

Our Ref: MCR-25-667

Mr Charles Millsteed  
Chief Executive Officer  
Queensland Competition Authority  
Level 27, 145 Ann Street  
Brisbane Qld 4000

Dear Mr Millsteed

**2024-25 Capital Expenditure Report — West Moreton System**

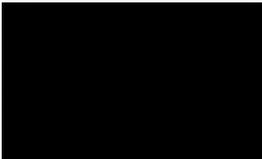
Queensland Rail's Access Undertaking 2 (AU2) requires that the Queensland Competition Authority (QCA) be provided with details of capital expenditure for the subject year that Queensland Rail considers should be included in the Regulatory Asset Base (RAB).

Attached is the 2024-25 Capital Expenditure Report (and supporting documentation), providing details of the assets Queensland Rail considers should be included in the West Moreton System RAB.

As required by clause 1.3(c), Schedule E of AU2, I can confirm that the information contained in the 2024-25 Capital Expenditure Report is in all material respects correct.

If your officers have any questions in relation to this matter, please contact Queensland Rail's Policy and Regulations Manager Mr Douglas Jasch by telephone on 07 3072 0544 or via email at [douglas.jasch@qr.com.au](mailto:douglas.jasch@qr.com.au).

Yours sincerely



**Kat Stapleton**  
Chief Executive Officer

23 December 2025

# West Moreton System

Capital Expenditure Report 2024-25

December 2025



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# 1. Structure of Submission

## 1.1 Queensland Rail's network

This report (**2024-25 Capital Expenditure Report**) has been submitted to the Queensland Competition Authority (**QCA**) in accordance with Queensland Rail's Access Undertaking 2 (**AU2**) requirements. The report is structured as follows:

- **Section 1** outlines the structure of this report.
- **Section 2** summarises AU2's requirements and process for Queensland Rail producing this 2024-25 Capital Expenditure Report as well as the matters the QCA must take into account when considering the report. Additionally, Section 2 provides a summary of the financial information relevant to this report.
- **Section 3** sets out the key characteristics of the West Moreton System, which will assist in providing an understanding of Queensland Rail's fit for purpose capital program.
- **Section 4** explains Queensland Rail's Investment Framework.
- **Section 5** sets out Queensland Rail's approach and processes related to Prudency of Scope of projects.
- **Section 6** sets out Queensland Rail's approach and processes related to Prudency of Standard of projects.
- **Section 7** sets out Queensland Rail's approach and processes related to Prudency of Cost of projects.

## 2. The Capital Expenditure Report Process

### 2.1 Capital expenditure report requirements

On 1 July 2025 the QCA approved a new Access Undertaking (**AU3**) which replaced AU2 upon AU2's expiry on 30 June 2025. AU3's Transitional provisions, sections 6.5(c), 6.5(d) and 6.5(e), state:

- (c) If this Undertaking requires Queensland Rail to report to the QCA on a Quarter or a Year that began prior to the Approval Date, then:
  - (i) the relevant report will include information in respect of the period prior to the Approval Date; and
  - (ii) Queensland Rail is only obliged to provide information for the period prior to the Approval Date as would have been required to be provided under AU2 in respect of that same type of report.
- (d) If the Approval Date is the first day of a Quarter, then Queensland Rail will report on the last Quarter prior to the Approval Date in accordance with the requirements of AU2.
- (e) If the Approval Date is the first day of a Year, then Queensland Rail will report on the prior Year in accordance with the requirements of AU2.

In accordance with AU3's above Transitional provisions, the 2024-25 Capital Expenditure Report has been developed in accordance with the AU2 requirements.

Clause 1.3 of Schedule E of AU2 provides that, unless otherwise agreed between Queensland Rail and the QCA Queensland Rail will, within six months after the end of each year, submit to the QCA an annual capital report (**Capital Expenditure Report**). The Capital Expenditure Report is to include details of the capital expenditure that "*Queensland Rail considers should be included in a Regulatory Asset Base*" (**RAB**). To be included in *the Capital Expenditure Report* the assets must have been commissioned in the '*subject financial year*' and must wholly or partly relate to coal services.

The 2024-25 Capital Expenditure Report relates to assets that were commissioned in the 2024-25 financial year. No incremental coal related capital expenditure has been identified for the Metropolitan System for 2024-25. As such, the 2024-25 Capital Expenditure Report relates solely to coal related assets in the West Moreton System.

Clause 1.3(c), Schedule E, of AU2 requires that the information provided to the QCA be accompanied by a statement signed by Queensland Rail's CEO confirming that the information is, in all material respects, correct.

## 2.2 Other capital commissioned prior to the 2024-25 financial year

In addition to the capital expenditure included in a Capital Expenditure Report, Schedule E of AU2 provides for Queensland Rail to separately apply to have included in the RAB capital commissioned prior to the subject year, but which has not yet been assessed and approved by the QCA. However, these assets would require a separate report to be submitted to the QCA. (and therefore these commissioned assets would not be included in the Capital Expenditure Report).

Queensland Rail is not seeking to have additional capital included in the RAB under these provisions.

## 2.3 QCA acceptance of capital expenditure into the RAB

Clause 1.3, Schedule E of AU2 sets out the requirements that the QCA is required to consider in relation to the assessment of whether the information in the Capital Expenditure Report should be accepted into the RAB:

### **“2.1 Requirements for acceptance of capital expenditure into the Regulatory Asset Base**

- a) *The QCA will accept capital expenditure into a Regulatory Asset Base if that capital expenditure:*
- (i) *is or has been accepted by the QCA as:*
    - A. **prudent in scope** in accordance with clause 3;
    - B. **prudent in standard** of works in accordance with clause 4; and
    - C. **prudent in cost** in accordance with clause 5; and
  - (ii) *has been incurred; and*
  - (iii) *either:*
    - A. *the capital expenditure project has been commissioned; or*
    - B. *formally discontinued.” (emphasis added)*

In accordance with the above, the QCA will assess whether the commissioned projects in the 2024-25 Capital Expenditure Report should be included in the RAB including by applying the above prudence tests.

Schedule E of AU2 requires that Queensland Rail provide the following details (unless otherwise agreed):

- the name of the project;
- the location of the project;
- the amount of the capital expenditure; and
- information, where applicable, to support the QCA’s assessment of the prudence of the capital expenditure (except to the extent that the QCA has already accepted that capital expenditure as prudent in scope, standard or cost).

In relation to the above, Queensland Rail has provided the following documents (where relevant):

- Business Cases;
- Project Handover Reports;
- Project Completion Reports;
- Asset Under Construction (**AUC**) forms; and
- The Fixed Asset Register (**FAR**).

## 2.4 2024-25 Capital Expenditure Report summary

Queensland Rail's 2024-25 Capital Expenditure Report includes ten capital expenditure projects seeking the QCA's approval for:

- **\$36,637,687** excluding interest during construction (**IDC**); and
- **\$38,783,157** including IDC.

The projects in question are set out in **Table 1** and **Table 2** below. All assets were commissioned during the 2024-25 financial year.

**Table 1: Commissioned Assets 2024-25 – excluding interest during construction**

Project Number	Project Name	2024-25
<b>100% WEST MORETON PROJECTS</b>		
B.05577	Greasers Replacement/Upgrades	1,083,617
B.05602	Telecom Nera and Rectifier replacement	1,185,201
B.05649	Bridge Renewal West Moreton 20/21-24/25	2,280,626
B.05650	Reconditioning West Moreton 20/21-22/23	15,397,518
B.05651	West Moreton Rerail Kingsthorpe to Oakey	3,565,927
B.05655	Level Crossing Upgrades West Moreton	871,792
B.06156	WM Formation Strengthening WN to KP	9,484,891
B.06159	Sleepers with gauge issue & Range rerail	1,136,902
<b>SYSTEM WIDE / REGIONAL WIDE PROJECTS – INCLUDE WEST MORETON</b>		
B.05085	Pedestrian Crossing Upgrades (Regional)	631,129
<b>OTHER</b>		
Ballast Undercutting	Ballast Undercutting	1,000,086
<b>TOTAL</b>		<b>36,637,687</b>

**Table 2: Commissioned Assets 2024-25 – including interest during construction**

Project Number	Project Name	2024-25
<b>100% WEST MORETON PROJECTS</b>		
B.05577	Greasers Replacement/Upgrades	1,225,079
B.05602	Telecom Nera and Rectifier replacement	1,284,889
B.05649	Bridge Renewal West Moreton 20/21-24/25	2,381,504
B.05650	Reconditioning West Moreton 20/21-22/23	17,174,497
B.05651	West Moreton Rerail Kingsthorpe to Oakey	3,733,655
B.05655	Level Crossing Upgrades West Moreton	891,852
B.06156	WM Formation Strengthening WN to KP	9,300,936
B.06159	Sleepers with gauge issue & Range rerail	1,145,908
<b>SYSTEM WIDE / REGIONAL WIDE PROJECTS – INCLUDE WEST MORETON</b>		
B.05085	Pedestrian Crossing Upgrades (Regional)	644,750
<b>OTHER</b>		
Ballast Undercutting	Ballast Undercutting	1,000,086
<b>TOTAL</b>		<b>38,783,157</b>

### Interest During Construction

AU2 is silent on the methodology to be used for the calculation of IDC. The QCA has advised that it will use the S-curve methodology, consistent with the calculation methodology used by Aurizon Network.

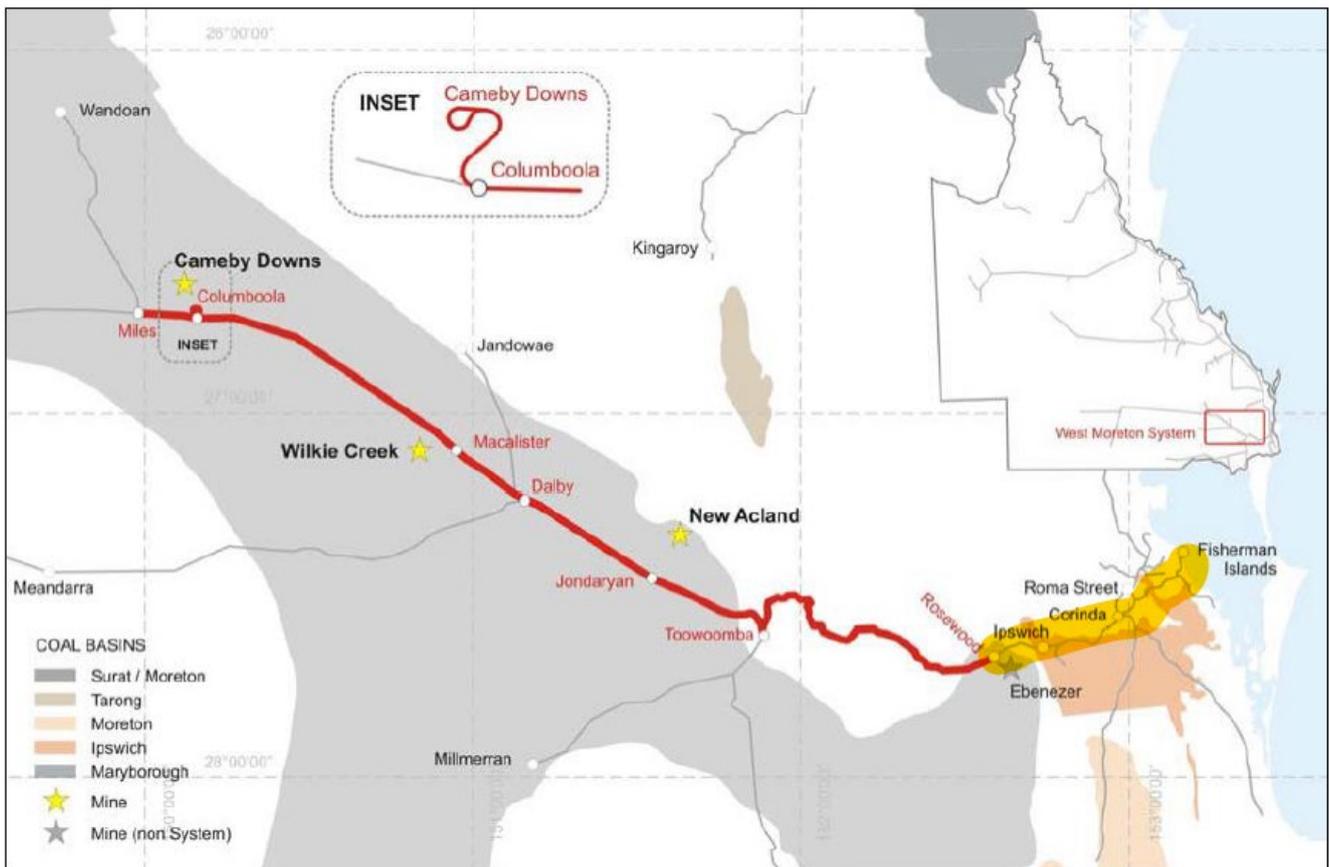
To obtain the IDC amount, the S-curve approach uses monthly cash flow values, multiplied by the applicable interest rate. These cash flows are extracted from Queensland Rail's financial accounting system (**SAP**). The applicable interest rate is the Weighted Average Cost of Capital (**WACC**) for the relevant regulatory period. Approved capital expenditure is included into the RAB as at 1 January in the year of commissioning. To do this, the IDC calculation must be conducted to the mid-point in the year the project was commissioned.

# 3. The West Moreton System

## 3.1 Introduction

Coal carrying train services traverse Queensland Rail’s West Moreton System, which spans approximately 321 route kilometres from Rosewood to Miles, and through the Metropolitan System<sup>1</sup> along approximately 80 route kilometres from Rosewood to the Port of Brisbane (Fisherman Islands). Both the West Moreton System and the Metropolitan System have QCA approved reference tariffs for coal carrying train services.

**Figure 1: Map of Miles to the Port of Brisbane**



### 3.1.1 History and characteristics

Historically the West Moreton System catered for passenger, livestock, freight and agricultural products (e.g. grain and cotton) with the first section of railway line in Queensland, between Ipswich and Grandchester, opening in 1865, the railway reaching Toowoomba in 1867 and Roma in 1880.

<sup>1</sup> The Metropolitan System means that part of the Network bounded to the north by (and including) Nambour station and to the west by (and including) Rosewood and including all branch lines comprised in that part of the Network. Coal trains travel on the System between Rosewood and the Port of Brisbane.

While coal carrying train services commenced in 1982 from mines located just west of Ipswich (in the Metropolitan System), heavy haul coal railings began on the West Moreton System from the Wilkie Creek mine in 1994, with Macalister as the loading point. The Wilkie Creek mine ceased railing in 2013 during a time of low international thermal coal prices but was reopened by New Wilkie Energy in 2023, with first railings on 20 July 2023. New Wilkie Energy was placed into administration on 27 December 2023. Railings from the Wilkie Creek Mine (loading from the Macalister siding) had recommenced during Administration on 2 April 2024 but ceased again on 4 May 2024. New Wilkie Energy is no longer under administration, but has not recommenced railing.

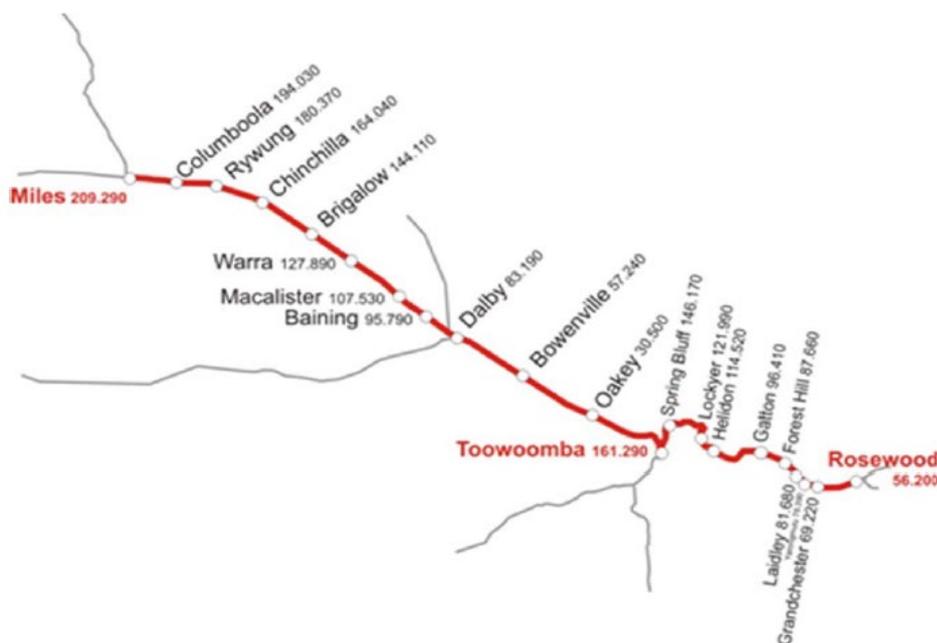
Following the development of the New Acland mine, railings from Jondaryan commenced in 2002 but ceased in 2022 due to the depletion of the Stage 2 coal resource. New Acland Stage 3 was subsequently developed and railings out of Jondaryan commenced in October 2023.

The final Surat Basin mine utilising the West Moreton System, Cameby Downs, began operations in late 2010 transporting coal from Columboola.

The West Moreton System is unique as a coal system, with the Toowoomba Range section, originally constructed in the 1880s, and the majority of the railway from Rosewood to Columboola, being founded on expansive black clays which, if not addressed through effective maintenance and capital strategies at a time of increasing tonnages, will remain unstable requiring mitigation such as speed restrictions.

As the West Moreton System was initially designed to cater for non-coal traffics, this environment has meant that investment in infrastructure improvements, by both Queensland Rail and West Moreton System end-users, has been necessary to accommodate coal carrying train services. It also requires a substantial maintenance effort. Queensland Rail maintains fit for purpose maintenance and capital programs that take account of the West Moreton System’s unique characteristics, and tonnage levels, ensuring a safe and reliable network.

**Figure 2:** Map of the West Moreton System



## 3.2 Rail capacity

Current traffics on the West Moreton System include train services carrying thermal coal from the two mines, freight trains carrying grain and livestock and the Westlander long distance passenger services.

The Toowoomba Range is the capacity constraint on the West Moreton System, with the QCA in AU2 determined a maximum capacity of 113 return train paths per week on average over a year. Of these, 14 return train paths per week are preserved for non-coal freight<sup>2</sup> and two return train paths per week are preserved for the Westlander<sup>3</sup>. The coal mines and their rail operators can contract up to 97 return train paths per week across the Range (as these are not preserved) and can also run ad hoc train services for the remaining 16 return preserved paths (if they are not being used by freight and passenger train services).

The Metropolitan System is not otherwise capacity constrained and can accommodate the 113 train services as well as any coal or freight services that originate in the Metropolitan System and travel between Rosewood and the Port of Brisbane.

AU2 was developed in an environment where forecast tonnages were 2.1 million tonnes per annum (**mtpa**). In contrast, Queensland Rail's Draft Access Undertaking 3 (**DAU3**) submitted to the QCA in November 2023 had forecast West Moreton coal tonnages could reach 9.6mtpa by 2027-28. The current AU3 forecast is between 7.5mtpa and 9.6mtpa, subject to the restarting of the Wilkie Creek coal mine.

Queensland Rail's purpose is to provide a safe, reliable, on-time, value for money and customer focussed rail service that benefits the community, supports industry and is integrated with the public transport system.

## 4. Investment Framework

Queensland Rail is a statutory authority that undertakes numerous capital projects annually to ensure the safe and reliable working, and growth, of the rail network for the people of Queensland. The following processes are applicable to the projects which are the subject of the 2024-25 Capital Expenditure Report.

The Queensland Rail project management methodology relevant to the Capital Expenditure Report is based on the OnQ Project Management Framework developed by the Queensland Government Department of Transport & Main Roads (**DTMR**). The OnQ Project Management Framework provides a consistent, reliable and transparent approach to the management and delivery of projects across Queensland Rail and has been applied to all projects in this report.

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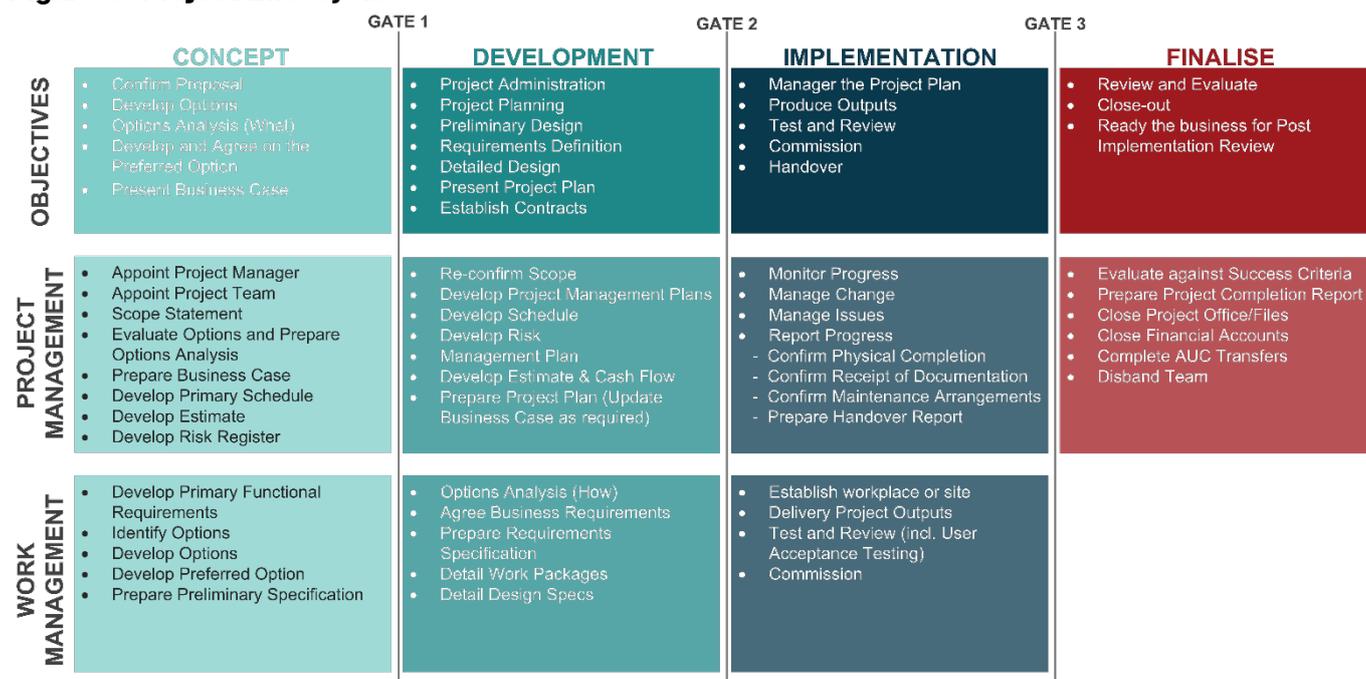
<sup>2</sup> These train paths are preserved under section 266A of the *Transport Infrastructure Act 1994*.

<sup>3</sup> These train paths are preserved under section 266A of the *Transport Infrastructure Act 1994*.

This methodology provides a structured and consistent approach to the management of projects and enables Queensland Rail to successfully deliver the right project outputs, on time and within budget, and meet quality and safety parameters. It also provides structured governance for authorising and approving projects.

The generic methodology is divided into four phases known as the Project Life Cycle. The Project Life Cycle provides the basic framework for managing the project, regardless of the specific work involved. Each phase has several project management and work management activities.

**Figure 3: Project Life Cycle**



Source: Framework – Project management methodology

Project delivery at Queensland Rail has four levels of oversight applied to it:

- **Operational Project Control** — the day-to-day guidance that provides accountability for project delivery and outcomes and advises on the impacts that the project will/may have on business operations and the impacts of business operations on the project.
- **Assurance** — independent assessment of how a project is performing with regard to scoping, planning, resourcing, expectations and alignment with strategy.
- **Governance** — key decisions and direction to allow projects to progress along a defined route that achieves benefits.
- **Financial** — endorsement and approval at relevant stages of progressive financial commitment, that the funding and financial resources are both available and appropriate.

These levels of oversight inform endorsement and approval, at relevant stages of progressive financial commitment, that the funding and financial resources are both available and appropriate. Financial Approvals may be subject to Assurance Reviews and Governance Decisions, or these may be used for a condition of approval.

The following sections set out Queensland Rail's approach to:

- Prudency of Scope;
- Prudency of Standard; and
- Prudency of Cost.

## 5. Prudency of Scope

The QCA is required to consider the prudency of capital projects submitted in the 2024-25 Capital Expenditure Report under the requirements of Schedule E in AU2. In making its assessment, the QCA is to have regard to a range of factors as set out in Schedule E in AU2 being prudency of scope (Clause 3), prudency of standard of works (Clause 4) and prudency of cost (Clause 5).

### 5.1 Access Holder Requirements

The West Moreton System is primarily used for the transportation of heavy haul coal from the Surat Basin to the Port of Brisbane.

To ensure the supply chain delivers the product to the Port of Brisbane on time, the above rail operator's services are timetabled to meet the requirements of the Metropolitan System. Delays in coal carrying train services can result in trains waiting for a new time slot in the Metropolitan System and delaying delivery of product to the port.

Queensland Rail seeks to minimise the below rail transit time including through efficient capital and maintenance expenditure. However, access holders also seek:

- a known cap on the number, location and time interval between track possessions;
- best possible response times to any network disruption (including force majeure events);
- some spare capacity for peak production rates, or catch-up capacity; and
- coordinated supply chain shutdowns and track possessions.

Queensland Rail aims to meet access holder / rollingstock operator / supply chain requirements by reasonably limiting the number of speed restrictions and the total number of unavailable days for rail traffic. However, transit times can also be impacted by factors that are not within the control of Queensland Rail, including due to weather conditions, major projects not in the control of Queensland Rail and above rail reasons.

### 5.2 Demand Forecasts

AU2 was developed with considerable uncertainty around potential future coal volumes likely to be moved on the West Moreton System. For this reason, Queensland Rail submitted two tonnage scenarios in its original August 2018 DAU2 submission to the QCA:

- a low tonnage 2.1mtpa scenario - assuming that only Yancoal's mine at Cameby Downs is producing coal and hauling on the West Moreton System; and

- a high tonnage 9.1mtpa scenario - assuming New Acland Stage 3 (**NAS3**) mine is developed and produces 7mtpa of coal for hauling from Jondaryan, in addition to the 2.1mtpa from Cameby Downs.

In the absence of the approval of NAS3 at the time of AU2’s approval, Queensland Rail proposed, and the QCA accepted, a forecast of 2.1mtpa for AU2.

NAS3 has now been approved with New Hope intending to ramp up tonnages during the AU3 period to 5mtpa (below the original 7mtpa estimate). Yancoal currently has contracted tonnages of 2.5mtpa.

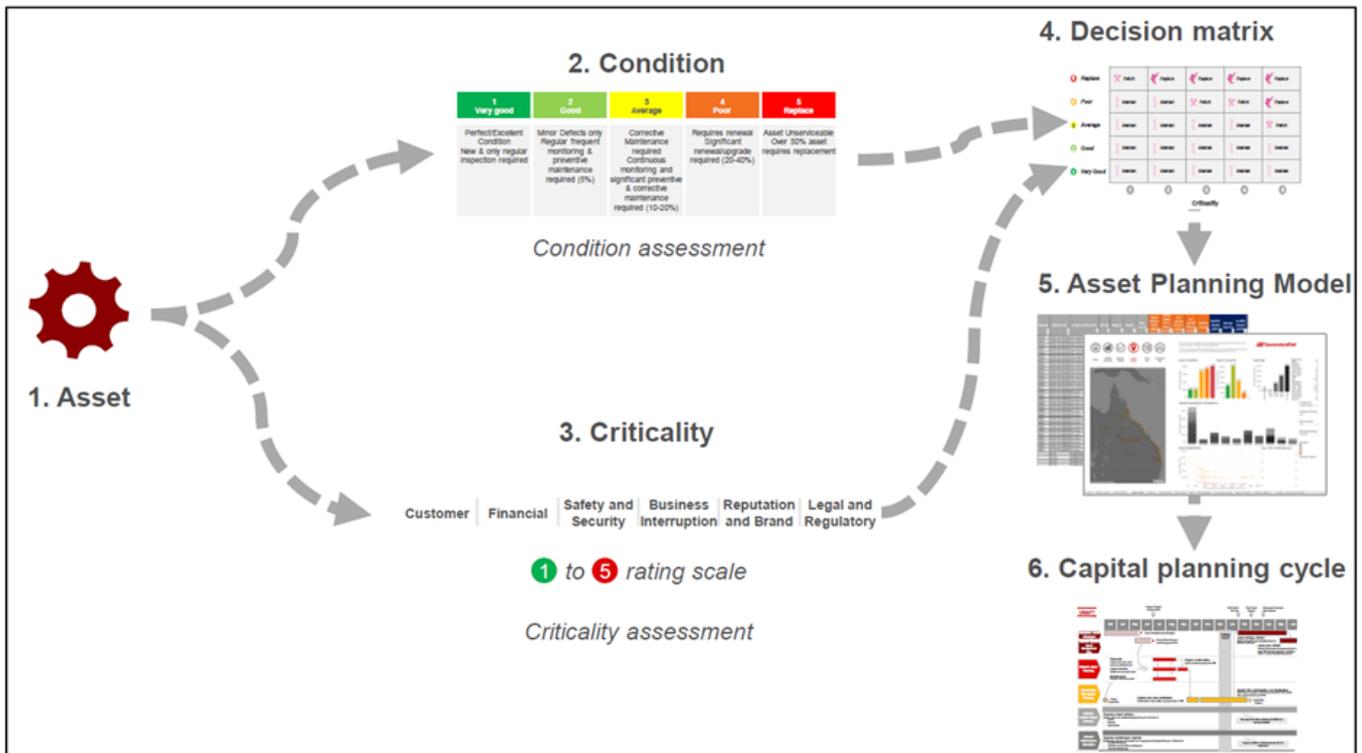
This resulted in the QCA AU3 Final Decision being based upon a 7.5mtpa scenario. AU3 contains triggers for a reference tariff reset to account for NWE restarting coal services.

### 5.3 Asset Planning Framework

The 2024-25 Capital Expenditure Report is based upon the Asset Planning Framework (**APF**). One of the key components of asset management is understanding the type of intervention (i.e. operational, maintenance or capital investment) needed to keep an asset operating at its required level of service. The APF provides a bottom-up view of capital renewal requirements based on an asset’s condition and associated risk profile, its criticality, its typical degradation lifecycle, and current asset management strategies and plans to guide asset planning and capital spend decision making.

The APF then leverages asset-specific decision matrices to aid this decision-making process. Decision matrices bring an asset’s condition and criticality together to guide the typical intervention to undertake based on its current state. **Figure 4** below illustrates the functioning of the APF.

**Figure 4 — Asset Planning Framework**



The APF uses the asset data stored in the Queensland Rail Enterprise Asset Management System (**EAMS**) as the baseline dataset from which decisions are made, influenced by the asset's condition, criticality, design/planned service life, and replacement cost.

An asset's condition rating is a key indicator of the health of the asset and provides an estimation of where the asset sits in its lifecycle. As shown in the figure above, under the AFP the asset's condition is measured against a five point scale, tailored for each asset type. This reflects the likelihood of failure of an asset – the worse the condition rating the higher the likelihood of failure. It provides the basis on which maintenance and capital interventions can be determined.

Within EAMS, asset conditions are measured using one of the following:

- **surveyed condition:** manually entered by Queensland Rail staff following observation of the assets through either visual inspections or engineering assessments; and
- **calculated condition:** calculated based on an asset's age, its planned service life, and the asset's typical degradation curve.

The next step in the framework is understanding the impact that an asset failure would have on Queensland Rail; i.e. an asset's criticality. How critical an asset is to the organisation can help determine the type of maintenance or capital intervention required. Organising assets according to criticality can identify those requiring immediate replacement or maintenance interventions and those where interventions can be postponed. Postponement may occur due to a constrained budget for that financial year or where grouping the replacement of assets aligns to the network business's overall asset management strategies and plans.

The asset criticality dimensions were based on Queensland Rail's Corporate Risk framework and have been assessed in accordance with an associated consequence of failure of an asset. Each asset criticality dimension comprises a five-point rating scale. A score of 1 means the impact of an asset failure is deemed to be insignificant to the business, whereas a score of 5 means the impact of an asset failure is deemed to be catastrophic. The asset condition and criticality rating were used as inputs to decision matrices, which assist in establishing the preferred intervention action for an individual asset. Decision matrices provide guidance on when an asset should be inspected, maintained, replaced or renewed based on the network business's asset strategies and plans. A generic decision matrix is shown below for illustrative purposes.

**Figure 5 – Decision Making Matrix**

<b>Condition</b>	<b>5</b> <i>Replace</i>	<i>Overhaul</i>	<i>Replace</i>	<i>Replace</i>	<i>Replace</i>	<i>Replace</i>
	<b>4</b> <i>Poor</i>	<i>Maintain</i>	<i>Maintain</i>	<i>Overhaul</i>	<i>Overhaul</i>	<i>Replace</i>
	<b>3</b> <i>Average</i>	<i>Maintain</i>	<i>Maintain</i>	<i>Maintain</i>	<i>Maintain</i>	<i>Overhaul</i>
	<b>2</b> <i>Good</i>	<i>Maintain</i>	<i>Maintain</i>	<i>Maintain</i>	<i>Maintain</i>	<i>Maintain</i>
	<b>1</b> <i>Very Good</i>	<i>Maintain</i>	<i>Maintain</i>	<i>Maintain</i>	<i>Maintain</i>	<i>Maintain</i>
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
		<b>Criticality</b>				

The APF Model leverages EAMS asset data to form the foundational profile of the assets to be included in the capital plan for renewals. An asset’s decision matrix and degradation lifecycle are then used to forecast the expected asset intervention methods and expected capital spend per year for interventions requiring asset renewal or refurbishment.

Lastly, the AFP utilises information from the sources discussed above to forecast capital spend for the next fiscal year. Ongoing project delivery and maintenance programs provide updates on existing and new asset conditions to ensure that all asset data is current.

### 5.4 Evaluation of Options

The 2024-25 Capital Expenditure Report was based on TMR’s *OnQ Project Management Framework* which provides the basic framework for managing the project, regardless of the specific work involved. Projects range in type, size, scope, cost and time from large projects costing millions of dollars and implemented over many years, to small projects with a small budget and taking just a few weeks to complete.

Consistent with OnQ, the projects in the 2024-25 Capital Expenditure Report were classified as Type 1, 2 or 3 according to the level of risk and complexity of the project. The higher the complexity and risk, the greater the level of management and control that is required. Below is a high level description of the three project types.

**Figure 6: Project Type Definitions**

<b>Project Type</b>	<b>Description</b>
<b>Type 1</b>	Complex/extreme or high risk projects, requiring high levels of investigation, management and control.
<b>Type 2</b>	Straightforward/medium risk projects, requiring moderate levels of investigation, management and control
<b>Type 3</b>	Simple/low risk projects, requiring low levels of investigation, management and control.

All projects in the 2024-25 Capital Expenditure Report are considered Type 3 projects.

## **5.5 Consultation with Stakeholders – AU2**

Queensland Rail is committed to consultation. In AU2 Queensland Rail consulted with access holders and rollingstock operators about individual capital expenditure projects as set out in Schedule E of AU2.

For example, as part of the QCA AU2 consultation process, Queensland Rail provided the unredacted AU2 West Moreton System reference tariff model to key West Moreton stakeholders under a deed of confidentiality, including to Aurizon, New Hope and Yancoal, enabling stakeholders to assess Queensland Rail’s capital claim. Queensland Rail also set out its capital claim for industry consultation in *Queensland Rail’s Draft Access Undertaking 2 (DAU2) Explanatory Document (14 August 2018)* and its *DAU2 West Moreton System low volume coal reference tariff 22 November 2019* submission.

# **6. Prudency of Standard**

The QCA is required to consider the prudency of standard of projects submitted in the 2024-25 Capital Expenditure Report under Clause 4.2(a) of Schedule E in AU2. In making this assessment, the QCA is to have regard to a range of factors as set out in Clause 4 of Schedule E in AU2.

## **6.1 Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems**

As an accredited RIM under the RSNL, Queensland Rail must ensure, so far as is reasonably practicable (**SFAIRP**), the safety of its railway operations including the movement of rollingstock on a railway track.<sup>[1]</sup>

Accreditation is granted by the Office of the National Rail Safety Regulator (**ONRSR**) on the basis that Queensland Rail has the competence and capacity to manage the risks to safety of persons arising, or potentially arising, from its railway operations, and to implement its safety management system (which Queensland Rail refers to its Safety and Environmental Management System (**SEMS**)) for railway

<sup>[1]</sup> RSNL section 52

operations. The content of a safety management system is prescribed under the Rail Safety National Law. The SEMS is the basis for Queensland Rail’s accreditation. Without its accreditation, Queensland Rail cannot operate its business.

To fulfil its obligation to manage risks SFAIRP, Queensland Rail must *eliminate* risks to safety so far as is reasonably practicable.<sup>[2]</sup> In assessing what is reasonably practicable, the cost associated with available ways of eliminating or minimising risk may be taken into account *only* after assessing the extent and available ways of doing so.<sup>[3]</sup>

The means by which Queensland Rail assesses whether risks are managed SFAIRP is by the application of its SEMS. Queensland Rail must not, without reasonable excuse, contravene its SEMS. In fact, to do so is an offence under the RSNL. Queensland Rail’s SEMS includes:

- Civil Engineering Track Standard (**CETS**) — MD-10-575; and
- Civil Engineering Structures Standard (**CESS**) — MD-10-586.

Queensland Rail is committed to maintaining a safe and reliable network. Queensland Rail’s renewal capital program has been developed in accordance with CETS and CESS.

## 7. Prudence of Costs

The QCA is required to consider the prudence of the costs of projects submitted in the 2024-25 Capital Expenditure Report under Clause 5.3(a) of Schedule E in AU2. In making this assessment, the QCA is to have regard to a range of factors as set out in Clause 5.3(b) and (c) of Schedule E in AU2.

Queensland Rail’s *Project Management Methodology MD-14-781* sets out the framework used for the management of all Queensland Rail capital expenditure projects, including the business case and financial approval requirements for new projects.

Queensland Rail uses SAP as its accounting and reporting platform for projects from initial funding, budget allocation and project delivery. As projects are completed, costs transfer from AUC to the FAR. Assets which have been recognised on the FAR (commissioned assets) are included in the 2024-25 Capital Expenditure Report.



Queensland Rail’s considers that its internal processes support prudence of cost for capital expenditure, having regard to:

<sup>[2]</sup> RSNL section 46

<sup>[3]</sup> RSNL section 47(e)

- the Queensland Rail *Project Management Methodology (MD-14-781)* and *Portfolio and Program Management Methodology (MD-16-29)*;
- external cost benchmarks for components such as rail, sleepers and ballast – where Queensland Rail is able to use its purchasing power for the cost-effective sourcing of materials; and
- use of external contractors for projects suited to this method of procurement – including projects subject to open tenders.

# Attachment 1: Detailed Capital Project Assessments

## B.05577 Greasers Replacement/Upgrades

Claim: **\$1,225,079** (including IDC)

Project	Previously approved (incl IDC)	This claim (incl IDC)	Total	Project Status
B.05577 Greasers Replacement	\$433,439	\$1,225,079	\$1,658,518	<b>Completed</b>

### Project Objective

The objective of this project was to install upgraded electric lubricators for the West Moreton System to mitigate the impacts of a significant increase in track stiffness on the tight radius curves resulting from slab track installation.

### Requirement for the New Lubrication Systems

The West Moreton System previously had [REDACTED] Portee PW37.5 lubricators installed (old lubrication system). The old lubrication system was hydraulically driven and required heavy maintenance regimes to ensure it remains operational and reliable. The old lubrication system also relied on the train wheels to trigger a pin that pushes pressure through the hydraulic system and pumps the grease through to the rail. If there are any leaks or air in the hydraulic system it soon becomes non-operational and stops pushing lubricant onto the rail. The old lubrication system required constant checking to ensure operation. It had been installed for an average of 20 years and lubricators were becoming life expired at the time of the creation of this project.

In May 2019 Aurizon advised Queensland Rail of a sharp increase in wheel flange wear, particularly on lead wheels of locomotives running the West Moreton corridor from around April 2019. Wear rates on the Aurizon locomotives went from [REDACTED] /10,000km to [REDACTED] /10,000km.

The installation of the new lubrication systems is now complete. Upgrade of the lubricators has provided reliability and ease of maintainability. The upgraded lubricators have increased efficiencies due to improved wheel/rail interface and reduction in rail and wheel wear and will support reliability for the higher AU3 tonnage levels.



Old lubrication system



New lubrication system

All lubricators have been installed and have been working well. There are no longer noise complaints relating to a lack of rail lubrication. Additionally, there has been a large reduction to rail rollingstock wheel wear complaints from external stakeholders. The new machines are easier to use and maintain with modern components that require less intrusive maintenance.

Assessment Criteria	Queensland Rail Response
<b>Prudency of scope – criteria to be considered</b>	
The need to accommodate what is reasonably required to comply with Access Agreements.	This project increases the reliability of the Network for customers and for Queensland Rail.
The extent of Reasonable Demand, and the need for new capital expenditure projects to accommodate that demand.	AU3 tonnages are forecast to ramp up to 7.5mtpa from the original AU2 forecast of 2.1mtpa. This project has replaced existing assets with more efficient assets and, thereby, increasing the reliability of the West Moreton System, as well as both decreasing maintenance costs and assisting in reducing maintenance costs for aging coal rollingstock.
The age and condition of existing assets and the need for replacement capital expenditure projects.	<p>This project replaced an older system of aging, less efficient lubrication systems with new track lubrication systems which is required for greater efficiency (refer to the above sections for greater detail).</p> <p>Queensland Rail’s processes are located at <a href="#">Queensland Rail’s Investment Framework Prudency of Scope Prudency of Standard Prudency of Costs</a></p>
Queensland Rail’s obligations under any Laws, including health, safety and environmental Laws.	<p>As an accredited RIM Queensland Rail has a comprehensive Safety and Environmental Management System (<b>SEMS</b>). The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (SFAIRP).</p> <p>For greater detail refer to <a href="#">Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems</a></p>
The appropriateness of Queensland Rail’s processes to evaluate and select proposed capital expenditure projects, including the extent to which alternatives are evaluated as part of the process.	The “ <i>Greasers Replacement/Upgrades Project</i> ” is a Type 3 project, as set out in Queensland Rail’s Project Management Framework. Type 3 projects include projects

## Assessment Criteria

## Queensland Rail Response

that are well defined, low risk of any change and the work is a standard repetitive process.

Queensland Rail's processes are located at [Queensland Rail's Investment Framework Prudency of Scope Prudency of Standard Prudency of Costs](#)

The extent to which the capital expenditure project was subjected to Queensland Rail's processes to evaluate and select proposed capital expenditure projects.

This project has been through Queensland Rail's processes to evaluate and select proposed capital expenditure projects.

The project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined, very low risk of any change. Work is a standard repetitive process (nothing unique) - i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

The Business Case, Handover Report and AUC forms are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR. The Handover Report and Completion Report are completed at the end of the project and will be provided to the QCA at that stage.

This project increases the reliability of the Network for customers and for Queensland Rail.

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to Queensland Rail's Investment Framework in this submission [Queensland Rail's Investment Framework](#)

The extent to which consultation has occurred with relevant stakeholders about the capital expenditure project.

This project increases the reliability of the Network for customers. In May 2019 Aurizon advised Queensland Rail of a sharp increase in wheel flange wear, particularly on lead wheels of locomotives running the West Moreton corridor from around April 2019. Wear rates on the Aurizon locomotives went from [REDACTED]/10,000km to [REDACTED]/10,000km.

## Prudency of standard – criteria to be considered

The requirements of Rolling Stock Operators and what is reasonably required to comply with Access Agreements.

This project increases the reliability of the Network for customers. In May 2019 Aurizon advised Queensland Rail of a sharp increase in wheel flange wear, particularly on lead

## Assessment Criteria

## Queensland Rail Response

wheels of locomotives running the West Moreton corridor from around April 2019. Wear rates on the Aurizon locomotives went from [REDACTED]/10,000km to [REDACTED]/10,000km.

Current and likely future usage levels.

In AU3 the QCA approved tonnage levels of up to 7.5mtpa in approving the West Moreton System reference tariff. AU3 includes a reference tariff review trigger which requires a reference tariff reset if tonnages increase by 1 mtpa above the annual forecast.

The requirements of the codes developed by the Rail Industry Safety and Standards Board (RISSB) Limited ACN 105 001 465 in relation to the standards required for rail infrastructure in Australia.

As an accredited RIM, Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (SFAIRP).

The requirements of other relevant Australian design and construction standards.

For greater detail refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#) in this submission.

Queensland Rail's design standards contained within the Safety Management System.

All relevant Law and the requirements of any Authority (including the Safety Regulator).

## Prudency of cost — criteria to be considered

The level of such costs relative to the scale, nature, cost and complexity of the project.

Queensland Rail's processes are located at [Queensland Rail's Investment Framework Prudency of Scope Prudency of Standard Prudency of Costs](#)

This project has replaced existing assets with more efficient assets thereby increasing the reliability of the West Moreton System, as well as both decreasing maintenance costs and assisting in reducing maintenance costs for an aging coal rollingstock.

The circumstances prevailing in the markets for:

- A. engineering, equipment supply and construction;
- B. labour; and
- C. materials.

This project used both internal and external resources, with the installation being done by Queensland Rail and supplied by Airlubes.

## Assessment Criteria

## Queensland Rail Response

Where the QCA has approved a procurement strategy for the capital expenditure project under clause 6.1(b), the extent to which Queensland Rail has achieved compliance with that procurement strategy.

Not applicable.

The manner in which the capital expenditure project has been managed by Queensland Rail given the circumstances at the time when relevant management decisions and actions were made or undertaken, including Queensland Rail's balancing of:

Queensland Rail has comprehensive processes in place to manage safety and environmental compliance. For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#) in this submission.

- A. safety during construction and operation;
- B. compliance with environmental requirements during construction and operation;
- C. compliance with Laws and the requirements of Authorities;
- D. minimising disruption to the operation of Train Services during construction;
- E. accommodating reasonable requests of Access Holders (and, if applicable, their Customers) to amend the scope and sequence of works undertaken to suit their needs;
- F. minimising whole of asset life costs including future maintenance and operating costs;
- G. minimising total project cost which may at times not be consistent with minimisation of individual contract costs;
- H. aligning other elements in the supply chain; and
- I. meeting contractual timeframes and dealing with external factors.

Queensland Rail is committed to the achievement of its safety goals and to further its safety vision of Safety Comes First, Always. To demonstrate duty of care the project implemented processes, tools and guidance as defined by Queensland Rail's SEMS.

This project has been delivered below the allocated budget.

This project has replaced existing assets with more efficient assets, and thereby increasing the reliability of the West Moreton System, as well as both decreasing maintenance costs and assisting in reducing maintenance costs for aging coal rollingstock.

## B.05602 Telecom Nera and Rectifier Replacement

Claim: **\$1,284,889** (including IDC)

Project	Previously Approved (incl IDC)	This claim (incl IDC)	Total	Project Status
B.05602 Telecom Nera and Rectifier Replacement	N/A	<b>\$1,284,889</b>	\$1,284,889	Completed

### Project description

End of support Nera digital microwave equipment supporting train movements on the Toowoomba Range was becoming unreliable with limited support options. In addition, a number of telecoms rectifier and battery systems required renewal between Helidon and Toowoomba and two sites west of Toowoomba to maintain reliability of signalling and train radio communications (a full list is provided below). The rectifiers (battery charger) and battery systems in the telecommunications network were approaching end of service life. This equipment provides reliable power for the telecoms network supporting critical services including train radio (e.g. communications to train services on the network), signalling telemetry, and traction power SCADA communications. The main objective of this project was to address the risk of the likelihood of power failures that impacts critical network operations.

### Asset condition – Need for upgrading

All the Nera microwave systems listed in this program were identified as EAMS condition assessment 5 (very poor), and all the rectifiers were condition 4 (poor). The Nera system was being maintained by sourcing used/refurbished parts from elsewhere, which this project will rectify. The newly installed systems are condition 1 (very good), with full supplier's support.

### Site Location Assets Replaced

Following are the site locations where the assets under this project were replaced:

- Helidon CER [REDACTED]
- Stringybark MWR Nera [REDACTED]
- Reservoir MWR Nera [REDACTED]
- Toowoomba CER Nera [REDACTED]
- Murphy's Creek Nera [REDACTED]
- Lockyer [REDACTED]
- Holmes CER [REDACTED]
- Spring Bluff [REDACTED]
- Ballard East [REDACTED]
- Bowenville [REDACTED]
- Mt Mowbullian [REDACTED]

Assessment Criteria	Queensland Rail Response
<b>Prudency of scope – criteria to be considered</b>	
The need to accommodate what is reasonably required to comply with Access Agreements.	Power and associated communication systems with built in redundancy are important for communications and the reliability of the network.
The extent of Reasonable Demand, and the need for new capital expenditure projects to accommodate that demand.	AU3 tonnages are forecast to ramp up to 7.5 mtpa during AU3 from the original AU2 forecast of 2.1 mtpa. This project has replaced existing assets with more efficient assets, thereby ensuring the reliability of the West Moreton System. Refer to <a href="#">Rail capacity</a> ) and to <a href="#">Queensland Rail’s Investment Framework</a> .
The age and condition of existing assets and the need for replacement capital expenditure projects.	<p>End of support Nera digital microwave equipment supporting train movements on the Toowoomba Range was becoming unreliable with limited support options. In addition, a number of telecoms rectifier and battery systems required renewal between Helidon and Toowoomba and two sites west of Toowoomba to maintain reliability of signalling and train radio communications.</p> <p>The rectifiers (battery charger) and battery systems in the telecommunications network were approaching end of service life. This equipment provides reliable power for the telecoms network supporting critical services including train radio (e.g. communications to train services on the network), signalling telemetry, and traction power SCADA communications. The main objective of this project was to address the risk of the likelihood of power failures that impacts critical network operations. This project replaced aging assets to ensure the reliability of the System.</p>
Queensland Rail’s obligations under any Laws, including health, safety and environmental Laws.	<p>As an accredited RIM Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (SFAIRP).</p> <p>For greater detail refer to <a href="#">Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems</a></p>

## Assessment Criteria

The appropriateness of Queensland Rail's processes to evaluate and select proposed capital expenditure projects, including the extent to which alternatives are evaluated as part of the process.

## Queensland Rail Response

This project replaced aging equipment which was required to be upgraded. This project supports the reliability of Queensland Rail's network.

### Alternative options considered

**Option 1 – Do nothing (Not recommended)** This option of continuing with local maintenance was dismissed as the assets were end of life.

**Option 2 – (Not preferred)** Replace Nera microwave system and rectifier equipment throughout the Toowoomba West Moreton area with updated technology from Ceragon (formally Nera). Reconfigure the data network and the CERs e.g., rack-mount in the fully airconditioned rooms.

**Option 3 – (Preferred)** Replace Nera microwave system with microwave technology supplied by a different provider e.g., NEC used in train radio network. The rectifier equipment to be replaced with updated technology as used throughout the West Moreton area. Reconfigure the data network and the CERs e.g., rack-mount in the fully air-conditioned rooms.

**Option 4 – (Not preferred)** Replace Nera microwave system throughout the Toowoomba West Moreton area. Reconfigure the data network and the CERs to create modern racking storage in a fully air-conditioned room. This option did not include renewals for the rectifier equipment. This option was discounted as the savings were minimal, approximately \$160,000, whilst the risk of asset failure would not have been treated.

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

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The extent to which the capital expenditure project was subjected to Queensland Rail's processes to evaluate and select proposed capital expenditure projects.

This project has been through Queensland Rail's processes to evaluate and select proposed capital expenditure projects.

Assessment Criteria	Queensland Rail Response
	<p>The Business Case, Handover Report and AUC forms are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR.</p> <p>The project supports the reliability of the rail network. For further information on Queensland Rail’s processes to evaluate and select proposed capital expenditure projects refer to <a href="#">Queensland Rail’s Investment Framework</a>.</p>
<p>The extent to which consultation has occurred with relevant stakeholders about the capital expenditure project.</p>	<p>This project has replaced existing assets nearing life expired status with the replacement assets, increasing the reliability of the West Moreton System.</p>
Prudency of standard – criteria to be considered	
<p>The requirements of Rolling Stock Operators and what is reasonably required to comply with Access Agreements.</p>	<p>This project provides a reliable network and ensures reliable and important communication with Rolling Stock Operators.</p>
<p>Current and likely future usage levels.</p>	<p>AU3 tonnages are forecast to ramp up to 7.5 mtpa during AU3 from the original AU2 forecast of 2.1 mtpa). This project has replaced existing assets with more efficient assets thereby ensuring the reliability of the West Moreton System. Refer to <a href="#">Rail capacity</a> and to <a href="#">Queensland Rail’s Investment Framework</a></p>
<p>The requirements of the codes developed by the Rail Industry Safety and Standards Board (RISSB) Limited ACN 105 001 465 in relation to the standards required for rail infrastructure in Australia.</p> <p>The requirements of other relevant Australian design and construction standards.</p> <p>Queensland Rail’s design standards contained within the Safety Management System.</p> <p>All relevant Law and the requirements of any Authority (including the Safety Regulator).</p>	<p>As an accredited RIM, Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (<b>SFAIRP</b>). The SEMS includes standards for timber sleepers as prescribed in CETS.</p> <p>For greater detail refer to section refer to <a href="#">Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems</a> in this submission.</p>

**Assessment Criteria****Queensland Rail Response****Prudence of cost — criteria to be considered**

The level of such costs relative to the scale, nature, cost and complexity of the project.

This is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined and low risk of any change. Work is standard repetitive process.

The Business Case, Handover Report and AUC forms are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR.

The project was required for the continued reliability of the System.

The project used both internal officers as well as external resources.

The project has been undertaken using the [Queensland Rail's Investment Framework](#)

The circumstances prevailing in the markets for:

- A. engineering, equipment supply and construction;
- B. labour; and
- C. materials.

The upgraded equipment is specialised and required due to compliance obligations as well as to maintain the safety and reliability of the rail network.

The project uses both internal officers as well as external resources.

Where the QCA has approved a procurement strategy for the capital expenditure project under clause 6.1(b), the extent to which Queensland Rail has achieved compliance with that procurement strategy.

Not applicable.

## Assessment Criteria

## Queensland Rail Response

The manner in which the capital expenditure project has been managed by Queensland Rail given the circumstances at the time when relevant management decisions and actions were made or undertaken, including Queensland Rail's balancing of:

- A. safety during construction and operation;
- B. compliance with environmental requirements during construction and operation;
- C. compliance with Laws and the requirements of Authorities;
- D. minimising disruption to the operation of Train Services during construction;
- E. accommodating reasonable requests of Access Holders (and, if applicable, their Customers) to amend the scope and sequence of works undertaken to suit their needs;
- F. minimising whole of asset life costs including future maintenance and operating costs;
- G. minimising total project cost which may at times not be consistent with minimisation of individual contract costs;
- H. aligning other elements in the supply chain; and
- I. meeting contractual timeframes and dealing with external factors.

Queensland Rail has comprehensive processes in place to manage safety and environmental compliance. For greater detail refer to section refer to [Design Standards and Codes - Queensland Rail Safety and Environmental Safety Systems](#) in this submission.

The upgraded equipment is specialised and required to maintain the reliability of the West Moreton System.

## B.05649 Bridge Renewal West Moreton 20/21-24/25

Claim: **\$2,381,504** (including IDC)

Project	Previously approved (incl IDC)	This claim (incl IDC)	Total	Project status
B.05649 Bridge Renewal West Moreton 20/21-24/25	\$13,175,784	<b>\$2,381,504</b>	\$15,557,288	Completed

### Project description:

The objective of the Bridge Renewal West Moreton 20/21-24/25 project was to undertake replacement works i.e. bridge pier replacement and full bridge structure replacement on priority timber bridges (21 in total) in the West Moreton System.

Queensland Rail has over 1,000 timber bridges across Regional Queensland requiring a major maintenance budget. These aging timber bridges have structural elements that have life-expiring components including piers and girders. Condition inspections of all timber bridges on the West Moreton System were carried out by Queensland Rail's inspectors to identify the existing defects. The inspection data was used to undertake a comprehensive condition analysis which enabled a replacement priority list to be produced. In many instances speed restrictions were in place to continue operations across these bridges. These speed restrictions impacted on sectional running times.



Replacement works underway at WL139.69km

Some bridges are also prone to flooding which further affects the structural integrity of these aging structures. If a bridge is damaged by flooding it will close the line for a considerable period while repairs are undertaken.

The Bridge Renewal West Moreton 20/21-24/25 project undertook pier, headstock and abutment replacements on 11 bridges and three full bridge-to-culvert replacements on high priority timber bridge locations in the West Moreton System.

The first tranche of priority timber bridge replacements commenced in 2016/17 with 18 bridges completed by October 2019. This project was the second tranche in the programme and saw renewal of ■ structures completed in October 2024.

This project undertook replacement works i.e. bridge pier replacement and full bridge structure replacement on the next tranche of priority timber bridges (21 in total) in the West Moreton System over financial years 2020/21 to 2023/24.

Defects on these bridges included bridge/rail misalignment, termite damage, cracked girders, perishing girders, loose screws, split spans, rotten transoms and rotten headstocks. The benefits/outcomes of the project are:

- reducing maintenance costs, due to the lower maintenance (primarily Inspection) requirements and longer life of the new structures;
- improving asset reliability due to the higher standard of bridging structure compared with existing timber structures;
- improving flood recovery by providing flood protection to embankments and designing the structure to withstand flood events which the existing timber structures may not;
- improving asset availability due to the reduced maintenance requirements for structures on the West Moreton System; and
- improved safety.

This program was also assessed as part of Queensland Rail's 2022-23 Capital Expenditure Report and the 2023-24 Capital Expenditure Report with the QCA determining the expenditure to be prudent in cost, scope and standard. The work has been carried out in the same manner in relation to this 2024-25 Capital Expenditure Report commissioned assets. This project was essential to maintain the safety and reliability of the West Moreton System.

**Assessment Criteria****Queensland Rail Response****Prudency of scope – criteria to be considered**

The need to accommodate what is reasonably required to comply with Access Agreements.

Condition inspections of all timber bridges on the West Moreton System were carried out by Queensland Rail's inspectors to identify the existing defects. The inspection data was used to undertake a comprehensive condition analysis which enabled a replacement priority list to be produced.

In many instances speed restrictions were in place in order to continue operations across these bridges. These speed restrictions impacted on sectional running times. Some bridges are also prone to flooding which further affects the structural integrity of these aging structures. If a bridge were to be damaged by flooding It would close the line for a considerable period while repairs are undertaken.

This project ensures that the network performs safely and reliably. The reliability assists customers with the throughput of their train services.

This project provides a reliable, safe network meeting the requirements for Train Service Entitlements contained in the Access Agreements by enabling train services to achieve greater throughput.

## Assessment Criteria

## Queensland Rail Response

The extent of Reasonable Demand, and the need for new capital expenditure projects to accommodate that demand.

The QCA approval process for the AU2 West Moreton System coal reference tariff was extensive with the QCA and stakeholders considering both a 9.1mtpa scenario and a 2.1mtpa scenario, the higher tonnage level being dependent upon the NAS3 mine being approved by Government.

Industry, the QCA and Queensland Rail all supported a 2.1mtpa scenario at the end of 2019 as the best forecast until/if NAS3's approval progresses, with the QCA using a 2.1mtpa forecast for contracted coal train paths in its Final Decision.

Since that assessment NAS3 has been approved and New Hope commenced railings in October 2023. The Wilkie Creek mine commenced railings in July 2023, however, were suspended in May 2024. This has resulted in increased coal railings approved in AU3 of 7.5mtpa (refer to [Rail capacity](#)).

These tonnages will require safe and reliable infrastructure. This project improves safety and reliability.

For information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

The age and condition of existing assets and the need for replacement capital expenditure projects.

Condition inspections of all timber bridges on the West Moreton System were carried out by Queensland Rail's inspectors to identify the existing defects. The inspection data was used to undertake a comprehensive condition analysis which enabled a replacement priority list to be produced.

In many instances speed restrictions were put in place in order to continue operations across these bridges. These speed restrictions impacted on sectional running times. Some bridges are also prone to flooding which further affects the structural integrity of these aging structures. If a bridge were to be damaged by flooding It would close the line for a considerable period while repairs are undertaken.

This project ensures that the network performs safely and, in particular, reliably. The reliability assists customers with the throughput of their train services.

## Assessment Criteria

## Queensland Rail Response

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

Queensland Rail's obligations under any Laws, including health, safety and environmental Laws.

The Bridge Renewal West Moreton 20/21-24/25 Project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined and low risk of any change. Work is a standard repetitive process (nothing unique) - i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

Bridge renewal is a Type 3 project, as set out in Queensland Rail's Project Management Framework. The assets included in this 2024-25 Capital Expenditure Report have been commissioned and are included in Queensland Rail's FAR. The Business Case, Completion Report, Handover Report and AUC forms are provided with this report.

As an accredited RIM Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (SFAIRP).

For greater detail refer to [Design Standards and Codes - Queensland Rail Safety and Environmental Safety Systems](#) in this submission.

The appropriateness of Queensland Rail's processes to evaluate and select proposed capital expenditure projects, including the extent to which alternatives are evaluated as part of the process.

The Bridge Renewal West Moreton 20/21-24/25 Project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined and very low risk of any change. Work is standard repetitive process (nothing unique) i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#).

The extent to which the capital expenditure project was subjected to Queensland Rail's processes to evaluate and select proposed capital expenditure projects.

This project has been through Queensland Rail's processes to evaluate and select proposed capital expenditure projects.

The project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined, very low risk of any

## Assessment Criteria

## Queensland Rail Response

change. Work is repetitive process (nothing unique) - i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

The assets included in this 2024-25 Capital Expenditure Report have been commissioned and are included in Queensland Rail's FAR. The Business Case, Completion Report, Handover Report and AUC forms are provided with this report.

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

The extent to which consultation has occurred with relevant stakeholders about the capital expenditure project.

Queensland Rail uses the SWUG process to discuss closure and other major maintenance and timetabling issues with rolling stock operators.

## Prudency of standard – criteria to be considered

The requirements of Rolling Stock Operators and what is reasonably required to comply with Access Agreements.

This project provides a reliable, safe network meeting the requirements for greater throughput for access holders.

Current and likely future usage levels.

The QCA approval process for the AU2 West Moreton System coal reference tariff was extensive with the QCA and stakeholders considering both a 9.1mtpa scenario and a 2.1mtpa scenario, the higher tonnage level being dependent upon the NAS3 mine being approved by Government.

Industry, the QCA and Queensland Rail supported a 2.1mtpa scenario at the end of 2019 as the best forecast until/if NAS3's approval progresses, with the QCA using a 2.1mtpa forecast for contracted coal train paths in its Final Decision.

Since that assessment NAS3 has been approved and commenced railings in October 2023. The Wilkie Creek mine commenced railings in July 2023, however, were suspended in May 2024. This has resulted in increased coal railings with the QCA approving a reference tariff in AU3 of 7.5 mtpa. (refer to [Rail capacity](#)). These increased tonnages require safe and reliable infrastructure.

## Assessment Criteria

The requirements of the codes developed by the Rail Industry Safety and Standards Board (RISSB) Limited ACN 105 001 465 in relation to the standards required for rail infrastructure in Australia.

The requirements of other relevant Australian design and construction standards.

Queensland Rail's design standards contained within the Safety Management System.

All relevant Law and the requirements of any Authority (including the Safety Regulator).

## Queensland Rail Response

As an accredited RIM, Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (**SFAIRP**). The SEMS includes standards for timber sleepers as prescribed in CETS. For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#) in this submission.

## Prudency of cost — criteria to be considered

The level of such costs relative to the scale, nature, cost and complexity of the project.

The assets included for this 2024-25 Capital Expenditure Report were commissioned in 2024-25. Queensland Rail has added these assets to Queensland Rail's FAR. The Business Case, Completion Report, Handover Report and AUC forms are provided with this report.

Also refer to [Queensland Rail's Investment Framework](#).

The circumstances prevailing in the markets for:

- A. engineering, equipment supply and construction;
- B. labour; and
- C. materials.

The project was undertaken by both Queensland Rail resources and external contractors.

The delivery strategy for this project was comprised of a blended delivery utilising Queensland Rail internal resources and contractor support in the form of equipment supply and installation.

Internal resources were utilised for the installation of any pits, conduits, enclosures and electrical works and wayside equipment. Internal resources also undertook testing of communications connectivity, protection and performed operational system integration activities with Queensland Rail's wayside detection and asset protection systems. The resources utilised were primarily Telecoms Maintainer teams throughout the regions, with support from structural, track and civil gangs if required to enable minor enabling works (concrete pours, minor earthworks and sensor installations on-track).

Assessment Criteria	Queensland Rail Response
<p>Where the QCA has approved a procurement strategy for the capital expenditure project under clause 6.1(b), the extent to which Queensland Rail has achieved compliance with that procurement strategy.</p>	<p>Not applicable.</p>
<p>The manner in which the capital expenditure project has been managed by Queensland Rail given the circumstances at the time when relevant management decisions and actions were made or undertaken, including Queensland Rail's balancing of:</p> <ul style="list-style-type: none"> <li>A. safety during construction and operation;</li> <li>B. compliance with environmental requirements during construction and operation;</li> <li>C. compliance with Laws and the requirements of Authorities;</li> <li>D. minimising disruption to the operation of Train Services during construction;</li> <li>E. accommodating reasonable requests of Access Holders (and, if applicable, their Customers) to amend the scope and sequence of works undertaken to suit their needs;</li> <li>F. minimising whole of asset life costs including future maintenance and operating costs;</li> <li>G. minimising total project cost which may at times not be consistent with minimisation of individual contract costs;</li> <li>H. aligning other elements in the supply chain; and</li> <li>I. meeting contractual timeframes and dealing with external factors.</li> </ul>	<p>Queensland Rail has comprehensive processes in place to manage safety and environmental compliance.</p> <p>As an accredited RIM, Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (SFAIRP). The SEMS includes standards for timber sleepers as prescribed in CETS.</p> <p>For greater detail refer to section refer to <a href="#">Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems</a> in this submission.</p>

## B.05650 Reconditioning West Moreton 21-23

Claim: **\$17,174,497** (including IDC)

Project	Previously approved (incl IDC)	This claim (incl IDC)	Total	Project Status
B.05650 Reconditioning West Moreton 21-23	\$34,022,650	<b>\$17,174,497</b>	\$51,197,147	<b>Completed</b>



### Background

The West Moreton System spans 407 track kilometres (314 route kilometres) of narrow gauge track which consists of 41kg, 50kg and 60kg rail. The 41kg rail is interspersed with timber and steel sleepers. This System has been systematically upgraded, targeting priority sections of track.

The existing 41kg rail and timber and steel sleepers are becoming maintenance-intensive and have needed upgrading to improve reliability and safety. In addition, there are sections of this line that are built on untreated black soil formations which contribute to the intensive maintenance requirements. This black soil formation has contaminated the existing ballast, contributing to drainage issues. This line also suffers from top and line and stress issues during the summer months. Due to the poor condition of the track structure this section of track requires increasing maintenance to conform to CETS and to support operational base service level performance.

This Reconditioning project was required to improve safety and reliability at priority locations by providing an improved track structure to service existing traffic. The project has been developed to address the high priority defects that have been identified during routine infrastructure inspections of the West Moreton System and in Queensland Rail's '*Derailment Reduction Strategy West Moreton*

*System Jondaryan – Columboola Report (2019)*'.

## Project Benefits

The West Moreton System has been systematically upgraded with priority track targeted as part of an overall strategy. The B.03656 Western System Asset Replacement (**WSAR**) Project replaced [REDACTED] of priority track over six years and was completed in 2015-16. The B.05171 Reconditioning West Moreton 16/17 - 19/20 Project renewed [REDACTED] of track.

Continuing this work, the scope of works for this project included the upgrade of the track structure to 50kg rail, full depth medium duty concrete sleepers and A Grade ballast, and formation improvements comprised of construction of a new capping structure. This B.05650 Reconditioning West Moreton 20/21-22/23 Project upgraded [REDACTED] of priority track between [REDACTED] and [REDACTED] on the West Moreton System. The targeted areas are critical sections, carrying loaded coal traffic from all mines.

The benefits that will be realised by delivering this project are:

- Improved safety via replacement with heavier track structure, reducing risk of buckles / misalignment.
- Reduced potential for Temporary Speed Restrictions (**TSRs**) and impacts to operations such as derailment via improved track stability and improved formation strength (eliminated risk of sleeper / rail failure; improved top and line).
- Improved track condition and track quality as measured by the Overall Track Condition Index (**OTCI**).
- Track standards compliance via track realignment. The condition of the track was requiring increasing maintenance to conform to CETS.
- Reduced future track maintenance requirements over this section.
- Improved reliability and service delivery on the West Moreton System.

Note: Commissioned assets that are located between Columboola and Miles are not eligible for inclusion in the Annual Capital Expenditure Report.

## Previous Consideration by the QCA

Arcadis<sup>4</sup> and the QCA<sup>5</sup> has previously found that the commissioned assets were prudent in terms of scope, standard and cost. The 2024-25 Capital Expenditure Report is seeking \$17,174,497 (excluding IDC) for commissioned assets in this project. These works were undertaken by Queensland Rail in the same manner as for the assets commissioned in 2020-21 Capital Expenditure Report. Arcadis wrote:

*“In general, Arcadis found that Queensland Rail has implemented an effective reconditioning program based upon high priority defects regular inspections and in Queensland Rail’s ‘Derailment Reduction Strategy West Moreton System Jondaryan – Columboola Report (2019)’.....Reconditioning in the West Moreton System is part of a wider program, with priority track targeted as part of an overall strategy. The project is essential in maintaining operational performance and safety in light of future demand levels, with targeted areas critical in carrying loaded coal traffic from all mines in the West Moreton System”.*

Assessment Criteria	Queensland Rail Response
<b>Prudency of scope – criteria to be considered</b>	
The need to accommodate what is reasonably required to comply with Access Agreements.	This Reconditioning project was required to improve safety and reliability at priority locations on the West Moreton System by providing an improved track structure to service existing traffic. The project has been developed to address the high priority defects.  The existing track structure comprising 41kg rail and timber and steel sleepers is becoming maintenance-intensive and needs upgrading to improve reliability and safety. This is a critical section in the system, carrying loaded coal traffic from all mines in the system.

<sup>4</sup> Arcadis' Report 'Queensland Rail 2020 -21 Capital Expenditure Claim. 18 August 2022', p22

<sup>5</sup> Queensland Competition Authority Decision Notice, 29 August 2022

## Assessment Criteria

## Queensland Rail Response

The extent of Reasonable Demand, and the need for new capital expenditure projects to accommodate that demand.

The QCA approval process for the AU2 West Moreton System coal reference tariff was extensive with the QCA and stakeholders considering both a 9.1mtpa scenario and a 2.1mtpa scenario, the higher tonnage level being dependent upon the NAS3 mine being approved by Government.

Industry, the QCA and Queensland Rail all supported a 2.1mtpa scenario at the end of 2019 as the best forecast until/if NAS3's approval progresses, with the QCA using a 2.1mtpa forecast for contracted coal train paths in its Final Decision.

Since that assessment NAS3 has been approved and New Hope commenced railings in October 2023. The Wilkie Creek mine commenced railings in July 2023, however, were suspended in May 2024. This has resulted in increased coal railings approved in AU3 of 7.5mtpa (refer to [Rail capacity](#)).

These tonnages will require safe and reliable infrastructure.

For information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

The age and condition of existing assets and the need for replacement capital expenditure projects.

Issues with formation on the West Moreton System are longstanding and are the result of the original railway construction between 1865 and 1880.

The WorleyParsons Report 2013 noted that West Moreton System formation is sub-standard even for a semi-heavy haul operation, and the track requires regular resurfacing (of the order of once every three to four months). The improvement from resurfacing in top and line soon deteriorates. In areas where there is major weakness in the foundation the sleepers start pumping and the black soil mud soon permeates the track structure.

The existing 41kg rail and timber and steel sleepers are becoming maintenance-intensive and need upgrading to improve reliability and safety. In addition, there are sections of this line that are built on untreated black soil formations which contribute to the intensive maintenance requirements. This black soil formation has contaminated the existing ballast, contributing to drainage issues. This line also suffers from top and line and stress issues during the summer months. Due to the poor condition of the track structure this section of

## Assessment Criteria

## Queensland Rail Response

track requires increasing maintenance to conform to CETS and to support operational base service level performance.

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

Queensland Rail's obligations under any Laws, including health, safety and environmental Laws.

As an accredited RIM, Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as reasonably practicable (SFAIRP). The SEMS includes standards for conditioning as prescribed in CETS.

For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#)

The appropriateness of Queensland Rail's processes to evaluate and select proposed capital expenditure projects, including the extent to which alternatives are evaluated as part of the process.

Queensland Rail followed its investment process. For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to Queensland Rail's Investment Framework in this submission. For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

The Reconditioning project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined, very low risk of any change. Work is standard repetitive process (nothing unique) - i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

The Business Case, Handover Report, AUC forms and FAR are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR. Queensland Rail considered the following three options in relation to this project:

### **Option 1: Do nothing**

This option would ignore the risk of rail wear and deformation causing derailment. This would result in increasing maintenance costs to remove large amounts of rail defects such as irregular sleeper spacing, damaged joints, wheel burns, squats, irregular wear and head rail flow.

## Assessment Criteria

## Queensland Rail Response

### **Option 2: Replace rail or ballast only**

This option would only provide limited track stability, alignment improvement and operational maintenance savings.

### **Option 3: Recondition (Preferred option)**

This option upgrades formation/ capping and the track structure to 50kg rail, full depth/ medium duty concrete sleepers, and A Grade ballast. This option will reduce the risk of service disruption and safety risks by improving the network through the replacement of deteriorating track infrastructure with new infrastructure and targeting the replacement of below rail infrastructure that is known will have an increasing operational maintenance cost.

The extent to which the capital expenditure project was subjected to Queensland Rail's processes to evaluate and select proposed capital expenditure projects.

Queensland Rail followed its investment process. For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

The Reconditioning project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined, very low risk of any change. Work is standard repetitive process (nothing unique) - i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

The Business Case, Handover Report, AUC forms and FAR are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR.

The extent to which consultation has occurred with relevant stakeholders about the capital expenditure project.

The project was included in the following documents as part of the QCA's consultation on AU2:

- Queensland Rail's Draft Access Undertaking 2 (DAU2) Explanatory Document (14 August 2018);
- QCA Draft Decision on Queensland Rail 2020 draft access undertaking April 2019;
- SYSTRA, Review of Proposed Maintenance, Capital & Operations Expenditure Review, Draft Access Undertaking 2 (DAU2), April 2019;
- Queensland Rail's DAU2 West Moreton System low volume coal reference tariff 22 November 2019; and
- The QCA Final Decision on Queensland Rail 2020 draft access undertaking, February 2020; and

## Assessment Criteria

## Queensland Rail Response

- The QCA review of Queensland Rail's 2020-21 Capital Expenditure Report.

As part of the QCA AU2 approval process, Queensland Rail provided the unredacted AU2 West Moreton System reference tariff model to key West Moreton stakeholders under a deed of confidentiality, including to Aurizon, Pacific National, New Hope and Yancoal as part of the QCA AU2 consultation process, enabling stakeholders to assess the claim. The B.05650 Reconditioning West Moreton 21-23 Project and its forecast expenditure was included in the model. This also enabled the release of the unredacted QCA SYSTRA Draft Decision and Final Decision reports to these stakeholders which included this project.

Queensland Rail uses the SWUG process to discuss closure and other major maintenance and timetabling issues with rolling stock operators.

## Prudency of standard – criteria to be considered

The requirements of Rolling Stock Operators and what is reasonably required to comply with Access Agreements.

This Reconditioning project is required to improve safety and reliability at priority locations on the West Moreton System by providing an improved track structure to service existing traffic. The project has been developed to address the high priority defects.

The existing track structure comprising 41kg rail and timber and steel sleepers is becoming maintenance-intensive and is in need for upgrade to improve reliability and safety. This is a critical section in the system, carrying loaded coal traffic from all mines in the system.

This project ensures that the network performs safely and reliably to a condition that meets engineering standards.

This project provides a reliable, safe network meeting the requirements for Train Service Entitlements contained in the Access Agreements for coal services that utilise the West Moreton System and minimises disruptions through additional track maintenance and speed restrictions for train services.

Queensland Rail used the SWUG process to discuss closures and other major maintenance and timetabling issues with rolling stock operators.

Current and likely future usage levels.

The QCA approval process for the AU2 West Moreton System coal reference tariff was extensive with the QCA and stakeholders considering both a 9.1mtpa scenario and a 2.1mtpa

## Assessment Criteria

## Queensland Rail Response

scenario, the higher tonnage level being dependent upon the NAS3 mine being approved by Government.

Industry, the QCA and Queensland Rail all supported a 2.1mtpa scenario at the end of 2019 as the best forecast until/if NAS3's approval progresses, with the QCA using a 2.1mtpa forecast for contracted coal train paths in its Final Decision.

Since that assessment NAS3 has been approved and New Hope commenced railings in October 2023. The Wilkie Creek mine commenced railings in July 2023, however, were suspended in May 2024. This has resulted in increased coal railings approved in AU3 of 7.5mtpa (refer to [Rail capacity](#)).

These tonnages will require safe and reliable infrastructure.

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The requirements of the codes developed by the Rail Industry Safety and Standards Board (**RISSB**) Limited ACN 105 001 465 in relation to the standards required for rail infrastructure in Australia.

The requirements of other relevant Australian design and construction standards.

Queensland Rail's design standards contained within the Safety Management System.

All relevant Law and the requirements of any Authority (including the Safety Regulator).

As an accredited RIM, Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (SFAIRP). The SEMS includes standards for level crossings as prescribed in CETS.

For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#).

**Assessment Criteria****Queensland Rail Response****Prudence of cost — criteria to be considered**

The level of such costs relative to the scale, nature, cost and complexity of the project.

The assets included for this 2024-25 Capital Expenditure Report were commissioned in 2024-25. Queensland Rail has added these assets to Queensland Rail's FAR.

The Business Case and AUC forms have been provided to the QCA as part of this 2022-23 Capital Expenditure Report. The Project is ongoing. The Handover Report and Completion Reports are developed at the completion of the project.

The circumstances prevailing in the markets for:

- A. engineering, equipment supply and construction;
- B. labour; and
- C. materials.

Work was ne in-house using internal and external resources. Internal Queensland Rail track and structure staff were used for the construction labour.

Where the QCA has approved a procurement strategy for the capital expenditure project under clause 6.1(b), the extent to which Queensland Rail has achieved compliance with that procurement strategy.

Not applicable.

## Assessment Criteria

## Queensland Rail Response

The manner in which the capital expenditure project has been managed by Queensland Rail given the circumstances at the time when relevant management decisions and actions were made or undertaken, including Queensland Rail's balancing of:

- A. safety during construction and operation;
- B. compliance with environmental requirements during construction and operation;
- C. compliance with Laws and the requirements of Authorities;
- D. minimising disruption to the operation of Train Services during construction;
- E. accommodating reasonable requests of Access Holders (and, if applicable, their Customers) to amend the scope and sequence of works undertaken to suit their needs;
- F. minimising whole of asset life costs including future maintenance and operating costs;
- G. minimising total project cost which may at times not be consistent with minimisation of individual contract costs;
- H. aligning other elements in the supply chain; and
- I. meeting contractual timeframes and dealing with external factors.

As an accredited RIM, Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (SFAIRP). The SEMS includes standards for timber sleepers as prescribed in CETS.

For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#) in this submission.

## B.05651 West Moreton Rerail Kingsthorpe to Oakey

Claim: **\$3,733,655** (including IDC)

Project	Previously approved (incl IDC)	This claim (incl IDC)	Total	Project Status
B.05651 West Moreton Rerail Kingsthorpe to Oakey	\$5,834,501	<b>\$3,733,655</b>	\$9,568,156	<b>Completed</b>

### Background

This project involved the renewal of [REDACTED] kilometres of worn and defective rail on the mainline track between Gowrie to Oakey on the Western Line, renewal of [REDACTED] of yard track at Kingsthorpe (including ballast, sleeper, and rail) and [REDACTED] bridge relay (Gowrie Creek Bridge) on the Western Line. These works included primarily the elimination 41kg/m rail for new 50kg/m rail throughout several high priority locations on the Western Line, completing the missing link between Toowoomba and Jondaryan.

The rail asset was ageing and exhibiting a heightened occurrence of fatigue defects. Replacement of fatiguing rail aligned with the approach outlined in the 2019 West Moreton Derailment Reduction Strategy. Concurrently, West Moreton forecasted a significant increase in traffic from [REDACTED] that commenced in 2023, making asset resilience increasingly critical. This program was delayed due to inclement weather impacts.

### Scope

[REDACTED] Disposal of existing ballast, steel sleepers and 41kg rail, installation of new ballast, FDC sleepers and 50kg rail.

[REDACTED] Disposal of existing 41kg rail, installation of new 50kg rail. A number of locations in this section have already been rerailed ([REDACTED] These locations are: [REDACTED] (existing 50kg), [REDACTED] (existing 50kg), [REDACTED] (existing 50kg), [REDACTED] (Level crossing upgrade already complete).

[REDACTED] Disposal of existing ballast, timber and steel sleepers and 41kg rail, installation of new ballast, LPC sleepers and 50kg rail.

[REDACTED]

Replace near life-expired 41kg/m rail between [REDACTED] on the Western Line with 50kg/m rail, which will increase the strength of the track structure.

[REDACTED]

The relay is required to replace the existing life-expired steel sleepers, Grade B ballast and 41kg rail with Grade A ballast, FDC sleepers and 50kg/m rail. This will result in a more robust track structure that will be more suitable for the current traffic task, and which will require less maintenance.

[REDACTED]

Relay required to remove the existing 1 in 2 steel pattern, 41kg rail and life-expired ballast and replace it with Grade A ballast, LPC sleepers and 50kg rail.

### **Project Benefits**

This project seeks to:

- Implement sustainable asset management practices;
- Provide network resilience;
- Improve safety outcomes for customers, employees and contractors;
- Sustain on-time running and reliability;
- Prevent and recover from disruptive events;
- Achieve stakeholder and customer service standards and expectations; and
- Optimise asset management and investment.

Assets commissioned in 2022-23 from this project were included in the 2022-23 Capital Expenditure Report and were found to be prudent in terms of scope, standard and cost by the QCA.

## Assessment Criteria

## Queensland Rail Response

### Prudency of scope – criteria to be considered

The need to accommodate what is reasonably required to comply with Access Agreements.

This project is safety critical providing a reliable, safe network.

The project is required to replace near life-expired 41kg/m rail between [REDACTED] on the Western Line with 50kg/m rail, which will increase the strength of the track structure.

Historical data from 2016 to 2022 recorded by the RTI car (ultrasonic inspections), showed that the section between Toowoomba and Oakey had various internal rail defects in the past, where the 41kg/m rail was or is still present. A high proportion of the rail defects exhibited are correlated with rail breaks and categorised as immediate priority under CETS, impacting operations and requiring reactive maintenance practices. In addition, given the frequency of welds in the rail, repair works are requiring greater closure lengths to meet CETS requirements. By removing the existing 41kg rail the risk of internal defects are reduced leading to a decreased risk in rail failure.

The extent of Reasonable Demand, and the need for new capital expenditure projects to accommodate that demand.

The QCA approval process for the AU2 West Moreton System coal reference tariff was extensive with the QCA and stakeholders considering both a 9.1mtpa scenario and a 2.1mtpa scenario, the higher tonnage level being dependent upon the NAS3 mine being approved by Government.

Industry, the QCA and Queensland Rail all supported a 2.1mtpa scenario at the end of 2019 as the best forecast until/if NAS3's approval progresses, with the QCA using a 2.1mtpa forecast for contracted coal train paths in its Final Decision.

Since that assessment NAS3 has been approved and New Hope commenced railings in October 2023. The Wilkie Creek mine commenced railings in July 2023, however, were suspended in May 2024. This has resulted in increased coal railings approved in AU3 of 7.5mtpa (refer to [Rail capacity](#)).

This project is safety critical providing a reliable, safe network.

The age and condition of existing assets and the need for replacement capital expenditure projects.

The project is required to replace near life-expired 41kg/m rail between [REDACTED] on the Western Line with 50kg/m rail, which will increase the strength of the track structure. Historical data from 2016 to 2022 recorded by the RTI car (ultrasonic

## Assessment Criteria

## Queensland Rail Response

inspections), shows that the section between [REDACTED] had various internal rail defects in the past, where the 41kg/m rail was or is still present. A high proportion of the rail defects exhibited are correlated with rail breaks and categorised as immediate priority under CETS, impacting operations and requiring reactive maintenance practices. In addition, given the frequency of welds in the rail, repair works are requiring greater closure lengths to meet CETS requirements. By removing the existing 41kg rail the risk of internal defects are reduced leading to a decreased risk in rail failure.

This stability is particularly important with the higher tonnages forecast to come onto the network resulting in higher rail traffic.

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#).

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Queensland Rail's obligations under any Laws, including health, safety and environmental Laws.

This is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined and low risk of any change. Work is standard repetitive process (nothing unique) - i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

The Business Case, Handover Report and AUC forms are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR. The FAR has been provided as part of this report.

As an accredited RIM Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (SFAIRP).

For greater detail refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#).

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The appropriateness of Queensland Rail's processes to evaluate and select proposed capital expenditure projects, including the extent to which alternatives are evaluated as part of the process.

This project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined, very low risk of any change. Work is standard repetitive process (nothing unique) i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

## Assessment Criteria

## Queensland Rail Response

The project is appropriate as it is a safety critical project which will replace near life-expired 41kg/m rail between [REDACTED] on the Western Line with 50kg/m rail, which will increase the strength of the track structure. The analysis is based on historical data from 2016 to 2022 recorded by the RTI car (ultrasonic inspections). A high proportion of the rail defects exhibited are correlated with rail breaks and categorised as immediate priority under CETS, impacting operations and requiring reactive maintenance practices.

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

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The extent to which the capital expenditure project was subjected to Queensland Rail's processes to evaluate and select proposed capital expenditure projects.

This project has been through Queensland Rail's processes to evaluate and select proposed capital expenditure projects.

The project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined, very low risk of any change. Work is standard repetitive process (nothing unique) - i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

The project is appropriate as it is a safety critical project which will replace near life-expired 41kg/m rail between [REDACTED] on the Western Line with 50kg/m rail, which will increase the strength of the track structure.

The analysis is based on historical data from 2016 to 2022 recorded by the RTI car (ultrasonic inspections). A high proportion of the rail defects exhibited are correlated with rail breaks and categorised as immediate priority under CETS, impacting operations and requiring reactive maintenance practices.

The Business Case, Handover Report and AUC forms are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR. The FAR has been provided as part of this report.

Assessment Criteria	Queensland Rail Response
	For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to <a href="#">Queensland Rail's Investment Framework</a> in this submission
The extent to which consultation has occurred with relevant stakeholders about the capital expenditure project.	Queensland Rail uses the South West User Group ( <b>SWUG</b> ) process to discuss closure and other major maintenance and timetabling issues with rolling stock operators.
Prudency of standard – criteria to be considered	
The requirements of Rolling Stock Operators and what is reasonably required to comply with Access Agreements.	This project ensures that the network performs safely and reliably. This project provides a reliable, safe network meeting the requirements for Train Service Entitlements contained in the Access Agreements.
Current and likely future usage levels.	<p>The QCA approval process for the AU2 West Moreton System coal reference tariff was extensive with the QCA and stakeholders considering both a 9.1mtpa scenario and a 2.1mtpa scenario, the higher tonnage level being dependent upon the NAS3 mine being approved by Government.</p> <p>Industry, the QCA and Queensland Rail all supported a 2.1mtpa scenario at the end of 2019 as the best forecast until/if NAS3's approval progresses, with the QCA using a 2.1mtpa forecast for contracted coal train paths in its Final Decision.</p> <p>Since that assessment NAS3 has been approved and New Hope commenced railings in October 2023. The Wilkie Creek mine commenced railings in July 2023, however, were suspended in May 2024. This has resulted in increased coal railings approved in AU3 of 7.5mtpa (refer to <a href="#">Rail capacity</a>).</p>
<p>The requirements of the codes developed by the Rail Industry Safety and Standards Board (RISSB) Limited ACN 105 001 465 in relation to the standards required for rail infrastructure in Australia.</p> <p>The requirements of other relevant Australian design and construction standards.</p>	<p>As an accredited RIM, Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (SFAIRP). The SEMS includes standards for timber sleepers as prescribed in CETS.</p> <p>For greater detail refer to section refer to <a href="#">Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems</a> in this submission.</p>

## Assessment Criteria

## Queensland Rail Response

Queensland Rail's design standards contained within the Safety Management System.

All relevant Law and the requirements of any Authority (including the Safety Regulator).

### Prudency of cost — criteria to be considered

The level of such costs relative to the scale, nature, cost and complexity of the project.

The assets included in this 2024-25 Capital Expenditure Report were commissioned in 2024-25. Queensland Rail has added these assets to Queensland Rail's FAR.

The Business Case, Handover Report and AUC forms are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR. The FAR has been provided as part of this report.

The project is safety related.

The project uses both internal officers as well as external resources

The circumstances prevailing in the markets for:

- A. engineering, equipment supply and construction;
- B. labour; and
- C. materials.

The delivery stage for this project comprises the utilisation of primarily internal Queensland Rail resources. All works will be managed and delivered under the direction and control of Queensland Rail management and construction team supervisors. External resources such as plant and labour hire will be contracted when sufficient Queensland Rail resources are not available or where specialised equipment is required and cannot be sourced internally. This project will utilise current Queensland Rail Panel Arrangements to procure external contractors, as required. These Panel Arrangements have agreed terms and conditions and therefore should not require further contract departure.

Where the QCA has approved a procurement strategy for the capital expenditure project under clause 6.1(b), the extent to which Queensland Rail has achieved compliance with that procurement strategy.

Not applicable.

## Assessment Criteria

## Queensland Rail Response

The manner in which the capital expenditure project has been managed by Queensland Rail given the circumstances at the time when relevant management decisions and actions were made or undertaken, including Queensland Rail's balancing of:

- A. safety during construction and operation;
- B. compliance with environmental requirements during construction and operation;
- C. compliance with Laws and the requirements of Authorities;
- D. minimising disruption to the operation of Train Services during construction;
- E. accommodating reasonable requests of Access Holders (and, if applicable, their Customers) to amend the scope and sequence of works undertaken to suit their needs;
- F. minimising whole of asset life costs including future maintenance and operating costs;
- G. minimising total project cost which may at times not be consistent with minimisation of individual contract costs;
- H. aligning other elements in the supply chain; and
- I. meeting contractual timeframes and dealing with external factors.

Queensland Rail has comprehensive processes in place to manage safety and environmental compliance. For greater detail refer to section refer to [Design Standards and Codes - Queensland Rail Safety and Environmental Safety Systems](#) in this submission.

The project of works has been based on the risk ranking determined using ALCAM which is a transport industry accepted safety assessment tool used to assist in the prioritisation of safety control upgrades at level crossings according to their comparative safety risk.

## B.05655 Level Crossing Upgrades West Moreton

Claim: **\$891,852** (including IDC)

Project	Previously approved (incl IDC)	This claim (incl IDC)	Total	Project Status
B.05655 Level Crossing Upgrades West Moreton	\$3,994,981	\$891,852	\$4,886,833	Completed

### Background

This project was developed to improve safety and minimise the risks associated with the interface between rail and road at level crossings. As the level crossing structure is subject to the combination of both rail and road traffic, any deterioration of the formation affects efficient operations and safety for both rail and road users.

There are 127 level crossings including public level crossings, occupational and maintenance level crossings (87, 36 and 4 respectively) in the West Moreton System between Rosewood and Miles. The service life of a level crossing will vary between 10 and 25 years depending on rail traffic, road traffic, road/rail orientations/alignment, road surface, drainage and climatic conditions.

23 level crossings in the West Moreton System were identified as requiring reconditioning in the five years from 2021-22 to 2024-25, with the upgrading of these level crossings being the subject of this project. The level crossings were identified via track recording data and subsequently verified through inspections by qualified track staff. The infrastructure at the locations identified for upgrade was classed as being life-expired and/or in poor condition. Engineering resources were also utilised to verify and prioritise needs prior to the current work being planned.

The current version of the CETS addresses transitions between track structures at level crossings where rail breaks have occurred in the past as a result of inadequate transition. Maintaining flangeway<sup>6</sup> clearance at level crossings can be difficult with deteriorated or inadequate road surfaces, and inadequate flangeway clearance has caused derailments in the West Moreton System. This project was a "modern equivalent type" replacement of the track and level crossing infrastructure, ensuring these components have improved safety and are compliant with the current standards, including transitions between track structures and flangeway clearance.

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<sup>6</sup> Flangeway: The passageway for the flange of a wheel running on rails. Flange - a projecting flat rim, collar, or rib on an object, serving for strengthening or attachment or (on a wheel) for maintaining position on a rail.

This was achieved via reconditioning rail track panels and providing new road surfaces. The purpose of the project was to mitigate the risks associated with level crossings by focusing on:

- Asphalt surface replacement when road traffic is adversely impacted.
- Providing or improving drainage systems in level crossings as they are reconditioned.
- Design, install, operate and maintain level crossings in compliance with Queensland Rail standards for level crossings.

### **Project Scope**

This project involved the reconditioning of 23 level crossings in the West Moreton System between Rosewood and Miles and includes the following tasks:

- Upgrade of track structure to 50kg rail, full depth concrete sleepers and A Grade ballast.
- Upgrade of formation, typically 600mm deep and 4 metres wide, with a layer of laminated geofabric/grid and a layer of geogrid Formation treatment to be determined from site investigation.
- Improved surface drainage and subsoil drainage.
- Designed and monumented alignment (designed alignment will typically be a regression of the existing alignment).
- Transitions between track structure complying with CETS.
- Asphalt road surface and formed flangeway complying with CETS.
- Resurfacing.
- Restressing.



## **Project Benefits**

The benefits of the project are:

- Improved safety for road users.
- Improved safety via replacement with heavier track structure, reducing risk of buckles / misalignment, and pavement failure.
- Transitions between track structures compliant with CETS, reducing the risk of rail breaks.
- Formed flangeway clearances compliant with CETS, reducing the risk of derailment.
- Reduced potential for TSRs and impacts to operations such as derailment via improved track stability and improved formation strength (eliminated risk of sleeper / rail failure; improved top and line and road surface).
- Improved track condition and track quality as measured by the OTCI.
- Reduced future track maintenance requirements at the 23 level crossings.
- Improved reliability and service delivery on the West Moreton System.

## **QCA Assessment**

The QCA Consultants Arcadis<sup>7</sup> and the QCA<sup>8</sup> have previously found that the commissioned assets were prudent in terms of scope, standard and cost. The QCA also found the works undertaken through this project to be prudent in its assessment of the 2021-22 Capital Expenditure Report. Queensland Rail has continued to use prudent practices.

<b>Assessment Criteria</b>	<b>Queensland Rail Response</b>
<b>Prudency of scope – criteria to be considered</b>	
The need to accommodate what is reasonably required to comply with Access Agreements.	The Level Crossing Upgrade Project replaced level crossing infrastructure that was life-expired and/or in poor condition. The key benefit of this safety project is that Queensland Rail will continue to be able to provide a safe, reliable network and meet the requirements for

<sup>7</sup> Arcadis' Report 'Queensland Rail 2020 -21 Capital Expenditure Claim. 18 August 2022', p7

<sup>8</sup> Queensland Competition Authority Decision Notice, 29 August 2022

## Assessment Criteria

## Queensland Rail Response

Train Service Entitlements in terms of throughput for coal and non-coal services that utilise the West Moreton System.

The investment in this project ensured fit for purpose assets are provided. The work will limit the need for TSRs and reduce maintenance required, both of which will assist the operational performance of train services.

The extent of Reasonable Demand, and the need for new capital expenditure projects to accommodate that demand.

The QCA approval process for the AU2 West Moreton System coal reference tariff was extensive with the QCA and stakeholders considering both a 9.1mtpa scenario and a 2.1mtpa scenario, the higher tonnage level being dependent upon the NAS3 mine being approved by Government.

Industry, the QCA and Queensland Rail all supported a 2.1mtpa scenario at the end of 2019 as the best forecast until/if NAS3's approval progresses, with the QCA using a 2.1mtpa forecast for contracted coal train paths in its Final Decision.

Since that assessment NAS3 has been approved and New Hope commenced railings in October 2023. The Wilkie Creek mine commenced railings in July 2023, however, were suspended in May 2024. This has resulted in increased coal railings approved in AU3 of 7.5mtpa (refer to [Rail capacity](#)).

For information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

The age and condition of existing assets and the need for replacement capital expenditure projects.

The required work was identified via track recording data and subsequently verified through inspections by qualified track staff. The infrastructure at the locations identified for upgrade was classed as being life-expired and/or in poor condition, noting that the West Moreton

## Assessment Criteria

## Queensland Rail Response

System is an old system. Engineering resources were also utilised to verify and prioritise needs prior to the current work being planned.

QCA consultant SYSTRA recognised the need for and importance of this project during the AU2 QCA approval process as did QCA consultant Arcadis in their assessment of Queensland Rail's 2020-21 Capital Expenditure Report.

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

Queensland Rail's obligations under any Laws, including health, safety and environmental Laws.

As an accredited RIM, Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed SFAIRP. The SEMS includes standards for level crossings as prescribed in CETS.

For greater detail refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#).

The appropriateness of Queensland Rail's processes to evaluate and select proposed capital expenditure projects, including the extent to which alternatives are evaluated as part of the process.

The Level Crossing Upgrade Project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined, very low risk of any change. Work is standard repetitive process (nothing unique) — i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

The Business Case, Completion Report and AUC forms are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR. The FAR has been provided as part of this report.

Queensland Rail considered a 'do nothing' option, however this option was not considered acceptable due to safety considerations.

This project was developed to improve safety and minimise the risks associated with the interface between rail and road at level crossings. As the level crossing structure is subject to the combination of both rail and road traffic, any deterioration of the formation affects efficient operations and safety for both rail and road users.

## Assessment Criteria

## Queensland Rail Response

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

The extent to which the capital expenditure project was subjected to Queensland Rail's processes to evaluate and select proposed capital expenditure projects.

The level crossing upgrade project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. The assets included as part of this report were commissioned in 2024-25. The Business Case, Completion Report and AUC forms are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR. The FAR has been provided as part of this report.

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

The extent to which consultation has occurred with relevant stakeholders about the capital expenditure project.

This project combines the following two projects reviewed by the QCA as part of their approval of AU2: the Level Crossing Reconditioning Project and the Level Crossing Transitions Project.

The project was included in the following documents as part of the QCA's consultation on AU2:

- Queensland Rail's Draft Access Undertaking 2 (DAU2) Explanatory Document (14 August 2018);
- QCA Draft Decision on Queensland Rail 2020 draft access undertaking April 2019;
- SYSTRA, Review of Proposed Maintenance, Capital & Operations Expenditure Review, Draft Access Undertaking 2 (DAU2), April 2019;
- Queensland Rail's DAU2 West Moreton System low volume coal reference tariff 22 November 2019;
- The QCA Final Decision on Queensland Rail 2020 draft access undertaking, February 2020.

As part of the QCA AU2 approval process, Queensland Rail provided the unredacted AU2 West Moreton System reference tariff model to key West Moreton stakeholders under a deed of confidentiality, including to New Hope and Yancoal as part of the QCA AU2 consultation process, enabling stakeholders to assess the claim. The B.05655 Level Crossing Upgrades West Moreton Project and its forecast expenditure was included in the model (as Level

## Assessment Criteria

## Queensland Rail Response

Crossing Reconditioning and Level Crossing Transitions Projects). This also enabled the release of the unredacted QCA SYSTRA Draft Decision and Final Decision reports to these stakeholders which included this project.

Consultation was undertaken in terms of closures. Queensland Rail uses the SWUG process to discuss closure and other major maintenance and timetabling issues with rolling stock operators.

## Prudency of standard – criteria to be considered

The requirements of Rolling Stock Operators and what is reasonably required to comply with Access Agreements.

The level crossing upgrade project replaced level crossing infrastructure that was life-expired and/or in poor condition. The key benefit of this safety project is that Queensland Rail will continue to be able to provide a safe, reliable network.

The investment in this project ensured fit for purpose assets are provided. The work will avoid temporary speed restrictions (**TSRs**) and reduce maintenance required, both of which will assist the operational performance of train services. This project will contribute to continuing to maintain a safe and reliable network.

Queensland Rail uses the SWUG process to discuss closure and other major maintenance and timetabling issues with rolling stock operators.

## Assessment Criteria

## Queensland Rail Response

Current and likely future usage levels.

The QCA approval process for the AU2 West Moreton System coal reference tariff was extensive with the QCA and stakeholders considering both a 9.1mtpa scenario and a 2.1mtpa scenario, the higher tonnage level being dependent upon the NAS3 mine being approved by Government.

The QCA approval process for the AU2 West Moreton System coal reference tariff was extensive with the QCA and stakeholders considering both a 9.1mtpa scenario and a 2.1mtpa scenario, the higher tonnage level being dependent upon the NAS3 mine being approved by Government.

Industry, the QCA and Queensland Rail all supported a 2.1mtpa scenario at the end of 2019 as the best forecast until/if NAS3's approval progresses, with the QCA using a 2.1mtpa forecast for contracted coal train paths in its Final Decision.

Since that assessment NAS3 has been approved and New Hope commenced railings in October 2023. The Wilkie Creek mine commenced railings in July 2023, however, were suspended in May 2024. This has resulted in increased coal railings approved in AU3 of 7.5mtpa (refer to [Rail capacity](#)).

These upcoming increased tonnages will require safe and reliable infrastructure.

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The requirements of the codes developed by the Rail Industry Safety and Standards Board (**RISSB**) Limited ACN 105 001 465 in relation to the standards required for rail infrastructure in Australia.

The requirements of other relevant Australian design and construction standards.

Queensland Rail's design standards contained within the Safety Management System.

All relevant Law and the requirements of any Authority (including the Safety Regulator).

As an accredited RIM, Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (SFAIRP). The SEMS includes standards for level crossings as prescribed in CETS.

For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#).

## Assessment Criteria

## Queensland Rail Response

The level of such costs relative to the scale, nature, cost and complexity of the project.

Both the QCA consultant SYSTRA<sup>9</sup> and the QCA in its AU2 Final Decision Capital Indicator<sup>10</sup> accepted Queensland Rail's forecast expenditure of \$8.082M for this project (i.e. the Level Crossing Reconditioning Project \$6.241M and the Level Crossing Transitions Projects \$1.841M).

The Business Case, Completion Report and AUC forms are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR. The FAR has been provided as part of this report.

The circumstances prevailing in the markets for:

- A. engineering, equipment supply and construction;
- B. labour; and
- C. materials.

The required work was identified via track recording data and subsequently verified through inspections by qualified track staff. The infrastructure at the locations identified for upgrade was classed as being life-expired and/or in poor condition. Engineering resources were also utilised to verify and prioritise needs prior to the current work being planned.

The delivery strategy for this project was to deliver the scope of works using both Queensland Rail internal staff and external wet hired plant and services.

With regard to materials, consultation was undertaken with supply vendors to ensure vendors were aware of the proposed program of works. Agreements for when these materials were to/will be delivered were reached with the relevant vendors.

## Prudency of cost — criteria to be considered

Where the QCA has approved a procurement strategy for the capital expenditure project under clause 6.1(b), the extent to which Queensland Rail has achieved compliance with that procurement strategy.

Not applicable.

<sup>9</sup> SYSTRA Update to West Moreton System Costs and Investment Forecasts, February 2020, p.27

<sup>10</sup> The QCA's Final Decision on Queensland Rail 2020 draft access undertaking, February 2020, p.73

## Assessment Criteria

## Queensland Rail Response

The manner in which the capital expenditure project has been managed by Queensland Rail given the circumstances at the time when relevant management decisions and actions were made or undertaken, including Queensland Rail's balancing of:

- A. safety during construction and operation;
- B. compliance with environmental requirements during construction and operation;
- C. compliance with Laws and the requirements of Authorities;
- D. minimising disruption to the operation of Train Services during construction;
- E. accommodating reasonable requests of Access Holders (and, if applicable, their Customers) to amend the scope and sequence of works undertaken to suit their needs;
- F. minimising whole of asset life costs including future maintenance and operating costs;
- G. minimising total project cost which may at times not be consistent with minimisation of individual contract costs;
- H. aligning other elements in the supply chain; and
- I. meeting contractual timeframes and dealing with external factors.

Queensland Rail has comprehensive processes in place to manage safety and environmental compliance. Queensland Rail is happy for the QCA to request a presentation on its overall governance and compliance processes.

For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#).

## B.06156 WM Formation Strengthening WN to KP (Willowburn to Kingsthorpe)

Claim: **\$9,300,936** (including IDC)

Project	Previously approved (incl IDC)	This claim (incl IDC)	Total	Project Status
B.06156 WM Formation Strengthening WN to KP (Willowburn to Kingsthorpe)	N/A	\$9,300,936		Ongoing

### Project Objective

This project is strengthening the formation of track between Willowburn ( ) and Kingsthorpe ( ) on the West Moreton (WM) System, through replacement of the existing failing subgrade material, and replacement with new capping, subgrade improvements, installation of cess drainage, and new A grade ballast. This is to support an increase to 7.5 mtpa through this section of the network.

### Asset Condition

The section of track between Willowburn and Kingsthorpe is facing significant challenges, including degrading ballast and poor track formation. Originally the track was built between 1865 and 1880 on non-engineered formation and following works in 2006-2007 this section of track now has 50 kg rail on concrete sleepers. Primarily the track sits on black soil throughout the section being treated, compared to sandstone and rock foundation in the range areas. The non-engineered formation construction and narrow formation width present risks over this section requiring formation improvements, including track instability, drainage issues, weakened track beds, uneven load distribution, and increased maintenance requirements. The track in-scope has experienced an average of since July 2023 compared to for out-of-scope track between Toowoomba – Jondaryan.

The formation related defects result in temporary speed restrictions, as well as closure of the corridor during high temperatures in summer for heat precautions. These operational restrictions are necessary to control the increasing the likelihood of track buckling and risk of derailment but have a negative impact on train times and access through SEQ off-peak paths to the Port of Brisbane.

The black soil formation contributes to accelerated track deterioration, particularly during droughts and higher summer temperatures. Cracking of the black soil leads to significant ballast loss, resulting in top and line exceptions that require resurfacing and additional track work, further compromising track stability. In wet conditions, the swelling of the black soil and poor drainage reduce the bearing capacity of the soil, causing track deformation under heavy loads.

## Scope Summary – Delivery Phase

This project will deliver 1 [REDACTED] of formation strengthening between Willowburn and Kingsthorpe. The scope has been developed in the planning phase based on geotechnical results, past inspection data and defect rates.

The key deliverables of the project are:

- Subgrade improvements to enhance track stability, increase load-bearing capacity, and extend track lifespan by stabilising the foundation.
- New formation to ensure proper track alignment, uniform support, and better drainage for safer and more efficient train operations.
- New A-grade ballast to provide stable track support, improve drainage, reduce maintenance, and enhance ride quality.
- Reinstatement of existing concrete sleepers and 50kg rail as components are in good condition and within their design lifespan.

Assessment Criteria	Queensland Rail Response
<b>Prudency of scope – criteria to be considered</b>	
The need to accommodate what is reasonably required to comply with Access Agreements.	This project improve network reliability at a time of increased tonnages -- refer to <a href="#">Rail capacity</a> .

## Assessment Criteria

## Queensland Rail Response

The extent of Reasonable Demand, and the need for new capital expenditure projects to accommodate that demand.

The QCA approval process for the AU2 West Moreton System coal reference tariff was extensive with the QCA and stakeholders considering both a 9.1mtpa scenario and a 2.1mtpa scenario, the higher tonnage level being dependent upon the NAS3 mine being approved by Government.

Industry, the QCA and Queensland Rail all supported a 2.1mtpa scenario at the end of 2019 as the best forecast until/if NAS3's approval progresses, with the QCA using a 2.1mtpa forecast for contracted coal train paths in its Final Decision.

Since that assessment NAS3 has been approved and New Hope commenced railings in October 2023. The Wilkie Creek mine commenced railings in July 2023, however, were suspended in May 2024. This has resulted in increased coal railings approved in AU3 of 7.5mtpa (refer to [Rail capacity](#)).

This project will assist in providing a more reliable network, less chance of speed restrictions, therefore assisting throughput at a time where coal tonnages are moving towards 7.5mtpa.

For information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

The age and condition of existing assets and the need for replacement capital expenditure projects.

The section of track between Willowburn and Kingsthorpe is facing significant challenges, including degrading ballast and poor track formation. Originally the track was built between 1865 and 1880 on non-engineered formation and following works in 2006-2007 this section of track now has 50 kg rail on concrete sleepers. Primarily the track sits on black soil throughout the section being treated, compared to sandstone and rock foundation in the range areas.

The non-engineered formation construction and narrow formation width present risks over this section requiring formation improvements, including track instability, drainage issues, weakened track beds, uneven load distribution, and increased maintenance requirements. The track in-scope has experienced an average of [REDACTED] since July 2023 compared to [REDACTED] for out-of-scope track between Toowoomba – Jondaryan.

The formation related defects result in temporary speed restrictions, as well as closure of the corridor during high temperatures in summer for heat precautions. These operational restrictions are necessary to control the increasing the likelihood of track buckling and risk of

derailment but have a negative impact on train times and access through SEQ off-peak paths to the Port of Brisbane.

The black soil formation contributes to accelerated track deterioration, particularly during droughts and higher summer temperatures. Cracking of the black soil leads to significant ballast loss, resulting in top and line exceptions that require resurfacing and additional track work, further compromising track stability. In wet conditions, the swelling of the black soil and poor drainage reduce the bearing capacity of the soil, causing track deformation under heavy loads.

This project will assist in providing a more reliable network, less chance of speed restrictions, therefore assisting throughput at a time where coal tonnages are moving towards 7.5mtpa.

**Data & Quantified Risk**

This project's works are supported by the below data:

- Higher rates of defects and higher priority defects are occurring on the track in scope, with [REDACTED] since 01/07/2023, compared to [REDACTED] [REDACTED] on the out-of-scope track between Toowoomba and Jondaryan. The occurrence of very high and critical defects is also more frequent in the section within scope.
- Track Recording Car defect clusters in the track in scope with eighteen occurrences in the last Track Recording Car run.
- Percentage voids contamination (PVC) of ballast from 2015 Ground Penetrating Radar (GPR) data identifies highly fouled to severely fouled contamination.
- fouling of ballast in the track in scope.

## Assessment Criteria

## Queensland Rail Response

Queensland Rail's obligations under any Laws, including health, safety and environmental Laws.

As an accredited RIM, Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (SFAIRP). The SEMS includes standards for level crossings as prescribed in CETS.

For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#).

A WHS Management plan has been developed. A project risk assessment has also been completed.

A For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#).

The appropriateness of Queensland Rail's processes to evaluate and select proposed capital expenditure projects, including the extent to which alternatives are evaluated as part of the process.

This Project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined, very low risk of any change. Work is standard repetitive process (nothing unique) - i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

The Project Plan and AUC forms are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR. This project is ongoing. The Handover Report and Completion Report are completed at the end of the project and will be provided to the QCA at that stage.

The extent to which the capital expenditure project was subjected to Queensland Rail's processes to evaluate and select proposed capital expenditure projects.

This Project has been developed within Queensland Rail's processes to evaluate and select proposed capital expenditure projects - refer to [Queensland Rail's Investment Framework](#) in this submission.

The extent to which consultation has occurred with relevant stakeholders about the capital expenditure project.

Community impacts during construction will be managed and mitigated through Queensland Rail's existing community engagement processes and procedures. There will be no impact to customers.

## Assessment Criteria

## Queensland Rail Response

### Prudency of standard – criteria to be considered

The requirements of Rolling Stock Operators and what is reasonably required to comply with Access Agreements.

This project improves network reliability at a time of increased tonnages -- refer to [Rail capacity](#).

This is essential given the age of the network combined with the weather and the importance of reliability for both Queensland Rail and its customers.

Current and likely future usage levels.

The QCA approval process for the AU2 West Moreton System coal reference tariff was extensive with the QCA and stakeholders considering both a 9.1mtpa scenario and a 2.1mtpa scenario, the higher tonnage level being dependent upon the NAS3 mine being approved by Government.

Industry, the QCA and Queensland Rail all supported a 2.1mtpa scenario at the end of 2019 as the best forecast until/if NAS3's approval progresses, with the QCA using a 2.1mtpa forecast for contracted coal train paths in its Final Decision.

Since that assessment NAS3 has been approved and New Hope commenced railings in October 2023. The Wilkie Creek mine commenced railings in July 2023, however, were suspended in May 2024. This has resulted in increased coal railings approved in AU3 of 7.5mtpa (refer to [Rail capacity](#)).

The requirements of the codes developed by the Rail Industry Safety and Standards Board (**RISSB**) Limited ACN 105 001 465 in relation to the standards required for rail infrastructure in Australia.

As an accredited RIM, Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed SFAIRP. For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#).

The requirements of other relevant Australian design and construction standards.

A WHS Management plan has been developed. A project risk assessment has also been completed.

Queensland Rail's design standards contained within the Safety Management System.

For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#)

All relevant Law and the requirements of any Authority (including the Safety Regulator).

This project will result in maintaining a safe and reliable network.

Assessment Criteria	Queensland Rail Response
<b>Prudency of cost — criteria to be considered</b>	
<p>The level of such costs relative to the scale, nature, cost and complexity of the project.</p>	<p>For further information on Queensland Rail’s processes to evaluate and select proposed capital expenditure projects refer to <a href="#">Queensland Rail’s Investment Framework</a>.</p>
<p>The circumstances prevailing in the markets for:</p> <ul style="list-style-type: none"> <li>A. engineering, equipment supply and construction;</li> <li>B. labour; and</li> <li>C. materials.</li> </ul>	<p>External resources such as plant and labour hire will be contracted when sufficient internal resources are not available. External resources will be engaged through the approved vendor panel contracts on the Contractor Safety Management Prequalification Register.</p> <p>Materials will be sourced through the Queensland Rail Infrastructure Material Logistics (<b>IML</b>) team, and quarries with existing Queensland rail contracts</p>
<p>Where the QCA has approved a procurement strategy for the capital expenditure project under clause 6.1(b), the extent to which Queensland Rail has achieved compliance with that procurement strategy.</p>	<p>Not applicable.</p>

## Assessment Criteria

## Queensland Rail Response

The manner in which the capital expenditure project has been managed by Queensland Rail given the circumstances at the time when relevant management decisions and actions were made or undertaken, including Queensland Rail's balancing of:

- A. safety during construction and operation;
- B. compliance with environmental requirements during construction and operation;
- C. compliance with Laws and the requirements of Authorities;
- D. minimising disruption to the operation of Train Services during construction;
- E. accommodating reasonable requests of Access Holders (and, if applicable, their Customers) to amend the scope and sequence of works undertaken to suit their needs;
- F. minimising whole of asset life costs including future maintenance and operating costs;
- G. minimising total project cost which may at times not be consistent with minimisation of individual contract costs;
- H. aligning other elements in the supply chain; and
- I. meeting contractual timeframes and dealing with external factors.

Queensland Rail has comprehensive processes in place to manage safety and environmental compliance. Queensland Rail is happy for the QCA to request a presentation on its overall governance and compliance processes.

For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#).

As an accredited RIM, Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed SFAIRP. For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#).

A WHS Management plan has been developed. A project risk assessment has also been completed.

A For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#)

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#).

## B.06159 Sleepers with gauge issue & Range rerail

Claim: \$1,145,908 (including IDC)

Project	Previously approved (incl IDC)	This claim (incl IDC)	Total	Project Status
B.06159 Sleepers with gauge issue & Range rerail	\$3,948,219	\$1,145,908	\$4,886,833	Completed

### Project description

This project will replace all full-depth concrete sleepers and tighten gauges in [REDACTED] nominated curves over a track length of [REDACTED] in the West Moreton System between Rosewood and Toowoomba.

### Asset condition

There are [REDACTED] tight radius curves between Rosewood and Toowoomba that have been identified by track geometry recording, track inspection and engineering staff as having recurring and persistent wide gauge defects which have required frequent intervention to ensure compliance with CETS and continued safe operation of rail traffic.

In these [REDACTED] particular curves, the High Density Poly Ethylene (HDPE) pad, spacers, and fasteners have been replaced numerous times, and there are instances where the rail has been replaced prematurely (before it is condemned for rail wear) to return the gauge to within tolerance. The rails will continue to wear under traffic, and the gauge in these curves will further increase.

The root cause of the gauge issue is the concrete sleepers; accumulation of dimension tolerance in their manufacture has resulted in the persistent gauge issue being realised midway through their design life. The concrete sleepers in these curves have been in service for in excess of two decades and are typically early production gauge-widened concrete sleepers for tight radius curves. Replacement of these concrete sleepers is required to resolve the ongoing issue.

The [REDACTED] curves in scope of this project have a radius less than [REDACTED] with a corresponding design gauge of [REDACTED]. As the rails, sleepers and fasteners wear under traffic, the gauge dimension increases. The critical dimension for wide gauge defects is [REDACTED] which is the maximum safe width for rollingstock.

CETS requires immediate action for continued operation of rail traffic when this defect level is exceeded. This low tolerance for wear ( ) in combination with the persistent wide-gauge defects due to sleeper inadequacies requires high levels of reactive repair to maintain track safety.

### Scope summary

The scope of this project is to replace all full-depth concrete sleepers in the nominated curves, over a track length of in the West Moreton System between Rosewood and Toowoomba. The project activities include:

- Replacing new full-depth concrete sleepers with a reduced spacing of . This will result in the required design gauge complying with construction tolerance.
- Replacing rail on six of the nominated curves with new due to the existing rail wear approaching defect limits.
- Installing concrete checkrail sleepers on three of the nominated curves.
- Installing new A grade ballast on all nominated curves.
- Site clean-up works including dismantling, relocation and/or scrapping. The rails will be sold to .
- Resurfacing and restressing.
- Monumented alignment survey and design.
- Job plans, project planning. Site safety planning and management.
- Environmental approvals as required.

This program was also assessed as part of Queensland Rail's 2022-23 Capital Expenditure Report and the 2023-24 Capital Expenditure Report determined by the QCA in both cases to be prudent in cost, standard and scope. The commissioned assets in this 2024-25 Capital Expenditure Report have had developed by Queensland Rail in the same way as the above.

## Assessment Criteria

## Queensland Rail Response

### Prudency of scope – criteria to be considered

The need to accommodate what is reasonably required to comply with Access Agreements.

There are ■ tight radius curves between Rosewood and Toowoomba that have been identified by track geometry recording, track inspection and engineering staff as having recurring and persistent wide gauge defects which have required frequent intervention to ensure compliance with CETS and continued safe operation of rail traffic.

This project is safety related providing a reliable, safe network which will assist to facilitate throughput of the increased tonnages in AU3.

The extent of Reasonable Demand, and the need for new capital expenditure projects to accommodate that demand.

The QCA approval process for the AU2 West Moreton System coal reference tariff was extensive with the QCA and stakeholders considering both a 9.1mtpa scenario and a 2.1mtpa scenario, the higher tonnage level being dependent upon the NAS3 mine being approved by Government.

Industry, the QCA and Queensland Rail all supported a 2.1mtpa scenario at the end of 2019 as the best forecast until/if NAS3's approval progresses, with the QCA using a 2.1mtpa forecast for contracted coal train paths in its Final Decision.

Since that assessment NAS3 has been approved and New Hope commenced railings in October 2023. The Wilkie Creek mine commenced railings in July 2023, however, were suspended in May 2024. This has resulted in increased coal railings approved in AU3 of 7.5mtpa (refer to [Rail capacity](#)).

For information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

The age and condition of existing assets and the need for replacement capital expenditure projects.

There are ■ tight radius curves between Rosewood and Toowoomba that have been identified by track geometry recording, track inspection and engineering staff as having recurring and persistent wide gauge defects which have required frequent intervention to ensure compliance with CETS and continued safe operation of rail traffic.

In these ■ particular curves, the High Density Poly Ethylene (**HDPE**) pad, spacers, and fasteners have been replaced numerous times, and there are instances where the rail has been replaced prematurely (before it is condemned for rail wear) to return the

## Assessment Criteria

## Queensland Rail Response

gauge to within tolerance. The rails will continue to wear under traffic, and the gauge in these curves will further increase.

The root cause of the gauge issue is the concrete sleepers; accumulation of dimension tolerance in their manufacture has resulted in the persistent gauge issue being realised midway through their design life. The concrete sleepers in these curves have been in service for in excess of two decades and are typically early production gauge-widened concrete sleepers for tight radius curves. Replacement of these concrete sleepers is required to resolve the ongoing issue.

The [REDACTED] curves in the scope of this project have a radius less than [REDACTED] with a corresponding design gauge of [REDACTED]. As the rails, sleepers and fasteners wear under traffic, the gauge dimension increases. The critical dimension for wide gauge defects is [REDACTED] which is the maximum safe width for rollingstock. CETS MD-10-575 requires immediate action for continued operation of rail traffic when this defect level is exceeded. This low tolerance for wear [REDACTED] in combination with the persistent wide-gauge defects due to sleeper inadequacies requires high levels of reactive repair to maintain track safety.

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#).

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Queensland Rail's obligations under any Laws, including health, safety and environmental Laws.

This is a safety and reliability project.

As an accredited RIM Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (**SFAIRP**).

For greater detail refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#).

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The appropriateness of Queensland Rail's processes to evaluate and select proposed capital expenditure projects, including the extent to which alternatives are evaluated as part of the process.

This project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined, very low risk of any change. Work is standard repetitive process (nothing unique) i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

## Assessment Criteria

## Queensland Rail Response

The project is appropriate as it is a safety critical project which there are ■ tight radius curves between Rosewood and Toowoomba that have been identified by track geometry recording, track inspection and engineering staff as having recurring and persistent wide gauge defects which have required frequent intervention to ensure compliance with CETS and continued safe operation of rail traffic.

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission.

The extent to which the capital expenditure project was subjected to Queensland Rail's processes to evaluate and select proposed capital expenditure projects.

This project has been through Queensland Rail's processes to evaluate and select proposed capital expenditure projects.

The project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined, very low risk of any change. Work is standard repetitive process (nothing unique) - i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

The project is appropriate as it is a safety critical project which there are ■ tight radius curves between Rosewood and Toowoomba that have been identified by track geometry recording, track inspection and engineering staff as having recurring and persistent wide gauge defects which have required frequent intervention to ensure compliance with CETS and continued safe operation of rail traffic.

The Business Case and AUC forms are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR. This project is ongoing. The Handover Report and Completion Report are completed at the end of the project and will be provided to the QCA at that stage.

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#) in this submission

The extent to which consultation has occurred with relevant stakeholders about the capital expenditure project.

Queensland Rail uses the South West User Group (**SWUG**) process to discuss closure and other major maintenance and timetabling issues with rolling stock operators.

## Assessment Criteria

## Queensland Rail Response

### Prudency of standard – criteria to be considered

The requirements of Rolling Stock Operators and what is reasonably required to comply with Access Agreements.

This project ensures that the network performs safely and reliably. This project provides a reliable, safe network meeting the requirements for Train Services.

Current and likely future usage levels.

The QCA approval process for the AU2 West Moreton System coal reference tariff was extensive with the QCA and stakeholders considering both a 9.1mtpa scenario and a 2.1mtpa scenario, the higher tonnage level being dependent upon the NAS3 mine being approved by Government.

Industry, the QCA and Queensland Rail all supported a 2.1mtpa scenario at the end of 2019 as the best forecast until/if NAS3's approval progresses, with the QCA using a 2.1mtpa forecast for contracted coal train paths in its Final Decision.

Since that assessment NAS3 has been approved and New Hope commenced railings in October 2023. The Wilkie Creek mine commenced railings in July 2023, however, were suspended in May 2024. This has resulted in increased coal railings approved in AU3 of 7.5mtpa (refer to [Rail capacity](#)).

These upcoming increased tonnages will require safe and reliable infrastructure. This project improves this safety.

The requirements of the codes developed by the Rail Industry Safety and Standards Board (RISSB) Limited ACN 105 001 465 in relation to the standards required for rail infrastructure in Australia.

As an accredited RIM, Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practical (SFAIRP). The SEMS includes standards for timber sleepers as prescribed in CETS.

The requirements of other relevant Australian design and construction standards.

For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#) in this submission.

Queensland Rail's design standards contained within the Safety Management System.

All relevant Law and the requirements of any Authority (including the Safety Regulator).

**Assessment Criteria****Queensland Rail Response****Prudence of cost — criteria to be considered**

The level of such costs relative to the scale, nature, cost and complexity of the project.

The assets included in this 2024-25 Capital Expenditure Report were commissioned in 2024-25.

Queensland Rail has added these assets to Queensland Rail's FAR. The Business Case and AUC forms have been provided to the QCA as part of this 2024-25 Capital Expenditure Report.

The project is safety related.

The project uses both internal officers as well as external resources

The circumstances prevailing in the markets for:

- A. engineering, equipment supply and construction;
- B. labour; and
- C. materials.

The delivery stage for this project comprises the utilisation of primarily internal Queensland Rail resources. All works will be managed and delivered under the direction and control of Queensland Rail management and construction team supervisors. External resources such as plant and labour hire will be contracted when sufficient Queensland Rail resources are not available or where specialised equipment is required and cannot be sourced internally. This project will utilise current Queensland Rail Panel Arrangements to procure external contractors, as required. These Panel Arrangements have agreed terms and conditions and therefore should not require further contract departure.

Where the QCA has approved a procurement strategy for the capital expenditure project under clause 6.1(b), the extent to which Queensland Rail has achieved compliance with that procurement strategy.

Not applicable.

## Assessment Criteria

## Queensland Rail Response

The manner in which the capital expenditure project has been managed by Queensland Rail given the circumstances at the time when relevant management decisions and actions were made or undertaken, including Queensland Rail's balancing of:

- A. safety during construction and operation;
- B. compliance with environmental requirements during construction and operation;
- C. compliance with Laws and the requirements of Authorities;
- D. minimising disruption to the operation of Train Services during construction;
- E. accommodating reasonable requests of Access Holders (and, if applicable, their Customers) to amend the scope and sequence of works undertaken to suit their needs;
- F. minimising whole of asset life costs including future maintenance and operating costs;
- G. minimising total project cost which may at times not be consistent with minimisation of individual contract costs;
- H. aligning other elements in the supply chain; and
- I. meeting contractual timeframes and dealing with external factors.

Queensland Rail has comprehensive processes in place to manage safety and environmental compliance. For greater detail refer to section refer to [Design Standards and Codes - Queensland Rail Safety and Environmental Safety Systems](#) in this submission.

The project of works has been based on the risk ranking determined using ALCAM which is a transport industry accepted safety assessment tool used to assist in the prioritisation of safety control upgrades at level crossings according to their comparative safety risk.

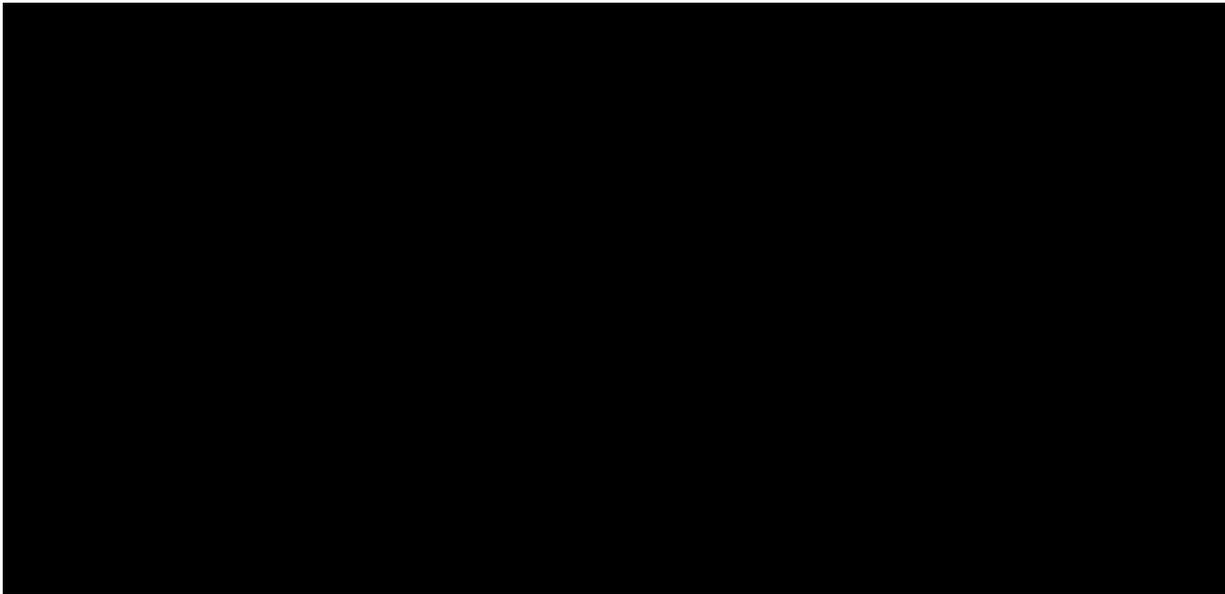
## B.05085 Pedestrian Crossing Upgrades (Regional)

Claim: **\$644,750** (including IDC)

The project reached practical completion for the final pedestrian level crossing on 31 October 2024. Below is an example of a regional upgrade. The 2024-25 Capital Expenditure Report for this project is in relation to [REDACTED]

### Executive Summary

The purpose of the pedestrian crossing upgrade project was to address the high-risk areas of pedestrian interaction at a number of pedestrian level crossings on the regional network. The project achieved compliance with Queensland Rail Standards, Australian Level Crossing Assessment Model (ALCAM) assessment reports, and the current relevant Australian Standards by designing and installing upgrades to the following [REDACTED] pedestrian level crossings across five regional council locations in two stages.



These were at higher-risk areas on the Queensland Rail regional network where pedestrians are crossing rail tracks.

The Australian Level Crossing Assessment Model (**ALCAM**) is a risk assessment tool used to assess risk and assist with determination of an appropriate level of control at a crossing. To consider these assessments and to comply with current Australian Standards, installations and upgrades to various pedestrian crossings were required.

The key benefits identified as an outcome of undertaking the proposed works are:

- Improved safety of passageway for pedestrians across the rail network;
- Address recommendations proposed by the ALCAM assessments and Queensland Rail requirements;
- Increased pedestrian use of the designated crossing;
- Reduction in pedestrian access to prohibited areas (rail corridor);
- Reduction in potential for near miss occurrences; and
- Reduction in accidents / incidents involving rollingstock and pedestrians.

Assessment Criteria	Queensland Rail Response
<b>Prudency of scope – criteria to be considered</b>	
The need to accommodate what is reasonably required to comply with Access Agreements.	The key benefit of this safety project is that Queensland Rail will continue to be able to provide a safe, reliable network and meet the requirements for Train Service Entitlements contained in the Access Agreements for coal and non-coal services that utilise the West Moreton System.
The extent of Reasonable Demand, and the need for new capital expenditure projects to accommodate that demand.	This project is safety related rather than demand dependant.
The age and condition of existing assets and the need for replacement capital expenditure projects.	<p>The ALCAM is a risk assessment tool used to assess risk and assist with determination of an appropriate level of control at a crossing. To consider these assessments and to comply with current Australian Standards, installations and upgrades to various pedestrian crossings on the West Moreton System are required.</p> <p>For further information on Queensland Rail’s processes to evaluate and select proposed capital expenditure projects refer to <a href="#">Queensland Rail's Investment Framework</a>.</p>

## Assessment Criteria

## Queensland Rail Response

Queensland Rail's obligations under any Laws, including health, safety and environmental Laws.

As an accredited RIM, Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (SFAIRP).

For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#).

The appropriateness of Queensland Rail's processes to evaluate and select proposed capital expenditure projects, including the extent to which alternatives are evaluated as part of the process.

The Pedestrian Crossing Upgrades project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined, very low risk of any change. Work is standard repetitive process (nothing unique) - i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

The Business Case, Handover Report, Completion Report and AUC forms are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR.

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#).

Queensland Rail examined the following options:

**Option 1: Grade separation:** This option is not considered viable due to the high cost and limited space to construct the necessary walkways.

**Option 2: Do nothing:** This option is not considered viable due to the level of risk of pedestrian and rollingstock interaction if left untreated.

**Option 3: Install passive pedestrian mazes:** This option is preferred as it provides the necessary protection control measures that are required to satisfy an acceptable risk threshold.

**Option 4: Install active crossing controls:** Where active controls are identified as the risk treatment, the site will be removed from scope and re-inserted into the priority modelling for pedestrian crossings under a separate program of works.

## Assessment Criteria

## Queensland Rail Response

The extent to which the capital expenditure project was subjected to Queensland Rail's processes to evaluate and select proposed capital expenditure projects.

The Pedestrian Crossing Upgrades project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined, very low risk of any change. Work is standard repetitive process (nothing unique) - i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

The Business Case, Handover Report, Completion Report and AUC forms are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR.

For further information on Queensland Rail's processes to evaluate and select proposed capital expenditure projects refer to [Queensland Rail's Investment Framework](#).

The extent to which consultation has occurred with relevant stakeholders about the capital expenditure project.

The Pedestrian Crossing Upgrades project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined, very low risk of any change. Work is standard repetitive process (nothing unique) - i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

During the project life cycle, a project Stakeholder Assessment was completed to understand the impact, influence and management strategy for each stakeholder.

During the planning of the pedestrian crossings, the project engaged with external impacted stakeholders in particular regional councils. The Project Manager engaged with the external regional councils onsite to build relationship between Queensland Rail and our regional communities. This was encouraged and applauded by the regional councils for the excellent communication provided.

The project worked closely with the construction teams during implementation to provide confidence and ensure good stakeholder engagement with internal teams. The close engagement resulted in an overall positive project delivery and completion of the final site (North Street, Toowoomba) with minor or insignificant impacts.

## Assessment Criteria

## Queensland Rail Response

### Prudency of standard – criteria to be considered

The requirements of Rolling Stock Operators and what is reasonably required to comply with Access Agreements.

The key benefit of this safety project is that Queensland Rail will continue to be able to provide a safe, reliable network.

Queensland Rail uses the SWUG process to discuss closure and other major maintenance and timetabling issues with rolling stock operators.

Current and likely future usage levels.

This project is safety related rather than demand dependant.

The requirements of the codes developed by the Rail Industry Safety and Standards Board (**RISSB**) Limited ACN 105 001 465 in relation to the standards required for rail infrastructure in Australia.

As an accredited RIM Queensland Rail has a comprehensive SEMS. The SEMS sets out the means by which Queensland Rail assesses whether risks of its railway operations are managed so far as is reasonably practicable (SFAIRP).

The requirements of other relevant Australian design and construction standards.

For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#).

Queensland Rail's design standards contained within the Safety Management System.

All relevant Law and the requirements of any Authority (including the Safety Regulator).

**Assessment Criteria****Queensland Rail Response****Prudence of cost — criteria to be considered**

The level of such costs relative to the scale, nature, cost and complexity of the project.

The Pedestrian Crossing Upgrades project is a Type 3 project, as set out in Queensland Rail's Project Management Framework. Type 3 projects include projects that are well defined, very low risk of any change. Work is standard repetitive process (nothing unique) - i.e. scope will not change from that detailed in the funding submission and this scope was clear and specific.

The Business Case, Handover Report, Completion Report and AUC forms are provided as part of this submission. The assets were commissioned in 2024-25 and have been added to the FAR.

The circumstances prevailing in the markets for:

- A. engineering, equipment supply and construction;
- B. labour; and
- C. materials.

The pedestrian crossings selected for installation / upgrades under this project have been assessed using ALCAM, which provides a scoring rating for level crossing hazards and risks to allow comparison of level crossing against others in a consistent manner to determine tolerability towards that risk. ALCAM also aids in the determination of proposed treatments and optimum safety improvements to address these hazard areas at individual sites. These improvements are then implemented in accordance with the appropriate standards e.g. AS1742.7 - 2016 Manual of Uniform Traffic Control Devices Part 7: Railway Crossings, Queensland Rail standard drawings and Department of Transport and Main Roads standard signage.

Where the QCA has approved a procurement strategy for the capital expenditure project under clause 6.1(b), the extent to which Queensland Rail has achieved compliance with that procurement strategy.

Not applicable.

## Assessment Criteria

The manner in which the capital expenditure project has been managed by Queensland Rail given the circumstances at the time when relevant management decisions and actions were made or undertaken, including Queensland Rail's balancing of:

- A. safety during construction and operation;
- B. compliance with environmental requirements during construction and operation;
- C. compliance with Laws and the requirements of Authorities;
- D. minimising disruption to the operation of Train Services during construction;
- E. accommodating reasonable requests of Access Holders (and, if applicable, their Customers) to amend the scope and sequence of works undertaken to suit their needs;
- F. minimising whole of asset life costs including future maintenance and operating costs;
- G. minimising total project cost which may at times not be consistent with minimisation of individual contract costs;
- H. aligning other elements in the supply chain; and
- I. meeting contractual timeframes and dealing with external factors.

## Queensland Rail Response

Queensland Rail has comprehensive processes in place to manage safety and environmental compliance. Queensland Rail is happy for the QCA to request a presentation on its overall governance and compliance processes.

For greater detail refer to section refer to [Design Standards and Codes – Queensland Rail Safety and Environmental Safety Systems](#) on page 11 of this submission.

## Ballast Undercutting

For AU1 and AU2, the QCA decided that ballast undercutting (track lowering) was *track reconditioning* involving lowering of the track by removing the track and grading the ballast and that these costs should be capitalised.<sup>11</sup>

In 2024-25, Queensland Rail is seeking approval for \$1,000,086 in track lowering for inclusion in the RAB, consistent with the methodology applied by the QCA.

As a note, as track lowering activities are part of Queensland Rail's normal maintenance activities, it does not have business cases, assets included on the Fixed Asset Register or a Completion/Handover Report for works undertaken. Distances have been sourced from Queensland Rail's EAMS system, with [REDACTED] of work completed.

Queensland Rail's track lowering maintenance activities are associated with managing excessive ballast depth, which affects track stability and causes poor vertical alignment. Track lowering is not a substitute for formation repairs. This activity predominantly reuses existing ballast and removes excessive ballast depth to regain stability of the track structure—it is not an extension of the ballast life, but simply a reduction in top and line and track stability issues. Track lowering includes all works involved in either undercutting of track sections or lowering of excessively ballasted sections of track.

Undercutting works are performed in the district using an excavator mounted undercutter bar. Track lowering is generally carried out in large sections and is done by removing the track and grading ballast away and then replacing the track. Ballast during track lowering is generally reused, although some new ballast is required for undercutting works.

For Queensland Rail, track lowering is part of the routine maintenance required to provide safe and reliable services on the West Moreton System. Unlike track reconditioning, there is no new asset components involved, with ballast, sleepers and rail all placed back into position after the track has been lowered. Track lowering does not improve the service quality of the existing asset, with this maintenance undertaking to ensure the asset remains 'fit for purpose'.

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<sup>11</sup> B&H Supplementary Report relating to submissions by stakeholders in response to the QCA's Draft Decision of Queensland Rail DAU 2015 (May 2016), p 14.