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23 July 2021

Ms Toni Power
Coordinator-General
C/-EIS Project Manager, Inland Rail - Calvert to Kagaru Project
Office of the Coordinator-General
PO Box 15517
CITY EAST QLD 4002

Dear Toni

Re: Council endorsement draft Environmental Impact Statement

I refer to Council's letter dated 18 June 2021 enclosing Council's interim response to the draft Environmental Impact Statement for the Calvert to Kagaru Inland Rail Project.

At the Ordinary Meeting on 22 July 2021, Council endorsed the final version of Council's submission to the Coordinator-General in response to the draft Environmental impact Statement for the Calvert to Kagaru Inland Rail Project. One addition was made to the Traffic, Transport and Access section of Council's interim response.

Please accept the enclosed report as Council's final submission.

Your sincerely

Sonia Cooper
Acting Chief Executive Officer
Ipswich City Council

Inland Rail – Helidon to Calvert

Ipswich City Council Response

to Draft Environmental Impact Statement

July 2021

Document Control

Version	Prepared By	Approved By	Date
1	Richard Hancock	Tony Dileo	22/07/2021

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Sustainability

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
	Sustainability in Design **Governance Theme - Climate Response** a) There is a focus on stormwater modelling and flooding impacts in relation to the climate response which is required. Although there is a reference to AS 5334 – 2013; specific reference should be made, and work undertaken to design for heat and climate variability.	a. The proponent must undertake climate modelling and climate change risk assessment for the project and incorporate any requirements into the final design prior to construction as per AS 5334 - 2013.
	Environmental Protection Theme - Efficient use of resources and minimisation of carbon footprint b) In the design phase of the project, there are no carbon minimisation opportunities specifically identified. Opportunities are focussed on waste management and land resource efficiencies which will have some bearing on carbon reduction. The report could further to articulate carbon reduction opportunities explicitly and address the impacts of climate variability.	b. The proponent must articulate specific carbon reduction opportunities such as the use of renewable energy on the project.
	Future Sustainability Opportunities **Governance Theme - Future proofing** c) The EIS fails to appropriately address and assess carbon reduction more broadly and does not include specific design measures apart from resource efficiency and 'environmentally friendly' procurement.	c. The proponent must include designing for carbon reduction and climate variability into the final design prior to construction.
	d) Steps to explore alternative energy sources have not been explicitly identified in the future sustainability opportunities; though selection of fuel and energy efficient plant and equipment has been referred to.	d. The proponent must explicitly state that alternative low carbon energy sources will be utilised where feasible.

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
	e) The EIS fails to adequately assess the utilisation of lower carbon fuels and does not provide identification of further measures to reduce carbon.	e. The proponent is required to incorporate stronger commitments and more well-articulated actions (e.g. workforce travel, selection of building materials, renewable energy opportunities) in relation to carbon reduction for both the construction and operation phase of H2C.
	General Comments f) Whilst there is a level of commitment to reducing carbon and addressing climate change in the various phases of delivery in the project; there is no articulation of undertaking a Carbon Reduction Plan and a carbon analysis of a business-as-usual approach versus the implemented sustainability approach to determine the actual carbon emissions avoided/ reduced (to meet the 15% reduction target).	f. The proponent must complete a Carbon Reduction Plan that includes a carbon analysis options assessment that assess the carbon emissions avoided due to the sustainability measures implemented into the final design. The proponent must ensure the design meets the 15% (or better) carbon reduction target.
	a. Given the project has an expected lifespan of 100 years; a stronger commitment to whole-of-life procurement processes is highly desirable - not just consider, embed.	g. Devise procurement whole-of-life specifications for product categories for the project.

Land Use and Tenure

SECTION REFERENCE	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
Chapter 3 – Project Approvals Section 3.4 – Other State Legislation	a. The *Human Rights Act 2019* is not considered within the other state legislation.	a. Include assessment against the *Human Rights Act 2019.*
Chapter 5 – Stakeholder Engagement Section 5.5 – Project Stakeholders	b. All relevant local communities have not been identified. This is possibly due to businesses only being identified that are proximate to the alignment, rather than considering the broader/large scale impacts the corridor will have on surrounding businesses/community (see comments e and g for further information).	b. Consultation with these stakeholders should be undertaken.
Chapter 8 – Land Use and Tenure Section 8.4 – Legislation, policies, standards and guidelines	c. While the Ipswich Planning Scheme has been correctly identified, it should be noted that Council is currently preparing a draft Planning Scheme.	c. To be noted.

SECTION REFERENCE	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
Chapter 8 – Land Use and Tenure Section 8.5.1 Land Use Study Area	d. The extent of the land use study area only extends for approximately 1km either side of the proposed alignment. This is not considered an appropriate methodology to identify land uses and impacts. e. The alignment is located outside the Queensland Governments Development Assessment Mapping System 'Future railway corridor' overlay in numerous areas with substantial variances. Accordingly, the State Assessment Referral Agency may have missed the opportunity to enforce conditions and provide advice for development applications located within the overlay. In addition, the State Assessment Referral Agency may have imposed conditions and advice which would no longer be relevant due to the change in alignment.	d. Utilise a more effective methodology to identify land uses and impacts. e. Consult with the Department of State Development, Manufacturing, Infrastructure and Planning. Particularly to identify missed development application referrals, review conditions and advise that may no longer be required, and review the Development Assessment Mapping System.
Chapter 8 – Land Use and Tenure Section 8.5.2 Impact assessment methodology	f. Figure 8.2 incorrectly references the Statutory Land Use Planning Instruments and Benchmarks (i.e. Bromelton State Development Area Development Scheme and Greater Flagstone Priority Development Scheme)	f. Update the table to reflect the planning schemes applicable to the study area (i.e. Ipswich planning scheme).
Chapter 8 – Land Use and Tenure Table 8.22 Development Activity Within the Land Use Study Area	g. This table only looks at development/development approvals within the study area, however the impacts of the proposed development are further reaching and should be investigated further with respect to impacts on existing/lodged development applications. i.e. Existing Spicers tourism use and the application for Bubbling Springs tourism use (currently under assessment), will be significantly impacted on in respects to accessibility (due to wait times) as a result of the crossing at Grandchester Mount Mort Road.	g. Development applications/approvals which are impacted on as a result of the proposal are to be included/considered.

SECTION REFERENCE	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
Chapter 8 – Land Use and Tenure Section 8.6.2 Land use	h. Figures 8.4a - 8.4i identify the QLUMP land uses. It has been identified that several parcels of land, land uses (inclusive of parcels proximate to the alignment) are incorrect.	h. The Queensland Land Use Mapping Program (QLMUP) dataset has a very broad 'predominant land use' categorisation. Predominant land uses have been overlooked in some instances. Further investigation should be undertaken. It is noted the Australian Land Use and Management Classicisation Version 8 has the capability of identifying ancillary/secondary uses, yet these were not provided within Appendix G of the EIS.
Appendix G – Impacted Properties (General)	i. There are a high proportion of lots which have a significant percentage of permanent disturbance, which when resumed will create fragmented boundaries surrounding the rail line. This is a concern as it will likely result in small (unviable) rural lots; land locked lots; and an increase in lots capable of being used to justify boundary realignments, which could potentially further fragment rural land.	i. Properties with high percentages of permanent disturbance should be resumed in entirety, or alternatively, balance land should be amalgamated into adjoining lots. An increase in small (potentially landlocked/constrained lots) in rural areas should not be supported where it can be avoided.
Appendix G – Impacted Properties (General)	j. The Queensland Land Use Mapping Program (QLMUP) dataset has a very broad 'predominant land use' categorisation. Predominant land uses have been overlooked in some instances. The Australian Land Use and Mapping Classification Version 8 is predominantly focused on agricultural uses and consequently is unlikely to accurately identify individual uses dispersed throughout generic agricultural uses. The Australian Land Use and Management Classicisation Version 8 has the capability of identifying ancillary/secondary uses yet these were not provided within Appendix G of the EIS.	j. Predominant land uses should be further investigated, this may be resolved by identifying ancillary/secondary uses with the QLMUP dataset.

Landscape and Visual Amenity

SECTION REFERENCE	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
Chapter 22 Cumulative Impacts 22.6.3 Landscape and visual	a. Visual amenity of residents within corridor will be impacted post construction period	a. The proponent must provide specific mitigation measures to address impacts to visual amenity.
Chapter 24 Conclusions **Page 6 24.4.3 Landscape and Visual Amenity**	b. Visual impacts of the project to the township of Grandchester were not included in the list of "Significant" impacts.	c. The proponent must demonstrate that the visual impacts at Grandchester are not 'significant'
Appendix H Figures 43 and 44	d. No visualisation produced for viewpoint 16a Grandchester State School only an aerial visualisation at a much greater distance, resulting the trains having a much smaller apparent size.	e. The proponent must provide a visualisation at Grandchester State School from the same viewpoint and at the same scale as the existing view

Flora and Fauna

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
	Koalas and Fauna Crossings a. Fauna crossings are aligned with creek crossings and related rail bridges. Although these are logical, there are no terrestrial crossings at all nor does it mean that these crossings have been prioritised and optimised for fauna movement based on an understanding of movement requirements in the area. Looking at the volume of koala data on both sides of the alignment through Ebenezer (there is also Ebenezer Creek) this area is in clear need of a crossing. b. The EIS doesn't appear to address any on-going monitoring for koalas that would provide direction for undertaking pre-emptive measures. c. The EIS makes no reference to how wildlife carers can be supported through construction and operation activity should there be increased wildlife injury e.g. train and haulage truck strikes. d. The EIS makes reference to a fauna crossing strategy. Access to this document or information would be helpful to understand treatment etc. **Field Survey Effort** e. All of the findings and assessments are based on limited and opportunistic field surveys as well as desktop data which is never comprehensive. For many species such as greater gliders and spotted quolls this is the first time a lot of this area has ever had any sort of survey. It is therefore curious that the EIS is largely based on predictive modelling and limited targeted field research	a. The proponent must investigate the potential for fauna crossing in a prioritised and rationalised manner rather than those coincidentally located at creek crossings. While these are logical given bridges are required for flooding purposes, they don't represent a considered approach. Council will provide further information and suggestions on suitable locations. b. The proponent must implement a long-term monitoring program which analyses for potential genetic isolation and barrier effects. This can be through analysis of scat genetics. c. The proponent must propose measures to reduce potential impact on carers. d. The proponent must make available the fauna crossing strategy prior to approval. e. The proponent must undertake targeted surveys for species prior to making desktop assessments that rule out the possibility of a species occurring within the project area.

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
	e.g. targeted spotlight effort for Greater gliders and meat baited camera trapping for quolls. **Environmental Offsetting** f. The H2C is subject to environmental offsets. **Construction Traffic Impacts** g. The EIS does not provide enough information regarding management of potential impacts (i.e. vehicle strikes) to wildlife, in particular koalas, associated with increasing construction traffic on local road network - such as for spoil haulage, materials transport and workers commute. **Detailed Design Work** h. Reference is made across numerous sections to undertaking detailed design at later time. This makes it challenging to understand holistically the proposed projects impacts, suitability of mitigation measures and suitability of potential offsets. Following points highlight this concern. i. The style and extent of fauna fencing is not detailed. Insight into fauna impacted and locations of risk should be sufficiently understood to provide this level of detail at this stage of the project and EIS development.	f. Consistent with Commonwealth and State environmental offsetting, council expectations are that where offsets are required, they must: • Be delivered as close as practical to the impact while avoiding areas for future development; and • At a minimum, be provided in the Ipswich City Council local government area; and • Achieve additionality, being that it creates additional opportunities that would never have occurred in the absence of the offset. Additionally, Council is to be identified as a stakeholder with respect to environmental offset planning, design and delivery within Ipswich. g. The proponent must identify the extent of increased traffic, hotspot areas and detail of proposed mitigation measures. h. The proponent must release proposed draft documents for public and stakeholder comment. i. The proponent must release detail on the style and extent of fauna fencing.

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	EIS mentions collaborating with landholders with the style of fencing. In locations of Greater glider and Grey-headed Flying-foxes habitat, typically the use of barb wire is avoided. There is no mention on what will take precedent in situations where there is differences between the fencing requirements to mitigate fauna impacts and landholder preferences.	
	j. The mitigation measures frequently mentions where practical, minimising vegetation clearing and ground disturbance. It would be helpful to understand minimum width clearing could be restricted to below the standard nominated 20m wide disturbance corridor.	j. The proponent must provide indication of minimum width and circumstances in-which this can be applied.
	k. Details into the extent of clearing required for new vehicle access tracks and permanent vehicle service tracks is not provided. Again, this makes it difficult to understand the holistic impacts.	k. The proponent must provide details of likely locations and extent of clearing (subject to further refinement).
	Operational Details l. There is limited detail into the on-going operational management or commitment to environmental management and rectification. The draft *Environmental Management Plan* contains no approach to operationalise ongoing environmental management.	l. The proponent must update the *Environmental Management Plan* to cover operational matters. This document must be released to the public prior to approval.
	m. There is limited information regarding systems for managing an environmental incident (e.g. train derailment) and associated rehabilitation of land and environmental values.	m. The proponent must provide detail on the management of an environmental incident in an updated Environmental Management Pan.
	Ongoing Monitoring	

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
	n. The EIS lacks detail into on-going monitoring for wildlife in proximity to the corridor, to preventative measures that avoid strikes and deaths. Subsequently, there is no detail of ongoing commitment to retrofitting measures should it be deemed necessary to rectify an ongoing environmental impact.	n. The proponent must provide detail into the ongoing monitoring during the operation of the C2K.
	Specific Comments	
	o. The EIS completely misses threatened species *Marsdenia coronata* (slender milkvine). The species is identified as vulnerable under state legislation and is found within the area. Its distribution is far more widespread than records suggest.	o. The proponent must consider the impacts on this species.
Appendix J Part 1 Page 255	p. There is a critical flaw in the assessment of proposed impact to grey-headed flying-foxes. The habitat modelling correctly includes both remnant and regrowth vegetation containing preferred winter foraging species. However the assessment only considers impacts to occur within 15km of a known roosting site. This is a flawed estimate and not in line with contemporary literature around the species mobility and foraging patterns. Flying foxes frequently forage more than 40km from a roost and also make migratory movements of more than 100km per night. These migratory movements are not in straight lines, and often involve stopping and feeding between camps	p. The Proponent must adjust the models for habitat critical to survival of the species to include all habitat within 100km from a known or historic roost. *Welbergen JA, Meade J, Field HE, Edson D, McMichael L, Shoo LP, Praszczalek J, Smith C, Martin JM, (2020) 'Extreme mobility of the world's largest flying mammals creates key challenges for management and conservation', BMC Biology, vol.18, no.1, Article no.101 & Eby, P. 1991. Seasonal movements of Grey-headed Flying-foxes, Pteropus poliocephalus (Chiroptera: Pteropodidae), from two maternity camps in northern New South Wales. Wildlife Research 18: 547-559.*
Section 11 Page 135	q. Mentions the use of baiting to control wild dog predation on Spotted-tailed Quoll. Appropriate and by-catch impacts. Council is not supportive of this approach.	q. The proponent must amend the management plan and utilise an alternate approach to prevent predation on the Spotted Quoll.

Air Quality

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
Chapter 12, Air Quality & Appendix K, Air Quality Technical Report	**Tank Water – Grain/Cotton/Coal Dust Impacts** a. As the majority of properties impacted by this project are located on rural land, reticulated water supply may not be available. The primary source of drinking water for these residential premises is domestic water tanks that rely on rainwater collected from roof run-off to fill them and could be impacted by dust from the new rail line.	a. The proponent must provide additional assessment on the impact of dust on drinking water of rural homes. And if required provide appropriate mitigation measures to prevent health hazards.
Chapter 12, Air Quality & Appendix K, Air Quality Technical Report	**Odour Impacts** b. The air quality reports do not appear to adequately account for the odour or dust impacts from desiccated manure blown off loaded or empty livestock wagons	b. The proponent must revise the assessment to account for the odour or dust impacts from desiccated manure. Any sensitive receivers to the impacts of odour are to be identified and mitigation measures proposed.
Chapter 12, Air Quality & Appendix K, Air Quality Technical Report	**Q Fever** c. The air quality reports do not appear to adequately account for the effects *C. burnetii* (Q Fever) from contaminated airborne transmission or from desiccated manure blown off loaded or empty livestock wagons	c. The proponent must revise the assessment to account for Q Fever impacts from desiccated manure. Any sensitive receivers to the impacts of Q Fever are to be identified and mitigation measures proposed.
Chapter 11 Flora and Fauna, Chapter 12, Air Quality & Appendix K, Air Quality Technical Report	**Dust Deposition – Vegetation Impacts** d. The air quality reports do not appear to adequately account for potential dust deposition from livestock, coal, grain or cotton wagons, so that they will not adversely affect the health of ecologically sensitive vegetation.	d. The proponent should fully identify and assess the impacts to manage the potential dust deposition from the trains so that they will not adversely affect the health of ecologically sensitive vegetation including aquatic habitat. Practical mitigations measures such as vegetated

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Chapter 12, Air Quality & Appendix K, Air Quality Technical Report, Chapter 13, Surface Water and Hydrology and Chapter 14 and Groundwater		wind breaks can reduce the concentration of dust moving laterally into native vegetation.
	Dust Deposition – Water Quality Impacts e. The air quality reports do not appear to adequately account for potential dust deposition from livestock, coal, grain or cotton wagons, so that they will not adversely affect surface and / or ground water quality	e. The proponent should fully identify and assess the impacts to manage the potential dust deposition from the trains so that they will not adversely affect the surface and / or ground water quality.
	Intrinsic Value – Indigenous Heritage Sites f. The air quality reports do not appear to adequately account for the impacts to the Intrinsic Value of Indigenous Heritage sites. "Intrinsic Value" is a much less tangible value of heritage. It typically involves the perceptions of individuals as to how a heritage property contributes to the basic and essential elements of a local community. The presence of these values helps form the identity of an area and the people that live within it. The existence value or inherent value of heritage is firmly embedded in a building and / or site's identity, uniqueness and significance.	f. The proponent should fully identify and assess the impacts to the Intrinsic Value of all Indigenous Heritage sites to manage the air quality and odour Issues

Surface Water Quality

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
Section 13.3.3	a. Bremer River Water Quality Objectives (WQO) are currently under review by DES and potentially will be updated.	a. The proponent must update the surface water quality assessment to achieve the latest WQOs for the Bremer River Catchment.
Section 13.4.1	b. The EIS fails to account for on-going monitoring of water quality during the operation of the Inland Rail	b. The proponent must development a management strategy that monitors water quality during the operation of the project and account for remediation measures required to maintain the WQOs of the Bremer River catchment.
Section 13.4.1.1	c. The EIS states that *'Sites targeted watercourses that cross the proposed alignment, with additional sites located upstream and downstream of the alignment crossing'*. This appears contradicted by Appendix M- Surface WQ Tech Report and Figure 13.1 which only identify a single monitoring site in Western Creek, Bremer River, Warrill Creek and no WQ monitoring site at the major crossing of Purga Creek.	c. The proponent must meet the outlined methods by monitoring upstream and downstream of existing sites and consider in the short term a second site downstream to detect an impact to surface WQ if one is to exist.
Section 13.5.3.2 & 13.5.3.3	d. Table 13.11 and 13.12 indicate many sites were dry at the time of sampling, with some of the sites only sampled once out of the three baseline monitoring rounds. This makes it difficult to build a temporal trend in data. Although most waterways were currently degraded and not meeting WQO's for many parameters, the baseline data for some sites is scant and may make detecting future impacts difficult or vague.	d. The proponent must amend the surface water quality assessment to include more permanent reaches that are reliable for taking water quality samples.
Section 13.6.1	e. The EIS states *'Potential surface WQ impacts will be avoided or minimised through initial mitigation through design responses…'*	e. The proponent must ensure that works associated with construction on ephemeral waterways occur during dry periods.

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Section 13.6.1	f. The EIS states *'Wastewater quality involving TSS, Phosphorus, and Nitrogen via MUSIC modelling of alignment drainage, indicates that impacts to rural areas associated with potential stormwater discharges are expected to be negligible with buffering from swales producing discharge of a better quality (reduced concentrations) than typical for rural areas'*. This is considered vague and unsupported (is this on site or off-site wastewater?), no evidence in Appendix M other than MUSIC modelling was used to conclude this. Furthermore, simply being 'better quality than typical for rural areas' is insufficiently ambitious and does not outline if this meets any relevant legislative objectives.	f. The proponent must quantify expected values of both onsite and off-site wastewater parameters and provide clarity on how it is expected to be 'better quality than typical for rural areas' in an amended surface water quality assessment.
Section 13.6.1.1	g. Erosion and sediment deposition from runoff into Ipswich waterways is one of the greatest surface water quality risks of the proposed project.	g. The proponent must implement an Erosion and Sediment Control Plan in accordance with IECA guidelines and standards.
Section 13.7.1	h. The EIS Table 13.24 states *'The design has been developed to avoid the need to permanently divert watercourses…'*. Despite stating that it refers to mapped waterways, this statement seems somewhat misleading as section 13.5.2.2 identifies five unmapped waterways that will need to be diverted.	h. The proponent must ensure that watercourses are not diverted.
Section 13.7.1.3	i. The EIS States *'In the event that Water Quality Objectives cannot be achieved for receiving waters, alternate treatment/ disposal options as adaptive management actions are to be implemented …'* Water treatment plants are also mentioned here, and it is recognised they will need to be of sufficient size to hold the required volumes of water.	i. The proponent is required to provide clarification on the sizing of water treatment plants and adopt this into the final design.

Hydrology and Flooding

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
Independent Flood Review Panel	**Independent Flood Review Panel Comments** a) The Independent Flood Review Panel highlighted multiple short fallings of the EIS flood study.	a) The proponent must incorporate the recommendations put forward by the Independent Flood Review Panel
Chapter 13 Section 13.5.2 P13-91, P13-110 Section 13.9.2.3	**Surface Water and Hydrology** a) Council provides a general comment that the AR&R 2016 IFDs are potentially being underestimated in the western Ipswich areas as well as Lockyer Valley RC LGA. Refer to Flood Panel Report. b) There is a potential error in blockage section: 0% blockage scenario mentioned but corresponds to higher water levels than 50%. c) Afflux impacts appear to be localised to remote rural land areas and away from sensitive receptors (buildings and habitation). Some are also beyond project TOR maximums. d) Increased Time of Submergence of certain rural roads noted (from Table 13.46). Some are quite extensive (as expanded in Appendix M).	a) The proponent must review the IFD's and confirm validity. b) The proponent must review these potential errors and confirm correct figures. c) The proponent must confirm whether agreement with affected landowners has been reached or confirm how the TOR maximums will be met. d) The proponent must confirm that relevant assessment on the impacts such as alternate access and emergency management aspects have been undertaken.
Appendix M Section 2 and 8	e) Council notes the potential underestimation of design flows when using the Bureau of Meteorology's 2016 design Intensity-Frequency-Duration (IFD) rainfall data. The use of potentially underestimated IFDs and their subsequent flow values could result in the under-design of the ARTC infrastructure. The potential underestimation was first identified in the hydrology phase of the Brisbane River Catchment Flood Study (BRCFS) in 2012. To rectify this, factors were applied to the flow	e) The proponent must review the IFD's and confirm validity.

	hydrographs to achieve a reasonable match to other design estimate methods and historical observed flows. Council's Bremer River model (The Ipswich Rivers Flood Studies Update) in 2019 confirmed the underestimation once again, with the issue being more pronounced in the western areas of Ipswich. Factors had to be applied to BoM 2016 IFDs to better match Flood Frequency Analysis (FFA) flow estimates and historical flows at gauges. These issues in further detail were also provided to ARTC's consultant between 2018 and 2019, through reviews of previous versions of this report. Since the IRFSU project, the BoM IFDs over south-east Queensland have been reviewed and re-estimated in 2020. In most cases, IFDs have on average increased below durations of 24 hours and decreased for longer storm durations. It has been peer reviewed in early 2021 and the project is currently being finalised. Expectation is it should be available in time for the detailed design phase of the Inland Rail project. Review of the current report appears to indicate that the underestimation has been considered to some degree. ARTC design flows at the Walloon gauge are still notably below BRCFS FFA (and Council's) flow values while the issue at the Amberley gauge has been improved through the application of factored BRCFS flows. This approach overall appears inconsistent as a result.	
Section 5.2 Section 9.3.3.2	f) LiDAR from mid-2019 is now available. g) Increase of Time of Submergence in the regional 1% AEP from 51.6 to 69 hours (also >200mm above TOR requirement). It is not clear how 'drainage improvements at a local catchment scale' can resolve this issue given the low immunity of rural roads.	f) The proponent must incorporate updated LiDAR in future design phases g) The proponent must confirm how this will be achieved.

Noise and Vibration

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
	a. The design and implementation of noise mitigation measures required to meet noise levels, are the responsibility of the proponent. However the long-term effectiveness of noise mitigation strategies and measures is likely to be dependent on implementation of an effective ongoing maintenance and management plan.	a. The proponent must provide an Ongoing Maintenance Management Plan with relation to noise mitigation measures to ensure that the long-term impacts of operational noise are mitigated.
	b. The acoustic reports submitted state that the predicted noise emissions from the rail operational use have been determined to exceed the adopted noise limits at the sensitive uses (residences) along the corridor.	b. The proponent must incorporate design features to limit noise emissions to acceptable noise limits.
Chapter 15 Section 15.6.1 Chapter 23 Section 23.12 Table 23.12 Appendix O and P	c. The acoustic report has indicated that the proposed standard construction hours of operation, including construction traffic, will be 7.00am-6.00pm Mon to Fri and 8.00am to 1.00pm Sat. However the Environmental Impact Statement, Chapter 23, states that there will be construction activities outside these hours.	c. The proponent must ensure consistency between the EIS documentation and must amend the acoustic report if required. The Proponent should fully identify and implement strategies to manage the residents impacted by all types of construction work at all times of the day for the duration of the project. Considering that the majority of sensitive uses are on agricultural land, they potentially cannot be relocated to other premises at night due to their location and the availability of alternative temporary accommodation
Chapter 11 Section 11.8.2.9 Appendix O and P	d. The acoustic reports do not appear to adequately account for the impacts of noise on fauna. The rail corridor location will potentially impact 33 existing	d. The proponent must provide assessment on the noise impact caused to fauna during operation of the railway. The assessment must include (but not limited to) the koala, black cockatoo and Rock

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	threatened wildlife, including Koala and Brush Tailed Rock Wallaby, which are both listed as vulnerable under the Environmental Protection and Biodiversity Conservation Act 1999.	Wallaby. The proponent must fully identify and implement strategies to manage the potential noise and vibration impacts to fauna (including edge impacts). The Proponent must demonstrate the Acoustic Quality Objectives for any Protected or Critical Areas including edge impacts are assessed. The Qld Environmental Protection (Noise) Policy 2019 identifies a Protected Area or Critical Area as a sensitive receptor and identifies the noise quality objective to be achieved as, "the level of noise that preserves the amenity of the existing marine park".
Chapter 11 Section 11.8.2.9 Appendix O and P	e. There is no indication within the various acoustic reports that an assessment of the noise impacts on farm animals in support of the proposal was conducted. The rail corridor location will potentially impact a number dairy, cattle, poultry and horse breeding/training farms.	
Chapter 15 Section 15.7.1.2 Section 15.7.6 2 & 3 Section 15.8.8 Appendix O and P	f. The acoustic reports have conducted measurement parameter to the façade of the residential buildings, as they have identified these as the sensitive uses. This potentially quarantines the existing and future use of the land between the building and the boundary of the rail corridor. The Qld Operational Railway Noise and Vibration Guideline 2019 identifies a sensitive land use to include outdoor spaces of the residence as a noise criteria for new rail lines to achieve. It states that this criteria must be achieved for a minimum of 2000m2 or if the outdoor area is smaller than 2000 m2, the whole area.	e. The Proponent should fully identify and implement strategies to manage the potential noise and vibration impacts to these animals. f. The Proponent should fully identify and implement strategies to manage the potential noise impacts to ensure that outdoor spaces of the residence achieve the noise criteria for new rail lines for a minimum of 2000m2, or if the outdoor area is smaller than 2000m2, the whole area.
Chapter 15 Section 15.8.8	g. The reports have assessed the predicted noise levels of the new rail development for the project opening in 2026	

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Appendix O and P	and also for the expected rail volumes over an indicative period into the future (in this case 2040). Future growth in rail vehicle volumes have been taken into account in noise monitoring. The reports state that 285 sensitive receptors will be impacted at project opening and further 30 by 2040. It is not clear if the Proponent will mitigate the noise impacts for all 315 sensitive uses at the project opening or progressively mitigate these properties.	g. Consideration must be given to mitigate the noise impacts for all 315 sensitive uses at the project opening at 2026.
Appendix O and P	h. The acoustic reports do not appear to adequately account for the effects of varying topography and source-receiver geometry on noise propagation from the proposed rail line or adverse meteorological effects. It appears that the noise propagation calculations, and recommendation for management controls, have been made based on noise propagation over flat ground. The effect of this omission may be an under-prediction of noise impact levels on adjacent residential receivers. The *Qld Operational Railway Noise and Vibration Guideline 2019* identifies a requirement to identify variation of noise levels due to the effects of sound reflection and meteorological effects.	h. The proponent must amend the acoustic report to account for the impacts of varying topography. The proponent must fully identify and implement strategies to manage the potential of the variation of noise levels due to the effects of sound reflection and meteorological effects.
Chapter 15 Section 15.9.2 Appendix O and P	i. The reports have indicated that due to the location of the sensitive users (mostly rural), it will not be feasible to install acoustic barriers within the rail corridor. The reports have recommended that fixed noise mitigation measures should be installed on impacted private property outside the rail corridor (such as upgrading	i. The Proponent should fully identify, describe and implement strategies to ensure that all the fixed noise mitigation measures are installed at impacted private sensitive uses, at the project opening at 2026 and that a plan is in place to

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
	property boundary fences, or architectural façade treatments such as double-glazing). The Proponent did not provided details of what would be required to upgrade a property boundary fence so that it will screen rail noise. Generally this would require a solid acoustic barrier of a certain height, which considering that the location as mostly rural, may not be suitable. Further, once constructed who will be responsible for the maintenance of this infrastructure, considering the various potential threats to these barriers such as from a bush fire.	maintain the infrastructures integrity at the cost of the proponent.
Chapter 15 Section 15.7.7.1 Appendix O and P	j. The engineering reference design train volume (peak) in the business case is for 418 train per week for 2040, which equates to an average of 60 train movements a day. However the acoustic report has modelled an average of 51 trains per day using this line by 2040	j. The proponent must ensure consistency between the EIS documentation and must amend the acoustic report if required.
	Impacts of Noise on an Indigenous Heritage Site k. The acoustic reports do not appear to adequately account for the impacts to the Intrinsic Value of Indigenous Heritage sites. "Intrinsic value" - is a much less tangible value of heritage. It typically involves the perceptions of individuals as to how a heritage property contributes to the basic and essential elements of a local community. The presence of these values helps form the identity of an area and the people that live within it. The existence value or inherent value of heritage is firmly embedded in a building and or site's identity, uniqueness and significance.	k. The Proponent should fully identify and assess the impacts to the Intrinsic Value of all Indigenous Heritage sites to manage the potential noise from the trains.

Economics and Social

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
	a. Reference documents will be updated e.g. Advance Ipswich and the 2016 census	a. The proponent must update Social Impact Assessment with updated reference documents
	b. Council welcome the suggested involvement of Council in the monitoring and review of the Social Impact Management Plan (SIMP), as well as involvement in the development of a Community Wellbeing Plan and AMP as outlined	b. The proponent must include the following in the Social Impact Management Plan: i. Quarterly reports prepared by the contractor regarding stakeholder and community engagement. (Stakeholder and community engagement plan). ii. Quarterly reports on the contractor's construction employment register/percentage of personnel employed locally and local procurement outcomes. iii. Updates provided to the ICC Tourism Team regarding monitoring of changes to event attendance or demands on tourism accommodation.
	c. The measure to address 'exposure to construction noise or vibration from laydown areas or bridge construction sites may affect the wellbeing and/or lifestyles of households near the Project footprint' and the Proponent will communicate with landowners within 250m of laydown and bridge construction sites and monitor complaints from residents in these areas	c. The proponent must communicate with landowners at a greater distance from work sites

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
	d. A Grievance Procedure will be developed	d. The proponent must provide Council with opportunity to review and provide feedback on the Grievance Procedure for complaints management/ongoing complaints management.
	e. Reliance on Queensland Police Service data to change a Traffic Management Plan is not adequate. This will not cover near misses.	e. The proponent must analyse community complaints to identify improvements to Traffic Management Plans, including at level crossings.
	f. Proponent will consult with Ipswich Tourism Operators Network annually to identify any decreases in visitation established as attributable to the project.	f. The proponent must undertake more frequent consultation, and criteria for assessment developed, including what documentation will be required for any claim
	g. A number of households within the EIS investigation corridor in the Ipswich local government area will need to relocate to enable the project's construction. SIMP states access will be available to support services and potentially additional funding from ARTC.	g. Proponent must provide support to vulnerable residents who need to relocate
	h. Potential safety risks of creating new rail corridor	h. Proponent must provide rail safety awareness campaigns

Level Crossings

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
Chapter 19 – Section 19.5 – Traffic, Transport and access study area - Figure 19.2d	The proposed road-rail interfaces do not meet the requirements of S11.111 of the *Terms of Reference:* 'Describe how the project complies with the *Queensland Level Crossing Safety Strategy 2012 to 2021* to *'…minimise any proposals to construct a public level crossing on a greenfield site, with a clear objective to add no further open level crossings to the network. …'*	The Proponent must demonstrate compliance with the *Queensland Level Crossing Safety Strategy 2012 to 2021.*
Chapter 19 – Section 19.5 – Traffic, Transport and access study area - Figure 19.2d	The proposed public road-rail interface locations illustrated on Figure 19.2d, denotes an "At Grade Level Crossing" at Grandchester Mount Mort Road (crossing 330-14-P-2).	The proponent shall clarify the design and operational differences between an "Active Level Crossing" and an "At Grade Level Crossing".
Chapter 19 – Section 19.7.4 – School Bus Routes – Table 19.18	i. Table 19.18: Impacted School Bus Routes - identifies impacts to the school bus service on Calvert Station Road, however it is understood that there is currently a school bus stop in the vicinity of the proposed Inland Rail level crossing.	The proponent is required to identify the work required to mitigate any impacts to the existing school bus stop on Calvert Station Road, and to ensure safe access to the bus stop is maintained for pedestrians.
Chapter 19 – Section 19.8.2.1 – Rail network - Table 19.22	a. Table 19.22: Proposed Public Road-Rail Interface and Proposed Treatment - identifies an Active Level Crossing for Grandchester Mount Mort Road to the south of Rosewood Laidley Road. This section of Grandchester Mount Mort Road provides the primary connection between the Grandchester Township and the broader regional network to the north of the inland rail corridor and key education, community and tourist facilities and a significant agricultural land to the south of the inland rail corridor. The proposed at grade level crossing has the	a. The proponent shall review the proposed road-rail crossing treatment at Grandchester Mount Mort Road with the view to providing uninterrupted access to / from the community to the south of the inland rail corridor, including Grandchester State School, Spicers Hidden Vale and the significant agricultural catchment.

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
	potential to add significant travel time and / or distance for school buses, local and regional trips and create a significant severance of key community infrastructure.	
Chapter 19 – Section 19.8.2.4 – Emergency Service Vehicles	b) The proposed at grade level crossing on Grandchester Mount Mort Road has the potential to create significant delays and / or added travel distance and time for emergency vehicle response for the community and facilities to the south of the inland rail corridor.	a. The proponent shall quantify the potential delays and / or added travel distance for Emergency Services vehicles, as a result of the proposed level crossing on Grandchester Mount Mort Road. The calculation of the potential delays shall account for both the short term 1,800m long trains, and the longer term 3,600m long trains. a. The proponent shall review the proposed road-rail crossing treatment at Grandchester Mount Mort Road to minimise the impact to emergency vehicle response times.
Chapter 19 – Section 19.9.3.1 – Rail Crossings	c) There are concerns about the potential operational and safety issues generated by the limited separation between the existing Western rail line level crossing on Rosewood Laidley Road, the intersection of Rosewood Laidley Road / Grandchester Mount Mort Road (State road network) and the propose at grade level crossing between the Inland Rail line and Grandchester Mount Mort Road. The rail level crossing assessment within section 19.9.3.1 considers the forecast years of 2026 and 2036, however only appear to consider the impact of two 1,800m trains per hour, operating at the maximum design speed of 115km/h. The assessment does not appear to consider types of vehicles that are likely to use the crossing (ie. proportion / type of commercial vehicles, including school buses). It is expected that with increased train frequency, increased train lengths and potentially lower operating speed through level crossing,	a. The proponent is required to demonstrate the operational impact of the proposed rail level crossing on the adjacent road network for 2026 and 2036, with increased train lengths and reduced operating speeds through the rail level crossings. b. The assessment shall also consider the types of vehicles likely to use the crossing (ie. heavy vehicles), to ensure the resulting queuing is accurately captured. c. The proponent shall demonstrate how the potential safety and operational issues (including vehicle delays, queuing/storages and impacts to pedestrian access to the Grandchester Station School) are to be address in both the short and long term, under the base scenario (ie. two 1,800m trains an hours) and under the increased

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
	inclusion of appropriate heavy vehicle usage, that the report operational impacts of the rail level crossing on the adjacent road network could be significantly worse.	train length future scenario (eg. two 3,600m trains an hour).
Chapter 19 – Section 19.10.3 – Impact Assessment - Table 19.28	d) It is noted that Table 19.28: Project Traffic, Transport and Access Impacts Impact Assessment - suggested that the risk at Road/Rail interface at open level crossings (operational phase) will be reduced from High to Low/Moderate with the mitigation measure of road safety audits and appropriate infrastructure. Council reject this supposition and have concerns that open level crossing will have a significant level of residual risk, which Council will become partially responsible for.	a. The proponent is required to provide further justification as to how an open level crossing could operate with a low residual risk profile, particularly given the nature of the freight rail planned to use the line. a. The proponent shall also provide commentary to demonstrate how this significant residual risk associated with introduction of an open level crossing will not be transferred to the Local road authorities, creating unreasonable on-going risk and burden in terms of assessment and maintenance requirements.
Appendix U – Section 6.4.3.1 Analysis assumptions	e) The analysis of the level crossing wait times and resulting traffic queues and storage requirements has been based on a 1,800m train length and maximum 115km/h design speed.	a. The proponent is required to demonstrate the operational impact of the proposed rail level crossing on the adjacent road network for 2026 and 2036, with increase train frequencies, increase train lengths and reduced operating speeds through the rail level crossings. a) The assessment shall also consider the types of vehicles likely to use the crossing (ie. heavy vehicles), to ensure the resulting queuing is accurately captured.

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Appendix U – Section 6.4.3.3 Analysis Results – Table 6.38	b. Table 6.38: Vehicle wait times - includes the proposed rail level crossing on Grandchester Mount Mort Road (330-14-P-2) and Calvert Station Road (330-15-E-4), however it notes that there is not an adjacent QR crossing at these locations.	g. The proponent is requested to clarify why the proposed level crossing have not considered the existing QR level crossing, when determining the rail crossing wait time.
Appendix U – Section 6.4.3.3 Analysis Results – Table 6.39	i. Table 6.39: Proposed level rail crossing analysis results – indicates a LOS A result for both the proposed level crossing on Grandchester Mount Mort Road and on Calvert Station Road, based on the average weighted delay for all vehicles approaching the level crossing in the hour. Whilst this calculation is relevant for a typical signalised intersection, the direct application to the proposed level crossing scenario is questioned, particularly given the intersection delays are significant and well in excess of the LOS F 80 second threshold for a signalised intersection each time the level crossing is activated.	h. The proponent is to consider alternate more appropriate LOS definition for the rail level crossing analysis.

Construction Traffic

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
Chapter 19 – Section 19.5.2 – Construction Routes	The construction routes associated with the construction of H2C are yet to be confirmed. Traffic volumes and resulting impacts may be subject to significant variation, depending on the routes chosen by the proponent.	The proponent must revise the route assessment once the haul routes have been confirmed and ensure the applicable road network meets an appropriate performance standard.
Chapter 19 – Section 19.7.2.1 – State-controlled roads - Table 19.14	It is noted that table 19.14 – State Controlled Roads: Project Primary Construction Routes includes Pine Mountain Road (302) between Warrego Highway and Lowry Street, which provided a primary north connection to the Ipswich City Centre. Significant volumes of commercial vehicles shall be deterred from entering or travelling through the Ipswich City Centre.	The proponent is required to clarify the intended use for this section of Pine Mountain Road during the project construction.
Chapter 19 – Section 19.7.2.2 – Local Government Road - Table 19.16	It is noted that table 19.16 – Local Government Roads: Project Construction Routes includes School Road, Grandchester. There concerns regarding the use of School Road for heavy vehicles or significant volumes of construction traffic given the potential impacts to the operation and access to the Grandchester School.	The proponent is required to clarify the intended use for the section of School Road during the project construction and identify appropriate mitigation measures to manage any impacts to the Grandchester State School.
Chapter 19 – Section 19.7.2.2 - Local Government Roads - Table 19.16 	a. Table 19.16 – Local Government Roads: Project Construction Routes - includes Thagoona Haigslea Road between Karrabin Rosewood Road and Schumanns Road. It is noted that there is currently a sign on Thagoona Haigslea Road indicating that the road is closed to heavy traffic exceeding 10 tonnes. The sign does not appear to be regulatory (enforceable) however there is likely to be a community expectation the heavy vehicles are not to use this road to access the Mount Mort quarry.	The proponent is required to investigated other possible access routes to the quarry. If no other feasible / practical route is available the proponent is required to identify any upgrade works required to provide low maintenance, safe and efficient two-way traffic access for all road users.

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
Chapter 22 – Section 22.6.12 – Traffic, transport and access	f) The proposed combined delivery approached for the G2H, H2C and C2K projects, has the potential to create a significant cumulative impact to the road network particularly for access route to / from key resource area.	a. The proponent is required to identify the key routes that are likely to experience cumulative traffic impact from the G2H, H2C and C2K projects. a. The traffic impact assessment shall be revised to quantify the cumulative impact on the identified routes and to identify any required mitigation measure to maintain safe and efficient access for the all road users.
Appendix U – Section 4.1.4 Existing construction route traffic volumes – Table 4.5	g) It is noted that Table 4.5: Existing baseline construction route traffic volumes – includes an estimated daily traffic volume of 766 vehicles per day, however the road does not appear to be a constructed road.	b. The proponent is to revise the estimated current daily traffic volumes for Rafters Road, Grandchester.
Appendix U – Section 5.9 Traffic generation by activity - Table 5.13 & 5.14	h) It is noted that the forecast project traffic volumes for Grandchester Mount Mort Road appears to be very low with a maximum of 3,443 trips per year in 2025.	a. The proponent is required to confirm that the forecast traffic volumes included in tables 5.13 & 5.14 for Grandchester Mount Mort Road are correct. c. The proponent is required to demonstrate how construction traffic will access this section of the Inland rail corridor if it is not via Grandchester Mount Mort Road.

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
Appendix U – Section 6.2 Five per cent traffic comparison on links - Table 6.3	i) It is noted that there are a significant number of Ipswich Council controlled rural road identified in Tables 6.2 & 6.3: 5 per cent comparison summary – which construction traffic is forecast to contribute significantly more than 10% of the total traffic, with many exceeding 30%. Whilst it is acknowledged that some of these roads have a low base volume, the standard of current construction (formation / seal width, pavement design) are also low, and are not considered to be appropriate for construction access from a major project.	b) The proponent shall identify the required upgrades or improvements required to all Council roads that exceed the 5% construction traffic threshold trigger. All roads proposed to be used for construction access shall be constructed to a standard to provide low maintenance, safe and efficient two-way traffic access.
Appendix U – Section 6.2.2 Level of service comparison on links	j) The level of service (LOS) comparison included within section 6.2.2 is acknowledged, however Council does not support the LOS comparison approach to determine upgrade requirements for low standard rural roads. Most existing rural Council roads are constructed to a minimal standard, in terms of horizontal and vertical geometry, formation width, and pavement design to suit current volumes only. These roads are generally only suitable for occasional use by heavy vehicles (eg. garbage truck and school bus).	c) The proponent shall identify the required upgrades or improvements required to all Council roads that exceed the 5% construction traffic threshold trigger, regardless of the theoretical LOS classification. All roads proposed to be used for construction access shall be constructed to an appropriate standard to provide a low maintenance, safe and efficient two-way traffic access, during and following the construction period.
Appendix U – Section 6.3 Construction intersection analysis – Table 6.9	k) Table 6.9: Intersection with construction traffic turn movements - identifies the intersections of Karrabin Rosewood Road / Haigslea Amberley Road and Rosewood Laidley Road / Ipswich Rosewood Road as joint ownership between DTMR and ICC. Both intersections are DTMR controlled.	d) The proponent is to update Table 6.9 to reflect the correct ownership of the intersections of Karrabin Rosewood Road / Haigslea Amberley Road and Rosewood Laidley Road / Ipswich Rosewood Road.

Emergency Management

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
Section 20.7.1	b. The EIS fails to mention the impact of severe storms, hail events or destructive winds.	b. The proponent must provide discussion on the impacts of severe storms, hail events or destructive winds and list relevant mitigation strategies to prevent adverse weather impacts.
Section 20.7.2.2	c. The report acknowledges alterations caused by the project to road traffic will impact on emergency services' ability to respond in the case of an accident during the construction and operational phase of the project.	c. The proponent must undertake community consultation with emergency service providers to ensure they are aware of road closures detours
Table 20.9	d. The risk table does not include bushfire risk caused by lightning strike. Often in Ipswich City Council Bushfires are caused by lightning strike and should be referenced in the EIS.	d. The proponent must amend the hazard risk table to include lightning storms.
Section 20.9.4.4	e. The EIS mentions consultation with Ipswich Local Disaster Management Group	e. The proponent must provide evidence of consultation with the Local Disaster Management Group occurring.

Waste and Resource Management

SECTION	DESCRIBE THE ISSUE	SUGGESTED SOLUTION
	a. Community members have expressed concerns that the Inland Rail project will be used to enable the establishment of new waste management facilities in the Ipswich Region.	a. The proponent must identify proposed freight categories.