From: Irrelevant information deleted in accordance with section 73
Sent: Monday, 15 March 2021 11:47 AM
To: Inland Rail - B2G
Subject: Energy Queensland response - Draft EIS Inland Rail – Border to Gowrie (B2G)
Attachments: Energy Qld response draft EIS B2G.pdf

Dear Madam/Sir,

Thank you for the opportunity to comment on this draft study. Please find our response attached.

Regards,

Irrelevant informatio

Irrelevant information deleted

Environment & Cultural Heritage Group
Health, Safety & Environment

Energy Queensland
PO Box 2312, Toowoomba QLD 4350
Irrelevant information deleted in accordance with section 73
energyq.com.au

09 March 2021

Attention: Coordinator-General
C/- EIS Project Manager, Inland Rail – Border to Gowrie project
Project Evaluation and Facilitation
Office of the Coordinator-General
PO Box 15517
City East QLD 4002 Australia

Via email:

inlandrailb2g@coordinatorgeneral.qld.gov.au

Dear Madam/Sir

Energy Queensland response - Draft EIS Inland Rail – Border to Gowrie (B2G) project

Thank you for the opportunity to comment on this draft study. Energy Queensland (EQL) is the group of electricity distribution, retail and energy services businesses owned by the state of Queensland.

Yarranlea T010 zone substation site is described as Lot 1 on RP120604 Toowoomba Regional Council and is Freehold tenure of approximately 3.2ha in area. Access to this property has been affected by overland stormwater depositing silt on access points. EQL alerts Australian Rail Track Corporation (ARTC) to **Registered Soil Conservation Plan SC300986.**

Soil Conservation Plan SC300986 was counter-signed by Queensland Electricity Corporation (QEC) and Queensland Railways in 1986. The plan covers country on the southern side of the rail line however it impacts on Yarranlea T010 by allowing delivery of stormwater close to the site.

The following condition is part of the approved plan:

> "*It was also agreed that when the Railway Department installs a suitable culvert under the railway that a levy bank be constructed on the QEC property to direct any flow of water from this culvert away from the substation*".

The levy bank is critical to effective management of stormwater subject to this plan and therefore critical to EQL maintaining all-weather access to this important zone substation. While a small levy was constructed within the rail corridor the inadequate design and subsequent maintenance led to silt deposits on the substation access,

preventing vehicle access to the substation at critical times. EQL has since undertaken mitigation works on the substation Lot to manage this issue however please note Queensland Rail's obligations under the plan.

We trust you will consider this matter in your corridor design process.

Yours sincerely

Irrelevant information deleted in accordance with sect

Environment & Cultural Heritage Group

Ergon Energy | Energex
PO Box 2312, Toowoomba QLD 4350
Irrelevant information deleted in accordance v
ergon.com.au

Part of the Energy Queensland Group

Encl: **Registered Soil Conservation Plan SC300986.**

JV/D QUEENSLAND RAILWAYS

Office of the Assistant General Manager Toowoomba

Campbell Street,
Toowoomba, Q. 4350
Telephone 32 3633 (STD 076)

Enquiries
Telephone EXT 10
Your Ref.
Our Ref. AG 691

15th August, 1986

The Officer in Charge,
Soil Conservation Services Branch,
Department of Primary Industries,
P.O. Box 102,
TOOWOOMBA, 4350

Dear Sir,

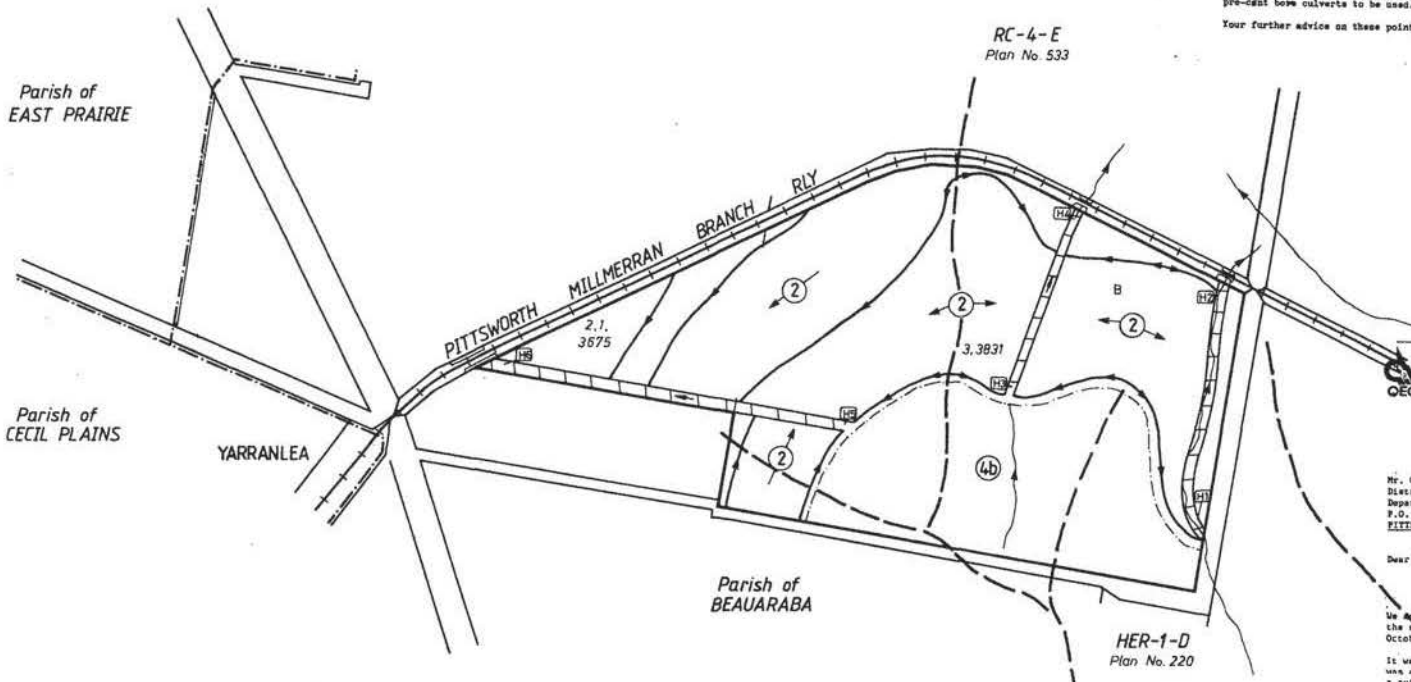
With reference to your letter RC-4-H of 30th July, 1986 concerning Soil Conservation Plan No 986 (G & N Schultz) at Yarranlea:-

As indicated verbally to Mr Bass, this Department would have no objection to the proposal provided your Department will arrange to dispose of the water after it passes under the Railway line, and provided the waterways up and downstream of the line are of such depth below the rail as to allow the construction of a suitable culvert; preferably 1400mm to allow 1200 x 900 pre-cast bore culverts to be used.

Your further advice on these points would be appreciated.

Yours faithfully,

REGIONAL MANAGER



Queensland Electricity Commission

Southern Region
450 Gregory Terrace, Fortitude Valley, Brisbane
P.O. Box 553, Fortitude Valley, Q. 4006, Australia
Telephone (07) 228 2111 Telex 42308

Ref. SR344/999/1

14 October 1986

Mr. G.A. Bass,
District Adviser,
Department of Primary Industries,
P.O. Box 160,
PITTSWORTH. Q. 4356.

Dear Sir,

YARRANLEA SUBSTATION
FARM PLAN NO. 986 - G. & N. SCHULTZ

We acknowledge receipt of your letter dated 15 September 1986 and confirm the above visit between yourself, R. Hartwig and T. Stacey on Thursday, 9 October 1986.

It was agreed that the proposal, Farm Plan No. 986 for soil conservation was acceptable. It was also agreed that when the Railway Department installs a suitable culvert under the railway that a levee bank be constructed on QEC property to direct any flow of water from this culvert away from the substation.

Should you require any further assistance in this regard please do not hesitate to contact us.

Yours faithfully,

C.G. Jones
REGIONAL MANAGER-SOUTHERN

ENQUIRIES: Mr. T. Stacey
Telephone - 226 7830

I/we, the undersigned have no objection to this plan being implemented.

NAME / AUTHORITY	SIGNATURE	DATE	FARM CODE
G & N. Schultz	K A Schultz	5.6.86	RC-4-H

Soil Conservation Plan

SC 300986

BOUNDARIES: Project Plan boundary; Property boundary; Catchment boundary; Erosion Hazard Zone boundary; Soils boundary; Shire boundary; Parish boundary; Capability Unit boundary; Capability Classification $IIIe_3d_2$

IMPROVEMENTS: Building; Fencing Existing / Proposed; Access track; Transmission Line; Tramline; Underground Main Line; Mill. Bore or Irrigation Hydrant; Watering point; Dam

DRAINAGE and TOPOGRAPHY: Natural watercourse: in cultivation / in pasture; Culvert; Invert; Cross Drainage Identification point: Existing / Proposed; Land slope and direction 5%

LAND USE: Restricted Use Area; Cultivation; Native pasture; Improved pasture IP; Timber; Quarry; Swamp; Soil Sample Site

PROTECTION MEASURES: Waterway; Contour bank; Diversion bank; Pondage bank; Design point R4; Erosion Hazard Zone number 2; Management Indentification Unit A; Direction of flow of rows; Area to be contour banked / Intermediate banks not shown

IMPORTANT NOTES:
Location of structures and boundaries, other than cadastral boundaries on this plan are approximate only and are subject to confirmation by field survey.
Dimensions of runoff control structures are not shown to scale and will be specified in writing.
Such structures are designed to provide a degree of protection consistent with practical and economic considerations and will not necessarily meet all runoff occurrences.
Cartographic base compiled from maps supplied by the Queensland Department of Mapping and Surveying.
Without prejudice and not intended for use in any court proceedings.

DESIGN: PREP. G.A.B.; CKD.; PASSED; AREA O.I.C.
DRAFTING: DR. L.F.W.; CKD.

QUEENSLAND DEPARTMENT OF PRIMARY INDUSTRIES
SOIL CONSERVATION SERVICES BRANCH

G. & N. SCHULTZ

SCALE 1:8000
Metres 200 0 200 Metres

REVISION: DATE | REMARKS | CKD | PSD

REAL PROPERTY DESCRIPTION: Resub. 1 of Sub. 2 of Por. 3675, Sub. 3 of Por. 3831, Parish of BEAUARABA

AERIAL PHOTOGRAPHY COVERAGE

SERIES	RUN	PHOTO No.	DATE
TOOWOOMBA	7	56	JUNE 84

SHIRE(S): PITTSWORTH
SOIL CONS. DISTRICT(S): PITTSWORTH
FARM CODE(S): RC-4-H
CARTOGRAPHIC BASE: CLIFTON 28, 29
Sh. of 3.5.85
986

From: Irrelevant information deleted in accordance with section 73 of the RTI
Sent: Wednesday, 31 March 2021 3:41 PM
To: Inland Rail - B2G
Subject: DSDSATSIP response: Inland Rail - Border to Gowrie - release of draft EIS for public consultation

Good afternoon

Please note that the documents for the above EIS have been reviewed and the Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships have no comments to make.

Thanks

Irrelevant inf

Irrelevant information deleted in

Irrelevant information deleted in accordance **Culture and Economic Participation**
Aboriginal and Torres Strait Islander Partnerships
Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships
Irrelevant information deleted in accordance with section 73 of t
Level 9, 1 William Street, Brisbane QLD 4000
www.datsip.qld.gov.au

I acknowledge Aboriginal and Torres Strait Islander people as the Traditional Owners of this country throughout Australia, and their connection to land and community. I pay my respect to all Traditional Owners, and to their Elders past and present.

From: EIS Correspondence
Sent: Tuesday, 13 April 2021 11:58 AM
To: Inland Rail - B2G
Cc: EIS Correspondence
Subject: RE: Inland Rail - Border to Gowrie - release of draft EIS for public consultation

Hi there

I would like to advise that Infrastructure and Economic Resilience, within the Department of State Development, Infrastructure, Local Government and Planning is a nil response to this draft EIS.

Thank you

Irrelevant information deleted in accordance with section 73 of the RTI Act

Infrastructure and Economic Resilience
Department of State Development,
Infrastructure, Local Government and Planning

Irrelevant information deleted in accordance

Microsoft Teams – meet now
Level 27, 1 William Street, BRISBANE QLD 4000
PO Box 15009, CITY EAST QLD 4002
dsdilgp.qld.gov.au

Unite & Recover

Queensland Government

I acknowledge the traditional custodians of the lands and waters of Queensland. I offer my respect to elders past, present and emerging as we work towards a just, equitable and reconciled Australia.

From: Inland Rail - B2G <InlandRailB2G@coordinatorgeneral.qld.gov.au>
Sent: Monday, 25 January 2021 5:19 PM
Subject: Inland Rail - Border to Gowrie - release of draft EIS for public consultation

Dear Agency Contact Officers,

The Australian Rail Track Corporation Limited (ARTC), the proponent for the Inland Rail project, has prepared a draft Environmental Impact Statement (EIS) for the Inland Rail – Border to Gowrie (B2G) project and submitted it to the Coordinator-General. The draft EIS has been released for public and agency review and comment **from Saturday 23 January 2021 to 5pm Monday 19 April 2021 – a period of 12 weeks.**

Your agency is invited to participate in the EIS process for the proposed Inland Rail – B2G project. The B2G project's initial advice statement, Terms of Reference (TOR) and draft EIS can be viewed at www.statedevelopment.qld.gov.au/inlandrail-b2g

Please note, the offset strategy contained in the on-line version is the redacted version for public release. It does not include information about the offset properties being considered. Please advise if your agency requires a secure copy of the unredacted version for your agency's review and consideration.

Submissions on the draft EIS

Your agency is invited to provide a submission on the draft EIS for the B2G project, in particular, to advise:

- the adequacy of the document in addressing matters relevant to your agency and in relation to the final TOR (Attached)
- any proposed construction and operational conditions your agency recommends for the Coordinator-General's consideration in preparing the evaluation report
- any other advice or comment for the Coordinator-General's consideration.

Please ensure you clearly identify the section number and page number of the draft EIS relevant to the issue being raised and also provide, if applicable, your recommendations with respect to actions proposed by the proponent and if you consider additional information is required.

Submissions will be accepted until **5 pm on 19 April 2021** and should be sent to:

Post: The Coordinator-General
C/- EIS Project Manager—Inland Rail – Border to Gowrie project
Project Evaluation and Facilitation
Office of the Coordinator-General
PO Box 15517
CITY EAST QLD 4002

Email: inlandrailb2g@coordinatorgeneral.qld.gov.au

Where a response has not been received by the closing date, it may be assumed that the draft EIS satisfactorily addresses your agency's requirements. Alternatively, if you believe there are no matters associated with the proposal that would be of interest to your organisation, please advise that you do not wish to participate in the EIS process.

Advisory agency briefings

It is anticipated that advisory agency briefings with ARTC will be held in late February/early March 2021. The briefing sessions will provide an outline of the EIS process, as well as the findings from ARTC's EIS investigations. The proponent and their consultants will give a presentation and will be available to answer questions on the draft EIS contents to assist agencies in preparing a submission. The format and location of the briefing is yet to be determined and may need to be over MS Teams, if a face to face briefing is not achievable.

There may also be an opportunity for this office to arrange with ARTC for an agency representative to visit the site of the proposed rail alignment and or impact locations. Please email inlandrailb2g@coordinatorgeneral.qld.gov.au if your agency is interested in attending an agency briefing and/or a site inspection, providing details of the topic you are interested in and the details of your contact officer coordinating the EIS submission. An invitation to the briefing/site inspection will be emailed to your agency's nominated contact officer as soon as they are finalised.

Should you have any queries please do not hesitate to contact the B2G mailbox InlandRailB2G@coordinatorgeneral.qld.gov.au

Kind regards,
Inland Rail – B2G EIS project team
Office of the Coordinator-General

Department of State Development,
Infrastructure, Local Government and Planning

Please consider the environment before printing this email

From: Infrastructure/Planning ESU
Sent: Monday, 12 April 2021 8:28 AM
To: Irrelevant informa
Subject: Correspondence from the Director-General, Department of State Development, Infrastructure, Local Government and Planning – Our ref: DGC21/66
Attachments: DGC21-66 - Letter to Irrelevant informat pdf

Follow Up Flag: Follow up
Flag Status: Completed

Good morning

Please find attached correspondence from Mr Damien Walker, Director-General, Department of State Development, Infrastructure, Local Government and Planning.

Kind regards

Executive Services Unit
Department of State Development,
Infrastructure, Local Government and
Planning
1 William Street, Brisbane QLD 4000

Queensland
Government

Queensland Government

Our ref: DGC21/66

Your ref: DGBN20/974

Department of
State Development, Infrastructure, Local Government and Planning

09 APR 2021

Irrelevant information

Coordinator-General

Irrelevant information deleted in accordance with section 73 of

Irrelevant informatio

Dear

Thank you for your letter of 25 January 2021 requesting feedback on the draft environmental impact statement report (EIS) for the Inland Rail – Border to Gowrie (B2G) project and the requirements for approvals under the *Planning Act 2016* (the Planning Act).

The Planning Group of the Department of State Development, Infrastructure, Local Government and Planning (the department) has conducted a review of the EIS and supports the declaration of the coordinated project and the proposed EIS.

The Inland Rail – B2G project is generally consistent with the relevant regional plan strategic outcomes, as expressed in Darling Downs Regional Plan 2013 and the South East Queensland Regional Plan 2017 (*ShapingSEQ*).

With respect to possible project approval requirements under the Planning Act, you will be aware that the Planning Regulation 2017 (the Regulation) identifies specific provisions that would enable the B2G project (as a declared coordinated project) to not require referral to the State Government for further assessment. Also, if the project is deemed to be government supported transport infrastructure, referral may not be required for certain matters, such as operational work near a state transport corridor/tunnel or future transport corridor/tunnel or operational work that is high impact earthworks in a wetland protection area.

Based on the department's review of the proposed alignment, and unless the B2G project can meet relevant accepted development criteria under the Regulation, the development may require approval for:

- the taking of or interfering with water
- native vegetation clearing
- constructing or raising waterway barrier works
- development for removing quarry material from a watercourse or lake.

The State Development and Assessment Agency (SARA) would be pleased to provide detailed pre-lodgement advice on the state interests relevant to its assessment of the Inland Rail – B2G project once the final alignment is known. To facilitate this, SARA kindly requests the Office of the Coordinator-General provide the land descriptions of all affected land parcels. All development proposals can then be assessed by SARA against the criteria in the State Development Assessment Provisions.

1 William Street
Brisbane Qld 4000
PO Box 15009 City East
Queensland 4002 Australia
Telephone 13 QGOV (13 74 68)
Website www.dsdilgp.qld.gov.au
ABN 25 166 523 889

I have asked for Irrelevant information deleted in accordar Planning and Development Services – Planning Group in the department to assist you with any further queries. You may wish to contact Irrelevant information del on Irrelevant information or by email at Irrelevant information deleted in accordance with .

Yours sincerely

Irrelevant information deleted in accord

From: Irrelevant informatio
Sent: Tuesday, 20 April 2021 2:28 PM
To: Inland Rail - B2G
Cc: Irrelevant information
Subject: Economic Advisory comments on Inland Rail B2G draft EIS
Attachments: B2G_comments_final4.docx

Hi, please find attached the Economic Advisory team's comments on the Inland Rail B2G draft EIS economics section. Thanks.

Comments on Inland Rail (Border to Gowrie) Project Draft EIS Economics Chapter

Report to Office of the Coordinator General, DSDILGP

April 2021

Background

A request was made to the DSDILGP Economic Advisory (EA) team by the Office of the Coordinator General (OCG) during 2020 to assist with the review of the economic content of Economic Impact Statements for individual projects comprising of the Inland Rail Program. The comments in this report pertain to the Inland Rail Border to Gowrie project (hereafter referred to as the B2G project).

The Economics Chapter of the Economic Impact Statement (EIS)[1] for this project includes:

- a description of the existing economic environment of the study area (comprising of the LGAs of Goondiwindi and Toowoomba);
- an assessment of the economic benefits of the project using elements of the Cost Benefit Analysis (CBA) methodology along with rail freight demand projections developed by ACIL Allen for the Inland Rail Business Case (2015);
- an assessment of the economic impacts of the project on the regional, state and national economies. The regional impacts are calculated at the ABS labour market region level for Darling Downs - Maranoa. A Computable General Equilibrium (CGE) model is used by KPMG (the KPMG-SD model) for this purpose; and
- a discussion of the potential cumulative impacts on the local and regional economies resulting from the construction and operation of related projects, including adjacent Inland Rail projects.

The EIS for this project was conducted by KPMG for the Federal government agency responsible for delivery of the Inland Rail Program, the Australian Rail Track Corporation (ARTC). Chapter 16 contains the report on the economic impacts.

Note that it is not possible for the EA team to comprehensively validate the integrity and/or accuracy of the various economic impacts reported in this Chapter as insufficient detail has been provided regarding the modelling techniques used.

Comments on existing economic environment

- Construction labour availability subsection, 16.6.1.3 p. 16.10: The degree or magnitude of construction labour supply constraints at the regional (ie. study area) level is discussed with reference to the results of a national and state survey. It would be more appropriate to discuss this topic in relation to the regional economic environment, i.e., the region has a relatively small labour force and given that other projects comprising of the Inland Rail Program will be underway in adjacent regions during the same time period, it is likely that there will be some labour supply shortages for construction workers.

[1] Note that the content of the Economics chapter of the EIS for this project is adapted from the B2G Economic Impact Assessment Technical Report prepared by KPMG (Appendix V).

- Labour force subsection, 16.6.1.4 p. 16.10 and 16.11, Tables 16.3 and 16.4: Various labour force characteristics are presented for the March quarter 2019 and December 2019. However, the youth labour force data and all participation rates presented in these Tables are for the 2016 ABS Census of Population and Housing. Generally, when conducting an analysis of labour market conditions, it is more appropriate to consider indicators at a consistent point in time to avoid distortion or misrepresentation of facts.
- Industry by employment subsection, 16.6.2.1, p. 16.12 and 16.13: This subsection, including Table 16.4, comprises of data and associated discussion as that contained in subsection 16.6.1.1. To avoid unnecessary duplication, it is recommended that these subsections are merged.

Comments on economic benefits assessment

- Table 16.5, p 16.19: The results of the economic benefits assessment in present value terms appear reasonable and have been calculated at a 7% discount rate, as is accepted practice. Further, sensitivity testing of the results to changes in the discount rates has been conducted at both the 4% and 10% rates.
- The main assumptions used in the economic benefits assessment appear sound, as do the categories of benefits quantified along with the underpinning parameter values used to monetise each of the categories of benefits.
- To derive the freight benefits of the project, future freight demand must be calculated. In doing so, it is assumed that all future contestable freight is carried by rail.[2] This results in a shift of the total freight task from road to rail. As this assumption is open to conjecture, EA suggest that sensitivity testing is performed on changes to this assumption.
- Subsection 16.9.4, p 16.20: In reporting the results of the full CBA conducted for the Inland Rail Program business case, the benefit cost ratio (BCR) and net present value (NPV) are highlighted at the 4% discount rate rather than at the usually highlighted 7% discount rate. As such, EA suggest that the BCR and NPV results at the 7% discount rate are highlighted.

Comments on regional impact assessment

Economic impacts estimated with a CGE model are generally very sensitive to the assumptions used. The following information would be required to fully validate the economic impacts of the CGE modelling conducted for this project:

- the choice of model closure or economic environment used to simulate the impacts of the B2G project;
- details of the model database (i.e., the CGE core drawn from the base year input-output tables);

[2] This is consistent with the assumption contained in the Inland Rail Program Business Case (2015).

- input data used to derive shocks to the model (e.g. to investment, output etc.) that represent the direct impacts of the project and to derive any changes to model parameters;
- project specific adjustments such as changes to model theory or equations that deal with the complexity of the project;
- a full set of modelling results – represented as percentage deviations from baseline for all of the key variables. At present, only specific results are shown for the Darling Downs – Maranoa regional economy; and
- access to the model files to be able to replicate and test the assumptions used to set up the simulation.

Without this information it is only possible to make some general observations in respect of the CGE modelling and estimated regional economic impacts, as follows:

- A significant limitation of the regional economic impact assessment results from modelling the links of the Inland Rail Program separately. The operational phase economic impacts of the B2G project will only be realised once all links in the Inland Rail Program are completed. Hence, modelling of the impacts of each link separately only enables construction phase impacts to be considered.
- A further limitation results from the use of a comparative static version of the CGE model used for the calculation of economic impacts. This type of CGE model measures impacts relative to a snapshot of the economy that does not include the capital expenditure (capex) associated with the B2G project construction phase. The use of a dynamic CGE model would be more appropriate, however, as this type of model measures impacts on an annual basis relative to a baseline or business as usual projection of the economy. This enables the adjustment path of the economy to the shocks associated with the B2G project to be traced.
- As there is likely to be overlap in the timing of the construction phases of projects comprising of the Inland Rail Program in adjacent regions, modelling each link in isolation may lead to an underestimation of supply side constraints, particularly those on labour. As such, two scenarios were modelled by KPMG in which assumptions regarding the labour market differ. In the first scenario, the availability of skilled workers in the region is such that there is no pressure on real wages to increase, resulting in a "slack" labour market. In the second scenario, skilled workers must be sourced via an increase in real wages, resulting in a "tight" labour market.
- The choice of assumption regarding the labour market has a significant bearing on the magnitude of project impacts, as household incomes and consumption increase to a much greater degree under the slack labour market scenario due to a much greater increase in employment in Darling Downs - Maranoa. It is stated in the report that current labour market conditions in the region are consistent with the slack labour market assumption.
- However, the influence of supply side constraints resulting from the overlap in timing of the construction of other Inland Rail links in adjacent regions is ignored in this argument. Further, the likely significant future demand for skilled construction workers in Darling Downs – Maranoa and surrounding regions resulting from a range of factors (such as increased numbers of major projects and continuing population growth) is also not raised. As such, EA are of the view that the tight labour market assumption is more consistent with these factors.

- The use of a dynamic CGE model would alleviate the requirement for differing assumptions for the labour market at the regional level, as the theory underpinning the dynamic model enables more sophisticated labour market adjustment mechanisms.

Comments on cumulative impacts

- The cumulative economic impacts of the five sections of the Inland Rail program that fall in Queensland[3] are also quantified using the KPMG-SD CGE model. As such, most of the limitations discussed with regard to modelling the regional impacts of the B2G project also apply for the cumulative impact assessment.
- Again, only the construction phase impacts are quantified, as only the Queensland sections of the Inland Rail program are modelled. This is also modelled under two scenarios – slack and tight labour markets.
- Notwithstanding the limitations previously discussed, the results of the cumulative impacts modelling appear reasonable. It is worth noting that, due to some crowding out effect in the market for construction industry workers during the construction phases of these projects, there is a small negative impact on overall employment in the regions outside of the those directly impacted by these projects (i.e. the Remainder of Queensland and Remainder of Australia).

[3] These comprise of the B2G, Gowrie to Helidon (G2H), Helidon to Calvert (H2C), Calvert to Kagaru (C2K) and Kagaru to Acacia Ridge and Bromelton (K2ARB) projects.

From: Irrelevant informa
Sent: Thursday, 29 April 2021 5:16 PM
To: Inland Rail - B2G
Cc: DSD South; Irrelevant information
Subject: Feedback on the draft EIS B2G

Dear Office of the Coordinator General

Please find attached the feedback on the draft EIS B2G as endorsed by Irrelevant information deleted in accordance Regional Economic Development South, State Development Group, Department of State Development, Infrastructure, Local Government and Planning on 28 April 2021.

The document is located in Source **D21/58383** and attached for you convenience.

If you have any queries please do not hesitate to contact me.

Kind regards

Irrelevant information deleted in accordance

State Development Group
Department of State Development,
Infrastructure, Local Government and Planning
Irrelevant information deleted in accordance
128 Margaret Street, Toowoomba QLD 4350
PO Box 825, Toowoomba QLD 4350
dsdilgp.qld.gov.au

Comments on Draft EIS - Inland Rail – Border to Gowrie project

General comments

The primary focus areas for this response have been the economic and social impacts of the project as aligns most with the operations of the department.

Generally, there would seem to be little content around post construction economic impact:

- Descriptions of the benefits claimed for freight through operation of Inland Rail do not discuss the transition from one mode to the other, or factors that might influence the speed and extent of that transition.
- There is little or no description of the type of freight that is expected to transition from road to rail.
- No quantification of the increased congestion around any intermodal hub appears to be factored into calculation of the benefits of the mode shift.
- Questions remain on what economic impact there will be on businesses in the transport sector with business models based on provision of long-haul freight services? Those businesses won't necessarily remain profitable with a transition to a higher proportion of short-haul services with the accompanying higher proportion of operator and asset down time.

<table>
<tr><th>EIS document reference- Section etc</th><th>Issue, content and/or description</th><th>Comment</th><th>Suggested solution</th></tr>
<tr>
<td>Chapter 5 Project Description

5.4.20 Construction Water

Figure 5.48

5.7.10 Operational water supply and management

Chapter 13 Groundwater Chapter</td>
<td>Issue: water usage (construction and operation)

The draft EIS estimates that the following water demands will occur during the project:
<table><tr><th>Construction activity</th><th>Water demand in ML</th></tr><tr><td>Earthworks</td><td>2536</td></tr><tr><td>Trackworks</td><td>2.16</td></tr><tr><td>Concrete</td><td>15</td></tr><tr><td>Non-res. accommodation</td><td>540.9</td></tr></table>
There does not seem to be an allowance for water during the establishment of vegetation planted as part of the landscaping design just a statement that these elements will be self-sustaining once established and will not require watering.

Post construction whilst there is an acknowledgement that water may be required to support local maintenance activities such as high pressure cleaning of culverts but “the volumes required will be dependent on the specific activities and frequency of undertaking, and therefore cannot be quantified at this stage of the Project”</td>
<td>Water demand is already oversubscribed in the project area with emergency water supply measures only recently ceasing in Stanthorpe.

While there was some reference to hierarchy of preferred water sources in the Agency briefing, I could not find that in the EIS documentation nor could I find anything firmly undertaking to what extent the hierarchy would be followed.

Investment attraction opportunities are already being limited by the lack of available water and this project, and the juggernaut of expectation of completion timeframes, that will come once construction commences would seem to provide limited protection for existing and potential water users or to make allowances for climatic conditions or increased water demands.

The capacity for the increased demand for treated water would also need to be a matter for consultation with the TRC or alternate provider.

Ongoing, the need to maintain the culverts would seem vital to any flood management strategy and there is potentially a water demand for this task.</td>
<td>Water security is a constant topic within the region, perhaps the application of a legacy lens could be used to support infrastructure that would not only support the project construction need but provide longer term benefit to the impacted area.</td>
</tr>
</table>

Appendix C Stakeholder Engagement Report	**Issue: Consultation is dated, and a level of fatigue has developed due to lack of closure** The project has not been widely consulted locally since 2019	There is a reported level of fatigue amongst the business community we engage with from what is felt to be a one-way conversation. Concerns are repeatedly raised without a sense of being heard or receiving a response. Consultation needs to be more regular and Inland Rail needs to have a mechanism to allay business fears. Significant businesses in the region have advised that they receive acknowledgement of emails, but no actual responses. Key Government department representatives have also reported not having current consultation with the project.	Consultation should be a two-way process. The process for receiving and resolving concerns raised by stakeholders about negative impacts should be detailed transparently and publicly so that stakeholders know how their issues will be considered and adjudicated. This would include the principles used to determine how ARTC acts to reduce impacts or compensate those affected. Involvement of an independent mediator would help alleviate concerns stakeholders might have about how fairly negotiations will be conducted. With construction of projects underway in other states it would be concerning if ARTC did not already have clearly defined processes that could be referenced.

16.11.1.3 Disruption to access and infrastructure	**Issue : failure to quantified economic impact on the current intensive livestock operations within the Project footprint (3 cattle feedlots, 1 piggery and 1 poultry farm) or the current intensive livestock operations within proximity to the Project footprint (3 Cattle feedlots and 1 Piggery)** "As detailed in Chapter 7 : Land Use and Tenure, potential land severances may cause a disruption in farm operations through impacts to essential farming infrastructure, services or access routes. The specific impact on the economic viability of farming operations as a result of this potential disruption to access and infrastructure is not quantified in this assessment, and the extent of these impacts will be confirmed during detailed design. ARTC will work with individual landowners to develop suitable solutions based on individual farm management practices."	While identified as a potentially impacted properties, there would seem to be no effort to measure the impact of both the construction and operational stages, not only to the individually identified 'impacted property', but to the communities themselves due to the linkages of employment and as drivers of the local economy. For example, one impacted business is a substantial vertically integrated poultry operation, that is a significant driver for the economy of Millmerran and of the wider Darling Downs. It would be considered within the top 20 employers and businesses within the region and contributes significantly to the economy via grain and transport supply chain requirements. The change from what is currently a disused rail line to the proposed 26 trains per 24 hour period traversing at speed within 100 mtrs of the infrastructure that houses their poultry and processing operations represents a significant impact to the business viability, none of this quantifiable impact would seem to have been captured. Not quantifying this negative impact would seem to provide a skewed presentation of the economic impacts of the project, particularly to the community of Millmerran and of the wider Darling Downs.	That an effort be made to quantify the value of the impact, at a minimum the 5 properties identified within the project footprint and to the wider community in which they support.

Chapter 21 – Cumulative Impacts	**Issue: Currency of data** Cumulative impact – projects timeframes etc	Have the changes in the project construction timeframes been reflected and reconsidered in the cumulative impact consideration. The changes to the procurement/construction methodology do not seem to be captured. The construction of the Southern Queensland Correctional Centre Phase 2 at Gatton does not seem to have been considered. This has a high construction and higher operational workforce demand and is within the identified target area for project workforce.	A more up to date consideration of the impact given significant changes in both the broader economic environment following COVID 19 and the construction methodology/procurement structure and timeframe.

Chapter 16 – Economics Section 16.7 Inland Rail Impacts	**Issue : cost benefit analysis done on Programme wide not Project specific basis and limited analysis on impact post construction** The EIS references the *Inland Rail Program Business Case* (ARTC 2015) noting positive economic benefits that it includes, without offering comment on the veracity of those general claims or commenting on their relevance to the B2G project. For Example "Lower prices for consumers as a result of lower inter-capital freight transport costs, which reduces the cost of living for households." "Enhanced competition between rail and road freight, by providing a credible transport alternative, which will drive further innovation and efficiency" "Potential to promote the expansion and development of freight precincts around Inland Rail terminals as a result of the benefits from co-location and clustering of industries (as a result of reduced transport costs to warehousing, economies of scale and knowledge-sharing opportunities).	While there is some specificity around construction impact the impact of the project post construction would seem to retract to the all of program view. There does not appear to be any context within the EIS around opportunities outside the origination and termination points of the model <24hr model train and therefore the implied benefit may be condensed to only a few locations along the whole of program alignment not within the Project area. There is reference to the establishment of an Inland Rail Academy, which is described as a collection of projects and partnerships, with the aim to facilitate local employment and procurement opportunities and build Inland Rail's social licence to operate the Inland Rail Program.	It would be good if more project specific (operational) impacts could be identified and included. Such detail will likely strengthen the case for tangible project benefits Given the substantial scope of the Inland Rail Academy more detail could be provided on how it will achieve its goals.
Appendix C Stakeholder Engagement – train operations	**Issue : Access to the line and intermodal points within the Project area.** "Community continuing to seek clarity about the planned operations of trains. This includes asking about train length, frequency, what will	Identified as a general theme during Stakeholder Engagement there seems to be little in the EIS that addresses the placement of future sidings and or intermodal developments that would support	It would be good if more project specific (operational) impacts could be identified and included. Such as determination and allowances for a set number of intermodal access points to be developed.

	be transported, how trains will cope with winds, potential spur lines and how emergencies will be dealt with. The community and business operators are interested in opportunities to transport grain and other goods, as well as the potential for local employment for maintenance and operations and potential sidings and planned future intermodal developments" ARTC response "ARTC recruited a Business Development Manager based in Toowoomba to identify potential opportunities for the community and potential business operators who are interested in potentially transporting grains and other goods. Information about the service offering including length and frequency of trains was publicly available and promoted."	opportunities locally to get freight onto Inland Rail. While ARTC has engaged a Business Development Manager based in Toowoomba there does not seem to be much appetite to move away from "spine" or the model train both elements limit capacity to stop and onboard or discharge freight.	Such detail will likely strengthen the case for tangible project benefits
Chapter 16 – Economics Figure: 16.11 Social Impact Management Sub-plans	**Issue : Local Content and Indigenous and local participation.** Project Employment – ARTC Commitment … "Minimum local employment targets will be negotiated and agreed between ARTC and the Principal Contractor" Local Business and Industry Participation … "Implementation of ARTC's Sustainable Procurement Policy" "Indigenous participation and local participation are included as key elements of construction tender assessment"	Both local content and local employment opportunities have been consistent themes throughout consultation undertaken by ARTC. However, at this point no specific targets have been set by ARTC, instead leaving this to be negotiated with the Principal Contractor. There seems to be a softening of language, in Appendix Z – Proponent Commitments there is a line "Minimum local employment targets will be a requirement in tender documentation" I am unclear if that is ARTC tender documentation but it is changed to "Minimum local employment targets will be	Details on how the Project will practically go about ensuring opportunities to create economic benefits are realised would strengthen the case for project benefits. For example, there is an undertaking to "...build businesses' capacity to participate in the Project's supply chain through business development, mentoring and pre-qualification projects." This could be as little as a few advertisements, newsletters and/or video clips or it could be extensive direct assistance, including investment, in businesses

		negotiated and agreed between ARTC and the Principal Contractor" In Chapter 16. There is also no reference to the Southern Queensland Correctional Centre facility being constructed at Gatton and the 500 + staff that will be needed operationally once complete. Additionally as some significant program wide contracts have already been awarded (steel tracks and sleepers) and some future work packages are known to have limited potential capability in Australia(comms and signalling etc) , let alone rural Queensland, the need to direct a large percentage of the remaining project spend to the impacted areas and communities is vital.	The clear establishment of targets and or further information on how these elements will be weighted for consideration in the tender process would bring some clarity and confidence to this widely held area of interest and one of the more tangible benefit areas identified. It would also be important to understand what value of the budget for B2G remains uncommitted in arrangements external to the project area.
Chapter 16 Economics 16.1 Introduction & Appendix V– Economic impact assessment – Border to Gowrie Baseline and impact assessment	**Issue: Currency of data and labour market assumption** "Since the completion of the economic modelling detailed in this report, there have been changes to the Project and the Project environment. These changes include alterations to the Inland Rail construction programme and the economic shock associated with the 2020 quarter 2 market conditions which are not reflected in the economic analysis or economic impact assessment contained within this report at the request of ARTC". 2 Australian Government's Small Area Labour Markets publication, December 2019; ABS, Labour Force Survey, Australia, December 2019 (12-month moving average) – published 26	Data from earlier than 2015 used to support the business case and employment and demographic data from 2019 and 2016 is used to describe existing labour market conditions. There have been significant labour market changes since 2019 which could lead to different conclusions in the baseline assessment and impact assessment. The assumption of a slack labour market is particularly concerning. Unemployment levels in the region are low and have been for some years. With acute employment shortages highlighted across businesses broadly within Toowoomba and	The slack labour market assumption should be reviewed more up to date data should be used to confirm the conclusions are still valid. Changing the modelling to a tight labour market makes a big difference: the employment numbers drop by about two thirds as the price of labour is much higher, for example.

Page 12 footnote 1 & 2 16.5.6 Limitations of the assessment methodology. 16.6 Existing Environment P 8 15.11.2.1 Employment opportunities and labour draw	March 2020; ABS 2016 Census of Population and Housing Participation rate for working age population 15 to 64 years # June 2016" "ARTC Statement Although further costs and other technical and economic data are expected as each project progresses through design development, the Inland Rail Programme Business Case (ARTC,2015a) endorsed by the Australian Government is currently the most detailed assessment for the Inland Rail Project. For this reason, and in the interest of maintaining consistency, cost and demand profiles for the Inland Rail project, economic impact assessments have been based on the 2015 Inland Rail Programme Business Case." "The following section describes the key demographic and socio-economic characteristics of the study area including the local population, and the existing regional and local economic environment. Unless otherwise stated, all information contained within this section has been drawn from the ABS2016 Census of Population and Housing (ABS,2016a). The information may not reflect recent changes in demographic and employment outcomes resulting from the 2020 quarter 2 market conditions." "If the six Inland Rail projects listed in Table 15.30 were constructed simultaneously, and all workforce peaks coincided, a total of approximately 3016 construction personnel could be required across several LGAs. …..	across the Darling Downs. Notably that agricultural sector has been severely impacted due to international travel restrictions prohibiting the movement and access of foreign labour. This may have further negative impacts upon the rural businesses in these communities who are unable to compete for labour. There has been a better than anticipated recovery post COVID and a positive year in many areas of the agricultural sector for the first time in many years. There would seems to be little consideration made to the information in 15.11.2.1 around the scheduling of projects and the cumulative impact on labour.	

	"Coincidence of construction for projects such as Charlton Wellcamp Enterprise Area projects and the Toowoomba Medicinal Cannabis Production Facility is possible, If multiple additional projects as listed in Table 7.5 were construction in the same timeframe there may be a significant draw on trades and construction labour contributing to labour shortages across the region."		
Appendix V – Economic impact assessment technical report – Secondary service and supply businesses Freight and logistics p 7	**Issue: lack of detail or involvement in implied benefit** "As part of Inland Rail, the Project has the potential to stimulate business and industry development at the Toowoomba Enterprise Hub in Wellcamp. By providing efficient transport access to intrastate and interstate markets, the Project may act as a catalyst for further private sector investment in this area, particularly for freight and logistic operations. The further development of the Toowoomba enterprise Hub has the potential to unlock greater economic activity in the region, such as though promoting greater international export opportunities via Wellcamp Airport."	It is unclear from this if the Project will build, contribute to, or otherwise assist with development of any intermodal facilities in the Toowoomba Enterprise Hub or any other assistant to proponents of projects connecting to Inland Rail. If, for example, the Project will involve construction of one or more intermodal facilities for use in the construction process, and such facilities could be designed in such a way that they would be useful as commercial facilities and be sold, or otherwise made available to industry after completion of the build.	The provision of such common use infrastructure could substantially increase the catalytic impact of the Project. Similarly, any other assistance the Project may provide to proponents of projects connecting into Inland Rail would strengthen the case for project benefits.

Chapter 16 Economics 16.11 Business and industry impacts 16.11.1.3 Local service and supply business – Telecommunications & Appendix V – Economic impact assessment - Baseline and impact assessment- Local businesses and industry - Local Business- Telecommunications p 8	**Issue : lack of detail or involvement in implied benefit** "Inland Rail is planning telecommunications systems as part of construction requirements and ongoing safe rail operations. ARTC is working with telecommunications carrier network operators to provide services for construction site offices, non-resident workforce accommodation and the railway corridor. While the focus will mainly be for the provision of voice and high speed data services around the rail track vicinity, it is envisaged that the extended wireless telecommunications network coverage and optical fibre systems will add benefit to the local communities(such as businesses) in those areas where previously such services did not exist."	As connectivity in regional areas is the subject of significant focus and investment, detail around the permanency of some of this infrastructure and the intention to construct infrastructure with a legacy benefit in mind may strengthen both the economic and the social benefit presented.	This would seem to be a missed opportunity of providing some actual legacy benefit from the Project, especially in the areas with significant impact and little obvious benefit.

From: Irrelevant information deleted in accordance with section 73 of the RTI Act
Sent: Tuesday, 13 April 2021 12:28 PM
To: Inland Rail - B2G
Subject: C-ECTF-21/1417 - Correspondence from Irrelevant information deleted in accordance w Queensland Health
Attachments: DG LTR - Response to Border to Gowrie Inland Rail Coordinated Project.PDF

Good Afternoon

Please find attached correspondence from Irrelevant information deleted in accordance wi Queensland Health, for your attention.

Should you require further clarification or have any further questions, the Department of Health's contact is Irrele Irrelevant information deleted in accordance with sectic Capital and Asset Services, via telephone on Irrelevant inforn

Kind regards

Queensland Government

Ministerial & Executive Services Unit, Office of the Director-General | Queensland Health

E Irrelevant information deleted in accorda
W health.qld.gov.au

Queensland Health acknowledges the Traditional Owners of the land, and pays respect to Elders past, present and future.

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Queensland Government

Queensland Health

Enquiries to: Irrelevant information dele
Property and Planning Unit - Capital and Asset Services
Telephone: Irrelevant info
Our ref: C-ECTF--21/1417
Your ref: DGBN20/974

Irrelevant information

Coordinator-General
Office of the Coordinator-General
PO Box 15517
CITY EAST QLD 4002

Email: inlandrailb2g@coordinatorgeneral.qld.gov.au

Dear Ms Power

Thank you for your letter dated 25 January 2021, regarding the draft Environmental Impact Statement report for the Inland Rail – Border to Gowrie (B2G) project.

The Department of Health's Capital and Asset Services Branch has reviewed the project materials including the alignment of the railway line and can confirm that there are no Queensland Health assets which will be affected by the proposal.

I can therefore advise Queensland Health has no further comment on the current proposal.

Should you require further clarification or have any further questions, the Department of Health's contact is Irrelevant information deleted in accordance with section 73 of Capital and Asset Services, via telephone on Irrelevant inform

Yours sincerely

Irrelevant information deleted in acc

Director-General
12 / 04 / 2021

From: Irrelevant information deleted in accordance with section 73 of the RTI Act
Sent: Tuesday, 27 April 2021 2:22 PM
To: Inland Rail - B2G
Cc: Irrelevant information deleted in accordance with section 73
Subject: Darling Downs Public Health Unit - comments regarding Inland Rail - Border to Gowrie
Attachments: EIS DDPHU comments.pdf

Good afternoon

Please find attached a copy of the Darling Downs Public Health Unit comments for the above mentioned project.

I have placed the original in the post for you.

Please do not hesitate to contact me should you have any further questions.

Kind regards

Irrelevant infor

Irrelevant information deleted in accord

Darling Downs Public Health Unit
p Irrelevant information deleted in accordanc
a: Browne House, Baillie Henderson Hospital, Cnr. Tor & Hogg St, Toowoomba QLD 4350
e: Irrelevant information deleted in accordance with **w:** Darling Downs Health

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Enquiries to: Irrelevant information d
Telephone:
Facsimile:
Our Ref: GEN-S-5.1

Queensland Government

Darling Downs Public Health Unit

Darling Downs Hospital and Health Service

Cnr Hogg and Tor Streets
PO Box 405 Toowoomba
Queensland 4350 Australia
Telephone +61 7 4699 8240
Facsimile +61 7 4699 8477
www.health.qld.gov.au/darlingdowns
ABN 64 109 516 141

The Coordinator-General
C/- EIS project manager – Inland Rail – Border to Gowrie project
Coordinated Project Delivery
Office of the Coordinator-General
PO Box 15517
CITY EAST QLD 4002

Dear Sir/Madam

Thank you for the opportunity to consider the draft Environmental Impact Statement (EIS) for the Inland Rail – Border to Gowrie Project.

The information within the draft EIS has been reviewed by this Unit.

Queensland Health considers accommodation camps to be sensitive receptors, meaning the same human health and well-being goals/criteria applied to the prescribed sensitive receptors in the EIS should be extended to areas where accommodation camps are located. For this reason, the proposed accommodation camps should be strategically located to minimise health risks.

It is essential that workers in these temporary accommodation facilities are considered and the following measures are addressed to appropriately assess and manage the increased risk to human health in this population group:

1. Consideration should be given to the use of air monitoring stations to assess air quality in the accommodation camps and site these accordingly based on predominant wind predictions;
2. Outline the source and storage of the potable water in the accommodation camps and subsequent disinfection if required;
3. Ensure that medical and first aid services provided in accommodation camps comply with the *Health (Drugs and Poisons) Regulation 1996* and that the relevant local health authorities are aware of the camp prior to it being established;
4. Consideration should be given to potential noise impact from the use of the diesel generator for power generation;
5. Consideration should be given to implementing strategies to reduce adverse health effects resulting from social isolation;

6. Consideration should be given to implementing strategies (including monitoring) on how pests and vermin will be appropriately managed to prevent infestation in the camp locations.
7. You are reminded to regularly monitor the Chief Health Officer Public Health Directions which can be found here *https://www.health.qld.gov.au/system-governance/legislation/cho-public-health-directions-under-expanded-public-health-act-powers* for the latest information on any potential impacts on the workforce or proposed accommodation arrangements.

Queensland Health also recommends that the proponent assess the sites potential (both construction and camp) to create breeding sites for biting insects and describe strategies (including monitoring) to prevent the spread of mosquito borne diseases in the area.

Further information needs to be provided on what mitigation processes will be implemented where current, proposed and future bore water is affected, other than where supply is disrupted through regular flooding or drawdown processes, such as contamination of groundwater.

Should you have any further queries regarding this matter, please contact Irrelevant information deleted in accordance with s Darling Downs Public Health Unit, on Irrelevant information deleted in accordance with s or email Irrelevant information deleted in accordance with s

Yours sincerely

Irrelevant information deleted in accordance with s

27 /04/21

From: Irrelevant information deleted in accordance with section 73 of the
Sent: Thursday, 15 April 2021 10:26 AM
To: Inland Rail - B2G
Cc: Irrelevant information
Subject: DCHDE (excl of Communities & Digital Economy) submission - Inland Rail – Border to Gowrie EIS
Attachments: DCHDE (excl Communities & Digital Economy) Submission - Inland Rail - Border to Gowrie EIS.pdf

Dear Officers

Please find attached the DCHDE (exclusive of Communities & Digital Economy) submission on the Inland Rail - Border to Gowrie Environmental Impact Statement.

Thanks

Irreleva

Irrelevant information deleted in accordance with section 73 of the RTI

Housing, Homelessness and Sport | Department of Housing and Public Works
Level 20 | 41 George Street | Brisbane
Irrelevant information deleted in accordance with section 73 of the RTI Act
www.hpw.qld.gov.au

Submission form: Environmental Impact Statement

Please complete this form only if you wish to provide a submission by email or post. To make an online submission, visit **https://haveyoursay.dsd.qld.gov.au**

Name of project: Inland Rail – Border to Gowrie
Please write the project name exactly as it appears in the newspaper public notice or at **https://haveyoursay.dsd.qld.gov.au**

Your details (please print)

Irrelevant information deleted in accordance with section 73 of the RTI Act	Department of Communities, Housing and Digital Economy (Housing and Homelessness Services)
Postal address: GPO Box 690 Brisbane Queensland 4001	**Phone number** Irrelevant informati
Irrelevant information deleted in accordance w	**Email address** Irrelevant information deleted in accorda
Signature ..... A submission by more than one person must be signed by *each* submitter	**Date** 15/04/2021

Your comments on the application for project change (please print)

Section	Describe the issue	Suggested solution
Appendix A - Terms of Reference	The department acknowledges that the proponent has (to varying degrees of adequacy) addressed matters of department interest outlined in the EIS Terms of Reference for the project.	
Social (C15) Social Impact Management Plan (15.9) Housing and Accommodation (AMP) (15.9.4) and Social Monitoring Framework (15.9.7 and Table 15.26) Community and Stakeholder Engagement (CEMP) (15.9.2 and Table 15.21) and Health and Community Wellbeing (CWP) (15.9.5 and Table 15.24). Draft Outline Environmental Management Plan (EMP) (C22)	The department supports most of the EIS proposals outlined in the Accommodation Management Plan (AMP) in 15.9.4 to manage impacts on affordable housing and short-term accommodation and the related monitoring framework section outlined in Table 15.26. However, the department notes that the displacement of households from residential properties required by this project and related impact mitigation proposals for them are not documented in the AMP. Further it is noted that the EIS provides no breakdown of the tenure of the residential properties to be acquired because of this project. Consequently, the CEMP and CWP would appear to have been prepared in the absence of required data, with the former focusing primarily on liaising with, and managing impacts for, landowners (potentially owner occupiers and landlords) and the latter addressing support for landowners and tenants should they request assistance. This tenure information is required for the comprehensive assessment of project impacts and formulation of more complete impact mitigation proposals given historically tight rental markets in the affected Councils and the very limited current capacity of local region townships to absorb new rental demand. The tenure of residential properties required for acquisition needs to be identified in the EMP's detailed design phase of refining the permanent project impact footprint so it is available to inform the likely need for an upgraded AMP, CEMP, CWP and monitoring framework. Given current challenging market conditions, the department considers that the proponent in this phase needs to determine the number of tenants the property acquisitions will displace and the cost of a tenant support program (if tenants are identified) on the basis of the number of tenants and a commitment to proactively assist them to find alternative accommodation (inclusive of relocation and associated costs). Thus, if displaced tenants are identified, the proponent will be able to put in place an upgraded program for delivery by either a principal project contactor or a community organisation that will more comprehensively and proactively address household displacement. **Accordingly, it is recommended that this matter be addressed via a condition in any project approval granted by the Coordinator-General.** In addition, it is recommended that ongoing compliance with the resultant plans and the related monitoring framework elements stemming from this requirement be subject a condition of any project approval granted by the Coordinator-General (CG).	A CG condition of approval requiring the proponent to determine in the detailed design phase the number of tenants project property acquisitions will displace and the cost of a tenant support program (if tenants for displacement are identified) on the basis of the number of tenants and a proponent commitment to provide staff and funds to proactively assist them to find alternative accommodation (inclusive of relocation and associated costs). This above condition should include a clause, that in the event of displaced tenants being identified in the project's detailed design phase, the proponent will provide an upgraded AMP, CEMP and CWP and monitoring framework incorporating a commitment to fund a tenant support program based on this condition for delivery by either a principal project contactor or a suitable community organisation. A CG condition requiring the proponent to conform with the resultant AMP, CEMP, CWP and the related monitoring framework elements upon the completion of work required by the above condition.

Noise and Vibration (C14), Operational Railway Noise and Vibration Assessment (Appendix T) Social (C15), Conclusions (C23), Proponent Commitments (Appendix Z), Social Impact Management Plan (C15), Draft Outline Environmental Management Plan (C22).	The EIS identifies that acceptable noise standards during the construction and operational phase of the project are to be achieved through appropriate project design elements and impact mitigation and monitoring strategies. In relation to addressing operational noise for affected groups of residential properties in Yelarbon, Brookstead and Pittsworth, preferred treatments for achieving environmental standards, including any noise barrier treatments, will be identified during the **detailed design phase** of the project. The preferred treatments for achieving acceptable environmental noise standards for impacted housing in Yelarbon, Brookstead and Pittsworth, including any noise barrier treatments, need to be made available for State Agency review before the commencement of these works and the operation of the rail line. Accordingly, it is recommended that this matter be addressed via a condition in any project approval granted by the Coordinator-General.	As the preferred treatments for achieving acceptable environmental noise standards for housing, including any noise barrier treatments, are to be identified in the project's detailed design phase, this information should be included in any upgraded SIMP and EMP and made available for State Agency review via a condition of any approval granted by the Coordinator-General.

- If there is not enough space on this form, please attach additional pages. Please write your full name and the name of the project on any separate pages.
- Send the completed form to the email/postal address shown in the newspaper public notice. If you require assistance, please telephone 13 QGOV (13 74 68) or +61 7 3452 7485.
- You **must** provide your comments by the closing date shown in the public notice and on the consultation website.

From: Irrelevant information deleted in accordance with section 73
Sent: Thursday, 22 April 2021 9:27 AM
To: Inland Rail - B2G
Cc: DAF_EIS Unit
Subject: DAF comments on Inland Rail Border to Gowrie draft EIS
Attachments: DAF EIS Submission Inland Rail B2G updated DDG App.pdf

Good morning

Thank you for the opportunity to comment on this Project's draft EIS. Please find attached a whole-of-DAF submission on the above mentioned project.

Should you have any questions please contact me on the details below.

Many thanks

Irrelevant information

Irrelevant information deleted in accordance with section 73 of the RTI Act

Irrelevant information deleted Fisheries and Forestry
Department of Agriculture and Fisheries

Irrelevant information deleted in ac
W www.daf.qld.gov.au
Physical: Ecosciences Precinct, Level 2B East, 41 Boggo Road, Dutton Park Qld 4102
Postal: Ecosciences Precinct, Level 2B East, GPO Box 267, Brisbane Qld 4001
Customers first | Ideas into action | Unleash potential | Be courageous | Empower people

DEPARTMENT OF AGRICULTURE AND FISHERIES

Submission on the Inland Rail – Border to Gowrie (B2G) Project - DEIS

Section	DAF Division	Describe the issue	Suggested Solution
General Comments	Agriculture	***Surface Water Quality*** - Potential Project impacts include – increased debris; changes to water quality and hydrology, (due to increased water turbidity and sedimentation); increased salinity, (which may affect the usability of downstream waters for purposes such as irrigation, farm supply, stock use and recreation, etc), increased contaminants, erosion, and sedimentation, with exacerbation of these impacts on surface water quality likely if rehabilitation is inadequate. In addition, there are potential impacts to water morphology and the availability of surface water for existing users. Also, structural failure, (of a bridge or culverts within waterways), has the capacity to alter flow regimes and increase degradation of surface water quality due to potential secondary salinity issues. Potential cumulative impacts of the Project on surface water include riparian vegetation loss from vegetation clearing; reduction in the connectivity of waterways, and an increase in erosion and sedimentation in waterways.	
		Groundwater Resources - Potential Project impacts include - loss or damage to existing landowner bores or groundwater use from bores (quality/yield degradation); groundwater level reduction; alteration of acquirer parameters and/or flow patterns; subsidence/settlement of compressible substrates; ARD; groundwater level mounding; and alteration to groundwater recharge/discharge mechanisms. The Project could also change groundwater levels and flow paths, reduce groundwater levels due to seepage into cuttings; and increase contamination causing a reduction of groundwater quality.	
		Hydrology and Flooding - Potential Project impacts include - changes to the existing flood regime such as, changes in peak water levels and associated duration of inundation; change flood flow distribution across floodplain areas; changes in velocity (leading to localised scour and erosion); and potential impacts on external properties, including increased depth of water, (noting the Project alignment crosses several major waterways (including the Macintyre and Condamine Rivers).	
Chapter 3 Legislation and Project Approvals Process Also ***Appendix M*** Preliminary Fauna Movement Provision and Fencing Strategy	Biosecurity Queensland	***(S3.5.3.3, pg3-14) (Appendix M, S3, Table 3.1, pg16)*** The proponent states that they are consulting with GRC about realignment of the wild dog check fence. The Project interacts with the existing wild dog check fence from Ch 26.8 km to Ch 56.0 km and that the wild dog check fence will need to be reinstated on the left-hand side corridor boundary. Table 3.1 in Appendix M indicates the location of parts of the check fence which are proposed to be reinstated. There are nine parcels of land affected in this section The proponent has not included the requirements of Section S91 (3) of the *Biosecurity Act 2014* and will need to make clear the requirement for consultation with the Chief Executive of the Department of Agriculture and for consultation to be initiated by the Department of Agriculture and	Under the *Biosecurity Act 2014*, local governments oversee and fund the maintenance of the wild dog check fences to a wild dog-proof standard. The wild dog check fences were built to protect animals in the adjacent cropping and grazing lands. Although the check fences do not physically link up to the wild dog barrier fence, they play an important role in wild dog control in southern Queensland. Most of the wild dog check fences have been well maintained and have been improved from their original condition. Section S91(3) of the *Biosecurity Act 2014* requires that before amending the barrier fence map the Chief Executive of the Department of Agriculture and Fisheries must consult with the building authority (Goondiwindi Regional Council) and the owner of land affected by the amendment. There are other references to consulting with GRC about this issue and these should be cross-referenced where relevant.

		Fisheries with the building authority (Goondiwindi Regional Council) and the owner of the land affected by the amendment about the reinstatement of the check fence.	
Chapter 7 Land Use and Tenure ***Chapter 8*** Land Resources	Agriculture South (RED)	***(S7.5.2.2, Table 7.13 and 7.14, pgs7-69 to 7-70)*** and ***(S8.6.2.1, Tables 8.20 and 8.21, pgs8-156 to 8-157, Table 8.28, pg178)*** Regardless of the inconsistency mentioned below, a significant amount of ALC Class A/B land, and land within an Important Agricultural Area will be permanently converted to a non-agricultural use by the project. The mitigation measures proposed for impacts to this finite resource appear to centre on avoidance and minimisation methods through the reference design phase and through amendments at the detail design stage. Given the amount of land to be irreversibly converted to a non-agricultural use and the regions reliance on agriculture economically, DAF is concerned that the mitigation measures proposed aren't adequate to protect the long-term viability and growth of the agriculture sector as per the State Planning Policy nor the Darling Downs Regional Plan, in which agriculture is the priority land use DAF raised this issue at the EIS adequacy stage stating that the proponent does not discuss mitigation strategies regarding the loss of ALC A and B land.	The EIS should consider investigating ways to ensure that there is "no net loss" of agricultural productivity in the region as a mitigation measure to offset the considerable loss of ALC Class A/B land within the EIS assessment area. This could be achieved by working with affected landowners to 'switch on' areas which are currently not utilised for production, but with new infrastructure or access (etc) could be used for agricultural production. It is recommended that an equivalent amount of ALC A/B land be "switched on" to offset the loss of ALC A/B land rendered unusable for agriculture by the project. This land should be protected by covenant on title so that it remains permanently available for ongoing and uninterrupted use for agricultural only.
	Agriculture	***(S7.5.2.2, Table 7.15, pgs7-70 to 7-72 and Appendix F, Table F.2)*** Inconsistent approach in reporting intensive animal activities - Table F.2 in Appendix F details land uses based from QLUMP to detail predominant land use. However, section 7.5.2.2 in Chapter 7 uses EA data to detail land use. As a result Table 5.2 details 2 properties where intensive animal operations are the predominate land use, whereas section 7.5.2.2 identifies nine intensive animal operations. The inconsistent use of data does not	The narrative in the EIS needs to be consistent to ensure that agricultural values, based on farming practices and systems, are accurately identified and detailed.

		provide for a consistent narrative when discussing agricultural land uses.	
Chapter 8 Land Resources	Agriculture South (RED)	***(S8.6.2.1, Tables 8.20 and 8.21, pgs8-156 and 8-157)*** Inconsistency with regards to amount of ALC Class A land to be permanently sterilised by the project. Table 8.20 states 1,913.24 ha of ALC Class A/B land will be permanently sterilised, however Table 8.21 totals for Class A land in the Goondiwindi and Toowoomba LGAs don't add up to 1.913.24, rather 1,766.88 which is what is recorded in the narrative.	Amend figures to be consistent throughout this Chapter and others referring to loss of ALC Class A and B land
Chapter 10 Flora and Fauna	Fisheries Queensland	***(S10.5.4.2, pg10-76)*** The report outlines that during three field surveys the presence and abundance of fish species would have been limited by dry conditions. This is evident when noting that the surveys were conducted prior or after significant wet season flows. It is noted that the report states that 'a greater diversity and abundance of fish across watercourses… is therefore assumed…' However, the assumption of greater diversity does not necessarily describe impacts resulting from the development.	Where waterways providing fish passage will be impacted in a manner greater than that described in the ADR, a development approval is required. Further fish surveys should be undertaken during times of adequate flow in the wet season to gain an understanding of fish species composition and population abundance. Only then can the scale of impacts from the project be fully understood.
	Biosecurity Queensland	***(S10.5.3.4, Table 10.10, pg10-66)*** The proponent has identified and listed restricted invasive species and Weeds of National Significance (WoNS) but has failed to reference the GRC Biosecurity Plan or state how the listed species are to be prioritised for strategic management. There is little alignment with GRC Regional Council's Biosecurity Plan and priorities for invasive species.	To ensure the project aligns with GRC's Biosecurity Plan for the strategic management of priority invasive species, it is recommended that the EIS lists and integrates GRC's priorities for invasive species management in relevant sections of Chapter 10, Chapter 22, and in the development of the Biosecurity sub-plan of the CEMP. This should include GRC's consideration of species not present, the listing of prioritised restricted species, and priority non-declared species.
Chapter 12 Surface Water and Hydrology	Fisheries Queensland	***(S12.8.1.2, pg12-109)*** This section outlines that three waterways providing for fish passage will be realigned/diverted. However, this section does not acknowledge that filling sections of waterways and consequent flow diversions constitute waterway barrier works. Such works are assessable development and require an approval.	**The following advice should be provided:** The filling of sections of waterways and consequent altering flow means that diversions constitute waterway barrier works that are assessable development. Such works require an approval under the *Planning Act 2016.*
		(S12.9.1.2, Table 12.57, pgs12-127 to 12-123) This table outlines the mitigation measures relating to impacts to surface waters. Under row	**Recommended condition:** All in-stream works are to be completed as quickly as possible, but must be avoided during times of elevated flows.

		'construction' it is explained that construction tasks within the 1% AEP flood area will be scheduled to avoid periods of elevated flood risk. However, instream works should be avoided in 20% AEP flood events to minimise impacts to waterways providing for fish passage.	**Reason:** To minimise construction impacts to the matter of State environmental significance waterways providing for fish passage. **Timing:** At all times.
Chapter 22 Outline Environmental Management Plan	Biosecurity Queensland	***(S22.4, pg22-6)*** Training in biosecurity risks and prevention and the requirements under the *Biosecurity Act 2014* is not included in the list that requires all employees, contractors and subcontractors to receive.	Recommend that biosecurity is included in the list of training requirements for all employees, contractors and subcontractors.
		(S22.11.4.3, Table 22.6, 22-31 and 22-32) The reference to the reinstatement of the wild dog fence does not include a include the Section S91(3) requirement of the *Biosecurity Act 2014.* (Refer to the above comment)	Include a reference to the requirement of the Section S91(3) of the *Biosecurity Act 2014.*
Chapter 23 Conclusions	Agriculture	***(S23.4.1, pg23-10)*** DAF is concerned over the potential for adverse impacts to poultry operations as a result of the operational activities of the project.	What is the mitigation strategy to ensure that adverse impacts to poultry operations, including bird deaths, as a result of the operation of the rail line, will be appropriately mitigated to ensure that there is a no net loss in poultry capacity and production in the regions where impacts occur? The EIS should detail the mitigation strategy in this regard and include this in the project's ongoing commitments and reporting requirements.
Appendix J Terrestrial Ecology Technical Report	Fisheries Queensland	***(S4.5.7, pg87)*** This section outlines that waterway crossings will be constructed in accordance with DAF factsheet 'What is not a waterway barrier work?', or the accepted development requirements for operational work that is constructing or raising waterway barrier works, or a relevant development approval. This will need to be conditioned to ensure that impacts to waterways providing for fish passage are minimised and managed appropriately.	**Recommended condition:** I. All waterway crossings must be constructed: a) As per design requirements of DAF factsheet 'What is not a waterway barrier work?'; or b) In accordance with the accepted development requirements for operational work that is constructing or raising waterway barrier works; or c) In accordance with a development approval issued under the *Planning Act 2016*. II. All other waterway barriers, including but not limited to, diversions and realignments, must be constructed in accordance with a development approval issued under the *Planning Act 2016*. **Reason:** To avoid or acceptably minimise impacts to the matter of State environmental significance (MSES) that is waterways providing for fish passage. **Timing:**

			At all times. **Additional advice should be provided as follows:** For the definition of a waterway, consult the *Fisheries Act 1994*. DAF factsheet *What is a waterway?* provides further guidance on the definition in the Act and is found here https://www.daf.qld.gov.au/business-priorities/fisheries/habitats/policies-guidelines/factsheets/what-is-a-waterway . Development that constitutes operational work that is constructing or raising waterway barrier works within a waterway requires an authority under the *Planning Act 2016*. The spatial data layer Queensland waterways for waterway barrier works is a helpful tool to identify most waterways and classifies those to allow determination of whether a development can comply with the 'Accepted Development Requirements for operational work that is constructing or raising waterway barrier works' or is assessable development and requires development approval. The spatial data layer can be accessed via the Development Assessment Mapping System here: https://dams.dsdip.esriaustraliaonline.com.au/geoviewer/ or via Queensland Globe here: https://qldglobe.information.qld.gov.au/ The relevant accepted development requirements can be found here: https://www.daf.qld.gov.au/business-priorities/fisheries/habitats/fisheries-development/accepted-development. Prior to waterway barrier works commencing under the accepted development requirements, contact DAF and discuss opportunities for multiple waterway crossings to be notified in single submissions. Prior to lodgement of development applications for development approval for operational work that is constructing or raising waterway barrier works with the State Assessment and Referral Agency, seek pre-lodgement advice on relevant information requirements and consult with DAF as to whether multiple works may be able to be included in a single Development Application. Assessable development for operational work that is constructing or raising waterway barrier works must demonstrate avoidance and mitigation of impacts to waterways providing for fish passage. Any acceptable Significant Residual Impact is likely to require an environmental offset under the *Environmental Offsets Act 2014*. Information on these requirements is available at: www.qld.gov.au/environment/pollution/management/offsets.
		(S5.3.4, Table 5.18, pgs249-250) The table outlines that the likelihood of a significant residual impact to waterways providing for fish passage is uncertain.	**The following advice is provided:** Where waterway crossings are constructed in accordance with DAF factsheet '*What is not a waterway barrier work?*' or in accordance with the accepted development requirements for operational work that is constructing or raising waterway barrier works, the works do not result in a significant residual impact. Where waterway barrier works require a development approval, the associated

			assessment of an application will determine whether the development results in a significant residual impact. Any acceptable Significant Residual Impact is likely to require an environmental offset. However, an environmental offset will not be considered until it has been demonstrated that all reasonable measures have been taken to firstly avoid, minimise and/or mitigate impacts to waterways providing for fish passage (refer to Queensland Environmental Offsets Policy). **Recommended condition:** Enter into an agreed delivery arrangement to deliver an environmental offset in accordance with the *Environmental Offsets Act 2014* to counterbalance any significant residual impacts on the matter of State environmental significance, being waterways providing for fish passage. **Reason:** To counterbalance all significant residual impacts to waterways providing for fish passage. **Timing:** Prior to commencing any works that impact on waterways providing for fish passage.
Appendix K Aquatic Ecology Technical Report		***(S2.2.7, pg19)*** The reports states that the spatial data layer Queensland waterways for waterway barrier works shows the extent of Fisheries' interests in relation to waterway barrier works and that this layer indicates whether waterway barrier works can proceed under self-assessable code or require a development approval. This is not correct, the *Fisheries Act 1994* defines a waterway, not the spatial data layer. The spatial data layer is only a tool to identify whether specific types of waterway barrier works can be constructed under the relevant accepted development requirements or require development approval. Self-assessable codes are obsolete as they have been transitioned to accepted development requirements. This section states that self-assessable work allows for some regularly rebuilt waterway barriers. "Self-assessable" works conducted under the	This section of the EIS should be amended to the following effect: Remove all references to "self-assessable codes" and replace with "accepted development requirements". All waterways providing for fish passage, including those that may not be mapped under the spatial data layer *Queensland waterways for waterway barrier works* must be identified to determine the full extent of impacts the project will have on waterways providing for fish passage. A waterway is defined under the *Fisheries Act 1994* and further guidance can be found on Fisheries Queensland's factsheet, *What is a waterway?* Where a waterway is present on ground but not mapped, the proponent should seek pre-lodgement advice from the State Assessment and Referral Agency to seek a determination of the waterway to identify whether works may be accepted or assessable development. Remove text "and some regularly rebuilt waterway barriers" where referred to "self-assessable works".

		accepted development requirements do not allow for regularly rebuilt waterway barriers.	
		(S5.2.2, Table 41, pgs115 – 123) This table highlights that when surface water storages are dewatered, reasonable measures to avoid the spread of pest species will be taken. However, surface water storage areas may contain other (native) fish. Any fish (which is not a declared pest) must be salvaged prior to dewatering to prevent injury and mortality of fish. Fish salvage in accordance with DAF fish salvage guidelines must be undertaken prior to complete dewatering where fish are present.	It will be recommended to condition fish salvage in accordance with DAF fish salvage guidelines. **Recommended condition:** Where waterways and waterbodies require de-watering, fish must be salvaged in accordance with DAF's *Guidelines for fish salvage* found here: https://www.daf.qld.gov.au/business-priorities/fisheries/habitats/policies-guidelines/factsheets/guidelines-for-fish-salvage ***Additional Advice to attach to this condition as a note****: A General Fisheries Permit is required for the use of regulated apparatus and when fish in possession (e.g. during transport to other locations) exceeds the recreational limits prescribed by the Fisheries (General) Regulation 2019. The consequent stocking of fish into Queensland waters may require an authority. Advice should be sought from DAF prior to any fish salvage operations.* **Reason:** To minimise the risks of fish injury and mortality and fish health being compromised by the project. **Timing:** At all times.
Appendix M Preliminary Fauna Movement Provision and Fencing Strategy		***(S3, pg15)*** This section notes that 'Fencing across small waterways will be designed to avoid storm damage and to retain effective stock control…' Fencing across waterways may constitute waterway barrier works.	**Recommended condition:** For all fencing across waterways: i. seek pre-lodgement advice from the State Assessment and Referral Agency to determine whether the proposed works constitute waterway barrier works. ii. that constitutes waterway barrier works obtain a relevant development approval under the *Planning Act 2016.* **Reason:** To ensure that fences do not impact waterways providing for fish passage; or To ensure that impacts to waterways for fish passage are acceptably minimised, mitigated and offset. **Timing:** Prior to construction of fencing across waterways.

Appendix N Environmental Offset Delivery Strategy - QLD	Agriculture South (RED)	DAF notes that the Project will result in significant adverse impacts, even after the implementation of all mitigation measure, including rehabilitation. As such, offsets will be required under the EPBC Act Offsets Policy and Qld Environmental Offsets Policy 2017. DAF understands that State Agencies will be consulted during the development of Environmental Offset Delivery Plans and Offset Area Management Plans.	Development of the Environmental Offset Delivery Plans and Offset Area Management Plans should ensure that ALC Class A/B land, land within an Important Agricultural Area and productive agricultural lands are not converted to a non-agricultural use for offsetting purposes.
Appendix Y Spoil Management Strategy	Fisheries Queensland	***(S3.1, Table 3.1, pg12 to 14)*** This table lists the locations of proposed stockpile and laydown areas. Some of these appear to be within waterways providing for fish passage as shown on the plans referenced below. Stockpile areas within waterways are likely to constitute waterway barrier works and are assessable development. Stockpiling within waterways is unlikely to meet the relevant state code as stockpiles do not have a functional requirement to be located in a waterway (i.e. they can be located outside of a waterway) and the associated impacts to waterways providing for fish passage are not acceptable.	**Recommended condition:** All ancillary elements of the development, including but not limited to, laydown and stockpile areas, car parking, hardstands, temporary accommodation, site offices, etc. must be located completely outside the high banks of waterways. **Reason:** To minimise impacts to waterways providing for fish passage. **Timing:** At all times.
Design Drawings Part 1 of 2		***Plan 2-0001-310-ELE-10-SK-1025*** This plan depicts laydown area B2G—LDN055.4 within a mapped waterway providing for fish passage. ***Plan 2-0001-310-ELE-10-SK-1027*** This plan depicts laydown area B2G—LDN060.4 within a mapped waterway providing for fish passage. ***Plan 2-0001-310-ELE-10-SK-1031 and Plan 2-0001-310-ELE-10-SK-1032*** This plan depicts laydown area B2G—LDN074.0 within a mapped waterway providing for fish passage. ***Plan 2-0001-310-ELE-10-SK-1034*** This plan depicts a laydown area within a mapped waterway providing for fish passage.	Laydown areas do not have a functional requirement to be located in a waterway and should therefore be placed outside of waterways.

		Plan 2-0001-310-ELE-10-SK-1037 This plan depicts laydown area B2G—LDN091.8 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-1039 This plan depicts laydown area B2G—LDN098.0 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-1042 This plan depicts laydown area B2G—LDN104.5 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-1045 This plan depicts laydown area B2G—LDN115.6 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-1049 This plan depicts laydown area B2G—LDN127.0 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-1056 This plan depicts laydown area B2G—LDN149.0 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-1063 This plan depicts laydown area B2G—LDN169.6 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-1065 This plan depicts laydown area B2G—LDN175.5 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-1068 and Plan 2-0001-310-ELE-10-SK-1069 This plan depicts laydown area B2G—LDN185.0 within a mapped waterway providing for fish passage.	
Design Drawings Part 2 of 2		***Plan 2-0001-310-ELE-10-SK-2025*** This plan depicts laydown area B2G—LDN055.4 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-2027 This plan	

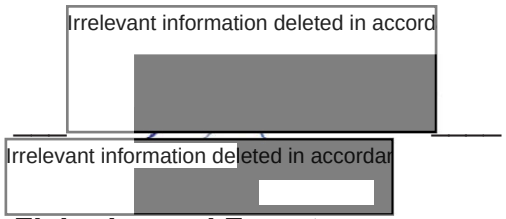
		depicts laydown area B2G—LDN060.4 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-2031 and Plan 2-0001-310-ELE-10-SK-2032 This plan depicts laydown area B2G—LDN074.0 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-2034 This plan depicts a laydown area within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-2037 This plan depicts laydown area B2G—LDN091.8 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-2039 This plan depicts laydown area B2G—LDN098.0 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-2042 This plan depicts laydown area B2G—LDN104.5 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-2045 This plan depicts laydown area B2G—LDN115.6 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-2049 This plan depicts laydown area B2G—LDN127.0 within a mapped waterway providing for fish passage. Laydown areas do not have a functional requirement to be located in a waterway and should therefore be placed outside of waterways.	
		Plan 2-0001-310-ELE-10-SK-2056 This plan depicts laydown area B2G—LDN149.0 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-2063 This plan depicts laydown area B2G—LDN169.6 within a mapped waterway providing for fish passage.	

		Plan 2-0001-310-ELE-10-SK-2065 This plan depicts laydown area B2G—LDN175.5 within a mapped waterway providing for fish passage.	
		Plan 2-0001-310-ELE-10-SK-2068 and Plan 2-0001-310-ELE-10-SK-2069 This plan depicts laydown area B2G—LDN185.0 within a mapped waterway providing for fish passage.	
Recommended reasonable and relevant conditions		The following reasonable and relevant conditions are recommended to be included in the Stated Conditions of the Coordinator General's Evaluation Report for the EIS to minimise impacts on waterways providing for fish passage, a Matter of State Environmental Significance.	**Recommended Condition:** Spoil is not disposed of within waterways and is managed to prevent acid soil development. Land profiles within the high banks of waterways that are temporarily disturbed by the development works, other than those within the permanent development footprint, must be promptly restored to pre-work profiles. **Reason:** To minimise construction impacts to waterways providing for fish passage. **Timing:** At all times.
		For bridges that do not constitute waterway barrier works an operational works approval for constructing or raising waterway barrier works is not required. However, temporary waterway barrier works including, but not limited to, haul roads, piling pads, working platforms, coffer dams etc. are likely required to facilitate the construction of bridges. Such development aspects are likely to require an authority.	**The following advice should be provided:** Under the Planning Regulation 2017, works involving constructing or raising waterway barrier works must be undertaken in accordance with the relevant accepted development requirements or under a development approval (assessable development). The placement of temporary waterway barriers to facilitate construction of bridges may be conducted under DAF's accepted development requirements for operational work that is constructing or raising waterway barrier works (ADR). If any proposed temporary waterway barrier works cannot meet the accepted development requirements, this aspect of the works will need to be covered under a development approval under the *Planning Act 2016*. The applicant should note that time limitations apply to all temporary waterway barriers in place under the ADR. The prescribed limits are 360 days for mapped green and amber waterways and 180 days for mapped red and purple waterways. Within this timeframe construction must commence and be completely removed from the high banks of the waterway. If there is any possibility (e.g. due to weather, construction delays, etc.) the barriers need to be in place for longer than the prescribed period under the ADR, the applicant is advised to include proposed temporary waterway barrier works in a development application.

DEPARTMENT OF AGRICULTURE AND FISHERIES

ENDORSED / NOT ENDORSED

Comments



Date:13/ 04/ 2021

Fisheries and Forestry
Department of Agriculture and Fisheries

Matt Woodforth

From: ESNoreply <ESNoreply@tmr.qld.gov.au>
Sent: Monday, 19 April 2021 3:14 PM
To: Irrelevant inform
Subject: DG41149 - Department of Transport and Main Roads - Do not reply to this email
Attachments: DG41149_DG signed letter_19042021.pdf

Dear Irrelevant infor

Please find attached correspondence from Irrelevant information deleted in accordance w Department of Transport and Main Roads.

Kind regards

Cabinet, Legislation and Executive Services | Department of Transport and Main Roads
GPO Box 1549 | Brisbane Qld 4001
W: www.tmr.qld.gov.au

Please do not reply to this email.

Our ref: DG41149

Your ref: DGBN20/974

19 April 2021

Queensland Government

Office of the
Director-General

Department of
Transport and Main Roads

Irrelevant information d

Coordinator-General
Office of the Coordinator-General
Department of State Development
Infrastructure Local Government and Planning
Irrelevant information deleted in accordance with section 73 d

Dear Irrelevant inform

Thank you for the opportunity to review the draft environmental impact statement (EIS) for the Inland Rail Border to Gowrie project during public consultation.

The Department of Transport and Main Roads (TMR) has reviewed the draft EIS and provides you with the enclosed document showing comments for your consideration. The comments cover a range of issues and highlight various areas where the EIS requires an update or additional information. A summary of the key issues can be found on page 1 of the enclosed comments.

The project proposes to create a new railway open level crossing with a state-controlled road (SCR) and 27 new railway open level crossings with local government roads. TMR opposes the proposed new open level crossing of the Millmerran–Inglewood Road (a SCR).

With regard to the twenty-seven proposed OLCs on local government roads, the *Queensland Level Crossing Safety Strategy 2012–2021* and the *Queensland Level Crossing Safety Strategy 2012–2021 2019 Update: On Track to ZERO Harm* both strongly discourage new level crossings as a matter of policy. Accepting these level crossings sets a precedent for the remainder of the Inland Rail projects and for other projects in Queensland. The EIS requires additional information to demonstrate the safety and efficiency of the proposed crossings. TMR would like to explore placing an obligation on the project to upgrade level crossings should the safety and efficiency of the crossing deteriorate to an unacceptable level in the future.

If your officers require further information, they can contact Irrelevant information deleted in accordanc Irrelevant information deleted in accordance with section TMR, by telephone on Irrelevant infor or email at Irrelevant information deleted in accordance w

TMR looks forward to working with you and your department on the Inland Rail Border to Gowrie project as it progresses through the Coordinator-General EIS process.

Yours sincerely

Irrelevant information deleted

Department of Transport and Main Roads

Enc (1)

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The Department of Transport and Main Roads' comments on Inland Rail – Border to Gowrie project - draft Environmental Impact Statement (public consultation version January 2021)

Summary of key issues

Approval process and proponent commitments

- The project's approval process has not yet been confirmed. If the project is subject to exemptions, the Department of Transport and Main Roads (TMR) will need to discuss conditions and enforcement options with the Office of the Coordinator-General to protect TMR's state interests as TMR cannot rely solely on the *Transport Infrastructure Act 1994*.
- Australian Rail Track Corporation (ARTC) has made various commitments about finalising the assessment of the project's impacts but has not consistently committed to undertaking the necessary mitigation measures that may be identified through the finalised assessment. TMR's comments recommend that ARTC continue to work with TMR regarding the most appropriate mechanism to ensure their impacts are adequately mitigated.

Open level crossings

- The project is proposing to create one new active open railway level crossing with a state-controlled road (Millmerran-Inglewood Road). TMR's comments require this crossing be grade separated.
- The project is proposing to create 27 new open railway level crossings with local government roads. The draft Environmental Impact Statement (EIS) requires additional information to demonstrate the safety and efficiency of the proposed crossings for road and rail users. TMR would like to explore placing an obligation on the project to upgrade level crossings (including grade separation) should the safety and efficiency of the crossing deteriorate to an unacceptable level.
- The draft EIS has not assessed the impact of proposed construction haulage routes on existing or proposed open railway level crossing safety or provided detail about how the project will interface with the South Western line and Millmerran Branch line.

Operational noise

- The draft EIS has not assessed the project's operational noise impacts in accordance with TMR's latest Operational Railway Noise and Vibration – Interim Guideline 2019.

Flooding

- The draft EIS' Hydrology and Flooding assessment assumes 100mm overtopping of state-controlled roads is acceptable, which is inconsistent with TMR 'no-net worsening' policy. Various state-controlled roads are presently identified as affected.
- TMR has requested the project/EIS be amended to ensure no net worsening, either through provision of more cross-drainage structures or the upgrading of state-controlled roads.

Cumulative impacts

- The draft EIS' Cumulative Impact Assessment has not considered a number of TMR projects or the cumulative impact of other sections in the Inland Rail proposal.

Traffic and transport assessment

- The draft EIS' Traffic and Transport Impact Assessment lacks detail and requires ongoing update (including the road safety and pavement impact assessment) in consultation with TMR.
    - intersection analysis has not been presented (particularly analysis for triggering the 5 per cent increase in development traffic criteria as per TMR's Guide to Traffic Impact Assessment (GTIA)
    - the impacts of the opening of construction site interfaces on state-controlled roads and traffic movements (e.g. disruption and delay to normal flow of traffic during) have not been clarified
    - the pavement impact analysis has not provided any calculation for marginal cost contributions

Management and maintenance

- The project is proposing various rail over state-controlled road bridges. TMR's comments request that the draft EIS acknowledge and ensure that cross-sectional arrangements for bridges (rail over road) do not constrain the future capacity of state-controlled roads and also allow easy inspection, structural maintenance and traffic/incident management.
- The draft EIS has not clarified future ownership and maintenance agreement matters for some critical assets, particularly the Yelarbon bridge (Grade separation - road over rail) and the Gore Highway bridge (Grade separation - road over rail)
- The project will necessitate some state-controlled roads being transferred to local government ownerships (and vice versa), however the draft EIS has not discussed the proposed process, cost sharing or maintenance responsibility impacts.
- The draft EIS does not clarify agency responsibility (ARTC/TMR/Local government/QPS) for incident management at rail/road interface. Similarly, management of flooding or fire related disaster events and its impacts at rail/road interfaces has not been clarified in the draft EIS.

General

- The draft EIS does not clearly outline the process to be observed for locations where changes are anticipated from the reference design or where the deviations have already been proposed outside the corridor. It is further anticipated that as the reference design proceeds to the detailed design phase, there will be further changes. Clarity is required as to whether ARTC will be managing the impact of these changes (environmental impacts, noise and vibration, dust, flooding impacts, hydrology, safety and so on) as the lead agency or whether it will be left to ARTC to deal with those changes through the design process directly with TMR and respective local government.

Acronyms

CG = Coordinator-General

EIS = Environmental Impact Statement

GSTI = Government Supported Transport Infrastructure

GTIA = TMR's Guide to Traffic Impact Assessment 2018

PIA = Pavement Impact Assessment

QR = Queensland Rail

TIA = Traffic Impact Assessment

TMR = Department of Transport and Main Roads

ToR = Terms of Reference

ARTC = Australian Rail Track Corporation

#	Section	Issue	Recommended action	Importance
01	Chapter 03 Project Approvals Section 3.5.19.2 Page 31	The Department of Transport and Main Roads (TMR) agrees that the project fits the definition of 'government supported transport infrastructure' (GSTI) under the *Transport Infrastructure Act 1994*. However, it has not yet been confirmed if the project fits the definition of GSTI under the *Planning Act 2016*. TMR understands that the Coordinator General (CG) is currently considering if the project is GSTI and deciding on the project's approval pathway. If the project is GSTI under the *Planning Act 2016*, TMR would not have the opportunity to review the project after the CG's final Environmental Impact Statement (EIS) evaluation report, other than through contractual negotiations and the limited and specific approvals required for access to, and works on, the state-controlled roads and rail corridors in accordance with the *Transport Infrastructure 1994.* In such a scenario, TMR considers that it would be both reasonable and lawful for the CG to include 'imposed conditions' in the CG evaluation report to protect TMR's state interests and obligate ARTC to undertake their various commitments in the EIS/Outline Environmental Management Plan (and others as needed to protect TMR's interests), where those requirements are not enforceable by other statutory processes – similar to the approach taken for the Cross River Rail project.	It is recommended that this section be reworded to state that the project is considered GSTI under the *Transport Infrastructure Act 1994*, and updated to reflect the outcomes of the CG's investigation into whether the project is GSTI in accordance with the *Planning Act 2016*, and any resulting impact that may have on the project's proposed approval process. TMR would appreciate the opportunity to continue to discuss the project approval process with the CG once it has been confirmed, and provide further input regarding the need for, and ultimate format of, any conditions in the CG's final evaluation report for the project to protect TMR's State interests. TMR's expectation is that this discussion will occur in the coming months as ARTC updates the EIS to reflect TMR and other state agencies comments – prior to the CG's evaluation report being finalised.	1
02	Chapter 03 Project Approvals Section 3.7 Table 3.5 Pages 45	The State Assessment and Referral Agency (SARA) has been moved from Queensland Treasury (QT) to the Department of State Development, Infrastructure, Local Government and Planning (DSDILGP). The report refers to SARA in Department of State Development, Tourism and Innovation (DSDTI). The correct department should be referenced. Approvals under the *Transport Infrastructure Act 1994* may also include approvals for access to a state-controlled road granted under section 62. The table should be updated to reference that approval.	Table 3.4 should be updated to correctly reference relevant Queensland Government Departments, in particular the movement of SARA from QT to DSDILGP. It is also recommended the table be updated to include approvals granted under Section 62 of the TIA.	1

03	Chapter 03 Project Approvals Section 3.7 Table 3.5 (Works within a state-controlled road corridor) Page 48	Table 3.5 references 'development permit for works within, adjacent or impacting state transport infrastructure' and the lists the relevant legislation as the 'TI Act and the Planning Regulation." The relevance of this row/section in the table is unclear. The triggers within the Planning Regulation are not necessarily relevant for this project and the approval issued through the Planning Act 2016 do not authorise works within a transport corridor. Approval for works within a transport corridor are granted under the relevant section of the *Transport Infrastructure Act 1994*. It is recommended this section be reworked or removed.	Recommend this row/section in Table 3.5 be revisited to identify its relevance to the project and either remove or amend as required.	1
04	Chapter 05 Project Description Section 5.2.5.1 Table 5.11 Page 18	The EIS provides details of two road over rail bridges on state-controlled road in Table 5.11 (Cunningham Highway bridge and Gore Highway bridge). Cross-sectional arrangement for the proposed bridges (rail over road) should not constrain/restrict future growth/capacity for traffic, and should allow ease of structural maintenance, inspection and traffic management for incident management.	Cross-sectional arrangement for the proposed bridges (rail over road) should not constrain/restrict future growth/capacity for traffic, and should allow ease of structural maintenance, inspection and traffic management for incident management. These aspects need to be acknowledged in the EIS when proposing bridge designs to TMR.	1
05	Chapter 05 Project Description Section 5.2.9 Page 58	The EIS notes a number of utility services (communication, electricity, gas, water, sewerage) that have been identified for either protection or relocation to facilitate ARTC works.	The relocation of utility services should not preclude TMR from future development in the road reserve nor should it lead to an increase in cost for TMR future works. Amend the project and EIS as needed.	1
06	Chapter 05 Project Description Section 5.3 Page 63	The EIS mentions pre-construction activities and early works for establishment of access tracks, stockpiles/laydown areas etc. The EIS however, does not provide details regarding the approval process for undertaking these works in relation to identification, design approval of temporary access from state-controlled road, approval process for traffic management, environmental management and access to road reserves for construction activities from respective road authorities.	Update the EIS to provide an outline of the approval process from road authorities to undertake works.	1
07	Chapter 05 Project Description General	The EIS identifies that although ARTC is applying for trains at a length of 1.8km all infrastructure works including corridors and land has been designed for 3.6km trains (including passing loops, land requirements and infrastructure). It is unclear how impacts associated with an increase in train length will be considered.	Clarify how a change to the project approval which is currently for 1.8km will be considered if the operations of trains increase in length to 3.6km as identified in the EIS. The increase is likely to include changes to impacts associated with noise and vibration, visual amenity and social impacts.	1
08	Chapter 05 Project Description Section 5.4.2 Page 75	Section 5.4.2 states in relation to the construction schedule that: "Contractor award mid-2021. Some tasks can commence prior to contract award." Considering it is now March 2021, it is recommended that these dates are updated in the EIS.	Amend the EIS to reflect a realistic construction timeframe.	2
09	Chapter 05 Project Description Section 5.4.12.2 Page 90	The EIS references dispersive (sodic) soils and amelioration methods in relation to bulk earthworks. This indicates a misunderstanding of best practice amelioration methods by including the use of lime and mixing with a reclaimer/stabilizer, which could be misinterpreted as being hydrated/quicklime and would not be appropriate for neutral to alkaline soils. Additionally, there does not seem to be any consideration of amelioration of sodic subsoils for use in homogenous and outer zone of zoned embankments as per TMR interim Soil Management Manual (SMM).	In the absence of any nominated ARTC standard, include the requirement for mapping or testing to determine the suitability and risks of the project's topsoils and subsoils as the Interim TMR Soil Management Manual (SMM), SMM Appendix 2 soil forms and TMR Soil Group classifications – prior to disturbance. Amend the EIS accordingly.	2
10	Chapter 05 Project Description Section 5.4.20.2 Table 5.37 Page 103	The EIS quotes October 2020 figures but these are now six months out of date and inaccurate. The variance in data is quite dramatic and should be revisited. For example: • Ben Dor Weir is quoted as 81.8% full but by March 2021 it was 46.29% full • Coolmunda Dam is quoted as 28.8% full but by March 2021 it was 17% full • Talgai weir quoted is as 26.3% full but by March 2021 it was 82% full • Lemon Tree weir is quoted as 13.7% full but by March 2021 it is was 62.4% full	Amend the EIS to demonstrate if existing dams have sufficient total capacity for Inland Rail works, instead of available volume.	1

		Inaccurate water data will likely lead to increased cartage on state-controlled roads. The Terms of Reference (ToR) requires the EIS to use current data.		
11	Chapter 05 Project Description Section 5.4.20.2 Page 104	Section 5.4.20.2 regarding other water source opportunities states that potential sources of water from the Commodore mine to be investigated post EIS. The ToR requires the EIS to use current data. Sourcing of water is critical to the project. Therefore it would be appropriate to consider water requirements as part of the EIS.	Office of the Coordinator-General to consider if the lack of data is adequate to meet the requirements of the ToR.	2
12	Chapter 05 Project Description Section 5.4.20.2 Page 104	Regarding whether the contractors and ARTC remain ineligible to operate under the exemption requirements, a temporary water permit would be required before taking any water for construction activities. It is unclear whether the timescales and requirements have been adequately assessed if a temporary water permit is required. Additionally, it is unclear if this strategy provides enough volumes.	Update the EIS to adequately assess and consider what implications are for the project if a temporary water permit is required, what are the required timeframes and if the proposal strategy provides sufficient volumes.	2
13	Chapter 05 Project Description Section 5.4.23 Table 5.41 Pages 108 and 109	Table 5.41 with relation to proposed construction waste quantities has topsoil stripping estimated on three stripping depths (100, 200 and 300 mm) without qualification as to the why and where such depths are to occur. There is also no reference to the type and depth of topsoil and type of underlying subsoil. The EIS has also assumed a blanket approach to topsoil stripping which can result in the contamination of stripped topsoil with sodic and or saline subsoils (and other high-risk subsoils).	In the absence of any nominated ARTC standard, include the requirement for mapping or testing to determine the suitability and risks of the project's topsoils and subsoils as the Interim TMR Soil Management Manual (SMM), SMM Appendix 2 soil forms and TMR Soil Group classifications map and CSIRO Clay Minerology Maps. Amend the EIS accordingly.	2
14	Chapter 05 Project Description Section 5.1.4 Table 5.2 Page 7 Section 5.2.2 Figure 5.3 Page 13 Section 5.1.12 Page 62 Section 5.2.4 Page 16	The EIS notes that there are 12 rail interfaces (tie-ins) with the existing railway corridors (South Western line and Millmerran Branch line). The EIS notes that the project requires the establishment of 145km new rail and approximately 71.2km of existing railway corridor. The project will require connection into and upgrade of Queensland Rail's existing railway corridors. Upgrade works will include the removal of existing narrow-gauge track and the construction of the new formation and dual gauge track within the existing railway corridor. Section 5.2.12 Signalling and communications notes that the Advanced Train Management System (ATMS) will replace the existing Direct Traffic Control operational along Queensland Rail's (QR) existing rail network. The EIS does not reflect the requirements under section 255 of the *Transport Infrastructure Act 1994* that the railway manager's written approval must be obtained where carrying out works in or on a railway corridor or otherwise interfere with the railway or its operations.	Amend the EIS to reflect the requirements under section 255 of the *Transport Infrastructure Act 1994* by inserting the following wording: *'The staging of the works within the existing railway corridors and the management of potential impacts may be the subject of an interface agreement between ARTC and QR. Approvals under the Transport Infrastructure Act 1994 will be required to be sought from the railway manager where carrying out works in or on a railway corridor or otherwise interfering with the railway or its operations, prior to the commencement of any works in the railway corridors'.* *'The railway manager is responsible for maintaining and operating the railway corridor. It is currently assumed that ARTC will be able to occupy sections of the existing rail corridor through temporary possession agreement for extended periods to avoid the need for constrained, short-term possession works. This construction staging approach within existing rail corridors will require confirmation during the detail design phase of the Project, through discussion with and relevant approvals and agreements to be obtained from the railway manager (Queensland Rail)'.*	1
15	Chapter 05 Project Description Section 5.4.12 Page 89	Section 5.4.12 of the EIS states that: *'The earthworks will mostly involve the excavation of cuttings and the construction of formation.* *Non rippable rock will be broken down via drill and blast or by hydraulics rock breakers… Significant volumes of non-rippable rock are anticipated within some of the cuttings along the railway corridor, particularly in the northern part of the alignment.'* However, the EIS does not detail the interface of the proposed bulk earthworks with the existing railway corridors. The EIS also does not mention any potential impacts of blasting impacts on the state-controlled transport infrastructure.	Amend the EIS and supporting reports to demonstrate how the project will comply with PO3, PO5, PO11 to PO15 of the *State Code 2: Development in a Railway Environment, of the State Development Assessment Provisions* and Part 2.7 - *Filling, Excavation and Ground Disturbance of the Guide for Development in a Transport Environment: Rail.* In particular, ARTC should provide the following, amongst, other relevant information: - (a) Preliminary Geotechnical Investigation • A RPEQ certified preliminary geotechnical investigation of the site. This should provide preliminary geotechnical design information on the following, amongst other relevant considerations, to inform the structural engineering design and construction management of the development: • earthworks, including methods for the excavation, the excavation and drilling of rock, the stability of open excavations, and filling/back filling and compaction • permanent and temporary retention options, design loads and geotechnical design parameters • suitable options for foundation structures, design loads and geotechnical design parameters • groundwater management	1

			• vibration impacts from drilling, boring, blasting and excavation • advice on effects on the existing rail transport infrastructure and relevant construction issues. (b) RPEQ certified concept plans for earthworks and structures Provide RPEQ certified conceptual structural engineering design and earthworks plans for the development, including cross sections/elevations and any required supporting technical details showing the earthworks/batters/retaining structures in proximity to the existing railway corridors. This should include: • the location and extent of proposed excavation and filling (earthworks), including likely volumes of cut and fill adjacent to the railway corridor • the maximum depth of any excavation adjacent to the railway corridor • the maximum height and intended form/design of any proposed retaining walls or structures adjacent to the railway corridor • where proposed excavations, filling/backfilling or retaining works will be greater than 1m in depth or height abutting the railway, RPEQ certified drawings should be provided demonstrating that the works will not de-stabilise rail transport infrastructure or the rail corridor land supporting this infrastructure. This should include the loading configuration of any embankments and retaining walls, including foundation and retaining structures • demonstrate that any retaining structures, excavations, filling/backfilling and structures will be located outside the railway corridor. (c) Blasting • provide proposal plans demonstrating that any blasting activities will be adequately setback from the railway corridor • demonstrate that the project does not involve blasting or provide a blasting management plan that has been prepared in consultation with and approved by the railway manager (Queensland Rail). Queensland Rail can be contacted at: developmentenquiries@qr.com.au. ARTC is advised that the construction of the project will need to address vibration, ground movement and loading impacts on the existing railway corridors.	
16	Chapter 05 Project Description Section 5.2.10 Pages 58 to 61	Section 5.2.10 notes that fencing will be provided to the majority of the railway corridor, with primary purpose to limit access. Fencing in greenfield track areas will be in accordance with ARTC fencing standards. The EIS does not indicate what is proposed to occur along the existing railway corridor boundaries. In particular areas where proposed works in the existing corridor will likely disturb/ damage or remove existing railway corridor fencing.	Amend the EIS to include existing and proposed fencing details regarding the existing railway corridor. New and replacement fencing the in the railway corridor will need to be in accordance with the railway mangers standards: • Queensland Rail Civil Engineering drawing number QR-C-S3235, Rural Fences • Queensland rail Civil Engineering drawing number QR-C-S3231 Timber Fence • Queensland rail Civil Engineering drawing number QR-C-S3230 1.8m high Chain Link security fence without rails; or • Queensland Rail Civil Engineering drawing number QR-C-S3229 1.8m high Chain Link security fence with top and bottom rails.	1
17	Chapter 05 Project Description Section 5.7.7 Table 5.43 Page 113	Table 5.43 indicates a list and levels of dangerous goods and hazardous materials proposed. The project involves dangerous goods in proximity to the existing railway including the use and transport of dangerous goods to and from the site. Any development in proximity to a railway corridor must be designed and constructed to ensure that impacts of a fire, explosion, spill, gas emission or dangerous goods incident can be appropriately mitigated.	Amend the EIS and supporting documents to demonstrate how the proposed project will comply with PO23, Table 2.2.1, of *State Code 2: Development in a Railway Environment of the State Development Assessment Provisions*. In particular, ARTC should demonstrate whether the proposed uses on the site will involve the handling or storage of hazardous chemicals above the threshold quantities identified in AO23.1. Where these thresholds are exceeded, ARTC is required to provide information demonstrating how the proposed project will be designed and constructed to minimise the impacts of a fire, explosion, spill, gas emission or dangerous goods incident on the railway corridor. ARTC should provide a Registered Professional Engineer of Queensland (RPEQ) certified risk assessment in accordance with Chapter 2.6 – *Dangerous Goods and Fire Safety* and Appendix 1 – *Development Risk Assessment Guide* of the *Guide to Development in a Transport Environment: Rail* and demonstrate how measures will be incorporated into the project design to minimise the identified risks. This should address the following risks, among other identified risks: • minimising or controlling the outbreak of fire • controlling smoke and/or gas release dispersion	1

			• minimising heat build-up in structures • limiting the possibility of structural components being blast damaged • providing stability or contingency measures in the proposed development • providing safe emergency access and egress to and from the railway • ensuring effective containment and clean-up of dangerous goods incidents. Amend the EIS (Draft OEMP and Proponent Commitments) accordingly.	
18	Chapter 05 Project Description Section 5.2.7.1 Table 5.15 Pages 25 and 26 Section 5.2.7.2 Page Chapter 18 Traffic, Transport and Access Section 18.4.4 Page 29 Section 18.6.1.2 Page 62 Appendix X (Part 1) Traffic Impact Assessment Section 3.3.1 Page 81 Section 6.4.3 Page 281	The project interfaces 10 times with state-controlled roads, three times at existing level crossings, and seven times at new locations. The seven new proposed crossing are as follows • 310-24-P-2 Millmerran-Inglewood Road (Active level crossing) (TMR) • 310-11-P-O Cunningham Highway (Grade separation) (TMR) • 310-56-P-2 Warrego Highway (Grade separation: rail-over-road (bridge)) (TMR) • 310-48-P-8 Oakey-Pittsworth Road (Grade separation: rail-over-road (bridge)) (TMR) • 310-55-P-1 Toowoomba-Cecil Plains Road (Grade separation: rail-over-road (bridge)) (TMR) • 310-35-P-4 Millmerran-Inglewood Road (Grade separation: rail-over-road (bridge)) (TMR) • 310-37-P-12a Millmerran-Inglewood Road (Grade separation: rail-over-road (bridge)) (TMR) All of these seven new state-controlled road interfaces are proposed to be grade separated except 310-24-P-2 Millmerran-Inglewood Road. TMR does not support this proposed level crossing as it is inconsistent with the higher-order function of Millmerran-Inglewood Road, and the other two grade separated crossings proposed for Millmerran-Inglewood Road. Creating new level crossings also does not achieve the objectives of the *Queensland Level Crossing Safety Strategy 2012 to 2021.*	Amend the project proposed design to ensure that it does not create any new level crossings with state-controlled roads (i.e. ensure 310-24-P-2 Millmerran-Inglewood Road is grade separated). This is a TMR requirement. Amend the EIS accordingly.	1

19	Chapter 05
	Project Description
	Section 5.2.7.1
	Table 5.15
	Pages 25 and 26
	
	Section 5.2.7.2
	Page
	
	Chapter 18
	Traffic, Transport and Access
	Section 18.4.4
	Page 29
	
	Section 18.6.1.2
	Page 62
		The project interfaces 57 times with local government roads.
		• nine interfaces are proposed to be grade separated
		• 21 interfaces are proposed to be consolidated, relocated, realigned, or diverted resulting in no crossing
		• 11 interfaces are proposed to be new active open level crossings
		  o 310-17-P-7a McDougalls Crossing Road (Active level crossing) (GRC)
		  o 310-18-P-8 Cremascos Road (Active level crossing) (GRC)
		  o 270-12-P-1 Kildonan Road (Active level crossing) (GRC)
		  o 310-21-P-9 Lovells Crossing Road (Active level crossing) (GRC)
		  o 310-22-P-9 Thornton Road (Active level crossing) (GRC)
		  o 310-28-P-3 Unnamed Road (Active level crossing) (GRC)
		  o 310-42-E-O Harris Road (Active level crossing) (TRC)
		  o 310-38-P-3 Owens Scrub Road (Active level crossing) (TRC)
		  o 310-57-P-4 Leesons Road (Active level crossing) (TRC)
		  o 310-36-P-1 Blackwell Road (Active level crossing) (TRC)
		  o 310-48-P-1 Tip Road (Active level crossing) (TRC)
		• 16 interfaces are proposed to be new passive open level crossings
			TMR appreciates that the EIS has sporadically presented information regarding the assessment of level crossing safety. However, this information (and additional information not currently within the EIS) needs to be presented succinctly and clearly for each proposed crossing.
			Amend the EIS (/TIA) to demonstrate how the proposed level crossings will comply with PO20 and PO24 of State Code 2: Development in a railway environment of the State Development Assessment Provisions and Chapter 2 of the *Guide to Development in a Transport Environment: Rail*. The RPEQ certified Traffic Impact Assessment will be required to address the following:
			<u>Australian Level Crossing Assessment Model</u>
			• the expected traffic distribution on the road network and the proportion of traffic that is likely to use each proposed railway level crossing
			• the expected timeframe for the delivery of the project including the commencement of construction and the completion of the project (including any stages)
			• existing traffic flows (expressed as vehicles per day) anticipated over the proposed railway level crossing/s, including daily (peak hour) fluctuations, and number and percentage of heavy vehicles and buses
			• the expected background traffic growth (expressed as vehicles per day) over the proposed railway level crossing/s, including the number and percentage of heavy vehicles and buses. This should include background traffic growth from the anticipated commencement of construction and each project stage to a ten-year horizon
				1

	Appendix X (Part 1) Traffic Impact Assessment Section 3.3.1 Page 81 Section 6.4.3 Page 281	o 310-5-P-1 Wondalli-Kurumbul Road (Passive level crossing) (GRC) o 310-43-E-8 Mann Silo Road (Passive level crossing) (TRC) o 310-52-P-3 Purcell Road (Passive level crossing) (TRC) o 310-39-P-1 Lindenmayer Road (Passive level crossing) (TRC) o 310-50-P-11 Linthorpe Valley Road (Passive level crossing) (TRC) o 310-34-P-1 Millwood Road (Passive level crossing) (TRC) o 310-36-P-8a Scraggs Road (Passive level crossing) (TRC) o 310-8-E-O Unnamed Road (Passive level crossing) (GRC) o 310-20-P-12z Bybera Road (Passive level crossing) (GRC) o 310-25-P-3 Grays Road (Passive level crossing) (GRC) o 310-10-P-1 Unnamed Road (Passive level crossing) (GRC) o 310-26-P-2 Wongava le-Yugilbar Road (Passive level crossing) (GRC) o 310-33-P-1 NicolCreek Road (Passive level crossing) (TRC) o 310-32-P-4 Paton Road (Passive level crossing) (TRC) o 310-30-P-2 Unnamed Road (also called Kooroongarra Rd) (Passive level crossing) (TRC) o 310-31-P-7 Kooroongarra Road (Passive level crossing) (TRC) Section 18.4.4 of Chapter 18 and Section 6.4.3 of Appendix X (Part 1) state that: *'The rail crossing impact for the project has centred on vehicle delay and queuing analysis of the project traffic at rail crossings, and at neighbouring closely spaced intersections. This analysis was undertaken for the project at proposed new rail crossings only and was not extended to the 12 existing operational rail crossings.'* However, section 18.6.1.2 of Chapter 18 notes: *'an ALCAM assessment has been undertaken for existing and proposed railway level crossings. ARTC will continue to consult with DTMR and local governments on the preferred road-rail interfaces.'* Detailed information about the ALCAMs for each of the existing and proposed crossings has not been presented. It is unclear what information was used to inform these ALCAMs (preliminary or detailed design information), what treatments were considered and what informed the ultimate decision to propose the treatments for each crossing. Section 3.3.1 of Appendix X (Part 1) states: *The refence design has been developed to prevent short-stacking issues with the project alignment…Short stacking issues have been avoided through development of the reference design by maintaining a minimum separation distance between the outer rail of the alignment and the centre of the nearest parallel road in accordance with Section 5.4 of AS1742.7:2017 – Manual of Uniform traffic control devices: Part 7 and with the Manual of Uniform traffic control devices Part 7: railway crossings.'.*	• the expected project generated traffic (expressed as vehicles per day), including daily fluctuations (peak hour) and percentage of heavy vehicles and length and number of buses, that will pass over the impacted railway level crossing/s from the commencement of construction, and each project stage to a ten year design horizon • the maximum size and type of vehicle (including length, width, height and weight) anticipated over the impacted railway level crossing/s as a result of the project during construction and on-going operation (including any stages) • the following data table is required to be populated for each impacted railway level crossing: AADT over railway level crossing (Prepare table for each impacted railway level crossing) Year | Without project (background growth) | With project | No. and dimensions/type of heavy vehicles | No. and dimensions/type of buses 2021 (current scenario) Commencement of Construction (prepare for each stage) Commencement of the use (prepare for each stage) Ten-year design horizon (prepare for each stage) • confirmation of sight distances on each side of the proposed railway level crossing/s. The traffic data used in the Traffic Impact Assessment would need to be endorsed by TMR and relevant local road managers. ARTC would need to engage a suitably qualified and experienced professional to conduct ALCAM assessments for each of the proposed railway level crossings using the above data requirements and also taking into account other relevant considerations such as field observations/site circumstances. Short stacking Demonstrate that there is sufficient clearance between each proposed railway level crossing and the relevant intersection or vehicular access location to allow the maximum size of vehicle used on the roadway to queue. In particular: • The minimum clearance should be 5m from the edge running rail (of the closest railway track) as per Section 5.4 – Short Stacking and Figure 3.2 – Yellow Box Marking of AS1742.7:2016 Manual of Uniform Traffic Control Devices, Part 7: Railway plus the length of the maximum design vehicle. The maximum design vehicle should be the maximum vehicle anticipated to use the roadway • Provide a plan accurately showing the available clearance between the railway level crossing and relevant intersection/access point and demonstrate how the maximum vehicle length can be accommodated with the 5m setback from the closest track. Additionally, the vehicle must not encroach on any safety controls, such as but not	

			limited to pavement marking (for example, box marking), for the railway level crossing or road • Provide a RPEQ certified swept path analysis based on the maximum design vehicle for turns into and out of the railway level crossing. <u>Design</u> ARTC should provide RPEQ certified detailed design drawings for each proposed railway level crossing which demonstrate: • Adherence to relevant design standards including the Manual of Uniform Traffic Control Devices, Part 7: Railway crossings and other applicable railway manager standards • Applicable road design standards • That safety risks will be adequately mitigated in accordance with the findings of the ALCAM assessments and short stacking assessments. <u>Other points</u> ARTC (the future railway manager) will be required to enter into interface agreements with the relevant local road managers. There will also be approval requirements from the road managers for any safety controls for the level crossings on the local roads. The EIS should clearly demonstrate why ARTC made the decision to grade separate or have active or passive level crossings for each road/rail interface. Clarification is required pertaining to the heavy vehicle design vehicle used in SIDRA as such parameters are not provided in the TIA report. This is to ascertain whether queueing results account for the longest design vehicle.	
20	Chapter 05 Project Description Section 5.2.7.1 Table 5.15 Pages 25 and 26	The safety and efficiency of the newly created level crossings may deteriorate to an unsafe level if traffic increases on the affected local government roads post completion of the project. In such scenario, TMR considers that it would be reasonable to obligate ARTC to upgrade the treatment at the crossings (e.g. from passive to active or from at-grade to graded separated).	TMR recommend that ARTC be legally obligated to upgrade any new level crossings created by the project (e.g. from passive to active or from at-grade to grade separated) if the safety and efficiency of the crossing deteriorates to an unacceptable level as established through clear and predetermined threshold criteria. TMR would like to discuss such obligations with the CG once ARTC has provided additional information about each crossing. In addition to the above, the safety and operational integrity of the existing and new level crossings will need to be monitored through interface agreement arrangements. These agreements will require the level of safety risk to be continually monitored and level crossing issues reported as further development is approved and traffic increases. Consideration will have to be given to implementing improved control and safety measures, as required, including grade separation.	1
21	Chapter 05 Project Description Section 5.2.7.1 Table 5.15 Pages 25 and 26	Section 5.2.7.2 of Chapter 5 states that the project interfaces with 153 private unformed roads and 62 private formed roads. The EIS notes that ARTC will work with all impacted landholders for appropriate interfaces and level crossing treatments.	The proposal should seek to minimise the number of private occupational crossings it creates as much as possible given the safety concerns associated with private occupational crossings. Greater detail is required in the EIS to demonstrate how ARTC has sought to minimise the number of private occupational crossings.	1
22	Chapter 05 Project Description Section 5.2.5.1 Table 5.11 Page 18 Section 5.2.5.2 Figure 5.10 Page 21	Three new road over rail bridges are proposed as listed in Table 5.11. Figure 5.10 shows typical section with a clearance of 7.1m between the rail track and underside of the bridge deck. At the technical agency briefing held by the COG on 10/02/2021, Chris Matthews advised that the project is based on trains and double stacked containers with a total height of 7.2m. The EIS does not state the intended total height of the proposed trains and double stacked container freight.	Amend the EIS to clarify this discrepancy. Demonstrate how the proposed road bridge clearance over the railway corridor in Figure 5.10 will accommodate a design train height of 7.2m clear of all bridge structure. Relevant standards also exist for required height clearances over railway corridors. These should be investigated with railway managers.	1

23	Chapter 05 Project Description General Chapter 18 Traffic, Transport and Access General	The project proposes interface and connection to the existing railway corridors (South Western Line and Millmerran Branch Line). A Stormwater Management Plan has not been provided to quantify the stormwater impacts of the proposed project/development and indicate how they are to be managed. The EIS and supporting documents should demonstrate how the project complies with PO16 to PO17 of the *State Code 2: Development in a Railway Environment*, PO10 to PO12 of the *State Code 6: Protection of State Transport Networks of the State Development Assessment Provisions* and Section 2.8 of the *Guide to Development in a Transport Environment: Rail*.	Amend the EIS to provide a Stormwater Management Plan demonstrating that the management of stormwater (quantity) post development/project can achieve a no worsening impact (on the pre-development/project condition) for all flood and stormwater events that exist prior to development/project and up to a 1% Annual Exceedance Probability (AEP). This should include at least the following flood and stormwater events: 63.2%, 50%, 39%, 20%, 10%, 5%, 2% and 1% AEP. Stormwater management for the project must ensure no worsening or actionable nuisance to the railway corridor, caused by peak discharges, flow velocities, water quality, sedimentation and scour effects. The report should also demonstrate that flood storage capacity is maintained on the site. Overland flow paths/ hydraulic conveyance should be maintained on the site as part of the proposed project. In particular, the following should be addressed: • Pre-development condition. Verify the existing drainage characteristics of the site, in relation to the railway corridor such as through a site detail and contour survey. All relevant legal points of discharge for the project site should be identified. • Earthworks Plan. Provide an earthworks plan, including cross sections/elevations, and any required supporting technical details clearly showing the location and extent of proposed excavation and filling (earthworks), including likely volumes of cut and fill adjacent to the railway corridor and the resulting cut: fill balance. • Catchment Analysis. Provide pre-development/project and post-development/project catchment plans that clearly identify all internal catchments on the site, external catchments draining into the site, the flow paths (direction of flow) within each catchment, the size of each catchment and the legal point of discharge for each catchment. • Flood impact assessment. Incorporate the findings of the revised Hydrology and Flooding Technical Report • Maintain the pre-development/project condition. The pre-development/project flow scenario will need to be replicated in the post development/project condition. The proposed development/project should not impede or interfere with any drainage, stormwater or floodwater flows, including sheet flows, from the railway corridor or vice versa. Retaining structures, filling/excavation, landscaping, buildings and structures or any other works to the land should be designed to include provision for drainage so as not to adversely impact on the railway corridor. The development/project design will need to address any concentration of flows, potential for back-up/ponding and scour/erosion which may undermine the railway corridor. • Water quantity assessment. The peak discharge analysis should provide adequate details of the pre and post development/project impervious area of the site and give adequate consideration to the detention basin requirements of the QUDM, Fourth Edition. • Conceptual drainage layout. Provide a conceptual stormwater drainage layout plan showing the proposed internal stormwater network on the site, including, drains, pits, dams, detention basins and the like, demonstrating how all surface water flows will be collected and conveyed to the legal points of discharge. This should include the conceptual design and sizing of drainage infrastructure such as but not limited to diversion drains. • Mitigation measures. Include details of the mitigation measures proposed to address any potential stormwater and flooding impacts of the proposed development. The design flood peak discharges should be shown for the mitigated case to demonstrate there is no worsening impact on the railway corridor All mitigation measures must be located on the site and not in the railway corridor.	1
24	Chapter 06 Sustainability Section 6.5.3 Table 6.6 Page 16	The text in Table 6.6 indicates that batters 1:3 or less steep do not need to be vegetated, or that the vegetation of slopes steeper than 1:3 is not standard practice (however it is standard practice as per Transport and Main Roads Specifications - MRTS16 Landscape and Revegetation Works (MRTS16). It is recommended that the EIS revaluate the technical feasibility options to re-vegetate soil slopes steeper than 1:3.	Update the EIS to include the requirement to vegetate all soil or extremely weathered rock material in cuts and embankments to be vegetated as per MRTS16.	2

25	Chapter 06 Sustainability Section 6.5.3 Table 6.6 Page 16	The intent of Table 6.6 is understood however, it indicates a misunderstanding on best practice amelioration methods as dispersive soils can be ameliorated using ag-lime, dolomite or ag-gypsum depending on the pH and other soil properties.	In the absence of any nominated ARTC standard, include the requirement for mapping or testing to determine the suitability and risks of the project's topsoils and subsoils as the Interim TMR Soil Management Manual (SMM), SMM Appendix 2 soil forms and TMR Soil Group classifications map and CSIRO Clay Minerology Maps. Amend the EIS accordingly.	2
26	Chapter 06 Project Description Sections 6.5.18.2 and 6.5.18.3 Page 71 Chapter 19 Traffic, Transport and Access Section 19.4.1.1 Figure 19.4 Pages 17 to 22 Section 19.5.1.1 Page 34 Section 19.6.1.1 Page 42	Figure 19: 4a-f Project Construction Routes indicates that proposed construction routes will at least use the following existing railway level crossings on the following railway corridors. West Moreton Line • Lane Road, Calvert (LXR 4243) • Rosewood Laidley Road (Grandchester) (LXR:4240) • John Street (Ipswich Rosewood Road) (LXR:4244) • Karrabin Rosewood Road, Karrabin (LXR: 4252) Ebenezer Branch Railway • Ipswich Rosewood Road (LXR 4255) • Coopers Road Interstate Line • Undullah Road • Wyatt Road • Beaudesert Boonah Road However, section 19.5.1.1 Existing rail crossings states: *'There are currently no existing operational level rail crossings within the EIS investigation corridor that would be impacted. The traffic, transport and access study area consist of greenfield rail that will encompass new proposed level crossings. Therefore, no assessment is necessary for existing rail crossings as part of the project.'* In addition, section 19.6.1.1 rail network states: *'No existing operational level rail crossings within the EIS investigation corridor that would be impacted. Therefore, no assessment is necessary for existing rail crossings'* The EIS has not assessed the potential safety impacts on existing railway level crossings on the roads identified through the primary construction transport routes during construction. There are approximately 9 railway level crossings along the primary construction routes used for haulage of materials during construction. The proposed project will increase road traffic, including heavy vehicles and over-dimensional road loads over railway level crossings. No information has been provided which clearly identifies the potentially impacted railway level crossings or which demonstrates that the level of safety risk at the impacted railway level crossings is not worsened. This can only be demonstrated via ALCAM (Australian Level Crossing Assessment Model) assessments completed by the relevant railway manager using traffic information verified by the TMR region. Additionally, short stacking issues would need to be addressed. Evidence of such assessments has not been provided by the applicant. The safety impact on existing railway level crossings must be assessed before the application is decided. The commentary provided in the EIS displays a lack of understanding of safety issues at railway level crossings and should be deleted. TMR requires amendments the TIA and EIS to demonstrate how the project will comply with PO20 and PO24 of the State *Code 2: Development in a Railway Environment*, PO7 to PO9 of the *State Code 6: Protection of state transport networks of the State Development Assessment Provisions* and Section 2.2 of the *Guide to Development in a Transport Environment: Rail* for all impacted railway level crossings.	Amend the EIS to identify the railway level crossings impacted upon by the construction routes and level of existing safety controls i.e. active or passive or grade separated road/rail. Also, address any short stacking issues at these existing railway level crossings due to limited clearances/queuing distance between the level crossings and intersections/access points. Amend the EIS wording in sections 19.5.1.1 and 19.6.1.1 to *'Several railway level crossings have been identified on the project construction routes Figures 19a to f. Development generated construction traffic has the potential to adversely impact on the safety of railway level crossings.'* Amend the EIS and TIA to demonstrate how the project will comply with PO20 and PO24 of the *State Code 2: Development in a Railway Environment* of the State Development Assessment Provisions and Section 2.2 of the *Guide to Development in a Transport Environment: Rail*. In particular, the following should be addressed: • detail the expected traffic distribution on the road network as a result of the proposed development, including haulage routes during construction. • identify any and all railway level crossing/s likely to be impacted by project generated traffic (including construction and staff movements). This should include level crossings on local and state-controlled roads and any private (occupational) level crossings. • for each impacted railway level crossing provide: (a) <u>Australian Level Crossing Assessment Model</u> o the expected timeframe for the delivery of the proposed project including the commencement of construction and the completion of the development (including any stages). o existing traffic flows (expressed as vehicles per day) over the impacted railway level crossing/s, including daily (peak hour) fluctuations, and number and percentage of heavy vehicles and buses. o the expected background traffic growth (expressed as vehicles per day) over the impacted railway level crossing/s, including the number and percentage of heavy vehicles and buses. This should include background traffic growth from the anticipated commencement of construction and each project stage to a ten-year horizon. o the expected development generated traffic (expressed as vehicles per day), including daily fluctuations (peak hour) and percentage of heavy vehicles and buses, that will pass over the impacted railway level crossing/s from the commencement of construction, and each development stage to a ten year design horizon. It is noted that workers may be transported via bus from workers camps. o the maximum size and type of vehicle (including length, width, height and weight) anticipated over the impacted railway level crossing/s as a result of the project during construction and on-going operation (including any stages). This should include any over-mass and over-dimension vehicles used to transport components. o the following data table should be populated for each impacted railway level crossing:	1

			AADT over railway level crossing (Prepare table for each impacted railway level crossing) Year | Without development (background growth) | With development | No. and dimensions/type of heavy vehicles | No. and dimensions/type of buses 2020 (current scenario) Commencement of Construction (prepare for each stage) Commencement of the use (prepare for each stage) Ten year design horizon (b) Short stacking Development generated traffic must not worsen vehicular queuing (short stacking) issues over impacted railway level crossing/s. In particular, provide the following for each impacted railway level crossing: o Demonstrate that there is sufficient clearance between each railway level crossing and the relevant intersection/vehicular access location to allow the maximum size of vehicle used in the operation to queue. The minimum clearance should be 5m from the edge running rail (of the closest railway track) as per Section 5.4 – Short Stacking and Figure 3.2 – Yellow Box Marking of AS1742.7:2016 Manual of Uniform Traffic Control Devices, Part 7: Railway plus the length of the maximum design vehicle. o Provide a plan accurately showing the available clearance between the railway level crossing and relevant intersection/access point and demonstrate how the maximum vehicle length can be accommodated with the 5m setback from the closest track. Additionally, the vehicle must not encroach on any safety controls, such as not limited to pavement marking (for example, box marking), for the railway level crossing or road. o Provide a RPEQ certified swept path analysis based on the maximum design vehicle for turns into and out of the railway level crossing. Over-dimensional Road Loads (Queensland Rail): Under the Transport Infrastructure (Rail) Regulation 2006 permission from the Railway Manager (Queensland Rail) is required to take over-dimensional road loads across Queensland Rail infrastructure (e.g. rail level crossings and rail bridges). Further information can be obtained from Queensland Rail's website at: http://www.queenslandrail.com.au/forbusiness/overdimensionalloads	
27	Chapter 07 Land use and Tenure Section 7.6.3.1 Table 7.31 Page 171	The EIS provides minimal information regarding the functionality of at-grade crossings for stock routes, given there is an intensification of train movements and any form of mitigation offered at those crossings, if any. The ToR requires the EIS to describe the potential impact of the construction and operation of the project on existing land uses permitted along the proposed alignment and adjacent areas including stock routes.	Update the EIS to provide further detail as to the functionality of at-grade crossings for stock routes and any form of mitigation proposed at these crossings.	1
28	Chapter 07 Land Use and Tenure Section 7.6.3.1 Page 166	The EIS states that some of the existing stock routes, where grade separation is not proposed, intend to remain as passive crossing locations. Limited detail is offered as to the functionality of passive at-grade crossings for stock routes given an intensification of train movements and any form of mitigation offered at those crossings, if any. The ToR requires to describe the potential impact of the construction and operation of the project on existing land uses permitted along the proposed alignment and adjacent areas including stock routes.	Update the EIS to provide further detail as to the functionality of passive at-grade crossings for stock routes given an intensification of train movements.	1
29	Chapter 09 Landscape and Visual Impact Assessment General	The EIS is not clear regarding who is responsible for long term maintenance of the general landscaping vegetation including the landscaping installed at the rest area in Yelarbon.	Amend the EIS to clarify who is responsible for long-term maintenance of landscaping and vegetation.	2

30	Chapter 10 Flora and Fauna General	There is no requirement for ARTC to identify and assess the project soils as per the TMR Interim SMM, SMM Appendix 2 soil forms, TMR Soil Group classifications and CSIRO Clay Mineralogy Maps. Additionally, this should be undertaken by a Certified Professional Soil Scientists (CPSS) as per TMR's interim SMM.	Amend the EIS to include the requirement for mapping or testing to determine the suitability and risks of the project's topsoils and subsoils as the Interim TMR Soil Management Manual (SMM), SMM Appendix 2 soil forms and TMR Soil Group classifications map and CSIRO Clay Minerology Maps and to meet the requirements of MRTS16.	2
31	Chapter 11 Air Quality Section 11.7.3 Pages 34 (including Appendix O)	Chapter 11 does not provide a clear indication of whether the project has considered emissions from the following cumulative sources: • Existing Rail Line West of Chainage ~30 NS2B. • Existing Rail Line East-Northeast of Chainage ~45 • Existing Rail Line East of Chainage ~162 • Existing Rail Line Northwest of Chainage ~207 Road traffic pollutant emissions have not been modelled for the study area.	Update the EIS (including Appendix O) to consider the cumulative impacts from rail and road traffic as per the requirement of the ToR. Provide justification as to why the selected background pollutant levels are representative of sensitive receivers (in the vicinity of existing roads) including those within townships.	1
32	Chapter 11 Air Quality Section 11.7.5 Pages 39 and 40 (including Appendix O)	Section 11.7.5. has not included any 'approved developments' within the study methodology area.	Update the EIS (including Appendix O) to include approved developments as sensitive receivers and revise the assessment as per the requirement of the ToR.	1
33	Chapter 11 Air Quality Section 11.7.5 Pages 40 (including Appendix O)	Section 11.7.5 states that predicted pollutant levels are taken to be 0m above ground but does not provide justification regarding the selected model sensitive receiver height.	Update the EIS to include further justification on the selected model sensitive receiver height given: • the heights of roofs for drinking water assessment, • guidance available in other transport related manuals (e.g. Road Traffic Air Quality Management Manual) which include receiver heights of 1.8m above ground for ground level receivers. As a minimum provide the likely differences of higher receiver heights verses the selected receiver height.	1
34	Chapter 11 Air Quality Section 11.9.2 Page 168 (including Appendix O and Chapter 22)	Given coal could potentially be transported on the network a Coal Dust Management Plan should be required as part of the mitigation strategy and ongoing requirements.	Update the EIS (including Appendix O and Chapter 22) to ensure a Coal Dust Management Plan is required as part of the mitigation strategy and ongoing requirements.	1
35	Chapter 12 Surface Water and Hydrology General	It is unclear if the hydrology modelling has consideration water storage / dams (e.g. Turkey's Nest) on downstream private properties which are built to catch rain/surface run off water. The collected water from these dams is utilised for agricultural purposes and as water for stock. Councils also access these seasonal dams for road maintenance purposes.	Update the EIS to investigate and confirm that this impact has been considered and mitigated or minimised.	1
36	Chapter 12 Surface Water and Hydrology General	It is unclear what the project's percentage reliance on groundwater versus other sources of water for construction purposes like dam, creeks, etc. It is unclear if there is an intention to drill boreholes to extract water for construction purposes. The use of town water for construction purposes is not a sustainable practice. Construction water quality standards are much lower compared to potable town water. Sourcing of town water from smaller regional towns would be a challenge and water may need to be carted over long distances.	Update the EIS to confirm overall water data required for construction purposes including groundwater, bore water, townwater and haulage.	1
37	Chapter 12 Surface Water and Hydrology Section 12.6.3.2	Table 12.8 of the report identifies flood impact objectives and allows 100mm of water overtopping of roadways. 100mm overtopping of state-controlled roads and railways has not been accepted by TMR and is inconsistent with TMR's 'no net-worsening' policy position for state-controlled transport infrastructure.	Revise the project and EIS to ensure that the hydrological impacts are consistent with TMR's 'no net-worsening' policy. TMR will not accept a worsening scenario. Therefore, further mitigation measures such as additional cross drainage structures or raising of the existing road by the project is required to reduce the impact. Flood resilient pavements would need to be designed and constructed depending on the location.	1

	Table 12.8 Page 26	In addition, the EIS has identified several locations using flood modelling where the project creates an increase in inundation depth at existing state-controlled roads. It is also unclear if the EIS has considered the effects of increased velocities and its impact on roads in terms of erosion and flood damage. Are there recommendations to construct flood resilient pavements where an increase in velocities is anticipated?	Amend the objective in the EIS to no net worsening for state transport infrastructure.	
38	Chapter 12 Surface Water and Hydrology Section 12.7.6.2 Page 81	Regarding the Westbrook Creek, it is unclear whether the recent development around Wellcamp been captured to a suitable detail, to determine whether it has an impact on the hydrology in this region. Additionally, it may be that the Toowoomba Cecil Plains Road should be raised and protected from inundation and excess velocities.	Office of the Coordinator-General seek confirmation as to whether this level of information is adequate and meets the requirements of the ToR.	2
39	Chapter 12 Surface Water and Hydrology Section 12.9.1.2 Table 12.57 Page 134	Regarding the Surface Water Management Plan, it is unclear how a 12-month baseline monitoring exercise will be undertaken if construction is anticipated to commence mid-2021. Using the anticipated timelines identified by ARTC there is likely to be insufficient time to establish a baseline unless it is happening already.	Update the EIS to confirm timing of works with the baseline monitoring.	1
40	Chapter 12 Surface Water and Hydrology Section 12.10.2.2 Page 159	Section 12.10.2.2 asserts that the amenity of Toowoomba Cecil Plains Road is not being detrimentally impacted. However, if the depth and time of submergence on the Toowoomba Cecil Plans (sic) Road is increasing due to the project, as suggested in this section, is being detrimentally impacted.	Update the EIS to correctly identify that Toowoomba Cecil Plains Road is being detrimentally impacted and identify any additional mitigation measures required.	1
41	Chapter 12 Surface Water and Hydrology Section 12.10.2.3 Page 175	Chapter 12 indicates that the change in Average Annual Time of Submergence (AAToS) on the Gore Highway is only 0.4 hours per year. However, up to 12 hours additional time of submergence during a 1% AEP event is significant and should be mitigated against.	Consistent with TMR's approach, the project should be achieving a no net-worsening outcome for flooding impacts to the state-controlled road. Therefore, the EIS should be updated to ensure hydrological impacts on the Gore Highway are adequately mitigated.	1
42	Chapter 12 Surface Water and Hydrology Section 12.10.2.3 Page 175	Chapter 12 suggests that Millmerran-Leyburn Road being cut by floodwaters is insignificant because the Millmerran-Inglewood Road is also cut. However, access needs to be maintained for the railway.	Update the EIS/project to ensure that hydrological impacts are adequately mitigated for Millmerran Leyburn Road.	1
43	Chapter 12 Surface Water and Hydrology Section 12.10.2.4 Page 200	It is unclear from the text of Chapter 12 whether impacts to Millmerran-Inglewood Road as a result of Back Creek and Bringalily Creek have been considered and appropriately mitigated.	Update the EIS/project to ensure that hydrological impacts are adequately mitigated for Millmerran Inglewood Road.	1
44	Chapter 12 Surface Water and Hydrology Section 12.10.2.10 Page 261	The Cunningham Highway and Cunningham Highway North both appear to be affected by increased flooding. Also, access to Yelarbon must be maintained for emergency purposes, presumably the connection with Goondiwindi.	ARTC should continue to work with relevant stakeholders to ensure that access to Yelarbon is adequately maintained and update the EIS accordingly.	1
45	Chapter 13 Groundwater Section 13.5.4	Section 13.5.4 indicates that only one round of groundwater sampling was conducted. It is unclear whether other water quality data has been assessed from other available records.	Update the EIS to confirm that sufficient water quality sampling has been undertaken to establish a baseline and satisfy the requirements of the ToR.	2

	Page 15			
46	Chapter 13 Groundwater Section 13.6.7 Table 13.9 Page 58	The groundwater irrigation value in Table 13.9 Summary of Environmental Values and Water Quality Objectives refers to threshold salinity tolerances in the section 4.2.4 of the ANZECC/ARMCANZ Guideline 2018. These referenced guidelines uses ECse (electrical conductivity of saturated soil) and it is possible that the Electrical Conductivity (EC) of the registered bores in the impact assessment area are reported using EC1:5. This is important to qualify as there is considerable difference in the tolerance values due to the conversion factor between the classification schemes. Refer to Section 8.3 of the TMR Interim SMM for details.	Amend the EIS clarify the EC classification schemes for EC testing.	1
47	Chapter 13 Groundwater Section 13.7.3 Table 13.15 Page 74	Table 13.15 states that Possible Acid Sulphate Soils (PASS) is a risk to the project through sulphide-bear rocks in cuts or the use of sulphide-bearing materials in the embankment fill. This statement is inconsistent with the Spoil Management documents where ARTC predicts no Acid Sulphate Soils or PASS are likely to be encountered.	Confirm whether ASS and PASS are expected to be encountered and update the relevant EIS chapters as required.	1
48	Chapter 13 Groundwater Section 13.7.3 Table 13.15 Page 74	Table 13.15 states that 'Unweathered areas of the Kumbarilla Beds' will be avoided where possible, through the detail design phase. Considering that the alignment will be largely locked-in by the detail design stage, it is unclear how the Kumbarilla Beds will be avoided.	Update the EIS to confirm how Kumbarilla Beds will be avoided.	1
49	Chapter 13 Groundwater Section 13.7.5 Page 76	The EIS refers to potential impacts that are considered temporary, in particular deep cuts that will likely impact groundwater which will occur for the life of the project. It is recommended the EIS be revisited to consider what is temporary and what are permanent considering the period in which the impacts are to occur.	Update the EIS to confirm what are the actual long-term impacts of the project, as some 'temporary' impacts are actually permanent impacts.	2
50	Chapter 13 Groundwater Section 13.8.3.1 Page 83	Section 13.8.3.1 states that the Groundwater Monitoring and Management Plan will be developed and implemented during the detail design stage. This may be difficult to be achieved as construction is scheduled to start in 2021. It is unclear if there will be enough time to monitor and create a baseline that will be long-enough to detect trends. Clearing has been acknowledged to create evapotranspiration.	Update the EIS to include more realistic timeframes and consider the development of a Groundwater Monitoring and Management Plan before detailed design. Amend Chapter 22 Outline Environmental Management Plan and Appendix Z Proponent Commitments as needed.	1
51	Chapter 13 Groundwater Section 13.9 Table 13.21 Page 89	Table 13.21 provides a score (high, moderate, low) for initial significance and residual significance for existing bores (registered and non-registered). It is unclear what criteria is being used to score the residual significance as "low".	Update the EIS to confirm what quantitative values/criteria were to assess the significance and determine the scores provided in Table 13.21.	2
52	Chapter 14 Noise and Vibration General	Dust monitoring would need to be completed when undertaking construction works, particularly in urban/semi-urban areas like Yelarbon, Brookstead, Pampas and generally at construction sites.	Update the EIS to require dust monitoring during construction activities at a minimum.	2
53	Chapter 14 Noise and Vibration General	Noise barriers provide opportunities for local communities and artists to do murals and artwork. Are there intentions to do murals/artwork on noise barriers at Pittsworth, Yelarbon, Brookstead?	Update the EIS to confirm if murals/artwork on noise barriers will be included as part of the community engagement process.	2
54	Chapter 14 Noise and Vibration General	The impact of railway noise on new residential dwellings is managed through the declaration of Transport Noise Corridors which requires building work to adhere to the Queensland Development Code MP4.4. TNCs are available SARA and local government mapping systems and are updated as a requirement of a gazette of Transport Noise Corridors. The land designated as a Transport Noise Corridor comprises land within a corridor up to 250 metres on both sides of the railway which is significantly affected by noise. This includes railways that carry at least 15 trains per day. The corridor is measured from the boundary of	Amend the EIS to indicate that ARTC commit to working with TMR to update and gazette the railway corridor as a Transport Noise Corridor so that future development within the TNC can adequately manage and mitigate noise associated with railway operations relevant to MP4.4 under the *Building Act 1974*.	1

		the railway with adjacent land, and then continuing the distance of up to 250 metres, depending on the noise contours mapped as a result of rail traffic noise.		
55	Chapter 14 Noise and Vibration General	The scope of the Noise and Vibration Assessment has not adequately considered TMR's *Interim Guideline - Operational Railway Noise and Vibration (March 2019).* This document is a published standard under the *Transport Infrastructure Act 1994*. A clear assessment has not been made and mitigation requirements for this mandatory part of the Interim Guideline have not been adequately presented/determined.	Update the EIS to provide a noise and vibration assessment in accordance with the mandatory portions of TMR's *Interim Guideline - Operational Railway Noise and Vibration (March 2019)*.	1
56	Chapter 14 Noise and Vibration Section 14.4.2 Pages 7 and 8	Section 14.4.2 does not mention, and therefore it is assumed that it does not include, approved developments within the study methodology area. These developments could be sensitive receivers and likely could be affected by the proposed rail project.	Update the EIS (including Appendix (Appendix S & T)) to acknowledge and include any approved developments as sensitive receivers within the study area and revise the assessment.	1
57	Chapter 14 Noise and Vibration Section 14.6.5.1 Pages 23 and 23 Section 14.7.4.1 Page 32 (including Appendix T)	The methodology of the Noise and Vibration Assessment has not been specifically assessed against TMR's *Interim Guideline - Operational Railway Noise and Vibration (March 2019)*. This document is a published standard under the *Transport Infrastructure Act 1994*. TMR drew ARTC's attention to the document during the initial adequacy review of the EIS in September 2019.	Where the assessment does not strictly assess against the requirements of the Interim Guideline, the EIS should clearly document how the selected method may also be used to determine compliance with TMR's *Interim Guideline - Operational Railway Noise and Vibration (March 2019)*. An adequate review should be provided within the assessment to show how the selected method compares with the requirements of the Interim Guideline. The review should provide sufficient detail on the following aspects: • Source data (i.e. 95th percentile vs Single Event Maximum) • Modelling method (algorithm, inputs and assumptions, with differences noted for various distances from the source) • Criteria (for all mandatory components of the Interim Guideline) Comparison - A sample area modelled and assessed under the selected project method verses the requirements of the Interim Guideline should be provided. The sample area should have sufficient variation to allow for the differences noted to be presented. For non-residential receivers this may not be possible, and the assessment should clearly identify these locations and assess them in accordance with TMR's *Interim Guideline - Operational Railway Noise and Vibration (March 2019).*	1
58	Chapter 14 Noise and Vibration Section 14.6.5.3 Table 14.22 Pages 25 and 26 (including Appendix T)	Table 14.22 is missing TMR's *Interim Guideline - Operational Railway Noise and Vibration (March 2019)* groundborne noise criteria for Court of Law (court reporting and transcript areas, Judges' chambers).	Update the EIS and including Appendix (Appendix T) to include TMR's *Interim Guideline - Operational Railway Noise and Vibration (March 2019)* groundborne noise criteria for Court of Law (court reporting and transcript areas, Judges' chambers).	1
59	Chapter 14 Noise and Vibration Section 14.6.5.4 Pages 26 and 27 (including Appendix S)	The EIS should assess new and upgraded roads in accordance with the *Transport Noise Management Code of Practice Volume 1*. The current level of detail and assessment is not consistent with this code.	Update the EIS including Appendix (Appendix S) to assess as per the requirements of the *Transport Noise Management Code of Practice Volume 1*. Including the design of noise mitigation where required.	1
60	Chapter 14 Noise and Vibration Section 14.7.1.1 Pages 28 and 29 (including Appendix S)	The noise assessment of the borrow pit has been made against the construction noise criteria. Please confirm if this activity is an environmentally relevant activity (ERA).	Confirm if the borrow pit is an ERA. Update the EIS including Appendix (Appendix S) to assess against the ERA requirements including updated noise criteria (if required).	1
61	Chapter 14 Noise and Vibration Section 14.7.4.1	The WHO limit of 42 dB(A) Lmax is based on a dose-effect related to aircraft.	Update the EIS to justify the use of dose-effect and its applicability to railway noise.	1

	Page 38 (including Appendix T)			
62	Chapter 14 Noise and Vibration Section 14.7.1 Page 28 Section 14.7.4.1 Page 38 (including Appendix T)	The EIS identifies a reduction of 7 dB(A) for façade level (external to internal) but does not provide a justification as to why that reduction has occurred. The EIS references AS3671 as the basis for the reduction but does not include the assumed opening percentage to justify the selected values or a comparison with available literature (i.e. values as low as 5 dB(A)).	Update the EIS to justify the selected façade reduction.	1
63	Chapter 14 Noise and Vibration Section 14.7.4.1 Page 38 (including Appendix T)	The last paragraph of section 14.7.4.1 states: *'It would be expected that residential property, complying to Australian building code and standards, would achieve façade noise reductions greater than the conservative 7 dBA assumption applied in this assessment.'*	Update the EIS to state what codes and standards would be expected to achieve a greater reduction than that applied in the assessment.	1
64	Chapter 14 Noise and Vibration Section 14.7.4.2 Page 38 Appendix T Operational Railway Noise and Vibration Section 9.1 Pages 58 to 61 Section 12.2 Figures 20 and 21 Page 127 (including Appendix S)	The assessment of vibration dose value (VDV) requires further clarification based on the following: • Appendix T, s9.1, Provide the justification/reference document for rail crest factor of 4. • Appendix T, s12.2, The Logarithmic VDV versus distance relationship is not clear on Figure 20 • Appendix T, s9.2, VDV is based on weighted acceleration. It is unclear why Figure 21 include a vibration velocity spectrum.	Update the EIS to: • Justify the selected crest factor. • Provide additional logarithmic x-axis labels and chart lines. Data would be clearer if each data set had mean,5/25/50/75/95 percentiles and min/max values plotted. The adopted relationship would be expected to underestimate values at the distance of the Wanitool dataset. Discuss the implication of this in relation to the closest sensitive receiver. Provide the source data for VDV measurement and prediction.	1
65	Chapter 14 Noise and Vibration Section 14.7.4.3 Page 39 Appendix T Operational Railway Noise and Vibration Section 13 Pages 131 and 132	The assessment of groundborne noise requires further clarification based on the following: Appendix T, s13, the adjustment factors stated (0 dB) seem to be lower than those recommended for generic cases (i.e. where detailed information is not available for individual buildings) by the *FTA Transit Noise and Vibration Impact Assessment Manual, 2018* (pg 145), which recommends up to +6 dB adjustment.	Update the EIS to justify the selected adjustment factors or revise the modelling and assessment. Propose mitigation measures.	1
66	Chapter 14 Noise and Vibration	Cumulative impacts require further assessment and do not include the cumulative impacts from road/rail operations with the multi-modal LAeq criteria from TMR's environmental emissions policy.	The EIS should be updated to determine if additional mitigation is required to address cumulative impacts. The cumulative noise impacts from road and rail operations combined should also be	1

	Section 14.10.2 Page 54 (including Appendix T)		assessed with multi-modal LAeq criteria within the environmental emissions policy. Update the EIS accordingly.	
67	Chapter 14 Noise and Vibration Section 14.8.2.2 Page 42 to 44 (including Appendix S and T)	The Section 11.125 of the ToR states: *'Describe any expected exceedances of noise and vibration goals or criteria following the provision or application of mitigation measures and how any residual impacts would be addressed.'* However, operational rail and road mitigation measures have not been adequately designed and therefore it is unknown what level of mitigation is considered reasonable and practicable. The EIS should clearly demonstrate mitigation requirements and residual exceedances. The noise barrier heights reviewed should not be limited in height to 4 m above ground. Each receiver (or group of receivers) which is predicted to exceed the criteria shall be specifically addressed in the report and mitigation options discussed. Where the project changes the road structure the noise barrier option should clearly present and address this issue and ensure that it does not obstruct crossings.	Update the EIS and revise the assessment to determine the level of noise barrier and other mitigation requirements for sensitive receivers consistent with the requirements of the ToR. The assessment should clearly state if TMR's *Interim Guideline - Operational Railway Noise and Vibration (March 2019)* requirements have been met. The residual exceedances of criteria shall be clearly stated and why noise mitigation on rail corridor land, commercial corridor land or future railway land is not reasonable or practicable. It is expected that the EIS provides a clear review and recommend reasonable and practicable mitigation for each receiver (or group of receivers).	1
68	Chapter 14 Noise and Vibration Section 14.8.2.3 Table 14.39 Page 50 Section 14.9 Page 52 (including Chapter 22)	Table 14.39 states that no noise mitigation will be installed until after the project is operating and additional noise monitoring has been completed. This requirement is not standard practice (i.e. delay the installation of treatment). The noise (and other) mitigation shall be determined as part of the EIS and installed before operations commence. Noise monitoring is typically conducted after the project is operational to confirm that noise treatments (i.e. noise barriers) are preforming as predicted.	Update the EIS (including Chapter 22) and revise the assessment to determine the level of noise barrier and other mitigation requirements for sensitive receivers consistent with the requirements of the ToR. Mitigation must be determined as part of the EIS and installed before operations commence. Update the EIS (inc Chapter 22 Outline Environmental Management Plan and Appendix Z Proponent Commitments) accordingly.	1
69	Chapter 14 Noise and Vibration Section 14.4.2 Pages 7 and 8 Section 14.8.2.3 Table 14.39 Pages 50 and 51	Chapter 14 has not considered the potential noise impacts of the future operational railway on future sensitive land uses. Table 14.39 notes potential noise walls or barriers or earth mounds at the rail corridor boundary to mitigate operational rail noise to a group of sensitive receptors.	The proposed railway is likely to generate environmental emissions that may impact upon existing and future residential uses. It is recommended that the development be designed, constructed and implements mitigation measures to meet the relevant environmental emission criteria for noise set out in the Department of Transport and Main Roads' *Development Affected by Environmental Emissions from Transport Policy, Version 4 (October 2017), Table 3 Rail Noise External Criteria*, referenced in the ToR, which is available at: https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Development-on-Land-Affected-by-Environmental-Emissions Potential noise barriers and earth mounds in the existing railway corridor will need approval/licences from the railway manger (QR) under section 255 of the *Transport Infrastructure Act 1994.* The design and construction of noise barriers will need to comply with Queensland Rail's *Civil Engineering Technical Requirement CIVIL-SR-014* and Transport and Main Roads' *Specifications MRTS04 General Earthworks*.	1
70	Chapter 15 Social General	The Inland Rail project will be a significant infrastructure project in the Southern Queensland Region. Will educational tours and learning opportunities be offered to schools, institutes, universities and engineering groups as part of engagement activities?	Amend the EIS to comment on the educational opportunities the project could offer to education providers.	2
71	Chapter 15 Social Section 15.5 Table 15.5 Page 17	The scheduling in Table 15.5 is no longer accurate. Phases should be revised to align with likely final EIS CG Evaluation Report and approval by the Commonwealth Minister for EPBC Matters of National Environmental Significance.	Update the EIS (including Table 15.5) to reflect a more realistic schedule.	2
72	Chapter 15	Section 15.6.51 indicates that Social Impact Assessment (SIA) consultation with indigenous people identified:	Amend Chapter 15 to include additional information regarding consultation with indigenous people.	2

	Social Section 15.6.4.1 Page 33 Chapter 17 Cultural Heritage General	*'Potential for the Project cultural sites, such as bora rings, kippa rings or sites associated with ancestors' graves, or massacre sites'.* However, these were not detailed in Chapter 17 Cultural Heritage.		
73	Chapter 15 Social Section 15.8.1.6 Table 15.14 Page 62	Table 15.14 states that: *'The maximum wait time at a level crossing has been calculated to be approximately 2-3 minutes for pass-by of a train of 1,800m travelling at 115 km/h'.* This should be confirmed as waiting time may change based on train speed due to safety, change in grade, nearby crossing loops. Wait time calculation around potential future train length of 3,600m should also be provided and include road user modelling to enable a better understanding of road user impacts and the need for grade separation.	The EIS should be updated to provide a level crossing wait time calculation based on train speed variation due to safety (IE 80km hour), change of rail grade, crossing loops, shorter curve in rail track which will require a reduction in speed as opposed to a longer curve which will allow for top speed. Provide a level crossing wait time calculation based on proposed future train length of 3600m (i.e. four to six minutes). Update the TIA accordingly. This is in addition to TMR's other comments on the proposed level crossings.	1
74	Chapter 15 Social Section 15.10 Table 15.29 Page 122	For Table 15.29 under Community Cohesion, there is no consideration of the likely amenity impact resulting from workforce accommodation that may remain in place post construction to accommodate overseas or interstate travellers requiring quarantining due to COVID, refugee processing/emigration or seasonal farming workforce housing.	Amend the EIS to include a risk consideration for potential long term/permanent use of Inland Rail workforce accommodation for potential other uses post construction.	2
75	Chapter 15 Social Section 15.11 Table 15.30 Page 136 to 138.	The construction dates in Table 15.30 need to be updated in accordance with the revised schedule for each section on the Inland Rail proposal as they are no longer accurate. Also, each project represented in this table should be reassessed in accordance with revised construction schedule for the B2G section of the Inland Rail proposal.	Update the EIS to ensure construction schedules for all Inland Rail project sections in Queensland are reflective of current EIS and EPBC referral approval timeframes. Social cumulative impacts need to be reassessed in accordance with an updated construction schedule.	1
76	Chapter 16 Economics General	Assuming freight time savings are based on 24 hours travel time achieved between Melbourne and Brisbane, there is no sensitivity analysis presented for loss resulting from any delay on the network. Can the EIS inform what the sensitivity of an hour's delay (due to an incident or maintenance issue) is on the network in relation to travel time on the B2G section?	Update the EIS to explain the significance and sensitivity of delays on individual rail sections as well as the larger Inland Rail project.	2
77	Chapter 16 Economics General	The EIS does not clearly state that local industry participation is mandated for ARTC.	Update the EIS to clarify that local industry participation has been mandated to ARTC.	2
78	Chapter 17 Cultural Heritage Section 17.5.2.3 Table 17.17 Pages 31 and 32 Appendix W Non-Indigenous Cultural Heritage Section 7.0 Pages 72 to 96	Table 17.17 which is a summary of assessments that indicate cultural heritage significance threshold for site B2G-19-H22 Protest Public Art indicates that this area of interest is of cultural heritage 'State Significance' for the following criteria under the Queensland Heritage Act: Historical, Rarity, Aesthetic, Social and Associational. A Cultural Heritage assessment of B2G-19-H22 should be revisited to confirm if this is indeed State or more likely of Local significance. It is very unlikely this item would meet the criteria to be registered on the Queensland Heritage Register.	A cultural heritage assessment of B2G-19-H22 Protest Public Art should be revisited to confirm if this is indeed State or more likely of Local significance.	2
79	Chapter 17 Cultural Heritage	Table 17.22 omits a 'practical completion' phase which should include an end of project Cultural Heritage Audit and the removal of any exclusion zoning fencing ensuring that on ground conditions are the same as when was fenced.	Update Table 17.22 to include a 'Practical Completion or Finalisation Phase' where mitigation and management measures should include:	2

	Section 17.7.2.1 Table 17.22 Page 37		• end of project Cultural Heritage Audit • the removal of any Cultural Heritage exclusion zoning fencing ensuring that on ground conditions remain the same as when was fenced.	
80	Chapter 17 Cultural Heritage Section 17.7.2.1 Table 17.22 Page 37	Table 17.22 indicates for the construction phase the review for adopting quieter and non-vibrator plant items near sensitive receptors is to be reported as part of ongoing Cultural Heritage site manager notes and subject to auditing requirements for compliance. This should also apply for appropriately sized plant and equipment selected for each construction task.	Consider as part of the Environmental Monitor or Auditing roles and requirements, the review of Site Manager notes to ensure consideration is given to adopting quieter and non-vibrator plant items near sensitive receptors IE Cultural Heritage areas of interest. Amend the EIS accordingly.	2
81	Chapter 18 Traffic, Transport and Access General	The use of SIDRA analysis for rail/road interfaces will not provide correct analysis with respect to queue length/stacking on side roads, particularly with rail on side roads. From a safety aspect and operation efficiency on state-controlled roads, it is TMR's intention to avoid queues on roads from traffic waiting to turn onto side roads having an interface with rail level crossing. It is TMR's intention to maintain unimpeded movement to traffic on state-controlled roads.	The EIS should ensure that operational efficiency on the TMR road network is not worsened in the design process.	1
82	Chapter 18 Traffic, Transport and Access General	It is unclear whether any design analysis has been conducted that identified headlight glare from night-time train movements, particularly when travelling through towns or parallel to the highways. The EIS does not mention any details regarding this analysis.	Amend the EIS to clarify whether a design analysis of headlight glare from night-time trains has been conducted.	1
83	Chapter 18 Traffic, Transport and Access General	The EIS does not clarify how incidents at road/rail interfaces will be managed and who will be the agency dedicated to incident management. It is unclear if ARTC will be solely responsible for managing incidents or will they receive assistance from other agencies. Similarly management of flooding or fire related disaster events and its impacts at Rail/Road interfaces has not been clarified in the EIS.	Update the EIS to include the process and agency responsible for managing rail/road interface incidents.	1
84	Chapter 18 Traffic, Transport and Access Section 18.4.1 Figures 18.1 and 18.2a to 18.2h Pages 10 to 18	Figure 18.1 and Figures 18.2a to 18.2h relate to the project rail alignment as well as the project road-rail interface locations. The figures identify roads as 'major roads' and 'minor roads' but it is difficult to determine what roads are state-controlled roads or local government roads.	Amend Figure 18.1 and Figures 18.2a to 18.2h to more clearly identify the road types and relevant ownership.	1
85	Chapter 18 Traffic, Transport and Access Section 18.4.3.1 Page 24	Chapter 18 references various parts of the Austroads series *Guide to Traffic Engineering Practice.* These manuals have been superseded.	Update the EIS to ensure that the latest Austroads manuals are referenced and used.	1
86	Chapter 18 Traffic, Transport and Access Section 18.4.3.1 Page 25	The EIS states that 'the GTIA defines LOS as a qualitative index for ranking operating conditions on roads…' but intersection delay is also used in GTIA to quantify impacts.	The EIS should be updated to ensure the TIA is undertaken in accordance with GTIA noting that some of the performance indicators are different.	1
87	Chapter 18 Traffic, Transport and Access Section 18.4.3.1 Page 25	2019 traffic data should be available and used for state-controlled roads. The linear growth rate to be applied to state-controlled roads is to be discussed and agreed prior to finalised of the TIA and PIA.	Prior to finalising the TIA (which will not occur until after a Principal Construction Contractor is appointed), the background traffic growth rates to be applied to state-controlled roads are to be agreed to by TMR. Amend the EIS to illustrate this commitment.	1

88	Chapter 18 Traffic, Transport and Access Section 18.4.3.2 Page 25	The TIA states that traffic impacts associated with the offsite disposal of waste have not been assessed. The TIA should include a small allowance for the aggregate of all minor movements such as waste, cleaning services, caterers and other servicing vehicles combined to be added to the main construction activities.	Update the EIS to include an allowance for "other" traffic not covered under the main construction transportation activities.	1
89	Chapter 18 Traffic, Transport and Access Section 18.4.3.2 Project traffic Page 25	The EIS states that material deficit for the project may be approximately 971,237m^3 and that this has not been included as a construction transportation activity. This surplus may be up to between 97,124 heavy vehicle movements (loaded and unloaded assuming truck and dog combination at maximum legal payload) and 268,958 heavy vehicle movements (loaded and unloaded assuming tandem truck type at maximum legal payload). While it is understood some or all of the spoil can be reused, it is unacceptable to not include the management of a substantial amount of spoil in the assessment of construction transportation activities.	Update the EIS to include a probable and conservative scenario including haulage of spoil. Alternatively, the Traffic Impact Assessment must be updated to include details of construction spoil when specific details are known. Amend Chapter 22 Outline Environmental Management Plan and Appendix Z Proponent Commitments to reflect this commitment.	1
90	Chapter 18 Traffic, Transport and Access Section 18.4.3.3 Table 18.4 Page 26 Section 18.6.2.5 Page 108	The statements about the performance criteria and TMR's GTIA are not correct. Nowhere in GTIA 2018 does it state such performance criteria. Similarly, section 18.6.2.5 incorrectly suggests what GTIA 2018 considers minimum acceptable LOS values.	Update the EIS and TIA to be consistent with GTIA and use GTIA performance criteria.	1
91	Chapter 18 Traffic, Transport and Access Section 18.4.3.3 Table 18.6 Page 27	Table 18.6 identifies the impact type and impact assessment year(s) for the project in relation to the requirements of TMR's GTIA. For pavement, the table states that the impact assessment year related to each year of construction plus year of opening of each stage including the final stage over a 20-year design period. However, the GTIA states that the mitigation of pavement impacts occurs for a period of 20 after the opening of the final stage.	Amend the EIS to correctly reference the requirements of the GTIA in relation to impact assessment year by type.	1
92	Chapter 18 Traffic, Transport and Access Section 18.4.3.3 Figure 18.5 Page 28	The last box in Figure 18.5 says "Prepare and finalise traffic impact assessment and road use Management Plan / infrastructure agreement if applicable *" with the asterisk noting that this is to be prior to project commencement. Many details will not be able to be finalised until after a Principal Construction Contractor is awarded. The definition of "project commencement" must be clearer and there needs to be a mechanism for updating the TIA once new information is available.	Update the EIS to define what 'project commencement' means in the context of TIA and other road use agreements mean. Amend Chapter 22 Outline Environmental Management Plan and Appendix Z Proponent Commitments to reflect ARTC's commitment to update the TIA.	1
93	Chapter 18 Traffic, Transport and Access Section 18.5.6 Table 18.19 Page 56	Section 18.5.6 identifies long-distance coach services that are privately operated that use roads within the impact assessment area. Crisps Coaches runs a service from Moree to Toowoomba that travels along the Cunningham Highway from Goondiwindi to Inglewood which intersects the proposed alignment where the project is located within the existing corridor.	Confirm and update the EIS as necessary to include the long-distance coach services provided by Crisps that travel from Moree to Toowoomba along the Cunningham Highway.	1
94	Chapter 18 Traffic, Transport and Access Section 18.6 Page 60	General construction activities are mostly during the day according to this section. It is probably worth indicating that another circumstance were night works will be required (in addition to the delivery of materials) are works to road where traffic volumes during the day do not permit lane closures without causing excessive delays.	Amend the EIS to include road works as another possible circumstance where works could occur outside the standard hours.	1

95	Chapter 18 Traffic, Transport and Access Section 18.6.1.1 Pages 60 to 61	The project has potential to cause significant disruption to existing rail freight supply and logistics during the course of construction, particularly where online construction is undertaken. Traffic assumptions of the assessment do not address impacts specific to online construction of the project in that it involves displacing rail freight onto road for the duration of the construction work. There is a significant potential for disruption to rail freight including grains that displace rail freight on to road freight. The Traffic Impact Assessment does not consider this. It is unclear how TMR is engaged through this process, particularly where track possession are agreed and traffic assumptions are revised.	Update the EIS to detail traffic type and volumes that may be impacted or generated through the course of online construction methods.	1
96	Chapter 18 Traffic, Transport and Access Section 18.6.1.1 Page 60	The report suggests that online construction would result in the existing railway being non-operational for periods and that alternative means of transportation will be required. Consultation with TMR will be required prior to this arrangement taking place. Depending on the length of time of the rail track closure and the resultant increase in the number of heavy vehicles using the road network, the TIA may have to be updated.	Update the EIS to include TMR as a potential party to any interface agreement. Amend Chapter 22 Outline Environmental Management Plan and Appendix Z Proponent Commitments to reflect this commitment.	1
97	Chapter 18 Traffic, Transport and Access Section 18.6.1.2 Page 65	Section 18.6.1.2 is not clear as to the overall forecast daily rail freight traffic - including with existing traffic on the South Western Line and the Millmerran Branch Railway.	Update the EIS to clarify the existing and forecast rail freight traffic.	1
98	Chapter 18 Traffic, Transport and Access Section 18.6.1.2 Table 18.25 Page 66	To give the reader a better understanding of the wait times at level crossings, Table 18.25 should be updated to include an estimated number of closures per day in certain years. For example, 101 second closure time, 30 times a day in 2030 and 40 times a day in 2040. Include both average number of closures per day and peak number of closures per day. This information is buried in the text but putting it in the table will make it easier to read.	Update the EIS (including Table 18.25) to include number of closures at level crossing. This is in addition to TMR's other comments regarding the level crossings.	1
99	Chapter 18 Traffic, Transport and Access Section 18.6.1.2 Table 18.25 Page 66 Appendix X (Part 1) Traffic Impact Assessment Section 6.4.3.1 Page 281	Table 18.25 refers to vehicle wait times but is not considered to be an assessment of actual travel delay. The table states 'total wait time per closure (seconds)'. In addition, it is unclear if wait times include a train at the more likely operational speed as opposed to the 115km/hr design speed, and the full period of advanced warning time and boom gate closure, where applicable. The EIS states delays at level crossings will, in most instances, be five seconds or less. However, SIDRA is not an indicator of average delays to travel time. The EIS does not consider the possibility of opposing trains passing a level crossing and the longest passing times. Road users are more likely to be non-compliant as waiting times increase in terms of frequency as well as duration. The assessment of travel delays should be more thoroughly explored and detailed to consider total wait times, delays caused, and at the likely operational speed in order to fully assess the delays both in terms of link delays and intersection delay proposed to be experienced over the at-grade level crossings of state-controlled roads.	Revise and update the EIS and TIA to consider vehicle delays including in terms of total boom gate down time in minutes over a 24-hour period. Detail the longest anticipated closure period for simultaneously passing trains at the nominated operational speed. This is in addition to TMR's other comments regarding the level crossings.	1
100	Chapter 18 Traffic, Transport and Access Section 18.6.2.2 Table 18.27 Page 87 Section 18.4.1.2 Figure 18.3a to 18.3c	Table 18.27 lists a section of Pittsworth-Felton Road as a Toowoomba Regional Council road. Pittsworth-Felton Road is a state-controlled road. The maps provided in Figure 18.3 are too small to be able to identify which sections are Pittsworth-Felton Road are intended to be used as construction routes. The TIA cannot be finalised until there is clarity on which sections of which roads are intended to be used for construction routes. The appropriateness of the road sections nominated to be used for construction routes has not been evaluated in detail. This will be done once a construction contractor is appointed and construction routes and heavy vehicle volumes are known with more certainty.	Update the EIS to ensure that the correct owner is identified for each of the road sections nominated to be used for construction routes.	1

	Pages 20 to 22			
101	Chapter 18 Traffic, Transport and Access Section 18.6.2.2 Page 89	The report lists Pittsworth-Tummaville Road as a state-controlled Road. TMR does not manage any road with that name.	Update the EIS to include correct road names and/or correct ownership (TMR or local government).	1
102	Chapter 18 Traffic, Transport and Access Section 18.6.2.6 Page 109	The state-controlled road intersections identified as potentially requiring treatments based from the turn warrants safety assessment within the Traffic Impact Assessment is confirmed to not be based on intersection count data, but does not describe the source of data and detail the assumptions of traffic volumes that are made for the purposes of this assessment. In addition, the assessment does not identify the year from which existing volumes were determined and projected to the forecast year. It is unclear if and how the base year and assessed year is determined.	Clarify the source data adopted for the turn warrants assessments. Update the EIS to provide turn warrants assessment including base data and detail the traffic engineering assumptions, for all state-controlled road intersections of the haulage route that are proposed for any turning movements. Note that any future detailed assessment for the impacted intersections should require detailed intersection counts.	1
103	Chapter 18 Traffic, Transport and Access Section 18.6.3 Page 116	Where the consolidation of private accesses or the relocation of a private access results in a change to the State-controlled network, TMR are also to be consulted. Access to a state-controlled road will generally need TMR approval.	Update Chapter 18 to confirm that any changes to the state-controlled road network shall require consultation with and approval from TMR.	1
104	Chapter 18 Traffic, Transport and Access Section 18.6.8.2 Page 119	Pedestrian activity should be anticipated in all towns and connectivity is to be maintained. Although there are no dedicated pedestrian level crossings (which is presumed to mean a formed footpath crossing), all level crossings within towns should ensure that pedestrians (and cyclists) can use the crossing in a safe way.	Update the EIS to include assess active transport needs at level crossings within towns.	2
105	Chapter 18 Traffic, Transport and Access Section 18.7.1 Table 18.37 Page 121	Table 18.37 under Road-rail interfaces says that "Grade-separated crossings of existing roads have been adopted instead of level crossings, where possible".	Update the EIS to accurately reflect the reasons for not grade-separating all crossings and also include commentary that crossing locations are still being negotiated with relevant road authorities. This is in addition to TMR's other comments regarding the level crossings.	1
106	Chapter 18 Traffic, Transport and Access Section 18.7.1 Page 121	Table 18.37 under 'Bridges' states that 'Maintenance access to the deck level of all new structures has been incorporated into the design'. It is unclear if this is for road over rail bridges as well.	Verify that 'all' new structures include both rail over road and road over rail bridges. Amend the EIS accordingly.	2
107	Chapter 18 Traffic, Transport and Access Section 18.9 Table 18.40 Pages 132 and 133	Table 18.40 lists projects included in the traffic and transport cumulative impact assessment. Only Gowrie to Helidon (G2H) has been included. Until such time as construction routes for all Inland Rail projects have been finalised, the cumulative impact assessments cannot be fully assessed. There may be overlap between other Inland Rail project sections as well (for example, Helidon to Calvert (H2C), Calvert to Kagaru (C2K) and Kagaru to Acacia Ridge and Bromelton (K2ARB)).	It is recommended that the report be updated to note that further projects may be included in the cumulative impact assessment once there is more certainty on construction routes for all Inland Rail projects.	2
108	Chapter 18 Traffic, Transport and Access Section 18.10 Page 139	Conclusion states that "Further road-specific analysis, presented in Appendix X: Traffic Impact Assessment, indicates that the state-controlled road segments located in Queensland and NSW would have minimal pavement impact given the duration of construction activities and pavement loading. This statement is misleading as high loading over short durations can still have impacts on pavements that certainly shouldn't be classed as 'minimal'.	Update the EIS so that it does not minimise (or downplay) the potential for pavement impacts.	1

109	Chapter 18 Traffic, Transport and Access Section 18.5.1.4 Table 18.11 Page 33 Section 18.6.1.2 Page 62 Appendix X Traffic Impact Assessment General	Table 18.11 indicates the location and level of safety controls at the existing railway level crossings. There are 3 existing state-controlled road level crossings as noted below: • 310-11-E-1 Cunningham Highway (Wondalli Street) – active railway level crossing (crossing ID: 1089) • 310-40-E-2 Millmerran-Leyburn Road – passive railway level crossing (crossing ID: 2639) • 310-44-E-2 Gore Highway – active railway level crossing (crossing ID: 682). Section 18.6.1.2 notes an ALCAM assessment has been undertaken for existing and proposed railway level crossings and that ARTC will continue to consult with DTMR and local governments on the preferred road-rail interfaces. The existing state-controlled road level crossings will be upgraded as below: • 310-11-P-0 Cunningham Highway (Wondalli Street) - existing active level crossing and will be relocated east via a proposed grade separated railway crossing (road over rail) • 310-40-E-2 Millmerran-Leyburn Road – existing passive level crossing will be upgrade to an active level crossing • 310-44-E-2 Gore Highway – existing level crossing upgrade to a new grade separated crossing (road over rail)	The EIS, TIA and supporting documents should be amended to illustrate how the proposed treatments to the existing State-controlled road level crossings will comply with PO20 and PO24 of the *State Code 2: Development in a Railway Environment*, PO7 to PO9 of the *State Code 6: Protection of state transport networks* of the *State Development Assessment Provisions* and Section 2.2 of the *Guide to Development in a Transport Environment: Rail* for all existing impacted railway level crossings.	1
110	Chapter 18 Traffic, Transport and Access Section 18.5.4 Pages 44 and 45 Section 18.6.5 Table 18.36 Pages 117 and 118 Chapter 22 Outline Environmental Management Plan General Appendix Z Proponent Commitments General	Section 18.5.4 indicates that the project alignment traverses several public transport routes, while Table 18.36 identifies the school bus services that are likely to be impacted by construction and/or operational traffic. If the construction of the project necessitates temporary bus stop and pedestrian access arrangements and/or alternative bus routes, ARTC will need to reach agreement on those arrangements with TMR's TransLink division. Although the draft Outline Environmental Management Plan references the need for the Detail Design phase to 'acknowledge and consider' public transport and bus routes, it is unclear if the EIS references the requirement to obtain TMR TransLink division's agreement.	Amend Chapter 18 Traffic, Transport and Access to include *'If any temporary bus stop and pedestrian access arrangements or alternative bus routes are required when construction routes are finalised, the Proponent must reach agreement on suitable arrangements with the Department of Transport and Main Roads' TransLink Division (bus_stops@translink.com.au or on 3851 8700) prior to any construction or works commencing.'* and *'The school bus routes identified in Figure 18.36 and the bus stops and pedestrian access to these stops must be maintained during construction of the development. Accordingly, if any temporary bus stop and pedestrian access arrangements or alternative bus routes are required when construction routes are finalised, the Proponent must reach agreement on suitable arrangements with the Department of Transport and Main Roads' TransLink Division (bus_stops@translink.com.au or on 3851 8700) and/or bus operator (whichever is relevant) prior to any construction or works commencing.'* Amend Chapter 22 Outline Environmental Management Plan and Appendix Z Proponent Commitments to reflect this requirement.	1
111	Chapter 19 Hazard and Risk Section 19.7.2.2 Page 22	The department notes that there are adjoining interfaces with roads, including state-controlled roads, at some sections of the Inland Rail alignment. The road and rail interface includes any section of the Inland Rail alignment that abuts, and not necessarily crosses over, a road. The associated risks for construction and operations near state-controlled roads is not considered. For example, the risks associated with direct vehicular access including uncontrolled vehicular access to the road corridor during construction or operations, and the proposed mitigation measures are not detailed in the EIS.	The hazard and risk chapter provides little guidance as to details on the safeguards that would reduce the likelihood and severity of hazards, consequences and risks to persons, within and adjacent to the project area(s) that are close to state-controlled roads, and in particular through construction and operational stages. Update the EIS to thoroughly consider hazard and risks associated with railway and construction activity adjoining road.	1
112	Chapter 19 Hazard and Risk Section 19.8.1 Table 19.11 Page 44	The EIS states that for road-rail interfaces: *'Where grade separation has not been feasible, the design has been developed in accordance with ARTC Engineering Code of Practice–Level Crossings (ARTC, 2011)'* *'Level crossings have been subject to safe design studies and risk assessments in accordance with ALCAM to identify and reduce, as far as practicable, the potential risks with these crossings'.*	Update Table 19.11 of the EIS to ensure it is consistent with TMR's requirements for rail interfaces with State-controlled roads. Note that on routes approved for use by type 1 road trains, investigations should include determining if any particular safety requirements need to be incorporated into the operation of the flashing lights e.g. longer pre-warning times and sight distances to the signals, allowance for greater safe stopping distances by advanced active warning signs. This is in addition to TMR's other comments on railway level crossings.	1

		Consistent with TMR's requirements for state-controlled roads, the road safety audits are to be undertaken. These road safety audits may identify other or additional physical controls that will be considered necessary.		
113	Chapter 19 Hazard and Risk Section 19.8.2 Table 19.12 Page 47	The proposed scale of soil mapping is considered excessive and not necessary. The TMR Soil Group Classifications Map provided in virtual document pool for tenderers should be referenced and used to minimise the frequency (scale) of sampling and to target soil sampling to ground-truth the boundaries of the TMR Soil Group mapped boundaries.	It is recommended ARTC use TMR's Soil Group mapped boundaries to minimise the frequency (scale) of sampling. Update the EIS accordingly.	2
114	Chapter 19 Hazard and Risk Section 19.9.1 Table 19.13 Page 66	A bushfire may be of 'High' consequence rather than 'Moderate' through a high fire risk dry season.	Clarify and update the EIS to ensure that the residual risk with the mitigation strategies proposed through a high-risk seasonal period does not remain to be 'High'.	2
115	Chapter 20 Waste Management General	Under the *Waste Reduction and Recycling Act 2011* (WRRA), TMR is required to report annually on the volumes of waste generated, reused, recycled and disposed to landfill. TMR is expected to contribute to the Queensland Government's waste reduction targets and report how this is being achieved. The EIS does not clarify whether the contractors will be reporting on waste generated from their construction sites.	Amend the EIS to clarify whether contractors will conduct monthly reporting on waste as per MRTS 51 requirements.	1
116	Chapter 21 Cumulative Impacts General	Cumulative impacts are defined as upstream and downstream, not just immediately adjacent. The assessment has only considered Gowrie to Helidon (G2H) in most impacts. Helidon to Calvert (H2C) and Calvert to Kagaru (C2K) also need to be considered, since they will impact on many different factors in the region.	The entire Inland Rail program within Queensland needs to be considered as a holistic operation to fully appreciate the impacts it will have. Amend the EIS and cumulative impact assessment to consider the whole program of Inland Rail works in Qld, not just projects immediately adjacent to the Border to Gowrie (B2G) section	1
117	Chapter 21 Cumulative Impacts Section 21.2.1 Page 3	Section 6.1.9 and Table 6.2 lists projects included in the cumulative impact assessment and focuses on the Priority Development Areas, State Development Areas, and some EIS, but does not discuss and potentially omits any other significant developments approved under other legislation.	Update the Cumulative Impact Assessment of the EIS to consider any other permitted developments that may be of relevance. Update any other related technical assessments accordingly.	1
118	Chapter 21 Cumulative Impacts Section 21.3.11 Page 91	Projects included in the cumulative impact assessment do not include projects of the Inland Rail programme and is stated to only consider the directly adjoining North Star to Border (NS2B) and Gowrie to Helidon (G2H) sections. The cumulative impact assessment must include all projects of the Inland Rail programme. It is anticipated there will be overlaps and cumulative impacts in some of the technical reports and these are required to be considered.	Update the Cumulative Impact Assessment of the EIS to include whole program of Inland Rail works in Qld, not just projects immediately adjacent to the Border to Gowrie (B2G) section. Update any other related technical assessments accordingly.	1
119	Chapter 22 Outline Environmental Management Plan General	There appears to be a few deviations between the EIS and reference alignment. The EIS does not discuss how the impacts of the deviations will be assessed regarding environmental impacts, flora/fauna, noise issues and so on, and who will be managing those changes.	Amend the EIS to discuss how the deviations will be assessed regarding environmental impacts, flora/fauna, noise issues and so on, and who will be managing those changes (the process).	1
120	Chapter 22 Outline Environmental Management Plan Section 22.6.4 Page 10	This section of the EIS only discusses the construction phase. Prior work should also be included for reporting purposes. Prior works will include the required permits and approvals, results from fauna spotter investigations as well as erosion and sediment control installation and failures. These issues (including others not mentioned) should be reported on a monthly basis.	Update the EIS to provide information about the works, investigations and approvals taking place prior to the construction phase. These should be reported on monthly. Update the draft Outline Environmental Management Plan to reflect this requirement.	1
121	Chapter 22 Outline Environmental Management Plan Section 22.10	The EIS states that some works will be occurring '24 hours a day, 7 days a week'. This may not accurately reflect the actual working hours because while these may be the desired working hours, individual permits and approvals may alter these times.	Amend the EIS to reflection that the hours of works are subject to permits and other restrictions and therefore may be less than 24 hours a day, 7 days a week.	1

	Table 22.2 Page 12			
122	Chapter 22 Outline Environmental Management Plan Section 22.11.4.3 Table 22.6 Page 32	TMR's *Fauna Sensitive Road Design Manual* (2000) is referred to in the fauna movement section. The *Fauna Sensitive Road Design Manual* (2000) is currently being revised with input from numerous major projects.	ARTC should contact TMR for latest information relating to fauna movement to assist in the detailed design stage.	1
123	Chapter 22 Outline Environmental Management Plan General	Erosion and sediment control should be dealt with through a separate Erosion and Sediment Control not just section 22.11.2. The plan must: • be an approved plan prior to preconstruction activities • occur for all preconstruction activities • be installed prior to all clearing activities • require sediment basins to be decommissioned once the site is stable • must have a management plans for ongoing maintenance and safety of permanent sediment basins / bioretention basins	Amend the Outline Environment Management Plan to ensure these requirements are met.	1
124	Chapter 22 Outline Environmental Management Plan General	TMR is expecting to finalise the USQ Fauna Movement Study on the Toowoomba Bypass in July 2021. It is a 12-month study looking at the effectiveness of dedicated fauna movement structures, drainage culverts and bridge structures in the movement of fauna from one side of the road reserve to the other. This information will be pertinent to the environmental and design teams at ARTC during the detailed design stage.	Contact TMR for the latest information relating to fauna movement to assist in the detailed design stage.	1
125	Chapter 22 Outline Environmental Management Plan General	The current EIS assessment has identified various flora and fauna within the impacted corridor. The EIS does not include a process for managing any newfound species in the project area, including whether ARTC would manage that process as the lead agency.	Update the EIS to include the process for managing newfound species, including the agency that will manage that process.	1
126	Chapter 22 Outline Environmental Management Plan General	The EIS does not clearly explain what type of criteria will be used for identifying suitable offset sites. Agencies including TMR and local council have future projects planned, and many of those projects are not currently in the public domain. The selection of offset land sites will require coordination with agencies regarding their future planning/road upgrades requirements. It is unclear whether ARTC will manage the coordination as the lead agency.	Amend the EIS to clarify the type of criteria used to identify suitable offset sites and detail the offset site selection process, including the consultation and coordination process with government agencies.	1
127	Chapter 22 Outline Environmental Management Plan General	The EIS does not clearly state who will manage the relocation of fauna during any construction activities. It is unclear whether ARTC will manage the relocation process as the lead agency.	Amend the EIS to clarify who will manage the relocation of fauna during any construction activities.	1
128	Chapter 22 Outline Environmental Management Plan Section 22.1.1 Page 3	The Outline Environmental Management Plan omits 'a Biosecurity sub-plan'.	Amend the Outline Environmental Management Plan to require a Biosecurity sub-plan.	2
129	Chapter 22 Outline Environmental Management Plan Section 22.1.3.2 Page 4	The pre-construction activities omit the following: the establishment of early erosion and sediment controls and sediment basins associated with pre-construction activities.	Consider amending the EIS to include 'the establishment of early erosion and sediment controls and sediment basins.'	2
130	Chapter 22	The general construction activities omit the following.	Consider amending the EIS to require:	2

	Outline Environmental Management Plan Section 22.1.3.3 Page 5	• Establishment of erosion and sediment controls including the diversion of water around disturbance footprint where practical and feasible. • Sequential clearing while utilising a fauna spotter / catcher.	• Establishment of erosion and sediment controls including the diversion of water around disturbance footprint where practical and feasible. • Sequential clearing while utilising a fauna spotter / catcher.	
131	Chapter 22 Outline Environmental Management Plan Section 22.1.3.4 Page 5	During project finalisation and as part of the rehabilitation plan, management and appropriate treatment of invasive plants is required as cleared areas free of ground cover are a high risk of weed invasion.	It is recommended the EIS be amended to include the requirement for the management and appropriate treatment of invasive plants as cleared areas free of ground cover are a high risk of weed invasion.	2
132	Chapter 22 Outline Environmental Management Plan Section 22.4 Page 8	Section 22.4 includes the following dot point. *'All employees, contractors and subcontractors will receive an environmental induction that will include, but not be limited to:* • *Relevant imposed conditions*.' It is unclear if this imposed condition is referring to EIS imposed condition or conditions under secondary approvals.	It is recommended the EIS be amended to more correctly read: *'EIS Coordinator General Evaluation Report imposed, stated and recommended conditions included secondary approvals and conditions obtain by project for the relevant activities.'*	2
133	Chapter 22 Outline Environmental Management Plan Section 22.5 Page 9	Section 22.5 indicates that: *'Section 320 to 320G of the EP Act outline the requirements for the duty to notify of environmental harm. Pollution incidents and activities that cause or threaten to cause serious environmental harm or material environmental harm must be reported within 24 hours to the Department of Environment and Science and other stakeholders.'* Add the word 'potential' before 'serious environmental harm' and 'material environmental harm. This is to acknowledge that without appropriate investigation within the statutory 24-hour duty to notify obligation, it is unclear what, who, where, how and why an environmental incident has occurred including any environmental/remediation costs.	It is recommended the EIS be amended to read *'cause **potential** serious environmental harm or **potential** material environmental harm.'*	2
134	Chapter 22 Outline Environmental Management Plan Section 22.10 Table 22.2 Page 12	For consistency with C2K Chapter 22 OEMP, and to ensure appropriate consultation, assessment and justification is provided for works outside of standard work hours, ensure B2G Ch 22, Table 22.2 includes the following foot note. 1. *'Works outside of standard hours will only proceed where:* a. *Consultation with the local community has been undertaken* b. *A site-specific noise risk assessment has been undertaken to identify the environmental risks associated with the works and action required to mitigate these risks* *Justification is provided as to why the works are required outside of the hours nominated for surface works above.'*	It is recommended the EIS be amended to include a footnote at the bottom of table 22.2 that reads: 1. *'Works outside of standard hours will only proceed where:* a. *Consultation with the local community has been undertaken* b. *A site-specific noise risk assessment has been undertaken to identify the environmental risks associated with the works and action required to mitigate these risks* *Justification is provided as to why the works are required outside of the hours nominated for surface works above.'*	2
135	Chapter 22 Outline Environmental Management Plan Table 22.14 Page 65	Table 22.4 indicates *'Encountering potential acid sulphate soils (Pass) and/or acid rock drainage (ARD). All excavated material that is suspected to contain sulphides will be stockpiled, lined and covered, and managed to minimise rainfall infiltration and leaching.'* There is likely to be PASS disturbed during construction. Stockpiling, lining and covering PASS material may still lead to oxidation and leaching. Soil testing for Actual and Potential Acid Sulphate soils should be undertaken to confirm treatment / liming rate to neutralise the acidification of stockpiled/ transported/ reused/ disposed spoil. Treatment with lime may not be viable or the only option, for example if PASS material is likely to be used in batters where those batters are capped off. Excavated PASS material can also be transported in sealed haulage trucks and treated at disposal sites.	It is recommended the EIS / Chapter 22 Draft Outline Environmental Management Plan be amended to include: • Soil testing for Actual and Potential Acid Sulphate soils should be undertaken to confirm treatment / liming rate to neutralise the oxidation and leaching of acids at stockpiled/transported/reused/disposed spoil material. • Treatment with lime may not be viable or the only option, for example if PASS material is likely to be used in batters where those batters are capped off. Excavated PASS material can also be transported in sealed haulage trucks and treated at disposal site.	1
136	Chapter 22 Outline Environmental Management Plan	Options are required for the decommissioning of sediment basins upon practical completion, as follows. • Consult with landowners to retain sediment basin as watering hole	During project finalisation – consider options for the decommission or retention of sediment basins. Noting that sediment basins that are retained may need to be fenced to reduce drowning.	2

	Section 22.11.2.4 Table 22.4 Pages 19 to 23	• Decommission sediment basins • Retain sediment basin for erosion and sediment control with fencing and ongoing maintenance requirements. These do not appear to be covered in the draft Outline Environmental Management Plan.		
137	Chapter 22 Outline Environmental Management Plan Section 22.11.5.4 Page 52 Appendix Z Proponent Commitments Table 1 Page 5	An air quality monitoring station is located near Commodore Mine and Millmerran Power Station during construction for background air quality and dust deposition monitoring. The monitoring station is likely to be impacted by cross contamination from the Commodore Mine and Millmerran Power Station. Background monitoring is likely to be compromised due to proximity of Commodore Mine and Millmerran Power Station, and therefore wouldn't be a true indicator of background air quality for environmental nuisance incident monitoring.	It is recommended that air quality monitoring be undertaken at several alternative sites along the B2G alignment where there is less chance of result cross contamination from other airborne dust nuisances.	2
138	Chapter 22 Outline Environmental Management Plan Page 57	It is unclear if pipe around culverts have been proposed due to the use of zoned embankments. Reactive soils in zoned embankments will require additional mitigation measures where culverts penetrate.	Update the EIS to confirm if pipe zoned embankments have been used, and update and mitigate any requirements as necessary.	2
139	Chapter 22 Outline Environmental Management Plan Section 22.11.8.3 Table 22.14 Page 65	Relating to the treatment of acid sulphate soils, where material is disturbed and exposed to air, testing and appropriated rates of lime treatment need to be calculated and applied to stockpiled materials.	Update the EIS to ensure that material which is disturbed and exposed to air, testing and appropriated rates of treatment (lime) are calculated and applied to stockpiled materials.	2
140	Chapter 22 Outline Environmental Management Plan Section 22.11.8.3 Table 22.14 Page 65	It is unclear whether any additional land requirements have been considered if contaminated leachate is found at deep cuts and ponds.	Update the EIS to confirm deep cuts have an additional footprint in anticipation of requiring more space for ponds.	2
141	Chapter 22 Outline Environmental Management Plan Table 22.14 Page 63	It is unclear whether alternative borehole locations have already been identified, in anticipation of access being denied/not available.	Update the EIS and the project to identify alternative locations now rather than once the detail design phase commences to manage risk and impacts to project timing and delivery.	2
142	Chapter 22 Outline Environmental Management Plan Section 22.11.11.4 Table 22.22 Page 93	The EIS including Table 22.22 references the *Queensland Level Crossing Safety Strategy 2012-2021.* It is important to note this policy has been updated with the *2019 Update: On Track to Zero Harm.* It is recommended that both versions be referenced.	It is recommended that both the *Queensland Level Crossing Safety Strategy 2012-2021 and* the *2019 Update: On Track to Zero Harm* versions be referenced.	1
143	Chapter 22 Outline Environmental Management Plan	Under Construction (Delivery phase), Bushfire (Aspect), mitigation measures do not include the avoidance and management of vehicles traversing through long/dry grass/vegetation, vehicle inspections and carrying of firefight equipment. During and after travelling through long dry vegetation, there is potential for underbody vehicle ignition and bushfire.	Amend the EIS and draft Outline Environmental Management Plan to require project personnel to avoid where possible the vehicles traversing through long dry grass or similar vegetation, and for personnel to ensure fire safety precautions (firefighting equipment and training) are	2

	Section 22.11.12.4 Table 22.23 Page 102		implemented prior to using vehicles (e.g. inspect vehicle underbody for collected or grass/vegetation in contact with hot exhaust or similar parts.).	
144	Chapter 22 Outline Environmental Management Plan Section 22.11.13.2 Page 108	TMR recommends adopting circular economy model principles and shifting away from current linear economic model based on the 'take-make-dispose' approach to managing products and resources. Through circular economy principles – • design out waste and pollution • keep products and materials in use • regenerate natural systems Noting that the Queensland government's initiative supports circular economy in Queensland.	Adopt a Circular Economy model in the construction, operation, maintenance and decommission of Inland Rail project.	2
145	Chapter 22 Outline Environmental Management Plan Section 22.11.13.4 Table 22.24 Page 109	Waste conversion calculations have not been included to determine if volume of waste streams have been correctly converted to tonnes when reporting generated, reused/recycled, recovered and disposed of waste streams.	Update the EIS to ensure there is the provision of waste stream volume conversion to tonnes when reporting waste distribution for consistence with the Department of Environment and Science reporting requirements.	2
146	Chapter 22 Outline Environmental Management Plan General	TMR requires a Construction Management Plan (CMP) to address risks to the state-controlled transport corridors which includes railway corridors and railway level crossings.	The Construction Management Plan must demonstrate that there will be no disruption to the safety and operational integrity of railway corridors and associated state-controlled-transport networks during the course of construction. The Construction Management Plan must address at least the following, among other relevant considerations: • Construction methodology and work method statements; • Management of loading, ground movement and vibration impacts on state-controlled transport infrastructure; • Storage locations, site accommodation facilities, laydown facilities, loading/unloading zones and vehicle access tracks; • Unauthorised access prevention to the railway corridor (temporary and permanent); • Maintenance of emergency/maintenance access to the railway corridor for the railway manager; • Railway operational requirements and scheduled railway closures; • Adherence to relevant Queensland Rail standards including but not limited to CIVIL-SR-002 – Work in or about Queensland Rail Property and CIVIL-SR-016 – Services under railway property (non-Queensland Rail services); • Railway level crossing safety; • Stormwater management. Certain aspects of the Construction Management Plan will require Registered Professional Engineer of Queensland (RPEQ) certification, for instance, a Traffic Management Plan, stormwater management and earthworks. Amend the EIS (Draft OEMP and Proponent Commitments) accordingly.	1
147	Chapter 23 Section 23.1 Table 23.1 Conclusions Page 3	It is unclear if scour protection at culverts will extend into neighbouring properties where the corridor is narrow and the likelihood is erosion will continue past the rail corridor boundary (e.g. due to high velocities in dispersive soils). Scour / sediment transport may have a knock-on effect on adjoining landowners including state lands, plus QR/TMR drainage.	Update the EIS to confirm ARTC have a policy to extend scour protection beyond their corridor, where calculations have indicated erosion in third party properties.	1
148	Design Drawings General	Design drawings have been included with the EIS. However, the EIS has not included detailed proposal plans on the project interface with the existing railway corridor.	Detailed design plans are required to clarify the interface of the proposed development with the South Western line and Millmerran Branch line, including but not limited to, fencing	1

			arrangements to prevent unauthorised access, earthworks, stormwater drainage, services and utilities and the design of new rail transport infrastructure and other rail infrastructure. The design of the development will need to ensure that emergency and maintenance access to the railway corridor is not obstructed or interfered with and that the existing and future operations of the railway corridors are not compromised. Additionally, the placement, design and management of stockpile areas and dangerous goods must ensure there are no adverse impacts on the railway corridor. Amend the EIS (Draft OEMP and Proponent Commitments) accordingly.	
149	Appendix C Stakeholder Engagement Report Section 5.4.4 Table 5.9 Page 77	The dates in Table 5.9 finishes on 23 September 2020 and gives the perception that the working group is no longer meeting.	Amend the EIS to state that fortnightly meetings are ongoing for the life of the project.	2
150	Appendix C Stakeholder Engagement Report Section 7.2 Page 125	The first paragraph states: *'The decision by the Coordinator-General about whether to approve the Project will be made public via DSDIP's and ARTC Inland Rail's websites.'* This wording is potentially incorrect, as the Coordinator-General will determine whether the project can proceed.	Consider revising the wording to ensure accuracy.	2
151	Appendix C Stakeholder Engagement Report General	There is no mention of a Stakeholder Risk Register, not having a Stakeholder Risk Register may jeopardise the Queensland Government's commitment to ensuring Queensland gets the best outcome from the project, and that the Australian Government considers and responds appropriately to issues raised by Queenslanders.	Update the EIS to include the requirement for ARTC to develop and maintain a Stakeholder Risk Register (sometimes referred to as a Risk Log) to detail all identified risks, including description, category, cause, probability of occurring, impact(s) on objectives, proposed responses, owners, and current status. Update the EIS to include a document which outlines the results of the Project's qualitative risk analysis, quantitative risk analysis, and risk response planning for Stakeholder Engagement.	1
152	Appendix J Terrestrial Ecology Technical Report General	The Terrestrial Ecology and Technical Report has not been undertaken in accordance with TMR's Interim Management Manual (SSM), SMM Appendix 2 soil forms, TMR Soil Group classifications and CSIRO Clay Mineralogy Maps.	In the absence of any nominated ARTC standard, update the EIS to include the requirement to identify, assess, ameliorate and manage the project soils as per the TMR Interim SMM, SMM Appendix 2 soil forms, TMR Soil Group Classifications Map and CSIRO Clay Mineralogy Maps. Amend the EIS accordingly.	2
153	Appendix J Terrestrial Ecology Technical Report General	It is industry standard that the technical report be undertaken by a suitably qualified soil practitioner and with consideration to the study team chapter that does not appear to be the case. A Certified Professional Soil Scientist is required to undertake soil surveying, assessment and management as per TMR's interim SSM.	It is recommended that a Certified Professional Soil Scientist undertake soil surveying, assessment and management as per the Interim TMR Soil Management Manual.	2
154	Appendix P Surface Water Quality Technical Report General	The Surface Water Quality Technical Report, in relation to the management of project soils, has not been undertaken in accordance with TMR's Interim Management Manual (SSM), SMM Appendix 2 soil forms, TMR Soil Group classifications and CSIRO Clay Mineralogy Maps.	In the absence of any nominated ARTC standard, include the requirement to identify, assess, ameliorate and manage the project soils as per the TMR Interim SMM, SMM Appendix 2 soil forms, TMR Soil Group Classifications Map and CSIRO Clay Mineralogy Maps. Amend the EIS accordingly.	2
155	Appendix P (Part 1) Surface Water Quality Technical Report Section 2.3.1 Page 25	The EIS states that 'all required scour lengths were predicted to fit within the rail corridor'. Topography, erodibility and velocities may well dictate that scour extends beyond the boundary. It is unclear what allowance has been made should scour protection be required to extend beyond the corridor boundary and impinge on third party property (e.g. into cropping land or highway corridor).	Update the EIS to confirm ARTC have a policy to extend scour protection beyond their corridor, where calculations have indicated erosion in third party properties.	1
156	Appendix Q Hydrology and Flooding Technical Report General	Proposed works and impacts on state-controlled roads even if they are included within the project footprint need to be clearly understood. However, no detail of proposed road works are included within the EIS. As it is, impacts on state-controlled roads are not acceptable to TMR and in some cases (i.e. Yelarbon) not even understood, as a levee raise is currently proposed affecting the Cunningham Highway. If affluxes are due to road works, this need to be documented in detail for TMR to have an informed position to comment.	TMR recommends that in addition to updating the EIS as requested in TMR's other comments, ARTC: • create a separate impacts memorandum that details flooding and hydrology impacts to State-controlled roads	1

			• discuss that impacts memorandum directly with TMR and the impact of proposed works within and outside the project footprint. A higher level of detail is required to clearly identify all impacts in state-controlled roads due to the proposed railway and ancillary roadworks.	
157	Appendix Q Hydrology and Flooding Technical Report General	Recommend an additional afflux reporting band in accordance with TMR's Hydrology and Hydraulic Modelling Guidelines. Additional band should be between +10 and +20mm (then 20–50, etc) as often afflux in sensitive areas can end up just above 10mm and with only one band covering 10–50, it is not possible to tell visually whether the afflux is just in excess or a lot in excess.	Add an additional afflux reporting bands in accordance with TMR's Hydrology and Hydraulic Modelling Guidelines. Additional band should be between +10mm and +20mm (then 20–50mm, etc)	1
158	Appendix Q Hydrology and Flooding General	It is unclear what the project's approach is to temporary works. Whilst it is appreciated the details of temporary works are not known in detail at this stage, this project is understood to involve significant and separable earthworks packages, major bridge packages, etc all of which will involve temporary placement of filling within floodplains, hence the potential for hydraulic impacts is significant.	Outline proposed approach to how the flooding, stormwater and drainage impacts of temporary works impacts will be managed.	1
159	Appendix Q Hydrology and Flooding General Sections 4.2 and 4.3 Pages 31 to 33	Section 4.2 and 4.2 states/implies that design events between 20% AEP (1 in 5) and PMF have been considered for impact assessment. It is unclear if frequent type floods (63% and 39% AEP) have been considered. Frequent flood events are the most likely type of flooding to be of concern for many rural areas, where drainage can be more important than flooding.	Ensure all relevant stormwater and flooding events have been considered and assessed: 63.2%, 50%, 39%, 20%, 10%, 5%, 2% and 1% AEP, noting that for rural areas, frequent flooding events (63% and 39%) AEP are of particular concern. Amend the EIS accordingly.	1
160	Appendix Q Hydrology and Flooding General	It is unclear what the hydraulic approach to new railway corridor fencing is within the flood modelling, especially where mesh is tight, and debris can catch. This type of fencing could impact local farm drainage performance.	Clarify the approach to new railway corridor fencing within the flood modelling, particularly where this may cause blockages, catch debris or affect local farm drainage performance. Amend the EIS accordingly.	1
161	Appendix Q Hydrology and Flooding General	The types of noise barriers to be used with the project are yet to be determined/finalised. However, the noise barriers may affect the project's hydraulic and flooding impact. It is unclear how this impact has been considered, if at all.	Amend EIS to clarify how the impact of noise barriers can be included in the flood modelling, and how their impact can be suitably mitigated and managed. In addition to not worsening the flood impact, noise barriers should be aesthetically pleasing.	1
162	Appendix Q Hydrology and Flooding General	Appendix Q Hydrology and Flooding Technical Report should be revised to demonstrate that the management of stormwater and flooding post-development can achieve a no worsening impact (on the pre-development condition) to State transport corridors for all flood and stormwater events that exist prior to development and up to a 1% Annual Exceedance Probability (AEP).	Appendix Q - Hydrology and Flooding Technical Report (reference 3100 and document number 2-0001-310-EAP-10-RP-0213) should be revised to demonstrate that the management of stormwater and flooding post development can achieve a no worsening impact (on the pre-development condition) for all flood and stormwater events that exist prior to development and up to a 1% Annual Exceedance Probability (AEP). In particular provide a revised hydraulic and hydrological analysis demonstrating the design flood peak discharges for the site and surrounding area which exist in the pre and post development scenarios for all flood and stormwater events up to a 1% Annual Exceedance Probability addressing the following: • At least the following flood and stormwater events: 63.2%, 50%, 39%, 20%, 10%, 5%, 2% and 1% AEP. • The flood model needs to adequately encompass the existing and future railway corridor. Mapping (afflux, water level/depth and velocity) should be provided to clearly illustrate the pre-development scenario, and the post development impacts for all relevant design events. Maps scales should be altered to clearly show the potential impacts on the state-controlled transport corridors. The afflux maps should be revised so that a negligible impact is referred to as +/- 10mm. The report should demonstrate that flood storage capacity is maintained on the site with the development and any early temporary works. Overland flow paths/ hydraulic conveyance should be maintained on the site as part of the proposed development. • The flood model should be underpinned by a revised General Arrangement Plan which clearly shows the pre and post development impervious area on the site. • The flood model should be underpinned by an earthworks plan that clearly shows the location and extent of proposed excavation and filling (earthworks), including likely volumes of cut and fill and the resulting cut: fill balance. The revised report should take into account all comments/ recommendations preceding/above. Include details of the mitigation measures proposed to address any potential stormwater and flooding impacts of the proposed development.	1

163	Appendix Q (Part 1) Hydrology and Flooding Section 14.5.3.3 Pages 272 to 274 Section 14.5.3.3 Table 14.19 Page 274	Although standards currently do not mention them, a risk assessment may be required for extreme events larger than 2000-year AEP. This comment applies for all sections where there are large impacts during extreme events. Mitigation measures may be necessary/proposed (including more drainage structures).	Amend the EIS documents to analyse and mitigate impacts during extreme events larger than 2000yr AEP.	1
164	Appendix Q (Part 1) Hydrology and Flooding Section 19.6.3.2 Page 383	It is unclear why impacts to flood sensitive receptors are not included in section 19.6.3.2.	Amend the EIS to include flood sensitive receptors.	1
165	Appendix Q (Part 1) Hydrology and Flooding General Section 4.4 Page 33	It is recommended in TMR's *Bridge Scour Manual* (cited in References at Section 4.4) that specialist assessment by a geomorphologist is undertaken of bridge sites in order to understand the natural scour context of the site so as to build in appropriate allowances in the bridge design for future scour. This general issue is considered particularly important for the study area because of known scour issues associated with "black soil country". There is no evidence of specialist geomorphic assessment of the existing environment at proposed bridge sites in the EIS.	Amend the draft EIS and supporting documents to include specialist geomorphic assessment and input for all proposed bridge sites. Such advice is also advisable for culverts in sensitive areas.	1
166	Appendix Q (Part 1) Hydrology and Flooding Section 4.2 Table 4.2 Page 32	Table 4.2 – No impact criteria is nominated for existing rail transport infrastructure and railway corridor land. As for state-controlled roads, TMR and QR require a no-worsening criterion to any existing rail infrastructure and rail corridor land i.e. no impact to the existing local immunity of the railway; no increased risk of subgrade submergence or time of submergence.	Amend the EIS to nominate appropriate impact criteria for existing rail transport infrastructure, other rail infrastructure and railway corridor land. This should be that the post development scenario can achieve a no worsening impact (on the pre-development condition) for all flood and stormwater events that exist prior to development and up to a 1% Annual Exceedance Probability (AEP). This should include at least the following flood and stormwater events: 63.2%, 50%, 39%, 20%, 10%, 5%, 2% and 1% AEP. Stormwater management for the proposed development must ensure no worsening or actionable nuisance to existing railway corridors, including rail transport infrastructure and other rail infrastructure, caused by peak discharges, flow velocities, water quality, sedimentation and scour effects. Flood storage capacity is maintained on the site with the development. Overland flow paths/ hydraulic conveyance should be maintained on the site as part of the development.	1
167	Appendix Q (Part 1) Hydrology and Flooding Section 4.2 Table 4.2 Page 32	The criteria (other than the water level criteria) in Table 4.2 are vague and not definitive. For example, the extreme event criteria of 'no unacceptable or unexpected impacts' is totally subjective. Best practice is to nominate definitive criteria based on avoidance of actionable nuisance or damage.	Nominate appropriate definitive criteria in Table 4.2 for stormwater and flooding in accordance with best practice and avoid vague criteria. Amend the EIS accordingly.	1
168	Appendix Q (Part 1) Hydrology and Flooding Section 4.4 Page 33	Other relevant standards/guidelines for design of transport infrastructure in Queensland are: • Road Drainage Manual (TMR – 2019) • Hydrology and Hydraulic Modelling Guidelines (TMR – 2019) • TMR Standard Drawings (various drawings cover drainage structures) • Queensland Rail Standard Drawings (various drawings cover drainage structures) • Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia. Australian Institute for Disaster Resilience (2017) • State Planning Policy – State Interest Guidance Material – Natural hazards, risks and resilience – Flood. Department of Infrastructure, Local Government and Planning (2017) • Austroads Guide to Bridge Technology Part 8: Hydraulic Design of Waterway Structures	Amend the EIS and supporting documents as appropriate to refer to all relevant standards/guidelines concerning flooding and stormwater management.	1

169	Appendix Q (Volume 1) Hydrology and flooding technical report Section 16.6.3.8 Tables 16.33 and 16.34 Page 330 and 331	The Cunningham Highway (crossing near the bridge) flood impact data indicates that with the rail alignment, the 1% AEP depth of inundation increases by 190mm on the eastern side. The time of submergence increase to 9–11 hours depending on 5% AEP to 1% AEP event on eastern side, and the increase in time of submergence on the western side is about 15–28 hours depending on 5% AEP to 1% AEP event.	TMR's position is that impacts resulting from the project should be no net worsening and an increase will not be accepted. Therefore, further mitigation measures (cross drainage structures) by the project is likely required to reduce this impact. Flood resilient pavements would need to be designed and constructed depending on the location. Amend the EIS accordingly.	1
170	Appendix Q (Volume 1) Hydrology and Flooding Technical Report Section 16.6.3.8 Table 16.34 Page 331	The Yelarbon-Keetah Road flood impact data indicates that with the rail alignment the 2% AEP time of submergence increases by 14 hours.	TMR's position is that impacts resulting from the project should be no net worsening and an increase will not be accepted. Therefore, further mitigation measures (cross drainage structures) by the project is likely to be required to reduce this impact. Flood resilient pavements would need to be designed and constructed depending on the location. Amend the EIS accordingly.	1
171	Appendix Q (Volume 1) Hydrology and Flooding Technical Report Section 9.5.3.3 Table 9.45 Page 178	The Gore Highway flood impact data in Table 9.45 indicates that with the rail alignment the 2% and 1% AEP time of submergence will increase by 13 and 12 hours respectively.	TMR's position is that impacts resulting from the project should be no net worsening and an increase will not be accepted. Therefore, further mitigation measures (cross drainage structures) by the project is likely required to reduce this impact. Flood resilient pavements would need to be designed and constructed depending on the location. Amend the EIS accordingly.	1
172	Appendix Q (Volume 1) Hydrology and Flooding Technical Report Section 4.1 Table 4.1 Page 31	Table 4.1 of the hydraulic report identifies several performance design criteria for the project, but it is unclear what Representative Concentration Pathway (RCP) is considered for climate change.	Amend the EIS to clarify which representative concentration pathway (RCP) is considered for climate change.	2
173	Appendix Q (Volume 1) Hydrology and Flooding Technical Report Section 4.2 Table 4.2 Page 32	Table 4.2 identifies flood impact objectives for the project where the change in peak levels identifies sections where up to 400 mm localised afflux is accepted. An increase in 400mm localised afflux can be significant.	TMR's recommend 200mm should be treated as the limit and affluxes larger than 200 mm as non-compliances and review and accept on a case by case basis. Amend the EIS accordingly.	1
174	Appendix Q (Volume 1) Hydrology and Flooding Technical Report Section 4.2 Table 4.2 Page 32	Apart from the water level criteria, these criteria are not definitive, but vague. For example, the extreme event criteria of "no unacceptable or unexpected impacts" is totally subjective. Best practice is to nominate definitive criteria based on avoidance of actionable nuisance or damage.	Amend the EIS to nominate appropriate definitive criteria in accordance with best practice (for example, but not limited to, add a maximum afflux criterion for events larger than 1% AEP to Table 4.2.)	1
175	Appendix Q (Volume 1) Hydrology and Flooding Technical Report Section 4.2 Table 4.2 Page 32	The afflux nominated as acceptable impacts for "roads" was not agreed to by TMR as being appropriate for state-controlled roads. TMR will insist on a no-worsening criteria to any state-controlled road – i.e. no impact to the local immunity of the road, no increased risk of water on the pavement and no increase in the time of submergence to the road.	Amend the EIS and project to clarify and comply with TMR's requirements for state-controlled infrastructure (road and rail) (i.e. no net worsening).	1
176	Appendix Q (Volume 1)	The EIS identifies that risks posed through climate change will be dealt with via sensitivity analysis. Climate change mitigation measures should be incorporated into the design, in particular for parts of the infrastructure that are difficult to modify later.	Amend the EIS to incorporate climate change mitigation measures within the design, rather than just as a sensitivity analysis.	1

	Hydrology and Flooding Technical Report Section 4.2 Table 4.2 Page 32 Section 7.9.4.3 Pages 71 and 72 Section 8.6.4 Page 101			
177	Appendix Q (Volume 1) Hydrology and Flooding Technical Report Section 7.4.1.2 Figure 4 Pages 47 and 48	Section 7.4.1.2 related to the January 2011 calibration event states that there was a problem in the rating curve of the gauge, but it is unclear if the recorded flows were re-rated.	Amend the EIS to confirm whether the recorded flows were re-rated as a consequence of the problem in the rating curve.	2
178	Appendix Q (Volume 1) Hydrology and Flooding Technical Report Section 7.9.4 Page 70	Section 7.9.4 relates to a sensitivity analysis for Gowrie Creek, but the report identifies that blockage was assessed in accordance with Australian Rainfall and Runoff 2016 (ARR2016). "Blockage" should be included in the design in accordance with ARR2016 rather than as part of the sensitivity analysis.	Recommend amending the EIS to include blocking as part of the design in accordance with *Australian Rainfall and Runoff 2019*.	2
179	Appendix Q (Volume 1) Hydrology and Flooding Technical Report Section 8.6.3.3 Table 8.30 Page 96	Section 8.6.3.3 identifies the impacts of the project on state-controlled roads. Table 8.30 indicates that for 1% AEP the depth of inundation for Toowoomba-Cecil Plains Road (a state-controlled road) increases by 70mm and time of submergence increases by 1.1 hours (on top of top of 330 mm existing inundation). This impact is not considered negligible and is not acceptable to TMR. Additionally, afflux maps in the Appendix seem to suggest larger impacts in the order of 500mm are observed at the crossing of Inland Rail with Toowoomba-Cecil Plains Road and is not clear if the proposed intersection is an overpass (rail over road or road over rail).	Consistent with TMR's previous advice, TMR's position is that impacts resulting from the project should be no net worsening and a 70mm increase will not be accepted. Therefore, further mitigation measures (cross drainage structures) by the project is likely required to reduce this impact. Amend the project and EIS accordingly. Flood resilient pavements would need to be designed and constructed depending on the location. Additionally, further detail and information (afflux maps, drainage structure info, etc) is required to understand this impact for all events including extreme events.	1
180	Appendix Q (Volume 1) Hydrology and Flooding Technical Report Section 9.3.5/9.3.6 Pages 135	Section 9.3.5 states that calibration for the hydraulic model was based upon comparisons made between hydrographs at key gauge locations as well as level and depth comparisons at both anecdotal flood markers and surveyed floodmarks. Further calibration and validation are likely required, including further comparison to floodmarks and anecdotal evidence (in particular for location 12) to further ensure the credibility of the models.	It is recommended that further calibration/validation be undertaken in particular for comparison to floodmarks and anecdotal evidence for locations e.g. flood marker 12 which have poor matches. Amend the EIS accordingly.	2
181	Appendix Q (Volume 1) Hydrology and Flooding Technical Report Section 9.5.3.3 Table 9.44 Page 177	The Millmerran-Leyburn Road flood impact data indicates that with the rail alignment the 2% AEP depth of inundation will increase by 60mm on the eastern side of crossing and decrease by 440mm on western side of crossing. Similarly, the time of submergence increases by 3 hours on the eastern side and decreases by 4 hours on western side. However, for a 20% AEP event, the time of submergence increases by 40 hours. An increase in velocity is also identified and will need mitigation.	TMR's position is that impacts resulting from the project should be no net worsening and an increase will not be accepted. Therefore, further mitigation measures (cross drainage structures) by the project is likely required to reduce this impact. Flood resilient pavements would need to be designed and constructed depending on the location. Additionally, further detail and information (afflux maps, drainage structure info, etc) is required to understand this impact for all events including extreme events.	1
182	Appendix Q (Volume 1) Hydrology and Flooding Technical Report Section 9.5.4.2	It is possible blockage played a role during historical events and might help with calibration.	For noting and consideration in the EIS.	2

	Page 189			
183	Appendix Q (Volume 1) Hydrology and Flooding Technical Report Section 10.5.3.3 Table 10.19 Page 214 Appendix Q (Volume 2, Part 1) Hydrology and Flooding Technical Report Appendix D Figure D4-E Page 126	The Millmerran-Inglewood Road flood impact data indicates that with the rail alignment the 2% AEP depth of inundation will increase by 10mm. However, for a 20% AEP event, the time of submergence increases by 5 hours. The afflux maps in Appendix (Figure D-5E) seem to show larger impacts in the order of 50 to 100mm observed just upstream of the crossing of project alignment with Millmerran-Inglewood Road due to the colour palette used for the maps. As in TMR's other comment, it is not clear if the proposed intersection is an overpass (rail over road or vice versa). Similarly, the afflux maps in Appendix D (Fig. F4-E) seem to show larger impacts in the order of 200 to 500mm observed at Millmerran-Inglewood road at locations other than those reported.	TMR's position is that impacts resulting from the project should be no net worsening and an increase will not be accepted. Therefore, further mitigation measures (cross drainage structures) by the project is likely required to reduce this impact. Flood resilient pavements would need to be designed and constructed depending on the location. Amend the EIS to clarify if larger impacts are the case and provide further detail and information (afflux maps, drainage structure info, etc) to allow TMR to understand this impact for all events including extreme events. This should include any potential mitigation measures required to reduce the impact. Amend the project and EIS accordingly.	1
184	Appendix Q (Volume 1) Hydrology and Flooding Technical Report Section 16.6.3.8, Table 16.30 Page 329 Appendix Q (Volume 2, Part 2) Hydrology and Flooding Technical Report Appendix J Figure J4-E Page 143	Afflux Maps in Appendix J (Fig. J4-E) seem to show significantly larger impacts in the order of 500mm observed at the Cunningham Highway (south of proposed levee) and Yelarbon-Keetah Road at locations, more than those reported. These impacts on the Cunningham Highway are not considered negligible and are not acceptable to TMR. Also, it is not clear how if the proposed levee will interact with the Cunningham Highway (levee over road or vice versa).	Amend the EIS to provide additional information (afflux maps, drainage structure info, etc) to understand the impacts for all events including extreme events. This should include any required mitigation measures including additional drainage structures etc.	1
185	Appendix Q1 (Volume 1) Hydrology and Flooding Technical Report Section 3.2 Page 30 Section 16 Pages 296 to 339	Inglewood-Texas Road and Texas-Yelarbon Road (State-controlled roads) are listed as floodplain infrastructure within the Macintyre Brook floodplain in section 3.2 of Appendix Q1. Section 16 of Appendix Q1 contains the floodplain analysis for Macintyre Brook and it does not include any data or references to these roads.	Update the EIS to include data for all state-controlled roads that are located within floodplains.	1
186	Appendix Q1 (Volume 1) Hydrology and Flooding Technical Report Section 9.4.3 Table 9.30 Page 164	The EIS refers to established rail lines as 'Existing QR Rail Line'. There is more than one existing QR Rail Line in the Project area and therefore it is difficult to determine which line is being referred to.	Amend the EIS to refer to existing QR rail lines by their name.	1
187	Appendix Q1 (Volume 1)	Some of the tables appear to have incorrectly calculated (/summarised) the change in AAToS and depth of inundation between the existing and developed cases. For example, the change in AAToS appears miscalculated for the Warrego Highway (Table 7.39),	Amend the EIS to clarify and accurately reflect the change in flood depth, inundation length, TOS and AATOS cause by the project for all state-controlled roads and rail lines.	1

	Hydrology and Flooding Technical Report General	Pampas-Horrane Road (Table 9.45) and the Cunningham Highway (Table 16.34). Similarly, the change in inundation appears miscalculated for the Cunningham Highway (Table 16.28 and 16.31). The EIS does not provide data (other than overtopping depths) for existing QR rail lines located in floodplains. It also does not state the change in inundation length for road and/or rail infrastructure.		
188	Appendix R (Part 1) Groundwater Technical Report Section 4.7.7.1 Page 86	It is unclear if the absence of a Groundwater Dependent Ecosystem (GDE) means the area was surveyed and no GDEs were found or that the GDE has no record for that area.	Update the EIS to clarify what the Atlas is indicating to the study and amend the appendix and relevant EIS chapter accordingly.	2
189	Appendix R (Part 1) Groundwater Technical Report Section 6.4 Page 112	It is unclear whether one round of water sampling from two years ago is enough to satisfy the requirements of ToR.	Office of the Coordinator-General to confirm if one round of water sampling from 2 years ago is sufficient to satisfy the requirements of the ToR.	2
190	Appendix S (Part 1) Construction Noise and Vibration and Operational Road Traffic Noise Technical Report Section 5.2.1 Page 35	It is unclear in the EIS if the baseline noise at the 12 potential borrow sites has been established so that if the sites become operational a comparison of noise levels can be accurately made. If this baseline assessment is not undertaken until detailed design, it is likely there may not be sufficient time to collect an adequate baseline level.	Update the EIS to confirm if baseline noise monitoring was undertaken for the borrow pit locations.	1
191	Appendix S (Part 1) Construction Noise and Vibration and Operational Road Traffic Noise Technical Report Section 6.1.1 Table 6.1 Pages 46 and 47	It is unclear in the EIS if the increased height of the Cunningham and the Gore Highways was modelled due to them being placed on grade separation crossings. This will be particularly relevant for vehicles (especially road-trains) accelerating up onto the bridges when travelling away from the receptors.	Update the EIS to confirm that the height increases were included in the assessment.	1
192	Appendix S (Part 1) Construction Noise and Vibration and Operational Road Traffic Noise Technical Report Section 6.1.1 Table 6.1 Page 46	The new Gore Highway at Brookstead is not listed in the table.	Update the EIS to include the new Gore Highway at Brookstead.	1
193	Appendix T Operational Railway Noise and Vibration Technical Report Section 11.2 Page 121	It is unclear if the operational noise assessment considered the scenario D where one train is waiting on the passing loop with its engines running, plus another train is on the mainline also with its engines running.	Update the EIS to confirm combined noise levels were modelled where receptors are present.	1
194	Appendix T	Section 11.6 states that:	Update the EIS to more accurately reflect the perceived noise by sensitive receptors, particularly at night.	1

	Operational Railway Noise and Vibration Technical Report Section 11.6 Page 124	*'when the trains depart from crossing loops the locomotives are required to initially operate under a high notch setting from a standing position. This can cause higher noise emissions… but would not be expected to influence the noise levels over the 15-hour daytime and 9-hour night-time assessment periods.'* This statement is confusing and somewhat contradictory. Recommended that the EIS revisit and more accurately reflect the perceived noise by sensitive receptors, especially at night.		
195	Appendix X (Part 1) Traffic and Transport Impact Assessment Section 12 Pages 214 to 217 Chapter 18 Traffic, Transport and Access Section 18.4.1.1 Page 19 Chapter 22 Outline Environmental Management Plan General	TMR notes that the Traffic and Transport Impact Assessment (TIA), Pavement Impact Assessment (PIA) and Safety Audits/Assessments are not comprehensive or conclusive as ARTC has had to make assumptions about haulage routes given a construction contractor has yet to be appointed. In recognition of this limitation ARTC has proposed to update the Traffic Impact Assessment when the project contractors are appointed, and final traffic generation is clearer in accordance with TMR's GTIA. For example, Section 18.4.1.1 states *"The TIA may be finalised when project contractors are appointed and the final traffic generation is clearer".* TMR does not object to this approach but will need to be confident the ARTC is legally obligated through statutory powers/laws to update the TIA, PIA and Safety Audit/Assessment and then undertake necessary mitigation works, and fulfil its various other commitments (and additional commitments yet to be determined) in the OEMP to protect TMR's State interests. This is particularly important because TMR does not have the power to require ARTC to update the TIA, PIA and Safety Audit/Assessment through the *Transport Infrastructure Act 1994.*	TMR recommend that ARTC continue to engage with TMR early in the preparation and review of a more detailed Traffic Impact Assessment, Road Pavement Impact Assessment and Safety Audit/Assessment and resultant mitigation measures. Early and continued engagement will ensure a Safe System approach to the delivery of the Inland Rail project that does not detriment the state-controlled road network. The requirement to prepare and review a more detailed Traffic Impact Assessment, Road Pavement Impact Assessment and Safety Audit/Assessment should be added to those requirements already listed in the Traffic, Transport and Access part of the draft Outline Environmental Management Plan. This requirement should clearly articulate that ARTC will consult and work with TMR, and ultimately obtain TMR's endorsement for the TIA and pavement impact assessment (PIA).	1
196	Appendix X Traffic Impact Assessment GTIA Section – 1.1 Seek Preliminary Advice	The TIA report indicates that extensive consultation has been undertaken with the following stakeholders and associated consultation method: • NSW Roads and Maritime Services (RMS): RFI, Telephone and emails • QLD Department of Transport and Main Roads (TMR): Request for information (RFI), meetings and emails • Goondiwindi Regional Council: RFI • Inverell Shire Council: RFI • Toowoomba Regional Council: RFI and meetings • Clarence Valley Council: RFI • Moree Plains Shire Council: RFI • Gwydir Shire Council: RFI The TIA indicates that the consultation was used as an opportunity to confirm the acceptability of: • The proposed TIA process • List of potentially impacted assets included in the assessment • Guidelines, manuals and policies adhered to for the assessment • Assumptions (such as traffic growth rates, assumed base volumes, etc.) • Proposed mitigation measures. It is unclear from the TIA whether all affected road authorities were consulted in preparing the TIA. Although the TIA states the type of information requested from each stakeholder, it is still unclear whether the information requested was actually provided, what information was ultimately provided, if there were any gaps in the provided information, how were these gaps resolved and whether any assumptions had to be made about the provided information.	It is suggested that clarification be provided regarding the outcomes of the consultation whether if there were any agreement/requirements stipulated by TMR, RMS and councils regarding the study area, impact assessment process, key issues to be addressed, performance metrics, mitigation and assumptions for the TIA. It is also suggested that the TIA be updated to elaborate further on the type of information received and any gaps in information which had to be resolved.	1
197	Appendix X Traffic Impact Assessment GTIA Section – 1.2 Source and Compile	The TIA report also indicates that existing traffic volume data was obtained for all impacted local government roads (LGRs) and state-controlled roads. The base year of the TIA assessment is 2021. Traffic data was sourced from a combination of sources including from TMR's detailed segment analysis reports, Queensland Globe, Traffic Viewer, Logan Motorway and Toowoomba Second Range Crossing data, adopting volumes from nearby adjacent roads, traffic surveys and assumed volumes. The TIA report indicates that LGR traffic volumes were estimated based on 7-day 24-hour traffic surveys, volumes obtained	The EIS (/TIA) should use the most up to a date and latest traffic data. Clarification is required explaining what traffic data has been obtained from Queensland Globe, how they have been used in the TIA and why the TMR detailed segment report data was not used instead.	1

	Base Road Link Traffic Information Traffic, Transport and Access Section 18.6.2.1 Page 77	from relevant road authorities and assumptions where traffic information is not available. The TIA indicates that **7-day 24-hour traffic surveys** were conducted on the following LGRs: **Goondiwindi Regional Council** • Bybera Road Between Cunningham Highway and Private Access • Bybera Road Between Private Access and Unnamed Road • Cremascos Road Between Cunningham Highway and 400 m west of private access • Kildonan Road Between Yelarbon-Keetah Road and Cunningham Highway • Lovells Crossing Road Between Callandoon Street and Unnamed Road • Lovells Crossing Road Between Unnamed Road and Unnamed Road • Springborg Road Between Cunningham Highway and Railway Line • Suttons Road Between East Sawmill Road and Unnamed Road • Thornton Road Between Millmerran-Inglewood Road and Unnamed Road • Whetstone Access Road Between Cunningham Highway and 600 m west of Railway Line **Gwydir Shire Council** • North Star Road Between MPSC Council Boundary and Edwards Street • North Star Road Between Edward Street and Getta Road • North Star Road Between Getta Road and Blue Nobby Road • North Star Road Between Blue Nobby Road and Hibernia Road • North Star Road Between Hibernia Road and Yallaroi Road • North Star Road Between Yallaroi Road and Baroma Road • North Star Road Between Baroma Road and Warialda Road **Moree Plains Shire Council** • Bruxner Way Between Newell Highway and Tucka Tucka Road • Bruxner Way Between Tucka Tucka Road and North Star Road • North Star Road Between Bruxner Way and Gwydir Shire Council boundary The TIA indicates that traffic data for the following roads were **obtained from the relevant authority**: **Department of Transport and Main Roads** • Toowoomba Bypass 319 - Between Gore Highway and Toowoomba-Cecil Plains Road • Toowoomba Bypass 319 - Between Toowoomba-Cecil Plains Road and New England Highway • Toowoomba Bypass 319 - Between New England Highway and Warrego Highway **Goondiwindi Regional Council** • Cemetery Road Between Mooroobie Lane and Unnamed Road • Coolmunda Dam Access Full Extent • Fosters Road Between Cunningham Highway and Grays Road • Grays Road Between Millmerran-Inglewood Road and Mosquito Creek Road • Mooroobie Lane Between Wondalli Kurumbul Road and Cemetery Road • Mosquito Creek Road Between Grays Road and Cunningham Highway • Old Texas-Yelarbon Road Between Rocky Creek Road and Inglewood Texas Road • Old Texas-Yelarbon Road Between Texas-Yelarbon Road and Rocky Creek Road • Town Commons Road Between Waggamba Road and Barwon Highway	Clarification is required on how the assessment has taken into account the lower traffic demand on the road network in 2020 and 2021 given the COVID-19 situation. Clarification is required on how traffic volume data for the Logan Motorway were used in the TIA. Clarification is required on how traffic data from the Toowoomba Second Range Crossing were used in the TIA. It is unclear from the TIA the basis of the road hierarchy and LOS thresholds defined per road. LOS thresholds were not defined for highway class links. Clarification is required in the TIA report. It is unclear from the report how traffic volume data obtained from 7-day 24-hour counts relates to AADT as it is not a 365-day count. Clarification is also required describing how the data obtained from the 7-day 24-hour counts were converted into AADT and representative peak hour volumes. It was found in the TIA that the traffic volume data obtained were from different years. Clarification is required relating to how the data from different years were used to estimate base year 2021 traffic and clarification is required. Clarification is required on the rationale and how the "assumed" traffic volumes were estimated for the impacted roads. Amend the EIS (/TIA) to respond to these issues accordingly.	

		• Wondalli Kurumbul Road Between South Western System (Railway) and Bickers Road • Yelarbon Kurumbul Road Between Cunningham Highway and Wondalli Kurumbul Road **Toowoomba Regional Council** • Alderley Street Between Gore Highway and Condamine Street • Alderley Street Between Greenwattle Street and Gore Highway • Athol School Road Between Gore Highway and Trader Road • Biddeston Southbrook Road Between Gore Highway and Stower Road • Blackwell Road Between Millmerran-Inglewood Road and Gore Highway • Blackwell Road Between Bunkers Hill School Road and Macaulay Road • Bostock Road Between Pampas-Horrane Road and Unnamed Road • Brimblecombe Rd Between Toowoomba-Cecil Plains Road and Gowrie Mountain School Road • Bunkers Hill School Road Between Gore Highway and Blackwell Road • Campbell Street Between Millmerran-Inglewood Road and Commens Street • Commodore Peak Road Between Millmerran-Inglewood Road and Blackwell Road • Condamine Street Full Extent • Draper Road Between Steger Road and Leesons Road • Drayton Wellcamp Road Between Wellcamp Westbrook Road and Boundary Street South • Euston Road Between Boundary Court and Greenwattle Street • Gap Road Between Gore Highway and Cypress Street • Greenwattle Street Between Euston Road and Alderley Street • Heckendorf Road Between Millmerran-Inglewood Road and Bora Creek Road • Kooroongarra Road Between Millmerran-Inglewood Road and Bliss Road • Kooroongarra Road Between Millmerran-Inglewood Road and Halls Road • Kooroongarra Road Between Millwood Road and Cunningham Highway • Leesons Road Full Extent • Linthorpe Road Between Gore Highway and Loveday Road • Lochaber Road Between McEwan Lane and Gore Highway • Macaulay Road Between Blackwell Road and Wellcamp-Westbrook Road • McDougall Street Between Toowoomba-Cecil Plains Road and Hursley Road • Millwood Road Between Millmerran-Inglewood Road and Kooroongarra Road • Murlaggan Road Between Gore Highway and Roche Road • Murlaggan Road Between Roche Road and Yarranlea Road • Omara Road Between Toowoomba-Cecil Plains Road and Warrego Highway • Owens Scrub Road Between Millmerran-Inglewood Road and Foxwood Road • Railway Street Between Short Street and Vines Street • Saleyards Road Between Millmerran-Inglewood Road and Gore Highway • Scrubby Road Between Gore Highway and Jentz Road • Short Street Between Yandilla Street and Toowoomba Road • Six Mile Road Between Rodney Road and Bligh Street • Steger Road Between Warrego Highway and Draper Road • Toowoomba Road Between Vines Street and Gore Highway • Tummaville Road Between Gore Highway and Mann Silo Road • Wellcamp-Westbrook Road Between Macaulay Road and Toowoomba-Cecil Plains Road • Wellcamp-Westbrook Road Between Toowoomba-Cecil Plains Road and Drayton Wellcamp Road • West Street Between Gore Highway and Rodney Road • Yarranlea Road Between Gore Highway and Railway Line		

- Yarranlea Road Between Railway Line and Saint Helens Road

Traffic volumes were **assumed** for the following roads:

Clarence Valley Council

- Charles Street Between Bent Street and Pacific Highway
- Clarence Street Between Oliver Street and Craig Street
- Clark Road Full Extent
- Dobie Street Between Villers Street and Summerland Way
- Fry Street Between Mary Street and Alice Street
- Mary Street Between Fry Street and Oliver Street
- Oliver Street Between Clarence Street and Mary Street
- Red Lane Between Summerland Way and Trenayr Road
- Trenayr Road Between Red Lane and Clark Road
- Villers Street Between Craig Street and Dobie Street

Goondiwindi Regional Council

- Boodle Street Between Boodle Street and Hunt Street
- East Sawmill Road Between Cunningham Highway and Springborg Road
- Elizabeth Street Between Cunningham Highway and Callandoon Street
- Eukabilla Road Between Kildonan Road and Unnamed Road
- Hunt Street Between Leichhardt Highway and Boodle Street
- Inglewood Quarry Access Road Full Extent
- McDougalls Crossings Road Between Cunningham Highway and 800 m west of Cremascos Road
- Queen Street South Between Yelarbon Kurumbul Road and Danes Lane
- South Kurumbul Road Between Yelarbon-Kurumbul Road and Kildonan Road
- Unnamed Road Between Cunningham Highway and Private Access
- Unnamed Road Between Cemetery Road and Unnamed Road
- Unnamed Road Between Texas-Yelarbon Road and Private Land
- Unnamed Road Between Woodcocks Road and Queen Street North
- Unnamed Road Between East Sawmill Road and Suttons Road
- Unnamed Road Full extent
- Woodcocks Road Between Cunningham Highway and Unnamed Road

Gwydir Shire Council

- Stephen Street Between Long Street and Gwydir Highway
- Warialda Road Between North Star Road and Gournama Road
- Warialda Road Between Gournama Road and Oregon Road
- Warialda Road Between Oregon Street and Stephen Street

Inverell Shire Council

- Campbell Street Between Byron Street and Otho Street
- Texas Bridge Road Between QLD/NSW Border and Bruxner Highway

Moree Plains Shire Council

- River Road Between Newell Highway and Boggabilla Weir

Toowoomba Regional Council

- Airport Quarry Wellcamp Access Road Between Toowoomba-Cecil Plains Road and Wellcamp Airport

- Bligh Street Between Concrete Millmerran and Crosby Street
- Bligh Street Between Six Mile Road and Concrete Millmerran
- Bushy Lane West Between Gore Highway and 650 m west of Gore Highway
- Chamberlain Road Between Warrego Highway and Robson Road
- Dieckmann Road Between Gore Highway and Madelaine Street
- Forestry Road Between Millmerran-Inglewood Road and Unnamed Road
- Fysh Road Between Gore Highway and Fysh Road
- Geitz Road Between Gore Highway and Luck Road
- Gilgal Lane Between Gore Highway and Railway Line
- Grevillea Street Full Extent
- Hall Road Between Gore Highway and Railway Line
- Kahler Road Between Murlaggan Road and Glen Devon Road
- Lindenmayer Road Between Gore Highway and Unnamed Road
- Paint Mine Road Between Gore Highway and Loveday Road
- Paton Road Between Millmerran-Inglewood Road and Kooroongarra Road
- Pittsworth-Felton Road Between Cypress Street and Golf Course Road
- Roche Road Between Murlaggan Road and Saint Helens Road
- Unnamed Road Between Gore Highway and Millmerran Indoor Sports Centre
- Unnamed Road Between Toowoomba-Cecil Plains Road and Unnamed Road
- Unnamed Road Between Tummaville Road and Scrubby Road
- Unnamed Road Between Drayton Westbrook Road and Unnamed Road
- Unnamed Road Between Bostock Road and Unnamed Road
- Unnamed Road Between Forestry Road and Unnamed Road
- Unnamed Road Between Gore Highway and Private Access
- Ware Street Between Gore Highway and Railway Line

The TIA indicates that data obtained from **RMS Traffic Viewer** were used to estimate traffic volumes on the following roads:

Roads and Maritime Services

- Bruxner Highway Between New England Highway and Summerland Way
- Gwydir Highway Between Stephens Road and Delungra Road
- Gwydir Highway Between Delungra Road and Delungra Bypass Road
- Gwydir Highway Between Delungra Bypass Road and Copeton Dam Road
- Gwydir Highway Between Copeton Dam Road and Bannockburn Road
- Gwydir Highway Between Bannockburn Road and Campbell Street
- Gwydir Highway Between Campbell Street and Tingha Road
- Gwydir Highway Between Tingha Road and Elsmore Road
- Gwydir Highway Between Elsmore Road and Woodstock Road
- Gwydir Highway Between Woodstock Road and Waterloo Road
- Gwydir Highway Between Waterloo Road and Coronation Avenue
- Gwydir Highway Between Coronation Avenue and New England Highway
- Gwydir Highway Between New England Highway and Shannon Vale Road
- Gwydir Highway Between Shannon Vale Road and Bald Nob Road
- Gwydir Highway Between Bald Nob Road and Old Grafton Road
- Gwydir Highway Between Old Grafton Road and Coombadjha Road
- Gwydir Highway Between Coombadjha Road and Old Glen Innes Road
- Gwydir Highway Between Old Glen Innes Road and Rogan Bridge Road
- Gwydir Highway Between Rogan Bridge Road and Bent Street
- New England Highway Between Bruxner Way and Bruxner Highway
- New England Highway Between Gwydir Highway and Gwydir Highway
- Newell Highway Between NSW/QLD Border and Bruxner Way
- Pacific Motorway Between QLD/ NSW border and Gwydir Highway

- Summerland Way Between Bruxner Highway and Red Lane
- Summerland Way Between Trenayr Road and Turf Street

Clarence Valley Council

- Bent Street Between Gwydir Highway and Craig Street
- Craig Street Between Villiers Street and Clarence Street
- Craig Street Between Clarence Street and Bent Street

Inverell Shire Council

- Bruxner Way Between Glenrock Road and New England Highway
- Bruxner Way Between Texas Bridge Road and Glenrock Road

The TIA indicates the following assumptions were made in terms of LOS thresholds for the impacted roads:

- Urban Local Road - Volumes derived by assuming LOS A with associated AADT of 2000 veh/day (as per in Austroads Part 2 - Guide to Traffic Engineering Practice: Roadway Capacity)
- Urban Collector Road - Volumes derived by assuming LOS B with associated AADT of 3800 veh/day (as per in Austroads Part 2 - Guide to Traffic Engineering Practice: Roadway Capacity)
- Rural Local Road - Volumes derived by assuming AADT of 400 veh/day (on a review of proximate rural local roads)
- Rural Collector Road - Volumes derived by assuming LOS A with K-value of 0.12 with associated AADT of 2000 veh/day (as per in Austroads Part 2 - Guide to Traffic Engineering Practice: Roadway Capacity)
- Rural Arterial Road - Volumes derived by assuming LOS A with K-value of 0.15 with associated AADT of 1600 veh/day (as per in Austroads Part 2 - Guide to Traffic Engineering Practice: Roadway Capacity)
- Urban Arterial Road - Volumes derived by assuming LOS A with K-value of 0.12 with associated AADT of 2000 veh/day (as per in Austroads Part 2 - Guide to Traffic Engineering Practice: Roadway Capacity)

It is unclear from the TIA how the road hierarchy was determined, and the basis of the LOS thresholds defined per road. LOS thresholds were not defined for highway class links. Clarification is required in the TIA report. It is also unclear from the report how traffic volume data obtained from 7-day 24-hour counts relates to AADT as it is not a 365-day count. Clarification is also required describing how the data obtained from the 7-day 24-hour counts were converted into AADT.

The TIA indicates that **detailed segment report data** was obtained for the following roads:

Transport and Main Roads:

- Cunningham Highway 17D - Between NSW/QLD Border and Leichhardt Highway
- Cunningham Highway 17D - Between Leichhardt Highway and Wyaga Road
- Cunningham Highway 17D - Between Wyaga Road and Yelarbon-Keetah Road
- Cunningham Highway 17D - Between Yelarbon-Keetah Road and Texas Yelarbon Road
- Cunningham Highway 17D - Between Texas-Yelarbon Road and Inglewood Texas Road
- Cunningham Highway 17C - Between Inglewood Texas Road and Millmerran-Inglewood Road
- Cunningham Highway 17C - Between Millmerran-Inglewood Road and Inglewood Quarry Access Road
- Cunningham Highway 17C - Between Inglewood Quarry Access Road and Coolmunda Dam Access
- Gore Highway 28A - Between Millmerran-Inglewood Road and Millmerran-Leyburn Road

		• Gore Highway 28A - Between Millmerran-Leyburn Road and Pampas-Horrane Road • Gore Highway 28A - Between Pampas-Horrane Road and Brookstead-Norwin Road • Gore Highway 28A - Between Brookstead-Norwin Road and Tummaville Road • Gore Highway 28A - Between Tummaville Road and Vines Street • Gore Highway 28A - Between Vines Street and Toowoomba Bypass • Gore Highway 28A - Between Toowoomba Bypass and Westbrook Road • Gore Highway 28A - Between Westbrook Road and Warrego Highway • Inglewood Texas Road 231 - Between Cunningham Highway and Greenup Limevale Road • Inglewood Texas Road 231 - Between Greenup Limevale Road and Texas Yelarbon Road • Inglewood Texas Road 231 - Between Texas-Yelarbon Road and Stanthorpe Texas Road • Inglewood Texas Road 231 - Between Stanthorpe-Texas Road and Old Texas-Yelarbon Road • Inglewood Texas Road 231 - Between Old Texas-Yelarbon Road and QLD/NSW Border • Ipswich Motorway 17A - Between Cunningham Highway and Logan Motorway • Leichhardt Highway 26C - Between Cunningham Highway and Hunt Street • Leichhardt Highway 26C - Between Hunt Street and Barwon Highway • Millmerran-Inglewood Road 337 - Between Cunningham Highway and Thornton Road • Millmerran-Inglewood Road 337 - Between Thornton Road and Council Boundary • Millmerran-Inglewood Road 337 - Between Council Boundary and Kooroongarra Road • Millmerran-Inglewood Road 337 - Between Kooroongarra Road and Blackwell Road • Millmerran-Inglewood Road 337 - Between Blackwell Road and Campbell Street • Millmerran-Inglewood Road 337 - Between Campbell Street and Gore Highway • Millmerran-Leyburn Road 335 - Between Gore Highway and Reiche Road • Oakey Pittsworth Road 323 - Between Gore Highway and Quibet Road • Texas-Yelarbon Road 2322 - Between Cunningham Highway and Old Texas Yelarbon Road • Toowoomba-Cecil Plains Road 324 - Between Warrego Highway and McDougall Street • Toowoomba-Cecil Plains Road 324 - Between McDougall Street and Boundary Street • Toowoomba-Cecil Plains Road 324 - Between Boundary Street and Charlton Connection Road • Toowoomba-Cecil Plains Road 324 - Between Charlton Connection Road and Hursley Road • Toowoomba-Cecil Plains Road 324 - Between Hursley Road and Hanrahans Road • Toowoomba-Cecil Plains Road 324 - Between Hanrahans Road and 2km west of Brimblecombe Rd • Warrego Highway 18B - Between Kingsthorpe Haden Road and Toowoomba Bypass • Warrego Highway 18B - Between Toowoomba Bypass and Charlton Connection Road • Warrego Highway 18B - Between Charlton Connection Road and McDougall Street • Warrego Highway 18B - Between McDougall Street and Bridge Street • Warrego Highway 18B - Between Bridge Street and Toowoomba-Cecil Plains Road • Warrego Highway 18B - Between Toowoomba-Cecil Plains Road and Karrool Street • Warrego Highway 18B - Between Karrool Street and Gore Highway • Warrego Highway 18B - Between Gore Highway and Fifth Avenue • Warrego Highway 18A - Between Toowoomba Bypass and Gatton-Helidon Road • Warrego Highway 18A - Between Gatton-Helidon Road and Gatton-Esk Road • Warrego Highway 18A - Between Gatton-Esk Road and Laidley-Plainland Road		

		• Warrego Highway 18A - Between Laidley-Plainland Road and Tallegalla Two Tree Hill Road • Warrego Highway 18A - Between Tallegalla Two Tree Hill Road and Haigslea Amberley Road • Warrego Highway 18A - Between Haigslea Amberley Road and Brisbane Valley Highway • Warrego Highway 18A - Between Brisbane Valley Road and Mount Crosby Road • Warrego Highway 18A - Between Mount Crosby Road and Cunningham Highway **Queensland Globe data** was obtained for the following roads: **Transport and Main Roads:** • Barwon Highway 31A - Between Leichhardt Highway and Town Common Road • Charlton Connection Road 320 - Between Toowoomba-Cecil Plains Road and Jordan Court • Charlton Connection Road 320 - Between Jordan Court and Warrego Highway • Gore Highway 28A - Between Blackwell Road and Saleyards Road • Gore Highway 28A - Between Saleyards Road and West Street • Gore Highway 28A - Between West Street and Millmerran-Inglewood Road • Pampas-Horrane Road 327 - Between Gore Highway and Bostock Road • Pittsworth-Felton Road 332 - Between Golf Course Road and Short Street • Yelarbon-Keetah Road 241 - Between Cunningham Highway and Old Warwick Road The TIA indicates that data obtained from **volumes were adopted** from adjacent surveyed link road or adjacent TMR detailed segment and weekly report data: • Logan Motorway 210A - Between Ipswich Motorway and Pacific Motorway • Pacific Motorway 12A - Between Logan Highway and NSW/QLD border • Edwards Street Between North Star Road and I B Bore Road TMR's review indicate that information was obtained for all LGR and SCR links expected to be impacted and to be used as primary construction transport routes. It was found in the TIA that traffic volume base year dates of all sources of information were for different years. It is unclear from the TIA report how the data from different years were used to estimate base year 2021 traffic and clarification is required.		
198	Appendix X Traffic Impact Assessment GTIA Section – 1.3 Source and Compile Base Intersection Traffic Information	The TIA report indicates that the following SCR (TMR) intersections will be impacted by the Project's construction turn movements: **Transport and Main Roads: 88 intersections** • Barwon Highway/Leichhardt Highway • Barwon Highway/Town Commons Road • Cunningham Highway/Woodcocks Road • Cunningham Highway/Yelarbon Kurumbul Road • Cunningham Highway/Kildonan Road • Cunningham Highway/East Sawmill Road • Cunningham Highway/Texas Yelarbon Road • Cunningham Highway/Springborg Road • Cunningham Highway/Whetstone Access Road • Cunningham Highway/McDougalls Crossing Road • Cunningham Highway/Cremascos Road • Cunningham Highway/Bybera Road • Cunningham Highway/Yelarbon-Keetah Road • Cunningham Highway/Lovells Crossing Road • Cunningham Highway/Inglewood Texas Road • Cunningham Highway/Millmerran-Inglewood Road • Cunningham Highway/Fosters Road	It is unclear from the TIA report what type of traffic data for intersections have been used for the assessment of intersection performance. TMR's review was unable to confirm the veracity of the intersection volume data used for the intersection analysis in the TIA. Clarification is required in the TIA. Amend the TIA accordingly.	1

		• Cunningham Highway/Inglewood Quarry Access Road • Cunningham Highway/Coolmunda Dam Access • Gore Highway/Murlaggan Road • Gore Highway/Blackwell Road • Gore Highway/West Street • Gore Highway/Dieckmann Road • Gore Highway/Yarranlea Road/ • Gore Highway/Tummaville Road • Gore Highway/Warrego Highway • Gore Highway/Millmerran-Inglewood Road • Gore Highway/Lindenmayer Road • Gore Highway/Hall Road • Gore Highway/Millmerran-Leyburn Road • Gore Highway/Gilgai Lane • Gore Highway/Pampas-Horrane Road • Gore Highway/Scrubby Road • Gore Highway/Gap Road • Gore Highway/Bunkers Hill School Road • Gore Highway/Oakey Pittsworth Road • Gore Highway/Lochaber Road • Gore Highway/Paint Mine Road • Gore Highway/Linthorpe Road • Gore Highway/Toowoomba Road • Gore Highway/Geitz Road • Gore Highway/Bushy Lane West • Gore Highway/Biddeston Southbrook Road • Gore Highway/Unnamed Road • Gore Highway/Athol School Road • Gore Highway/Saleyards Road • Gore Highway/Toowoomba Bypass • Gore Highway/Alderley Street • Inglewood Texas Road/Old Texas Yelarbon Road • Leichhardt Highway/Cunningham Highway • Leichhardt Highway/Hunt Street • Logan Motorway/Pacific Motorway • Millmerran-Inglewood Road/Thornton Road • Millmerran-Inglewood Road/Grays Road • Millmerran-Inglewood Road/Forestry Road • Millmerran-Inglewood Road/Paton Road • Millmerran-Inglewood Road/Millwood Road • Millwood Road/Kooroongarra Road • Millmerran-Inglewood Road/Heckendorf Road • Millmerran-Inglewood Road/Blackwell Road • Millmerran-Inglewood Road/Kooroongarra Road • Millmerran-Inglewood Road/Campbell Street • Millmerran-Inglewood Road/Saleyards Road • Millmerran-Inglewood Road/Owens Scrub Road • Pampas-Horrane Road/Bostock Road • Pittsworth-Felton Road/Short Street • Texas Yelarbon Road/Old Texas Yelarbon Road • Texas Yelarbon Road/Unnamed Road • Toowoomba Cecil Plains Road/Toowoomba Cecil Plains Road • Toowoomba Cecil Plains Road/Charlton Connection Road		

- Toowoomba Cecil Plains Road/Toowoomba Bypass
- Toowoomba Cecil Plains Road/Wellcamp Westbrook Road
- Toowoomba Cecil Plains Road/McDougall Street
- Toowoomba Cecil Plains Road/Omara Road
- Toowoomba Cecil Plains Road/Airport Quarry Wellcamp Access Road
- Toowoomba Cecil Plains Road/Brimblecombe Road
- Toowoomba Cecil Plains Road/Unnamed Road
- Warrego Highway/Charlton Connection Road
- Warrego Highway/Warrego Highway
- Warrego Highway/Toowoomba Cecil Plains Road
- Warrego Highway/Omara Road
- Warrego Highway/Toowoomba Bypass
- Warrego Highway/Steger Road
- Warrego Highway/Leesons Road
- Warrego Highway/Toowoomba Bypass
- Warrego Highway/Logan Motorway
- Warrego Highway/Chamberlain Road
- Yandilla Street/Short Street

Goondiwindi Regional Council: 15 intersections

- Cemetery Road/Mooroobie Lane
- East Sawmill Road/Springborg Road
- East Sawmill Road/Unnamed Road
- Eukabilla Road/Unnamed Road
- Eukabilla Road/Kildonan Road
- Grays Road/Mosquito Creek Road
- Hunt Street/Boodle Street
- Mooroobie Lane/Wondalli Kurumbul Road
- Suttons Road/East Sawmill Road
- Unnamed Road/Cemetery Road
- Unnamed Road/Unnamed Road
- Wondalli Kurumbul Road/Yelarbon Kurumbul Road
- Woodcocks Road/Unnamed Road
- Yelarbon Kurumbul Road/Unnamed Road
- Yelarbon Kurumbul Road/Queen Street South

Toowoomba Regional Council: 18 Intersections

- Alderley Street/Condamine Street
- Alderley Street/Greenwattle Street
- Bostock Road/Unnamed Road
- Drayton Wellcamp Road/Wellcamp Westbrook Road
- Euston Road/Drayton Wellcamp Road
- Forestry Road/Unnamed Road
- Gowrie Tilgonda Road/Gowrie Lilyvale Road
- Greenwattle Street/Euston Road
- Kingsthorpe Tilgonda Road/Tilgonda Kingsthorpe Road
- Leesons Road/Kingsthorpe Tilgonda Road
- Murlaggan Road/Roche Road
- Murlaggan Road/Kahler Road
- Short Street/Railway Street
- Six Mile Road/Bligh Street
- Tilgonda Kingsthorpe Road/Gowrie Tilgonda Road

- Tummaville Road/Unnamed Road
- Yandilla Street/Cypress Street
- Yarranlea Road/Murlaggan Road

Roads and Maritime Services: 16 intersections

- Bruxner Highway/New England Highway
- Bruxner Way/Texas Bridge Road
- Bruxner Way/North Star Road
- Gwydir Highway/Stephen Street
- Gwydir Highway/Campbell Street
- Gwydir Highway/New England Highway
- Gwydir Highway/Charles Street
- New England Highway/New England Highway
- New England Highway/Bruxner Way
- Newell Highway/Kildonan Road
- Newell Highway/River Road
- Summerland Way/Bruxner Highway
- Summerland Way/Dobie Street
- Summerland Way/Trenayr Road
- Pacific Motorway/Charles Street
- Red Lane/Summerland Way

Clarence Valley Council: 10 intersections

- Bent Street/Clarence Street
- Bent Street/Villers Street
- Clark Road/Trenayr Road
- Charles Street/Bent Street
- Clarence Street/Oliver Street
- Dobie Street/Villers Street
- Mary Street/Fry Street
- Oliver Street/Mary Street
- Trenayr Road/Clark Road
- Trenayr Road/Red Lane

Moree Plains Shire Council: 1 intersection

- Bruxner Way/North Star Road

Gwydir Shire Council: 2 intersections

- North Star Road/Edwards Street
- North Star Road/Warialda Road

The TIA report indicates that the following SCR (TMR) intersections are potentially impacted by the Project's operation:

Goondiwindi Regional Council: 23 intersections

- Cunningham Highway/Bybera Road
- Cunningham Highway/Yelarbon-Kurumbul Road
- Cunningham Highway/East Sawmill Road
- Cunningham Highway/Springborg Road
- Cunningham Highway/Whetstone Access Road
- Cunningham Highway/McDougalls Crossing Road

- Cunningham Highway/Cremascos Road
- Cunningham Highway/Elizabeth Street
- Cunningham Highway/Yelarbon-Keetah Road
- Cunningham Highway/Millmerran-Inglewood Road
- Cunningham Highway/Fosters Road
- Cunningham Highway/Inglewood Quarry Access Road
- Cunningham Highway/Coolmunda Dam Access
- Millmerran-Inglewood Road/Thornton Road
- Millmerran-Inglewood Road/Grays Road
- East Sawmill Road/Unnamed Road
- Springborg Road/East Sawmill Road
- Suttons Road/Unnamed Road
- Eukabilla Road/Kildonan Road
- Grays Road/Mosquito Creek Road
- Mooroobie Lane/Mooroobie Lane
- Mooroobie Lane/Wondalli-Kurumbul Road
- Wondalli-Kurumbul Road/Yelarbon-Kurumbul Road

Toowoomba Regional Council: 32 intersections

- Gore Highway/Athol School Road
- Gore Highway/Murlaggan Road
- Gore Highway/Blackwell Road
- Gore Highway/Yarranlea Road/
- Gore Highway/Tummaville Road
- Gore Highway/Millmerran-Inglewood Road
- Gore Highway/Lindenmayer Road
- Gore Highway/Scrubby Road
- Gore Highway/Linthorpe Road
- Gore Highway/Geitz Road
- Gore Highway/Bushy Lane West
- Gore Highway/Unnamed Road
- Gore Highway/Unnamed Road (2)
- Forestry Road/Unnamed Road
- Tummaville Road/Unnamed Road
- Millmerran-Inglewood Road/Forestry Road
- Millmerran-Inglewood Road/Paton Road
- Millmerran-Inglewood Road/Millwood Road
- Millwood Road/Kooroongarra Road
- Millmerran-Inglewood Road/Blackwell Road
- Millmerran-Inglewood Road/Kooroongarra Road
- Millmerran-Inglewood Road/Kooroongarra Road (2)
- Millmerran-Inglewood Road/Campbell Street
- Millmerran-Inglewood Road/Commodore Peak Road
- Millmerran-Inglewood Road/Owens Scrub Road
- Toowoomba-Cecil Plains Road/Wellcamp-Westbrook Road
- Toowoomba-Cecil Plains Road/Omara Road
- Toowoomba-Cecil Plains Road/Brimblecombe Road
- Warrego Highway/Leesons Road
- Greenwattle Street/Alderley Street
- Bunkers Hill School Road/Blackwell Road
- Drayton Wellcamp Road/Wellcamp-Westbrook Road

Gwydir Shire Council: 2 intersections

- North Star Road/North Star Road
- North Star Road/Edwards Street

Moree Plains Shire Council: 1 intersection

- Bruxner Way/North Star Road

It is unclear from the TIA report what type of intersection information was obtained from each controlling authority such as turn movement counts and their durations, vehicle classifications, etc., and whether traffic surveys were conducted. Clarification is required elaborating on the type of information obtained for each impacted intersection. TMR's review was unable to confirm the veracity of the intersection volume data used for the intersection analysis in the TIA.

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Appendix X

Traffic Impact Assessment

GTIA Section – 3.1 Construction and operational details (including year of opening of each stage and any relevant catchment/market analysis)

The construction of the Project is anticipated to be undertaken over a period of six years approximately, starting in 2021 with completion of construction in 2026. The Project is expected to be fully operational by 2026.

The TIA report presents the traffic generated based on the quantities of construction materials, workforce and equipment, with buffer factors applied to each transportation task to allow for additional journeys that may be required as a consequence of factors such as material quality compliance issues, breakages etc. The total number of trips by construction activity are summarised in the TIA Table 5.14, shown below:

Transportation task	2021	2022	2023	2024	2025	2026	Buffer
Movement of workforce to/from non-resident workforce accommodation camps	141,727	142,299	142,299	142,299	135,435	22,573	0%
Material movement: cut to fill	34,285	88,505	33,947	5,860	0	0	10%
Material movement: cut to spoil	28,402	78,288	58,579	0	0	0	10%
Material movement: general fill	45,298	71,523	20,472	2,559	0	0	5%
Delivery of precast concrete bridge components	23	229	717	572	8	0	2.50%
Delivery of material from quarries	1,433	9,282	3,927	26,035	30,593	0	7.50%
Delivery of sleepers	0	0	100	976	3,503	292	2.50%
Delivery of water	26,538	45,095	37,971	19,630	8,957	15	10%
Delivery of precast concrete culverts	323	1,982	686	0	0	0	2.50%
Delivery of in situ concrete for culverts	479	3,116	1,536	0	0	0	5%
Delivery of in situ concrete for bridges	0	3,225	8,884	3,595	40	0	5%
Movement of plant, equipment and tools	1,810	1,810	1,810	1,810	1,810	302	0%

The TIA assumed the following construction schedule and construction activities in order to establish development generated traffic:

Material	Delivery method	Quantity/volume	Start date*	End date*
General fill	Road/haul routes	9,595,807 m^3	21/05/2021	19/02/2024
Structural fill	Road/haul routes	2,070,678 m^3	21/05/2021	19/02/2024
Capping	Road	584,214 m^3	12/02/2022	9/04/2025
Top ballast	Road	217,585 t [1]	11/03/2024	21/08/2025
Bottom ballast	Road	438,570 t [1]	22/12/2023	27/05/2025
Sleepers	Road	378,850 items	1/12/2023	11/02/2026
Rail	Rail	41,155 t	11/10/2024	11/02/2026
Precast concrete – bridge	Road	34 bridges (of various length and sizes)	29/07/2022	7/02/2025
In situ concrete – bridge and culverts	Road	120,379 m^3	16/07/2021	7/02/2025
Culverts	Road	~2,700 culverts (various sizes)	16/07/2021	17/08/2023
Construction water	Road	2,536 ML	14/04/2021	3/02/2026
Workforce	Road	900 FTE (peak)	2/01/2021	11/02/2026
Plant and Tools	Road	150 veh/month	2/01/2021	11/02/2026

Clarification is required whether the construction program includes activities such as internal road construction / external access upgrade work and site preparation works.

The TIA mentions that although some materials might be delivered prior to construction start and end dates. However, it was assumed that delivery and construction start and end dates

Clarification is required whether the construction program includes activities such as internal road construction / external access upgrade work and site preparation works. Further details are required in the TIA.

Clarification is required to confirm the proposed schedule for delivery of materials and start of construction.

Clarification is required how rail will be transported from origin to destination for the new gauge construction as this is not mentioned in the TIA report.

The TIA mentions that operational traffic would be minimal and irregular to assess. Clarification with sufficient justification is required regarding expected operational activities and the expected operational vehicles likely to be generated during a typical peak hour.

The TIA does not appear to provide much information regarding the worker transport routes, workforce traffic volumes by route and the mode of travel to be used from population centres of accommodation to work site.

Any borrow pits intended to be utilised for TMR works are to be TMR/local authority approved.

Amend the EIS, TIA and Chapter 22 Outline Environmental Management Plan accordingly.

1

would occur during the same time. Clarification is required to confirm the proposed schedule for delivery of materials and start of construction.

Clarification is required regarding the arrival patterns of work force and material / equipment and how overlapping peaks were taken into consideration.

The TIA report identified the impacted roads and intersections for the transport of construction material and equipment – refer to Section 2.1 of this table. The TIA assumed the locations of the following:

- Borrow sites for borrow material at the following locations and proposed use:
  - Cemetery Road Structural Fill
  - Mooroobie Lane Structural Fill
  - Woodcocks Road Structural Fill
  - Taits Red Ridge Structural Fill
  - Texas-Yelarbon Road Structural Fill
  - Bybera Road Structural Fill
  - Fosters Road Structural Fill
  - Mosquito Road Structural Fill
  - Millmerran-Inglewood Road Structural Fill
  - Kooroongarra Andersons Road, Canning Creek Structural Fill
  - Kooroongarra Road Structural Fill
  - Heckendorfs Road Structural Fill
- Ballast material will be sourced from the following quarries:
  - Inglewood Quarry
  - Captains Mountain Quarry (Millmerran)
  - Quarry Road Quarry
  - Bland Quarries Pittsworth
  - Wellcamp Quarries
  - Holcim Australia Toowoomba Quarry
- Precast concrete and batch plant facilities

The TIA mentions that a concrete batch plant and precast facility has been proposed. For the purpose of the TIA, it is assumed that all precast material for the bridges will be supplied from the proposed Precast Concrete Facility and Concrete Batch Plant North.

Two locations have been identified for the temporary siting of a precast concrete facility and concrete batch plant for the Project. Whilst two locations have been nominated, only one plant is expected to be necessary to supplement the supply of concrete from established plants. The proposed locations are immediately north and south of the Condamine River floodplain outside the 1% AEP flood line. The locations are:

ID[1]	Location	Chainage	Description
B2G-LDN150.5	Gore Highway and Dieckmann Road	Ch 150.5 km	Precast concrete facility and concrete batch plant - north
B2G-LDN137.0	Gore Highway	Ch 137.0 km	Precast concrete facility and concrete batch plant - south

All precast elements for culvert construction are assumed to be supplied from Toowoomba. The remaining in-situ concrete required along the alignment will be sourced from existing concrete suppliers (Holcim, Rocla and Humes) within supply distance to the Project.

Construction water will be sourced from the following supplies for each activity:

- 2536ML for earthworks
- 15.0ML for the temporary batching and precast concrete plant (water requirement for concrete supplied by existing concrete/precast concrete suppliers not included)
- 2.16ML for trackwork

The TIA mentions that water will be supplied to various points along the alignment by water trucks. Origin locations where water will be transported from, have been provided in the TIA, Appendix N.

		Rail sleepers The TIA has assumed that ARTC will supply all of the concrete sleepers. The concrete sleepers are assumed to originate from NSW (town of Grafton) and be distributed via the road network to various laydown areas. Two overarching transport routes have identified as below: • North of Millmerran utilises the Pacific, Warrego and Gore Highways, including the new Toowoomba Second Range Crossing • South of Millmerran utilises Summerland Way and the Bruxner Highway Proposed construction transport routes for sleepers are illustrated in Appendix M of the TIA. **Rail tracks** The TIA assumes that rail tracks will be transported by rail to laydown areas. Clarification is required how rail will be transported from origin to destination for the new gauge construction as this is not mentioned in the TIA report. **Workforce** The TIA mentions that accommodation demands in the northern extent of the project are expected to be sufficiently met by established accommodation in Toowoomba, Pittsworth and Southbrook. South of Pittsworth, the TIA indicates that worker camps would be optimally located in the proximity of the townships of Yelarbon, Inglewood and Millmerran to accommodate the construction workforce. Each facility will be required to hold 300 staff during the peak between weeks 50 and 70. The average occupancy of the non-resident workforce accommodation outside of the peak period will be approximately 150 people per facility. It was assumed that workers will travel to the sites in light vehicles. The TIA mentions that operational traffic would be minimal and irregular to assess. Traffic would consist of will consist of low vehicle movements to/from depots and transportation of maintenance material within the rail corridor. Clarification with sufficient justification is required regarding the expected operational vehicles likely to be generated during a typical peak hour. TMR's review was unable to determine whether sufficient information is available to determine both construction and operational development generated traffic.		
200	Appendix X Traffic Impact Assessment GTIA Section – 3.2 Design peak periods	The TIA determined the peak periods and peak traffic loads based on the following parameters and assumptions: • Working hours for general construction activities: o Monday to Friday – 6.30 am to 6 pm o Saturday – 6.30 am to 1 pm o No work planned on Sundays or public holiday • Track possessions will proceed on a 7-day/24-hr calendar basis, subject to agreement with QR. • Workforce on site is estimated to peak at 900 full time equivalents between weeks 50 and 70. The average number of full-time equivalent workforce on site across the full construction period is over 400 people. From TMR's review, it was found that the peak periods were estimated with consideration of the following: • An equal average monthly distribution of total construction traffic loads across the construction duration in number of months were assumed in the TIA. This was done to determine an average monthly traffic volume applicable to each construction activity throughout the delivery timeframe. • An equal average distribution of monthly construction traffic loads per day was determined by dividing the average monthly traffic load by 22 working days in a month. This was done to determine an average daily traffic volume applicable to each construction activity throughout the delivery timeframe. • An equal average distribution of daily construction traffic loads per day was determined for each construction activity by dividing the average daily traffic load by 12 working hours in a day. This was done to determine an average hourly traffic volume applicable to each construction activity throughout the delivery timeframe.	Clarification is required regarding the peak number of workers in the design peak hour, arrival patterns of the work force and material / equipment and how overlapping peaks were taken into consideration. It is also unclear from the TIA what is the adopted design peak period (month, day and hour) based on the construction traffic profile in the TIA. It is suggested that a graph be included in the TIA illustrating the overlapping activities, schedules and generated traffic in order to identify the peak periods. It is unclear from TMR's review how micro fluctuations in peaking would be accounted for by using an average distribution and sequential construction schedule. Clarification and sufficient justification are required as the construction schedules is anticipated to overlap i.e. concurrent construction activities. Furthermore, it was assumed that delivery and construction start, and end dates would occur during the same time. Amend the EIS (/TIA) to respond to these issues accordingly.	1

		• The peak period (peak daily and hourly construction traffic) were then estimated by overlapping all construction activities and the distribution of average daily traffic loads across the construction schedule. This was done to determine the peak period (duration in the construction schedule) where construction traffic will be the highest. The TIA indicates that peak delivery movements for different construction activities will likely not coincide with each other as the start date of construction activities are typically reliant on the end date of others. It is unclear from TMR's review how micro fluctuations in peaking would be accounted for by using an average distribution and sequential construction schedule. Clarification and sufficient justification are required as the construction schedules is anticipated to overlap i.e. concurrent construction activities. Furthermore, it was assumed that delivery and construction start, and end dates would occur during the same time. The design peak hour during construction was not indicated in the TIA. It is unclear from TMR's review how the peak of 900 workers during weeks 50 and 70 were taken into account as the TIA assumed equal average distribution of work force generated traffic across the entire construction schedule. Clarification is required regarding the peak number of workers in the design peak hour, arrival patterns of the work force and material / equipment and how overlapping peaks were taken into consideration. The work force usually arrives on site before equipment / material arrives on site and leaves the site after material supply. Clarification is required as TMR's review was unable to determine whether workforce traffic peaks were adequately determined. TMR's review was unable to confirm if both construction and operational development generated traffic in the peak periods has been adequately addressed in the TIA. It is also unclear from the TIA what is the adopted design peak period (month, day and hour) based on the construction traffic profile in the TIA. It is suggested that a graph be included in the TIA illustrating the overlapping activities, schedules and generated traffic in order to identify the peak periods.		
201	Appendix X Traffic Impact Assessment GTIA Section – 3.3 Design day definition	The TIA report identified the use of applicable K-values from the Road Planning and Design Manual (RPDM), Chapter 5: Traffic Parameters and Human Factors pertaining to different road types. These K-values were applied to base AADT volumes to estimate base 30th highest hourly design volumes to account for seasonal fluctuation. This was done for all road links forming part of the construction routes. The K-values considered for the roads consist of: • Rural arterials = K-value of 0.15 • Outer urban arterials = K-value of 0.12 In the absence of existing traffic count data for a particular road link, the use of generic K-values from the RPDM is considered acceptable. However, traffic count data were collected for the study road links and intersections, which can be used to determine the appropriate K-values for each link and intersection.	It is suggested to use the existing observed traffic volume count data be used to estimate the appropriate K-values for each impacted link and intersection. Applying generic global K-values is not representative of local traffic conditions. Clarification is required. Update TIA with revised K-values.	1
202	Appendix X Traffic Impact Assessment GTIA Section – 3.4 In/Out directional splits	The TIA report does not describe the trip distribution methodology and how directional splits by construction activity were estimated in the peak periods (daily and peak hour). Further clarification is required in the TIA report.	Clarification is required on trip distribution and how directional splits of peak traffic (daily and peak hour) were estimated for each construction activity i.e. workers and general construction traffic movements. Amend the EIS (/TIA) accordingly.	1
203	Appendix X Traffic Impact Assessment GTIA Section – 3.6 Peak Generated Traffic	The TIA indicates that the development would generate the following peak daily construction traffic volumes distributed along the LGR and SCR road network for each assessment year: • 9592 vehicles/day in year 2021 • 13,922 vehicles/day in year 2022 • 8882 vehicles/day in year 2023 • 7275 vehicles/day in year 2024 • 4782 vehicles/day in year 2025 • 3031 vehicles/day in year 2026 The estimated daily and peak traffic volumes indicate that the highest traffic demand occurs in year 2022, which aligns with the peak workforce (900 workers) expected in weeks 50 and 70, according to the construction start date of 2/1/2021.	Clarification with justification be provided pertaining to the generation of low operational traffic volumes and the consequent insignificant impact. Amend the EIS (/TIA) to accordingly.	1

		The TIA mentions that operational phase traffic would only account for irregular maintenance and emergency service vehicles. The operational traffic is envisaged to make use of the existing road system and account for low volume traffic with no impact on existing operations. It is suggested that clarification with justification be provided pertaining to the generation of low operational traffic volumes.		
204	Appendix X Traffic Impact Assessment GTIA Section – 3.7 Route Selection	The TIA mentions that the NHVR journey planner tool has been used to determine routes most likely to be used for the transport of construction material from origin to destination. The transport route will impact on the following: • 70 SCR (TMR) links • 25 SCR (RMS) links and • 139 LGR links • 88 intersections affecting TMR • 16 intersections affecting RMS • 46 intersections affecting local government • 10 level crossings to intersect with the SCR (TMR) • 66 level crossings to intersect with local government roads. The use of the NHVR tool to determine construction transport routes is an acceptable industry standard for feasibility purposes. However, such routes might have other constraints relating to bridge heights and widths, load limits, conditions of operations, etc., which was not examined in the TIA. • The TIA stipulates the use of the following design heavy vehicles in the TIA: • Austroads Vehicle Class 5-4 Axle Rigid Truck (27.5 tonne) • Austroads Vehicle Class 7 4 Axle Semitrailer (31.5 tonnes) • Austroads Vehicle Class 9 - 6 Axle Semitrailer (42.5 tonne) • Austroads Vehicle Class 10 - 7 Axle B-Double (55.5 tonne) • Assumed OSOM for Precast concrete bridges Unloaded Class 3 Rigid Truck with 4 Axle Dolly and 4 Axle Jinker (70t payload). The use of Performance Based Standards (PBS) trucks was not proposed by ARTC. TMR require that ARTC consider the PBS3B as the design vehicle for queue length and turn-paths which may impact on the selected transport routes and stacking distance requirements at level crossings.	Update transport routes to take into account other constraints such as those relating to bridge height and widths, load limits, vehicle swept path impacts, as well as other aspects of height and vehicle manoeuvrability impacts on conditions of operations etc. Amend the EIS (/TIA) to accordingly. Update the TIA to take into consideration the PBS3B as the design vehicle for queue length and turn-paths.	1
205	Appendix X Traffic Impact Assessment GTIA Section – 4.1 Road Safety	It should be noted that any changes to access configurations, nearby intersections, bus stop locations, cycling facilities, footpaths and so on, once designed, should be assessed via a Road Safety Audit to identify if they introduce any additional safety issues.	Any changes to access configurations, nearby intersections, bus stop locations, cycling facilities, footpaths and so on proposed by the project will require a Road Safety Audit as per the requirements of the GTIA. See TMR's other comments about updating the TIA, PIA and RSA.	1
206	Appendix X Traffic Impact Assessment GTIA Section – 4.1 Road Safety	The safety assessment in the TIA indicates that the risk rating increases due to the impact of the Project on the following state-controlled roads and LGRs: • Cunningham Highway (TMR) • Gore Highway (TMR) • Logan Motorway (TMR) • Millmerran-Inglewood Road (TMR) • Toowoomba-Cecil Plains Road (TMR) • Warrego Highway (TMR) • Bruxner Highway (RMS) • Gwydir Highway (RMS) • New England Highway (RMS) • Newell Highway (RMS) • Pacific Motorway (RMS)	Clarification is required with elaboration and reasoning for the increase in risk rating from on impacted state-controlled roads and LGRs. The TIA indicates that there would be no change to existing safety conditions along other roads, clarification is required in the TIA to support these conclusions. Elaboration should be provided in the TIA describing how these mitigation measures would demonstrate that they are measurable and auditable to ensure compliance. Consideration should be given to avoid schools along the transport routes or how the impact of heavy vehicle movements will be managed on school routes. Amend the EIS (/TIA) to respond to these issues accordingly.	1

		• Summerland Way (RMS) • Bruxner Way (ISC) It is unclear from the TIA report what the specific safety / risk factors and concerns were on each of the SCR links which would cause an increase in risk rating to existing crashes. Clarification is required with elaboration and reasoning for the increase in risk rating from "Medium" to "High" on impacted state-controlled roads and LGRs. Where the TIA indicates no change to existing safety conditions clarification is required to support this conclusion. The TIA indicates that mitigation measures would be required to reduce the risk rating and recommends the following measures: • Fatigue management measures should be introduced and enforced for all workers • Any required works to be identified in ongoing Road Use Management Plans prepared to support the project • Heavy vehicle movements are associated with construction activities and therefore the use of school bus routes should be avoided if possible, or carefully managed to avoid conflicts. • Consideration should be given to limiting construction traffic on school bus routes during pick-up and set-down times on school days, alternatively appropriate school bus infrastructure could be installed. • Temporary traffic management to be implemented, for example road signs stipulating reduced speed limits. Findings from TMR's review indicates that the road link safety assessment was adequately performed to determine the increase in the likelihood and consequence of safety as result of development generated traffic. However, clarification is required relating to specific safety / risk factors and concerns on each of the SCR links which would experience an increase in risk rating to existing crashes. In addition, elaboration should be provided in the TIA describing how these mitigation measures would demonstrate that they are measurable and auditable to ensure compliance. Consideration should be given to avoid schools along the transport routes.		
207	Appendix X Traffic Impact Assessment GTIA Section – 4.1 Road Safety	A road safety assessment for the impacted intersections was not addressed in the TIA. The TIA is to be updated with an intersection safety assessment as required by TMR's GTIA.	Undertake intersection safety analysis as per requirement of GTIA. See related comment about requirement to update the TIA.	1
208	Appendix X Traffic Impact Assessment GTIA Section – 4.2 Access and Frontage	The TIA report indicates that several laydown areas have been proposed throughout the length of the alignment. These laydown areas are situated next to the corridor to facilitate direct access to/from the laydown to the alignment. The TIA further indicates that a total of 74 laydown areas are proposed. The TIA provides a typical construction traffic access configuration which will be applied to laydown areas as well as a general discussion regarding the access and egress movements of construction traffic. The exact locations of the proposed laydown areas could not be reviewed as maps and figures were not provided illustrating the localities, although general locations are prescriptive in the TIA. It is suggested that although acceleration and deceleration lanes are proposed for each laydown area. A turn warrant assessment is to be conducted for access intersections to each laydown area in order to determine the requirement for the provision of dedicated right turn lanes.	It is suggested that a turn warrant assessment be conducted for each laydown area access intersections in order to determine the requirement for the provision of dedicated right turn lanes and or any other turn lane requirements. The turn warrant assessment should be done for each year of construction as well as 10 years post opening phase for the operational stage. Amend the EIS (/TIA) accordingly.	1
209	Appendix X Traffic Impact Assessment GTIA Section – 4.3 Road Link Capacity Analysis and Mitigation	The TIA evaluated the impact of the Project on the road link capacity using the following process: A 5% AADT volume comparison was undertaken by calculating the traffic generated by the Project as a percentage of the background traffic. This was performed for all construction transport road links mentioned in TMR's comments re Section 2.1 of the GTIA and each year of construction.	In the absence of existing traffic count data for a particular road link, the use of generic K-values from the RPDM is considered acceptable. However, traffic count data were collected for the study road links, which can be used to determine the appropriate K-values for each link which would take into account local conditions. Update TIA with revised K-values. The use of the *Austroads Part 2 – Guide to Traffic Engineering Practice: Roadway Capacity* guide is considered inadequate as the guide is superseded by the *Austroads Guide to Traffic Management Part 3: Traffic Studies and Analysis, 2017*. It is proposed that the analysis be updated to reflect the use of the latest Austroads guide.	1

		Road sections in the transport corridor where the Project related traffic exceeds 5% were identified and highlighted in the report. The TIA indicates 12 SCR roads which exceed the 5% threshold. These roads are: 1. Cunningham Highway – • Between Wyaga Road and Yelarbon-Keetah Road • Between Yelarbon-Keetah Road and Texas-Yelarbon Road • Between Texas-Yelarbon Road and Inglewood Texas Road • Between Inglewood Texas Road and Millmerran-Inglewood Road • Between Millmerran-Inglewood Road and Inglewood Quarry Access Road • Between Inglewood Quarry Access Road and Coolmunda Dam Access 2. Gore Highway – • Between Blackwell Road and Saleyards Road • Between Millmerran-Inglewood Road and Millmerran-Leyburn Road • Between Millmerran-Leyburn Road and Pampas-Horrane Road • Between Pampas-Horrane Road and Brookstead-Norwin Road • Between Brookstead-Norwin Road and Tummaville Road • Between Tummaville Road and Vines Street • Between Vines Street and Toowoomba Bypass • Between Toowoomba Bypass and Westbrook Road • Between Toowoomba Westbrook Road and Warrego Highway 3. Millmerran-Inglewood Road – • Between Cunningham Highway and Thornton Road • Between Thornton Road and Council Boundary • Between Council Boundary and Kooroongarra Road • Between Kooroongarra Road and Blackwell Road • Between Blackwell Road and Campbell Street • Between Campbell Street and Gore Highway 4. Millmerran-Leyburn Road – Between Gore Highway and Reiche Road 5. Pampas-Horrane Road – Between Gore Highway and Bostock Road 6. Pittsworth-Felton Road – Between Gold Course Road and Short Street 7. Texas-Yelarbon Road – Between Cunningham Highway and Old Texas Yelarbon Road 8. Toowoomba-Cecil Plains Road – • Between McDougall Street and Boundary Street • Between Boundary Street and Charlton Connection Road • Between Hursley Road and Hanrahans Road 9. Toowoomba Bypass – • Between Gore Highway and Toowoomba-Cecil Plains Road • Between Toowoomba-Cecil Plains Road and New England Highway 10. Warrego Highway – Between Kingsthorpe Haden Road and Toowoomba Bypass 11. Yelarbon-Keetah Road – Between Cunningham Highway and Old Warwick Road 12. Bruxner Highway – Between New England Highway and Summerland Way The TIA indicates that the following LGR's would exceed the 5% threshold: **Goondiwindi Regional Council** • Bybera Road Between Cunningham Highway and Private Access • Bybera Road Between Private Access and Unnamed Road • Cemetery Road Between Mooroobie Lane and Unnamed Road • Coolmunda Dam Access Full Extent • Cremascos Road Between Cunningham Highway and 400 m west of private access • East Sawmill Road Between Cunningham Highway and Springborg Road • Elizabeth Street Between Cunningham Highway and Callandoon Street • Fosters Road Between Cunningham Highway and Grays Road • Grays Road Between Millmerran-Inglewood Road and Mosquito Creek Road	It is acknowledged that the Levels of Service (LOS) during construction should not exceed LOS C along the affected TMR road links and intersections, according to the information supplied (worst case scenario). This complies with the generally acceptable limits prescribed in the GTIA. TMR's predominant responsibility, however, lies in the preservation of existing LOS, given the critical freight and transport routes involved. In this regard, future negotiations with ARTC regarding triggered intersection upgrades, sequential planning of works and other related activities are required with a view to maintain, as a minimum existing LOS. Amend the EIS (/TIA) accordingly.	

- Inglewood Quarry Access Road Full Extent
- Kildonan Road Between Yelarbon-Keetah Road and Cunningham Highway
- Lovells Crossing Road Between Callandoon Street and Unnamed Road
- Lovells Crossing Road Between Unnamed Road and Unnamed Road
- Mooroobie Lane Between Wondalli Kurumbul Road and Cemetery Road
- Mosquito Creek Road Between Grays Road and Cunningham Highway
- Old Texas-Yelarbon Road Between Rocky Creek Road and Inglewood Texas Road
- Old Texas-Yelarbon Road Between Texas-Yelarbon Road and Rocky Creek Road
- South Kurumbul Road Between Yelarbon-Kurumbul Road and Kildonan Road
- Springborg Road Between Cunningham Highway and Railway Line
- Suttons Road Between East Sawmill Road and Unnamed Road
- Thornton Road Between Millmerran-Inglewood Road and Unnamed Road
- Unnamed Road Between Cemetery Road and Unnamed Road
- Unnamed Road Between East Sawmill Road and Suttons Road
- Unnamed Road Between Texas-Yelarbon Road and Private Land
- Unnamed Road Between Woodcocks Road and Queen Street North
- Unnamed Road Full Extent
- Whetstone Access Road Between Cunningham Highway and 600 m west of Railway Line
- Wondalli Kurumbul Road Between South Western System (Railway) and Bickers Road
- Yelarbon Kurumbul Road Between Cunningham Highway and Wondalli Kurumbul Road

Gwydir Shire Council

- Edwards Street Between North Star Road and I B Bore Road
- North Star Road Between MPSC Council Boundary and Edwards Street

Moree Plains Shire Council

- Bruxner Way Between Newell Highway and Tucka Tucka Road
- Bruxner Way Between Tucka Tucka Road and North Star Road
- North Star Road Between Bruxner Way and Gwydir Shire Council boundary
- River Road Between Newell Highway and Boggabilla Weir

Toowoomba Regional Council

- Airport Quarry Wellcamp Access Road (Privately owned road) Between Toowoomba-Cecil Plains Road and Toowoomba Wellcamp Airport
- Athol School Road Between 280 m W of Short Rd to Gore Highway
- Biddeston Southbrook Road Between Gore Highway and Stower Road
- Blackwell Road Between Millmerran-Inglewood Road and Gore Highway
- Bostock Road Between Pampas-Horrane Road and Unnamed Road
- Brimblecombe Rd Between Toowoomba-Cecil Plains Road and Gowrie Mountain School Road
- Campbell Street Between Millmerran-Inglewood Road and Commens Street
- Commodore Peak Road Between Millmerran-Inglewood Road and Blackwell Road
- Draper Road Between Steger Road and Leesons Road
- Drayton Wellcamp Road Between Wellcamp Westbrook Road and Boundary Street South
- Filmers Road Between Gowrie Tilgonda Road and Private Property
- Forestry Road Between Millmerran-Inglewood Road and Unnamed Road
- Fysh Road Between Gore Highway and Fysh Road
- Gap Road Between Gore Highway and Cypress Street
- Geitz Road Between Gore Highway and Luck Road
- Gowrie Lilyvale Road Between Gowrie Glencoe Road and Smiths Road
- Gowrie Lilyvale Road Between Gowrie Tilgonda Road and Gowrie Glencoe Road
- Gowrie Tilgonda Road Between Filmers Road and Gowrie Lilyvale Road

		• Heckendorf Road Between Millmerran-Inglewood Road and Bora Creek Road • Kooroongara Road Between Millmerran-Inglewood Road and Bliss Road • Kooroongarra Road Between Millmerran-Inglewood Road and Halls Road • Kooroongarra Road Between Millwood Road and Cunningham Highway • Leesons Road Full Extent • Linthorpe Road Between Gore Highway and Loveday Road • Millwood Road Between Millmerran-Inglewood Road and Kooroongarra Road • Murlaggan Road Between Gore Highway and Roche Road • Murlaggan Road Between Roche Road and Yarranlea Road • Owens Scrub Road Between Millmerran-Inglewood Road and Foxwood Road • Paton Road Between Millmerran-Inglewood Road and Kooroongarra Road • Railway Street Between Short Street and Vines Street • Saleyards Road Between Millmerran-Inglewood Road and Gore Highway • Scrubby Road Between Gore Highway and Jentz Road • Six Mile Road Between Rodney Road and Bligh Street • Steger Road Between Warrego Highway and Draper Road • Toowoomba Road Between Vines Street and Gore Highway • Tummaville Road Between Gore Highway and Mann Silo Road • Unnamed Road Between Gore Highway and Millmerran Indoor Sports Centre • Unnamed Road Between Toowoomba-Cecil Plains Road and Unnamed Road • Unnamed Road Between Bostock Road and Unnamed Road • Unnamed Road Between Drayton Westbrook Road and Unnamed Road • Unnamed Road Between Forestry Road and Unnamed Road • Unnamed Road Between Tummaville Road and Scrubby Road • Wellcamp Westbrook Road Between Toowoomba-Cecil Plains Road and Drayton Wellcamp Road • West Street Between Gore Highway and Rodney Road • Yarranlea Road Between Gore Highway and Railway Line • Yarranlea Road Between Railway Line and Saint Helens Road **Inverell Shire Council** • Bruxner Way Between Glenrock Road and New England Highway • Bruxner Way Between Texas Bridge Road and Glenrock Road The TIA indicates that state-controlled roads (RMS) and Clarence Valley LGR's would not exceed the 5% threshold. These road sections were further analysed to determine the incremental change (deterioration) in the Level of Service (LOS) as a result of the development generated traffic (construction traffic). The TIA evaluated the impacts on the LOS by applying the methodology as stipulated in *Austroads Part 2 – Guide to Traffic Engineering Practice: Roadway Capacity* to analyse the two-way-two-lane highway and multi-lane highway segments for each year of construction where the 5% threshold is exceeded. The use of the guide is considered inadequate as the guide is superseded by the Austroads Guide to Traffic Management Part 3: Traffic Studies and Analysis, 2017. It is proposed that the analysis be updated to reflect the use of the latest Austroads guide. The link analysis also indicates that K-values consisting of 0.15 and 0.12 as mentioned in TMR's comments relating to GTIA Section 3.3 were used. In the absence of existing traffic count data for a particular road link, the use of generic K-values from the RPDM is considered acceptable. However, traffic count data were collected for the study road links, which can be used to determine the appropriate K-values for each link. Clarification should be provided whether local K-values were used where available. The TIA report indicated the following link sections would experience a change (deterioration) in LOS performance:		

		Department Transport and Main Roads: (five links) • Cunningham Highway, between Wyaga Road and Yelarbon-Keetah Road (LOS A to LOS B due to the addition of up to 39 veh/hour during the peak construction hour) • Gore Highway, between Millmerran-Inglewood Road and Millmerran-Leyburn Road (LOS A to LOS B due to the addition of up to 80 veh/hour during the peak construction hour) • Gore Highway, between Vines Street and Toowoomba Bypass (LOS B to LOS C due to the addition of up to 92 veh/hour during the peak construction hour) • Millmerran-Inglewood Road, between Kooroongarra Road and Blackwell Road (LOS A to LOS B due to the addition of up to 56 veh/hour during the peak construction hour) • Millmerran-Inglewood Road, between Blackwell Road and Campbell Street (LOS A to LOS B due to the addition of up to 73 veh/hour during the peak construction hour) **Goondiwindi Regional Council: (one link)** • East Sawmill Road, between Cunningham Highway and Springborg Road (LOS A to LOS B due to the addition of up to 21 veh/hour during the peak construction hour). The TIA indicates that there would not be any change to LOS for LGR's or SCR (RMS) in any direction of travel. Findings from TMR's review indicate that the change in the LOS would still be within the GTIA's threshold LOS C. The TIA report mentions there is no need to upgrade the road network for such a short duration of impact, however traffic and road use management strategies would be employed. From TMR's review, it is considered adequate to provide road use management strategies as mitigation measure where it aligns with the GTIA mitigation hierarchy where such impacts can be managed. The proposed management strategies provided in the TIA consist of: • Travel demand management (TDM) campaign to inform the public on works and its effect on network operations • Construction Traffic Management Plan to be prepared managing hours of work and deliveries, staff transport and staff parking, with the provision of on-site tool storage where practicable. Traffic Management Plans (TMPs) to be prepared prior to construction in accordance with the latest edition of the Manual of Uniform Traffic Control Devices: Part - Works on Roads and Technical Standard MRTS02 - Provision for Traffic Prior to the Commencement of Construction • Ongoing consultation with relevant Councils, Roads and Maritime Services, Transport and Main Roads, Police, emergency services and affected property owners/occupiers • Directional signage and line marking around construction sites and the surrounding network, including using Variable Message Signs (VMS) if appropriate • Implementation of traffic management controls consistent with industry standards. Temporary road works, including diversion and signage, should be in accordance with the Manual of Uniform Traffic Control Devices: Part 3 - Works on Roads and the Traffic and Road Use Management Manual: Volume 7 Road Works • Relevant emergency services should be notified in advance prior to the movement of all hazardous/dangerous or oversize construction material and equipment. • Secondary alternative construction route activities should be determined as part of the TMPs, in the event of the primary route is blocked off by an emergency/accident.		
210	Appendix X Traffic Impact Assessment GTIA Section – 4.4 Intersection Capacity Analysis	The TIA report indicates that the following intersections will be impacted: • Transport and Main Roads: 88 Intersections • Goondiwindi Regional Council: 15 Intersections • Toowoomba Regional Council: 18 Intersections • Roads and Maritime Services: 16 Intersections • Clarence Valley Council: 10 Intersections • Moree Plains Shire Council: 1 Intersections • Gwydir Shire Council: 2 Intersections Details regarding each intersection is provided in TMR's comments regarding Section 1.3 of the GTIA.	It is suggested that the TIA be updated to indicate the intersections where the development traffic exceeds 5% of the base traffic for any movement in the design peak period(s) in the year of opening of each construction stage and operations stage. The TIA to incorporate intersection delay assessments at those intersections to determine if the average delay to base traffic movements is greater than 5% in aggregate. Appropriate mitigation measures should be formulated to address the increase, if any, to the aggregate delay. Clarification is required to confirm whether all the affected SCR (TMR and RMS) and local government intersections were evaluated by means of a turn-lane warrant assessment. Clarification is required relating to the traffic volume information used to do the turn lane warrant assessment as it was found from the TIA that turn volumes were assumed.	1

		The TIA did not perform a 5% peak hour volume comparison analysis as well as an intersection delay assessment for the intersections identified to be impacted. A turn-lane warrant assessment was conducted to determine upgrade requirements. The turn-lane warrant assessment methodology in the TIA was found to comply with the approach as contained in the Austroads' *Guide to Road Design*, Part 4A: *Unsignalised and Signalised Intersections.* However, it is unclear whether the analysis was done for all impacted intersections. Clarification is required to confirm whether all the affected state-controlled roads (TMR and RMS) and local government intersections were evaluated by means of a turn-lane warrant assessment. The TIA provides turn warrant analysis findings of the intersections where results indicate upgrades are required. Upgrades are recommended at 13 intersections based as below: **Goondiwindi Regional Council** • Cunningham Highway/Bybera Road - CHR(s) turning treatment is required • Cunningham Highway/Elizabeth Street - AUL turning treatment and a CHR turning treatment • Cunningham Highway/Millmerran-Inglewood Road - AUL turning treatment and a CHR turning treatment • East Sawmill Road/Unnamed Road - AUL turning treatment **Toowoomba Regional Council** • Gore Highway/Geitz Road - CHR turning treatment and an AUL turning treatment • Gore Highway/Linthorpe Road - CHR turning treatment and an AUL turning treatment • Gore Highway/Millmerran-Inglewood Road - AUL turning treatment • Gore Highway/Scrubby Road - AUL or CHL turning treatment are required • Gore Highway/Tummaville Road - CHR(s) turning treatment and an AUL(s) turning treatment • Gore Highway/Athol School Road - AUL turning treatment • Millmerran-Inglewood Road/Campbell Street - AUL(s) turning treatment and a CHR(s) • Toowoomba Cecil Plains Road/Wellcamp Westbrook Road - CHR turning treatment • Warrego Highway/Leesons Road - CHR turning treatment Most of the intersections listed under the ownership of Toowoomba Regional Council and Goondiwindi Regional Council in the TIA are actually managed by TMR. Clarification is required in the TIA. Clarification is required relating to the traffic volume information used to do the turn lane warrant assessment as it was found from the TIA that turn volumes were assumed for the analysis. It is suggested that the TIA be updated with a 5% peak hour volume comparison analysis and intersection delay assessment as per the GTIA. This review is unable to determine whether the intersection analysis has been adequately assessed.	Amend the EIS (/TIA) accordingly.	
211	Appendix X Traffic Impact Assessment GTIA Section – 4.6 Other Considerations	**Performance Based Standard (PBS) Vehicles** The TIA does not specifically address heavy vehicle road corridor use according to the GTIA requirements. It is unclear whether the proposed development will generate Performance Based Standard (PBS) vehicles (Class B- NHVR), if so, a heavy vehicle assessment needs to be undertaken in accordance with Transport and Main Roads' *Performance Based Standards Queensland Network Classification Guideline – Level 2B, Level 3B, Level 4B Roads (November 2014).* This should be determined and updated accordingly in the TIA. The TIA mentions that Oversize Over mass vehicles would be required to transport items such as precast bridges, however details regarding the volumes, routes to be used, impacts of such vehicles in terms of swept paths, heights and loading were not assessed. These items are to be identified and addressed in the TIA.	Clarify if the Project will generate PBS vehicles. If it does, to update the TIA with mitigation measures determined through the assessment process using Transport and Main Roads' *Performance Based Standards Queensland Network Classification Guideline – Level 2B, Level 3B, Level 4B Roads* (November 2014). It is also suggested to indicate which haulage routes are gazetted approved multi-combination vehicle (MCV) and higher mass limit (HML) vehicle routes along with locations which have restrictions. Mitigation measures should be provided in the TIA report where routes have restrictions and are not gazetted heavy vehicle routes. The assessment to include how the movement of Oversize Over mass (OSOM) vehicles will be addressed in the TIA.	1

		Active Transport Impacts The TIA indicates that the following cycle routes within the Principal Cycling Network with be impacted by construction traffic routes: **Transport and Main Roads:** • Warrego Highway, between Tor Street and Kingsthorpe Haden Road • Toowoomba Bypass, between Mort Street and Toowoomba Cecil Plains Road • Toowoomba-Cecil Plains Road, between Warrego Highway and Hanrahan Road • Gore Highway, between Harrow Street and Ferguson Road • Warrego Highway, between Wulkuraka Connection Road and Mt Crosby Road **Toowoomba Regional Council:** • Charlton Connection Road, between Warrego Highway and Toowoomba Cecil Plains Road • McDougall Street, between Toowoomba-Cecil Plains Road and Hursley Road • Drayton-Wellcamp Road, between Double Road and Euston Road • Railway Street, between Toowoomba Road and Murray Street • Short Street, between Railway Street and Yandilla Street, • Yandilla Street between Short Street and Cypress Street **Roads and Maritime Services** • Oliver Street, between Clarence Street and Mary Street • Mary Street, between Oliver Street and Fry Street • Fry Street, between Mary Street and Alice Street • Summerland Way, between Eccles Street and Bruxner Highway • Bruxner Way, between Bulwer Street and New England Highway • New England Highway, between Bruxner Highway and Rouse Street The TIA note that a number of the proposed construction routes currently traverse through areas of moderate to high pedestrian activity through the city centres of Toowoomba, Pittsworth, Millmerran, Inglewood, Yelarbon and Grafton. The TIA does not specifically address the impact of construction traffic on pedestrian paths and cycle routes. Clarification is required in the TIA on how the impact of construction and operational traffic on pedestrian paths and cycle routes will be managed to safeguard the passage of pedestrians and cyclist. **Bus Public Transport** The TIA identified that there would be minimal impacts to existing bus public transport services as a result of construction of the Project. No existing bus services travel across the road rail interfaces, therefore there is minimal operational impacts to the services. **School Buses** The following school bus services are likely to be impacted by the proposed rail alignment: • P1883 AM & PM Athol to Bunker's Hill State School • P473 Yuraraba to Inglewood State School • P510 Southbrook North to Southbrook Central State School • P522 Mt Emlyn area to Millmerran State School • P772 AM & PM Tummaville to Millmerran State School • P938 Bringalily to Millmerran State School • P957 AM & PM Ivanhoe to Millmerran State School • S118 AM & PM Pittsworth to Brookstead Area • S178 Kingsthorpe Secondary to Harristown State High School • S577 Kingsthorpe/Wellcamp to Harristown State High School	Clarification is required in the TIA on how the impact of construction traffic on pedestrian paths and cycle routes will be managed to safeguard the passage of pedestrians and cyclist. Amend the EIS (/TIA) to respond to these issues accordingly.	

		• S740 AM & PM Millmerran Years 11 and 12 to Pittsworth State High School Prior to the construction phase of the Project, a suitable detour route for all of the affected services will be identified. Both prior to and during the construction phase of the Project, bus operators and affected schools will be consulted as part of the Project and made aware of the various construction activities. The contractors will be made aware of the presence of school bus routes and their operational hours as part of the project induction process.		
212	Appendix X Traffic Impact Assessment GTIA Section – 5.1 Certification of the TIA	Certification of the Traffic Impact Assessment Report by a Registered Professional Engineer Queensland using the pro-forma as per GTIA not provided.	Certification of the Traffic Impact Assessment Report by a RPEQ using pro-forma in the GTIA is required. Amend the EIS (/TIA) accordingly.	1
213	Appendix X Traffic Impact Assessment GPIA Section – 5.1 Determine Pavement Impact Assessment Area	The TIA undertook a 5% SAR4 pavement loading comparison analysis on 71 SCR links (67 TMR and 4 RMS) expected to be impacted to identify road segments where development pavement loading exceeds the background pavement loading by 5% or greater. From TMR's review, it was found that the PIA area was adequately defined, highlighting road sections which exceed the 5% threshold and require further analyses. The PIA indicates the following 34 road sections which exceed the 5% threshold: <u>Impacted State-controlled roads (TMR)</u> • Toowoomba Bypass 319 - Between Gore Highway and Toowoomba-Cecil Plains Road • Toowoomba Bypass 319 - Between Toowoomba-Cecil Plains Road and New England Highway • Toowoomba Bypass 319 - Between New England Highway and Warrego Highway • Cunningham Highway 17D - Between NSW/QLD Border and Leichhardt Highway • Cunningham Highway 17D - Between Leichhardt Highway and Wyaga Road • Cunningham Highway 17D - Between Wyaga Road and Yelarbon-Keetah Road • Cunningham Highway 17D - Between Yelarbon-Keetah Road and Texas Yelarbon Road • Cunningham Highway 17D - Between Texas-Yelarbon Road and Inglewood Texas Road • Cunningham Highway 17C - Between Inglewood Texas Road and Millmerran-Inglewood Road • Cunningham Highway 17C - Between Millmerran-Inglewood Road and Inglewood Quarry Access Road • Cunningham Highway 17C - Between Inglewood Quarry Access Road and Coolmunda Dam Access • Gore Highway 28A - Between Millmerran-Inglewood Road and Millmerran-Leyburn Road • Gore Highway 28A - Between Millmerran-Leyburn Road and Pampas-Horrane Road • Gore Highway 28A - Between Pampas-Horrane Road and Brookstead-Norwin Road • Gore Highway 28A - Between Brookstead-Norwin Road and Tummaville Road • Gore Highway 28A - Between Tummaville Road and Vines Street • Gore Highway 28A - Between Vines Street and Toowoomba Bypass • Gore Highway 28A - Between Toowoomba Bypass and Westbrook Road • Gore Highway 28A - Between Westbrook Road and Warrego Highway • Inglewood Texas Road 231 - Between Cunningham Highway and Greenup Limevale Road • Inglewood Texas Road 231 - Between Greenup Limevale Road and Texas Yelarbon Road	The 5% SAR4 pavement loading comparison analysis needs to be undertaken for local government roads. Amend the TIA accordingly.	1

		• Inglewood Texas Road 231 - Between Texas-Yelarbon Road and Stanthorpe Texas Road • Inglewood Texas Road 231 - Between Stanthorpe-Texas Road and Old Texas-Yelarbon Road • Inglewood Texas Road 231 - Between Old Texas-Yelarbon Road and QLD/NSW Border • Ipswich Motorway 17A - Between Cunningham Highway and Logan Motorway • Leichhardt Highway 26C - Between Cunningham Highway and Hunt Street • Leichhardt Highway 26C - Between Hunt Street and Barwon Highway • Millmerran-Inglewood Road 337 - Between Cunningham Highway and Thornton Road • Millmerran-Inglewood Road 337 - Between Thornton Road and Council Boundary • Millmerran-Inglewood Road 337 - Between Council Boundary and Kooroongarra Road • Millmerran-Inglewood Road 337 - Between Kooroongarra Road and Blackwell Road • Millmerran-Inglewood Road 337 - Between Blackwell Road and Campbell Street • Millmerran-Inglewood Road 337 - Between Campbell Street and Gore Highway • Millmerran-Leyburn Road 335 - Between Gore Highway and Reiche Road • Oakey Pittsworth Road 323 - Between Gore Highway and Quibet Road • Texas-Yelarbon Road 2322 - Between Cunningham Highway and Old Texas Yelarbon Road • Toowoomba-Cecil Plains Road 324 - Between Warrego Highway and McDougall Street • Toowoomba-Cecil Plains Road 324 - Between McDougall Street and Boundary Street • Toowoomba-Cecil Plains Road 324 - Between Boundary Street and Charlton Connection Road • Toowoomba-Cecil Plains Road 324 - Between Charlton Connection Road and Hursley Road • Toowoomba-Cecil Plains Road 324 - Between Hursley Road and Hanrahans Road • Toowoomba-Cecil Plains Road 324 - Between Hanrahans Road and 2km west of Brimblecombe Rd • Warrego Highway 18B - Between Kingsthorpe Haden Road and Toowoomba Bypass • Warrego Highway 18B - Between Toowoomba Bypass and Charlton Connection Road • Warrego Highway 18B - Between Charlton Connection Road and McDougall Street • Warrego Highway 18B - Between McDougall Street and Bridge Street • Warrego Highway 18B - Between Bridge Street and Toowoomba-Cecil Plains Road • Warrego Highway 18B - Between Toowoomba-Cecil Plains Road and Karrool Street • Warrego Highway 18B - Between Karrool Street and Gore Highway • Warrego Highway 18B - Between Gore Highway and Fifth Avenue • Warrego Highway 18A - Between Toowoomba Bypass and Gatton-Helidon Road • Warrego Highway 18A - Between Gatton-Helidon Road and Gatton-Esk Road • Warrego Highway 18A - Between Gatton-Esk Road and Laidley-Plainland Road • Warrego Highway 18A - Between Laidley-Plainland Road and Tallegalla Two Tree Hill Road		

- Warrego Highway 18A - Between Tallegalla Two Tree Hill Road and Haigslea Amberley Road
- Warrego Highway 18A - Between Haigslea Amberley Road and Brisbane Valley Highway
- Warrego Highway 18A - Between Brisbane Valley Road and Mount Crosby Road
- Warrego Highway 18A - Between Mount Crosby Road and Cunningham Highway
- Barwon Highway 31A - Between Leichhardt Highway and Town Common Road
- Charlton Connection Road 320 - Between Toowoomba-Cecil Plains Road and Jordan Court
- Charlton Connection Road 320 - Between Jordan Court and Warrego Highway
- Gore Highway 28A - Between Blackwell Road and Saleyards Road
- Gore Highway 28A - Between Saleyards Road and West Street
- Gore Highway 28A - Between West Street and Millmerran-Inglewood Road
- Pampas-Horrane Road 327 - Between Gore Highway and Bostock Road
- Pittsworth-Felton Road 332 - Between Golf Course Road and Short Street
- Yelarbon-Keetah Road 241 - Between Cunningham Highway and Old Warwick Road
- Logan Motorway 210A - Between Ipswich Motorway and Pacific Motorway
- Pacific Motorway 12A - Between Logan Highway and NSW/QLD border
- Edwards Street Between North Star Road and I B Bore Road

<u>Impacted State-controlled roads (RMS)</u>

1. Bruxner Highway Between New England Highway and Summerland Way
2. Gwydir Highway Between Stephens Road and Delungra Road
3. Gwydir Highway Between Delungra Road and Delungra Bypass Road
4. Gwydir Highway Between Delungra Bypass Road and Copeton Dam Road
5. Gwydir Highway Between Copeton Dam Road and Bannockburn Road
6. Gwydir Highway Between Bannockburn Road and Campbell Street
7. Gwydir Highway Between Campbell Street and Tingha Road
8. Gwydir Highway Between Tingha Road and Elsmore Road
9. Gwydir Highway Between Elsmore Road and Woodstock Road
10. Gwydir Highway Between Woodstock Road and Waterloo Road
11. Gwydir Highway Between Waterloo Road and Coronation Avenue
12. Gwydir Highway Between Coronation Avenue and New England Highway
13. Gwydir Highway Between New England Highway and Shannon Vale Road
14. Gwydir Highway Between Shannon Vale Road and Bald Nob Road
15. Gwydir Highway Between Bald Nob Road and Old Grafton Road
16. Gwydir Highway Between Old Grafton Road and Coombadjha Road
17. Gwydir Highway Between Coombadjha Road and Old Glen Innes Road
18. Gwydir Highway Between Old Glen Innes Road and Rogan Bridge Road
19. Gwydir Highway Between Rogan Bridge Road and Bent Street
20. New England Highway Between Bruxner Way and Bruxner Highway
21. New England Highway Between Gwydir Highway and Gwydir Highway
22. Newell Highway Between NSW/QLD Border and Bruxner Way
23. Pacific Motorway Between QLD/ NSW border and Gwydir Highway
24. Summerland Way Between Bruxner Highway and Red Lane

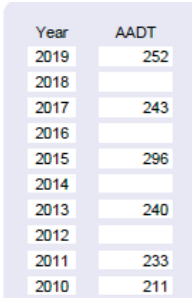
		25. Summerland Way Between Trenayr Road and Turf Street However, the 5% SAR4 pavement loading comparison analysis was not undertaken for local government roads.		
214	Appendix X Traffic Impact Assessment GPIA Section – 5.2 Obtain Road Asset and Traffic Data	All traffic volume data used in the PIA consist of the same data as mentioned in Section 1.2 of this table. The road links considered for the PIA are the same links as used for the traffic impact assessment. Road asset data from TMR (ARMIS, as-constructed plans, maintenance plans) was however not considered in the assessment. The PIA assumed a generic pavement composition for all SCR links in the PIA. The assumed generic pavement comprises thin bituminous surfacing (asphalt < 50 mm or spray seal) on unbound granular road base. This is not considered appropriate, especially given the that the FAMLIT model contains cost contribution rates for each 100 m of each SCR link. The pavement composition of each road link is typically available from TMR's ARMIS database and any associated as constructed or maintenance drawing records. It is suggested that actual pavement composition data be obtained from TMR (ARMIS) and RMS to more accurately inform the pavement impact analysis, especially with respect to pavements containing structural/thick asphalt and bound layers (example cement treated bases) which require an assessment of SAR5 and SAR12 axle loads.	It is suggested that the FAMLIT model and ARMIS data be used with associated load damage exponential l factors based on pavement type for all impacted road links in the TIA. Amend TIA accordingly.	1
215	Appendix X Traffic Impact Assessment GPIA Section – 5.3 Determine Growth Rates	The percentage (%) growth rate for background traffic was determined using linear regression for all vehicles (light and heavy vehicle streams inclusive), between the years 2010 and 2018. This has resulted in an equivalent average 2% (compound) growth rate for all vehicles. This average growth rate has been used to extrapolate the growth in background heavy vehicles during the construction period (2021 to 2026). The application of a traffic growth rate based on all vehicles to heavy vehicles is not appropriate. From TMR's review it was found that there are significant differences in heavy vehicle growth rates as compared to the growth rates for all vehicles. Additionally, the adoption of a single average traffic growth rate for background traffic for all impacted State-controlled roads is considered not appropriate. Individually calculated heavy vehicle traffic growth rates (background traffic) for each impacted road link needs to be used in order to capture local conditions along the link.	It is suggested that individually calculated heavy vehicle traffic growth rates (background traffic) for each impacted road link be used in the TIA. Amend the TIA accordingly.	1
216	Appendix X Traffic Impact Assessment GPIA Section – 5.5 Calculate Development ESA/SAR's	The TIA provides an overview of all stockpile, laydown areas, routes and construction material quantities to be transported along SCR links for purpose of the following: • Cut-to fill mass haul earthworks • Cut-to-spoil mass haul earthworks • Imported capping material for rail formation works • Rail sections • Rail sleepers • Rail ballast • Precast concrete bridge elements • In-situ concrete bridges • Pre-cast concrete culverts • In-situ concrete culverts/drainage structures • Construction water (material conditioning, compaction, concrete batch plants, concrete precast yard, dust suppression, haul road maintenance) • Delivery/collection of plant, tools, other materials • Staff An in-depth review of the construction quantities was not undertaken and is outside the scope of this review. A breakdown of the construction quantities was provided for all construction activities, for all stockpile, laydown areas and routes along SCR links. The TIA stipulates the use of the following design heavy vehicles in the TIA: • Austroads Vehicle Class 5-4 Axle Rigid Truck (27.5 tonne) and 4.087 ESA/HV	From TMR's review the following and discrepancies have been identified which is suggested to be updated in the TIA: The TIA report has identified that all rail sections will be delivered to site via existing rail however, the construction traffic loads schedule has identified that a significant amount of rail sections would be delivered to stockpiles/laydowns/sites by road. This inconsistency is to be clarified as it has a significant impact on construction traffic generation and assessment of their impacts. The TIA report has identified that precast concrete bridge elements and culverts, including RCP and RCBC will be transported to site by "Escorted Truck" which are typically Oversize Over Mass vehicles (OSOM). The TIA identifies a Class 3 Rigid Truck with an Axle Dolly and 4 Axle Jinker (70t payload) as an OSOM vehicle with 12.2 ESA/HV factor. TMR's review was unable to determine the veracity in which the ESA/HV value was calculated as it is based on a specific load to axle distribution ratio. Clarification is required in the TIA on the estimation process. Similarly, SAR5 and SAR12 values are also not provided in the TIA for the OSOM vehicle and as such would be required for clarification. The TIA report has identified that all construction vehicle trips are loaded in both directions. While it is expected that this may be true for a small percentage of trips, this assumption is considered too conservative and should be clarified/addressed in the TIA. The TIA should be updated to take into consideration FAMLIT asset data and associated development generated SAR5 and SAR12 load damage exponential factors / rates to calculate marginal cost contributions. Clarification is required relating to assumed routes likely to be used for plant and tool transport and expected peak hourly and annual volumes by an assumed design vehicle type as these trips would have an impact on pavement loading. It is suggested that the TIA be updated to reflect accordingly.	1

		• Austroads Vehicle Class 7 4 Axle Semitrailer (31.5 tonnes) and 5.019 ESA/HV • Austroads Vehicle Class 9 - 6 Axle Semitrailer (42.5 tonne) and 4.93 ESA/HV • Austroads Vehicle Class 10 - 7 Axle B-Double (55.5 tonne) and 7.72 ESA/HV • Assumed OSOM for Precast concrete bridges Unloaded Class 3 Rigid Truck with 4 Axle Dolly and 4 Axle Jinker (70t payload) and 12.21 ESA/HV The SAR4/HV values in the TIA were sourced from DTMR's GTIA *Practice Note: Pavement Impact Assessment.* The SAR4/HV for the OSOM vehicle to transport the 29 metre Super-T precast concrete bridge elements was calculated consistent with Austroads *Guide to Pavement Technology Part 2: Pavement Structural Design* which is considered acceptable. Findings from TMR's review indicate that the proposed ESA/HV values for the design vehicles considered align with the GTIA *Practice Note: Pavement Impact Assessment provided* values for the purpose of analysing the 5% comparison. However, findings from TMR's review indicates that development generated pavement loads account for ESA/SAR values per heavy vehicle only. Load damage exponential values for pavements with multiple layers consisting of SAR5's and SAR12's was not taken into account or calculated as road asset data from the FAMLIT model was not evaluated based on pavement type according to 100m increments. The TIA should be updated to take into consideration FAMLIT asset data and associated development generated SAR5 and SAR12 load damage exponential factors / rates to calculate marginal cost contributions. The TIA indicates that it is envisaged that the delivery and collection of plant, tools and materials to the construction areas will be cascaded across the road network and occur irregularly. It is considered that the spreading of the trips of this construction activity across the external road network would have a minimal impact and be of an irregular pattern to model. It has therefore been conservatively assumed that these activities would follow the same proposed routes as the workforce. Plant delivery is assumed to be 150 vehicles per month. Clarification is required relating to assumed routes likely to be used for plant and tool transport and expected peak hourly and annual volumes by an assumed design vehicle type as these trips would have an impact on pavement loading. It is suggested that the TIA be updated to reflect accordingly.	Clarification is required on the number of trips and routes used by staff/workers, which are assumed to be from the surrounding towns. Clarification is required on the offsite disposal of any spoil, and anticipated traffic generation. Clarification is required on the transport routes (origin/destination) for water supply. The TIA report has identified that railway sleepers will be delivered to stockpiles/laydowns/sites by Austroads Class 10 heavy vehicles with a 55-tonne payload capacity. The construction traffic loads schedule notes that the assumed capacity for freighting railway sleepers of 78 items. A precast concrete sleeper typically weighs 450–550 kg. The 78 sleepers would weigh a total of 40 tonnes, which indicates that the proposed vehicle would have sufficient payload capacity. The TIA report has identified that ready-mix concrete will be transported to site by trucks with 6m3 capacity, presumably agitator trucks. These trucks are typically Austroads Class 5 trucks with twin steer axles and TAPS chart identifies typical ESA/HV factors of 4.2–4.4. The TIA used an updated Class 5 truck which is considered sufficient. The TIA report has identified that construction water will be transported to stockpiles/laydowns/sites by 20 kilolitre water trucks. 20 kilolitre water trucks typically have a GCM of up to 43 tonnes and an ESA/HV factor of up to 5.5, which aligns with an equivalent Austroads Class 7 heavy vehicle as per the TAPS chart. This has been addressed in the TIA. Amend the EIS (/TIA) to respond to these issues accordingly.	
217	Appendix X Traffic Impact Assessment GPIA Section – 5.6 Determine 5% Pavement Loading Threshold	All construction traffic was converted to equivalent SAR4 repetitions and compared to the base traffic SAR4 during each year of construction 2021–2026, for each SCR link. The ratio of the development SAR4 to the background SAR4 has been calculated in accordance with the TMR's GTIA Practice Note: Pavement Impact Assessment, which calls for the SAR4 pavement impact ratio to be calculated, for each construction year, as the development traffic divided by the background traffic. The findings of the PIA show that several state-controlled roads are likely to surpass the 5% SAR threshold, with several road segments (mentioned in Section 5.1 of this table) exceeding this threshold by a significant margin. It is worth noting that while the analyses conservatively assume fully loaded vehicles in each direction, there are numerous inconsistencies within the application of the PIA methodology and calculations that need to be addressed in the TIA. Mitigation measures to counter pavement impacts are summarised in the TIA documents. The content has been reviewed and found to be generically adequate however, suitable mitigation measures should be identified for particular SCR links which may contain features or peculiarities that cannot be generically addressed. The mitigation of pavement impacts has only been conducted for the construction phase of the Project. The PIA 20 years after the opening of the final stage needs to be assessed in the TIA as required in the Practice Note: Pavement Impact Assessment.	The ratio of the development SAR4 to the background SAR4 has been calculated in accordance with the TMR's GTIA Practice Note: Pavement Impact Assessment, which calls for the SAR4 pavement impact ratio to be calculated, for each construction year, as the development traffic divided by the background traffic. The mitigation of pavement impacts has only been conducted for the construction phase of the Project. The PIA 20 years after the opening of the final stage needs to be assessed in the TIA as required in TMR's GTIA Practice Note: Pavement Impact Assessment. Amend the EIS (/TIA) to respond to these issues accordingly.	1
218	Appendix X Traffic Impact Assessment GPIA Section – 5.7 Marginal Cost Contributions	No marginal cost calculations were undertaken or provided in Appendix X – Traffic Impact Assessment, contrary to the requirements of TMR's GTIA. This should be addressed in the TIA.	It is suggested that the marginal cost contribution calculation be conducted in the TIA in accordance with TMR's GTIA Practice Note: Pavement Impact Assessment. Note that the current guideline is limited to the extent that it can only predict for increases in development traffic within 5%–40%. A review of traffic volumes presented in the report indicates that development traffic in excess of 100% may be generated. Assessment for such a significant increase in traffic will require special consideration by the TMR during the detailed design phase for marginal cost calculations.	1

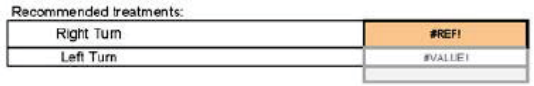
219	Appendix X (Part 1) Traffic Impact Assessment Section 1.6 Page 33	The EIS states: "The TIA has been undertaken consistent with the 2017 GTIA, consistent with the ToR, which is also generally in accordance with the 2018 GTIA (and with no material implications to assessment outcomes)." GTIA 2018 does introduce a new measurement for intersection delay (measured in vehicle-minutes) as a means of quantifying a development's impact rather than capacity. It also has a stronger focus on safety. Future revisions of the TIA will need to adhere to the 2018 GTIA in all aspects, not just the PIA.	Update the EIS to acknowledge that the entire TIA will be in accordance with GTIA 2018, not just the PIA.	1
220	Appendix X (Part 1) Traffic Impact Assessment Section 1.6.1.1 Page 35	The EIS makes reference to and uses the *Austroads Guide to Traffic Engineering Practice, Part 2: Roadway Capacity*" – this Austroads publication has been superseded and replace by the Austroads Guide to Road Design and Austroads Guide to Traffic Management.	Update the EIS to ensure that the latest Austroads manuals are referenced and used.	1
221	Appendix X (Part 1) Traffic Impact Assessment Section 1.6.1.1 Page 35	The EIS has assumed a k30 value for a number of situations, but k30 values may not be suitable for all of them. Further justification is required as to why k30 values have been applied within the report	Update the EIS and TIA to provide more information regarding the values assumed and provide necessary justifications as to why they were chosen.	1
222	Appendix X (Part 1) Traffic Impact Assessment Section 1.6.1.1 Page 35	It is not appropriate to assume 400 AADT on some rural local roads.	The TIA must use AADT values approved by the appropriate road authority.	1
223	Appendix X (Part 1) Traffic Impact Assessment Section 1.6.1.1 Page 36	The report says that the "*GTIA defines LOS as a qualitative index for ranking operating conditions…*". Note that the 2018 GTIA uses intersection delay as a measure for impact and must also be assessed. LOS is not relevant to intersection performance.	The finalised TIA should follow the performance criteria and impact assessment measures as specified in the 2018 GTIA.	1
224	Appendix X (Part 1) Traffic Impact Assessment Section 1.6.1.1 Background traffic Page 36	The EIS states: "*An evaluation of available traffic growth rates on State-controlled roads identified an overall annual average AADT growth rate of two per cent. This linear growth rate was the used to establish future background traffic volumes for all roads where data was not available* " This is unclear as data is available for most roads. While few State-controlled roads identified within the haul and construction route plans contain permanent traffic count sites, traffic growth rates are available and should be established for each road. The adoption of a single average traffic growth rate for background traffic for all roads does not accurately represent regional roads. In addition the 2% linear growth is determined based on AADT however this as a basis for the assumption could be substantially undervaluing the specific background growth seasonal patterns of heavy vehicles.	Establish background heavy vehicle growth rates based on road link data and assumptions that are agreed by the department.	1
225	Appendix X (Part 1) Traffic Impact Assessment Section 1.6.2.1 Table 1.4 Page 38	Table 1.4 identifies LOS criteria that is not contained within the GTIA.	Update and correct the EIS as stating that these criteria are in the 2018 GTIA is misleading.	1

226	Appendix X (Part 1) Traffic Impact Assessment Section 1.6.2.1 Table 1.4 Page 38	In Table 1.4 the EIS states: "*LOS C can be considered the minimum standard on rural roads. However, LOS D may be accepted in case of even traffic.*" The department may not consider this accurate or accept a worsening in LOS. A broad application of a minimum standard LOS to roads misrepresents the intention of Austroads and the department's requirements for road planning and design.	EIS should accurately reflect the requirement that any road planning and design be fit for purpose. Should the level of service be significantly impacted mitigation measures will require investigation.	1
227	Appendix X (Part 1) Traffic Impact Assessment Section 1.6.2.1 Table 1.5 Pages 38 and 39	There seems to be some confusion about what is required to be assessed and what is required to be mitigated. Table 1.5 for example is titled "Trigger criteria for the application of mitigation measures". This is not correct. The information in the table is actually the criteria for if a particular road link, intersection or road infrastructure needs to be included in the assessment. Once it is determined that a particular road link, intersection or road infrastructure is to be included in the assessment, then the assessment must quantify the impact and determine whether the Project is responsible for mitigating that impact. The thresholds (or triggers) for determining whether a road link, intersection or road infrastructure are to be included in the assessment are not the same as the thresholds (or triggers) for whether the Project is responsible for mitigating their impact.	The EIS should be updated to describe the impact assessment process as per the GTIA more clearly.	1
228	Appendix X (Part 1) Traffic Impact Assessment Section 2.4 Page 74	The report says that Table 2.3 lists the locations where pedestrians currently have access from one side of the proposed Project alignment to the other. Table 2.3 is local roads only. The Cunningham Highway in Yelarbon (a state-controlled road) is another location where there is currently pedestrian access across the railway line.	Update the EIS to ensure all locations where pedestrians currently access across the project alignment have been identified in the report.	1
229	Appendix X (Part 1) Traffic Impact Assessment Section 3.2 Page 76	The section says that the Contract Award is indicatively at the end of 2020. Given that this is not going to occur (it is now 2021), the indicative construction timetable should be updated accordingly.	Update the EIS to ensure the latest indicative construction timetable is provided in the report.	1
230	Appendix X (Part 1) Traffic Impact Assessment Section 3.3.1 Page 81	TMR have not requested separation distances for two A-triple vehicles. TMR's current position is for storage of a Type 1 Road Train / PBS 3B (42m) – one of which may be stored on the through road. This is different to what is written in the report.	Update the EIS to ensure the report represents TMR's current position accurately. Also see TMR's comment regarding swept path analysis for level crossings.	1
231	Appendix X (Part 1) Traffic Impact Assessment Section 4.4 Table 4.10 Page 104	In Table 4.10, the column headings say "peak volume". It is assumed this is "peak hour volume" not peak half hour or peak two hours.	Update the EIS to ensure tables headings include full units of measure.	2
232	Appendix X (Part 1) Traffic Impact Assessment Section 4.4 Page 104	In Table 4.10, why are %HV not applicable for three of the interface locations (Gore Highway, Toowoomba-Cecil Plains Road and Warrego Highway)?	Update the EIS to justify why certain roads are not adequately populated in the table, and update and amend the EIS as required.	1
233	Appendix X (Part 1) Traffic Impact Assessment Section 5.6.11 Page 147	Note that the roads listed are not all state-controlled roads.	Update the EIS to ensure the report accurately describes any accesses from state-controlled roads.	1

234	Appendix X (Part 1) Traffic Impact Assessment Section 6.1.2 Page 175	The EIS states: *'Road rail-interface analysis: It was considered to adopt 95th percentile output results from SIDRA modelling results instead of industry standard 85th percentile outputs. This is considered conservative as it accounts for additional vehicle queue and delay which might be induced through higher traffic volumes and slower moving vehicles.'* Adopting 95th percentile as output from SIDRA would not have intent to and would not necessarily reflect traffic volumes during a seasonal peak. It would in the first instance be considered conservative to adopt an AADT value factored for the peak harvest season before then considering queue lengths.	Revise the EIS assessment to include probable and conservative traffic assumptions for peak harvest season/s. Alternatively, the Traffic Impact Assessment must be updated to include these details.	1
235	Appendix X (Part 1) Traffic Impact Assessment Section 6.3.1 Page 230	The report says that the intersection would be designed to the largest construction vehicle. This will need to be confirmed by the appropriate road authority. The design vehicle may need to be larger depending on the access level of the roads involved.	Amend Transport Chapter of the EIS and TIA to note this requirement.	2
236	Appendix X (Part 1) Traffic Impact Assessment Section 6.3.1 Page 230	Bybera Road is not a gazetted B-double route. There will need to be an approval process through the appropriate authority to access for larger vehicles than what a road is gazetted for.	Amend Transport Chapter of the EIS and TIA to note this requirement.	2
237	Appendix X (Part 1) Traffic Impact Assessment Section 6.3.1 Page 230	With relation to the Cunningham Highway/Bybera Road intersection, the design will also need to comply with any TMR requirements in addition to Austroads GRD Part 4A. The intersection should be treated as a Staggered-T which may impact on the configuration of the turning lanes.	Update the EIS and TIA to more accurately expand upon the design requirements.	1
238	Appendix X (Part 1) Traffic Impact Assessment Section 6.3.1 Table 6.14 Pages 229 and 230	Section 6.3.1 discusses the turn warrants for right turn movements, whereas the third column of Table 6.14 refers to peak hour left turn volume into Bybera Road (Q_R).	Update the EIS to clarify column headings under section 6.3 regarding Construction intersection analysis.	1
239	Appendix X (Part 1) Traffic Impact Assessment Section 6.3.2 Page 232	The Cunningham Highway / Yelarbon-Kurumbul Road intersection will be reconfigured as part of the permanent works. Any assessment of the mitigation treatments proposed here must be cognisant of this.	Amend EIS and TIA to take account of the reconfiguration.	1
240	Appendix X (Part 1) Traffic Impact Assessment Section 6.3.3 Page 234	The second paragraph says "undated TIA" instead of "updated TIA" for the Cunningham Highway / East Sawmill Road intersection.	Amend the EIS to state 'updated' rather than 'undated'.	2
241	Appendix X (Part 1) Traffic Impact Assessment Section 6.4.3.2 Page 270	Where side roads are being closed (primarily to remove the need for a level crossing) and the traffic is diverted to an existing intersection with a state-controlled road, the operation of the existing intersection will also need to be assessed for potential impacts due to the increase in traffic.	Update the EIS to ensure that existing intersections affected through the closure of accesses are operating within acceptable limits.	1

242	Appendix X (Part 1) Traffic Impact Assessment Section 7.3 Table 7.3 Pages 308 to 311	It is noted that the values in Table 7.3 represent B2G-generated traffic only. The additional traffic generated from all other Inland Rail projects will also need to be factored in as this may increase these percentages above 5% for some road sections.	The TIA should include traffic generated by all other Inland Rail projects when determining whether impact assessment thresholds are reached. Amend the EIS/TIA accordingly.	1
243	Appendix X (Part 1) Traffic Impact Assessment Section 7.1 Page 305	The assumed seven-axle B-double is an atypical vehicle for quarry operations. The makeup of quarry fleet are typically tandem trucks or truck and dog combination ensuring wider and unrestricted access across the road network. These vehicles including within same classes can have substantially differing payloads. The assumed vehicle type is not made clear and it is therefore unclear what effect this has on the PIA.	Revise the assessment to include probable heavy vehicle traffic combination types for the intended activities. Undertake a detailed PIA in accordance with TMR's assessment criteria. This is in addition to TMR's other comments on the PIA.	1
244	Appendix X (Part 1) Traffic Impact Assessment Section 7.1 Pages 305 and 306	The PIA is not cross-referenced with other significant developments, in particular, other sections of the Inland Rail proposal, to inform cumulative impacts.	In consultation with the department undertake a detailed PIA in accordance with TMR's assessment criteria. Include the cumulative impacts of the Inland Rail programme and to maintain consistency with requirements of the ToR.	1
245	Appendix X (Part 1) Traffic Impact Assessment Section 11.2 Table 11.4 Pages 344 to 347	There is potential for other Inland Rail projects, namely H2C, C2K and K2ARB, to increase traffic volumes on the road network, not just North Star to Border and Gowrie to Helidon, yet only North Star to Border and Gowrie to Helidon are included in Table 11.4. All Inland Rail projects should be assessed for potential overlap of haulage routes and construction schedules, not just NS2B and G2H.	The TIA should include traffic generated by all other Inland Rail projects.	1
246	Appendix X (Part 1) Traffic Impact Assessment Appendix A Pages 360 to 366	The AADT data used in the calculation of growth rates does not appear to be correct. When the finalised TIA is developed, the correct and most current traffic data is to be used (ignoring any Covid-19 impacted data). For example, AADT data from EIS report  AADT data from TMR Annual Volume Report  It is not correct to fill in the gaps with data from adjacent years.	All growth rates for state-controlled roads are to be agreed to by TMR.	1
247	Appendix X (Part 1) Traffic Impact Assessment Appendix D Pages 384 to 456	The accuracy of the data supplied in Appendix D cannot be verified as the conversion of heavy vehicle types and volumes has not been supplied. This will need to be supplied to TMR as part of the development of the finalised TIA.	All data used for the PIA is to be supplied to TMR to allow for verification of the data provided.	1

Year	AADT
2019	252
2018	
2017	243
2016	
2015	296
2014	
2013	240
2012	
2011	233
2010	211

248	Appendix X (Part 1) Traffic Impact Assessment Section 3.3 Page 77	The EIS states that crossing loops will initially accommodate 1800m long trains. There is no mention of the potential to accommodate 3600m long trains in this section. The 3600m long trains are mentioned in other sections of the TIA.	Update section 3.3 to include reference to potential operations of 3600m long trains.	1
249	Appendix X (Part 1) Traffic Impact Assessment Section 5.6.9 Page 137	Section 5.6.9 states that temporary laydown areas will generally involve clearing, grubbing, topsoil stripping, installing environmental controls, laying hardstand material, and constructing parking areas and access tracks.	Please provide more certainty about the use/nature of 'temporary laydown areas' and the construction stage in which they are being established (e.g. pre or during construction).	1
250	Appendix X (Part 1) Traffic Impact Assessment Section 5.6.11 Page 147	The EIS states that laydown areas have been nominated for the Project that would need to be accessed directly off a State-controlled road, including: • Pittsworth-Tummaville Road • Southbrook Rockview Road These roads are not owned by the state government and the EIS also does not provide traffic data for these roads.	Please clarify the locations of the laydown areas that are being accessed by state-controlled roads and provide information and data for all relevant roads.	1
251	Appendix X (Part 2) Traffic Impact Assessment Appendix G to O Pages 79 to 103	The construction route maps are small and difficult to read. It is requested that GIS files for construction haulage routes are to be provided to TMR to allow for assessment.	Provide GIS files for construction haulage routes to TMR.	1
252	Appendix X (Part 4) Traffic Impact Assessment Appendix S Pages 60 to 179	It is unlikely that the construction schedule as plotted on the x-axis is to be achieved. The finalised TIA must contain updated versions of these graphs using the best available construction program (which may be the version supplied by the construction contractor).	Update the EIS/TIA to include construction timeframes that are more realistic.	1
253	Appendix X (Part 4) Traffic Impact Assessment Appendix S Pages 60 to 179	Some of the graphs do not start from 0. Does that mean that construction traffic is already on the road network (as of March 2021)?	Update the EIS to ensure that there are no errors or missing information to allow stakeholders to adequately assess the information.	1
254	Appendix X (Part 4) Traffic Impact Assessment Appendix T Pages 182 to 239	Some cells seem to have an error in them. Recommend ARTC provide a more final document without errors to ensure stakeholders can adequately consider the information. 	Update the EIS to ensure that there are no errors or missing information to allow stakeholders to adequately assess the information.	1
255	Appendix X Traffic Impact Assessment GTIA Section – 4.5 Transport Infrastructure Impact Assessment	**Level crossings** See TMR's other comments regarding level crossings **Structural Adequacy** The TIA report does not evaluate prevailing structural integrity issues of the transport infrastructure (for example, bridges or culverts) which may occur on any of the proposed construction transport routes. These items are to be identified and addressed in the TIA	Amend the EIS to evaluate the prevailing structural integrity issues of the transport infrastructure (bridges, culverts etc) in accordance with Section 4.5 of GTIA.	1
256	Appendix Y Spoil Management Strategy	According to the figures, only 1.19% of cut material is expected to be unsuitable. What degree of confidence is attributed to it in-light of the volume of GI undertaken to date? i.e. roughly one borehole every 5km	Update the EIS to confirm quantity of ground investigation undertaken so far is sufficient to provide this low % of unsuitable material and confirm degree of confidence in the figure.	2

	Section 2.2.2 Page 10			
257	Appendix Y Spoil Management Strategy Section 2.3 Table 2.3 Page 11 General	Reference is made to sodic (dispersive) soils and amelioration methods which indicate a misunderstanding on best practice amelioration methods.	In the absence of any nominated ARTC standard, include the requirement to identify, assess, ameliorate and manage the project soils as per the TMR Interim SMM, SMM Appendix 2 soil forms, TMR Soil Group Classifications Map and CSIRO Clay Mineralogy Maps.	2
258	Appendix Y Spoil Management Strategy Section 2.3 Table 2.3 Page 11 General	There is also a blanket approach to topsoil stripping which can result in the contamination of stripped topsoil with sodic and or saline subsoils (and other high-risk subsoils). Additionally, reference is made to a Soil Management Sub-plan but only refers to the inclusion of contaminated soils and ESC in the plan.	It is recommended that the EIS be amended to include topsoil and subsoil, surveying, assessment and management, topsoil stripping depths, and soil amelioration in the Soil Management Sub-plan.	2
259	Appendix Y Spoil Management Strategy Section 2.2.2 Page 10	Contrary to the EIS, existing railway corridors are not considered potential sources of contamination. They are to be assumed fully contaminated and ARTC have acknowledged this in their PSTR.	Update the EIS to remove existing railways from list of potential contamination and acknowledge that existing railway corridors are to be assumed as fully contaminated.	2
260	Appendix Z Proponent Commitments Table 1 Page 3	With reference to land resources, there should be a commitment to meet the requirements of TMR's MRTS16 and TMR's Interim SSM. This includes the requirement to; • to identify and assess the project soils as per the TMR Interim SMM, SMM Appendix 2 soil forms, TMR Soil Group Classifications Map and CSIRO Clay Mineralogy Map, • for the suitably qualified soil practitioner to be a CPSS as per the TMR Interim SMM.	Amend the EIS and Proponent Commitments to ensure that the applicant meet the requirements of the MRTS16 and the Interim SSM.	2
261	Appendix Z Proponent Commitments Table 1 Page 5	Surface water quality should, in addition to rain events, be monitored weekly during or prior to site inspection and daily visual site observation that there is a change in turbidity or visual contamination such as oil. Moreover, downstream water quality should be compared against baseline and upstream water quality sampling.	It is recommended that water quality monitoring be undertaken following significant rain events, weekly during site inspections, and daily after visual site observation that indicate a change in turbidity or contamination such as oil, or environmental incident or compliant. Amend the EIS, Proponent Commitments and Outline Environmental Management Plan accordingly.	2
262	Appendix Z Proponent Commitments Table 1 Page 8	Noise and vibration mitigation measures are to be installed during construction activities prior to operation of any rolling stock. Noise and vibration mitigation measure will be installed to ensure rolling stock does not exceed criterial as specified in Table 2.2.1, 2.2.2 and 2.2.3 as specified in TMR's Interim Guideline – Operational Railway Noise and Vibration.	Noise and vibration mitigation measures must be installed during construction activities prior to operation of any rolling stock in accordance to rail operational criteria as specified in TMR's *Interim Guideline – Operational Railway Noise and Vibration*. Amend the Proponent Commitments and Outline Environmental Management Plan accordingly.	1
263	Appendix Z Proponent Commitments Table 1 Pages 12 and 13	Regarding traffic and transport, ARTC is only committing to undertaking further assessment, but there is no commitment to undertake any the requirements or mitigation measures identified in the traffic impact assessment.	Amend the EIS (including Proponent Commitments) to ensure ARTC commits to undertaking the mitigation measures required as a consequence of the updated TIA. This includes any pavement contribution as a consequence of the updated PIA, upgrading any necessary intersections, as well as the requirement to develop and implement the outcomes of a Road-use Management Plan. Additionally, ARTC should continue to work with TMR regarding the appropriate mechanism to manage impacts to the State-controlled road (for example – an infrastructure agreement).	1

264	Appendix Z Proponent Commitments Table 1 Page 13	Waste will be managed in accordance with the waste hierarchy by reducing the amount of waste generated in the first instance, the segregation of waste into waste streams to facilitate appropriate reuse, recycle, waste recovery for fuel/energy and least preferable, dispose.	Update the EIS to ensure waste will be managed in accordance with the waste hierarchy by reducing the amount of waste generated in the first instance, the segregation of waste into waste streams to facilitate appropriate reuse, recycle, waste recovery for fuel/energy and least preferable, dispose.	2
265	Appendix Z Proponent Commitments Table 1 Page 14	Regarding the Environmental Management Plan, the Construction Environmental Management Plan is required to have an Erosion and Sediment Control Sub-Plan.	Update the EIS (Outline Environmental Management Plan and Proponents Commitments) to ensure that an Erosion and Sediment Control Sub-Plan is required.	2
266	Appendix Z Proponent Commitments Table 1 Page 14	Table 1, for the Environmental Management Plan, the dot point *Appointment of an Environmental Monitor to*: repeats twice. Consider removing the second reference to Environmental Monitor.	Consider removing second reference to appointing an environmental monitor and continue sequence of dot point comments.	2

Submission form: draft environmental impact statement (EIS)

Please complete this form only if you wish to provide a submission by email, post or fax. To make an online submission, visit **https://haveyoursay.dsd.qld.gov.au**

Name of project

Inland Rail – Border Gowrie Project

Your details (please print)

Full name Irrelevant information	**Organisation (if relevant)** Queensland Ambulance Service, Darling Downs Local Ambulance Service Network
Postal address PO Box 831 TOOWOOMBA QUEENSLAND **Postcode** 4350	**Phone number** Irrelevant informatio **Email address** Irrelevant information deleted in accordance wi
Signature Irrelevant information deleted	**Date** 02./02/2021

A submission by more than one person must be signed by *each* submitter

Your comments on the draft EIS (please print)

Section—e.g. water quality	Describe the issue	Suggested solution
No Issues		

- If there is not enough space on this form, please attach additional pages. Please write your full name and the name of the project on any separate pages.
- Send the completed form to the email/postal address/fax number shown in the newspaper public notice. If you require assistance, please telephone 13 QGOV (13 74 68).
- You **must** provide your comments by the closing date shown in the public notice and on the consultation website.
- For this submission to be 'properly made', it must be signed by each person who makes the submission and state the name and address of each person who makes the submission.

From: Irrelevant information deleted in accordance with section 73 of the RTI Act
Sent: Tuesday, 27 April 2021 2:22 PM
To: Inland Rail - B2G
Cc: Irrelevant information deleted in accordance with section 73 of the RTI Act; Irrelev; Vegetation Management Support; Irrelevant information deleted in acc; Soil Enquiry; Irrelevant inf; Irrelevant information deleted in accordance with section 73 of the RTI Act; Irrelev; DoR Planning; Irrelevant information
Subject: Department of Resources submission Inland Rail Border to Gowrie draft EIS
Attachments: Dept of Resources Submission Inland Rail B2G April 2021.docx

Good afternoon,

Please find attached Department of Resources (including Resource Safety Health Queensland) submission on the Inland Rail, Border to Gowrie, draft EIS.

Thank you to the technical officers who reviewed and provided advice on the draft EIS.

Please contact me if you have any queries regarding this submission.

Thanks and Kind Regards

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Planning Services
Department of Resources

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A: 32 Tansey Street , Beenleigh QLD 4207
W: www.dnrme.qld.gov.au

From: Planning Services South <PlanningServicesSouth@resources.qld.gov.au>
Sent: Tuesday, 13 April 2021 2:48 PM
To: DoR Planning
Subject: FW: Inland Rail Border to Gowrie draft EIS - extended public notification

From: Inland Rail - B2G <InlandRailB2G@coordinatorgeneral.qld.gov.au>
Sent: Tuesday, April 13, 2021 2:47:24 PM (UTC+10:00) Brisbane
To: Inland Rail - B2G <InlandRailB2G@coordinatorgeneral.qld.gov.au>
Subject: Inland Rail Border to Gowrie draft EIS - extended public notification

Good afternoon

The Coordinator-General has extended the public notification period for the Inland Rail – Border to Gowrie project draft environmental impact statement (EIS) by two weeks. It now closes at **5pm on Tuesday, 4 May 2021**.
You are welcome to make a submission by this date. If you have already made a submission you can make a further submission and the Coordinator-General will consider it in evaluating the EIS.
If you have any questions, please email InlandRailB2G@coordinatorgeneral.qld.gov.au.
Regards
Irrelevant information d

Office of the Coordinator-General
Department of State Development,
Infrastructure, Local Government and Planning
Level 17, 1 William Street, Brisbane
PO Box 15517, City East QLD 4002
dsdilgp.qld.gov.au

Unite & Recover

Queensland Government

I acknowledge the traditional custodians of the lands and waters of Queensland. I offer my respect to elders past, present and emerging as we work towards a just, equitable and reconciled Australia.

Department of Resources Submission to Inland Rail Project: Border to Gowrie, Draft EIS for Public Consultation

19 April 2021

Name: Irrelevant information deleted in accordance wit

Phone number: Irrelevant inform

Postal Address:
PO Box 1164
BEENLEIGH Qld 4207

Email Address
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Organisation
Department of Resources

Section of EIS	Description of issue	Suggested Solution
General advice to the OCG on condition recommendations	**Condition recommendations** Any condition within the Department of Resources submission is a recommended imposed condition. The Department of Resources can assist by providing technical advice to the Coordinator-General if the need arises.	For noting by the OCG.
Various sections of Draft EIS	**Department of Resources - Machinery of Government Changes** Recent machinery of government changes has resulted in state agency name changes, since the EIS was drafted. Therefore, all references to the former Department of Natural Resources, Mines and Energy (DNRME), require amending to either the Department of Resources or the Department of Regional Development, Manufacturing and Water (DRDMW) to reflect machinery of government changes. In general, this will require all references to the former DNRME, **in sections that do not relate to water matters**, being changed to Department of Resources.	Change all references to the former Department of Natural Resources, Mines and Energy, to either Department of Resources or Department of Regional Development, Manufacturing and Water (DRDMW) to reflect machinery of government changes.
State Land		
Various sections of Draft EIS	The department and unit name relating to State Land interests needs to be amended throughout the Draft EIS to reflect recent machinery of government/departmental changes.	**Amend EIS** Change all references in the Draft EIS from State Land Asset Management (SLAM), to Land Administration and Acquisition (LAA).

Section of EIS	Description of issue	Suggested Solution
		AND Change all references to the departments name (relating to State Land) from Department of Natural Resources, Mines and Energy, to Department of Resources.
Chapter 3: Project Approvals Table 3.5 Potential Post – Environmental Impact Statement Approvals for the Project Page 3-34	Table 3.5 (Land Act and NT Act row) State land dealings may take an extended amount of time to resolve and early engagement is recommended to minimise the risk of any delays to the project.	**Amend EIS** Amend Table 3.5 Land Act and NT Act row to include additional column (as included in Chapter 3: Project Approvals Table 3.4 of Calvert to Kagaru draft EIS) *Indicative approval processing timeframe*. Under this new column include the following: No statutory timeframes can be lengthy and early engagement with Department of Resources is required. For noting: Department of Resources, Land Administration and Acquisition contact: Irrelevant information delete Department of Resources PO Box 2 (Corner of Fitzroy and Guy Streets) Warwick QLD 4370 SLAM-Warwick@resources.qld.gov.au **Recommended condition** If the above changes are not made to Table 3.5, it is recommended that the OCG impose the following condition on the EIS: *Development on State Land, including road, must obtain relevant Land Act 1994 approvals through the administering authority the Department of Resources, Land Administration and Acquisition, unless another appropriate legislative land dealing process i.e., under the Transport Infrastructure Act 1994 is implemented.*

Section of EIS	Description of issue	Suggested Solution
Chapter 7 Land Use & tenure 7.1 Introduction Page 7-1	No mention of the *Land Act 1994* upfront and within the introduction of Chapter 7 Land Use and Tenure. The *Land Act 1994* and associated State land policies will play a significant role in enabling tenure / land dealings required to facilitate the Inland Rail project.	**Amend EIS** Amend section 7.1 Introduction to include the additional red text: "This chapter identifies the land use and tenure aspects relevant to the Project and, in doing so, addressees the following: • The relevant legislative context including the *Land Act 1994* for land use and tenure for the Project (refer Section 7.3)"
Chapter 7 Land Use & tenure 7.3 - Policies, standards and guidelines Table 7.2 Policies, Standards and Guidelines Relevant to the Project Page 7-3 – 7-4	Table 7.2 Policies, Standards and Guidelines Relevant to the Project does not include any information on the *Land Act 1994*. The relevance of the *Land Act 1994* needs to be described in Table 7.2 because multiple parcels of State Land will be impacted by the project (as stated in Appendix V). Additionally, chapter 3 Legislation and Project Approvals Process, section 3.5.14 *Land Act 1994,* states that the *Land Act 1994* will be used in tenure processes, therefore Table 7.2 needs to be updated accordingly.	**Amend EIS** Amend Table 7.2 by adding a row for the *Land Act 1994 (QLD)* and include a description under the 'Relevance to the Project' heading stating how the *Land Act 1994* will be used for tenure dealings. This has not been included in Table 7.2 Policies, Standards and Guidelines relevant to this Assessment, Page 7-3 – 7-4. **Recommended condition** If the above changes are not made to Table 7.2, it is recommended that the OCG impose the following condition on the EIS: *Development on State Land, including road, must obtain relevant Land Act 1994 approvals through the administering authority the Department of Resources, Land Administration and Acquisition, unless another appropriate legislative land dealing process i.e., under the Transport Infrastructure Act 1994 is implemented.*
Chapter 7 Land Use & tenure 7.5 Existing Environment 7.5.1 Land tenure Page 7-34	State land dealings may take an extended amount of time to resolve and early engagement is recommended to minimise the risk of any delays to the project.	**Amend EIS** Include additional text in Section 7.5.1 to identify that tenure processes under the *Land Act 1994* will be complied with. For example, amend the EIS to include the following: In some instances, appropriate tenure or interest in State land, that supports the proposed development, will be secured by ARTC under the *Land Act 1994*. In this case, contact must be made as soon as possible with the Department of Resources Land Administration and Acquisition

Section of EIS	Description of issue	Suggested Solution
		Team to discuss options and to begin proceedings under the *Land Act 1994.* For noting: Department of Resources, Land Administration and Acquisition contact: Irrelevant information delet Department of Resources PO Box 2 (Corner of Fitzroy and Guy Streets) Warwick QLD 4370 SLAM-Warwick@resources.qld.gov.au **Recommended condition** If the above changes are not made to section 7.5.1, it is recommended that the OCG impose the following condition on the EIS: *Development on State Land, including road, must obtain relevant Land Act 1994 approvals through the administering authority the Department of Resources, Land Administration and Acquisition, unless another appropriate legislative land dealing process i.e., under the Transport Infrastructure Act 1994 is implemented.*
Chapter 7 Land Use & tenure 7.6.1 Permanent change in tenure and loss of property – State forest revocation page 7 – 158 **and** 7.7.2.1 Change in land tenure and loss of property – State forest 7 - 180	While this section mentions revocation of State Forest, no mention is made of the impact on the grazing leases on State forest.	**Amend EIS** Include additional text in 7.6.1 Permanent change in tenure and loss of property – State forest revocation page 7 – 158 and 7.7.2.1 Change in land tenure and loss of property – State forest 7 – 180, to identify that impacts on grazing leases over State forests may require tenure processes under the *Land Act 1994*. For example, Where grazing leases over State Forests are impacted, it is recommended that ARTC contact the Department of Resources, Land Administration and Acquisition Team as soon as possible to discuss options and to begin proceedings under the *Land Act 1994*. For noting: Department of Resources, Land Administration and Acquisition contact: Irrelevant information delet

Section of EIS	Description of issue	Suggested Solution
		Department of Resources PO Box 2 (Corner of Fitzroy and Guy Streets) Warwick QLD 4370 SLAM-Warwick@resources.qld.gov.au **Recommended condition** If the above changes are not made to section 7.6.1 and 7.7.2.1, it is recommended that the OCG impose the following condition on the EIS: *Development on State Land, including road, must obtain relevant Land Act 1994 approvals through the administering authority the Department of Resources, Land Administration and Acquisition unless another appropriate legislative land dealing process i.e., under the Transport Infrastructure Act 1994 is implemented.*
Chapter 7 Land Use & tenure 7.6 Potential impacts 7.6.1 Change in tenure and loss of property Page 7 - 157	This section needs to be updated to include a description of the impacts of the project on land administered under the *Land Act 1994*. The following public uses will be impacted by the Project: Goondiwindi Regional Council LGA • 1SP150781 Reserve for Parks and Gardens – permanent impact to footpath and infrastructure. • 1Y5698 Reserve for Recreation – southern access road and small part of cricket oval permanently impacted. • 37MH878 Reserve for Camping & Water (Stock Route Reserve – Primary & Open with water facility) – eastern boundary of reserve and adjacent access road permanently impacted. • 89SP140808 Reserve for Racecourse – small area of permanent impact (0.01ha identified in Appendix V). • 2Y56916 Reserve for Local Government – small areas temporarily impacted (0.03ha identified in Appendix V).	**Amend EIS** Update Sections 7.6.1 to include potential impacts on land administered under the *Land Act 1994.* Specifically list the following reserves in section 7.6.1 Goondiwindi Regional Council LGA • 1SP150781 Reserve for Parks and Gardens – permanent impact to footpath and infrastructure. • 1Y5698 Reserve for Recreation – southern access road and small part of cricket oval permanently impacted. • 37MH878 Reserve for Camping & Water (Stock Route Reserve – Primary & Open with water facility) – eastern boundary of reserve and adjacent access road permanently impacted. • 89SP140808 Reserve for Racecourse – small area of permanent impact (0.01ha identified in Appendix V). • 2Y56916 Reserve for Local Government – small areas temporarily impacted (0.03ha identified in Appendix V).

Section of EIS	Description of issue	Suggested Solution
	• 41MH778 Reserve for Local Government – small area along northern boundary temporarily impacted (0.05ha identified in Appendix V). • 110SP171826 Reserve for Pasturage (Stock Route Reserve – Minor & Unused, Open) – permanent impact, possible fragmentation. Toowoomba Regional Council LGA • 84SP109985 Reserve for Recreation – 100% of reserve permanently impacted. • 140DER34129 Reserve for Water	• 41MH778 Reserve for Local Government – small area along northern boundary temporarily impacted (0.05ha identified in Appendix V). • 110SP171826 Reserve for Pasturage (Stock Route Reserve – Minor & Unused, Open) – permanent impact, possible fragmentation. Toowoomba Regional Council LGA • 84SP109985 Reserve for Recreation – 100% of reserve permanently impacted. • 140DER34129 Reserve for Water. Also, within sections 7.6.1 refer to Appendix F: Impacted Properties. In doing so acknowledge that Appendix F contains the complete and inclusive description of all parcels of State land proposed to be impacted.
	Stock Routes	
Appendix M Preliminary Fauna Movement Provision and Fencing Strategy – Appendix D ARTC Standard Drawings page 50	The following advice was previously provided to ARTC, however continues to be absent from the draft EIS: • Gates are to be incorporated across the rail track so to prevent stock from entering the track corridor while crossing the track. • Minimum stock crossing width of 7.3m has been stipulated to provide practical movement of large mobs through the opening while minimising injury to stock and damage to infrastructure from animal pressure. When reviewing the Typical Private Level Crossing for High Use Livestock and Machinery with Rail Maintenance Access Road -Drawing STD-T0169 within Appendix M Preliminary Fauna Movement Provision	**Recommended condition** Resources recommends the Coordinator General includes the following condition on the EIS approval: • Gates are to be incorporated across the rail track so to prevent stock from entering the track corridor while crossing the track and • A minimum stock crossing width of 7.3m is provided across the rail / track corridor. or • To the satisfaction of the Chief Executive administering the *Stock Route Management Act 2002*, an alternative livestock crossing design which facilitates the practical movement of large mobs of livestock across the rail track corridor while

Section of EIS	Description of issue	Suggested Solution
	and Fencing Strategy, it is apparent that neither stock routes advice have been incorporated.	minimising injury to livestock and damage to infrastructure from animal pressure is sought.
	Vegetation	
Various sections of the EIS	The below issues have been raised about specific sections of the EIS, however if an issue identified is also present in another section of the EIS, corrections also need to be made to those sections.	**For action.**
General note		**For Noting:** **Category C areas (high value regrowth)** The EIS identifies that clearing of category C areas will occur or is proposed to occur as a result of the Project. Clearing vegetation to the extent the clearing is in any category C areas is not for a relevant purpose under the *Vegetation Management Act 1999*. Accordingly clearing of vegetation in these areas cannot be approved under a development approval. Clearing vegetation in any category C areas must be undertaken as exempt clearing work or in accordance with an Accepted Development Vegetation Clearing Code (ADVCC). Clearing vegetation in any category C areas that is not exempt or not in accordance with an ADVCC is prohibited development. **Exchange Areas** Clearing of category C areas in accordance with an ADVCC may require the provision of an exchange area if the clearing exceeds the area or widths prescribed in the ADVCC. Exchange areas must be legally secured either through a voluntary declaration or a property map of assessable vegetation and must be managed in accordance with a management plan. The exchange area must comply with the 'exchange areas' section of the ADVCC under which the clearing is being notified.
Chapter 3 – Legislation and	Section 3.5.9.3 states an initial assessment of Significant Residual Impacts on prescribed matters has been undertaken against the Department of Environment and Heritage Protection (2014)	**Amend EIS** Amend section 3.5.9.3 to include information in relation to the use of the *Significant Residual Impact Guideline for Matters of State*

Section of EIS	Description of issue	Suggested Solution
project approvals process 3.5.9 *Environmental Offsets Act 2014* 3.5.9.3 Project Compliance Pages 3-17 to 3-18	Significant Residual Impact (SRI) Guideline and the Department of the Environment, Water, Heritage and the Arts (Department of the Environment, 2013) Significant Impact Guidelines 1.1—Matters of National Environmental Significance. However, an assessment of significant residual impacts should also be assessed against the *Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the Planning Act 2016 (Department of State Development, Infrastructure, Local Government and Planning, December 2014)*, because clearing for the Project has yet to be confirmed as exempt under Schedule 21 of the Planning Regulation as government supported transport infrastructure, and some clearing for the Project outside of the gazetted area may be assessable under the *Planning Act 2016*.	*Environmental Significance and Prescribed Activities assessable under the Planning Act 2016 (Department of State Development, Infrastructure, Local Government and Planning, December 2014)* for clearing that may not be exempt under Schedule 21 of the *Planning Regulation 2017*. **For noting:** The DSDILGP SRI guideline for prescribed matters made assessable under the *Planning Act 2016* can be found at: https://dsdmipprd.blob.core.windows.net/general/significant-residual-impact-guideline.pdf
Chapter 3 – Legislation and project approvals process 3.5.19 *Planning Act 2016* 3.5.19.2 Relevance to the Project Page 3-29 3.5.31 *Vegetation Management Act 1999* Pages 3-36 to 3-37 Table 3.5 Potential Post Environmental Impact Statement Project Approvals – State – Operational	**Demonstrating exempt clearing** *Sections 3.5.19.2 and 3.5.31* and Table 3.5 states that clearing within the gazetted project footprint will be exempt clearing for the construction of government supported transport infrastructure under Schedule 21 of the *Planning Regulation 2017*. It is the Department of Resources understanding that the State is yet to confirm if the project is government supported transport infrastructure. Until this is confirmed, the related vegetation clearing exemption does not apply. This should be more clearly reflected and articulated throughout Chapter 3.	**Amend EIS** Amend sections 3.5.19.2 and 3.5.31 so that there is no ambiguity surrounding the fact that clearing vegetation for the development will require a development approval unless the project is confirmed as government supported transport infrastructure by the Queensland Government. This should be identified upfront in these sections rather than at the end. Amend Table 3.5 to clearly identify if a development approval will be required for clearing vegetation on prescribed land unless the clearing is exempt. **For noting:** To confirm application of exemptions, and requirements for any approvals and permits under the State's vegetation management framework, the proponent is advised to contact the State Assessment Referral Agency (SARA) in the Department of State Development, Infrastructure, Local Government and Planning (DSDILGP): https://planning.dsdmip.qld.gov.au/planning/resources/contact-us

Section of EIS	Description of issue	Suggested Solution
work for clearing vegetation Page 3-46		
Chapter 3 – Legislation and project approvals process 3.5.31 *Vegetation Management Act 1999* 3.5.31.3 Project compliance Pages 3-36 to 3-37.	**Potential assessable clearing** *Section 3.5.31.3* Project *compliance,* implies that some proposed clearing may not be exempt under Schedule 21 of *the Planning Regulation 2017* and therefore may require approval. However, this clearing cannot be currently identified. Without the details of these proposed developments, no assessment of vegetation clearing can be undertaken, and therefore no specific conditions—to attach to any approval—can be provided.	**Amend EIS** Amend the EIS to clearly identify the location, extent and purpose of any clearing that will not be conducted in accordance with an applicable exemption in Schedule 21 of the *Planning Regulation 2017*. **Recommended Condition** It is recommended that the Coordinator-General include a condition on the EIS approval that ensures clearing of native vegetation must only occur for the following: • Exempt clearing work (as defined in Schedule 21 of the *Planning Regulation 2017*); or • Where it complies with an Accepted Development Vegetation Clearing Code; or • Where it complies with a development approval for clearing native vegetation
Chapter 5 – Project description 5.3 Pre-construction activities and early works 5.3.1 Environmental and planning approvals Pages 5-59 to 5-60 5.4 Construction Activities 5.4.7 Laydown, Stockpile and Storage Areas Page 5-76	**Pre-construction activities/early works** Section 5.3 identifies some pre-construction activities and early works that may involve clearing including surveying, establishment of access tracks, and utility and service relocations. The extent and location of these works has not been identified and it is unclear whether any associated clearing could be carried out as exempt clearing. **Environmental and planning approvals** Section 5.3.1 states clearing of vegetation is exempt under Schedule 21, Part 1, item 14 of the *Planning Regulation 2017* i.e. for 'government supported transport infrastructure'. As identified elsewhere, until the exemption is confirmed the clearing exemption does not apply. **Laydown, Stockpile and Storage Areas**	**Amend EIS** Amend the EIS to identify the location and extent of any clearing required for pre-construction/early works and any laydown, stockpile, and storage areas, particularly any works located outside of the gazetted development footprint. The EIS must detail whether these works are proposed to be carried out under the 'government-funded transport infrastructure' exemption (if it is confirmed that it applies to the project), or whether other exemptions/clearing codes or approvals need to be considered. Amend section 5.3.1 to remove ambiguity surrounding the fact that clearing vegetation for all aspects of the development will require a development approval unless clearing is carried out under an exemption or an applicable ADVCC. This is particularly relevant for statements that refer to Schedule 21, Part 1, item 14 of the *Planning Regulation 2017* for 'government supported transport infrastructure'.

Section of EIS	Description of issue	Suggested Solution
	Section 5.4.7 states laydown, stockpile and storage areas, including constructing parking areas and associated access tracks will be required along the length of the Project corridor and may involve the clearing of vegetation. It is unclear whether these will be able to be carried out as exempt clearing.	To confirm application of exemptions, and requirements for approvals and permits under the State's vegetation management framework, the proponent is advised to contact the State Assessment Referral Agency (SARA) in the DSDILGP: https://planning.dsdmip.qld.gov.au/planning/resources/contact-us
Chapter 10 – Flora and fauna 10.3 Policies, Standards, and guidelines Page 10-13	**Table 10.2 Policies, Standards, and guidelines relevant to this assessment** *Table 10.2* lists the Department of Environment and Heritage Protection (2014) Significant Residual Impact Guideline is to be used to assess for SRI impacts on MSES. However, an assessment of SRI impacts should also be assessed against the Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the *Planning Act 2016* (*Department of State Development, Infrastructure, Local Government and Planning, December 2014*), because clearing for the Project has yet to be confirmed as exempt under Schedule 21 of the *Planning Regulation 2017* as government supported transport infrastructure, and some clearing for the Project outside of the gazetted area may be assessable under the *Planning Act 2016*.	**Amend EIS** Amend Table 10.2 to include information in relation to the use of the *Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the Planning Act 2016 (Department of State Development, Infrastructure, Local Government and Planning, December 2014*) for clearing that may not be exempt under Schedule 21 of the *Planning Regulation 2017*. **For Noting:** The DSDILGP's SRI guideline for prescribed matters made assessable under the *Planning Act 2016* can be found at: https://dsdmipprd.blob.core.windows.net/general/significant-residual-impact-guideline.pdf
Chapter 10 – Flora and fauna 10.4 Methodology 10.4.2 Sensitive Environmental Receptors Page 10-15 10.4.6 Impact Assessment Methodology	**Sensitive environmental receptors for MSES** Section 10.4.2 states that sensitive environmental receptors for the project are those defined as 'prescribed environmental matters' in Part 2, Section 5 of the *Environmental Offsets Regulation 2014*. However, while Section 10.4.2 identifies regional ecosystems and wildlife habitat as sensitive environmental receptors, it does not identify regulated vegetation that intersects a wetland or watercourse. These are identified as MSES in the Environmental Offsets Regulation as 'prescribed environmental matters' and should therefore be identified in Section 10.4.2. **Impact assessment methodology for MSES**	**Amend EIS** Amend EIS to include regulated vegetation that intersects a wetland or watercourse in the list of 'sensitive environmental receptors' (that are *Environmental Offsets Regulation 2014* – 'prescribed environmental matters') in Section 10.4.2. Include information in relation to the use of the *Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the Planning Act 2016 (Department of State Development, Infrastructure, Local Government and Planning, December 2014)* for clearing that may not be exempt under Schedule 21 of the *Planning Regulation 2017*. The DSDILGP's SRI guideline is located at:

Section of EIS	Description of issue	Suggested Solution
Page 10-31	It is identified that significant impact assessment for MSES to inform potential offsets will be guided by the Queensland Environmental Offsets Policy (QEOP) Significant Residual Impact (SRI) Guidelines (DEHP 2014) However for clearing that is not exempt, significant impact assessment for MSES under the *Planning Act 2016* should rather be guided by the *Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the Planning Act 2016 (Department of State Development, Infrastructure, Local Government and Planning, December 2014)*.	https://dsdmipprd.blob.core.windows.net/general/significant-residual-impact-guideline.pdf
Chapter 10 – Flora and fauna 10.5 Existing Environment 10.5.3 Flora and Ecological Communities 10.5.3.2 Vegetation Communities Pages 10-46 to 10-59	**Vegetation communities** Section 10.5.3.2 suggests that clearing of category X areas is generally exempt. However, clearing of category X areas on State land is assessable unless done under an exemption or an ADVCC. **Tables 10.6 Extent of category B, C, R areas of regulated vegetation within the impact assessment area and Project footprint);** and **10.7 Extent of regulated vegetation located a defined distance from a watercourse or wetland within the impact assessment area and Project footprint** Tables 10.6 and 10.7 refer only to Category A, B, C and R areas. Category X areas on State land tenures should be identified as well as any exemptions that may apply. **Table 10.8 Descriptions of Regional Ecosystems (category and C regulated vegetation) within the impact assessment area** Table 10.8 describes the mapped REs within the impact area. For assessable category X areas, the preclearing regional ecosystem should be identified in this table.	**Amend EIS** Amend Section 10.5.3.2 to identify that Category X areas on State land tenures is assessable unless an exemption or ADVCC applies. Amend Table 10.6 to identify any impacted category X areas on State land tenures. Amend Table 10.7 to identify any impacted category X areas on State land tenures AND that are located a defined distance from a VMA watercourse or wetland. Of the impacted vegetation identified in both tables 10.6 and 10.7 include a column detailing the area of impacted vegetation that may be exempt and associated exemption provisions thought to apply. Amend Table 10.8 to identify the preclearing regional ecosystem of any impacted category X areas on State land.
Chapter 10 – Flora and fauna	Section 10.7 states that sensitive environmental receptors for the project are those defined as 'prescribed environmental matters' in Part 2, Section 5 of the *Environmental Offsets Regulation 2014*. However, while Section 10.7 identifies regional ecosystems and	**Amend EIS** Amend EIS to include regulated vegetation that intersects a wetland or watercourse in the list of sensitive environmental receptors in Section 10.7.

Section of EIS	Description of issue	Suggested Solution
10.7 Sensitive Environmental Receptors Page 10-107	wildlife habitat/essential habitat as sensitive environmental receptors, it does not identify regulated vegetation that intersects a wetland or watercourse. These are identified as MSES in the Environmental Offsets Regulation as 'prescribed environmental matters' and should therefore be identified in Section 10.4.2.	
Chapter 10 – Flora and fauna 10.11 Impact Assessment 10.11.1 Quantified Magnitude of Impacts Pages 10-142; 10-148 to 10-149 10.11.2 Initial significance assessment Pages 10-150; 10-157 to 10-164	**Table 10.35 – Estimation of potential magnitude of disturbance for sensitive environmental receptors (excluding threatened and migratory species) identified for the project.** Table 10.35 does not include area calculations for regulated vegetation associated with a wetland or watercourse. The Table does include those for Essential Habitat, and for consistency should include data for VMA wetland and watercourses within the Project area. **Table 10.38 Initial assessment of significance of impacts of the Project upon identified sensitive environmental receptors** Table 10.38 does not include information related to regulated vegetation associated with a watercourse or wetland. The Table does include those for Essential Habitat and for consistency should include information for VMA wetland and watercourses within the Project area.	**Amend EIS** Amend Table 10.35 and Table 10.38 to include area calculations for regulated vegetation that is associated with a VMA wetland or watercourse.
Chapter 10 – Flora and fauna 10.12 Significant Residual Impact Assessment 10.12.3 Significant Residual Impact Assessment for Matters of State	Section 10.12.3 does not clarify that the *Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the Planning Act 2016 (Department of State Development, Infrastructure, Local Government and Planning, December 2014)* is used to assist in deciding whether or a not a prescribed activity will or is likely to have a significant residual impact on a MSES for offsets imposed under the *Planning Act 2016*. A revised SRI assessment should be undertaken for MSES matters using DSDILGP's SRI guideline and the calculations in *Table 10.41* updated if relevant.	**Amend EIS** Amend EIS to clarify that environmental offsets imposed under the *Planning Act 2016* for a MSES must use the *Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the Planning Act 2016 (Department of State Development, Infrastructure, Local Government and Planning, December 2014)*. Update Table 10.41 if relevant following assessment of SRI using DSDILGP's SRI Guideline. For Noting:

Section of EIS	Description of issue	Suggested Solution
Environmental Significance Page 10-168		The DSDILGP's SRI guideline for prescribed matters made assessable under the *Planning Act 2016* can be found at: https://dsdmipprd.blob.core.windows.net/general/significant-residual-impact-guideline.pdf
Chapter 10 – Flora and fauna 10.13 Biodiversity offsets 10.13.2 Matters of State Environmental Significance Pages 10-170 to 10-171	Section 10.13 does not include a correlation between matter of MNES and MSES to enable an understanding or assessment of impacts remaining post MNES being addressed/offset. Section 10.13.2 does not clarify whether DSDILGP's SRI Guideline was used to assess and quantify the SRI impacts outlined in Table 10.43. The SRI assessment and quantification should be repeated using the DSDILGP's SRI Guideline and the values in Table 10.43 revised if relevant, including any SRI impacts for wetlands.	**Amend EIS** Amend section 10.13 to include a section that details and quantifies the matters and area (hectares) of overlap between MNES and MSES matters and offset requirements. Identify that environmental offsets imposed under the *Planning Act 2016* for MSES must use the Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the *Planning Act 2016* (*Department of State Development, Infrastructure, Local Government and Planning, December 2014*). Update Table 10.43 if relevant following assessment of SRI using DSDILGP's SRI Guideline. **For Noting:** The DSDILGP's SRI guideline for prescribed matters made assessable under the *Planning Act 2016* can be found at: https://dsdmipprd.blob.core.windows.net/general/significant-residual-impact-guideline.pdf
Appendix J – Terrestrial Ecology Technology Report Chapter 1 – Introduction 1.2 Scope and purpose 1.2.3 Impact Assessment Area Page 4	Section 1.2.3 states an initial assessment of Significant Residual Impacts on prescribed matters have been assessed against the Department of Environment and Heritage Protection (2014) Significant Residual Impact Guideline and the Department of the Environment, Water, Heritage, and the Arts (Department of the Environment, 2013) Significant Impact Guidelines 1.1—Matters of National Environmental Significance. However, an assessment of SRI impacts should also be assessed against the Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the *Planning Act 2016* (*Department of State Development, Infrastructure, Local Government and Planning, December 2014*), because clearing for the Project has	**Amend EIS** Amend section 1.2.3 to include information in relation to the use of the Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the *Planning Act 2016* (*Department of State Development, Infrastructure, Local Government and Planning, December 2014*) for clearing that may not be exempt under Schedule 21 of the *Planning Regulation 2017*. **For Noting:** The DSDILGP's SRI guideline for prescribed matters made assessable under the *Planning Act 2016* can be found at:

Section of EIS	Description of issue	Suggested Solution
	yet to be confirmed as exempt under Schedule 21 of the *Planning Regulation 2017* as government supported transport infrastructure, and some clearing for the Project outside of the gazetted area may be assessable under the *Planning Act 2016*.	https://dsdmipprd.blob.core.windows.net/general/significant-residual-impact-guideline.pdf
Appendix J – Terrestrial Ecology Technology Report Chapter 2 – Legislative, policy, standards, and guidelines 2.1 Commonwealth and State legislation Pages 8 to 20	**Table 2.1 Legislative approvals, licences, permits and authorities relevant to the environmental aspects of the Project** Table 2.1 – State – *Vegetation Management Act 1999* • Applicability of the VMA: o Statements do not identify that native vegetation mapped as a category X area on State land tenures including Road, Trust land, USL, is also regulated. o Statements propose that clearing within the gazetted project footprint will be exempt clearing for the construction of' government supported transport infrastructure' under Schedule 21 of the *Planning Regulation 2017*. It is the Department of Resources understanding that the State is yet to confirm if the project is government supported transport infrastructure. Until this is confirmed, the related vegetation clearing exemption does not apply. This should be more clearly reflected and articulated throughout the EIS. In addition, some clearing for the Project outside of the gazetted area may be assessable under the *Planning Act 2016*. Table 2.1 – State • Table 2.1 does not identify that environmental offsets may be imposed under the *Planning Act 2016* (PA) e.g., for *Vegetation Management Act 1999* matters. The Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the *Planning Act 2016* (*Department of State Development, Infrastructure, Local Government and Planning, December 2014*) is used to assist in deciding whether or a not a prescribed activity will or is likely to have a significant residual impact on a MSES for which an offset is required under the *Planning Act 2016*.	**Amend EIS** Amend Table 2.1 to include the following: • *Vegetation Management Act 1999* o Identify that clearing native vegetation in category X areas on State land tenures are also regulated and assessable. o Clarification that clearing vegetation for the development will require a development approval relative to the VMA unless the clearing is exempt. • Identify that environmental offsets may also be imposed under the *Planning Act 2016*, with referral to the DSDILGP's SRI guideline located at: https://dsdmipprd.blob.core.windows.net/general/significant-residual-impact-guideline.pdf **For Noting:** To confirm application of exemptions, and requirements for any approvals and permits under the State's vegetation management framework, the proponent is advised to contact the State Assessment Referral Agency (SARA) in the DSDILGP: https://planning.dsdmip.qld.gov.au/planning/resources/contact-us

Section of EIS	Description of issue	Suggested Solution
Appendix J – Terrestrial Ecology Technology Report Chapter 3 – Methodology 3.4 Impact Assessment Method 3.4.4 Assessment of the significance of impact against the MNES (migratory species) and MSES impact guidelines Page 55	Section 3.4.4 states that the Significant Residual Impacts on prescribed matters have been assessed against the Department of Environment and Heritage Protection (2014) Significant Residual Impact Guideline, and the Department of the Environment, Water, Heritage, and the Arts (Department of the Environment, 2013) Significant Impact Guidelines 1.1—Matters of National Environmental Significance. However, an assessment of SRI impacts should also be assessed against the Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the *Planning Act 2016* (*Department of State Development, Infrastructure, Local Government and Planning, December 2014*), because clearing for the Project has yet to be confirmed as exempt under Schedule 21 of the Planning Regulation as government supported transport infrastructure, and some clearing for the Project outside of the gazetted area may be assessable under the *Planning Act 2016*.	**Amend EIS** Amend section 3.4.4 to include information in relation to the use of the Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the *Planning Act 2016* (*Department of State Development, Infrastructure, Local Government and Planning, December 2014*) for clearing that may not be exempt under Schedule 21 of the *Planning Regulation 2017*. **For Noting:** The DSDILGP's SRI guideline for prescribed matters made assessable under the *Planning Act 2016* can be found at: https://dsdmipprd.blob.core.windows.net/general/significant-residual-impact-guideline.pdf
Appendix J – Terrestrial Ecology Technology Report Chapter 4 – Description of Environmental Values 4.5 Desktop Study 4.5.18 Regulated Vegetation mapping Pages 112, 117 to 136	**Category X areas** Section 4.5.18 does not identify that category X areas on State land tenures including Road, Trust land, Unallocated State Land, is assessable unless an exemption applies. This should be noted throughout Section 4.5.18. Until an exemption for all aspects of the Project is confirmed, regulated category X areas (i.e., category X areas on State land tenures) are assessable. **Table 4.19 Extent of category A, B, C and R areas of regulated vegetation within the ecology study area** Table 4.19 does not quantify the extent of regulated category X areas within the project area. **Table 4.21 The extent of regulated vegetation intersecting watercourses and wetlands within the ecology study area** Table 4.21 does not provide clarity regarding whether impacted assessable category X areas associated with a watercourse/wetland are included in the calculations. Table 4.21 infers all category X areas are exempt.	**Amend EIS** Amend section 4.5.18 to note that category X areas on State land tenures is assessable unless an exemption applies. Amend Table 4.19 to include quantification of regulated and assessable category X areas within the Project area. Amend Table 4.21 to include quantification, if any, of regulated and assessable category X areas on State land tenures and that are associated with a VMA watercourse/wetland that are impacted by the Project. Amend Table 4.22 to include a description of the regional ecosystem types of regulated and assessable category X areas that are impacted by the Project.

Section of EIS	Description of issue	Suggested Solution
	Table 4.22 Descriptions of Regional Ecosystems within the ecology study area Table 4.22 does not quantify the extent of regulated category X areas that are impacted by the Project. This would include Road, Trust land, Unallocated State Land etc. Unallocated State Land may include several watercourses that are impacted by the Project – keeping in mind that VMA watercourses are not necessarily a watercourse under the Water Act. Although some regulated category X areas may not be remnant, the on-ground vegetation may be characteristic of a regional ecosystem.	
Appendix J – Terrestrial Ecology Technical Report Chapter 5 – Potential impacts and impact mitigation 5.3 Impact Assessment 5.3.1 Quantification of potential magnitude of impacts Page 219 to 220 5.3.2 Initial significance of impacts Pages 222 to 230	**Table 5.11 Estimation of potential magnitude of disturbance for Sensitive environmental receptors (excluding threatened and migratory species) identified for the Project** Table 5.11 does not include area calculations for regulated vegetation associated with a VMA wetland or watercourse. **Table 5.12 Initial impact assessment of the Project upon identified sensitive environmental receptors** Table 5.6 does not include information related to regulated vegetation associated with a VMA wetland or watercourse. Section 5.3.4 – there is ambiguity surrounding the role of DSDILGP's SRI guidelines in assessment of the project's SRI on MSES. This section initially states that SRI for MSES is assessed against the Department of Environment and Heritage Protection (2014) Significant Residual Impact Guideline. It only later refers to the DSDILGP's Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the *Planning Act 2016*, and in a context that does not clearly set out when it must be used. It is important to delineate when either the DES's SRI guideline or DSDILGP's SRI guideline applies. This is because clearing for the Project has yet to be confirmed as exempt under Schedule 21	**Amend EIS** Amend Table 5.11 to include area calculations for regulated vegetation that is associated with a VMA wetland and watercourse. Amend Table 5.12 to include information for regulated vegetation that is associated with a VMA wetland or watercourse. Amended Section 5.3.4 so there is no ambiguity surrounding the use of the Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the *Planning Act 2016* (*Department of State Development, Infrastructure, Local Government and Planning, December 2014*) for clearing that may not be exempt under Schedule 21 of the *Planning Regulation 2017*. **For Noting:** The DSDILGP's SRI guideline for prescribed matters made assessable under the *Planning Act 2016* can be found at: https://dsdmipprd.blob.core.windows.net/general/significant-residual-impact-guideline.pdf

Section of EIS	Description of issue	Suggested Solution
5.3.4 Significant Residual Impact Assessment for MSES Page 246	of the Planning Regulation as 'government supported transport infrastructure', and some clearing for the Project outside of the gazetted area may be assessable under the *Planning Act 2016*. The DSDILGP's SRI guideline must be used for any clearing that is assessable under the *Planning Act 2016*.	
Appendix J – Terrestrial Ecology Technical Report Chapter 5 – Potential impacts and impact mitigation 5.4 Biodiversity Offsets 5.4.2 Matters of State Environmental Significance Page 260 to 261 5.4.3 Provision of Offsets Page 262	Section 5.4 does not include a correlation between MNES and MSES to enable an understanding or assessment of impacts remaining post MNES being addressed/offset. Section 5.4.2 identifies potential significant residual impacts of the project on prescribed matters, including remnant vegetation intersecting a wetland. However, VMA wetlands are not identified in Table 5.22. Section 5.4.3 defines the scope of the Environmental Offset Delivery Plan including quantifying the SRI of the project on MSES and MNES and detailing the offsets to address the SRIs. The Environmental Offset Delivery Plan should also detail the overlap of MNES and MSES and how a MNES-offset will also deliver an appropriate offset for the MSES prescribed matter.	**Amend EIS** Amend section 5.4 to include a section that details and quantifies the matters and area (hectares) of overlap between MNES and MSES and offset requirements Amend Table 5.22 to included wetlands under the 'Regulated Vegetation section'. Amend section 5.4.3 to identify the scope of the Environmental Offset Delivery Plan will also include a breakdown of the overlap of MNES and MSES and will detail how a MNES-offset will also deliver an appropriate offset for the MSES prescribed matter.
Appendix N – Environmental Offset Strategy Section 1 – Introduction 1.3 Scope Page 8 Section 2 – Queensland offset	Appendix N in general does not include a correlation between matter of MNES and MSES to enable an understanding or assessment of impacts remaining post MNES being addressed/offset. Section 1.3 defines the scope of the Environmental Offset Delivery Plan including quantifying the SRI of the project on MSES and MNES and detailing the offsets to address the SRIs. The Environmental Offset Delivery Plan should also detail the overlap of MNES and MSES and how a MNES-offset will also deliver an appropriate offset for the MSES prescribed matter	**Amend EIS** Amend Appendix N to include a section that details and quantifies the matters and area (hectares) of overlap between MNES and MSES matters and offset requirements. Amend section 1.3 to identify the scope of the Environmental Offset Delivery Plan will also include a breakdown of the overlap of MNES and MSES and will detail how a MNES-offset will also deliver an appropriate offset for the MSES prescribed matter.

Section of EIS	Description of issue	Suggested Solution
legislative requirements and delivery options 2.2 Queensland Page 13 2.2.2 State *Development Public Works Act 1971* Page 14 Section 3 – Qld Environmental offset requirements Page 17 to 21 Section 4 – ARTC's Environmental Offset Strategy Delivery for Qld 4.1 Application of Hierarchy and Confirmation of Offsets Framework Page 22	Section 2.2 identifies the framework for the Queensland Environmental offsets including the Department of Environment and Heritage Protection (2014) Significant Residual Impact Guideline. However, for clearing that is not exempt under the *Planning Act 2016*, it is DSDILGP's SRI guideline that must be used. A note of this should be made in this section. Section 2.2.2 – for Qld Environmental Offsets Policy This section states that the most applicable SRI guideline is the Department of Environment and Heritage Protection (2014) Significant Residual Impact Guideline. However, for clearing that is not exempt under the *Planning Act 2016*, it is DSDILGP's SRI guideline that must be used. A note of this should be made in this section. Section 3 Table 2 and 3 offer a separate breakdown of the MNES and MSES. However, neither identify those overlapping MSES. A correlation between MNES and MSES must be provided to enable an understanding and assessment of the impacts remaining post-MNES offsets. Section 4.1 identifies that the offset requirements for MSES will be assessed against the QEOP's SRI Guideline. However, an assessment of SRIs should also be assessed against the Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the *Planning Act 2016* (*Department of State Development, Infrastructure, Local Government and Planning, December 2014*), because clearing for the Project has yet to be confirmed as exempt under Schedule 21 of *the* Planning Regulation as 'government supported transport infrastructure', and some clearing for the Project outside of the gazetted area may be assessable under the *Planning Act 2016*	Amend section 2.2 and 2.2.2 to identify that DSDILGP's SRI Guideline must be used for clearing that is not exempt under the *Planning Act 2016*. Amend section 3 to include a Table or other presentation format that details and quantifies the matters and area of overlap between MNES and MSES matters and offset requirements. Amend section 4.1 to include information in relation to the use of the Significant Residual Impact Guideline for Matters of State Environmental Significance and Prescribed Activities assessable under the *Planning Act 2016* (*Department of State Development, Infrastructure, Local Government and Planning, December 2014*) for clearing that may not be exempt under Schedule 21 of the *Planning Regulation 2017*. **For Noting:** The DSDILGP's SRI guideline for prescribed matters made assessable under the *Planning Act 2016* can be found at: https://dsdmipprd.blob.core.windows.net/general/significant-residual-impact-guideline.pdf

Section of EIS	Description of issue	Suggested Solution
	Native Title Act 1993	
EIS Executive Summary 7.1 Land use and tenure Page 31	The draft EIS identifies that native title may continue over ten properties including Reserve and State land tenure. However, it is also possible for Native Title rights and interests to exist on the State Lease Land identified in Table 14 – Tenure within the Impact Assessment Area page 28, for example where there are leases for low impact uses such as grazing.	**Amend EIS** Within this section it should be stated that a detailed native title assessment for all identified parcels within the footprint of the development should be carried out in accordance with the state's native title work procedures.
Chapter 7 - Land Use & tenure	Native Title is mentioned throughout Chapter 7, for example: • section 7.5.1.4 Native Title, page 7 -36 contains information regarding Native Title Claims. • section 7.6.2 Native Title, page 7 – 162 discusses what sections of the Native Title Act may apply to the project and the effect it has on the Native Title status of the land. • section 7.7.2.1 Change in land tenure and loss of property, Native Title, page 7 – 180, mentions ILUA's where Native Title has not been extinguished. No information has been included which confirms the requirement to identify existing and potential native title rights which can only occur from a detailed native title assessment being performed on all impacted properties identified in Appendix F.	**Amend EIS** Provide a detailed native title assessment for the properties identified in Appendix F– Impacted Properties, so that the native title status of each impacted property is known. Please use the native title work procedures to assess native title and comply with native title requirements.

Section of EIS	Description of issue	Suggested Solution
Chapter 15 – Social 15.8.1.1 Indigenous community interests page 15 - 55 And Table 15.14 Potential Impacts to Communities and Stakeholders page 15 – 57 And Table 15.29 Social Impact Assessment Summary page 15 - 117	These parts of the draft EIS identify that native title may continue over ten properties including Reserve and State land tenure. However, it is also possible for Native Title rights and interests to exist on other land included in Appendix F Impacted Properties. For this reason, all impacted properties should have native title assessed in accordance with the native title work procedures.	**Amend EIS** Amend these sections of the draft EIS to state that a detailed native title assessment will be carried out for all properties within the projects footprint in accordance with the native title work procedures.
Soil Conservation		
Chapter 8 – Land Resources	Within Chapter 8 it refers to on two occasions "Volume 3 Design Drawings". No such reference material could be found in the draft EIS common material.	**Amend EIS** If "Volume 3 Design Drawings" has not been provided as part of the common material within this draft EIS, please remove reference to it in Chapter 8 and any other chapters / appendices provided as part of this draft EIS. If the correct reference is now "Design Drawing Part 1" and "Design Drawings Part 2" articulate this in Chapter 8 and in other relevant parts of the draft EIS.
Chapter 8 – Land Resources 8.7 Mitigation measures	*Soil Conservation Guidelines for Queensland,* provides recommended maximum velocities for consolidated, bare and vegetated channels: Chapter 9, *Waterways, Section 9.3, Design Velocity, Table 9.1. p. 9-10.* Table 8.27 fails to include reference to the *Soil Conservation Guidelines for Queensland* (SCGQ). The following has been included in Table 8.28:	**Amend EIS** Amend Chapter 8, section 8.7 Mitigation Measures to include an assessment of each channel / waterway / drain in relation to the *Soil Conservation Guidelines for Queensland*, Table 9.1. In doing this demonstrate that each channel /waterway / drain will comply with the recommended maximum velocities depending on the expected channel conditions. To enable this assessment and understand the "conditions"

Section of EIS	Description of issue	Suggested Solution
Table 8.27 Initial mitigation measures of relevance to land resources Pages 8-175, 8-176 Table 8.28 Land Resource Mitigation Measures Pages 8-177 to 8 - 183	"*The Soil Management Sub-plan will include erosion and sediment controls as a component of the CEMP. The erosion and sediment control measures will be developed by a certified practitioner in erosion and sediment control, in accordance with the Best Practice Erosion and Sediment Control (ICEA, 2008) and with reference to Soil Conservation Guidelines for Queensland (DSITI, 2015) and will be implemented during construction of the Project*" While the *Soil Conservation Guidelines for Queensland* are mentioned in Table 8.28, how the guidelines will be applied is unknown. For example, detail has not been provided demonstrating how each waterway / channel / drain along the entire alignment has been assessed and will adhere to the recommended maximum velocities for consolidated, bare, and vegetated channels that is detailed in the SCGQ, Chapter 9, *Waterways, Section 9.3, Design Velocity, Table 9.1. p. 9-10.*	appropriate survey of soil type, gradient, vegetation species / cover and scour protection features is required. **Recommended Condition** It is recommended the OCG ensure all erosion and sediment control mitigation measures as part of the entire project occur in accordance with the *Soil Conservation Guidelines for Queensland* while also fulfilling requirements of Department of Transport and Main Roads (DTMR) regarding scour protection.
Appendix Q1 Hydrology and Flooding Technical Report Volume 1 and more specifically within Appendix Q1 is: Appendix D: Proposed Outlet Scour Protection Works – All Cross Drainage Structures.	Due to lack of detail provided in the Draft EIS B2G, it is not known if scour protection measures will satisfy state requirements. Therefore, additional scour protection measures may need to be detailed in the EIS, noting they will be subject to further analysis that relies on more detailed investigation of soil types, gradient, vegetation cover, expected velocities etc.	**Recommendation** The Department of Resources recommends referring to *Department of Transport and Main Roads* (DTMR) scour protection guidelines and that this issue be discussed further across all relevant state agencies. The Department of Resources also recommends the OCG be guided by DTMR technical advice in relation to how scour protection measures should be applied across the entire alignment (regardless of if the alignment intersects or runs parallel to DTMR infrastructure). Note, to enable the appropriate application of scour protection mitigation measures in the Draft EIS B2G, further analysis that relies on more detailed investigation of soil types, gradient, vegetation cover, expected velocities etc. is required.

Section of EIS	Description of issue	Suggested Solution
	Land Resources and Management	
Technical Agency Briefings and Various Draft EIS Sections	Department of Resources has previously advised that extra field work, data collection and laboratory analysis is required for the draft EIS to fully meet the TOR requirements (see below comments for further detail). It is recommended that ARTC amend their EIS to make it clear that extra fieldwork, data collection and analysis is required to fully meet the TOR requirements, and this is being undertaken in parallel with the public consultation period and will be submitted for the final EIS. That way, the proponent is upfront in that they are not releasing something they think meets the TOR. The OCG has advised that there is scope in the review process to request additional information after public notification, and to be publicly notified for a second time. Department of Resources would appreciate the opportunity to review the amended EIS.	**Amend EIS** The Department of Resources would appreciate the opportunity to review an amended Draft EIS containing extra fieldwork, data collection, analysis, and associated mitigation measures for consistency with the TOR requirements. **Recommended condition** The OCG should consider placing a condition on the EIS, if suggested updates to the EIS are found to be inadequate. The Department of Resources recommends the following condition for consideration (pending outcomes of an updated EIS): Prior to construction, a soil survey including soil profile descriptions and laboratory analysis must be completed at a scale, site intensity and maximum distance delineated for linear infrastructure in accordance with Tables 1, 2 and 3 of the *Guidelines for Soil Survey along Linear Features*, and the *Australian Soil and Land Resource Survey Field Handbook* (Yellow Book). This must be conducted by a suitably skilled and experienced soil and land resource scientist, preferably one with a CPSS accreditation in soil survey. The management units identified in this soil survey are to be formulated to accommodate construction and rehabilitation activities. This must include: • volumes of soil material available for track formation, and treatment and site rehabilitation; • potential salinity, acidity, sodicity and erosion risks / issues and suitable remediation measures.
Chapter 8 – Land Resources 8.2 TOR TOR 11.88 Page 8-1	**SOILS SURVEY AND DESCRIPTIONS** The Terms of Reference for 11.88 specifies: '*The assessment of impacts on topography, geology and soils will be in accordance with the Soil Science Guidelines of Australia, Queensland Branch (2015), in conjunction with the DES Information guideline for an environmental impact statement– Land* and the CSIRO guidelines –	**Amend EIS** At a minimum, extra field work, data collection and laboratory analysis should be completed at a scale, site intensity and maximum distance delineated for linear infrastructure that equates to 1:100 000 (See Table 1, Table 2 and Table 3 of the *Guidelines for Soil Survey along Linear Features*, and the *Australian Soil and Land Resource Survey Field Handbook* (Yellow Book)). In line with this guideline, fully described soil profile descriptions and laboratory analysis need to be included, rather

Section of EIS	Description of issue	Suggested Solution
	"Guidelines for surveying soil and land resources and Australian Soil and Land Survey field handbook (refer to Appendix 1)*".* There has been insufficient assessment of the range of soils along the project's corridor. The assessment is not consistent with the requirements of the *Soil Science Australia, Queensland Branch (2015), Guidelines for Soil Survey for linear features*; and the limited soil survey has not been completed in accordance with the requirements of the *Australian Soil and Land Survey, field handbook, and Australian Soil and Land Survey Handbook* Extra field work, data collection and laboratory analysis are required for the draft EIS to fully meet the TOR requirements. The existing description of soils within Chapter 8 – Land Resources is not suitable. As advised previously, ARTC continue to mis-interpret statements from the *Guidelines for Soil Survey along Linear Features.* These guidelines do not prescribe or recommend a scale of 1:250 000 for an EIS for a linear feature. In addition, as this linear feature is likely to have a disturbance footprint of around a 100 m width, it would be more logical than not, for the soils along the inland rail corridor to have been described and sampled using the recommendations from the *Guidelines for Soil Survey along Linear Features*, as was required by the Terms of Reference, not based on a 1:250 000 site density from McKenzie et al 2008 (which actually equates to one site described per square centimetre of map area, or for a larger project area, roughly 16 sites per 100 km^2). For a piece of linear infrastructure, it is illogical to map the landscape at a 1:250 000 scale, which is why the *Guidelines for Soil Survey along Linear Features* were devised to clarify a scale that is fit for purpose for linear features. It is acknowledged that sites from the Qld Government SALI database have been used to increase the site intensity along the route. This is supported. The main problem however is that the sites are not located proportionately along the route. Instead, there is a cluster of sites south of Kingsthorpe, a cluster of sites around Inglewood, and 2 in between. These sites provide a more reliable indication of the soils	than a map downloaded from ASRIS of Soil Order. Work should be completed by a suitably skilled and experienced soil and land resource scientist with a CPSS accreditation in soil survey. The soil descriptions provided do not provide a suitable representation of the soils along the route, or the impacts from disturbing them. The lumping of the soil chemistry results provides limited insight into the soils along the route. Based on this additional survey work, reassessments should be made in relation to: • volumes of soil material available for track formation, and treatment and site rehabilitation; • potential salinity, acidity, sodicity and erosion risks / issues and suitable remediation measures.

Section of EIS	Description of issue	Suggested Solution
	and their attributes along the route than the Soil Orders which have been downloaded from ASRIS. Contrary to the claims in the draft EIS, Tables 1, 2 and 3 from the *Guidelines for Soil Survey along Linear Features* are 'directly applicable' to this EIS design stage. As previously advised, the minimal laboratory analysis included in Appendix G Geotechnical Investigation, does not satisfy the requirements for Table 3, let alone the requirement for 25-50% of soil survey sites having a detailed profile description. Not one detailed soil profile description has been provided in the EIS (even the sites that have been downloaded from SALI do not include a detailed site description – this is a basic requirement of the *Guidelines for Soil Survey along Linear Features* and the TOR.	
Chapter 8 – Land Resources 8.5.3.1 Soil landscape and descriptions Page 8-40	Lithosols do not feature in the Australian Soil Classification groups.	**Amend EIS** Amend EIS to clarify that Lithosols do not feature as an Australian Soil Classification group
Chapter 8 – Land Resources 8.7 Mitigation measures Page 8 -175 to 8-183	Land resources mitigation measures, identifies several plans and sub-plans that are to be prepared to direct proposed mitigation measures, viz: • Construction Environmental Management Plan (CEMP) • Erosion and Sediment Control Plan (ESCP) • Rehabilitation and Reinstatement Plan To be able to advise the Coordinator-General on their suitability, the Department of Resources would appreciate the opportunity to assess such plans in view of more detailed land resource/soils data being obtained in subsequent studies proposed for the Project.	**Recommendation** The Coordinator General provide an opportunity for the Department of Resources to review the several EMPs and associated sub-plans related to assessing risks and mitigation measures for the land resources impacted by the Project.
Petroleum Tenures and Pipelines: Petroleum and Gas (Production and Safety) Act 2004 and Petroleum Act 1923		

Section of EIS	Description of issue	Suggested Solution
Chapter 7 Land Use and Tenure, 7.5.1.3 Petroleum and gas resource interests page 7-35	The EIS fails to recognise that Petroleum and Gas tenures exist under both the *Petroleum and Gas (Production and Safety) Act 2004* and the *Petroleum Act 1923.*	**Amend EIS** Amend Chapter 7, 7.5.1.3 to reference both the *Petroleum and Gas (Production and Safety) Act 2004* and the *Petroleum Act 1923* i.e., please include the following edits in red: "Several different authorities for petroleum and gas exploration and production activities in Queensland are granted under the *Petroleum and Gas (Production and Safety) Act 2004* and the *Petroleum Act 1923.*"
Mining Tenures and Resources		
Chapter 3 3.5.15.1 Mineral Resource Act 1989 Mineral Development Licences PDF Page 26 of 49 (and Figure 7.60 Land Use on page 7-115.)	**Regarding:** ***MDL … held where there is a significant mineral occurrence of possible economic potential.*** The known coal resource area in relation to MDL 299 and the proposed rail alignment is shown on Figure 7.60 Land Use on page 7-115. The Department is aware that the holder of MDL 299 has conducted additional exploration to establish a JORC Code 2012 resource on the area potentially impacted by the proposed rail alignment. The current holder of MDL 299 has only recently acquired that tenure and they also own the freehold land surrounding the MDL. This coal resource adjoining the current mining lease is a logical extension of the current pits and represents coal that can be mined with an economical strip ratio and transported directly to the power station with existing infrastructure. The resource is understood to represent several years' coal supply to the power station that is expected to operate until 2050.	To confirm the currently known extent of the coal resource area the Department suggests contacting the MDL holder regarding the significant mineral occurrence of possible economic potential (Standard: JORC Code 2012 Measured and Indicated status) that has been identified to over part of MDL 299. If warranted after consideration of other factors, future access to the resource could be achieved by moving the rail alignment approximately 1 km to North West over land that is also owned by the MDL 299 Holder.
Submission delivered by Department of Resource on behalf of Resource Safety and Health Queensland (RSHQ)		
Explosives		
Executive Summary	Section 7.9 contains very little information on blasting, a contributor to "Potential Construction Impacts", "Airborne Noise" and "Ground Borne Vibration". A sperate section on "Blasting" has been added	**Amend EIS**

Section of EIS	Description of issue	Suggested Solution
7.9 Noise and vibration Blasting Pages 63	which does not address the first two impacts (Airborne Noise and Ground Borne Vibration). The criteria described in Table 26 Recommended Minimum Working Distances for Vibration Intensive Equipment, only mentions controls for ground vibration, effectively ignoring blast overpressure and flyrock resulting from poor blast design and execution. This is considered a deficiency that needs to be corrected and the previously suggested amendments should be incorporated into the EIS. This includes: In accordance with *Explosives Regulation 2017,* Section 152(a) - Use of Blasting Explosives – A prescribed shotfirer must use blasting explosives as required under *Australian Standard 2187 Part 2: 2006, use of explosives*. This standard includes environmental controls for overpressure, vibration and flyrock. Sub-standard performance outcomes from blasting resulting in referrals to the Explosives Inspectorate would be measured against the criteria in the legislation and its reliance on AS2187.2-2006. It is suggested that the maximum permissible charge weight to meet the sensitive structure vibration criteria in Transport and Main Roads (TMR) document "CoP Vol 2" is shown in Table 27 Charge Mass Ranges for Set Distances. However, when referring to TMR CoP Vol 2 it does not include Table 27. It is unknown where the information in the Table 27 and Table 28 originates? Both tables are unreferenced and do not come from AS2187.2-2006, although it is possible that they may be derived from the calculations listed in the Standard.	This section of the EIS is wholly unsatisfactory and should be re-written to incorporate blasting impacts. Amend to include the following information under Blasting (page 63): In accordance with *Explosives Regulation 2017,* Section 152(a) - Use of Blasting Explosives – A prescribed shotfirer must use blasting explosives as required under *Australian Standard 2187 Part 2: 2006, use of explosives*. This standard includes environmental controls for overpressure, vibration and flyrock.
Chapter 3 Legislation and	Within this section there is reference to blast caps and detonators. It is unsure what the term "blast caps" refers to?	**Amend EIS**

Section of EIS	Description of issue	Suggested Solution
Project approvals process 3.5.11 Explosives Act 1999 3.5.11.2 Relevance to the Project page 3-21	"Blasting caps" is an obsolete term and are now referred to as "detonators"	The use of the term "blast caps" within this section and elsewhere in the EIS should be removed and substituted with "detonators".
Chapter 5 – Project Description 5.4.10 Other hazardous materials Table 5.30 Indicative list of dangerous goods and hazardous substances required during construction Pages 5-84 – 5-85		**For noting:** • A Blasting Contractor engaged to perform blasting activities will also have to consider security of the explosives for the entire duration of the task. Blasting Contractors will need to maintain a Security Management System. • Segregation of incompatible products will also have to be considered.
Chapter 5 – Project Description Table 5.26: Indicative plant and equipment for the construction phase Page 5-72		**For noting:** For any construction blasting relating to earthworks, tunnelling or drainage, the licenced shotfirer and blasting contractor will have to determine the blast design and quantity of explosives to complete the task.
Chapter 8 – Land Resources	Table 8.28, Aspect: Hazardous material and dangerous goods could be improved by adopting the recommended amendments.	**Amend EIS**

Section of EIS	Description of issue	Suggested Solution
Table 8.28: Land resource mitigation measures, Delivery phase: Construction, Aspect: Hazardous material and dangerous goods Page 8-182		Amend Table 8.28 Land resource mitigation measures, Delivery phase: Construction, Aspect: Hazardous material and dangerous goods by including the following in red: Licensed transporters operating in compliance with Australian Code for the *Transport of Dangerous Goods by Road and Rail* and Australian Code for the *Transport of Explosives by Road and Rail* will be used for the transport of dangerous goods and explosives.
Chapter 19 – Hazard and risk 19.7.3.3: Explosives use in proximity to the Project Page 19-39 to 19 - 40	Improvements could be made to *Section: 19.7.3.3 Explosives use in proximity to the Project* (Page 19-39) by ensuring the suggested solution is incorporated into the text.	**Amend EIS** It is suggested the following words are incorporated into the **Hazard description** section: Explosives are hazardous by nature and the incorrect or inappropriate storage, handling, or transport, may result in an unplanned initiation, causing harm to the environment and people. It is suggested the following change is made to the first sentence under **Potential impacts** section so to remove reference to "blast caps": Blasting explosives (including ~~blast caps~~ detonators and boosters) and Security Sensitive Ammonium Nitrate are expected to be required during construction…..
Chapter 19 – Hazard and risk 19.7.3.3: Explosives use in proximity to the Project. Potential impacts 19 - 40	Potential impacts require further assessment. The **Potential Impacts** paragraph does not satisfactorily describe hazards or requirements for mitigation.	**Amend EIS** Amend **Potential Impacts** section of EIS 19.7.3.3 to include information that better describes the hazards associated with transport, storage, handling and use of explosives during construction and how these hazards are to be mitigated.

Section of EIS	Description of issue	Suggested Solution
Chapter 19 – Hazard and risk 19.7.3.3: Explosives use in proximity to the Project. Potential impacts 19 - 40	Significant concern exists that security sensitive explosives will not be transported on the Inland Rail network.	**Discussion required** It is requested that the Coordinator General and ARTC commence immediate discussions with Resource Safety and Health Queensland (RSHQ) Irrelevant information deleted in accordance with section 73 of the RTI Act, email: Irrelevant information deleted in accor
Chapter 19 – Hazard and risk 19.8 Mitigation measures Table 19.12 Hazard and risk mitigation measures future phases of project delivery Delivery phase: Construction and commissioning Aspect – Storage and handling chemicals Page 19-58	**Aspect: Storage and handling chemicals** Table 19.12 (Page 19-58), Aspect – Storage and handling chemicals, dot point 3 states that: *"The Hazardous Materials Management Sub-plan (refer above) will be implemented as a component of the CEMP"*. Also, within Table 19.12 (Page 19-58) it mentions that; Chemicals stored and handled as part of construction activities will be managed in accordance with: • AS 2187.1: 1998 Explosives – Storage (Standards Australia, 1998a) • AS 2187.2-2006 - Explosives – Storage, transport and use, Part 2: Use of explosives (Standards Australia, 2006). • Australian Code for the Transport of Explosives by Road and Rial (Commonwealth of Australia, 2018b) These references are incorrect.	**Amend EIS** In addition to this 3rd dot point, it is recommended that the following be included: The shotfirer or blasting contractor must provide the Hazardous Material Management Sub-plan to the Explosive Inspectorate as part of the notification process of blasting activity at least seven days before the proposed blasting activity is carried out. **For noting:** The sooner the information is supplied to the Inspectorate, the less likely chance of delays with blasting if the Inspectorate has an issue. Within Table 19.12 (Page 19-59) amend the following to read. *Chemicals stored and handled as part of construction activities will be managed in accordance with:* • *AS 2187 Part 2 for explosives use.* • *AS 2187 - Part 1: 1998 for explosives storage and* • *Australian Code for the Transport of Explosives by Road and Rail - 3rd edition (AEC3 for explosives transport by road and rail).*

Section of EIS	Description of issue	Suggested Solution
Chapter 19 – Hazard and risk 19.8 Mitigation measures Table 19.12 Hazard and risk mitigation measures future phases of project delivery Delivery phase: Construction and commissioning Aspect – Explosives Page 19-58	Explosives section on page 19-58 refers to an "appointed licensed blasting contractor". This is not the description of the licensed person(s) contained in the legislation.	**Amend EIS** Within explosives section on page 19-58 ensure that appropriate legislative terminology is used to describe the licensed person undertaking the blasting works. For example, "*prescribed shotfirer*" under *schedule 7 of the Explosives Regulation 2017* means: ***148 Definitions for division*** *In this division—* *prescribed shotfirer means—* *(a) the holder of a shotfirer licence; or* *(b) a person appointed as a shotfirer by—* *(i) for an underground mine—the underground mine manager of the mine; or* *(ii) for another mine, including a quarry—the site senior executive for the mine.*

From: Irrelevant information deleted in accordance with section 73 of the RTI Act
Sent: Wednesday, 28 April 2021 2:46 PM
To: Inland Rail - B2G
Subject: RE: Inland Rail - Border to Gowrie - release of draft EIS for public consultation
Attachments: QPS response - INLAND RAIL B2G Director approved.pdf; QPS response - INLAND RAIL B2G.docx

Good afternoon,

Thank you for providing the Queensland Police Service the opportunity to comment on the draft environmental impact statement for the Inland Rail – Border to Gowrie (B2G) project.

Feedback is provided in the attached document.

The Planning and Performance team are now no longer responsible for coordinating EIS review and feedback for the Queensland Police Service. Please send any future Inland Rail EIS correspondence to Irrelevant information deleted in accordance with section 73 of the RTI Act

Please let me know if you have any questions.

Thank you.

Irrelevant information deleted in accordance with section 73
Queensland Police Service | Police Headquarters
7th Floor, 200 Roma Street, Brisbane QLD 4000
PH: Irrelevant informati | Email: Irrelevant information deleted in accordanc

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From: Inland Rail - B2G <InlandRailB2G@coordinatorgeneral.qld.gov.au>
Sent: Monday, 25 January 2021 17:19
Subject: Inland Rail - Border to Gowrie - release of draft EIS for public consultation

Dear Agency Contact Officers,

The Australian Rail Track Corporation Limited (ARTC), the proponent for the Inland Rail project, has prepared a draft Environmental Impact Statement (EIS) for the Inland Rail – Border to Gowrie (B2G) project and submitted it to the Coordinator-General. The draft EIS has been released for public and agency review and comment **from Saturday 23 January 2021 to 5pm Monday 19 April 2021 – a period of 12 weeks.**

Your agency is invited to participate in the EIS process for the proposed Inland Rail – B2G project. The B2G project's initial advice statement, Terms of Reference (TOR) and draft EIS can be viewed at www.statedevelopment.qld.gov.au/inlandrail-b2g

Please note, the offset strategy contained in the on-line version is the redacted version for public release. It does not include information about the offset properties being considered. Please advise if your agency requires a secure copy of the unredacted version for your agency's review and consideration.

Submissions on the draft EIS

Your agency is invited to provide a submission on the draft EIS for the B2G project, in particular, to advise:

- the adequacy of the document in addressing matters relevant to your agency and in relation to the final TOR (Attached)
- any proposed construction and operational conditions your agency recommends for the Coordinator-General's consideration in preparing the evaluation report
- any other advice or comment for the Coordinator-General's consideration.

Please ensure you clearly identify the section number and page number of the draft EIS relevant to the issue being raised and also provide, if applicable, your recommendations with respect to actions proposed by the proponent and if you consider additional information is required.

Submissions will be accepted until **5 pm on 19 April 2021** and should be sent to:

Post: The Coordinator-General
C/- EIS Project Manager—Inland Rail – Border to Gowrie project
Project Evaluation and Facilitation
Office of the Coordinator-General
PO Box 15517
CITY EAST QLD 4002

Email: inlandrailb2g@coordinatorgeneral.qld.gov.au

Where a response has not been received by the closing date, it may be assumed that the draft EIS satisfactorily addresses your agency's requirements. Alternatively, if you believe there are no matters associated with the proposal that would be of interest to your organisation, please advise that you do not wish to participate in the EIS process.

Advisory agency briefings

It is anticipated that advisory agency briefings with ARTC will be held in late February/early March 2021. The briefing sessions will provide an outline of the EIS process, as well as the findings from ARTC's EIS investigations. The proponent and their consultants will give a presentation and will be available to answer questions on the draft EIS contents to assist agencies in preparing a submission. The format and location of the briefing is yet to be determined and may need to be over MS Teams, if a face to face briefing is not achievable.

There may also be an opportunity for this office to arrange with ARTC for an agency representative to visit the site of the proposed rail alignment and or impact locations. Please email inlandrailb2g@coordinatorgeneral.qld.gov.au if your agency is interested in attending an agency briefing and/or a site inspection, providing details of the topic you are interested in and the details of your contact officer coordinating the EIS submission. An invitation to the briefing/site inspection will be emailed to your agency's nominated contact officer as soon as they are finalised.

Should you have any queries please do not hesitate to contact the B2G mailbox InlandRailB2G@coordinatorgeneral.qld.gov.au

Kind regards,
Inland Rail – B2G EIS project team
Office of the Coordinator-General
Department of State Development,
Infrastructure, Local Government and Planning

Please consider the environment before printing this email

Comment form: Draft environmental impact statement (EIS)

Please complete this form only if you wish to provide comments by email and post.

Name of project: Inland Rail Border to Gowrie (B2G) Project

Please write the project name exactly as it appears in the newspaper public notice or at **https://haveyoursay.dsdmip.qld.gov.au**

Your details (please print)

Full name

Irrelevant information deleted in accordance with section 73 of

Organisation (if relevant)

Queensland Police Service

Postal address

GPO Box 1440, Brisbane, Queensland

Postcode 4001

Phone number Irrelevant information

Email address

Irrelevant information deleted in accordance with se

Signature Irrelevant information deleted in accordance with s .....

Date 28/04/2021

Your comments on the draft EIS (please print)

Section or paragraph no.	Topic — e.g. water quality	Suggested change(s) to draft EIS, including reasons for the change(s)
Social - Chapter 15 Social, Section 15.8.4.4 Appendix U Social Impact Assessment	As identified in the EIS, the potential social impacts to emergency services during construction and operation are confirmed, including but not limited to: - **Increased demand for police and emergency services** as a result of: the increased risk of road/rail accidents and other major accidents; the increased need for traffic policing, traffic control assistance and oversize vehicle escorts; the temporary increase in population from non-resident workforce accommodation; and, additional resourcing. - **Emergency response delays** due to impeded accessibility at construction sites, when encountering heavy haulage vehicles during construction, and when encountering passing trains at level crossings during operation.	The proposed measures identified in the EIS are supported to address the impacts to health and emergency services and facilities. The following solutions and engagement measures identified in Appendix U are strongly supported: **Detailed design:** - Consultation with QPS to ensure appropriate access and egress solutions are incorporated into detailed design to enable movements across the rail corridor (pg. 189) - Provision of early advice, workforce ramp-up estimates, construction schedule and the like to QPS to assist with forward planning for any service adjustments that may be required (pg. 222, 255). - Preparation of a Community Wellbeing Plan in cooperation with QPS **Pre-construction to Construction:** - Provision of a forward schedule for construction activities requiring oversized vehicle escorts to police services and all emergency services bases (pg. 190, 255) - Early engagement with emergency service providers to develop protocols for emergency responses (pg. 190, 255) - Regular liaison meetings with QPS from pre-construction to project operation (pg. 190) **Operation**: - Cooperation with QPS, defining appropriate and co-ordinated responses and communication in the event of accidents and other emergencies. - Ready access to train schedules and alternate route options (pg. 190)
Traffic and Transport - Chapter 18 Traffic, Transport and Access - Appendix X Traffic Impact Assessment	The potential traffic, transport and access impacts to emergency services identified in the EIS are confirmed, being the potential delay in emergency service response time during construction and operation when encountering significant road works or passing trains at level crossings, in addition to the increased journey times caused by construction traffic.	The proposed measures identified in the EIS are supported to address the traffic impacts to emergency services, including but not limited to: Detailed design: - Consultation with QPS to address safety concerns and ensure appropriate access and egress solutions are incorporated into detailed design to enable movements across the rail corridor - Provision of construction management plans to QPS Construction: - Notifying relevant emergency services of temporary and permanent changes to the road network and construction activities that may affect emergency response times, and prior to the movement of all hazardous or oversize construction material and equipment. It is further recommended that the construction management plan and traffic management plan account for emergency services.

	Policing	Acting Inspector Hopgood has canvassed this draft EIS with all OICs along the proposed area in the Darling Downs District Country Patrol Group over the public consultation period. Acting Inspector Hopgood understands Inspector Preston has undertaken a similar process with relevant OICs in the Warwick Patrol Group. Further advice was sought from the OIC Millmerran Division and Patrol Inspector within the Dalby-Burnett Patrol Group, South West District. Inspector Preston has also taken part in agency briefings held on 3 and 4 March 2021. As a summary of issues identified, there will be impacts on policing as a consequence of this infrastructure development. These include access and transport issues, accommodation camps and policing responses required for potential protest activity and community unrest leading up to and during construction phases. There will also be increased demand for police escort services for excess dimension loads. Community impacts are also of concern, including persons being personally affected by the construction and route and the impacts on their mental health. There are active action groups in a number of communities along the route that have expressed concern particularly in relation to changes to flood patterns on farms and agricultural land, land acquisitions, property values and rural amenity. The QPS is aware of and has attended numerous stakeholder engagement sessions. At this stage, police are satisfied with the processes that have been developed and undertaken by ARTC in terms of their consultation with stakeholders. Further to this, there is direct engagement with local police in terms of responding to higher risk identified people and groups in the event of confrontation or other activism. There is no specific comment on the draft EIS, or identification of any suggested changes.

- If there is not enough space on this form, please attach additional pages. Please write your full name and the name of the project on any separate pages.
- Send the completed form to the email/postal address shown in the newspaper public notice. If you require assistance, please telephone 13 QGOV (13 74 68).
- You must provide your comments by the closing date shown in the public notice and on the consultation website.
- **Privacy**
  - Comments are made as part of a public consultation process and are not confidential. Your comments, including any personal information you provide in connection with your comments, may in the course of and for the purposes of evaluating the draft EIS, performing functions under the SDPWO Act or complying with obligations under other legislation, be disclosed by the Coordinator-General to the project proponent and to other local, State and Commonwealth government agencies. Your personal information will otherwise be dealt with in accordance with the *Information Privacy Act 2009 (Qld)*.
  - The Coordinator-General is authorised under Part 4 of the SDPWO Act to collect personal information as part of the public notification process.
  - Documents in the possession or under the control of the Coordinator-General are also subject to the *Right to Information Act 2009 (Qld)*.

From: Irrelevant information deleted in accordance with section 73
Sent: Friday, 30 April 2021 2:20 PM
To: Inland Rail - B2G
Cc: Irrelevant information RDMW Major Projects
Subject: RE: Inland Rail - Border to Gowrie - release of draft EIS for public consultation
Attachments: DRDMW dEIS adequacy response.pdf

Hi Irrelevant i

Please find the attached agency review of the B2G draft EIS.

If you have any questions please let me know.

Thanks in advance and kind regards
Inga

Irrelevant information deleted in a

Planning Services | North Region
Department of Natural Resources, Mines and Energy

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Department of Regional Development, Manufacturing and Water review of Draft EIS Inland Rail Border to Gowrie

Name: Irrelevant inform

Phone number: Irrelevant inforr

Postal Address: PO Box 937, Cairns QLD 4870

Email Address: Irrelevant information deleted in accordan

Organisation: Department of Regional Development, Manufacturing and Water

Section of Draft EIS	Description of issue	Suggested Solution
Water - surface and groundwater - Water Act 2000		
Groundwater		
Chapter 13 P13-3, Table 13.1, 11.58	Chapter 13, Table 13.1, row 11.58 of the draft Environmental Impact Statement (dEIS) details the need to identify 'Resources Operations Plans' under the Water Act.	**Amend** Amend existing text to that shown in **bold** and delete that shown in ~~strikethrough~~: • 11.58 Identify relevant Water Plans and ~~Resource Operations Plans~~ **Water Management Protocols** under the Water Act. • ~~e) a water management protocol~~ **Reason** • Resource Operations Plans are now called Water Management Protocols. • The table lists different types of authorities to take water, however a *'water management protocol'* is not an authority. A water management protocol is subordinate legislation that is used by the Department or Regional Development, Manufacturing and Water (DRDMW) in the management of water licences and water allocations in this area. A Water Management Protocol is not an authorisation.
Chapter 13 P13-5, Table 13.2	Chapter 13, Table 13.2 of the dEIS refers to groundwater units located within the assessment area and references 'Border Rivers Fractured Rock', 'Condamine Fractured Rock' and 'Condamine Alluvium'.	**Amend** Amend existing text to that shown in **bold** and delete that shown in ~~strikethrough~~:

Section of Draft EIS	Description of issue	Suggested Solution
		~~• Border Rivers Fractured Rock~~ ~~• Condamine Fractured Rock~~ • ~~Condamine Alluvium~~ **Upper Condamine Alluvium (Central Condamine Alluvium)** **Reason** Reference is made to the Condamine Alluvium. This is not how it is referred to in the *Water Plan (Condamine and Balonne) 2019*. The Condamine Alluvium area intersected by the proposed Inland Rail route falls under the Upper Condamine Alluvium (Central Condamine Alluvium). The Border Rivers Fractured Rock is an underground water unit under the *Water Plan (Border Rivers and Moonie) 2019* and does not fall within the impact assessment area. It is located to the east of the project area. The Condamine Fractured Rock is an underground water unit under the *Water Plan (Condamine and Balonne) 2019* and does not fall within the impact assessment area. It is located to the east of the project area.
Chapter 13 P13-15, Table 13.5	Chapter 13, Table 13.5 of the dEIS describes features associated with the Surat Basin and Clarence-Moreton Basins.	**Advice** The Gubberamunda Sandstone has not been included here as a formation nor aquifer within the Kumbarilla Beds sequence. Under the previous Water Plan (*Water Resource (Great Artesian Basin) Plan 2006*), the Kumbarilla Beds was the recognised geological name for the group of aquifers and as such, was managed as a group. Under the new *Water Plan (Great Artesian Basin and other Regional Aquifers) 2017*, the Kumbarilla Beds has been separated into the separate formations for management purposes. The Gubberamunda Sandstone is identified as a management unit with both stock and domestic licences and volumetric licences attached to land parcels located within the vicinity of the Inland Rail route. Surrounding CSG wells, Blu Indigo 2A and Indigo 2, show the presence of Gubberamunda Sandstone in their stratigraphic logs. Additionally, the **Updated Geology and Geological Model for the**

Section of Draft EIS	Description of issue	Suggested Solution
		Surat Cumulative Management Area 2019 contains mapping of the interpreted thickness of Gubberamunda Sandstone that clearly shows the unit is present in the area Further consultation is required between DRDMW and ARTC to discuss this potential difference in interpretation. The EIS should acknowledge the presence of water licences to take from the Gubberamunda Sandstone that are currently issued and the existence of this significant aquifer in this area.
Chapter 13 P13-43, 13.6.5	Chapter 13, 13.6.5 of the dEIS states "*The search identified 439 registered bores within the impact assessment area of which 156 were excluded from further evaluation due to an absence of data*".	**Advice** DRDMW requires clarification to establish if these bores are considered as part of any "make good" arrangements. Despite no information on depth/strata, there are still in many cases a working bore and may even be attached to a current water licence. All 439 registered bores need to be included as part of impact assessment and make good arrangements implemented.
Chapter 13 P13-44, Table 13.7	Chapter 13, Table 13.7 of the dEIS is titled "*Summary of groundwater entitlements for the impact assessment area*". The table provides entitlement figures for the relevant underground water unit within the vicinity of the impact area.	**Amend** Amend existing text to that shown in **bold** and delete that shown in ~~strikethrough~~: - **Upper** Condamine ~~River~~ Alluvium and tributaries. **Include** • Modify the title of the table to be representative of the data. It should be made clear that the areas listed are not solely within the impact assessment area. • Update the table with correct figures for the Main Range Volcanics. If these are unable to be obtained from the Water Entitlement Viewer, they can be provided directly by DRDMW if required. • Update the table with the correct figures for the Upper Condamine Alluvium and tributaries (described in table as Condamine River Alluvium and tributaries). If these are unable to be obtained from the Water Entitlement Viewer, they can be provided directly by DRDMW if required.

Section of Draft EIS	Description of issue	Suggested Solution
		Reason Amending 'Condamine River Alluvium and tributaries' to 'Upper Condamine Alluvium and tributaries' is necessary in order to reflect correct naming of this water source under the Water Plan (Condamine and Balonne) 2017. The title of the table indicates that all the listed entitlements fall within the impact assessment area. Data listed for the Main Range Volcanics is missing approx. 10,000ML of entitlement for this groundwater unit. This is likely the metered areas of Upper Hodgson and Toowoomba City. Figures provided for the Upper Condamine Alluvium and tributaries (described in table as Condamine River Alluvium and tributaries) are incorrect. The figures for productive base do not represent the final buyback figures by the Commonwealth Environmental Water holder, that were completed in 2019. Figures have not been updated since the buyback despite this information being supplied to ARTC after the preliminary EIS review.
Chapter 13 P13-67, Table 13.15	Chapter 13, Table 13.15 of the dEIS states "*where a groundwater bore is expected to be decommissioned or have access to it impaired as a result of the Project, 'make good' measures will be agreed in consultation with the affected landowner*. *Such measures may include the provision of an alternate water supply/new bore...* "	**Include** Provide details of the options that will be provided to landholders regarding a new bore and acknowledgment that an authorisation to drill may need to be obtained. **Advice** It is recommended ARTC clarify if the new bores are/are not replacement bores under the relevant code (Code for Self-assessable development of replacement bores). In some cases, and depending on what aquifer the bore is tapping, a new bore may need to be assessed for its possible impacts to groundwater dependent ecosystems and existing entitlements. Authority to drill may also be required under a development permit.

Section of Draft EIS	Description of issue	Suggested Solution
Chapter 13 P13-67, Table 13.15	Chapter 13, Table 13.15 of the dEIS describes that "*Decommissioning of bores will be in accordance with the* Minimum Construction Requirements for Water Bores in Australia (Edition 3).	**Amend** Update to reference the fourth edition of this document. **Reason** A fourth edition of the Minimum Construction Requirements for Water Bores in Australia has since been published.
Surface water		
Chapter 5 P5-5, 5.17	Chapter 5, 5.17 of the dEIS states "*The Project has the potential to result in direct and permanent impacts to land use and tenure within the Project footprint, with the majority of impacts occurring on commencement of land acquisition and construction. Potential impacts to land use and tenure associated with the Project are assessed in Chapter 7: Land Use and Tenure.*"	**Advice** Unless held by a local government or a mining lease holder, a water licence is attached to a parcel of land. Under section 43 of the Water Regulation 2016, if a water licence is attached to part of land taken under the *Acquisition of Land Act 1967*, the licence may be amended by the Department of Regional Development, Manufacturing and Water if the source of water is still able to be taken on the main property. If the remaining part of land no longer adjoins the original source, on the day the acquisition happens the water licence is taken to be held jointly by all owners of the land to which the licence applies. This situation remains in force until the joint owners apply to amend and/or transfer the jointly held water licence under the *Water Act 2000*.
Chapter 5 P5-99 and P5-100, 5.4.20.2	Chapter 5, Pages 5-99 and 5-100 of the dEIS state the following: • Page 5-99 "Alternative surface water storages, identified in or otherwise, may be accessed for the sourcing of construction water subject to obtaining the *appropriate water allocation or licence under the Water Act 2000 (Qld)".* • Page 5-99 "*Consultation with the Dumaresq–Barwon Border Rivers Commission, SunWater, GRC and TRC during the process will be required to establish the availability of water from dams and weirs in proximity to the Project*".	**Amend** Replace existing text to that shown in **bold** and delete that shown in ~~strikethrough~~: • Page 5-99, "Alternative surface water storages, identified in or otherwise, may be accessed for the sourcing of construction water subject to obtaining the **appropriate access to construction water from water markets, water licences or water permits under the *Water Act 2000*** ~~appropriate water allocation or licence under the Water Act 2000 (Qld)".~~ • Page 5-99, "Consultation with the **DRDMW,** Dumaresq–Barwon Border Rivers Commission, SunWater, GRC and TRC during the

Section of Draft EIS	Description of issue	Suggested Solution
	• Page 5-100 *Extraction of water from a watercourse typically requires:* o *A water allocation, water licence or water permit. Applications for resource entitlements are assessed against relevant criteria in the Water Act and relevant water resource plan and resource operations plan.*	process will be required to establish the availability of water from dams and weirs in proximity to the Project". • Page 5-100, A water allocation, water licence or water permit. Applications for resource entitlements are assessed against relevant criteria in the Water Act and relevant water ~~resource~~ plan, ~~and resource operations plan and resource operations plan~~, **water management protocols and Water supply schemes operation manuals**". **Reason** • Amendment required to reflect potential avenues to access water to use for construction (i.e. via water markets, water licences or water permits under the *Water Act 2000*). • ARTC should consult with DRDMW regarding access to water to use for construction. • Amendment required to reflect water planning document changes. Information on water planning and policy is available on the Business Queensland website: Water | Business Queensland
Chapter 12 P12.30, Table 12.14	Chapter 12, Table 12.14 of the draft EIS has an entry that states: • Condamine River (Northern Branch) (Ch 148.7)	**Amend** Replace existing text to that shown in **bold** and delete that shown in ~~strikethrough~~: • Condamine River (**North** ~~Northern~~ Branch) (Ch 148.7) **Reason** Amendment required in order to accurately reference this watercourse as per the Queensland Globe watercourse identification map.
Chapter 12 P12.32, 12.7.1.3	Chapter 12, 12.7.1.3 of the draft EIS states: "*Water Plans are part of the* Basin Plan 2012 *(Cth) and set new rules on how much water can be taken from the system (as licenced water waterharvesting)... "*	**Amend** Replace existing text to that shown in **bold** and delete that shown in ~~strikethrough~~:

Section of Draft EIS	Description of issue	Suggested Solution
		"Water Plans are part of the Basin Plan 2012 (Cth) and set new rules on how much water can be taken from the system (**such** as ~~licenced water~~ **authorised** waterharvesting)... " **Reason** Amendment required to reflect that not all water is managed as licenced water waterharvesting.
Chapter 12 P12-111 and P12-112	Chapter 12, pages 12-111 and 12-112 of the draft EIS has two instances where it is stated: "*Extraction of water from a watercourse typically requires:* *A water allocation, water licence or water permit. Applications for resource entitlements are assessed against relevant criteria in the Water Act and relevant water resource plan and resource operations plan"*.	**Amend** Replace existing text to that shown in **bold**, italicise that shown in *italics* and delete that shown in ~~strikethrough~~: "Extraction of water from a watercourse typically requires: A water allocation, water licence or water permit. Applications for resource entitlements are assessed against relevant criteria in the *Water Act **2000***, **the Water Regulation 2016,** relevant water ~~resource~~ plan**s, water protocols and Water Supply Schemes operations manuals** ~~and resource operations plan~~". **Reason** Amendment required to reflect water planning document changes.
General		
Throughout	Where requirements under the *Water Act 2000* are discussed, the draft EIS references the Department of Natural Resources, Mines and Energy as the responsible agency.	**Amend** Where the Department of Natural Resources, Mines and Energy is referenced in relation to requirements under the *Water Act 2000*, it is recommended the department name be changed to the Department of Regional Development, Manufacturing and Water. **Reason** The *Water Act 2000* was previously regulated by the former Department of Natural Resources, Mines and Energy. As a result of recent machinery of government restructure, the *Water Act 2000* is now regulated by the Department of Regional Development, Manufacturing and Water.
Chapter 3 P3-1, Table 3.1	The Terms of reference compliance table states "*The assessment and supporting information are considered sufficient for the Coordinator-General and administering authority to decide whether approvals sought through the EIS process should be granted*".	**Advice** Any approvals for water related development will need to be applied for after the Coordinator General's evaluation report is issued. There is insufficient information in the dEIS to enable DRDMW to assess and

Section of Draft EIS	Description of issue	Suggested Solution
		condition appropriately for any approvals and authorisations that may be required under the *Planning Act 2016* and/or *Water Act 2000*.

From: Irrelevant information deleted in accordance with section 73
Sent: Wednesday, June 23, 2021 2:10:44 PM
To: Irrelevant information deleted in accordance with section 73 of the RTI Act RDMW Major Projects
Irrelevant information deleted in accordance with sectio
Subject: Additional DRDMW comments_RE: Inland Rail - B2G/NS2B

Hi Irrelevant

As discussed last week, the Department of Regional Development, Manufacturing and Water (DRDMW) has some additional comments regarding the 7km section of Inland Rail that extends across the NSW/QLD border across the Macintyre River.

Advice concerning water requirements for NS2B:

- the proponent will need to address Queensland Gov water requirements from the Macintyre River north by liaising with DRDMW.
- the proponent should confirm no infrastructure will be placed within the Macintyre River or within mapped or unmapped features on the DRDMW watercourse identification map.
- if excavation of material, placement of fill or destruction of vegetation is proposed within a feature mapped as a watercourse on the DRDMW watercourse identification map, a riverine protection permit will be required if the works cannot be carried out in accordance with the riverine protection permit exemption requirements.
- there is an overland flow drainage feature on lot 37 on MH878 that is immediately downstream of an authorised overland flow storage that bywashes into this feature. A bank on this feature that captures ('takes') overland flow cannot be permitted under the Border Rivers and Moonie Water Plan area. A bank across this feature would also impact on the taking of overland flow by users downstream as well as flows into the Macintyre River.
- the proponent should describe/mitigate potential impacts on irrigation infrastructure and privately owned pumping infrastructure on the QLD side of the border.
- the proponent should describe/mitigate potential impacts on water harvesting caused by proposed infrastructure on the Macintyre River floodplain.
- DRDMW seeks ongoing consultation with ARTC with regard to water requirements for NS2B.

If you have any questions about any of the above, please let me know.

Kind regards
Irrelevant

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Water | Major Projects
Department of Regional Development, Manufacturing and Water

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E:
A: Level 4 Building 2 William McCormack Place| 5B Sheridan Street, Cairns

From: Irrelevant inform
Sent: Friday, 30 April 2021 2:20 PM
To: Inland Rail - B2G
Cc: Irrelevant information RDMW Major Projects
Subject: RE: Inland Rail - Border to Gowrie - release of draft EIS for public consultation

Hi Irrelevant i

Please find the attached agency review of the B2G draft EIS.

If you have any questions please let me know.

Thanks in advance and kind regards
Irreleva

Irrelevant information deleted in
Planning Services | North Region
Department of Natural Resources, Mines and Energy

P: Irrelevant information deleted in accordanc
E:
A: Level 4 Building 2 William McCormack Place| 5B Sheridan Street, Cairns
W: www.dnrme.qld.gov.au

Pages 177 through 185 redacted for the following reasons:
- -
Refused under section 47(3)(b) of the RTI Act

From: Irrelevant information deleted in accordance with section
Sent: Tuesday, 4 May 2021 4:06 PM
To: Inland Rail - B2G
Subject: RE: Inland Rail Border to Gowrie draft EIS - extended public notification
Attachments: QR Letter to OCG - Inland Rail (B2G) Draft EIS Feedback 4May2021 .pdf

Good afternoon
Please find attached correspondence in relation to B2G draft EIS feedback.

Kind Regards
Irrelevant inf

Irrelevant information deleted in accordance with sec

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Coordinated Project Delivery,
Office of the Coordinator General
Department of State Development, Manufacturing, Infrastructure and Planning

Inland Rail (Border to Gowrie) – draft EIS feedback

To whom it may concern

Queensland Rail appreciates this opportunity to provide feedback on the draft EIS for the Border to Gowrie (B2G) section of the proposed Inland Rail project.

Please find attached (Attachment A) summary table of Queensland Rail's feedback for consideration.

Do not hesitate to make contact to clarify any matter as necessary.

Kind regards

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Irrelevant information deleted in accordan

Queensland Rail

4 May 2021

Attachments:
A – Queensland Rail draft EIS (B2G Inland Rail) feedback

QueenslandRail

Attachment A – Queensland Rail draft EIS (B2G Inland Rail) feedback

Issue ID	Section	Describe the issue	Suggested Solution
1	Chapter 5 (Project Description) & Generally	Queensland Rail's review has been undertaken cognisant of its obligations under the Queensland Rail Transit Authority (QRTA) Act and the (Rail Safety National Law (Qld) Act 2017). Queensland Rail is concerned that there is inadequate discussion regarding the roles, responsibilities and general interface risks and management approach where the Inland Rail route overlaps or is to be constructed adjacent to the existing Queensland Rail managed rail corridor. The operation of two railways in close proximity presents complex operational and safety issues, which must be addressed prior to design and construction to avoid long term issues.	Provide additional discussion and detail to address Rail Infrastructure Manager interface management approach
2	Section 7.2 (*Land Resources*) Executive Summary	Clause11.150 of the Terms of Reference (ToR) requires the EIS to detail any known or potential sources of contaminated land within or adjoining the project area identified by landholders. Provide results of searches of EMR and/or CLR for the proposed alignment and disturbance areas. Section 7.2 of the EIS Executive Summary describes the existing environment/potential impacts as having only three non-corridor properties currently listed on the EMR. There is no recognition of the 30 kilometres of EMR listed properties that are situated within the existing rail corridor section of the proposed alignment. Accurate notation of potential sources of contamination will assist effective management. QR is aware, via search of the official Department of Environment and Science (DES) EMR/CLR register, of 16 rail corridor properties (which are noted as Impacted Properties in Appendix F) being EMR listed for Hazardous Contaminant reasons. These EMR rail corridor properties are Lot 82, SP104976; Lot 1, RP14231; Lot 121, 104977; Lot 14, SP112652, Lot 5, RP14231; Lot 2, RP37133; Lots 102 and 103, SP113905; Lot 22, SP124720; Lot 413, SP119196; Lot 110, MH807356; Lot 21, 120712; Lots 411 and 413, SP119197 as well as Lots 481 and 483, SP119198. These rail corridor properties are predominantly located in and around the populated	Update information to also describe all existing rail corridor properties listed on the State official EMR register.

		centres of Brookstead, Pampas, Yelarbon, Gibinbell and Kurumbul. Parts of the rail corridor between these populate centres will be of equivalent age.	
3	Section 7.16 (*Waste Management*) Executive Summary	Clauses 11.158 and 11.160 of the ToR require the EIS to describe and quantify all expected significant waste stream with respect to *Waste Reduction and Recycling Act 2011*, *EP Regulation 2008*, *National Waste Policy 2009* and relevant Department of Environment and Science (DES) guideline information. Although the DES document referred to in Appendix 1 has relevance, there are also other applicable DES information sheets. With respect to the EMR rail corridor properties, DES Information Sheet about 'Overview of Regulated Waste Categorisation,', ESR/2019/4749 is also of relevance. Section 2.2 of this DES Information Sheet states "*this means that the notification, assessment and removal of sites from the EMR CLR will continue to be undertaken against contaminated land assessment criteria only and is not impacted by regulated waste categorisation framework. The waste categorisation provisions of the EP Regulations will not apply to contaminated soil from sites that are on the EMR or CLR*." Table 40 of the Executive Summary appears to be inconsistent with this stated intent listing ballast and rail spoil as regulated waste.	Review DES' Information Sheet called 'Overview of Regulated Waste Categorisation' to confirm or not whether ballast and rail spoil from EMR listed properties is regulated waste and update Table 40.
4	Section 3.5.10.2 (*EP Act – Relevance to the Project*) Chapter 3 (Legislation & Project Approvals Process)	Section 3.5.10 outlines details on ERAs expected to be necessary, yet there is no corresponding discussion about the relevance of each EPP to the project. Of particular note, no recognition of any exclusions listed in Section 8 (4) (a) of the EPP (Noise). This EPP (Noise) cross-references matters mentioned in Section 1, Part 1, Schedule 1 of the EP Act (which includes "*ordinary use of rail transport infrastructure*") as being excluded from the Acoustic Quality Objectives. Absence of such details about application of environmental values/objectives is not consistent with Clause 9.10, ToR to determine the activity scope of ERAs and other EP Act requirements.	Describe all important inclusions and exclusions of applications in the other EP Act subordinate legislation, EPPs and outline their relevance to the project. This is either from the perspective of ERA decision and conditioning process as well as more generally in application of its environmental quality objectives/values.
5	Section 3.5.24 (Rail Safety National Law (Qld) Act 2017) Chapter 3 (Legislation & Project	Clauses 9.5 to 9.110 of the ToR requires the EIS to describe all legislation, policies and plans relevant to the Project and identify approvals, licences, permits and other authorisations required for the construction and operations of the Project. This is expected to include rail safety accreditation. To commence the facilitation of the nominated 'safety-in-design' processes, a high	Provide additional specific details regarding detailed design and safety-in-design processes clarifying the timing and proposed agreed accountabilities of Rail Infrastructure Manager rail safety

	Approvals Process)	level of certainty about roles and accountabilities for delivered and existing assets within the rail corridor is required to ensure applicability of engineering standards and specifications to achieve the outcome of safe operations on all impacted rail (both new and existing) infrastructure and how safety interfaces between Rail Transport Operators will be managed within the context of rail safety legislative framework. In addition to this, the statement made in Section 3.5.24.1 for project compliance is an oversimplification of the purpose of the RSNL and the obligations it places on an RTO. The safety-in-design process is only one element in supporting compliance with the RSNL and the key issue around multiple accreditation holders and impacts to other RTOs is not discussed/addressed. Section 5.1 (Overview of the Project) outlines that approximately 71.2 km of the current design is brownfield co-existing within the existing rail corridor for which Queensland Rail is the current accredited Rail Infrastructure Manager. No details as to timing or governance mechanisms are provided to provide certainty as to how or if these matters will be addressed prior to the commencement of detailed design / safety-in-design processes. The absence of such does not provide adequate details for the purposes of Clause 9.7 of the ToR with respect to "*statutory approvals, permits, licences and authorities (including requirements of any owners' consent) … for use of land*."	accreditation for the brownfield (existing) rail corridor sections. Provide detail of any mechanisms to work through such issues with QR to ensure satisfactory outcomes to mitigate impacts to QR assets and operations.
6	Section 8.5.8.2 (Contaminated Land – Potential Sources), Chapter 8 (Land Resources	Clause 11.150 of ToR requires the draft EIS to provide the search results of the EMR and/or CLR for the proposed alignment and disturbance areas. Section 8.5.6.2 of the draft EIS outlines that only three properties within the proposed alignment and disturbance areas were listed on the EMR. None of these three properties were on the existing rail corridor parts of the project. QR is aware, via search of the official Department of Environment and Science (DES) EMR/CLR register, of 16 rail corridor properties (which are noted as Impacted Properties in Appendix F) being EMR listed for Hazardous Contaminant reasons. These rail corridor properties are Lot 82, SP104976; Lot 1, RP14231; Lot 121, 104977; Lot 14, SP112652; Lot 5, RP14231; Lot 2, RP37133; Lots 102 and 103, SP113905; Lot 22, SP124720; Lot 413, SP119196; Lot 110, MH807356; Lot 21, 120712; Lots 411 and 413, SP119197 as well as Lots 481 and 483, SP119198.	Update information to also describe all existing rail corridor properties listed on the State official EMR register. Consider updating the list of future soil samples for contamination to include contamination testing within the existing rail corridor.

		These rail corridor properties are predominantly located in and around the populated centres of Brookstead, Pampas, Yelarbon, Gibinbell and Kurumbul. Parts of the rail corridor between these centres will be of equivalent pre-1960 age. Figure 8.1 shows limited soil sampling has been undertaken to date within the existing rail corridor to confirm or otherwise the presence of such contamination, regardless of listing or not given the historical use of the land. Future sampling plans should consider the above noted EMR listed properties and the general risk associated with rail corridor to ensure compliant management of material originating from the existing rail corridor.	
7	Section 12.6.3.3 (*Assessment Methodology*) Chapter 12 (Surface Water and Hydrology)	Clause 11.66 of the ToR details the requirements of flood studies, in particular (b) quantifying flood impacts on upstream and downstream existing infrastructure surrounding the proposed alignment from redirection or concentration of flows. It is not clear what were the data sources for QR's drainage structures (precisely which As – Built drawings) adopted within the hydraulic model. There is also no comprehensive description about the impact from the proposed Project embankments and drainage structures on QR's existing infrastructure. This presents risk to QR based on current operations continuing and further information or commitments are required to ensure QR infrastructure and operations are not adversely impacted.	Describe and tabulate list of names and numbers for all As-Built drainage structure drawings sourced from QR. Provide further clarity around impact to QR existing infrastructure and operations, including any mechanisms to work through such issues with QR to ensure satisfactory outcomes for QR assets and operations.
8	Section 12.10.2 (*Impact Assessment– Hydrology and Flooding*) Chapter 12 (Surface Water and Hydrology)	Clause 11.66 of the ToR details the requirements of flood studies. B2G embankment and proposed culverts and bridge structures would alter hydraulic regimes. Limited clarity about whether any such changes in flow regimes from structures would cause worsening effect to existing QR structures. This presents risk to QR based on current operations continuing and further information or commitments are required to ensure QR infrastructure and operations are not adversely impacted.	Detail any significant diversion or interception of overland flow. Include maps of suitable scale showing the location of diversions and other water-related infrastructure relative to existing railway drainage structures. Note any mechanisms to work through such issues with QR to ensure satisfactory outcomes for QR assets and operations.

9	Section 12.10.2.3 (*Condamine River*) Chapter 12 (Surface Water and Hydrology)	Clause 11.66 of the ToR details the requirements of flood studies. Table 12.75 (Change in Peak Water Levels – 1% AEP) does not outline what the maximum increase is for existing rail lines. Correspondingly, Figure 12.20b appears to indicate maximum increase in the order of 50 to 100 mm which is compliant with the 100 mm Railways objective (see Table 12.8). However without a tabulated number in Table 12.75, it is difficult to verify colour scaling with certainty.	Quantify the maximum increase in 1% AEP peak water levels for existing Millmerran rail line (both the operational and non-operational sections).
10	Section 12.10.2.10 (*Macintrye Brook – Yelarbon to Inglewood*)	Clause 11.66 of the ToR details the requirements of flood studies. Table 12.118 indicates the maximum increase in peak water level is 150 mm at Chainage 45 km on the South West Rail Line (as also shown in Figure 12.27b2). This is not compliant with the with the 100 mm Railways objective (see Table 12.8). and poses risk to QR assets and operations. There is insufficient detail to describe how impacts will be managed.	Provide details on any additional proposed measures being considered to reduce the maximum peak water levels to within the nominated Railways flood objectives.
11	Section 14.3 (*Policies, Standards and Guidelines*) Chapter 14 (Noise and Vibration)	No discussion about the relevance of EPP (Noise) to the project separately for construction and operation. Absence of such details about application of environmental values/objectives is not consistent with Clause 9.10, ToR to determine the activity scope of ERAs and other EP Act requirements.	Provide additional text to describe how Section 8 (4) (a) of the EPP (Noise) decouples the application of acoustic quality objectives separately for construction and operations.
12	Section 14.3 (*Policies, Standards and Guidelines*) Chapter 14 (Noise and Vibration)	Inclusion of World Health Organisation (WHO), 2009, "*Night Noise Guidelines for Europe"* has no direct reference in the ToR or other TMR guidance/policy, unlike the other Australian, British and German Standards that are either specifically listed in the ToR and/or cross-referenced in the TMR's Code of Practices/Interim Guidelines. Inclusion of the WHO Guideline's reference also appears inconsistent with the intent of Clause 11.124 in the ToR. Only reference to the WHO 2009 guideline is in the DES Noise Measurement Manual. However, this Manual outlines noise from ordinary use/operations of rail transport infrastructure is not within scope of the manual's application being an activity listed in Schedule 1 of EP Act. The inclusion of this reference is not expanded upon and creates confusion, including with expectation for mitigation.	Clarify the relevance of WHO 2009 Night Noise Guidelines for Europe to the project, and whether or not it will not be used criteria to comply with. If not, provide context to its inclusion.

13	Section 14.4.4.1 (*Operational Airborne Rail Noise*) Chapter 14 (Noise and Vibration)	Audible safety warning devices (both crossing alarm bells and train horns) used at active level crossings has been included in the scope of modelling predicted levels. This inclusion of train horns specifically is not consistent with Section 2.2.1 (Operational Airborne Noise Criteria) of TMR's *Interim Guideline for Operational Noise and Vibration (GSTI)* and therefore, not consistent with Clause 11.121 (f) of the ToR.	Due to public safety obligations, exclude train horns and crossing alarm bells from the scope of modelling inputs to operational predicted noise levels.
14	Section 14.6.5 (*Operational Rail Noise Criteria*) Chapter 14 (Noise and Vibration)	No clarity or mention to the WHO 2009 *Night Noise Guideline*'s recommended level with respect to whether or not it also defines Assessment Criteria and/or "*best practice environmental management*" as part of ARTC's rail noise management strategy. This is important for ToR compliance with both "*Impact Assessment*" and "*Mitigation Measures*" (Clause 11.124) perspectives. QR has an interest noting the proposed mitigation measures at both Yelarbon and Brookstead being in the form of noise barriers that may be constructed near, beside or on the existing rail corridor (see Figures 24 and 25 of Appendix T – SLR Operational Noise and Vibration Report).	Describe whether ARTC rail noise management strategy includes the WHO (2009) Night Noise Guidelines' Recommended Level of 42 dB(A) internal L_{Amax} level as either or both an Assessment Criteria and Best Practice Environmental Management for designing/implementing mitigation measures.
15	Section 14.7.4.1 (*Operational Rail Impacts – Sleep Disturbance*) Chapter 14 (Noise and Vibration)	There is limited discussion or summary details provided relative to the comparison against the WHO (Europe) 2009 night noise criteria. Hence, it is difficult to determine the effect on such exceedances and whether the WHO night noise will drive compliance and any Project mitigation works required under Clauses 11.125 to 11.126 of the ToR.	Provide more clarity on how the Assessment Criteria status of the WHO Night Noise Guideline's Recommended Level in ARTC overall operational noise management approach.
16	Section 14.8.2.2 (*Design Considerations – Operations - Rail*) Chapter 14 (Noise and Vibration)	Table 14.37 outlines design considerations with the objectives to remove the need for trains to sound horns with the use of wayside level crossing alarms. Although this is a good acoustic design objective, this needs to be placed in context of rail safety requirements of the Railway Manager(s) consistent with the corresponding Clause 11.143 of ToR that require the Project to ensure safety of people during operation phase. Interface risks with other Railway Managers does not appear to be adequately addressed. Clause 11.143 of the ToR acknowledges the proposed project's co-location and potential interaction between Railway Managers with the Millmerran Branch and South Western Line.	Provide additional wording to highlight that the need to sound the horn will still be determined by rail safety accreditation and the applicable Safety Management System of the responsible Railway Manager.

17	Section 17.7.1 (*Mitigation Measures*) Chapter 17 (Cultural Heritage)	Table 17.21 (Initial Mitigation Measures – Indigenous Heritage) confirms three CHMPs have been developed and agreed for the Project. Although it is good to acknowledge they are in accordance with ACH Act, there is a lack of clarity regarding the exclusion (or other) of the Existing Railway Corridor operations and maintenance.	Supplement the fifth row of Table 17.21 by describing ARTC's scope of Existing Railway Corridor activities covered by the three CHMPs excludes the maintenance of the existing QR railway.
18	Section 18.4.1 (*Impact Assessment Area*) Section 18.6.1.2 (*Operations – Road/Rail Intersections)* Chapter 18 (Transport)	Clause 11.109 of the ToR requires an impact assessment of the project on all individual road/rail crossings. This is irrespective of whether the crossing is public or private occupational crossings. QR has identified the following inconsistencies with how the level crossing are geographically shown compared to how they are reported in Tables 18.23 and 18.24:- • Coding for Interface ID 310-5-P-1 (refer Figure 18.2a) indicates an existing road – rail intersection but is listed in Table 18-24 Proposed road – rail intersection. This is a stock route crossing i.e. an existing road – rail intersect (QR ID 2038). It should it be 'E' for existing and listed in Table 18-23. • Coding for Interface ID 310-8-E-0 (refer Figure 18.2a) indicates an existing road – rail intersection but is listed in Table 18-24 Proposed road – rail intersection. This is. an existing road – rail intersect (QR ID 2032). It should it be listed in Table 18-23. • Interface ID 310-16-E-1 Whetstone Access Road coding indicates existing road rail intersection (as per legend on Figure 18.2b). Also listed as Proposed public road – rail intersection (Table 18.23). According to the Figure 18.2b, the proposed alignment departs the existing rail alignment before the existing road rail interface location (QR ID2206). Therefore, the crossing of Whetstone Access Road by Inland Rail would be a new level crossing and coding should be P (proposed), not E (existing). • Interface ID 310-42-E-0 should be coded 'P', not 'E' and listed in Table 18-24, as per 310-11-E-1 being replaced by 310-11-P-0 (refer Figure 18.2b) and listed in the respective Tables 18.23 (existing road-rail interfaces) and 18-24 (proposed road – rail interfaces)	Upgrade and address any nominated inconsistencies in level crossing types described in Figures 18.2a to 18.2g and Tables 18.23/18.24.

		• Although Interface ID 310-24-P-3 and 310-25-P-1 are shown with symbol for no crossing provided, (refer Figure 18.2c) are not referred to in the Chapter 18 document tables 18.23 and 18.24. All other intersection locations where no crossing is to be provided are listed and indicate treatment. • Interface ID 310-42-E-1 (refer Figure 18.2f) is on the existing rail alignment and listed in Table 18.23 (existing interfaces) as no crossing being provided. Road realignment will provide a new crossing nearby at 310-42-E-0 and is listed in Table 18-24 (proposed interfaces). • Coding for 310-43-E-3 and 310-43-E-8 indicates existing road – rail intersection (refer Figure 8.2f) but both are listed in Table 18-24 Proposed road – rail interface. Either: o the crossings should be listed in Table 18-23 Existing intersections or o if the proposed alignment veers off the existing alignment, the coding should be 'P' instead of 'E'. • Coding for Interface ID 310-46-E-1 (refer Figure 18.2g) indicates existing road - rail intersection (it is QR crossing ID 2624) but it is listed in Table 18-24 Proposed road - rail intersection.	
19	Section 18.6.1.2 (*Operations – Road/Rail Intersections* Chapter 18 (Transport)	Clause 11.109 of the ToR requires an impact assessment of the project on all individual road/rail crossings. This is irrespective of whether the crossing is public or private occupational crossings. Second last paragraph states *"The analysis indicates that delays at level crossings will, in most instances, be five seconds or less."* This is inconsistent with the total wait time listed Table 18.25 for each level crossing. The minimum listed time in Table 18.25 is 78 seconds.	Upgrade and address any nominated inconsistencies in how total wait time or delays has been quantified in Table 18.25 and corresponding text.
20	Section 18.7.2 (*Proposed Mitigation Measures*) Chapter 18 (Transport)	Clause 11.109 of the ToR requires an impact assessment of the project on all individual road/rail crossings. This is irrespective of whether the crossing is public or private occupational crossings. Specifically, Clause 11.110 requires construction impacts of the project on public railway level crossings through the ALCAM model. Clause 11.115 continues requiring measures to mitigate impacts on railway level crossings should be in accordance with *Queensland Level Crossing Safety Strategy (2012 – 2021)* with	Describe assessment of construction impacts and implications for additional mitigation measures in full consideration of ALCAM variables and required outputs.

		mitigation strategies to be prepared in close consultation with relevant transport authorities. Table 18.38 outlines the design of road – rail intersections will continue to be developed in consultation with DTMR and QR via pre-construction and construction phase surveys rather than describing the assessment findings within the EIS. Such consultative approach with QR for the pre-construction and construction surveys is appreciative. Using the Construction Haul Route maps in Part 2 of Appendix X, QR has identified at least 7 passive control only (without boom gates) level crossings on the Millmerran Branch and 9 level crossings on the South West Line with only one having active control in the form of boom gates. In the absence of any detailed assessment on the adequacy of sight distances and formation/width provided in the EIS, it is however not clear what additional infrastructure mitigation measures is required at each of these level crossings and whether certainty about such mitigation works can be adequately scheduled / funded in time before construction commences. Table 18.34 outlines details about minimum treatment requirements for turning lanes into and out of road intersection. In addition to this, details about whether the crossing control types need to change has been identified in Tables 18.23 and 18.24. For level crossing assessment, crossing control type is only one of the mitigation variables. There is lack of details specific to each affected level crossing about whether the mitigation works will also involve changes to road/rail crossing formation and width, sleeper upgrades, resealing road surfaces and lighting to accommodate expected weight/size of heavy construction vehicles. This is especially with respect to the significant magnitude of increase in heavy vehicle traffic movements listed in Table 18.31. Particular examples of such turning lane upgrade details being provided but not the equivalent rail crossing mitigation measures are at Lindenmayer Road/Gore Highway (QR level crossing ID 910) and Coolmunda Dam Access Road (QR level crossing ID 2191). The latter will be used for water catering and currently, only passive control with a history of incidents and marginally adequate existing sight	

		distance. Such mitigation works may also impact existing rail services upon which limited assessment of impact types has been described.	
21	Section 20.3 (*Policies, Standards and Guidelines*), Section 20.6.3 (*Construction Wastes*) Section 20.8.3 (*Proposed Mitigation Measures*) Chapter 20 (Waste Management)	Clauses 11.158 and 11.160 of the ToR require the EIS to describe and quantify all expected significant waste stream with respect to *Waste Reduction and Recycling Act 2011*, *EP Regulation 2008*, *National Waste Policy 2009* and relevant Department of Environment and Science (DES) guideline / instructional information. Although the DES document referred to in Appendix 1 has relevance, there are also other applicable DES information sheets. With respect to the EMR rail corridor properties, DES Information Sheet about 'Overview of Regulated Waste Categorisation,', ESR/2019/4749 is also of relevance. Section 2.2 of this DES Information Sheet states "*this means that the notification, assessment and removal of sites from the EMR CLR will continue to be undertaken against contaminated land assessment criteria only and is not impacted by regulated waste categorisation framework. The waste categorisation provisions of the EP Regulations will not apply to contaminated soil from sites that are on the EMR or CLR*." Section 20.3 does not mention this DES Information Sheet and this interpretation by the Administering Authority of when contaminated soil is or is not regulated waste. Tables 20.6 (Construction Waste Quantities), 20.7 (Operation Phase Waste Types and Waste Streams) and 20.12 (Management of Waste Types generated by the Project) in Sections 20.56.3, 20.6.4 and 20.8.3 has also labelled ballast and its spoil as being regulated waste which is inconsistent with the DES Information Sheet quoted above.	Review DES' Information Sheet called 'Overview of Regulated Waste Categorisation' to confirm or not whether ballast and rail spoil from EMR listed properties is regulated waste and update Section 20.3, Table 20.6 and 20.7.
22	Section 7.9.3.1 (*Flood Impacts at Proposed Hydraulic Structures – Gowrie Creek*)	Clause 11.66 of the ToR details the requirements of flood studies, in particular (b) quantifying flood impacts on upstream and downstream existing infrastructure surrounding the proposed alignment from redirection or concentration of flows. Tables 7.31, 9.36 and 16.23 presents the modelled change in peak water level for the proposed hydraulic structures. There are no corresponding tables for what changes are expected for existing QR infrastructure hydraulic structures. Accordingly, there is uncertainty over what risk is posed to existing QR	Tabulate potential flood impacts (if any) to existing QR's drainage structures.

		infrastructure.	
23	Section 16.6.3.7 (*Flood Impacts on QR – Macintyre Brook – Yelarbon to Inglewood*) Appendix Q1 – Volume 1 (Hydrology and Flooding Technical Report)	Clause 11.66 of the ToR details the requirements of flood studies, in particular (b) quantifying flood impacts on upstream and downstream existing infrastructure surrounding the proposed alignment from redirection or concentration of flows. At one location (Chainage 45 km), the predicted change in 1% AEP afflux is up to 150 mm immediately to the east of where the two alignment diverge from each other for a distance of 200 metres along the QR existing line. A change of more than 100 mm does not achieve the Railway flooding objectives nominated in Table 12.8 of Chapter 12. There is no discussion about what additional mitigation is being investigated to address this. This presents risk to QR based on current operations continuing and further information or commitments are required to ensure QR infrastructure and operations are not adversely impacted.	Provide details on additional proposed measures being considered to reduce the maximum peak water levels to within the nominated Railways flood objectives.
24	Section 7.3.7 (*Operational Railway Noise Model Inputs*) Appendix T (Operational Noise and Vibration)	Audible safety warning devices (both crossing alarm bells and train horns) used at active level crossings has been included in the scope of modelling predicted levels. This inclusion of train horns is not consistent with Section 2.2.1 (Operational Airborne Noise Criteria) of TMR's *Interim Guideline for Operational Noise and Vibration (GSTI)* and therefore, not consistent with Clause 11.121 (f) of the ToR.	Due to public safety obligations, exclude train horns and crossing alarm bells from the scope of modelling inputs to operational predicted noise levels.
25	Section 11.4 (*Potential for Sleep Disturbance*) Appendix T (Operational Noise and Vibration)	There is limited discussion or summary details provided relative to the comparison against the WHO (Europe) 2009 night noise criteria. Hence, it is difficult to determine the effect on such exceedances and whether the WHO night noise will drive compliance and any Project mitigation works required under Clauses 11.125 to 11.126 of the ToR.	Provide more clarity on how the Assessment Criteria status of the WHO Night Noise Guideline's Recommended Level in ARTC overall operational noise management approach both in terms of number of exceedances and triggers for noise mitigation.

From: Irrelevant information deleted in accordance with section
Sent: Tuesday, 11 May 2021 3:24 PM
To: Inland Rail - B2G; Irrelevant information deleted in accor
Cc: Irrelevant information deleted in accorda
Subject: 2018-8165-Assessment-Draft EIS-DAWE's comments on MNES chapter_May 2021 [SEC=OFFICIAL]
Attachments: 2018-8165-Assessment-Draft EIS-DAWE's comments on MNES chapter_May 2021.pdf; 2018-8165-Assessment-Comments on B2G MNES technical report_25 June 2020.pdf; 2018-8165-Assessment-Draft EIS-DAWE's comments on MNES chapter October 2020.pdf; 2018-8165-Assessment-Draft EIS-DAWE's comments on MNES chapter October 2020.pdf

Dear Irrelevant ir

Thank you again for the opportunity to comment on the draft EIS. Based on the information available in the latest draft EIS, the Department considers the proponent has still not adequately addressed Department's previous comments on defining habitat and identifying residual significant impact (see previous comments attached).

The Department is therefore of the view that the draft EIS is inadequate to allow the Minister to determine the acceptability of the impacts of the proposed action on relevant matters of national environmental significance (MNES) under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

The Department further notes that the independent flood panel review of the the draft independent flood panel report noted that multiple instances of increases in level occurring that are well in excess of the acceptable limits nominated as flood impact objectives. This report further identified issues with flood modelling, estimation of flows and impacts on local catchment areas. The department notes that the project crosses the Condamine River Floodplain which provides habitat for several listed threatened species and communities, based on the conclusions of the draft independent flood panel report the draft EIS needs to include must include more information on how findings of the flood panel review impacts potential habitat within the Condamine floodplain and associated habitat for the MNES and how these impacts have been considered in the draft EIS.

The Department is aware that ARTC is undertaking on-ground surveys, and the Department strongly recommends use of the habitat descriptions in accordance with Commonwealth definitions to inform habitat assessments where the EPBC Act listed threatened species and ecological community are likely to be or will be impacted by the proposed action.

Please note that a decision on whether or not the proposed action can be approved under the EPBC Act will occur following receipt of the State's assessment report. If the Minister believes on reasonable grounds that she does not have enough information to make an informed decision on whether or not to approve the proposed action, the Minister may request further information during the assessment period.

Further detail is provided in the attachment (May 2021 comments).

Please don't hesitate to contact me if you have any questions.

Cheers

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Environment Assessments Queensland and Sea Dumping Branch
Department of Agriculture, Water and the Environment
Irrelevant information deleted in

The Department acknowledges the traditional owners of country throughout Australia and their continuing connection to land, sea and community. We pay our respects to them and their cultures and to their elders both past and present

Department of Agriculture Water and the Environment advice comments on Inland Rail Border to Gowrie MNES chapter in the draft EIS, published on 25 January 2021 for public consultation

On 25 January 2021, the Queensland Office of the Coordinator-General (OCG) published the draft EIS for Border to Gowrie Inland rail project for public consultation. The department has reviewed the draft EIS and identifies following issues for OCG's consideration.

Please note that this is not a review of the merit or the acceptability of the proposed action. The department has reviewed the issues relevant to matters protected under the EPBC Act only.

Issues	Comments	Further actions
Scope of the action	• The draft EIS describes the action to include a corridor of sufficient width to accommodate future possible upgrades of the track, including a future possible requirement to accommodate trains up to 3,600 m in length. The department notes that the current assessment is based on 1,800 m train lengths. Please confirm the current footprint included in the draft EIS is for 1,800 m train lengths and clarify whether the 3,600 m for each passing loop be cleared as part of the proposed action? Does the ecological survey include the proposed passing loops for 3,600 m train lengths?	• Please clarify the extent in the draft EIS of clearing to avoid confusion.
Early works and pre-construction activities	• Section 1.10.6 states that pre-construction activities and early works will commence in 2021. The department notes that early works must not commence until the Minister determines whether or not to approve the action.	• Please include what activities will form part of the early works and pre-construction activities and proposed timing for those activities. • Please clarify if early works form part of the referred action.
Survey efforts	• The draft EIS indicates that the location of terrestrial and aquatic survey sites was dictated by land access agreements with landholders and that this has	• Provide more information on how was mapping validated when access to identified habitats was not permitted and how it has been addressed to identify

	significantly reduced the areas that were accessible to ecological investigations. • The draft EIS refers a number of previous ecological investigations by Eco Logical to inform the final advice statement for the draft EIS. Section 3.3.1.1 notes that there is some overlap in the location of surveys with EIS in 2017 and targeted surveys also captured areas within the alignment not subject to assessment elsewhere and concludes that most of the project footprint has been subject to ecological assessment. The department notes that Figures 3.3(a-d) includes survey locations that are outside of the impact assessment area and targeted surveys have not been undertaken to confirm the presence/absence of habitat or species. The draft EIS does not have enough information on how the habitat was defined during those previous investigations and whether survey methodologies were adequate in accordance with the Commonwealth/State guidelines. <u>Determining presence/absence</u>: note that the department uses both habitat presence and/or species presence when assessing an action and the absence (or low population) of a species does not demonstrate a low risk of significant impact.	potential impact on MNES? The department's position regarding inability to access an area due to landholder requirements, is that if habitat is present, species presence is assumed, unless there is evidence to justify otherwise. • The department considers that in the absence of on-ground survey data and for the purposes of assessment under the EPBC Act, the assessment should take a precautionary approach to identifying all potential habitat for protected matters and assume that listed species (or their habitat) and ecological communities are present within the action site until surveys are undertaken to confirm or rule out relevant habitats based on habitat type or quality. • Please provide previous field investigations including habitat assumptions and survey guidelines that were used to develop the predictive habitat modelling as part of the draft EIS.
Impacts of flooding on Condamine floodplain and MNES	• Section 5.2.1.15 states that potential hydrology and flooding changes are not expected to impact habitat for MNES species or TECs in more than a minor and transient manner. • The department notes that the draft independent flood panel report noted that multiple instances of increases in level occurring that are well in excess of the	• As such, the department considers further information is needed to justify conclusions reached on whether or not the proposed action will result in surface water and hydrology, and groundwater impacts on the Condamine River Floodplain and the habitat present for the MNES.

	acceptable limits nominated as flood impact objectives. This report further identified issues with flood modelling, estimation of flows and impacts on local catchment areas. The department notes that the project crosses the Condamine River Floodplain which provides habitat for several listed threatened species and communities, based on the conclusions of the draft independent flood panel report the department considers that there is potential that the draft EIS has not identified all potential impacts from flooding on MNES.	
Mapping of threatened ecological communities	• The department notes that mapping of threatened ecological communities is based on State based RE mapping and the draft EIS did not ground-truth these REs. • Section 3.2.5 states that analogous vegetation communities (i.e. remnant and regrowth REs were identified which were then used to spatially map out the extent of each of the identified TECs and Table 3.3 Identified TECs and the analogous REs (both remnant and high value regrowth) were used to map each of the TECs. The department notes that the commonwealth definition may include broader areas than regrowth and HVR vegetation. The draft further notes that key diagnostic characteristics and condition thresholds in the SPRAT and conservation advice for respective Commonwealth listed TECs have not been considered in identifying all TECs present within the project disturbance footprint (please refer to department's comments previous comments attached).	• Include an assessment against key diagnostic criteria and condition thresholds in the SPRAT and conservation advice for respective TECs in the draft EIS to confirm presence or absence of each ecological community. Please clarify whether key diagnostic characteristics and condition thresholds in the SPRAT and conservation advices for respective TECs were considered in identifying the extent and presence of all TECs within the project disturbance footprint. • Include a series of maps in the draft EIS showing: - ground-truthed regional ecosystems including areas of respective REs. - The project area and all surrounding environments (vegetated and non-vegetated), with the outline of the project area encompassing all components (temporary as well as permanent); and - Site topography and all known or anticipated drainage routes, for both the pre-construction and post-construction states of the project site (including

	• Section 4.3.1.3 states that Weeping myall woodlands and Poplar box woodlands TECs occur within the impact assessment area and Project footprint, however the occurrence of these communities could not be confirmed due to a lack of property access at the time of project surveys. • The draft EIS concludes that some TECs are unlikely to be impacted despite of their presence within the impact assessment area. For example, the Natural Grassland TEC and White Box-Yellow Box-Blakely's Red Gum Grassy Woodland TEC are indicated as occurring within the impact assessment area but not within the project footprint. The draft EIS must include on-ground surveys to confirm the TECs are not present within the project footprint. Table 8.4 states that if the absence of this TEC is confirmed by surveys, the project will not reduce the extent of an occurrence of this community. Please note: the threshold at which impacts must be considered and either mitigated or offset is where there is a non-trivial risk that the impact may occur. Uncertainty is not grounds for dismissing an impact nor for deeming the risk of its occurrence trivial. If the draft EIS cannot demonstrate that the risk of a particular impact is trivial, the department will need to assume the impact is likely to occur.	drainage from any offsite supporting infrastructure, such as access roads); and - All areas both on site and in the surrounding area comprising or potentially comprising a listed ecological community or habitat for a listed threatened species, regardless of the quality or intactness of those areas; and - All survey plots and locations (including but not limited to BioCondition transects, the route of any site meanders, any trapping locations, etc.); and - A quantification in hectares of each area required to be mapped above.
Potential habitat/Habitat critical/important habitat	• The department considers that without demonstration that field surveys are adequate (i.e. conducted in accordance with recommended survey guidelines, and across the entire proposed action site), it is not	• Revise and update the draft EIS to include definition of habitat for impacted matters in accordance with Commonwealth definition. This definition must be considered during on-ground surveys.

	appropriate to use occurrence records to determine (or exclude areas as) potential habitat for a species. • The department notes that 'potential habitat' has been defined on the basis of the presence of individuals or species records. However, the department notes that potential habitat should also consider the availability of suitable habitat (not only the presence of species) for foraging, breeding, dispersal etc activities by species. • Habitat has not been defined in accordance with Commonwealth guidelines. Furthermore, habitat critical/important population has not been defined in accordance with Commonwealth guidelines for some of the species. Please refer to department's previous comments for example (attached). • In accordance with the EPBC Significant Impact Guidelines, habitat critical to the survival of the species refers to areas that are necessary: o for activities such as foraging, breeding, roosting, or dispersal o for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators) o to maintain genetic diversity and long-term evolutionary development, or	• Review the draft EIS and provide references where local extinction has been used. • The department notes that in the absence of a definition for critical habitat for the species important population has been defined by applying a 1 km buffer on known records that intersect 'potential habitat' for several species. For example, *Macrozamia machinii.* The draft EIS states that project may impact 77.22 ha of potential habitat, however Table 8.16 states that no habitat critical to the survival of the species has been identified (under the approach used for this assessment) and that there will be no significant impact to the species. The Conservation Advice for *Macrozamia machinii* states that there are eight known populations of *M. plurinervia* occurring near Inglewood, in the Darling Downs district of south-eastern Queensland. the Conservation Advice does not define important population, therefore all habitat must be considered. It is noted that the survey efforts did not identify any records. Where survey results have been used to determine absence/presence of a species, detailed survey efforts must be included to enable the review of the adequacy of those survey efforts. • Table 2.1 concluded some species unlikely to occur however does not include evidence/justification for this conclusion. For example, Table 2.1 states that *Macrozamia conferta* is unlikely to occur, only known from very restricted small populations located outside the range of the project. The Conservation Advice for

	o for the reintroduction of populations or recovery of the species or ecological community. As such, the department considers that there may be instances where the total habitat areas for protected matters may be greater than what is estimated in Table 4.4. Nonetheless, for the purposes of assessment under the EPBC Act, the 'total habitat areas' (where it met Commonwealth definition) presented in the draft EIS will be used as part of the department's assessment of impacts on protected matters until detailed on-ground surveys have been undertaken to confirm the presence or absence of species and communities against Commonwealth guidelines. Such habitat may be, but is not limited to, habitat identified in a recovery plan for the species or ecological community. • And as previously advised, the Queensland Regional Ecosystems can be used to inform what is considered potential habitat however the extent of habitat present must be determined against relevant Commonwealth definitions (please see department's previous comments attached for examples).	*Macrozamia conferta* states that this species occurs within the Condamine (Queensland) Natural Resource Management region. Please provide more information whether the project site is located within the Condamine (Queensland) Natural Resource Management region. The Conservation Advice further identifies three known population, where is the project footprint in relation to these known population. The Conservation Advice further states that distribution of this species overlaps with the "White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland" EPBC Act-listed threatened ecological community. Where the draft EIS concluded that a species is unlikely to occur evidence/justifications must be included in the draft EIS to support this conclusion. The draft EIS notes that this TEC is present within the impact assessment area. Please review and update the draft EIS accordingly. • Table 4.4 included habitat within the project footprint for several species that has not been considered as significantly impacted. For example, Grey-headed Flying-fox, Greater Glider, Tara Wattle, Grey Falcon (please see department's previous comments on some of these species). The department notes that Recovery Plan for Grey-headed Flying-fox came into effect on 19 March 2021 the draft EIS needs to update to address the recovery plan for the species.
Vulnerable flora species	• Section 8.2.2 states that an initial assessment was undertaken to determine whether an 'important population' is present in the impact assessment area.	• Please ensure that conclusions made about the presence/absence of 'important populations' are

	Where an 'important population' is considered not to be present an assessment against the against the Significant impact guidelines was not undertaken. • The department acknowledges that the significant impact criteria for vulnerable species in the *EPBC* Act *Significant Impact Guidelines 1.1* includes a number of criteria that refer to 'important populations'. An 'important population' for vulnerable species is defined as a population that is necessary for a species' long-term survival and recovery, which may include populations identified as such in recovery plans. • However, the department notes that only three out of the nine significant impact criteria for a vulnerable species refers to impacts on 'important populations'.	supported by evidence, best available scientific literature and/or survey data. • For all vulnerable species that may, or are likely to occur, within or adjacent the action area, please ensure that the draft EIS includes an assessment for these species. • Whilst the department notes there may reasonable justification that some species are unlikely to be impacted by the proposed action. However, in the absence of on-ground survey data or sufficient information to demonstrate absence, the Department considers that, for the purposes of assessment under the EPBC Act, it is appropriate assume that those listed species are present and may be impacted.
Significant impact assessment	• The MNES chapter had concluded that significant impacts are unlikely on a number of species. This assessment was undertaken against the Significant Impact Guidelines, however there is not enough justification or evidence that supports the conclusion (please refer to Department's previous examples in attached comments). • In the absence of on-ground survey data to confirm whether the species is present within the project footprint and the extent of habitat available, the department considers that a precautionary approach should be taken in assessing potential impacts. • Please note that residual significant impacts are the residual impacts following avoidance and mitigation	• As noted above, the total habitat areas will be considered as the area of potential habitat (where it met Commonwealth definition) to be impacted in the absence of detailed on-ground surveys. Therefore, Table 1.1 may not be an accurate reflection of the residual significant impacts on species. • The department further notes that Table 1.1 considered significant residual impact on potential habitat for some species and considered only habitat critical for some species. As mentioned above, habitat critical has not been defined in accordance with the statutory documents in many cases therefore, there is a potential that the draft EIS has underestimated the impact on habitat present within the project footprint.

	measures. For example, if significant impacts are likely on 200 ha of habitat but impact on 50 ha is avoided through avoidance and mitigation, the residual significant impact is 150 ha.	
Permanent impact	• The draft EIS defines permanent impact that will last in excess of 21 years.	• Please note that any potential listed threatened species and/or ecological communities that may occur and are potentially impacted in the project area must be considered in the draft EIS regardless of the duration. The department strongly recommends removing this definition from the draft EIS.
Offset strategy	• The department notes that the offsets Strategy in the draft EIS refers to the residual significant impact summary for protected matters (Table 2 Potential MNES values impacted within Brigalow Belt and South East Queensland Bioregions). • Please note that the assessment of impacts will be undertaken against relevant Commonwealth guidelines and definitions. Residual significant impacts as a result of this assessment may differ from the conclusions reached by ARTC in the report, and therefore offset requirements may be less or greater than what is predicted in the report.	• Please update the offsets strategy to address department's comments.

Department of Agriculture Water and the Environment advice on the Inland Rail Border to Gowrie draft MNES Technical Report, provided 27 May 2020

Project Description

Australian Rail Track Corporation (ARTC) proposes to construct and operate the Border to Gowrie section of Inland Rail. The project MNES study area covers approximately 43,560.56 ha of land. Of this, 3203.78 ha is considered the project disturbance footprint. The Project requires establishment of approximately 145 km of new rail corridor (greenfield) and utilisation of approximately 71.2 km of existing rail corridor (brownfield). Key features of the project includes, but not limited to:

- Approximately 216.2 km of new single track railway, consisting of 7.0 km of standard gauge rail (1,435 mm), 209.2 km of dual gauge rail (standard (1,435 mm) and narrow (1,067 mm) gauge). Railway infrastructure and the corridor will initially be constructed for 1,800 m long trains, and future- proofed for operation of 3,600 m trains.
- Bridges to accommodate topographical variation, crossings of waterways or other infrastructure, including a total of 34 bridges, including 11 rail-over-road, 20 rail-over-watercourse and 3 road-over-rail.
- Five crossing loops will be constructed as part of the Project, at a minimum of 2,200 m in length for each loop.
- Cross-drainage is provided by reinforced concrete pipe culverts and reinforced concrete-box culverts.
- The construction of associated railway infrastructure and ancillary works, including works to level crossings, signalling and communications, signage and fencing, drainage works, and installation or modification of services and utilities within the rail corridor.

The proposed action is located within the Condamine River catchment and the conceptual alignment crosses 16 major waterways, 69 minor waterways and their associated floodplains. This includes the Macintyre River, Condamine River, Cattle Creek, Westbrook Creek and Dry Creek.

Department comments

On 27 May 2020, the Queensland Office of the Coordinator-General (OCG) requested Department of Agriculture, Water and the Environment (the Department) to provide comments on the MNES Technical report (MNES report) for Inland rail Border to Gowrie project (EPBC 2018/8165). Based on the Department's review of the revised B2G MNES report, there are several key outstanding issues that will need to be resolved prior to publication of the draft EIS and to inform the Department's recommendation on whether to approve the project. These include:

- Some areas of vegetation have been excluded as potential habitat for protected matters without survey data or other information to support this position. Therefore, there is a risk that the extent of habitat for and impacts on MNES have been underestimated. This may affect the quantum of offset required for any residual significant impact.

  The Department considers that in the absence of detailed on-ground survey data and for the purposes of assessment under the EPBC Act, the assessment should take a precautionary approach to identifying potential habitat for protected matters. Therefore, the Department prefers that the assessment assumes that listed species (or their habitat) and ecological communities are present within the action site until surveys are undertaken to confirm or rule out relevant habitats.

- The MNES Technical Chapter provides a summary of potential impacts on matters of national environmental significance that may arise during construction and operation of the action. These are summarised under Table 5.2 and 5.3 of the MNES Technical Chapter and includes (but are not limited to) habitat loss and degradation from vegetation/removal, fauna species injury or mortality, reduction in the connectivity, and impacts related to air quality, surface water and hydrology, groundwater, and noise and vibration.

  In making conclusions on whether or not impacts are expected during construction, commissioning or operation, Table 5.3 refers to other chapters/strategies of the draft EIS (e.g. Surface water and hydrology, flood modelling, fauna fencing strategy). These chapters however were provided to the Department for review in conjunction with the draft MNES Technical Report and therefore, the Department cannot verify whether conclusions made are justified. Please note that the Terms of Reference requires that the MNES section of the EIS bring together assessments of impacts from other chapters and produce a stand-along assessment in a format suited for assessment under the EPBC Act.

  It is therefore the Department's preference that all relevant information is provided or at a minimum is summarised in the MNES chapter to avoid the need to refer to other chapters or reports. Ultimately, the chapter should be written so that any conclusions are substantiated and can be reached independently.

- The Department notes that the project crosses the Condamine River Floodplain which provides habitat for several listed threatened species and communities. The MNES Chapter identifies which MNES may use the Condamine River Floodplain as potential habitat, however it does not provide an assessment or summary of what potential impacts may occur to the Condamine River Floodplain (e.g. hydrological impacts). The Department considers that MNES Chapter should include further details on what impacts may arise during construction, commissioning, and operation on the Condamine River Floodplain. As stated above, this information may be available in other chapters of the draft EIS which could be summarised into the MNES Chapter for context.

- The Department notes that several mitigation and management measures have been proposed at a higher level to minimise impacts on listed threatened species and communities. The Terms of Reference states that the draft EIS should describe any mitigation measures proposed to reduce impacts and supporting evidence should be provided to demonstrate the appropriateness of mitigation measures proposed. Where the likely success of mitigation measures cannot be supported by evidence, identify contingencies in the event the mitigation is not successful. The Department considers that the MNES

Technical Chapter requires further information on the predicted effectiveness of each proposed avoidance or mitigation measure, noting that the effectiveness of a measure reflects confidence in the ability of the measure to reduce the risk of a threat.

- ARTC has requested that the Offset Strategy be approved after the commencement of the action. However, the EPBC Environmental Offset Policy 2012 states that offsets should be implemented either before, or at the same point in time as, the impact arising from the action.

  The Department is in-principle supportive of ARTC's intention to secure larger and more strategic environmental offset sites for the Queensland Inland Rail projects. However, in accordance with the EPBC Environmental Offsets Policy, the Department considers that the Offset Strategy should be finalised and approved by the Minister prior to the commencement of the action. The Department further notes that the Terms of Reference states that the draft EIS should describe any offsets proposed to compensate for residual impacts and that the offsets proposed must be consistent with the EPBC Offsets Policy.

Please note that this is not a review of the merit or the acceptability of the proposed action. The Department has reviewed the issues relevant to matters protected under the EPBC Act only.

Issues	**Department's comments**	**Further actions required <u>prior to publication</u>**
Methodology of assessment	• The MNES report states that the maximum potential area of disturbance was determined for each MNES species using the predictive habitat modelling (i.e. the total extent of habitat to be cleared irrespective of habitat type and quality). Section 3.1 mentions that quality of habitat or the carrying capacity of the habitat may be used to determine whether a significant impact is likely when assessed against the MNES Guidelines. The Department notes the location of terrestrial and aquatic survey sites was dictated by land access agreements with landholders which was provided on a voluntary basis, and that this has significantly reduced the areas that were accessible to ecological investigation. • Without detailed on ground surveys of the entire disturbance footprint, it is difficult to determine habitat type and quality accurately. As a result, the significance of impacts on MNES may be underestimated.	• The Department considers that in the absence of detailed on-ground survey data of the whole study area and for the purposes of assessment under the EPBC Act, the assessment should take a precautionary approach to identifying all potential habitat for protected matters. Therefore, the Department recommends that the assessment assumes that listed species (or their habitat) and ecological communities are present within the action site until surveys are undertaken to confirm or rule out relevant habitats.
Field assessments and survey effort	• Section 3.3 notes that the location of terrestrial and aquatic survey sites was dictated by land access agreements with landholders and this has significantly reduced the areas that were accessible to ecological investigations. • Figure 3.2a-d identifies the locations of previous surveys; however the Department notes that many of these survey locations are outside the study area. • The MNES chapter refers to previous assessment and reports associated with ecological values of the project (Table 3.2) that were used to supplement gaps identified from database searches for MNES matters. The MNES chapter does not include these ecological reports.	• Please clarify how survey results within the study area were derived, given many of the survey locations were outside the study area. • Please provide previous reports that were used to develop the predictive habitat modelling.
Description of environmental values and habitat categories	• A total of 32 conservation significant flora species and 33 conservation significant fauna species listed under the provisions of the EPBC Act and/or NC Act were identified as occurring or potentially occurring within the Impact assessment area. • The Department notes that section 4.3.3 of the MNES report states that the project footprint encompasses a total of 3,203.78 ha. Under current Queensland Government (DNRME) vegetation mapping this includes 563.24 ha of remnant vegetation and 34.64 ha of high-value regrowth vegetation (HVR) The remaining 2,605.9 ha (81.3% of the Project footprint) has been largely heavily modified (clearing for agriculture/cattle grazing) and is considered by the proponent as very unlikely to provide habitat for most MNES fauna.	• Please ensure that habitat definitions are based on EPBC Guidelines and take account of all relevant REs and other available information (e.g. Queensland Government's *Spatial modelling for koalas in South East Queensland*.) • Noting that 2,605.9 ha is 81.3% of the project disturbance footprint, please provide further details of what habitat features are present within this area of land and why it is not considered to provide any habitat for MNES. Assessment of this area should take in account, as a minimum, its potential for movement opportunities, availability of scattered trees and shrubs, and distances between patches of vegetation. • In the absence of on-ground survey data and for the purposes of assessment under the EPBC Act, the Department considers that the assessment should take a precautionary approach to mapping native vegetation and habitat, which assumes that listed species (or their habitat) and ecological communities are present within the action site.

	• The Department further notes that the habitat in the predictive threatened species habitat model was categorised as 'unlikely habitat', 'potential habitat', 'important habitat' and 'habitat critical to the survival of the species'. o Section 3.2.4.3 states that the '*potential habitat for many species may include most of the mature vegetation communities of the specific bioregion, the potential habitat category restricts the habitat to a more limited and realistic set of environmental parameters which are also supported by literature and field-based observation*'. • Based on the information in the MNES Technical Report and the above, it is unclear whether 'potential habitat' for MNES has only considered remnant and HVR vegetation. For example, table 4.5 shows there are 489.11 ha of habitat, which includes various types of eucalypt woodland and communities (160.42 ha of Mature eucalypt open forest and woodland; 13.2 ha of mature eucalypt riparian woodland; 287.96 ha of Mature mixed eucalypt/non eucalypt woodland and 27.53 of regrowth eucalypt communities, however, potential habitat for Koala has been shown as 351.28 ha. The '*EPBC Act Referral Guidelines for the vulnerable koala*' define Koala habitat as "any forest or woodland containing species that are known koala food trees, or shrubland with emergent food trees. This can include remnant and non- remnant vegetation in natural, agricultural, urban and peri-urban environments. Koala habitat is defined by the vegetation community present and the vegetation structure; koalas do not necessarily have to be present". The Department notes that habitat for listed threatened species must be defined in accordance with relevant EPBC Guidelines and definitions. For example, in accordance with the Koala Referral Guidelines, habitat within the inland context includes: o Woodlands and forests (where Koala food trees have reliable access to soil moisture) o Box gum or red gum woodlands on heavier soils in remnant or regrowth vegetation patches particularly riparian zones o Small, patchy and sparsely distributed woodlands, shrublands and forest in highly modified, agriculture-grazing landscapes or in and around rural towns. Therefore, the Department considers that all 'potential habitat' for Koala may not have been included in the MNES Chapter. Further, Queensland Government's *Spatial modelling for koalas in South East Queensland* (Spatial modelling) ranks all regional ecosystems based on their suitability as Koala habitat. Several REs that have been identified in the Queensland Spatial Modelling as Koala habitat have been excluded from the definition of 'potential habitat'. • The Department also notes that 'potential habitat' has been identified for several species based on category of vegetation (such as remnant) and does not include all the potential habitat defined by EPBC guidelines. For example, the MNES Chapter identifies only category B regulated vegetation within relevant REs are considered to be potential habitat for Squatter pigeon when it occurs within 3 km of a Stream Order 3 or greater Watercourse, or within 3 km of a Lacustrine Wetland or Water body.	*Please note that in accordance with the draft Guide to nationally protected species significantly impacted by paddock tree removal[1], paddock/scattered trees can provide habitat for a wide range of species including birds, mammals, reptiles, frogs and insects. They can act as steppingstones for animals between patches of native vegetation and provide food in the form of nectar, foliage, and insects. In some situations, they may also provide important breeding, foraging, or connecting habitat for nationally protected species.*

[1] Draft Guide to nationally protected species significantly impacted by paddock tree removal can be found at https://www.environment.gov.au/biodiversity/threatened/publications/draft-guide-protected-species-impacted-paddock-tree-removal

	SPRAT defines Squatter Pigeon (southern) habitat however as open-forests to sparse, open-woodlands and scrub that are: o mostly dominated in the overstorey by Eucalyptus, Corymbia, Acacia or Callitris species o remnant, regrowth or partly modified vegetation communities, and o within 3 km of water bodies or courses. The Department also notes that draft EIS previously predicted 978.92 ha of habitat for the squatter pigeon within the project footprint, the current MNES report identified 134.22 Ha of potential habitat.	
Mapping of threatened ecological communities	• Section 3.2.5 stated that TECs and the analogous regional ecosystems (both remnant and high value regrowth) were used to map each of the TECs as stipulated by information provided by the DAWE's SPRAT database and Approved Conservation Advice. It is unclear whether the key diagnostic characteristics and condition thresholds in the SPRAT and conservation advice for respective TECs were considered in identifying all TECs present within the project disturbance footprint.	• Please clarify whether key diagnostic characteristics and condition thresholds in the SPRAT and conservation advice for respective TECs were considered to identify all TECs present within the project disturbance footprint?
Potential impacts	• The MNES Technical Chapter provides a summary of potential impacts on matters of national environmental significance that may arise during construction and operation of the action. These are summarised under Table 5.2 and 5.3 of the MNES Technical Chapter and includes (but are not limited to) habitat loss and degradation from vegetation/removal, fauna species injury or mortality, reduction in the connectivity, and impacts related to air quality, surface water and hydrology, groundwater, and noise and vibration. In making conclusions on whether or not impacts are expected during construction, commissioning or operation, Table 5.3 refers to other chapters/strategies of the draft EIS (e.g. Surface water and hydrology, flood modelling, fauna fencing strategy). These chapters however were not provided to the Department for review in conjunction with the draft MNES Technical Report and therefore, the Department cannot verify whether conclusions made are justified. It is the Department's preference that all relevant information is provided or at a minimum is summarised in the MNES chapter to avoid the need to refer to other chapters or reports. Ultimately, the chapter should be written so that any conclusions are substantiated and can be reached independently. • The Department notes that the project crosses the Condamine River Floodplain which provides habitat for several listed threatened species and communities. As such, the Department considers further information is needed to justify conclusions reached on whether or not the proposed action will result in surface water and hydrology, and groundwater impacts on the Condamine River Floodplain.	• Please note that the Terms of Reference requires that the MNES section of the EIS bring together assessments of impacts from other chapters and produce a stand-along assessment in a format suited for assessment under the EPBC Act. Therefore, please ensure that the MNES Technical Report includes sufficient information (e.g. summary of the groundwater assessment chapter) to support conclusions reached in the MNES Chapter and to avoid the need to refer to other chapters or reports. • Please provide further details on the potential hydrological impacts (including (but not limited to) surface and groundwater impacts) on the Condamine River floodplains that may occur during construction, commissioning, and/or operation. on the Condamine River Floodplain. This information may already be available in other chapters of the draft EIS and could summarised into the MNES Chapter.
Avoidance and mitigation measures	• The Department notes that the proponent proposes to implement several avoidance and mitigation measures to minimise risk of injury or mortality to protected matters during construction and operation. • The MNES report refers to a fauna fencing strategy has been prepared, however the strategy has not been included.	• Please provide a copy of all documents that are referenced in the MNES Chapter, otherwise provide a summary of the purposes of the document and mitigation/management measures proposed. • Please provide an assessment of the predicted effectiveness of each proposed avoidance or mitigation measure, noting that the effectiveness of a particular measure is a reflection of confidence in the ability of the measure to reduce the risk of a threat. The assessment of effectiveness should be evidence based and include examples of

		the demonstrated success of a particular measure to achieve the desired avoidance/mitigation outcome.
Impact on Greater glider habitat	• Section 8.2.2 states that the impact is only applicable if the population is important. This section also contains an initial assessment to determine whether an 'important population' is present in the MNES study area. Where an 'important population' is considered not to be present an assessment against the EPBC Significant Impact Guidelines 1.1 was not undertaken. • The Department notes that the MNES report considered potential impact on vulnerable species in general. However, Table 8.28 states that there will be no significant impact on Greater glider as the species has not been recorded during Project-associated surveys and there are no database records (Atlas of Living Australia) within the MNES study area. It is noted that the predictive habitat mapping indicates there is 141.23 ha of potential habitat within the Project footprint for the species and there were no targeted surveys undertaken for Greater glider. Without on ground surveys, the Department considers that there may be significant impact on Greater glider.	• As commented above, in the absence of on-ground survey data and targeted surveys for the purposes of assessment under the EPBC Act, the Department considers that the assessment should take a precautionary approach to mapping native vegetation and habitat, and assume that listed species (or their habitat) are present within the action site.
Biodiversity offsets for significant adverse residual impacts	• The Department notes that residual significant impacts are predicted for the following protected matters: o Brigalow TEC o Weeping Myall Woodlands TEC o Poplar Box Grassy Woodland on Alluvial Plains TEC o King bluegrass o Winged peppercress o *Macrozamia machinii* o *Xerothamnella herbacea* o Shiny-leaved ironbark o Belson's panic o Austral cornflower o Spotted-tail quoll (mainland) o Condamine earless dragon o Collared delma o Yakka skink o Dunmall's snake o Squatter pigeon - southern subspecies o South-eastern long-eared bat o Koala • ARTC proposes to identify and secure offsets following the detailed design phase. The proposed Offset Strategy states that the draft Environmental Offset Delivery Plan (EODP) will be submitted post detailed design and prior to commencement of construction. However, it seeks that approval be given to the Offset Strategy and Offset Management Plan 12 months after the commencement of the action.	Offset delivery The EPBC Environmental Offset Policy states that offsets should be implemented either before, or at the same point in time as, the impact arising from the action. Accordingly, should the proposed action be approved, the Department is likely to require that the Offset Strategy for this segment of the project is approved prior to the commencement of the action (for this segment) to align with the EPBC Environmental Offsets Policy. The Offset Area Management Plan(s) is also likely to be required to be approved before the action can commence. Further, whilst in some circumstances offsets do not need to be legally secured before commencement of the action (e.g. it can be legally secured within 12 months of approval), the conditions of any approval are likely to require that at a minimum, management measures have commenced before/at the same time as the commencement of construction. This would align with the approval of the Management Plan. The Department welcomes further discussion on this matter. For further details on what information is expected to be provided on the Offset Strategy, please refer to Department's comments on the proposed offset for the Calvert to Kagaru Inland Rail project (EPBC 2017/7944) provided on 24 October 2019, Helidon to Calvert Inland Rail project (EPBC 2017/7883) provided on 28 November 2019, and the draft Offset Strategy for all sections provided on 4 March 2020.

Department of Agriculture Water and the Environment advice on the
Inland Rail Border to Gowrie draft MNES Technical Report, provided 2 October 2020

Summary Department comments

On 2 October 2020, the Queensland Office of the Coordinator-General (OCG) requested the Department of Agriculture, Water and the Environment (the Department) to provide comments on the revised MNES Technical report for the Border to Gowrie Inland Rail project (EPBC 2018/8165). The Department considers the majority of previous comments have been addressed, however the Department considers there are several outstanding issues for OCG's consideration, of which are noted below.

Please note that this is not a review of the merit or the acceptability of the proposed action. The Department has reviewed the issues relevant to matters protected under the EPBC Act only.

Issues	Notes	Comments
Potential habitat	• Following previous comments, the Department notes that several amendments and further information has been provided in the MNES Technical Report relating to potential habitat for protected matters. • The Department notes that section 3.2.4.3 and 3.2.4.5 of the report state the following: o Potential habitat – areas or locations used by transient individuals or where species may have been recorded but where there is insufficient information of assess the area as important habitat or habitat critical to the survival of the species. o Habitat critical to the survival of the species – in line with DAWE's guidelines, habitat critical to the survival of the species represents habitat with the greatest value for relevant MNES species. This habitat category identifies areas that align with habitat critical to the survival of a listed threatened species as identified in an approve Recovery Plan for the species. However, in instances where there are no recovery plans for a specific species, and in line with the precautionary approach, the presence of a specimen backed record. For several species, habitat critical has been defined as All areas occupied by the species - Any specimen backed records (buffered to a 1 km radius) that fall within areas mapped as potential habitat (refer previous column) constitute Habitat critical to the survival of the species (excluding areas that fall outside of identified vegetation communities). • Table 4.4 of the report includes a summary of predicted habitat areas within the project footprint including the total habitat, potential habitat, important habitat, and habitat critical to the survival of the species. The Department understands that the 'total habitat area' is a combination of potential and important habitat, and habitat critical to the survival of the species. The Department further notes: o In some instance's areas of habitat critical to the survival of the species is considered lower than the total habitat area, based on the above definitions. o Habitat areas are an estimation of habitat accounting for MNES movement patterns and the presence of Queensland Regional Ecosystems. Estimates are considered to represent the upper limit of available habitat within the impact assessment area. • Table 5.1 of Appendix A Predictive habitat modelling methodology includes species habitat assumptions, some of which do not meet relevant Commonwealth definitions (please refer to Department's previous comments for example and the table below).	• The Department notes that 'potential habitat' has been defined on the basis of the presence of individuals or species records. However, the Department notes that potential habitat should also consider the availability of suitable habitat (not only the presence of species) for foraging, breeding, dispersal etc activities by species. • Furthermore, in accordance with the EPBC Significant Impact Guidelines, habitat critical to the survival of the species refers to areas that are necessary: o for activities such as foraging, breeding, roosting, or dispersal o for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators) o to maintain genetic diversity and long-term evolutionary development, or o for the reintroduction of populations or recovery of the species or ecological community. Such habitat may be, but is not limited to, habitat identified in a recovery plan for the species or ecological community. And as previously advised, the Queensland Regional Ecosystems can be used to inform what is considered potential habitat however the extent of habitat present must be determined against relevant Commonwealth definitions (please see examples below). • As such, the Department considers that there may be instances where the total habitat areas for protected may be greater than what is estimated in Table 4.4. Nonetheless, for the purposes of assessment under the EPBC Act, the 'total habitat areas' (where it met Commonwealth definition) presented in Table 4.4 will be considered as the minimum area of potential habitat to be impacted until detailed on-ground surveys have been undertaken to confirm the presence or absence of species and communities against Commonwealth guidelines.
Residual significant impact	• Section 3.2.4.3 of the MNES Technical Report states that 'impacts to potential habitat (where no habitat critical to the survival of the species occurs) are generally not considered to contribute towards significant residual impacts to an MNES. • The Department further notes that Table 9.1 (significant residual impacts) of the report has excluded the total value of habitat (inclusive of potential, important, and critical to the survival of the species) and now only includes the critical and important habitat for several species.	• As noted above, the total habitat areas will be considered as the minimum area of potential habitat to be impacted in the absence of detailed on-ground surveys. Therefore Table 9.1 may not be an accurate reflection of the residual significant impacts on species. • Please note that residual significant impacts are the residual impacts following avoidance and mitigation measures. For example, if significant impacts are likely on 200 ha of habitat however 50 ha is avoided. The residual significant impact is 150 ha.
Condamine Floodplain	• The Department notes that Section 5.2.1.15 of the report includes a summary of impacts from flooding and refers to an Appendix Q: Hydrology and Flooding technical Report. In making conclusions on whether or not impacts are expected during construction, commissioning or operation, Table 5.3 refers to other chapters/strategies of the draft EIS (e.g. Surface water and hydrology,	• Grateful if the Department could receive a copy of the surface water and hydrology flood modelling strategies to be able to make an informed conclusion on the adequacy of the information provided in the report.

	flood modelling, fauna fencing strategy). These chapters however were not provided to the Department for review in conjunction with the draft MNES Technical Report and therefore, the Department cannot verify whether conclusions made are justified. Please note that the Terms of Reference requires that the MNES section of the EIS bring together assessments of impacts from other chapters and produce a stand-along assessment in a format suited for assessment under the EPBC Act.	
Offset Strategy	• The Department notes that the Offset Strategy refers to the residual significant impact summary for protected matters (Table 2 Potential MNES values impacted within Brigalow Belt and South East Queensland Bioregions).	• The Department notes that Table 2 has excluded some of the species, such as *Xerothamnella herbacea*, Shiny-leaved ironbark (*Eucalyptus virens*), *Macrozamia machinii*, Squatter pigeon and the South-eastern long-eared bat (*Nyctophilus corbeni*). The Department further notes that there could be significant residual impact on additional species (refer to Department's comment on potential habitat and residual significant impact above). • Please note that the Department will undertake an assessment of impacts against relevant Commonwealth guidelines and definitions. Residual significant impacts as a result of this assessment may differ to the conclusions reached by ARTC in the report, and therefore offset requirements may be less or greater than what is predicted in the report.

Table 4.4 Predicted habitat for threatened (EPBC Act) flora and fauna species within the impact assessment area and Project footprint

Common name	Species name	EPBC Act status[1]	Predicted habitat within the impact assessment area (ha)[2] (43,560.56 ha)				Predicted habitat within the Project footprint (ha)[2] (3,203.78 ha)[3]				Department comments (23 October 2020)
			Total Habitat	Potential habitat	Important habitat	Habitat critical to the survival of the species	Total Habitat	Potential habitat	Important habitat	Habitat critical to the survival of the species	The Department notes that the 'Total habitat' areas are a combination of potential and important habitat, and habitat critical to the survival of the species. However, Table 4.44 does not clearly illustrate this. The Department recommends moving the 'total habitat' columns to the right of potential and important habitat, and habitat critical to the survival of the species, so that it is clear that is represents a total of the three components.
Tara wattle	*Acacia lauta*	V	5,510.32	5,510.32	N/A	0.00	295.85	295.85	N/A	0.00	The Department notes that approximately 295.85 ha of habitat is estimated to be present within the project footprint. This is based on habitat requirements presented in Table 5.1 of Appendix A Predictive habitat modelling methodology. However, the report states that there is unlikely to be habitat critical to the survival of the species present as it was not identified during surveys or historic records. As noted above, habitat critical to the survival of the species is not only based on the presence of the species. It is based on the suitability of habitat for the abovementioned reasons. The presence of species informs the assessment of impacts and whether significant impacts are likely. Therefore, the total habitat area identified could constitute habitat critical to the survival of the species if it meets the definition in the EPBC Significant Impact Guidelines.
Greater glider	*Petauroides volans volans*	V	2,680.33	2,680.33	N/A	0.00	198.42	198.42	N/A	0.00	The Department notes that 198.42 ha of habitat is estimated to be present for the Greater Glider within the project footprint, however no habitat critical is considered present. As per Department's previous comments, the Department notes that no targeted surveys (such as hollow-bearing surveys or spotlighting surveys) were undertaken for the Greater Glider to confirm whether or not the species is present within the disturbance footprint. As such, the Department will take a precautionary approach with identifying potential impacts on the Greater Glider in its assessments.
Koala	*Phascolarctos cinereus*	V	8,091.41	179.95	N/A	7,911.46	493.06	11.91	N/A	481.15	The Department notes that approximately 493.06 ha of habitat is estimated to occur within the project footprint. This is based on the following definition: "The species has broad habitat preferences that may encompass remnant and non-remnant habitat where suitable eucalypts occur. The following mapped vegetation communities (REs - both remnant and HVR) and unmapped riparian conduits (often featuring large eucalypts) are considered to constitute potential habitat as they have been identified as eucalypt forest and woodland that may contain Koala food trees". Koala habitat is defined as *any* ***forest*** *or* ***woodland*** *(including remnant, regrowth and modified vegetation communities) containing species that are Koala food trees or any shrubland with emergent Koala food trees*.

											The Koala Referral Guidelines further state that Koala habitat, in inland areas, include: • woodlands and forests (where Koala food trees have reliable access to soil moisture) • box gum or red gum woodlands on heavier soils in remnant or regrowth vegetation patches particularly riparian zones • small, patchy and sparsely distributed woodlands, shrublands and forest in highly modified, agricultural-grazing landscapes or in and around rural towns. The current definition as provided in the report does not fully align with the definition provided in the EPBC Koala Referral Guidelines, as it does not recognise small, patchy and sparsely distributed areas.
Grey-headed flying-fox	*Pteropus poliocephalus*	V	1,044.45	964.73	N/A	79.72	110.48	110.38	N/A	0.10	The Department notes that 110.48 ha of habitat is estimated to be present for the GHFF within the project footprint, however only 0.10 ha is considered habitat critical to the species. The Department notes that the GHFF SPRAT profile states that winter and spring key foraging species constitute habitat critical to the survival of the species. The Department notes that Table 5.1 of Appendix A Predictive habitat modelling methodology defines Habitat critical to the survival of the species as follows: For the purpose of this assessment critical habitat is considered to include: 100 m buffer surrounding the camps mature vegetation within 15 km from a flying fox camp known to regularly support the species: - Toowoomba, Spring Street (-27.601, 151.943) - Highfields, Jackson Close (-27.4605, 151.9283). This definition does not meet the SPRAT definition as stated above. The Department further notes however that key habitat for Koalas are generally analogous with GHFF requirements, and therefore the extent of habitat may be similar to the Koala.

Please note that these species have been used as examples to represent all MNES that may be potentially impacted by the proposal. Therefore, please ensure that an impact assessment has been undertaken for all relevant species and ecological communities against Commonwealth guidelines.

Department of Agriculture Water and the Environment advice on the
Inland Rail Border to Gowrie draft MNES Technical Report, provided 2 October 2020

Summary Department comments

On 2 October 2020, the Queensland Office of the Coordinator-General (OCG) requested the Department of Agriculture, Water and the Environment (the Department) to provide comments on the revised MNES Technical report for the Border to Gowrie Inland Rail project (EPBC 2018/8165). The Department considers the majority of previous comments have been addressed, however the Department considers there are several outstanding issues for OCG's consideration, of which are noted below.

Please note that this is not a review of the merit or the acceptability of the proposed action. The Department has reviewed the issues relevant to matters protected under the EPBC Act only.

Issues	Notes	Comments
Potential habitat	• Following previous comments, the Department notes that several amendments and further information has been provided in the MNES Technical Report relating to potential habitat for protected matters. • The Department notes that section 3.2.4.3 and 3.2.4.5 of the report state the following: o Potential habitat – areas or locations used by transient individuals or where species may have been recorded but where there is insufficient information of assess the area as important habitat or habitat critical to the survival of the species. o Habitat critical to the survival of the species – in line with DAWE's guidelines, habitat critical to the survival of the species represents habitat with the greatest value for relevant MNES species. This habitat category identifies areas that align with habitat critical to the survival of a listed threatened species as identified in an approve Recovery Plan for the species. However, in instances where there are no recovery plans for a specific species, and in line with the precautionary approach, the presence of a specimen backed record. For several species, habitat critical has been defined as All areas occupied by the species - Any specimen backed records (buffered to a 1 km radius) that fall within areas mapped as potential habitat (refer previous column) constitute Habitat critical to the survival of the species (excluding areas that fall outside of identified vegetation communities). • Table 4.4 of the report includes a summary of predicted habitat areas within the project footprint including the total habitat, potential habitat, important habitat, and habitat critical to the survival of the species. The Department understands that the 'total habitat area' is a combination of potential and important habitat, and habitat critical to the survival of the species. The Department further notes: o In some instance's areas of habitat critical to the survival of the species is considered lower than the total habitat area, based on the above definitions. o Habitat areas are an estimation of habitat accounting for MNES movement patterns and the presence of Queensland Regional Ecosystems. Estimates are considered to represent the upper limit of available habitat within the impact assessment area. • Table 5.1 of Appendix A Predictive habitat modelling methodology includes species habitat assumptions, some of which do not meet relevant Commonwealth definitions (please refer to Department's previous comments for example and the table below).	• The Department notes that 'potential habitat' has been defined on the basis of the presence of individuals or species records. However, the Department notes that potential habitat should also consider the availability of suitable habitat (not only the presence of species) for foraging, breeding, dispersal etc activities by species. • Furthermore, in accordance with the EPBC Significant Impact Guidelines, habitat critical to the survival of the species refers to areas that are necessary: o for activities such as foraging, breeding, roosting, or dispersal o for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators) o to maintain genetic diversity and long-term evolutionary development, or o for the reintroduction of populations or recovery of the species or ecological community. Such habitat may be, but is not limited to, habitat identified in a recovery plan for the species or ecological community. And as previously advised, the Queensland Regional Ecosystems can be used to inform what is considered potential habitat however the extent of habitat present must be determined against relevant Commonwealth definitions (please see examples below). • As such, the Department considers that there may be instances where the total habitat areas for protected may be greater than what is estimated in Table 4.4. Nonetheless, for the purposes of assessment under the EPBC Act, the 'total habitat areas' (where it met Commonwealth definition) presented in Table 4.4 will be considered as the minimum area of potential habitat to be impacted until detailed on-ground surveys have been undertaken to confirm the presence or absence of species and communities against Commonwealth guidelines.
Residual significant impact	• Section 3.2.4.3 of the MNES Technical Report states that 'impacts to potential habitat (where no habitat critical to the survival of the species occurs) are generally not considered to contribute towards significant residual impacts to an MNES. • The Department further notes that Table 9.1 (significant residual impacts) of the report has excluded the total value of habitat (inclusive of potential, important, and critical to the survival of the species) and now only includes the critical and important habitat for several species.	• As noted above, the total habitat areas will be considered as the minimum area of potential habitat to be impacted in the absence of detailed on-ground surveys. Therefore Table 9.1 may not be an accurate reflection of the residual significant impacts on species. • Please note that residual significant impacts are the residual impacts following avoidance and mitigation measures. For example, if significant impacts are likely on 200 ha of habitat however 50 ha is avoided. The residual significant impact is 150 ha.
Condamine Floodplain	• The Department notes that Section 5.2.1.15 of the report includes a summary of impacts from flooding and refers to an Appendix Q: Hydrology and Flooding technical Report. In making conclusions on whether or not impacts are expected during construction, commissioning or operation, Table 5.3 refers to other chapters/strategies of the draft EIS (e.g. Surface water and hydrology,	• Grateful if the Department could receive a copy of the surface water and hydrology flood modelling strategies to be able to make an informed conclusion on the adequacy of the information provided in the report.

	flood modelling, fauna fencing strategy). These chapters however were not provided to the Department for review in conjunction with the draft MNES Technical Report and therefore, the Department cannot verify whether conclusions made are justified. Please note that the Terms of Reference requires that the MNES section of the EIS bring together assessments of impacts from other chapters and produce a stand-along assessment in a format suited for assessment under the EPBC Act.	
Offset Strategy	• The Department notes that the Offset Strategy refers to the residual significant impact summary for protected matters (Table 2 Potential MNES values impacted within Brigalow Belt and South East Queensland Bioregions).	• The Department notes that Table 2 has excluded some of the species, such as *Xerothamnella herbacea*, Shiny-leaved ironbark (*Eucalyptus virens*), *Macrozamia machinii*, Squatter pigeon and the South-eastern long-eared bat (*Nyctophilus corbeni*). The Department further notes that there could be significant residual impact on additional species (refer to Department's comment on potential habitat and residual significant impact above). • Please note that the Department will undertake an assessment of impacts against relevant Commonwealth guidelines and definitions. Residual significant impacts as a result of this assessment may differ to the conclusions reached by ARTC in the report, and therefore offset requirements may be less or greater than what is predicted in the report.

Table 4.4 Predicted habitat for threatened (EPBC Act) flora and fauna species within the impact assessment area and Project footprint

Common name	Species name	EPBC Act status[1]	Predicted habitat within the impact assessment area (ha)[2] (43,560.56 ha)				Predicted habitat within the Project footprint (ha)[2] (3,203.78 ha)[3]				Department comments (23 October 2020)
			Total Habitat	Potential habitat	Important habitat	Habitat critical to the survival of the species	Total Habitat	Potential habitat	Important habitat	Habitat critical to the survival of the species	The Department notes that the 'Total habitat' areas are a combination of potential and important habitat, and habitat critical to the survival of the species. However, Table 4.44 does not clearly illustrate this. The Department recommends moving the 'total habitat' columns to the right of potential and important habitat, and habitat critical to the survival of the species, so that it is clear that is represents a total of the three components.
Tara wattle	*Acacia lauta*	V	5,510.32	5,510.32	N/A	0.00	295.85	295.85	N/A	0.00	The Department notes that approximately 295.85 ha of habitat is estimated to be present within the project footprint. This is based on habitat requirements presented in Table 5.1 of Appendix A Predictive habitat modelling methodology. However, the report states that there is unlikely to be habitat critical to the survival of the species present as it was not identified during surveys or historic records. As noted above, habitat critical to the survival of the species is not only based on the presence of the species. It is based on the suitability of habitat for the abovementioned reasons. The presence of species informs the assessment of impacts and whether significant impacts are likely. Therefore, the total habitat area identified could constitute habitat critical to the survival of the species if it meets the definition in the EPBC Significant Impact Guidelines.
Greater glider	*Petauroides volans volans*	V	2,680.33	2,680.33	N/A	0.00	198.42	198.42	N/A	0.00	The Department notes that 198.42 ha of habitat is estimated to be present for the Greater Glider within the project footprint, however no habitat critical is considered present. As per Department's previous comments, the Department notes that no targeted surveys (such as hollow-bearing surveys or spotlighting surveys) were undertaken for the Greater Glider to confirm whether or not the species is present within the disturbance footprint. As such, the Department will take a precautionary approach with identifying potential impacts on the Greater Glider in its assessments.
Koala	*Phascolarctos cinereus*	V	8,091.41	179.95	N/A	7,911.46	493.06	11.91	N/A	481.15	The Department notes that approximately 493.06 ha of habitat is estimated to occur within the project footprint. This is based on the following definition: "The species has broad habitat preferences that may encompass remnant and non-remnant habitat where suitable eucalypts occur. The following mapped vegetation communities (REs - both remnant and HVR) and unmapped riparian conduits (often featuring large eucalypts) are considered to constitute potential habitat as they have been identified as eucalypt forest and woodland that may contain Koala food trees". Koala habitat is defined as *any* ***forest*** *or* ***woodland*** *(including remnant, regrowth and modified vegetation communities) containing species that are Koala food trees or any shrubland with emergent Koala food trees*.

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Grey-headed flying-fox	*Pteropus poliocephalus*	V	1,044.45	964.73	N/A	79.72	110.48	110.38	N/A	0.10	The Department notes that 110.48 ha of habitat is estimated to be present for the GHFF within the project footprint, however only 0.10 ha is considered habitat critical to the species. The Department notes that the GHFF SPRAT profile states that winter and spring key foraging species constitute habitat critical to the survival of the species. The Department notes that Table 5.1 of Appendix A Predictive habitat modelling methodology defines Habitat critical to the survival of the species as follows: For the purpose of this assessment critical habitat is considered to include: 100 m buffer surrounding the camps mature vegetation within 15 km from a flying fox camp known to regularly support the species: - Toowoomba, Spring Street (-27.601, 151.943) - Highfields, Jackson Close (-27.4605, 151.9283). This definition does not meet the SPRAT definition as stated above. The Department further notes however that key habitat for Koalas are generally analogous with GHFF requirements, and therefore the extent of habitat may be similar to the Koala.

Please note that these species have been used as examples to represent all MNES that may be potentially impacted by the proposal. Therefore, please ensure that an impact assessment has been undertaken for all relevant species and ecological communities against Commonwealth guidelines.

From: Irrelevant information deleted in accordance with section 73 of the RTI Act
Sent: Friday, 21 May 2021 2:39 PM
To: Inland Rail - B2G
Cc: Irrelevant information
Subject: QFES submission - Draft EIS for the Inland Rail - Border to Gowrie (B2G)
Attachments: Incomming Correspondence.pdf; QFES submission_Inland rail QLD Border to Gowrie (B2G) EIS.docx

Attention: EIS Project Manger

Draft Environment Impact (EIS) for the Inland Rail – Border to Gowrie (B2G) project

Thank you for the opportunity to provide feedback regarding the EIS, please find the Queensland Fire and Emergency Services submission attached.
Apologies for the delay in response.

Regards

Irrelevant information deleted in accord

Community Resilience and Risk Mitigation

Emergency Management and Community Capability
Queensland Fire and Emergency Services
Mail cluster 14.11
GPO Box 1425, BRISBANE QLD 4001
Irrelevant information deleted in accordanc

Queensland Government

Office of the
Coordinator-General

Our ref: DGBN20/974

25 JAN 2021

Irrelevant information de

Queensland Fire and Emergency Services
GPO Box 1425
BRISBANE QLD 4001

Email: Irrelevant information deleted in accordance v

Dear Irrelevant information deleted in accor

I write to request your agency's feedback on the draft environmental impact statement report (EIS) for the Inland Rail – Border to Gowrie (B2G) project. I am seeking feedback from your agency during the public notification period which will run until 5pm, Monday 19 April 2021.

On 16 March 2018, the project was declared a 'coordinated project' requiring the preparation of an EIS, pursuant to Part 4 of the *State Development and Public Works Organisation Act 1971*. The release of the draft EIS for agency and public comment is the next step in my evaluation of the project.

The proponent, Australian Rail Track Corporation Limited (ARTC), proposes to develop an inland freight railway between Melbourne and Brisbane. The B2G project is one of 13 sections of the 1,700 kilometre Inland Rail Program proposed by ARTC on behalf of the Australian Government. The proposed 216 kilometre single-track dual-gauge freight railway alignment from the Queensland Border to Gowrie includes 145 kilometres of new dual-gauge track and 71 kilometres of upgraded track, 34 bridges and five crossing loops.

The proponent estimates the project would require an investment of $1.4 billion and create an average of 400 full-time equivalent jobs during the four year construction period.

I am writing to you as the project is a major infrastructure project that has the potential to impact on emergency planning procedures due to the construction and operation of the project.

1 William Street
PO Box 15517 City East
Queensland 4002 Australia
Telephone 13 QGOV (13 74 68)
Website www.dsdilgp.qld.gov.au
ABN 25 166 523 889

I am seeking your agency's feedback on the draft EIS to inform my evaluation of the project. The draft EIS is available online at www.statedevelopment.qld.gov.au/inlandrail-b2g.

Submissions should be addressed to:

Email: inlandrailb2g@coordinatorgeneral.qld.gov.au

Post: Attention: The Coordinator-General
c/- EIS Project Manager, Inland Rail – Border to Gowrie project
Office of the Coordinator-General
PO Box 15517
CITY EAST QLD 4002

Thank you for consideration of this request. If you require any further information, please contact Irrelevant information deleted in accorda Office of the Coordinator-General, Department of State Development, Infrastructure, Local Government and Planning at Irrelevant information deleted in accordance with section 73 of th or on Irrelevant information de who will be pleased to assist.

Yours sincerely

Irrelevant information dele

Coordinator-General

Draft EIS Chapter #	Page	Section/ table	Issue	Comment
19	19-10 19-44 19-67	Bushfire - 19.7.1.1 Table 19.12 19.9.2	Description of the identified bushfire hazard areas within the area of impact assessment, including potential future hazard based on SPP IMS BPA map. Summary of potential impacts, mitigation measures, risk assessment and residual risk management sections.	Measures are reasonable, identifying potential impacts and mitigation measures, including the approach to reference design and consultation regarding restrictions/disruptions to access.
19	19-26	19.7.2.3 Safety/Emergency Access	Services will use a combination of public road networks and private access while responding. Additionally, complementary estate management and response activities conducted by QPWS and QFES and other entities (hazard reduction burning, back burning etc) rely on trail networks in in effected areas – Whetstone and Bringalily State Forests. Potential disruptive impacts to this infrastructure have been addressed through an impact assessment and reference design for the project to maintain connectivity across estates and to essential public and private roads. At locations where level crossings of the rail alignment are provided, wait times of 199 seconds may be experienced, during train passage. This may result in increase in emergency response times in localised instances.	Consultation has occurred to develop the reference design with – QFES, TRC, GRC, QPWS. Additionally - On 10 March 2021, QFES South West Regional leadership team met with Mr Rob McNamara, Project Director ARTC. Matters discussed included impacts on the townships of Goondiwindi and Yelarbon. During the construction stage, a worker's camp will be located outside the town of Yelarbon and QFES will be reviewing emergency procedures for the camp. The SES Regional Manager has attended a number of consultation meetings regarding Inland Rail and any matters about flooding, access etc have been raised at these forums. The proposed rail line is also 70 metres to the east of the Pampas Rural Fire Brigade. Members of the brigade have raised concerns about vibration and noise from the trains affecting volunteers who may be in the station at the time.
22	22-26	22.11.4.1 Environmental Outcomes - Offsets	Potential increase in Bushfire hazard through the rehabilitation of any proposed environmental offset delivery areas.	A bushfire management plan should be developed as part of the offset delivery plans.