed as necessary as determined by all parties, approval of design stages will be done by UGLRL through comments close out and through Aconex by UGLRL.

Where CCB submission is required, John Holland will submit UGLRL Configuration Change Request Form (CRN-FRM-AMS-713026361-254) and CCR Checklist for CCB Gateway Submissions (CRN-CHK-AMS-713026361-3966) to UGLRL. John Holland will present the CCB to UGLRL CCB Board. CCB meeting outcome and any relevant comments will be sent to IRPL by UGLRL.

5.7.4 Interface Hazard Analysis

Hazard Identification Workshops will be performed to identify and manage interface hazards and associated safety risks throughout the life cycle of the project and as identified in the Safety Assurance

Plan. At a minimum, a Safety in Design workshop will be conducted during the Preliminary and Detailed Design stages of the I2S Project, identifying the interface hazards specific to each system associated with the I2S operation and support activities.

5.8 Signalling Deliverables Process

Refer to I2S Interface Co-ordination Plan-Signalling Work-UGL Regional Linx CRN (Aconex correspondence JH-TRANSMIT-000171) for details on how the interface will be managed for the signalling works.

5.9 Construction

Access Permission applications will be submitted for any works within the CRN corridor as per section 5.3 of this document. Once John Holland gets the approval for construction, we will follow UGLRL Network Rules and Procedures entering in CRN corridor.

5.9.1 Competency Management

John Holland will ensure competency management for all the people working and/or entering CRN corridor. We will use John Holland's well-established competency management system, including competency matrices and the Rail Training and Competency Management Procedure (JH-RAIL-MPR-PPL-003) to ensure all resources have appropriate competencies and are valid. Competency profiles have been established for the full range of roles engaged on John Holland rail projects, including specialist track, signalling, design, and electrical skills. Rail Safety Worker roles have been set in line with nationally accredited competencies defined in the Australasian Railway Association RIW website.

During mobilisation, we will establish Competency Management Plan 5-0019-220-PMA-00-PL-0010 for the project, reviewing all roles to ensure compliance with UGLRL requirements.

5.9.2 Safeworking

John Holland will follow the below agreement, process and procedures for any access to CRN corridor-

- UGL Regional Linx Accessing the Country Regional Network CRN-PRC-RLS-459032646-213

John Holland will ensure all personnel have the required competencies to enter and work in CRN corridor. Competent and experienced Safeworking Personnel will be engaged by John Holland to manage Safeworking. John Holland will notify UGLRL prior to entering the rail corridor and will minimise any disruption to rail traffic.

5.9.3 Possession Management

We have identified works which can't take place under other safeworking methods other than during scheduled possession to ensure minimal disruption to rail traffic. The work program is developed showing activities to happen during scheduled possession. Activities for each worksite will be planned by our subject matter experts to ensure activities can be carried out safely, in a manner which minimises Handback delay risk, and without disruption, interference or impact on operational rail traffic or ARTC's or IRPL's maintenance, projects, and other activities.

Refer to Rail Access Management Plan 5-0019-220-PMA-00-PL-0027 for more details on our strategy on track possession planning and implementation.

5.9.4 Construction Traffic

Coordination and consultation would occur with the proponents of any current construction interface works as well as any concurrent road/rail interfaces (TfNSW/CRN), with potential for cumulative impacts at the appropriate project stages. Discussions on Construction Traffic with UGLRL will include:

- Provision of regular updates on construction planning for the proposal
- Identification of key potential conflict points with other construction projects
- Developing mitigation strategies to manage conflicts

Depending on the nature of the conflict, this could involve coordination of traffic management arrangements between projects, where reasonable and feasible.

UGLRL representatives will also be invited the IRPL I2S Traffic Management Risk Workshop, where relevant.

5.10 Commissioning of Signalling

Once the signalling infrastructure is ready for commissioning and testing, commissioning plan and associated required documentation will be developed by SMEs and will be provided to UGLRL for review and approval. CCB Gate 4 will be used for approval purpose where agreed.

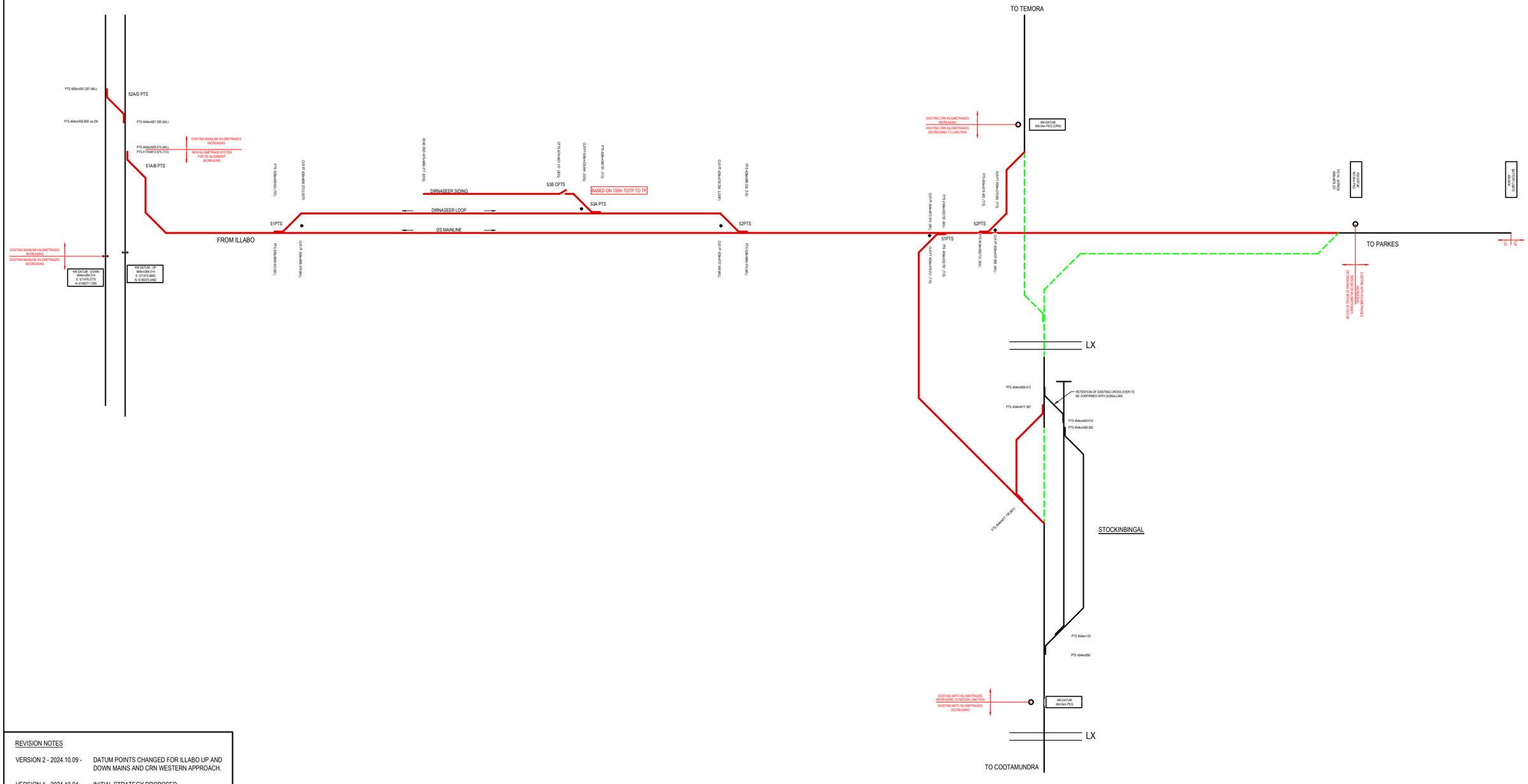
Refer to I2S Interface Co-ordination Plan-Signalling Work-UGL Regional Linx CRN (Aconex correspondence JH-TRANSMIT-000171) for details.

5.11 Completion and Handover

Completion and handover will take place as per relevant CRN/UGLRL standards and procedures. Refer to Completion and Handover Management Plan 5-0019-220-PMA-00-PL-0048 for details. Asset update and handover will be managed as per UGLRL CRN-MAN-AMS-713026361-8242 - Asset Change Request Process.

6 Appendices

Appendix A- Schematic-Km Strategy



REVISION NOTES

VERSION 2 - 2024.10.09 -	DATUM POINTS CHANGED FOR ILLABO UP AND DOWN MAINS AND CRN WESTERN APPROACH.
VERSION 1 - 2024.10.04 -	INITIAL STRATEGY PROPOSED

Appendix B- UGLRL-Third-party-configuration-requirements

Third Party Works

Configuration Management Requirements

Configuration management is essential for ensuring the safety and reliability of the Country Regional Network (CRN), playing a critical role in maintaining the integrity of assets and systems in compliance with the principle of "So Far As Is Reasonably Practicable" (SFAIRP). Managing asset configuration changes in a controlled and effective manner is crucial for minimizing safety and design risks associated with the operation and maintenance of the CRN.

Transport for New South Wales (TfNSW) Regional and Outer Metropolitan (ROM) division serves as the Asset Custodian, while UGL Regional Linx (UGLRL) operates as the Asset Steward, holding the authority to oversee changes as the change authority. UGLRL is delegated by TfNSW to approve configuration changes within the CRN, provided any associated risks are deemed acceptable under SFAIRP criteria.

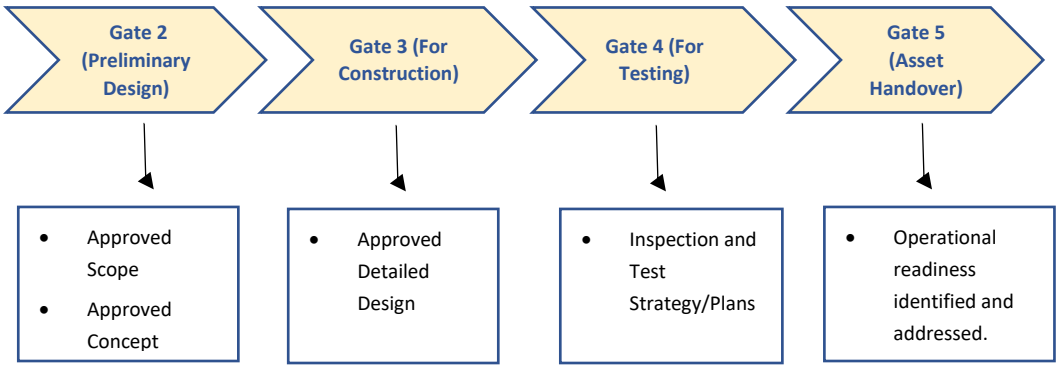
Third-party entities undertaking major projects within the CRN rail corridor, such as constructing new bridges, realigning tracks, or adding private sidings, must adhere to UGLRL's configuration management requirements. To comply, applicants must submit the following documents:

- Duly filled CRN-FRM-AMS-713026361-254 **Configuration Change Request Form** for the proposed change.
- Assurance evidence as per CRN-CHK-AMS-713026361-3966 **CCR Checklist for CCB Gateway Submissions** relevant for the appropriate approval gateway
- In case of changes proposed to Transport Assets (TAHE or TfNSW owned) **TAO authorised design certificate for GATE 3 submissions.**

For projects that do not affect Transport assets, a combined Gate 2&3 submission may suffice. UGLRL Third Party Works Manager and relevant SMEs are responsible for assessing the level of the proposed changes from Third parties. Generally third party projects that are presented to TfNSW as a design concept for Approval in Principle (AIP) and that do not impact delivery of TfNSW outcomes need only consider applying review gates from the design stage onwards(Gate 2).

Gateway definitions

UGLRL have four defined configuration gates. Gate 0 and Gate 1 are not applicable for CRN configuration changes.



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Configuration management Gate 2 – preliminary design complete

Gate 2 occurs at the point when a preliminary design has been completed. The purpose of this gate is to assure that a project is demonstrating adequate assurance in developing the design so as to provide confidence that the final design will meet the expectations. Factors such as the risks that may result from the configuration change, nature of the assets involved, project governance arrangements and procurement strategy may affect the appropriate application of this gate. For configuration changes that are of low risk and low complexity it may be appropriate to combine the gate 2 submission with the gate 3 submission.

Configuration management Gate 3 – for construction

Gate 3 occurs at the point when the detailed design has been developed and prior to progressing to construction unless the CCB has agreed to alternative arrangements. The purpose of this gate is to provide confidence that the designed solution is appropriate, safe SFAIRP and that the resulting risks are understood and acceptable to UGLRL and TfNSW(if applicable). This gate is important from a risk perspective as the desired outcome and resulting risks are largely determined. Content representing the final design baseline is expected to be presented at configuration management Gate 3.

Configuration management Gate 4 – ready for testing

Gate 4 occurs at the point when a transport asset has been altered or added and is ready to progress to the testing phase. The purpose of this gate is to assure that an asset is ready to be tested as an integral part of the TfNSW Transport Network. It is particularly relevant where testing introduces an elevated or novel risk to the transport network, such as testing vehicles within the operating transport network or connecting systems to the operational network for testing. Factors such as the risk of the configuration change, nature of the assets involved, project governance arrangements and procurement strategy may affect the appropriate application of this gate.

Configuration management Gate 5 – asset handover

Asset Handover occurs at CM Gate 5 prior to the commissioning and handover of the asset from the party responsible for delivering the completed asset to the next responsible party within the asset life cycle. This applies even if both parties are from the same organisation. For internal UGLRL project, the handover will occur from the Third Party Works Manager to the Head of Asset & Engineering.

The purpose of this gate is to seek assurance that the configuration change has been properly managed to be ready to be commissioned as an operating asset in the transport network and handed over along with necessary asset information. The submission should represent the expected product configuration baseline and demonstrate that the necessary asset information describing the product baseline has been or will be delivered.