Helidon to Calvert - Draft Terms of Reference (ToR)

Section	Topic	Item No.	Draft Terms of Reference	Suggested Change to draft ToR	Reason for change
10. Project Description		10.1.	The EIS must describe and illustrate at least the following specific information about the proposed project: (a) project title (b) project description (c) project objectives (d) expected capital expenditure (e) rationale for the project (f) regional and local context of the project's footprint (with maps at suitable scales) (g) relationship to other projects for the proposed Inland Rail Programme between Melbourne and Brisbane (h) relationship to other coordinated projects, major projects and/or developments (which are progressing through planning and approval processes and public information is available)		
			(i) workforce numbers to be employed by the project during its various phases	Amend text to read " Workforce numbers to be employed by the project during its various phases and the proposed targets to hire locals from the Local Government region who have been living in the local government area 12 months or more prior to the project. "	Workforce numbers are good but the community will be wanting to know the specifics of what percentage of the workforce will be targeted for local hiring.
			(j) where personnel would be accommodated and, where relevant, the likely recruitment arrangements to be adopted	Amend text to read "where personnel would be accommodated and the recruitment arrangements to be adopted"	Workforce accommodation needs to be addressed as impact on affordable accommodation can not be absorbed in the wider community. Recruitment arrangements need to be specified to ensure no disadvantage to local workers.
			(k) proposed timing and overall duration of the project including construction staging and likely schedule of works.		
		10.2	Provide real property descriptions of the preferred alignment.		
		10.3	Describe and map at suitable scales key transport infrastructure including state controlled roads, local roads, rail (including tunnels), air, and other infrastructure or services (including gas and water pipelines, and electricity transmission and distribution powerlines) existing, under construction or proposed in the region and to the preferred alignment.		
		10.4	Describe and illustrate the topography of the preferred alignment and surrounding area, and highlight any significant features shown on the maps. Include and name rivers and creeks. Maps should include a scale, and have contours at suitable increments relevant to the scale, location, potential impacts and type of project, shown with respect to Australian Height Datum (AHD) and drafted to GDA94.		
		10.5	Describe and illustrate specific information about the proposed project including the precise location of the preferred alignment in relation to designated areas, such as transport corridors, and protected areas.		
		10.6	Where relevant, describe and map in plan and cross-sections the geology and landforms, including catchments, of the project area. Show geological structures, such as aquifers, faults and economic resources (such as agricultural products) that could have an influence on, or be influenced by, the project's activities.		

10.7	Where relevant, describe, map and illustrate soil types and profiles of the project area at a scale relevant to the proposed project. Identify soils that would require particular management due to wetness, erosivity, depth, acidity, salinity or other relevant features.		
10.8	Plans and drawings provided must be detailed enough to enable the Coordinator-General and advisory agencies to adequately assess the impacts of the project.		
10.9	Describe the ability and capacity of the proposed rail corridor to support future passenger rail services between Brisbane and Toowoomba.	Amend text to read "Ensure the ability and capacity of the proposed rail corridor to support future passenger rail services and stations Brisbane and Toowoomba."	It's not enough to 'describe" the capacity - we want it ensured along the entire route Brisbane and Toowoomba.
10.10	Describe the planning schemes, regional plans, state policies, government priorities for the preferred alignment.		
10.11	Describe the following information about the proposed project: (a) all pre-construction activities (e.g. vegetation clearing, site access, interference with watercourses and floodplain areas, including wetlands)		
	(b) existing infrastructure and easements on the preferred alignment	Consider "including weather, flood monitoring and emergency management infrastructure"	Fire Trails & flood monitoring equipment may be impacted. Access to operating agency flood/weather monitoring equipment.
	(c) the proposed construction methods, associated equipment and techniques (d) location, design and capacity of water supply, telecommunications, power generation and transmission infrastructure (e) any infrastructure alternatives, justified in terms of ecologically sustainable development (including energy and water conservation) (f) hours of operation for proposed construction works, including night time (g) the sequencing and staging of activities (h) the capacity of high-impact plant and equipment, their chemical and physical processes, and chemicals or hazardous materials to be used (i) the known locations of new or altered works and structures and infrastructure necessary to enable the construction and operation of the development		
	(j) any activity that is a prescribed ERA (k) location of quarry operations the project may source materials from (l) the range of land uses and site layout (m) built form and design specifics (n) operation detail (e.g. hours of operation for project components) (o) the commissioning process including landscaping and the rehabilitation of affected areas after construction (p) proposed upgrades, realignments, relocation, deviation or restricted access to roads and other infrastructure (e.g. water, electricity, telecommunications, sewerage)		
	(q) location and scale of parking requirements.	Amend text to include consideration of accommodation of site facilities.	Linear projects of magnitude require careful consideration of adequate and location of staff, machinery and material storage areas to enable minimise of impacts on environmental factors.

			Include item 10.11 (r) "potential haulage routes during construction"	It is expected that the haulage of materials (spoil) away and to the site would have a significant impact in terms of road asset damage, road safety, noise, dust and such like. Whilst it is recognised that each potential constructor would have a slightly different view on haulage routes, its absence from the EIS process will lead to sub-optimal consideration of the impacts that haulage routes will have on the community and council roads. In addition, its consideration at EIS stage allows potential constructors to adequately price for route upgrades and impact mitigation measures.
			Include item 10.11 (s) "those assets that are anticipated to be upgraded or changed by the project and are anticipated to be identified as Returned Works (those improvements that will be handed back to the LGA or others for future maintenance and operation).	It is expected that upgrades and realignments to roads will be required. There will be a need for a succinct process to be in place for various stages of design, construction, quality management and handover of the new asset.
			location and methods of acquiring water during construction and of proposed sites of water extraction	Lockyer Valley is an area that is economically dependant on irrigation water therefore any draw on underground or above ground water sources must be considered and planned for.
			Location for the disposal of contaminated soils and other products generated or left over from the project	It is important that these are identified and local government is aware of the proposed plans for disposal of any contaminants.
			Add: Describe alternate routes and implications for locations of high community impact and concern (e.g., town centres, known flood areas, area where the existing rail line is perceived to increase flooding upstream)	Doesn't appear to be covered elsewhere
			Consider need to add description of people & communities	environment' is defined in Schedule 2 of the SDPWO Act which includes people and communities.
Infrastructure requirements	Objectives	The project should provide necessary infrastructure to service the development that: (a) maintains or enhances services to existing users (b) ensures any required works are compatible with existing infrastructure.		
			Add objective: (c) undertake necessary planning and make allowance for infrastructure within understood ultimate footprint. As part of this, talk to Council and other stakeholders and authorities to identify planning, work programs and timeframes.	It is important that the project include provision for and co-ordinate with understood infrastructure interactions necessary to implement the ultimate development footprint e.g. rail crossings for Laidley and Gatton. This also incudes access to future passenger facilities.

			Add objective: (d) In line with the social objects of 11.8 " identify adverse and mitigate impacts associated with current affected infrastructure along with that may result from proposed infrastructure to enable adequate consideration and decision making relating to the objectives of Section 11.8".	It is possible that the project outcomes will result in significant changes to existing infrastructure (directly or indirectly) including removal of elements that may be currently be of positive or negative community benefit. Equally, where there is currently deficiencies that may able to be remedied at nil or marginal cost by this project these need to be identified and considered in order to achieve the objectives of Section 11.8.
		10.12 Describe with concept and layout plans, requirements for new infrastructure, or the upgrading and/or relocating of existing infrastructure to service the project. Infrastructure to be considered should include sewerage and water supply, energy supply, telecommunications, stormwater, waste disposal and locations of any infrastructure easements. Describe the timing of requirements for this infrastructure. 10.13 Describe the typical service corridors or clearances for sewerage and recycled water mains in relation to other services.		
11.1 Matters of National Environmental Significance	Background and Content	11.1 This section should provide a stand-alone description and detailed assessment of the impacts of the project on the controlling provision for the project under the EPBC Act inclusive of any avoidance, mitigation and offset measures. 11.2 The Commonwealth Minister for the Environment and Energy (the Commonwealth Minister) has determined that the project (EPBC 2017/7882) is likely to impact upon listed threatened species and communities (sections 18 and 18A of the EPBC Act). 11.3 The EIS must be prepared in accordance with the bilateral agreement between the Commonwealth of Australia and the State of Queensland relating to environmental assessment. This will enable the EIS to meet the impact assessment requirements under both Commonwealth and Queensland legislation. 11.4 The statutory obligations for conduct of the EIS process under the bilateral agreement are set out in Part 13 of the State Development and Public Works Organisation Regulation 2010. 11.5 Once the draft EIS has been prepared to the satisfaction of the Coordinator-General and MNES addressed to the satisfaction of the Australian Government Department of the Environment and Energy, the draft EIS will be made available for public comment. 11.6 The proponent may be required by the Coordinator-General or the Department of the Environment and Energy to provide additional material to address matters raised in submissions on the EIS. 11.7 At the conclusion of the environmental assessment process, the Coordinator-General will provide a copy of the report evaluating the environmental impacts of the project to the Commonwealth Minister. 11.8 After receiving the evaluation report and sufficient information about the relevant impacts of the action, the Commonwealth Minister for the Environment and Energy has 30 business days to consider whether the impacts of the proposal are acceptable, or not, and to decide whether or not to approve each controlling provision. 11.9 The Commonwealth Minister's decision under Part 9 of the EPBC Act is separate to the approval decisions made by Queensland state agencies and other agencies with jurisdiction on state matters.	Amend text to add: …of the stages of the project to preliminary investigations, construction, operation and, where applicable, decommissioning	The 'project' must be described and defined.

Information requirements	11.10 Consideration must be given to any relevant policy statements available from www.environment.gov.au, including: (a) Matters of National Environmental Significance: Significant impact guidelines 1.15 (b) Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy6 and (c) any approved conservation advice, recovery plans and threat abatement plans (as relevant) for listed threatened species and ecological communities.	Amend text to add: to include relevant state and local government plans including Queensland NRM Plan.	There can be no opportunity for any relevant documents to be overlooked.
	11.11 The EIS must: (a) assess all the relevant impacts that the action has, will have or is likely to have, including on receiving environments of the project (b) provide enough information about the action and its relevant impacts to allow the Commonwealth Minister to make an informed decision on whether or not to approve the action (c) address the matters set out in Schedule 4 of the Environment Protection and Biodiversity Conservation Regulations 2000 (Cwlth) (EPBC Regulations).	Add text to add: where all actions and project stages are clearly described and considered.	The 'project' and 'actions' must be clearly defined and considered
	11.12 The MNES section of the EIS should bring together assessments of impacts from other chapters and produce a stand-alone assessment in a format suited for assessment under the EPBC Act.	Add text to add: …the EIS should bring together, analyse, consider and determine the impacts of the assessments…	Bringing together' is insufficient.
	11.13 The project should initially be assessed in its own right followed by an assessment of the cumulative impacts related to all known proposed developments in the region with respect to the controlling provision and all identified consequential actions. Cumulative impacts not solely related to the project development should also be described.	Amend text to add: cumulative impacts must also consider the accumulated effects on ecosystems and food webs including inter-species interaction for example and competitive pressures.	Does not specifically identify the accumulated impacts of other activities (both past and recent) such as land clearing that can affect the functionality of ecosystems and trophic relations.
	11.14 Predictions of the extent of threat (risk), impact and the benefits of any mitigation measures proposed, should be based on sound science and quantified where possible. All sources of information relied upon should be referenced.	Amend text to add: all sources of information and analysis on risks and benefits must be peer reviewed.	Referencing alone is insufficient. Sound science depends upon peer review.
	11.15 An estimate of the reliability of any predictions should be provided.	Amend text to add: reliability of predictions and confidence levels informing decisions making must be peer reviewed.	Referencing alone is insufficient. Sound science depends upon peer review.
	11.16 Any positive impacts of the project should be identified and evaluated.	Amend text: Any positive impacts of the project must be fully described, identified and evaluated. The value of these impacts will be peer reviewed.	Third party analysis cannot assess 'positive impacts' without a clear description of those impacts.
		Add in adverse/negative impacts	should identify, evaluate and mitigate any adverse impacts of the project
	11.17 The extent of any new field work, modelling or testing should be commensurate with risk and should be such that when used in conjunction with existing information, provides sufficient confidence in predictions that well-informed decisions can be made.	Amend text to include: where risk(s) are described with the method of evaluation.	Risks and the assessment of risks can be subjective and care must be taken to ensure that risks are not underestimated.
	11.18 In accordance with Schedule 4 of the EPBC Regulations, feasible project alternatives must be discussed, including: (a) if relevant, the alternative of taking no action; (b) a comparative description of the impacts of each alternative on the triggered MNES protected by the controlling provision (c) sufficient detail to make clear why any alternative or option is preferred to another.	Amend text: '…feasible project alternatives must be discussed following baseline assessment.	Discussion on options can only considered where the existing baseline condition is established.
	11.19 Short, medium and long-term advantages and disadvantages of the alternatives or options must be discussed.	Amend text to read "Short, medium and long-term advantages and disadvantages of the alternatives or options must be discussed with local government, state and federal agencies". Similarly, the terms 'short', 'medium' and 'long-' must be described or determined.	It was not clearly defined who the discussions were to place between. Definitions are important for an informed analysis and discussion.

	11.20 The information provided must include details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against: (a) the person proposing to take the action (b) for an action for which a person has applied for a permit, the person making the application. If the person proposing to take the action is a corporation, details of the corporation's environmental policy and planning framework must also be included.		
	11.21 The economic and social impacts of the action, both positive and negative, must be summarised. Matters of interest should include: (a) consideration at the local, regional and national levels (b) any public consultation activities undertaken, and their outcomes (c) any consultation with indigenous stakeholders (d) identification of affected parties and communities that may be affected and a description of the views of those parties and communities (e) project economic costs and benefits of the project and project alternatives, including the basis for their estimation through cost/benefit analysis or similar studies; and (f) employment and other opportunities expected to be generated by the project in each of the construction and operational phases.	Amend text in section (a) to read "consideration at the Local Government Area, regional and national levels"	Current wording makes no specific provision for any employment or other opportunity for genuinely local residents and businesses.
	11.22 The EIS must provide background to the action and describe in detail all components of the action for example (but not limited to), the construction, operation and (if relevant) decommissioning components of the action. This must include the location of all works to be undertaken (including associated offsite works and infrastructure), structures to be built or elements of the action that may have impacts on MNES.	Amend text to add: …including cumulative impacts and impacts on species and ecological communities remote from the corridor or area or operations.	Additional clarification required.
	11.23 The description of the action must also include details on how the works are to be undertaken (including stages of development and their timing) and design parameters for those aspects of the structures or elements of the action that may have relevant impacts.	Amend the text to add: The timing of stages must take into consideration, diurnal, seasonal temporal changes to the environment. Explanation must be provided on the reason for responding to these changes.	Environmental and meteorological variability must be considered when undertaking works or operations to ensure impacts are avoided or effectively mitigated.
	11.24 The EIS must also provide details on the current state of groundwater and surface water in the region as well as any use of these resources.	Amend text to read "The EIS must also provide details on the current state of groundwater (including aquifers) and surface water in the region as well as any use of these resources" The 'state' of groundwater must include analysis of volumes, flow, salinity, turbidity, nutrients and pollutants. It should also include the potential for other projects such as the proposed Wivenhoe pipeline to supplement existing ground and surface waters.	Groundwater is a broad term and the aquifers play a significant part in the regions agricultural production industries. It is essential that this is included in the study. Water is as much about quality as it is about quantity.
Listed threatened species	11.25 The EIS must describe the listed threatened species and ecological communities identified below (including EPBC Act status, distribution, life history and habitat).	Amend text to add: Maps of threatened species and ecological communities must be included in the descriptions.	It is critical to know where threatened ecological communities are or may be with particular reference to the rail corridor alignment, associated infrastructure and activity centres.

	11.26 The EIS must consider and assess the impacts to the listed threatened species and ecological communities and any others that are found to be or may potentially be present in areas that may be impacted by the project. Impacts from each component of the project of relevance to each listed threatened species or ecological community should be identified. Impacts may result from: (a) a decrease in the size of a population or a long-term adverse effect on an ecological community (b) reduction in the area of occupancy of the species or extent of occurrence of the ecological community (c) fragmentation of an existing population or ecological community (d) disturbance or destruction of habitat critical to the survival of the species or ecological community (e) disruption of the breeding cycle of a population (f) modification, destruction, removal, isolation or reduction of the availability or quality of habitat to the extent that the species is likely to decline (g) modification or destruction of abiotic (non-living) factors (such as water, nutrients or soil) necessary for the ecological community's survival (h) the introduction of invasive species that are harmful to the species or ecological community becoming established (i) interference with the recovery of the species or ecological community (j) action that may be inconsistent with a recovery plan.	Subsection (c) must also refer specifically to loss of connectivity or increase in connectivity where applicable. Subsection (f) should also refer specifically to loss or diminution of food source. Subsection (i) should list the species or ecological community and provide a description of the type and degree of 'interference'. Subsection (j) describe the type and extent of the action on the recovery plan. The recovery plans should be detailed.	Insufficient detail.
	11.27 The EIS should describe any mitigation measures proposed to reduce the impact on the listed threatened species and ecological communities and proposed mitigation measures. 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.	Amend text to add: all proposed mitigation measures must be peer reviewed to establish the confidence level of the measures or contingencies.	Peer review of critical mitigation measures or contingencies is essential to avoid irreversible impacts.
	11.28 The EIS should describe any offsets proposed to compensate for residual impacts.	Amend the text to add: The offsets must be fully described including the trigger for the offset, the position of the impact site (where applicable) and the position of the receiving site and the details of who and how the offset will be achieved.	The detail of offsets is critically important in determining the likely effectiveness and costs of offsets.
List of potential listed threatened species	11.29 The EIS must address impacts on, but not limited to, the following listed threatened species for the proposed action: (a) Regent Honeyeater (Anthochaera phrygia) – critically endangered; (b) Australasian Bittern (Botaurus poiciloptilus) – endangered; (c) Curlew Sandpiper (Calidris ferruginea) – critically endangered; (d) Coxen's Fig-Parrot (Cyclopsitta diophthalma coxeni) – endangered; (e) Eastern Bristlebird (Dasyornis brachypterus) – endangered; (f) Red Goshawk (Erythrotriorchis radiatus) – vulnerable; (g) Squatter Pigeon (southern subspecies) (Geophaps scripta scripta) – vulnerable; (h) Painted Honeyeater (Grantiella picta) – vulnerable; (i) Swift Parrot (Lathamus discolor) – critically endangered, marine; (j) Eastern curlew (Numenius madagascariensis) – critically endangered, marine, migratory; (k) Black-throated Finch (southern) (Poephila cincta cincta) – endangered; (l) Australian Painted Snipe (Rostratula australis) – endangered, marine;		

(m) Black-breasted Button-quail (Turnix melanogaster) – vulnerable;
(n) Large-eared Pied Bat (Chalinolobus dwyeri) – vulnerable;
(o) Corben's Long-eared Bat, South-eastern Long-eared Bat (Nyctophilus corbeni) – vulnerable;
(p) Northern Quoll (Dasyurus hallucatus) – endangered;
(q) Spot-tailed Quoll (SE mainland population) (Dasyurus maculatus maculatus) – endangered;
(r) Greater Glider (Petauroides volans) – vulnerable;
(s) Brush-tailed Rock-wallaby (Petrogale penicillata) – vulnerable;
(t) Koala (Phascolarctos cinereus) (combined populations of Queensland, New South Wales and the Australian Capital Territory) – vulnerable;
(u) Long-nosed Potoroo (SE mainland) (Potorous tridactylus tridactylus) – vulnerable;
(v) New Holland Mouse (Pseudomys novaehollandiae) – vulnerable;
(w) Grey-headed Flying-fox (Pteropus poliocephalus) – vulnerable;
(x) Collared Delma (Delma torquata) – vulnerable;
(y) Yakka Skink (Egernia rugosa) – vulnerable;
(z) Dunmall's Snake (Furina dunmalli) – vulnerable;

(aa) Condamine Earless Dragon (Tympanocryptis condaminensis) – endangered;
(bb) Five-clawed Worm-skink (Anomalopus mackayi) – vulnerable;
(cc) Murray Cod (Maccullochella peelii) – vulnerable;
(dd) Hairy-joint Grass (Arthraxon hispidus) – vulnerable;
(ee) Satin-top Grass (Bothriochloa bunyensis) – vulnerable;
(ff) Miniature Moss-orchid, Hoop Pine Orchid (Bulbophyllum globuliforme) – vulnerable;
(gg) Stream Clematis (Clematis fawcettii) – vulnerable;
(hh) King Blue-grass (Dichanthium queenslandicum) – endangered;
(ii) Bluegrass (Dichanthium setosum) – vulnerable;
(jj) Grevillea quadricauda – vulnerable;
(kk) Tall Velvet Sea-berry (Haloragis exalata subsp. velutina) – vulnerable;
(ll) Leionema obtusifolium – vulnerable; (mm)Wandering Pepper-cress (Lepidium peregrinum) – endangered;
(nn) Macadamia nut (Macadamia integrifolia) – vulnerable;
(oo) a grass (Paspalidium grandispiculatum) – vulnerable;
(pp) Mt Berryman Phebalium (Phebalium distans) – critically endangered;
(qq) Hawkeed (Picrus evae) – vulnerable;
(rr) Austral Cornflower, Native Thistle (Rhaponticum australe) – vulnerable;
(ss) Quassia (Samadera bidwillii) – vulnerable
(tt) Waxy Sarcochilus, Blue Knob Orchid (Sarcochilus hartmannii) – vulnerable;
(uu) Blotched Sarcochilus, Weinthal's Sarcanth (Sarcochilus weinthalii) – vulnerable;
(vv) Sophora fraseri – vulnerable; and
(ww) Austral Toadflax, Toadflax (Thesium australe) – vulnerable.

List of potential listed threatened Communities

11.30 The EIS must address impacts on the following listed threatened ecological communities for the proposed action:

(a) Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions - endangered;
(b) Lowland Rainforest of Subtropical Australia – critically endangered;
(c) Natural grasslands on basalt and fine-textured alluvial plains of northern New South Wales and southern Queensland – critically endangered;
(d) Weeping Myall Woodlands – endangered;
(e) Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions – endangered; and

			(f) White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (also known as Box-Gum Grassy Woodland and Derived Grassland) – critically endangered.		
	Offsets	11.31	The EIS must describe the residual impacts of the action for each relevant matter protected by the EPBC Act, after all proposed avoidance and mitigation measures are taken into account.	Amend text to add: Residual impacts must be determined upon initial assessment of baseline condition and subsequent change.	Residuals cannot be determined without first establishing the baseline condition, calculating or estimating the outcome of the minimising or mitigating measures and subtracting one from the other.
		11.32	The EIS must propose offsets for all residual impacts to matters protected by the EPBC Act consistent with the Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy.	Amend text to read "The EIS must propose offsets for all residual impacts to matters protected by the EPBC Act consistent with the Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy. Regional specific offsets in local areas affect to be considered as a priority.	Regions that have been affected with the construction and operation should be allowed the opportunity to receive the offsets locally
	Conclusion	11.33	The EIS must include an overall conclusion for the action describing the acceptability of the impact of undertaking the action in the manner proposed on the protected matters, in the context of: (a) the requirements of the EPBC Act; (b) the principles of ecologically sustainable development and the precautionary principle; and (c) the proposed avoidance, mitigation measures, and if relevant, offsets measures proposed to address any residual impacts.	Amend text to add: Subsection (b) describing how the principles of ecologically sustainable development and the precautionary principle have been applied.	Context' is insufficient here. Detail must be provided.
11.2 Water		Objective	Development is planned, designed, constructed and operated to protect environmental values of Queensland waters and supports the achievement of water quality objectives.	Amend text to add: …to protect and enhance environmental values of Queensland waters…And add: construction, operation and decommissioning of the project. Subsection (c) add: aquifers and other groundwater's and the stability of beds, banks and floodplains. Subsection (d) add: groundwater-dependent ecosystems including stygofauna are not adversely impacted by the development and operation of the project.	Objective is too generic and non-specific.
			The construction and operation of the project should aim to meet the following objectives: (a) equitable, sustainable and efficient use of water resources (b) environmental flows, water quality, in-stream habitat diversity, and naturally occurring inputs from riparian zones support the long-term maintenance of the ecology of aquatic biotic communities (c) the condition and natural functions of water bodies, lakes, springs and watercourses are maintained—including the stability of beds and banks of watercourses		
			(d) volumes and quality of groundwater are maintained and current lawful users of water (such as entitlement holders and stock and domestic users) and other beneficial uses of water (such as spring flows and groundwater-dependent ecosystems) are not adversely impacted by the development.	Amend text in section (d) to read "volumes and quality of groundwater and dams are maintained…"	This appears to be all about underground water; we need to ensure it also captures impacts on above-ground catchments for property owners, etc.
	Existing Environment	11.34	Describe the hydrology within the study area and the adjoining waterways in terms of water levels, discharges and freshwater flows.	Amend text to add: describe the hydrology within the Lockyer Catchment with particular emphasis on climate variability and storm/extreme events.	Hydrology assessment within the study is grossly insufficient.

	11.35 Detail the chemical and physical characteristics of surface waters and groundwater within the area that may be affected by the project. Include a description of water quality variability associated with climatic and seasonal factors, variability of freshwater flows and extreme events.	Amend text to add: …with particular emphasis on salinity and how the project will mitigate adverse impacts and enhance water quality.	Salinity is a particular issue for the Lockyer valley and the irrigated horticulture. Any loss of water quality, especially any increase in salinity during low aquifer water levels could have serious impacts.
	11.36 Describe the proposed management of existing and/or constructed waterbodies on the preferred alignment to maintain water quality.	Amend text to add: …that recognises and achieves the outcomes and intent of the Lockyer Catchment Action Plan.	The Lockyer Catchment Action Plan describes in detail how water bodies and associated catchments should be managed. A generic approach to water body management is likely to be insufficient or ineffective.
Water quality - Impact assessment	11.37 The assessment of impacts on water will be in accordance with the Department of Environment and Heritage Protection's (DEHP) application requirements for the ERAs with impacts to water (Guideline ESR/2015/1837).	The fact that some of the line may be at least 8m above the surrounding land could be considered a barrier to flow, and in the case of these earth features may cause dryland salinity upstream if they are constructed across flow lines. The weight also causing a change in the hydrology often can cause water to rise either side of this features	Hydrological study should be requested to determine whether there are any issues in these areas
	11.38 Identify the quantity, quality and location of all potential discharges of water and wastewater by the project, whether as point sources (such as controlled discharges) or diffuse sources (such as irrigation to land of treated sewage effluent).	Amend text to add: type of pollutant, potential impacts and measures to avoid, mitigate or offset.	Any pollution included in water discharges must be identified and management measures descried.
	11.39 Assess the potential impacts of any discharges on the quality and quantity of receiving waters taking into consideration the assimilative capacity of the receiving environment and the practices and procedures that would be used to avoid or minimise impacts.	Amend text to add: including nutrient offsets where applicable.	As above.
Water quality - Mitigation measures	11.40 Describe how the achievement of the objectives would be monitored and audited, and how corrective actions would be managed.	Amend text to add: throughout the lifetime of the project including construction, operation and decommissioning.	All life stages of the project must be considered.
	11.41 Describe mitigation strategies and contingency plans for: (a) potential accidental discharges of contaminants and sediments during construction and operation (b) stormwater run-off from the project facilities and associated infrastructure (c) flooding of relevant river systems, the effects of tropical cyclones and other extreme events (d) management of acid sulfate soils.	Add an additional item (e) declared drought periods. Add (a) and (b) and remediation activities. Add (c) including consideration of how the construction and operation of the project may contribute to the impacts of flooding, how this will mitigated and remediated and an assessment of the potential for a catastrophic failure of the project's structures including embankments during construction and operation and how the risks will me mitigated and, where applicable, remediated. Add (d) sodic, dispersive and salt affected soils.	Our regions local economy is very much dependent on water supply to the region so when in times of need water can be a very valuable resource
		Add an additional item (f) increase and decrease flows into private dams, farmland and properties including consideration of any contaminants.	We need to ensure on-farm dams are protected and don't lose their current in-flows or water health, and also that properties don't receive changed overland flows that cause other issues (e.g., scouring, soil movement, etc.)
Water resources - Impact Assessment	11.42 Provide details of any proposed impoundment, extraction, discharge, use or loss of surface water or groundwater. Identify any approval or allocation that would be needed under the Water Act 2000 (Water Act).	Amend text to add: and describe how these activities may impact on agricultural activities especially horticultural irrigation and measures to minimise impacts and provide compensation of unavoidable impacts.	Identification alone is insufficient.

	11.43 Detail any significant diversion or interception of overland flow. Include maps of suitable scale showing the location of diversions and other water-related infrastructure.	Amend text to add: Include fluvio-geomorphological studies and hydrological modelling to determine the impact of diversions or interceptions. All activities must recognise and achieve the outcomes of the Lockyer Catchment Action Plan.	The behaviour of creek systems and relationships with substrates (soils and geology) is complex and must be carefully considered. The project will potentially place embankments/structures on the floodplain which may affect movement of ground water and/or change the operation and movement of how surface/ground water interact potentially creating adverse conditions for current land uses/adverse impacts on current/future infrastructure e.g. salt movement and deposition patterns, exposure environment for infrastructure elements.
	11.44 Develop hydrological models as necessary to describe the inputs, movements, exchanges and outputs of all significant quantities and resources of surface water and groundwater that may be affected by the project. The models should address the range of climatic conditions that may be experienced at the site, and adequately assess the potential impacts of the project on water resources. This should enable a description of the project's impacts at the local scale and in a regional context including proposed: (a) changes in flow regimes from structures and water take (b) alterations to riparian vegetation and bank and channel morphology (c) direct and indirect impacts arising from the project.	Amend text to read "Develop hydrological models as necessary to describe inputs, movements, exchanges and outputs of all significant quantities and resources of surface and ground water (including aquifers) that may be affected by the project……."	It is important that aquifer is specified as it is the major source of water in the Lockyer Valley and essential for main industry of agriculture (horticulture)
	11.45 Provide information on the proposed water usage by the project, including details about: (a) the ultimate supply required to meet the demand for construction and full operation of the project, including timing of demands (b) the quality and quantity of all water supplied to the site during the construction and operational phases based on minimum yield scenarios for water reuse, rainwater reuse and any bore water volumes (c) a site plan outlining actions to be taken in the event of failure of the main water supply.	Amend text to add (d) the source and means of accessing water.	Where will the water come from?
	11.46 Describe proposed sources of water supply given the implication of any approvals required under the Water Act. Estimated rates of supply from each source (average and maximum rates) must be given and proposed water conservation and management measures must be described.	As 11.44	The use of groundwater will be contentious.
	11.47 Determination of potable water demand must be made for the project, including the temporary demands during the construction period. Include details of any existing town water supply to meet such requirements. Detail should also be provided to describe any proposed on-site water storage and treatment for use by the site workforce.	Amend text to add: and the capacity of existing town water supplies to meet expected demand.	The project cannot deduct from potable water supplies to the community of the Lockyer to its detriment.
	11.48 Identify relevant Water Plans and Resources Operations Plans under the Water Act. Describe how the project will impact or alter these plans.	Amend text to add: and any planned or potential changes to water plans or resource operation plans.	The rules regarding water allocation in the Central Lockyer.
Water resources - Mitigation measures	11.49 Provide designs for all infrastructure utilised in the treatment of on-site water including how any on-site water supplies are to be treated, contaminated water is to be disposed of and any decommissioning requirements and timing of temporary water supply/treatment infrastructure is to occur.	Amend text to add: and any necessary nutrient offsets required.	The project has the capacity to negate much of the work that is being down to remove nutrients and pollutants in the creeks and streams of the Lockyer catchment.
	11.50 Describe measures to minimise impacts on surface water and ground water resources.	Amend text to read "Describe measures to minimise impacts on surface water and ground water resources including in times or drought" And add: avoid, minimise and where applicable, offset impacts.	Drought periods can be a difficult time in the local region and measures need to be made to avoid impacts on the local agricultural industry. Describing is insufficient.

Flood management - existing environment	11.51 A desktop assessment of the rail line and surrounding catchments must be undertaken and the potential for flooding qualitatively described. The desktop assessment must also identify any high-risk watercourse crossing or floodplain locations that warrant further detailed quantitative assessment	Amend text to add: and include discussions with the big flood study team and healthy land & water and with reference to the Lockyer Catchment Action Plan.	A desktop study alone will be insufficient.
		Add text: A gap analysis shall be undertaken to identify changes in design and input parameters and deficiencies in existing studies and understandings.	There have been major changes in design and input parameters in recent times, additionally deficiencies in Annual Exceedance probable's have been identified within the catchment area that need to be addressed. There have been changes in software and technology that may enable better modelling representation. Floodplain operations over the configuration is this locality is sensitive to small changes. This may mean that work to date is no longer current.
Flood management - impact assessment	11.52 For these locations, a flood study must be included in the EIS that includes: (a) quantification of flood impacts on properties surrounding and external to the preferred alignment from redirection or concentration of flows (b) identification of likely increased flood levels, increased flow velocities or increased time of flood inundation as a result of the project	Amend text to remove: properties surrounding and external to the preferred alignment and add: the whole of the Lockyer catchment.	The catchment must be considered as a whole.
	(c) details of all calculations along with descriptions of base data and any potential for loss of flood plain storage.	Add text: (d) incorporate and address learning from the gap analysis in Section 11.48	Addressing findings 11.48
	11.53 The flood study should address any requirements of local or regional planning schemes for flood affected areas.	Amend text to add: and findings of the Big Flood Study.	Historical data is insufficient. Geological evidence is critically important in determining the exceedance levels. Refer to 11.48
	11.54 Describe flood risk for a range of annual exceedance probabilities (including Probable Maximum Flood) for the site, and assess how the project may change flooding characteristics. Include a discussion of historical events.	Amend text to add: and findings of the Big Flood Study.	Historical data is insufficient. Geological evidence is critically important in determining the exceedance levels.
	11.55 The study should consider all infrastructure associated with the project including levees, roads and linear infrastructure.	Amend text to Add "and the cumulative effect of all such factors" And levees, roads and lineal infrastructure not associated with the project and their accumulated impacts.	The original probably intends this already, but want to ensure that no piece of infrastructure is considered on it's own and that they also consider the impact at different flow heights and not just peak
	11.56 The EIS should describe the consultation that has taken place with landholders along the alignment regarding modelled potential impacts of the project on flooding. Include discussion of how the results of consultation have, will be, considered by the proponent in the EIS process.	Amend text to delete: the alignment and add: throughout the flood plains of the Lockyer catchment.	Flooding and flooding impacts will affect much more than properties within the alignment.
	11.57 Reference must be made to any studies undertaken by the local council(s) in relation to flooding.	Amend text to add: including results of the Big Flood Study funded by LVRC and with reference to the Lockyer Catchment Action Plan.	Understanding flooding in the Lockyer catchment requires an understanding of the fluvio-geomorphology and the climactic variability over extended timescales and the impact of flooding on communities and infrastructure.
		Amend text "by the local council" to "by the local council and other parties, including planned infrastructure and/or mitigation activities"	With reference to 11.48 - there have been significant studies under since the 2011 flooding, these include the Brisbane River Flood Study, SEQCOM, SEQWater, SEQ catchments, BOM, IEAust, QR, TMR, Toowoomba Second Range Crossing. There are also planned mitigation schemes and other infrastructure that may need to be considered in terms of synergies or mutual impacts.

				Add "Identify opportunities to improve flood immunity for localities along the rail corridor through proposed design alternatives and complementary community benefit programs (e.g., funding local levee projects)	To achieve some betterment as a 'community compensation' for the project as a whole. Refer to "Infrastructure requirements" objectives
	Flood management - Mitigation measures	11.58	Describe all proposed measures to avoid or minimise risks to life, property, community (including damage to other properties) and the environment as a result of project impacts during flood events particularly flood risks on individual properties, including in and around Grantham, Gatton, Forest Hill, Laidley, Grandchester and Calvert.	Amend text to include "businesses" And add: measures taken to reduce flood volumes and velocities.	Risk to businesses should also be a part of the proposed measures
				Amend text to also include: "...Infrastructure (both transportation and rural)..." Further Amendment to Add "Laidley South, Laidley North, Glenore Grove, Glen Cairn"	Consider of these is essential to capturing impacts holistically. I know it says "in and around" but it's important that we note the wider impact zone of flooding.
11.3 Land		Objectives	Development should be designed and operated to:	Add 'Helidon' Amend objectives to read: "Development should be designed, constructed and operated to: (a) avoid or minimise adverse environmental outcomes and seek to achieve environmental sustainability (b) avoid or minimise adverse social, economic and environmental outcomes for existing communities and those currently under development (c) ensure the ongoing maintenance of community wellbeing in all impacted communities"	Add in all localities along the route The EIS should be an honest assessment of the "impacts" and so should not use terms such as "improve" and "contribute to" that give a false impression that the impacts of the development will only be beneficial when it is clear there will be adverse impacts on impacted communities.
			(a) improve environmental outcomes (b) contribute to community wellbeing (c) contribute to social, economic and environmental sustainability.		
	Land use and tenure - existing environment	11.59	Detail the existing land use values for all areas associated with the project.	Amend text for 11.59 to read: "Detail the existing land uses for all areas impacted by the construction and operation of the project (including all areas that are impacted by noise, vibration and visual impacts)."	Need greater certainty as to what constitutes "areas associated with the project". Should be all areas impacted by the proposal.

	11.60 Discuss the compatibility of the project with the surrounding area. The discussion should include: (a) existing and proposed land uses, in and around the preferred alignment, referring to regional plans and the local government planning scheme/s (b) any tenures overlying and adjacent to the preferred alignment, and any to be applied for as part of this project (c) state interests identified in the State Planning Policy (SPP) (d) locational factors influencing the choice of preferred alignment.	Amend the text for 11.60 to read: "Discuss the compatibility of the project with land that includes the proposed alignment and surrounding land which will be impacted by the project (including all areas that are impacted by noise, vibration and visual impacts). The discussion should include: (a) existing land uses, existing land use rights (such as the right to build a residence on a vacant residential lot) and development for which a development approval exists (b) the proposed use of land that is identified in local government planning schemes and the regional plan (c) state interests identified in the State Planning Policy (SPP) (d) the tenure of all land within the proposed alignment and surrounding land which will be impacted by the project and any changes to tenure that will be required to facilitate the project (e) the locational factors that influenced the choice of the preferred alignment"	Need greater certainty as to what constitutes "areas associated with the project". Should be all areas impacted by the proposal. Need to consider not just current land uses but approved development and rights of property owners that have not been exercised (e.g. owners of lots in the Valley Vista estate).
Land use and tenure - Impact assessment	11.61 Describe the potential for the construction and operation of the project to change existing and potential land uses of the preferred alignment and adjacent areas.	Amend the text for 11.61 to read: "Discuss the impacts of the project on land that includes the proposed alignment and surrounding land which will be impacted by the project (including all areas that are impacted by noise, vibration and visual impacts). The evaluation of the impacts should include: (a) existing land uses, existing land use rights (such as the right to build a residence on a vacant residential lot) and development for which a development approval exists (b) the proposed use of land that is identified in local government planning schemes and the regional plan (c) state interests identified in the State Planning Policy (SPP) (d) the tenure of all land within the proposed alignment and surrounding land which will be impacted by the project and any changes to tenure that will be required to facilitate the project (e) the locational factors that influenced the choice of the preferred alignment"	Need greater certainty as to what constitutes "areas associated with the project". Should be all areas impacted by the proposal. Need to consider not just current land uses but approved development and rights of property owners that have not been exercised (e.g. owners of lots in the Valley Vista estate). Additionally consideration and avoidance of orphan lots, maintenance of current and future potental recreational links, maintenance of corridors for flora and fauna movement, fire and evacuation routes must be considered in terms efficent use of land, hazard management, future "places" development, economic and ecological grounds.

	11.62 Discuss the proposal in the context of the applicable Regional Plan and local planning schemes	Amend the text for 11.62 to read: "Detail the measures proposed to avoid or minimise impacts of the project on land that includes the proposed alignment and surrounding land which will be impacted by the project (including all areas that are impacted by noise, vibration and visual impacts). The evaluation should address impacts on: (a) existing land uses, existing land use rights (such as the right to build a residence on a vacant residential lot) and development for which a development approval exists (b) the proposed use of land that is identified in local government planning schemes and the regional plan (c) state interests identified in the State Planning Policy (SPP) (d) the tenure of all land within the proposed alignment and surrounding land which will be impacted by the project and any changes to tenure that will be required to facilitate the project (e) the locational factors that influenced the choice of the preferred alignment"	Need greater certainty as to what constitutes "areas associated with the project". Should be all areas impacted by the proposal. Need to consider not just current land uses but approved development and rights of property owners that have not been exercised (e.g. owners of lots in the Valley Vista estate). Need to detail proposed mitigation measures.
		Needs mitigation measures section which includes compensation for all those affected by negative impacts on valuations, lifestyle, health, business, etc.	
Native Title	11.63 Identify existing and potential Native Title rights and interests possibly impacted by the proposed project and describe how those impacts will be managed.	Amend to Identify existing and potential Native Title rights and interests impacted by the proposed project and describe how those impacts will be managed.	The project will impact to some degree
Landscape and visual amenity	11.64 Describe and illustrate the visual impact of the construction and operation of the project. Include major views, view sheds, outlooks, and features contributing to the amenity of the area.	Amend text to add: and how the visual impact of the project will be ameliorated and softened. Add "Address the findings, requirements and recommendations of South East Queensland Regional Plan 2005-2026 Implementation Guideline No 8 - Identifying and Protecting Scenic Amenity Values (2007)"	I would like to see in this section information on the existing environment, the impact assessment and the mitigation measures This document addresses the very high value of scenic amenity particularly in rural areas
		Amend the text for 11.64 to read: "Analyse the visual impact of the construction and operation of the project. Include details of all locations from which the project will have a visual impact, analyse the impact on visual amenity and landscape values and detail proposed measures to mitigate the visual impact and impact on landscape values."	Need information on impacts and mitigation measures.
Topography, geology and soils	11.65 The assessment of impacts on land will be in accordance with DEHP application requirements for the ERAs with impacts to land (Guideline ESR/2015/1839). 11.66 If the project impacts on Priority Agricultural Areas, Priority Living Areas, Strategic Environmental Areas, Strategic Cropping Areas, provide the approach to addressing the requirements of the Regional Planning Interests Act 2014.		

		11.67	Identify potential and actual areas of acid sulfate soils. Where potential areas are identified, further investigations (including field surveys) should be undertaken in accordance with accepted industry guidelines.	Amend text to add: and investigate areas of salinity (both recharge and expression) and areas of sodic, dispersive and expansive soils. Measures to avoid or mitigate must be fully explored and explained.	
				This section should analyse and discuss the visual impact of the project on views and visual amenity. It should be written in terms of the extent and significance of the changes to the view as experienced. Such views should be representative of public and private viewpoints, including places of residence, work, and recreation, from road, cycle and walkways, from the air and other known vantage points day and night and during all stages of the project as it relates to the surrounding landscape. The assessment is to address the visual impacts of the project structures and associated infrastructure, using appropriate simulation. Sketches, diagrams, computer imaging and photos are to be used where possible to portray the near views and far views of the completed structures and their surroundings from visually sensitive locations including public roads, public thoroughfares, and places of residence or work, which are within the line-of-sight of the project. Detail should be provided of all management options to be implemented and how these may/will mitigate or avoid the identified impacts.	I would like to see in this section information on the Existing environment, the impact assessment and the Mitigation measures
				Add another section to ensure the proponent looks at ways to use excess soil disposal within the local community	There may be opportunities with Council to use that Soil to cap existing land fill sites
11.4 Flora and Fauna		Objective	Matters of environmental significance are valued and appropriately safeguarded to support healthy and resilient ecosystems and ensure the sustainable, long-term conservation of biodiversity and the social, economic, cultural and environmental benefits it provides.	Amend text to add: Matters of environmental significance are to be established, valued and appropriately safeguarded etc. and: for the lifetime of the project including construction, operation and decommissioning.	Safeguarding biodiversity must extend beyond matters of MNES and MSES.
	Existing Environment	11.68	Identify and describe the biodiversity and natural environmental values of the terrestrial and aquatic ecology likely to be impacted by the project which have not been addressed in the section on MNES.	(h) Consider bushfire vulnerability	

Impact Assessment	11.69	Describe the likely impacts on the biodiversity and natural environmental values of affected areas arising from the construction and operation of the project. The assessment should include, but not be limited to, the following key elements: (a) matters of state environmental significance (b) terrestrial and aquatic ecosystems (including groundwater-dependent ecosystems) and their interaction (c) biological diversity including listed flora and fauna species and regional ecosystems (d) the existing integrity of ecological processes, and habitats of threatened, near-threatened or special least-concern species (e) the integrity of landscapes and places, including wilderness and similar natural places (f) actions of the project that may require an authority under the Nature Conservation Act 1992 and Water Act (for example, riverine protection permits) and/or could be assessable development for the purposes of the Vegetation Management Act 1999, the Fisheries Act 1994 (g) chronic, low-level exposure to contaminants or the bio-accumulation of contaminants (h) impacts on native fauna due to proximity to the site and site impacts (e.g. lighting, noise, waste and fencing) (i) impacts to movement of native fauna due to barrier effect of linear infrastructure.	Amend text to add to: (d) including those species (both flora and fauna) that the threatened species are dependant upon. (f) and EPBC Act. (h) and flora and impacts on abiotic elements e.g. quantity and quality of water, shading, soils including minerals and symbiotic bacteria.	
Mitigation Measures	11.70	Describe any proposed measures to avoid, minimise or mitigate potential impacts on natural values, and enhance these values. Assess how the nominated quantitative indicators and standards may be achieved for nature conservation management. In particular, address measures to protect or preserve any threatened or near-threatened species.	Amend text to add: and offset	Offsetting may be critical in achieving the Objective.
	11.71	Assess the need for buffer zones and the retention, rehabilitation or planting of movement corridors, and propose measures that would avoid the need for waterway barriers, or propose measures to mitigate the impacts of their construction and operation.	Amend text to add: 'movement corridors' must also include the identification and understanding of the loss of connectivity for less obvious species including, for example, bush birds, frogs.	Fauna movement needs to be carefully considered and must be reduced to consider all species including flora.
	11.72	Describe how the achievement of the objectives would be monitored and audited, and how corrective actions would be managed.		
	11.73	Where significant residual impact on matters of State environmental significance remain following the implementation of measures to avoid and mitigate impacts, describe any environmental offsets proposal for that impact.		
Biosecurity	Objective	The construction and operation of the project should aim to ensure: (a) the spread of weeds and pest animals is minimised (b) existing weeds and pests are controlled.	Amend (a) to: the spread of weeds and pest animals is <u>prevented</u> Amend (b) to: existing weeds and pests are <u>eradicated.</u>	This project is high risk for restricted matter movement.
Existing Environment	11.74	Provide information on the current distribution of animal pests and weeds on the preferred alignment.	Amend text to add: 'and pest animal harbour' Amend text to add: 'and within adjoining properties and reserves (e.g. road, creek), or within 150m of the alignment, whichever is greater.' Is there a way to ensure Fire Ants are specifically included due to the presumably high levels of soil movement and our region's sensitivity to the threat?	Pest animals may not be physically present, but suitable harbour may encourage their presence. Animals and weeds are not restricted by property boundaries, therefore a minimum buffer should be included, due to the potential for rapid spread. Reserves such as roads and creeks also provide easy mechanisms for spread, therefore need to be carefully considered.

	Impact Assessment	11.75	Describe the impact the project's construction and operation will have on the spread of pest animals and weed species along the preferred alignment and into adjoining properties.	Amend text to add: 'and into adjoining properties and reserves (e.g. road, creek), or within 150m of the alignment, whichever is greater.'	As above.
	Mitigation Measures	11.76	Propose detailed measures to control and limit the spread of pests and weeds on the preferred alignment and adjacent areas and any relevant local government area Biosecurity Plans. This includes restricted matters listed in the Biosecurity Act 2014 (Biosecurity Act) and Biosecurity Regulation 2016, declared plants under the Stock Route Management Act 2002 and designated pests under the Public Health Act 2005.	Amend text to add: 'All Restricted pest weed species and pest animal harbour shall be identified, GPS marked and mapped, and treated prior to any major machinery work to avoid the potential spread of these Invasive Pests.' Amend text to include: 'Weeds of National Significance (WONS).' Amend text to add: 'Measures shall include avoidance of establishment of pest harbour, to discourage their presence, breeding and distribution.'	Restricted matter should be controlled prior to commencement of works, to minimise future spread.
		11.77	All proposed measures must be in accordance with any relevant biosecurity surveillance or prevention program authorised under the Biosecurity Act.	Amend text to add: 'Mitigation measures shall include compliance with, and participation in, programs undertaken by local governments (e.g. baiting).'	This project is high risk for restricted matter movement, therefore all local control programs should be undertaken within and adjacent to the alignment to protect the Lockyer Valley.
11.5 Transport		Objectives	The construction and operation of the project should aim to: (a) maintain the safety and efficiency of all affected transport modes for the project workforce and other transport system users (b) avoid or mitigate impacts on the condition of transport infrastructure (c) ensure any required works are compatible with existing infrastructure and future transport corridors.		
	Existing Environment	11.78	Describe and map the existing transport infrastructure and corridors. Provide data on existing road and rail traffic in the project area.	Amend text to read "Describe and map the existing transport infrastructure and corridors. Provide data on existing road, active transport and rail traffic in the project area."	There is no reference to pedestrian or cycling traffic. In Gatton, for example, there is a shared pathway along Hickey Street immediately adjacent to the existing railway corridor. While the consideration of active transport could be implied as being included, it should be explicit to avoid doubt.
		11.79	Describe where the project's preferred alignment differs from the State's strategic rail corridor and the reasons for any such deviation.		
		11.80	Describe how the project complies with the Queensland Level Crossing Safety Strategy 2012-2021 on new road/rail interfaces and the impacts on existing road/rail interfaces.		
		11.81	The EIS should include a clear summary of the total transport task for the project, including workforce, inputs and outputs during the construction and operational phases.		
		11.82	Present the transport assessment in separate sections for each project-affected mode (road and rail) as appropriate for each phase of the project.	Consider amending text to include a specific reference to the emergency services	It would be desirable for the EIS to consider impacts on emergency services (during construction and operation), i.e., wait times at crossings, alternative routes, etc.
				Amend text to read "Present the transport assessment in separate sections for each project-affected mode (road, active transport and rail) as appropriate for each phase of the project."	While the consideration of active transport could be implied as being included, it should be explicit to avoid doubt.

	11.83 Provide sufficient information to allow an independent assessment of how existing and proposed transport infrastructure will be affected by project transport at the local and regional level (for example, local roads and state controlled roads).	No change to text anticipated, but point made here is to be noted by EIS team.	With the project potentially including a road bridge passing over the rail line at Forest Hill, there is a desire for the EIS to produce a concept layout for what the road and rail facilities would look like post-construction. For example, post-construction if the existing OLC were to be removed and a bypass constructed then the Forest Hill community needs to be given a full understanding of what the town would look like with the project in place.
		No change to text anticipated, but point made here is to be noted by EIS team.	The EIS should list each OLC along the existing route that would be removed as part of the Project and likewise the additional OLCs that will be created.
		No change to text anticipated, but point made here is to be noted by EIS team.	TMR has a published Principal Cycle Network Plan (https://www.tmr.qld.gov.au/Travel-and-transport/Cycling/Principal-Cycle-Network-Plans), which should be considered in the environmental impact assessment. LVRC has a long-held desire for a good quality active transport route connecting towns to and from UQ Gatton (as per the PCNP or similar).
		At the end of the paragraph add "The EIS should include consultation with the Department of Transport and Main Roads and all councils along the route to ensure due consideration of future transport infrastructure."	It is understood by Council that the Department of Transport and Main Roads is yet to undertake corridor planning for the Gatton-Helidon Road between the Warrego Highway and the Gatton CBD. No concept design exists for the 4-laning of the Gatton-Helidon Road over this section, so the EIS could omit its consideration. Without such planning being in place and there being potential changes to the Gatton-Helidon Road rail overpass due to the Project, there is a concern that the full impact of the project on the nearby roads, e.g., Crescent Street, Woodlands Road, Golf Links Drive, will not be adequately considered.
	11.84 Include details of the adopted assessment methodology for impacts on roads within the road impact assessment report in accordance with the Guidelines for Assessment of Road Impacts of Development.	No change to text anticipated, but point made here is to be noted by EIS team.	It is assumed that the utilisation of TMR's "Guidelines for assessment of road impacts of development" would include an assessment of the performance of roads and intersections at potential rail crossings, e.g., Crescent St / Gaul St in Gatton and Victoria St at Forest Hill. The impact of additional OLC closure times and the expected diversion of traffic should be modelled and detailed in the EIS.
Mitigation Measures	11.85 Discuss and recommend how identified impacts will be mitigated. Mitigation strategies are to be prepared in close consultation with relevant transport authorities (including Local Government).	No change to text anticipated, but point made here is to be noted by EIS team.	For the LGAs to be able to provide meaningful feedback on the Project impacts there will need to be sufficient detail provided during the EIS process. This should include instances where the capacity/redundancy of LGA roads is 'consumed' by the Project (potentially at zero cost to the Project).

11.6 Noise and Vibration		Objective	Development is planned, designed, constructed and operated to protect the environmental values of the acoustic environment.		
	Existing Environment	11.86	Describe the existing noise and vibration environment that may be affected by the project in the context of the environmental values.	Amend text to "Describe the existing noise and vibration environment that will be affected by the project in the context of related environmental values."	Creates a greater scope and transparency for monitoring of environments.
		11.87	Identify sensitive noise receptors adjacent to all project components and estimate typical background noise and vibration levels based on surveys at representative sites.		
		11.88	If the proposed project could adversely impact on the noise environment, undertake baseline monitoring at a selection of sensitive receptors potentially affected by the project. Describe the results of any baseline monitoring.	Amend text to "Where the proposed project adversely impacts on the noise and vibration environments, undertake baseline monitoring at a selection of sensitive receptors in each affected location of the project. Publish the result of baseline monitoring for public use."	Creates a greater accountability for informing the public of the baseline data and ensures that all affected are monitored, not just randomly selected ones.
				This needs to include areas as far as the noise carries in the worst case scenario, not just within the "study area".	There will likely be a cumulative effect from both: several trains on multiple lines passing a section at the same time; as well as the overall amount of time in a day that there is train noise. This also needs to include all possible trains using the corridor not just the Inland Rail trains.
	Impact Assessment	11.89	Describe the characteristics of the noise and vibration sources that would be emitted when carrying out the activity (point source and general emissions). Describe noise and vibration emissions (including fugitive sources) that may occur during construction, commissioning and operation.	Additional point "Describe the sensitive receptors and residential houses via text and mapping overlays of the noise and vibration emission affected areas"	While the type of emissions were to be described the data may not have been provided on the locations that would have been affected.
				Add wording along the lines of “Including the designation of new Transport Noise Corridors and the increasing of any distances for noise categories for existing Transport Noise Categories.”	This will enable affected properties to know the extent of the transport noise corridors
		11.90	The assessment of impacts on noise and vibration be in accordance with DEHP Application Requirements for ERAs with noise impacts (Guideline ESR/2015/1838).		
		11.91	Predict the impacts of the noise emissions from the construction and operation of the project on the environmental values of the receiving environment, with reference to sensitive receptors8, using recognised quality assured methods.		
		11.92	Discuss separately the key project components likely to present an impact on noise and vibration for the construction and operation phases of the project.		
		11.93	Taking into account the practices and procedures that would be used to avoid or minimise impacts, the impact prediction must address the: (a) activity’s consistency with the objectives (b) cumulative impact of the noise with other known emissions of noise associated with existing major projects and/or developments and those which are progressing through planning and approval processes and public information is available (c) potential impacts of any low-frequency (<200 Hz) noise emissions.	Add (d) "the cumulative impact of all noise sources on residents, businesses, schools, childcare centres, community halls, etc. within a 5km radius which includes both frequency and duration of trains passing on all lines within the corridor.	There will likely be a cumulative effect from both: several trains on multiple lines passing a section at the same time; as well as the overall amount of time in a day that there is train noise. This also needs to include all possible trains using the corridor not just the Inland Rail trains.

	Mitigation Measures	11.94	Describe how the proposed project, and in particular, the key project components described above, would be managed to be consistent with best practice environmental management for the activity. Where a government plan is relevant to the activity, or the site where the activity is proposed, describe the activity's consistency with that plan.	A new dot point should be added along the lines of: "Provide details (maps showing locations and appearance) of any proposed acoustic screens that will be erected to mitigate the impacts of any increase in noise to dwellings and increased Noise Categories." Another new point in this section " Predict the proposed Noise Categories for new Transport Noise Corridors and the expansion of existing Noise Corridors and map any areas that will be affected by increased Noise Categories."	The first point will enable affected properties to know any visual impacts of proposed mitigation measures. The second point will enable affected properties to know the proposed noise category to which they have to build should they undertake further work.
		11.95	Describe how the achievement of the objectives would be monitored and audited, and how corrective actions would be managed.		
11.7 Air		Objective	Development is planned, designed, constructed and operated to protect the environmental values of air.		
	Existing Environment	11.96	Describe the existing air quality that may be affected by the project in the context of environmental values.	Amend text to "Describe the existing air quality that will be affected by the project in the context of related environmental values."	Creates a greater scope and transparency for monitoring of environments.
		11.97	Discuss the existing local and regional air shed environment.	Amend text to "Document the existing local and regional air shed environment and environmental values"	Creates a greater scope and transparency for monitoring of environments.
		11.98	Provide baseline data on local meteorology and ambient levels of pollutants for later studies and modelling of air quality. Parameters should include air temperature, wind speed and directions, atmospheric stability, mixing depth and other parameters necessary for input to the model.	Include additional study Scientific analysis of impacts to any changes in airflow or wind, from embankments, structures, tunnels and/or cuttings and fills , on the micro climates required for the healthy growth of native vegetation and horticulture production crops typically occurring or grown in the Lockyer Valley region.	Identification of any impact on the existing air flows that are integral to the health of microclimates and the healthy growth of plants, both native and related to agriculture
	Impact Assessment	11.99	Describe the characteristics of any contaminants or materials that may be released as a result of the construction or operations of the proposal, including point source and fugitive emissions. Emissions (point source and fugitive) during construction, commissioning and operations should be described.	Amend text to "Describe the characteristics of any contaminants or materials that may be released as a result of the construction or operations of the proposal, including point source and fugitive emissions. Emissions (point source and fugitive) during construction, commissioning and operations are to be listed."	Creates a greater scope and transparency for monitoring of environments.
		11.100	The assessment of impacts on air will be in accordance with DEHP application the requirements for the ERAs with impacts to air (Guideline ESR/2015/1840).		

		11.101	Predict the impacts of the releases from the activity on environmental values of the receiving environment using recognised quality assured methods. The description of impacts should take into consideration the assimilative capacity of the receiving environment and the practices and procedures that would be used to avoid or minimise impacts. The impact prediction must: (a) address residual impacts on the environmental values (including appropriate indicators and air quality objectives) of the air receiving environment, with reference to the air environment9 at sensitive receptors. This should include all relevant values potentially impacted by the activity, under the EP Act, EP Regulation and Environmental Protection (Air) Policy 2008 (EPP (Air)) (b) address the cumulative impact of the release with other known releases of contaminants, materials or wastes associated with existing major projects and/or developments and those which are progressing through planning and approval processes and public information is available (c) quantify the human health risk and amenity impacts associated with emissions from the project for all contaminants covered by the National Environmental Protection (Ambient Air Quality) Measure or the EPP (Air).	Amend text to "Predict the impacts of the releases from the activity on environmental values of the receiving environment using recognised quality assured methods. The description of impacts are to take into consideration the assimilative capacity of the receiving environment and the practices and procedures that would be used to avoid or minimise impacts." ...	Creates a greater scope and transparency for monitoring of environments.
	Mitigation Measures	11.102	Describe the proposed mitigation measures to manage impacts to air quality.	Amend text to "Describe the proposed mitigation measures to manage impacts to air quality and the level of effectiveness they are to have."	Creates a greater scope and transparency for monitoring of environments.
		11.103	Describe how the proposed activity will be consistent with best practice environmental management. Where a government plan is relevant to the activity or site where the activity is proposed, describe the activity's consistency with that plan.		
		11.104	Describe how the achievement of the objectives would be monitored, audited and reported, and how corrective actions would be managed.		
11.8 Social		Objectives	The construction and operation of the project should aim to: (a) avoid or mitigate/manage adverse social impacts arising from the project (b) capitalise on opportunities potentially available for local industries and communities	According to the DRAFT Social Impact Assessment Guideline October 2016, in Section 3.4 Management Plans: "individual project circumstances necessitate that the actual SIA [Social Impact Assessment] requirements for a project are specified in the Terms of Reference (ToR) for the EIS. In the instance of the Draft ToR for the Helidon to Calvert section of the Inland Rail, the social impact information is far from specific and only includes the broadest of headings. This needs to be rectified in the ToR to ensure the specific considerations as detailed in the Draft SIA Guideline (2016) are fully included.	It is not the role of Council or a community stakeholder to provide the detail level of those requirements, but rather it is up to the Coordinator General and/or proponent to comply with the DRAFT SIA guideline. In short - Council expects that the every dot point in the DRAFT SIA Guidelines (2016) is included in the TOR and has to be addressed in the EIS. Therefore, we will not address every possible inclusion or amendment below as they will be included when this error/omission is addressed.
	Information requirements - General	11.105	The EIS is to be consistent, and in accordance with, relevant policies, standards and guidelines in place that exist at the time of its delivery.	Amend to "The SIA must include:"	Replace 'should' with 'must'
		11.106	Conduct a social impact assessment (SIA) in accordance with the Coordinator-General's Social impact assessment guideline (July 2013) and the Coordinator-General's Social impact assessment guideline (draft) (October, 2016) or the guideline in place at the time of delivery of the SIA.		

	11.107 The SIA should be developed in consultation with the Coordinated Project Delivery Division in the Office of the Coordinator-General, Department of State Development, and describe the likely social impacts (positive and negative) on affected communities. The proposed mitigation measures are to be discussed. Matters to be considered in the SIA are detailed in the following sections.		
	11.108 The SIA should include: (a) a profile of key stakeholders (b) a social baseline study of potentially impacted communities within the SIA study area (c) an overview of state government legislation and policies and priorities which complement the mitigation measures for the project's social impacts (d) an explanation of sources used to gather information and analysis methods used. Discuss rationale for both primary and secondary data (e) a description of how the potentially impacted communities and affected stakeholders were engaged and consulted with during the development of the SIA (f) identification of potential social impacts and their likely significance, including duration (g) the proponent's proposed enhancement and mitigation/management measures in relation to project impacts (h) details of the proponent's proposed monitoring and reporting framework.	Amend (a) to 'a profile of key stakeholders and acknowledgement of ALL stakeholders including but not limited to residents, businesses, tourism operators and community facilities/groups within 5km of the rail line)	There seems to be some evidence that ARTC have not identified "all stakeholders" well to date so some specific categories may assist in improving that
		AmendD (b) to 'a social baseline study of potentially impacted communities within not less than a 5km radius of the rail corridor.'	The social impacts will be…
Existing Environment - Social impact assessment study area	11.109 Define the project's SIA study area (including the local, district, regional and state level as relevant), taking into account the: (a) potential for social impacts to occur (b) location of other relevant projects (existing major projects and/or developments and those which are progressing through planning and approval processes and public information is available) (c) location and types of physical and social infrastructure, settlements and land use patterns (d) social values that might be affected by the project including integrity of social conditions, liveability, social harmony and wellbeing and sense of community (e) Indigenous social and cultural characteristics, such as native title rights and interests, and cultural heritage.	The project's "SIA Study area" must be not less than a 5km radius from the rail corridor and in some places may be considerable further to account for noise, employment, social wellbeing, etc.	
Existing Environment - Social Baseline Study	11.110 Undertake a targeted baseline study of the people residing within the project's SIA study area. This will provide a benchmark against which to identify the project's social issues, potential negative and positive social impacts, and the mitigation measures and management plans to address these impacts. 11.111 The social baseline study should be based on qualitative, quantitative and participatory methods. It should be supplemented by community engagement processes and primary data collection, and should reference relevant data contained in local and state government publications, reports, plans, guidelines and documentation, including regional and community plans.		
Existing Environmental - Community Engagement	11.112 A consultative and inclusive community and stakeholder engagement process should inform the baseline study, assessment of potential social impacts and development of appropriate mitigation measures and management plans. The engagement should commence at an early stage of the EIS process. It should include consultation with a broad range of stakeholder groups including affected landholders, local residents, community groups, traditional owners, Aboriginal and Torres Strait Islander representatives, state and local government agencies, and non-government organisations.	Amend text to include "Multicultural Community", and "Local businesses", and "Tourism operators", and other community interest groups as specified by local government at the time of specific community engagement planning.	Our multicultural community need to be engaged. Many are from non-English speaking backgrounds and may not understand the impacts from the project. Other stakeholders because they need to be listed specifically so that they're not overlooked.

	11.113 The community and stakeholder engagement process should be adequately described and documented in the EIS report. This should include details such as stakeholders consulted and how and when they were consulted, principles and processes adopted, overview of the consultation program and key events, stakeholder feedback and issues raised (including the means by which these have been or will be addressed), and a statement of agreement/s reached, or to be negotiated, for impact mitigation and management.		
Potential impacts and mitigation - Impact assessment	11.114 Assess and describe the type, level and significance of the project's social impacts (both negative and positive), based on the outcomes of the community engagement, social baseline study and impact analysis processes. This should include sufficient data to enable affected local and state authorities to make informed decisions about the project's effects. The potential social impacts will be identified by considering the potential changes to key aspects included in the social baseline study as a result of the project	Sentence 2 says, "…to enable affected local and state authorities to make informed decisions about the project effects." What types of decisions might they be?	
	11.115 Impact assessment should include an assessment of the potential scope and significance of impacts at the local and regional level, considering factors such as: (a) population and demographic changes (b) workforce (c) lifestyles and amenity (d) community values (e) housing (f) local and regional planning outcomes (g) social infrastructure (h) the health and social/cultural wellbeing of families and communities.	Amend text in section (b) to read "Workforce (including Seasonal Workforce)" and section (e) to read "housing and rental accommodation"	A major workforce in our region is seasonal and the impacts of this workforce will need to be included. Rental accommodation for seasonal workers will have be impacted by an influx of workers.
		This section may need to include references to perceived and actual separation and isolation cause by a major piece of infrastructure through a community.	E.g., before the Plainland overpass the Warrego Highway was considered a point of separation and a social barrier for the former Laidley Shire with numerous residents claiming they were in a separate area and wouldn't cross the barrier for any social reason. They saw themselves as part of a 'different' community. Depending on access routes under/over/around the Inland Rail line, it could add a new level of separation to many areas along it's route. Note too that we have the Toowoomba Second Range Crossing adding another physical/social barrier in parts of the Lockyer Valley.
		We need to ensure that impacts upon land valuations, future saleability, rental markets and prices, insurance assessments, etc. are included in the SIA and ToR as per the Draft SIA Guidelines mentioned at 11.8 (above).	
	11.116 The impact assessment should also evaluate and discuss the potential cumulative social impacts resulting from the proposed project in combination with other existing major projects and/or developments and those which are progressing through planning and approval processes (where public information is available) within the SIA study area. Key issues assessed should include: (a) population (b) workforce (construction and operation) (c) workforce accommodation (d) local and regional housing markets (e) use of and access to community infrastructure, services and facilities (including social and health services and facilities)		

		11.117	The impact assessment should include: (a) the impacts identified by the SIA process (b) impacted stakeholders (c) the timing or timeframes of impacts and the mitigation and management measures (d) description of the mitigation and management measures (e) defined outcomes, and the performance indicators and targets to achieve the outcomes (f) monitoring and reporting framework (g) residual impacts (after mitigation and management measures) and how these will be addressed.		
	Potential impacts and mitigation-Management Plans	11.118	Management plans for the following are to be provided as part of the SIA: (a) community and stakeholder engagement (b) workforce management (c) housing and accommodation (d) local business and industry content (e) health and community wellbeing.	This section will need to include all plans and categories as per the Draft SIA guidelines 2016	The areas in the management plan need to align with draft guidelines
11.9 Economic		Objectives	The construction and operation of the project should aim to: (a) avoid or mitigate adverse economic impacts arising from the project (b) capitalise on opportunities potentially available for capable local industries and communities (c) create a net economic benefit to the region and State.	Amend text in section (c) to read "work with local government to identify projects that create a net economic benefit to the local government region, the greater region and the state.	Local needs to be clearly defined for the community to understand what direct economic benefits are associated with this project.
	Information requirements	11.119	Identify the economic impacts of the project on the local and regional area and the State. Estimate the costs and benefits and economic impacts of the proposal using both regional impact analysis and cost–benefit analysis. The analysis should be consistent with the Coordinator-General's Economic impact assessment guideline (April 2017).	Amend text to read "Identify the economic impacts of the project on each LGA, regional area and the State." Local Government Area (LGA) would be added as a defined acronym on Page 30. Consideration should be given by the Coordinator General to defining the term 'regional'.	It is noted that the EIS is to undertake a CBA and RIA for the Project, however the "local and regional area" is not defined, which could lead to the 'masking' of negative local impacts by including this area in a larger area where the economic impacts are more positive.
				Include additional study Detailed economic analysis of the impacts to key local sectors utilising ANZIC divisions, as well as the local tourism sector (using recognised standards) in the local Lockyer Valley economy. Consideration to inputs and outputs of industry, in both time and cost, consideration of any gains or losses of production land; and likely impact on the number or structure of local jobs.	Concerns re the sustainability of industry and maintaining population growth and jobs growth for economic prosperity and wellbeing for residents of the Lockyer Valley. Concerns over the cumulative effect across the 2 proposed projects G2H and H2C within the same Local Government Area
				Include additional study Detailed analysis, using both benchmarking and local case studies of any changes in the incomes or cost of production for the local agriculture sector; and the associated direct input and output supply chains. Giving consideration to agricultural businesses also located outside the study area with likely changes to access routes	Concerns are any changes in the cost of production and getting agricultural commodities to market balanced against any gains, to determine the long term impacts on competitiveness for our agricultural sector and the potential impact to the cost to consumer of food, given the significance to local, national and international supply of food from the Lockyer Valley.

			Include additional study Detailed analysis of the impacts on land values within the LGA of Lockyer Valley both within the study area and outside.	Concerns in respect to the sustainability of the Local Government Authority for revenue through rates and the ability to continue to deliver and maintain services and local infrastructure for the local community. (rating $$ value will be high) Understand any impact to land values and the impact on the appeal of the region to continue to attract development investment in comparison to other areas, with consideration to major constraints and future development investment decisions.
			Include additional study Specific analysis of the economic impact and risk factors of traversing through the declared Helidon Explosives Zone – identifying any impacts to jobs, operational costs to individual businesses or any potential new business.	This area is a specialized zone of national significance set aside for a specific purpose, and consideration to maintaining the size, access and land use requirements. Are there any impacts on the usability or specialized nature that may impact on investment for new ventures or expansion for existing, or the total available land area including buffer zones.
			As part of the economic models undertake micro-economic modelling including sensitivity analysis of the interdependent impacts within the local value chains giving consideration to the sustainability and profitability of the large proportion of small and home based businesses in the regions' economy.	Concerns re impacts on individual and household incomes within the regions' family run SME and home based business sector interdependencies
			Not sure how long the mentioned 8m above the surrounding land features are, and whether they are in cultivation areas, but from field studies on tree lines/shelter belts, it is known that these will cause an edge effect on a crop, causing them to grow in a growth shadow causing a broken and patchy edge, that is with trees, and trees allow light through whereas an earth barrier 8m won't, so one would expect the effects to be worse.	A study on these edge effects should be carried out as there could be a an negative economic outcome.
11.10 Hazards, health and safety	Objectives	(a) The risk of, and the adverse impacts from, natural hazards are avoided, minimised or mitigated to protect people and property and enhance the community's resilience to natural hazards. (b) Developments are to be appropriately located, designed and constructed to minimise health and safety risks to communities and individuals and adverse effects on the environment.	add text to (a) "identified, avoided etc."	identification is part of the process. Additonally, in term of meeting the Objectives of 11.8 - localities and/or regions currently or likely to be isolated due to infrastrastructure configurations and/or natural hazards (flood, fire etc) should be identified to enable consideraton and management or provision of linkages, routes or access as part of project to mitigate the situation .

	Information requirements- General	11.120	Describe the potential risks to people and property that may be associated with the project in the form of a preliminary risk assessment for all components of the project and in accordance with relevant standards. The assessment should include: (a) potential hazards, accidents, spillages, fire and abnormal events that may occur during all stages of the project, including estimated probabilities of occurrence (b) identifying all hazardous substances to be used, stored, processed or produced and the rate of usage (c) potential wildlife hazards, natural events (for example, cyclone, flooding, bushfire, landslide,) and implications related to climate change (d) how the project may potentially affect hazards away from the preferred alignment (for example, changing flooding characteristics).	Consider emergency management routes and plans, currently, during and after construction. Consider requirements of Section 11.8. Consider bushfire management plan. Consider impact on evacuation routes and construction routes.	
				add text to (a) "flooding "	Flooding is a likely and key hazard that must be added to any such analysis
		11.121	Outline measures required to ensure that the proposed project avoids the release of hazardous materials as a result of a natural hazard event.		
		11.122	Provide 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). Identify the residual risk following application of mitigation measures. Present an assessment of the overall acceptability of the impacts of the project in light of the residual uncertainties and risk profile.		
		11.123	Provide an outline of the proposed integrated emergency management planning procedures (including evacuation plans, if required) for the range of situations identified in the risk assessment developed in this section.		
		11.124	Outline any consultation undertaken with the relevant emergency management authorities, including the Local Disaster Management Group.		
	Land Contamination	11.125	Detail any known or potential sources of contaminated land within or adjoining the project area, including the location of any potential contamination identified by landholders.	Again no specific mention of asbestos, hydrocarbon, and herbicide residue in soils	It would be good to see what measures they have in place for the treatment of any contaminated materials and their correct disposal
		11.126	Describe how any proposed land use may result in land potentially becoming contaminated.		
		11.127	Provide a description of the nature and extent of contamination at identified site(s).		
		11.128	Discuss the management of any contaminated land and potential for contamination from construction, commissioning, operation and decommissioning.		
		11.129	Describe strategies and methods to be used to prevent and manage any land contamination resulting from the project, including the management of any acid generation or management of chemicals and fuels to prevent spills or leaks.		
		11.130	Identify or detail any known potential unexploded ordnance that may occur within or adjoining the project area.		
	Climate	11.131	Describe the preferred alignment's climate patterns with particular regard to discharges to water and air and the propagation of noise.	Consideration for climate change to be included	
		11.132	Climate information should be presented in a statistical form including long-term averages and extreme values, as necessary.		
		11.133	Describe the climatic conditions that may affect management of the project. This includes a description of the vulnerability of the project area to seasonal conditions, extremes of climate (for example, cyclones and prolonged rain events) and natural or induced hazards (including bushfire).	Add text at end of section "the EIS shall identify the presence of existing fire trails and how the project impacts on these assets and mitigation measures for these identified impacts."	It would be desirable for the EIS to identify the presence of existing fire trails and the project impacts on these assets.
11.11 Waste Management		Objective	Any waste transported, generated, or received as part of carrying out the activity is managed in a way that protects all environmental values.		

	Impact Assessment	11.134	For wastes besides wastewater (which is addressed in the Water section of this TOR), describe all the expected significant waste streams from the proposed project activities during the construction and operational phases of the project.	Amend text to include "and quantify" after "For wastes besides wastewater (which is addressed in the water section of this TOR), describe" and add "Describe potential spoil disposal sites and their ability to service the project." at the end of the paragraph.	The generation and disposal of spoil from the Project could reasonably be expected to be a significant issue. The EIS should identify potential disposal sites that could be considered at later stages of the Project, without dictating their use. To omit potential sites at the EIS stage would mean not assessing full project impacts (and mitigation measures).
				Doesn't appear to be any mention in the doc of the contamination that is common on rail corridors, surface asbestos, buried hydrocarbons, and herbicide chemicals residue in the soil.	It would be good to see what measures they have in place for the treatment of any contaminated materials and their correct disposal
				Insert after “significant waste streams” the terms “including but not limited to General Wastes, Regulated and contaminated wastes”	Ensures that prospective tenderers cover these waste streams at a minimum.
		11.135	Define and describe the objectives and practical measures for protecting or enhancing environmental values from impacts by wastes. Take into account best practice waste management strategies as outlined in the National Waste Policy 2009 and the Waste Reduction and Recycling Act 2011 and the Environmental Protection Regulation 2008.		
	Mitigation Measures	11.136	Assess the proposed management measures against the preferred waste management hierarchy, namely: avoid waste generation; cleaner production; recycle; reuse; reprocess and reclaim; waste to energy; treatment; disposal. This includes the generation and storage of waste.		
		11.137	Describe how nominated quantitative standards and indicators may be achieved for waste management, and how the achievement of the objectives would be monitored, audited and managed.		
		11.138	Detail waste management planning for the proposed project especially how these plans would be applied to prevent or minimise environmental impacts due to waste at each stage of the project.		
		11.139	Provide details on natural resource-use efficiency (such as energy and water), integrated processing design, and any co-generation of power and by-product reuse as shown in a material/energy flow analysis.		
11.12 Cultural Heritage		Objective	The construction and operation of the project should aim to ensure that the nature and scale of the project does not compromise the cultural heritage significance of a heritage place or heritage area.		

Information requirements	11.140 Unless section 86 of the Aboriginal Cultural Heritage Act 2003 (ACH Act) applies, the proponent must develop a Cultural Heritage Management Plan (CHMP) in accordance with the requirements of Part 7 of the ACH Act. The EIS should provide details of the CHMP and any associated agreements that has been developed or reached or steps taken up to that point to develop or reach such a plan or agreement.	Unless an exemption applies under s86 of the Aboriginal Cultural Heritage Act 2003, the proponent must develop a Cultural Heritage Management Plan (CHMP) and an Indigenous cultural heritage study must be undertaken in accordance with the requirements of part 7 of that Act. The study should describe existing cultural heritage values that may be affected by the project, and include a description of the environmental values of the cultural landscapes of the affected area in terms of the physical and cultural integrity of the landforms. An historical cultural heritage study should also be undertaken of the known and potential historical cultural heritage values of the affected area. The study will, as a minimum, include a desktop analysis and an archaeological investigation (such as a physical investigation) of the area potentially affected by the project. This desktop component of the study should, as a minimum, review the following sources for information on historical cultural heritage values within the region of the project site: • the Queensland Heritage Register, for places already protected under the Queensland Heritage Act 1992 • local government heritage registers, lists or	Compliance with relevant legislation and expansion to ensure that all interested communities are identified, considered and included/consulted as the area is currently under challenge by Yagara/Yugarapul people. All clans involved in the challenge and those who currently hold native title should be involved to ensure no cultural heritage is missed as both have significant sites in the region.
	11.141 For non-Indigenous historical heritage, undertake a study of, and describe, the known and potential historical cultural and landscape heritage values of the area potentially affected by the project. Any such study should be conducted by an appropriately qualified cultural heritage practitioner. Provide strategies to mitigate and manage any negative impacts on non-Indigenous cultural heritage values and enhance any positive impacts.	Add specific wording around war, flood and disaster memorials and places of community remembrance (even if not marked) including intended but not yet developed sites of significance to local communities.	Some communities have places of significance that won't be on maps or in publications and need to involve considerable conversations with a range of community members.
		The discovery and protection of any previously unidentified archaeological artefacts or archaeological places during the course of the historical cultural heritage study must comply with part 9 of the Queensland Heritage Act 1992. Describing the social and cultural values potentially impacted by the project, and the assessment of the impacts on those values, should be conducted in consultation with all affected local, state and federal government bodies.	Some communities have places of significance that won't be on maps or in publications and need to involve considerable conversations with a range of community members.