21. Findings and commitments

21.1 EIS findings

The key findings of the EIS are:

- The Project will contribute to improving the track capacity leading to efficiencies in the coal transport chain to the export facilities at the Port of Gladstone. This has direct flow-on economic benefits for the Gladstone region, Queensland and Australia.
- The Moura Link Eastern Option is the preferred rail alignment to reduce land use impacts (eg severance of land) and lower construction costs compared to the Moura Link Western Option.
- Based on discussions with DNRW regarding the future Castle Hope Dam location there is a need to preserve a future Moura Link Western Option. This option should be included in the revised Gladstone Regional Council Planning Scheme.
- QR has commenced consultation with directly affected landowners, key stakeholders and Traditional Owners. This will be an ongoing process with QR committed to providing a level of comfort and certainty to local community and key stakeholders.
- The majority of land required by the Project is within the GSDA and adjacent to existing road and rail infrastructure. The majority of the land is also owned by the State Government (eg Department of Infrastructure and Planning and QR).
- A number of private properties, grazing leases and service providers will be directly impacted by the Project. A number of mitigation measures will be progressed during the design and construction phases.
- The Project generally complies with the planning intentions of the Calliope Shire Planning Scheme, the GSDA Development Scheme, and will comply with the applicable Commonwealth and State Legislation.
- The potential land use benefits of the Project will outweigh the direct property impacts and other potential land use impacts. Construction and operation of the Project will support development of the GSDA for industry and ensure that the economic advantage of the area is promoted.
- The construction of rail infrastructure (including the Moura Link Eastern Option) and associated easements will result in the clearing of approximately 95 ha of mapped REs and 471 ha of other vegetation (including grasslands) for the Project.
- During the field surveys 192 fauna species were recorded from the project area. Generally, the fauna species encountered within the project area are common and widespread within the project region and are associated with dry sclerophyll woodlands and forests. However, four threatened species were identified from habitats within the project area.
- Habitat removal and modification as a result of vegetation clearing and associated edge effects is anticipated to be the main impact to native fauna as a result of the Project's activities. This will result in the displacement of some fauna species to surrounding habitats.
- The Project is likely to have an impact on the ecological value of the Calliope River, Larcom Creek and associated floodplain communities.
- Potential impacts on water quality will be minimal due to implementation of appropriate erosion and sediment control and spill containment during construction and operation.
- The proposed Industrial Wastewater Treatment Plant and Sewage Treatment Plant will recycle and reuse wastewater as the primary design objective to minimise potential water quality impacts.
- Major changes to the existing flooding regime are not expected as a result of the Project.

- Construction and operation will only have a relatively minor impact on the existing groundwater regime.
- The Project is unlikely to have any significant impacts on local or regional air quality or to adversely affect human health. Modelling shows that dust emissions from the Project can be adequately managed to reduce impacts at sensitive locations within the vicinity of the Project.
- Construction noise and vibration can be adequately mitigated by implementing construction noise and vibration measures that are considered accepted construction practices on infrastructure projects.
- All nearby sensitive receiver locations are predicted to comply with legislative operational criteria for rail noise (including shunting). Operational activities will comply with QR's Code of Practice for Railway Noise Management.
- Waste minimisation, reuse and recycling policies and procedures will be implemented during construction and operation to minimise the impact of the Project on the waste stream.
- Prior to construction a detailed Traffic Management Plan will be prepared to mitigate impacts to existing traffic.
- No Indigenous or non-indigenous cultural heritage sites are expected to be directly affected by the Project. A Cultural Heritage Management Plan will be implemented during construction to minimise the potential impact on any cultural heritage items disturbed during earthworks activities.
- The Project is consistent with the intent of the GSDA industrial landscape. However, the Project will be visible from a number of locations in the surrounding area, including the Gladstone-Mount Larcom Road, Bruce Highway, Dawson Highway and the NCL.
- In comparison to the workforce numbers of other projects proposed in the Gladstone region and the anticipated timing of construction workforce peaks of the Project, it is expected the Project will have a minimal adverse social impact. However, a Construction Accommodation Strategy will be pursued to minimise the potential construction workforce impacts associated with the Project.

21.2 Commitments

The key commitments for implementation during design, construction and/or operation of the Project are summarised in the Table 21.1.

Table 21.1 QR commitments

Environmental area	QR's commitment
General	• All reasonable and practicable measures will be taken to minimise the likelihood of environmental harm being caused. • Minimise Project footprint and document design response in the Environmental Design Report. • Prepare and implement a Construction EMP for this Project that includes components or: – Soil handling and management – Vegetation rehabilitation and management – Fauna management – Pest management – Emergency response procedures – Weed management – Dust management – Noise and vibration management – Waste management – Other measures contained in the EIS EMP (Section 20) • Implement a Cultural Heritage Management Plan during construction. • Prepare and implement an Operational EMP. • Continue to provide project updates and progress to the community and stakeholders.
Land use and project approvals	• QR will continue consultation with directly affected land owners and key stakeholders. • QR will obtain all required planning and environmental approvals for the construction and operation, and implement the management measures and conditions.
Topography, geology and soils	• Develop and implement a Soil Handling and Management Sub Plan during construction which addresses: – Erosion and sediment control – The movement of actual or potentially contaminated soil (from the existing rail corridor or any properties listed on the EMR (ie Lots 71 and 72 on SP122249) including the application for an EPA Waste Disposal Permit (required for removal of soil from a land parcel which is listed on the EMR)). – Topsoil management – Red imported fire ants from nearby sites in accordance with QR's Fire Ant Risk Management Plan
Terrestrial flora	• Clearing of remnant vegetation will be restricted to the minimum required to enable the safe construction, operation and maintenance of the railway line, Aldoga Rail Yard and supporting infrastructure. • The preparation and implementation of a Vegetation Rehabilitation and Management Sub Plan based on designated revegetation/rehabilitation locations (including buffer zones) which are to be determined during the detailed design phase. This plan will be implemented during the construction and operation phases of the Project. • The development of a site specific Weed Management Sub Plan for implementation during construction and operational phases of the Project. This strategy is to be prepared in consultation with relevant State and Local government agencies and is to be implemented during the construction and operational phases of the Project.

Environmental area	QR's commitment
Terrestrial fauna	• Measures in the CEMP and OEMP to address fauna and pest management issues and mitigate the loss of ecological value.
Water quality	• QR will adopt water efficiency strategies (ie recycle and reuse of wastewater and stormwater from buildings) during construction and operation. • Stormwater management systems will be implemented and maintained during construction and operation to minimise impact on downstream receiving environments, particularly at Larcom Creek and Calliope River. • QR will minimise potential mosquito breeding sites onsite by preventing ponding waters. • No significant worsening of flooding upstream and downstream of the Project.
Groundwater resources	• Hydraulic testing of the aquifer, to establish a sustainable yield, should groundwater be used for construction and/or operational water supply. • Develop and implement management controls for hazardous materials onsite to protect groundwater, including spill response procedures and training.
Air environment	• Prepare and implement a Dust Management Plan during construction as part of the CEMP. • QR to implement the relevant findings of the Coal Loss Management Project during operation.
Noise and vibration	• Develop and implement noise and vibration mitigation measures (as part of the Construction EMP) during the construction phase of the Project. In advance notification with affected/adjoining property owners about timing and details of proposed construction works.
Waste	• Prepare and implement construction and operational Waste Management Sub Plans. • Integrate waste management strategies into the detailed design phase of the Project. • All wastes that are generated shall be stored, handled and transferred in a proper and efficient manner and will not be released into the environment or transported offsite by an appropriately licensed carrier and disposed of at an approved waste disposal facility.
Transport	• Develop and implement a Traffic Management Plan during construction. • Develop agreements with DMR and GRC on road maintenance and rehabilitation requirements as a result of the Project construction phase.
Cultural heritage	• Finalise and implement a CHMP during construction.
Visual and lighting impacts	• Clearing of remnant vegetation will be restricted to the minimum required for the safe works during construction, operation and maintenance. • Vegetation will only be removed when necessary for the Project works. • Construction and operational lighting design will be consider further in the detailed design subject to safety constraints. • Where vegetation is removed these areas will be progressively rehabilitated. • Vegetation rehabilitation works will be conducted in accordance with the Vegetation Rehabilitation and Management Sub Plan.
Social and economic	• Pursue a construction accommodation strategy to cater for the proposed construction workforce.

Environmental area	QR's commitment
Hazard and risk	• Amend the existing emergency procedures to accommodate the proposed Project. • Prepare and implement the following management plans: – CEMP (prior to construction) – CTMP(prior to construction) – CHMP(prior to construction) – OEMP (prior to operation) – Other relevant management plans and/or procedures designed to minimise environmental harm
Health and safety	• Prepare and implement emergency management procedures during the construction and operational phases of the Project.

21.3 Conclusion

The EIS concludes that the proposed Project is expected to have an impact on the existing environment within and adjoining the project area through ecological and social aspects.

The Project is consistent with the intent of the GSDA and will have significant economic benefits for the local, State and National economies.

The EIS also concludes that the potential for adverse impacts during construction and operation will be mitigated through the implementation of appropriate safeguards and management measures. Best practice environmental management will be adopted and implemented throughout the Project for all environmental aspects.

In summary, the Project can be constructed and operate in a manner that meets all relevant statutory goals and criteria, environmental objectives and considerations, and reasonable stakeholder expectations.