Cross River Rail project

Coordinator-General's change report – condition change (hours of work) 2019

October 2019

COORDINATOR-GENERAL

Queensland Government

The Department of State Development, Manufacturing, Infrastructure and Planning

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Synopsis

The Cross River Rail Project (the project) is a rail link from Dutton Park to Bowen Hills, including a 5.9 km tunnel under the Brisbane River and Central Business District (CBD).

The project was originally approved on 20 December 2012 by the Coordinator-General, subject to conditions as detailed in the Coordinator-General's evaluation report (2012 CGER) on the environmental impact statement (EIS) for the project. The project has undergone a number of changes since this 2012 approval, with each change evaluated and approved, subject to conditions, via Coordinator-General change reports (CGCR).

On 23 September 2019, the Cross River Rail Delivery Authority as the project proponent applied to the Coordinator-General to evaluate a proposed change to the Cross River Rail project, under section 35C of the *State Development and Public Works Organisation Act 1971* (SDPWO Act).

The request by the proponent is to change Condition 10 of the project-wide imposed conditions to allow extended hours work to be undertaken when necessary at Exhibition Railway Station and Mayne Railway Yard project work sites. This work would be undertaken within the rail corridor outside of the standard hours of construction (6:30am to 6:30pm), for safety and operational reasons. No changes to the scope, location or design of the project were requested as part of this change application.

Coordinator-General's conclusion

I am satisfied that the requirements of Part 4 of the *State Development and Public Works Organisation Act 1971* has been met and that sufficient information has been provided to enable the evaluation of the proposed changes to the project.

I consider that the change to the imposed conditions (Appendix 1) will result in overall acceptable outcomes for the project's delivery and that any potential effects can be well managed through existing conditions that will limit and control impacts.

I approve the change to the Cross River Rail project wide imposed conditions (Appendix 1). Appendix 1, 2 and 3 of this report replace Appendix 1, 2 and 3 of the June 2019 CGCR, therefore Appendix 1, 2 and 3 of the June 2019 CGCR no longer have effect.

In accordance with section 35 of SDPWO Act, this report will lapse on 31 December 2024.

A copy of this report will be provided to the proponent and relevant government agencies and will also be made publicly available at: **www.dsdmip.qld.gov.au/crr**.

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Toni Power
Coordinator-General

4 October 2019

1. Introduction

This change report has been prepared pursuant to section 35I of the *State Development and Public Works Organisation Act 1971* (Qld) (SDPWO Act) and provides an evaluation of the proposed changes to the Cross River Rail project (the project) outlined in the project change application received by the Coordinator-General on 23 September 2019 (the September 2019 project change application; the 'project change application').

This report does not re-evaluate the project as a whole. Further, it is not intended to revisit all the matters that were identified and subsequently addressed in the project's environmental impact statement (EIS) assessment process. Rather, this report concentrates on the particular issues identified in the project change application. The change report:

- summarises the change report process
- summarises the proponent's proposed change to the imposed condition
- summarises the key issues associated with the proposed changes
- presents an evaluation of the proposed changes, based on information contained in the project change application
- provides a set of revised conditions under which the project may proceed.

2. About the project

2.1 The proponent

The proponent for the project is the Cross River Rail Delivery Authority (CRRDA), an independent statutory body established under the *Cross River Rail Delivery Authority Act 2016* to facilitate and manage the delivery of the project. The CRRDA commenced operation on 14 April 2017.

2.2 The project

The project is a 10.2 km north-south rail line connecting Dutton Park to Bowen Hills with 5.9 km of tunnel under the Brisbane River and Central Business District (CBD). The project also includes new stations at Boggo Road, Woolloongabba, Albert Street, and Roma Street, with upgrades to the existing Exhibition Railway Station and stations between Fairfield to Salisbury.

Further information on the project and changes that have occurred since originally approved in 2012 are detailed in:

- the Coordinator-General's evaluation report on the EIS dated 20 December 2012 (2012 CGER)
- the Coordinator-General's change report dated 9 June 2017 (June 2017 CGCR)

- the Coordinator-General's change report dated 31 August 2018 (August 2018 CGCR)
- the Coordinator-General's change report dated 13 March 2019 (March 2019 CGCR)
- the Coordinator-General's change report dated 26 June 2019 (June 2019 CGCR).

3. Change report process

The proponent submitted the September 2019 project change application in accordance with section 35C of the SDPWO Act. The September 2019 project change application addresses the requirements of section 35E of the SDPWO Act, in that the written application describes the proposed changes and their effect on the project and states reasons for the proposed changes.

3.1 Proponent's reason for change and project change details

In its project change application, the proponent has identified that in order to complete the works required for the project at Exhibition Railway Station and Mayne Railway Yard work sites, 'rail possessions' will be required.

Rail possessions, a term used by Queensland Rail, involves the temporary closure of tracks or stations to undertake works such as replacement or maintenance of rail tracks, electrical wires, and signals.

In each instance the works were to occur, they would be undertaken subject to approval being granted by Queensland Rail. Rail possessions undertaken for the project would be programmed with a view to minimise interruptions to rail services, and provide sufficient time for works to be completed and the rail network to be safely reinstated for railway services.

The proponent has also indicated that wherever possible, rail possessions for the project will be programmed to coincide with Queensland Rail's planned rail possessions, to minimise disruption to the rail network.

In order to undertake works within the railway corridor to coincide with Queensland Rail's rail possession schedule, the proponent requires the ability to on occasion undertake extended hours work at Exhibition Railway Station and Mayne Railway Yard project worksites.

This necessitates a change to imposed condition 10 – Hours of Work. Table 3.1 outlines the requested change to Condition 10 relating to the project's hours of work.

Table 3.1 Proposed change to Imposed Condition 10: hours of work

Reference in the June 2019 CGCR	Requested change				
Appendix 1, Part C, Condition 10 (a) Hours of Work	**Worksite**	**Surface works—standard hours**	**Extended work hours**	**Managed Work**	**Spoil haulage and materials/ equipment delivery**
	Exhibition Railway station	Monday to Saturday, 6.30am-6.30pm	**For approved rail possession – 80 hours continuous work** **(Other extended work) Monday to Friday 6:30 pm to 10:00 pm**	24 hours, 7 days	Monday to Saturday: 6:30am - 6:30pm
	Mayne Railway Yard	Monday to Saturday, 6.30am-6.30pm	**For approved rail possession – 80 hours continuous work** **(Other extended work) Monday to Friday 6:30 pm to 10:00 pm**	24 hours, 7 days	24 hours, 7 days

The proponent's proposed change to Imposed Condition 10 – Hours of Work is consistent with the approved extended work hours for other project worksites. The proponent's change application also states that the scope and hours of work at Exhibition Railway Station and Mayne Railway Yard project worksites will be consistent with works currently undertaken by Queensland Rail as part of their normal maintenance and works in the rail corridor.

3.2 Public notification

On 3 October 2019, the Coordinator-General decided that public notification of the September 2019 project change application was not required, in accordance with section 35G of the *State Development and Public Works Organisation Act 1971*.

Factors that have informed this position include that the required changes are generally consistent with what was previously included in the project's scope in previous impact assessment documentation for the project.

For example, it was stated in the proponent's February 2017 and April 2019 project change applications, that "*surface works would generally be on a 12hr/6-day basis with extended work hours for particular circumstances including works within the rail corridor, delivery of oversized equipment and works that require continuous activity (e.g. concrete pours) in accordance with the imposed conditions for the project".*

Further, the September 2019 project change application does not propose any change to the scope, location or design of project work at Exhibition Railway Station and Mayne Railway Yard, which has been the subject of the following public notification and assessment by the Coordinator-General:

- draft EIS in 2011 (publicly notified from 30 August 2011 to 21 October 2011)

- project change application 1 in 2017 (publicly notified from 25 February 2017 to 27 March 2017)
- project change application 4 in 2019 (publicly notified from 20 May 2019 to 14 June 2019).

In line with existing project conditions, the proponent has confirmed that prior to the commencement of project works at individual project worksites, notification will be provided to properties within 200 metres of the worksite and be published online. The notification will include details of the proposed project work, including the location, date and hours.

Finally, the potential impacts of the project will be managed by a comprehensive and rigorous set of conditions including noise and vibration, air quality, traffic and transport, community engagement and complaints resolution.

4. Evaluation of the change application – change to Imposed Condition 10 – Hours of Work

4.1 Scope of project work

Since the 2011 EIS, the Cross River Rail project has included project work at Exhibition Railway Station and Mayne Railway Yard. The project as described in the 2011 EIS proposed a new surface Exhibition Railway Station and modifications to the existing surface rail tracks and construction of new surface tracks from Exhibition Railway Station through to Mayne Railway Yard.

The changed project as detailed in the April 2019 project change application at Exhibition Railway Station and Mayne Railway Yard detailed on Figure 4.1, Figure 4.2 and Figure 4.3 proposes an upgrade of the existing Exhibition Railway Station and construction of a new rail bridge over Moolabin Creek to the north of Mayne Railway Yard, with the existing eastern two track rail bridge (suburban line bridge) to be demolished. A new stabling facility is proposed in Mayne Yard North, with additional track work north of Breakfast Creek.

The potential impacts associated with the project work at Exhibition Railway Station and Mayne Railway Yard have been assessed and publicly notified as part of the 2011 EIS, the June 2017 CGCR and the June 2019 CGCR.

The proponent's project change application does not propose any change to the scope, location or design of project work at Exhibition Railway Station and Mayne Railway Yard.

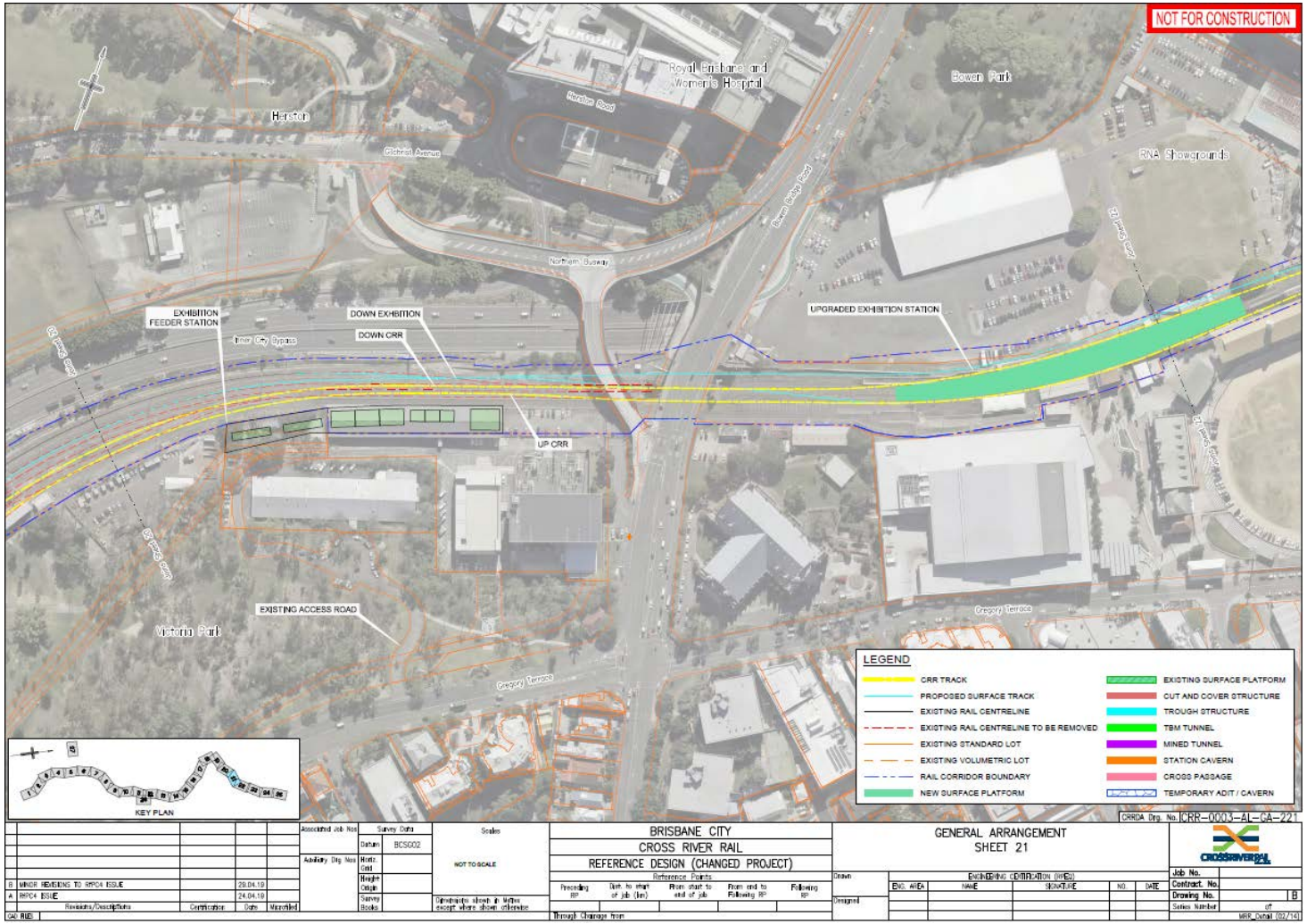

Figure 4.1 Project work at Exhibition Railway Station located within the existing rail corridor

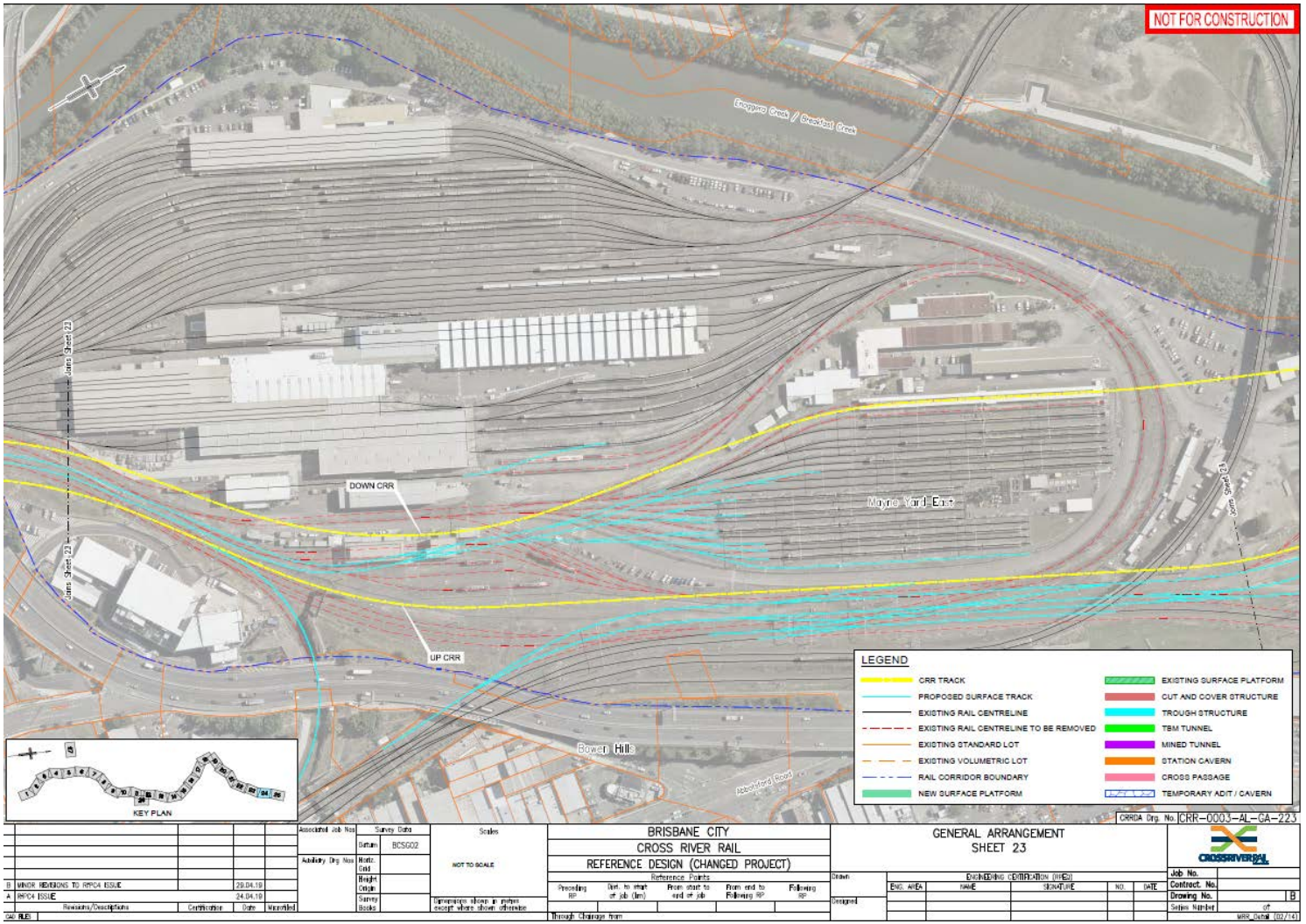

Figure 4.2 Project work at Mayne Railway Yard located within the existing rail corridor

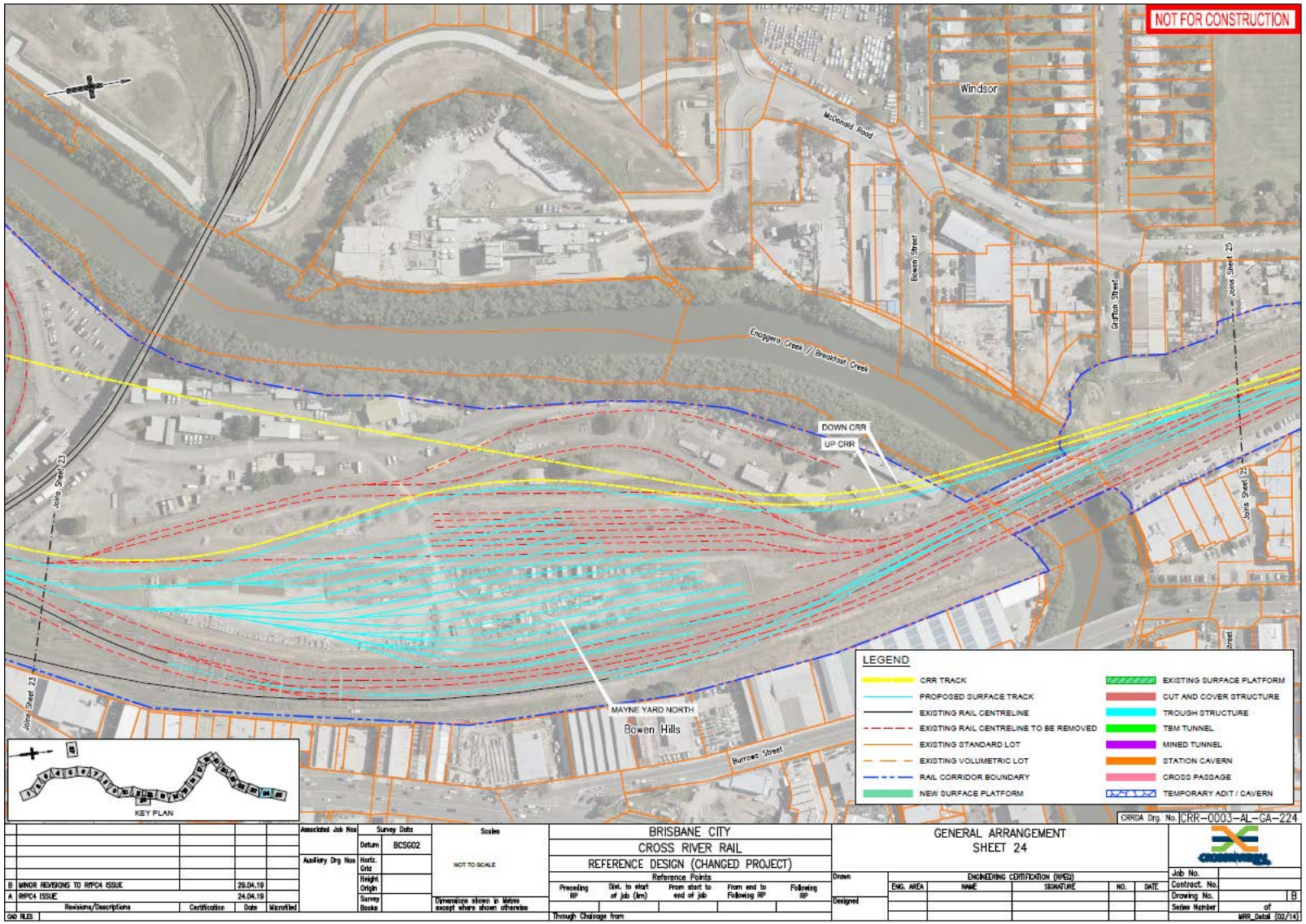

Figure 4.3 Project work at Mayne Railway Yard north within the existing rail corridor and Breakfast Creek

4.2 Approved hours of work and construction activities

In the proponent's project change applications (February 2017 and April 2019), the proponent has stated that "*surface works would generally be on a 12hr/6-day basis with extended work hours for particular circumstances including works within the railway corridor, delivery of oversized equipment and works that require continuous activity (e.g. concrete pours) in accordance with the imposed conditions for the project".*

The existing imposed conditions (Condition 10 (d)) for the project outline the type of work allowed to be undertaken during extended hours work. This work includes:

- project works within rail corridor land
- project works within a road reserve or busway that cannot be undertaken during standard hours due to potential disruptions to peak traffic flows or bus operations
- project works involving the transport, assembly or decommissioning of oversized plant, equipment, components or structures
- delivery of "in time" materials such as concrete, hazardous materials, large components and machinery
- project works that require continuous construction support, such as continuous concrete pours.

Extended work hours for the project comprises approved rail possession: 80 hours of continuous work and other extended work from 6:30pm – 10:00pm Monday to Friday, at the following worksites:

- Fairfield, Yeronga, Yeerongpilly, Rocklea and Salisbury stations
- Moorooka/Clapham Yard
- Southern portal
- Boggo Road Railway Station
- Northern portal.

The proponent has advised that project works to be undertaken during an approved rail possession includes (but is not limited to) the following work:

- delivery trucks and workers' vehicles entering the rail corridor to access worksites and facilities within the rail corridor
- disconnecting and removing sections of tracks
- removing redundant tracks and sleepers
- removing redundant poles, overhead wires and lighting towers
- minor earthworks.

It is noted that it is necessary to undertake the above works during an approved rail possession and outside of the standard work hours of construction to ensure limited impact to rail services and the safety of workers.

The proponent has advised that the scope of other extended work that can be undertaken between 6:30pm-10:00pm Monday to Friday includes the delivery of "in time" materials such as concrete, hazardous materials and large components and machinery.

4.3 Predicted impacts of project work at Exhibition Railway Station and Mayne Railway Yard

The potential impacts associated with project work at Exhibition Railway Station and Mayne Railway Yard has been assessed as part of the 2011 EIS, the February 2017 project change application and the April 2019 project change application.
These assessments considered the potential impacts associated with the proposed works, including noise and vibration impacts (refer to the June 2019 CGCR for further discussion and assessment of impacts).

The September 2019 project change application included a table outlining the maximum unmitigated noise levels predicted at the nearest noise sensitive receivers (at ground floor level) for project work at Exhibition Railway Station and Mayne Railway Yard, as summarised in Table 4.1.

Table 4.1 Predicted maximum unmitigated noise levels at nearest sensitive receivers

Worksite	Receiver area	Noise goals (Condition 11: Intermittent LA_{10}(15 min)	Maximum noise level (Condition 11(c) + 20 dBA)	Predicted noise level (dBA) (without attenuation)	Typical noise reduction based on mitigation measures (dBA)	Location relative to major worksite (m)
Exhibition	A – residential north-east	42	62	47 - 65	5 - 10	60
Exhibition	B – residential north-west	42	62	46 - 60	5 - 10	220
Exhibition	C – Royal Brisbane Women's Hospital	42	62	59 - 61	5 - 10	300
Mayne Yard	Residence on western side of Breakfast Creek (Gallway Street)	42	62	48 - 62	5 - 10	170
Breakfast Creek Bridge	Residence on Grafton Street	42	62	56 - 67	5 - 10	175
Mayne Yard North Stabling Yard	Residence on western side of Breakfast Creek (Somerset Street)	42	62	50 - 65	5 - 10	230

For project work at Exhibition Railway Station, the proponent's modelling undertaken for the 2011 EIS estimated that the highest unmitigated noise level would be 65 dB(A), which is 23 dB(A) above the relevant noise goal (42 dB(A)), and 3 dB(A) above the maximum noise level (62 dB(A)). Predicted vibration levels at the nearest heritage listed building within the RNA Showgrounds would be below the cosmetic damage goal of 2 mm/s.

The proponent's modelling also estimated that project work at Mayne Railway Yard would result in unmitigated noise levels of up to 62 dB(A), which is 20 dB(A) above the relevant noise goal (42 dB(A)).

The proponent predicts that noise reductions of 5 – 10 dB(A) could be achieved through the implementation of typical construction mitigation measures such as conducting works behind barriers/hoarding, use of silencers on major items of equipment and substitution of alternative demolition measures.

In the 2011 EIS the proponent indicated that works associated with the construction of new rail track or the upgrading of existing rail track would be relatively short in duration (less than 2 days) and would generally be confined to shut down periods (night-time, weekends, Christmas etc.). In the 2011 EIS, the proponent committed to limiting, where practicable, the duration of track construction works near sensitive receivers, and that construction planning would limit works predicted to exceed noise goals to day-time periods. However, where such functions could not be achieved, alternative mitigations for potentially affected persons would be required.

4.4 Coordinator-General's evaluation of the requested condition change (hours of work)

The proposed project work to be undertaken within the rail corridor across the project alignment, including Exhibition Railway Station and Mayne Railway Yard, has remained generally consistent since the 2011 EIS.

I am satisfied that the September 2019 project change application does not seek to change the scope, location or design of project work at Exhibition Railway Station or Mayne Railway Yard.

The proponent has requested a change to imposed condition 10 in relation to the approved hours of work for the project. In order to undertake the required project work within the rail corridor rail the proponent has identified that extended hours work are required at Exhibition Railway Station and Mayne Railway Yard.

Construction work within the rail corridor cannot be efficiently and safely undertaken during standard work hours at the same time as normal day-to-day passenger and freight rail operations. Accordingly, extended work hours, including up to 80 hours of rail possession, are required to ensure there is sufficient time to complete the proposed works within the rail corridor.

I note that the proponent's assessment predicted unmitigated noise levels of 20 dB(A) above than the relevant noise goals for Project Work at Exhibition Railway Station and Mayne Railway Yard. As the modelling of the predicated noise levels does not include

typical mitigation measures, it is likely that the noise generated by project works in these locations will be less than predicted, following the implementation of relevant mitigation measures.

In accordance with the existing project-wide imposed conditions (Imposed Condition 11 (c)), project works predicted to or monitored as generating noise levels more than 20dBA ($LA_{eq\ 10min,\ adj}$) above the relevant goal are authorised to occur in a locality only:

(i) when advance notification and consultation has been undertaken with Directly Affected Persons or potentially Directly Affected Persons about the particular predicted impacts and the approach to mitigation of such impacts;

(ii) where mitigation measures addressing the particular predicted or measured impacts have been developed on a 'case by case' basis in consultation with Directly Affected Persons;

(iii) where the mitigation measures are incorporated in a mitigation register and implemented prior to undertaking the project works;

(iv) between the hours 7:00am to 6:00pm Monday to Friday, with a respite period between noon and 2:00pm each day.

As indicated above, in instances where project works are predicated to or monitored to generate noise levels more than 20 dB(A) above the relevant noise goals, there is a requirement that this work can only undertaken between 7:00am to 6:00pm Monday to Friday with respite periods between noon and 2:00pm each day.

As extended work hours would generally be undertaken during the night-time period (e.g. after 6:30pm), any extended hours work that is predicted to or monitored as generating noise levels more than 20 dB(A) above the relevant noise goals is not permitted, in accordance with Condition 11(c)(iv).

The existing project-wide imposed conditions also require that:

- prior to the commencement of Project Work, a Construction Environmental Management Plan (CEMP) must be developed by the proponent and endorsed by the Environmental Monitor as being consistent with the Outline Environmental Management Plan (OEMP) and the imposed conditions
- the CEMP must be based on predictive studies and assessments of construction impacts which have regard to the scale, intensity, location and duration of construction works, and location of Directly Affected Persons
- the CEMP must, where predictive studies indicate impacts beyond those provided for in the performance criteria, incorporate mitigation measures to achieve the environmental outcomes
- the CEMP must contain a program and procedures for ongoing monitoring to identify the effectiveness of mitigation measures in achieving the imposed conditions (Construction) and the environmental outcomes in (iii).

In addition, in line with condition requirements, the proponent has appointed an Environmental Monitor to ensure all conditions are met. Further, a Community Relations Monitor has been appointed for the duration of construction to ensure community engagement and complaints resolution are effective.

I am satisfied that the project wide imposed conditions, in conjunction with a CEMP that will include a Noise and Vibration Management Plan, will mitigate the potential impacts of project work to be undertaken during the extended work hours. The CEMP, which must be consistent with the OEMP will include a range of mitigation measures that will mitigate the potential impacts of project works being undertaken during extended hours within the rail corridor.

5. Clerical error

The proponent in their April 2019 project change application requested a change to the construction hours to undertake managed works 24 hrs, 7 days at the following project worksites:

- Fairfield, Yeronga, Yeerongpilly, Rocklea and Salisbury stations
- Moorooka/Clapham Yard.

The June 2019 CGCR assessed and approved the proponent's requested changes to the project, however imposed condition 10 (a) table 1 contains a clerical error, authorising managed work at the worksites listed above, for 7 days. It did not clearly confirm that this included '24 hours'.

To address this clerical error and to improve consistency across project worksites, managed work in Condition 10 (a), Table 1 has been amended to 24 hours, 7 days consistent with the proponent's April 2019 request for project change 4 application.

Managed work is defined in Appendix 1, Schedule 3 and is 'project work for which either the predicted or monitored impacts meet the performance criteria at a sensitive place'.

6. Conclusion

This report concludes my evaluation of the proposed project change pursuant to section 35I of the SDPWO Act.

I am satisfied that the requirements of the SDPWO Act have been met and that sufficient information has been provided to enable the evaluation of the proposed changes to the conditions of approval.

I consider that the changes to the project's imposed conditions would result in acceptable overall outcomes. Accordingly, I approve the changes to the Cross River Rail project imposed conditions as set out in the September 2019 project change application, subject to the conditions in Appendix 1.

In accordance with section 35K of the SDPWO Act, the Coordinator-General's report on the EIS for the project, and the Coordinator-General's change report, both have effect for the project. However, if the reports conflict, this Coordinator-General's change

report prevails to the extent of the inconsistency. The proponent must implement all conditions in this report.

Appendix 1, 2 and 3 of this report replace Appendix 1, 2 and 3 of the June 2019 CGCR, therefore Appendix 1, 2 and 3 of the June 2019 CGCR no longer have effect.

In accordance with section 35 of SDPWO Act, this report will lapse on 31 December 2024.

A copy of this report will be issued to the proponent.

A copy of this report and all relevant EIS assessment documentation are available on the Department of State Development's website at **www.dsdmip.qld.gov.au/crr**

Appendix 1. Project-wide Imposed Conditions – Cross River Rail project

Part A. Imposed Conditions (General)

Condition 1. General conditions

(a) The project must be carried out generally in accordance with:

- (i) the Cross River Rail Request for Project Change dated April 2019;
- (ii) the amended or new drawings provided at Appendix 2, Response to Submissions Report, June 2019, including:
  - (A) CRR-0003-AL-GA-100 – Drawing Index and Locality Plans - 1
  - (B) CRR-0003-AL-GA-201 – General Arrangement - 4
  - (C) CRR-0003-AL-GA-211 – General Arrangement - 11
  - (D) CRR-0003-CD-GA-110 – Construction Site Plans Moorooka Station
  - (E) CRR-0003-DUT-GA-101 – Dutton Park Station
  - (F) CRR-0003-RP-GA-111 – Property Impact Plans – 11
  - (G) CRR-0003-RP-GA-124 – Property Impact Plans – 24
- (iii) amendments to the Project identified in the Cross River Rail Request for Project Change dated June 2018;
- (iv) amendments to the Project identified in the Cross River Rail Request for Project Change dated November 2018

(b) The proponent must notify the Coordinator-General and all nominated entities in Schedule 2 in writing of the commencement of Project Works and the commencement of the commissioning and operational phases of each 'construction site' at least 20 business days prior to the relevant commencement date.

(c) The temporary coach terminal works must be carried out in accordance with the conditions imposed at Appendix 3.

Condition 2. Outline Environmental Management Plan

(a) Two months prior to the commencement of Project Work submit a final Outline Environmental Management Plan to the Coordinator-General for approval.

(b) The Outline Environmental Management Plan must:

- (i) Include the environment outcomes and performance criteria for each environmental element from the draft outline EMP except as amended by these conditions;
- (ii) include possible mitigation measures, monitoring and reporting for each environmental element to achieve the environmental outcomes;
- (iii) include an outline of:
  - (A) the Construction Environmental Management Plan
  - (B) the Commissioning Environmental Management Plan
- (iv) be consistent with the Environmental Design Requirements in Schedule 1
- (v) include the following sub-plans:
  - (A) Community and Stakeholder Engagement Plan
  - (B) Construction Worksite Management Plan

(C) Construction Traffic Management Plan (CTMP)

(D) Construction Vehicle Management Plan

(E) Water Quality Monitoring Plan

(F) Erosion and Sediment Control Plan

(G) Spoil Placement Management Plan

(H) Noise and Vibration Management Plan

(I) Air Quality Management Plan

(J) Settlement Management Plan

(K) Non-Indigenous Cultural Heritage Management Plan

(L) Indigenous Cultural Heritage Management Plan

(vi) Be made available on the proponent's website once approved by the Coordinator-General and for the duration of the construction of the project and for a period of five years from commencement of operation.

(c) Any further amendments to the Coordinator-General approved Outline Environmental Management Plan will be issued to the Coordinator-General 20 business days prior to the commencement of Relevant Project Works.

Part B. Imposed Conditions (Design)

Condition 3. Design

(a) The project must achieve the Environmental Design Requirements in Schedule 1.

Part C. Imposed Conditions (Construction)

Condition 4. Construction Environmental Management Plan

(a) Prior to the commencement of Project Work, a Construction Environmental Management Plan for those works (Relevant Project Work) must be developed by the Proponent and endorsed by the Environmental Monitor as being consistent with the Outline EMP and these imposed conditions.

(b) The endorsed Construction Environmental Management Plan must be submitted to the Coordinator General at least 20 business days prior to the commencement of Relevant Project Works.

(c) The Construction Environmental Management Plan must:

(i) describe the Relevant Project Work;

(ii) be based on predictive studies and assessments of construction impacts which have regard to the scale, intensity, location and duration of construction works, and location of Directly Affected Persons;

(iii) be generally consistent with the Outline EMP and incorporate its environmental outcomes and performance criteria;

(iv) incorporate and respond to the Imposed Conditions (Construction);

(v) demonstrate that the Imposed Conditions (Construction) will be complied with during Relevant Project Work;

(vi) incorporate the community engagement plan, including the complaints management process, in accordance with Condition 9;

(vii) where predictive studies indicate impacts beyond those provided for in the performance criteria, incorporate mitigation measures to achieve the environmental outcomes;

(viii) establish specific mitigation measures and processes for consultation with Directly Affected Persons for Project Works under Conditions 9(c), 11(c), and 11(e);

(ix) contain a program and procedures for ongoing monitoring to identify the effectiveness of mitigation measures in achieving the Imposed Conditions (Construction) and the environmental outcomes in (iii)

(x) include a process for regular review and if required updating of the Construction Environmental Management Plan, including a process to review and implement additional or different mitigation measures in response to monitoring results;

(xi) incorporate the EMP sub-plans required by the Imposed Conditions or as required by the approved Outline EMP.

(d) The Construction Environmental Management Plan must be implemented for the duration of Relevant Project Work.

(e) Relevant Project Work is authorised if it is undertaken in accordance with the Construction Environmental Management Plan.

(f) The Construction Environmental Management Plan must be publicly available on the project website for the duration of the construction phase.

(g) The Construction Environmental Management Plan may be updated.

(i) updates to the Construction Environmental Management Plan that include new or additional Relevant Project Work must be endorsed by the Environmental Monitor as being consistent with condition 2 before Relevant Project Work may proceed.

(h) Updates to the Construction Environmental Management Plan that are limited to new or different mitigation measures for Managed Work may be endorsed by the Environmental Monitor.

Condition 5. Compliance

(a) The proponent must notify the Environmental Monitor and the Coordinator-General in writing, within 48 hours after becoming aware of a Non-Compliance Event.

(b) The notification must include:

(i) a description of the Non-Compliance Event, including details of the location, date and time of the Non-Compliance Event;

(ii) the name and contact details of a designated contact person;

(iii) an outline of actions that have been or will be taken to respond to the Non-Compliance Event.

(c) Within 14 days following the notification of a Non-Compliance Event, written advice detailing the following information must be provided to the Environmental Monitor and the Coordinator-General:

(i) a description of the Non-Compliance Event, including details of the location, date and time of the Non-Compliance Event;

(ii) the name and contact details of a designated contact person;

(iii) the circumstances in which the Non-Compliance Event occurred;

(iv) details of any complaint in relation to the Non-Compliance Event;

(v) the cause of the Non-Compliance Event;

(vi) a description of the environmental effects of the Non-Compliance Event;

(vii) the results of any sampling or monitoring performed in relation to the Non-Compliance Event;

(viii) actions taken to mitigate the environmental effects of the Non-Compliance Event;

(ix) proposed actions to prevent a recurrence of the Non-Compliance Event, including timing and responsibility for implementation.

(d) The Non-Compliance Event report must be made available on the project website and remain available for the duration of the construction phase for the project.

Condition 6. Reporting

(a) The Proponent must prepare a Monthly Report that summarises compliance and monitoring results for the duration of construction works.

(b) The Monthly Report must include:

(i) monitoring data required by the imposed conditions or Construction Environmental Management Plan undertaken for the period and, where required, an interpretation of the results;

(ii) details of any Non-Compliance Event, including a description of the incident, resulting effects, corrective actions, revised construction practices to prevent a recurrence, responsibility and timing;

(iii) reporting of complaints, including the number of complaints, description of issues, responses and corrective actions.

(c) The Monthly Report must be provided to the Coordinator-General and the Environmental Monitor, and made available on the project website within six weeks of the end of the month to which the report relates, and continue to be available on the project website until commissioning is complete.

(d) The Proponent must provide annual reports to the Coordinator-General and the Environmental Monitor (Annual Report) no later than 31 July in any year during the construction phase about compliance with the imposed conditions.

(e) The Annual Report must include:

(i) a compliance evaluation table detailing the relevant imposed condition, whether compliance with the condition was achieved and how compliance was evaluated;

(ii) an evaluation of compliance in relation to the CEMP and its sub-plans;

(iii) a summary of any Non-Compliance Events during the reporting period;

(iv) a summary of any Non-Compliance Events during the previous reporting period, with details of site remediation activities, corrective actions taken or to be taken and revised practices implemented or to be implemented (as relevant).

Condition 7. Environmental Monitor

(a) The Proponent must engage an independent, appropriately skilled and experienced entity, approved by the Coordinator-General, as the Environmental Monitor for the duration of construction.

(b) The Proponent must ensure that the Environmental Monitor has reasonable site access and access to all information required to perform its function, including, without limitation:

(i) all approvals;

(ii) the Construction Environmental Management Plan;

(iii) results of all monitoring required under the Imposed Conditions (Construction) including through the Construction Environmental Management Plan;

(iv) all information relating to complaints, including access to the complaints database.

(c) The Environmental Monitor must:

(i) monitor compliance with the imposed conditions during the construction of the project;

(ii) monitor compliance with the Construction Environmental Management Plan and sub-plans;

(iii) maintain a register of mitigation measures agreed between the Proponent and Directly Affected Persons (Mitigation Register);

(iv) review the compliance reports required by Condition 5, and the monthly reports and annual reports required by Condition 6, and provide advice to the Coordinator-General and the Proponent on the contents and adequacy of those reports;

(v) review the results of monitoring, which may be verified by the Environmental Monitor including by independent monitoring;

(vi) provide advice to the Proponent about compliance with the Imposed Conditions for construction, including by providing the results of independent monitoring where required;

(vii) provide advice to the Proponent about issues raised in complaints and the response to complaints, including advice from the Community Relations Monitor;

(viii) endorse the Construction Environmental Management Plan as consistent with the Outline EMP and complying with the Imposed Conditions (Construction);

Condition 8. Community Relations Monitor

(a) The proponent must engage an independent, appropriately skilled and experienced entity, approved by the Coordinator-General, as the Community Relations Monitor for the duration of construction.

(b) The Community Relations Monitor must:

(i) review and provide advice to the Environmental Monitor on the community engagement plan required by Condition 9;

(ii) receive monthly reports from the proponent on complaints;

(iii) attend each meeting between the Proponent and a Directly Affected Person to consult on mitigation measures, including providing input on standard responses for similar impacts;

(iv) provide advice to the Environmental Monitor in relation to complaints, community engagement and consultation on mitigation measures;

(v) be available to members of the community in accordance with Condition 9(f)(vi).

Condition 9. Community engagement plan

(a) The Proponent must develop a community engagement plan as part of the Construction Environmental Management Plan consistent with the Outline EMP's Community and Stakeholder Engagement Plan.

(b) The community engagement plan must be given to the Community Relations Monitor for advice at least 10 business days prior to the Construction Environmental Management Plan being provided to the Environmental Monitor.

(c) The community engagement plan must provide for:

(i) Directly Affected Persons to be consulted prior to commencement of Project Works and ongoing thereafter about Project Works, predicted impacts and mitigation measures;

(ii) Directly Affected Persons to be consulted about possible mitigation measures;

(iii) local communities near Project Works to be informed about the nature of construction, including the timing, duration and predicted impacts of the works in advance of their commencement;

(iv) information to be provided to public transport, road users, pedestrians and cyclists about the predicted effects of Project Works on road, rail and pedestrian and cycle network operations, in advance of their commencement;

(v) specific community consultation plans for identified key stakeholders;

(vi) implementation of an Indigenous employment policy, providing for Indigenous training and employment opportunities;

(vii) a process for advance notification to local communities of Project Works, including the timing, duration, predicted impacts and mitigation measures, which is available on the project website and through other media.

(d) The community engagement plan must incorporate a complaints management system developed specifically for the Project, which is established prior to the commencement of Project Works.

(e) The complaints management system must deliver a prompt response to community concerns with relevant information, action where required, and reporting of incidents.

(f) As a minimum, the complaints management system must include the following elements:

(i) a procedure for receiving complaints on a 24 hour, seven days a week basis, during Project Works;

(ii) a mechanism for notifying the community of the complaints procedure and how it may be accessed;

(iii) a process for registering and handling complaints received, including a database for tracking of complaints and actions taken in response;

(iv) a procedure for verifying complaints through monitoring and detailed investigation, and escalating and resolving verified complaints;

(v) a procedure for complaints to be notified to the Community Relations Monitor, including information about the complaint and its resolution;

(vi) access by the community to the Community Relations Monitor; and

(vii) regular reporting via the monthly environmental report, to the community of complaints and corrective actions, maintaining appropriate confidentiality.

(g) All information regarding complaints, including the information collected in Condition 9(f)(iii) must be made available to the Community Relations Monitor.

Condition 10. Hours of work

(a) Surface works for the Project are authorised to be undertaken within the hours of work set out in Table 1.

Table 1. Construction hours

Worksite	Surface works—standard hours	Extended work hours	Managed Work	Spoil haulage and materials/ equipment delivery
Fairfield, Yeronga, Yeerongpilly, Rocklea and Salisbury stations	Monday to Saturday, 6.30am-6.30pm	For approved rail possession—80 hrs continuous work (Other extended work) Monday to Friday 6:30pm - 10:00pm	24 hours, 7 days	Monday to Friday: 6.30am - 7.30am 9.00am - 2.30pm 4.30pm - 6.30pm Saturday 6.30am - 6.30pm

Worksite	Surface works—standard hours	Extended work hours	Managed Work	Spoil haulage and materials/ equipment delivery
Moorooka/ Clapham Yard	Monday to Saturday, 6.30am-6.30pm	For approved rail possession—80 hrs continuous work (Other extended work) Monday to Friday 6:30pm - 10:00pm	24 hours, 7 days	Monday to Friday: 6.30am - 7.30am 9.00am - 2.30pm 4.30pm - 6.30pm Saturday 6.30am - 6.30pm
Southern portal	Monday to Saturday, 6.30am-6.30pm	For approved rail possession—80 hrs continuous work (Other extended work) 6:30pm - 10:00pm, Monday to Friday	24 hours, 7 days	24 hours, 7 days
Boggo Road Railway station	Monday to Saturday, 6.30am-6.30pm	For approved rail possession—80 hrs continuous work (Other extended work) Monday to Friday 6:30pm - 10:00pm,	24 hours, 7 days	Monday to Friday: 6.30am - 7.30am 9.00am - 2.30pm 4.30pm - 6.30pm Saturday 6.30am - 6.30pm
Dutton Park Railway station	Monday to Saturday, 6.30am-6.30pm	For approved rail possession—80 hrs continuous work	n/a	24 hours, 7 days, except for: Monday to Friday: 7:00am - 9:00am 4:30pm - 6:30pm
Woolloongabba Railway station	Monday to Saturday, 6.30am-6.30pm	Monday to Friday 6:30pm- 10:00pm	24 hours, 7 days	24 hours, 7 days, except for: Monday to Friday: 7:00am - 9:00am 4:30pm - 6:30pm
Albert Street Railway station	Monday to Saturday 6.30 am – 6.30 pm,	Monday to Friday 6.30 pm – 10.00 pm	24 hours, 7 days	Monday to Friday: 6.30 am – 10.00 pm Saturday 6:30am - 6:30pm
Roma Street Railway station	Monday to Saturday, 6.30am-6.30pm	Monday to Friday 6:30pm- 10:00pm	24 hours, 7 days	Monday to Friday 6.30am - 7.30am 9.00am - 4.30pm 6.30pm - 10:00pm Saturday 6.30am - 6.30pm
Northern portal	Monday to Saturday, 6.30am-6.30pm	For approved rail possession—80 hrs continuous work	24 hours, 7 days	Monday to Friday: 6.30 am – 10.00 pm

Worksite	Surface works—standard hours	Extended work hours	Managed Work	Spoil haulage and materials/ equipment delivery
		(Other extended work) Monday to Friday 6:30pm - 10:00pm,		Saturday 6:30am - 6:30pm
Exhibition Railway station	Monday to Saturday, 6.30am-6.30pm	For approved rail possession—80 hrs continuous work (Other extended work) Monday to Friday 6:30pm - 10:00pm	24 hours, 7 days	Monday to Saturday: 6:30am - 6:30pm
Mayne Railway Yard	Monday to Saturday, 6.30am-6.30pm	For approved rail possession—80 hrs continuous work (Other extended work) Monday to Friday 6:30pm - 10:00pm	24 hours, 7 days	24 hours, 7 days

(b) Project Works that are underground, or in a ventilated acoustic enclosure, may be undertaken at any time provided the environmental outcomes are achieved.

(c) Works carried out because of an emergency that:

(i) is endangering the life or health of a person; or

(ii) is endangering the structural safety of a building; or

(iii) is endangering the operation or safety of community infrastructure that is not a building; or

(iv) is required to prevent environmental harm, may be undertaken outside the hours set out in Table 1.

(d) The following work may be undertaken during Extended Work Hours as set out in Table 1. subject to compliance with a specific Construction Environmental Management Plan sub-plan in accordance with Condition 4:

(i) Project Works within rail corridor land;

(ii) Project Works within a road reserve or busway that cannot be undertaken reasonably nor practicably during standard hours due to potential disruptions to peak traffic flows or bus operations;

(iii) Project Works involving the transport, assembly or decommissioning of oversized plant, equipment, components or structures;

(iv) delivery of "in time" materials such as concrete, hazardous materials, large components and machinery;

(v) Project Works that require continuous construction support, such as continuous concrete pours, pipe-jacking or other forms of ground support necessary to avoid a failure or construction incident.

(e) Blasting must not occur on public holidays, and is only authorised to occur during the hours of 7:30am to 4:30pm Monday to Saturday, and not on Sundays or public holidays.

(f) Prior to blasting events, at least 48 hours' notice must be provided to persons who may be adversely affected.

Condition 11. Construction Noise and Vibration

(a) Project Works must aim to achieve the project noise goals for human health and well-being presented in Table 2.

Table 2. Noise goals (internal) for Project Works

	Monday – Saturday 6.30am – 6.30pm	Monday – Friday 6.30pm – 10.00pm (Gabba, CBD only)	Monday – Saturday 6.30pm – 6.30am Sundays, Public Holidays	For Blasting Monday – Saturday 7.30 am – 4:30 pm only
Continuous ($LA_{eq\ adj}$)(1hr)	AS 2107 Maximum design level	40 dBA $LA_{eq\ adj\ (1hr)}$	35 dBA $LA_{eq\ adj\ (1hr)}$	130 dB Linear Peak
Intermittent ($LA_{10\ adj}$)(15min)	AS 2107 Maximum design level + 10 dBA	50 dBA $LA_{10,\ adj}$	42 dBA $LA_{10\ adj}$	

Notes

1. All goals are internal noise levels for human health and well-being outcomes.
2. Where internal noise levels are unable to be measured or monitored, the typical noise reductions presented in the relevant State guideline, such as the Guideline Planning for Noise Control, Ecoaccess, DEHP, January 2017 (currently under review).

(b) During construction monitor and report on noise and vibration in accordance with the Noise and Vibration Management Plan, a sub-plan of the Construction Environmental Management Plan.

(c) Project Works predicted to or monitored as generating noise levels more than 20dBA ($LA_{eq\ 10min,\ adj}$) above the relevant goal in Table 2. are authorised to occur in a locality only:

(i) when advance notification and consultation has been undertaken with Directly Affected Persons or potentially Directly Affected Persons about the particular predicted impacts and the approach to mitigation of such impacts;

(ii) where mitigation measures addressing the particular predicted or measured impacts have been developed on a ‘case by case’ basis in consultation with Directly Affected Persons;

(iii) where the mitigation measures are incorporated in a mitigation register and implemented prior to undertaking the Project Works;

(iv) between the hours 7:00am to 6:00pm Monday to Friday, with a respite period between 12:00noon and 2:00pm each day;

(d) Project Works must aim to achieve the construction vibration goals in Table 3.

Table 3. The construction vibration goals

Receiver type	Cosmetic Damage			Human comfort (mm/s PPV)		Sensitive building contents (mms/PPV)
	Continuous vibration (mm/s PPV)	**Transient vibration (mm/s PPV)**	**Blasting vibration (mm/s PPV)**	**Day**	**Night**	
Residential	According to BS7385 reduced by 50%[4]	According to BS7385	50[1]	According to AS2670	0.5[2]	
Commercial	According to BS7385 reduced by 50%[4]	According to BS7385	50	According to AS2670	-	0.5[3]
Heritage structures	2	-	10	-	-	

Notes:

1. All residential receivers in the vicinity of the Project blasting sites are regarded as reinforced or framed structures (i.e. BS7385)
2. Residential sleep disturbance
3. Equipment specific vibration criteria are required for highly sensitive equipment (i.e. electron microscopes, MRI systems or similar), as part of future site-specific detailed investigations
4. If resonance is present, or if investigation to detect resonance were not able to be undertaken due to a lack of access

(e) Where vibration protection criteria are available for sensitive building contents, predictive modelling must take into account the manufacturer's specifications for tolerance to vibration. To the extent reasonable and practicable, those specifications apply in lieu of the construction vibration goals in Table 3. Where predictive modelling indicates the specified criteria would not be achieved by the Project Works, such works may proceed only in accordance with specific mitigation measures agreed with the potentially Directly Affected Persons.

(f) Project Works predicted to or monitored as generating vibration levels more than 2mm/s for continuous vibration and 10mm/s for transient vibration may occur only:

(i) between the hours 7:00am to 6:00pm Monday to Friday, with a respite period between 12:00noon and 2:00pm each day; or

(ii) in accordance with the mitigation measures developed in consultation with and agreed by Directly Affected Persons that are incorporated in the Mitigation Register.

Condition 12. Property Damage

(a) Prior to the commencement of Project Works, predictive modelling must be undertaken of potential ground movement that may be caused by the Project Works. Such predictive modelling must ascertain the potential for damage due to ground movement being caused to property by Project Works.

(b) Where predictive modelling indicates the Project Works would lead to impacts above the vibration goals for cosmetic damage in Table 3. the proponent must prepare and submit a

property damage sub-plan, prior to the commencement of such works, as part of the Construction Environmental Management Plan. The property damage sub-plan must set out the procedure for:

(i) advance communication with potentially Directly Affected Persons;

(ii) procedures for building condition surveys both in advance of and following Project Works, including provision for consultation with property owners and occupants;

(iii) monitoring to be undertaken for potential impacts to property; and

(iv) mitigation measures.

(c) Where a post-construction building condition survey identifies that property damage has occurred as a consequence of the Project Works, such damage must be repaired as soon as practicable by the Proponent at no cost to the property owners. Such repairs must be undertaken in consultation with the property owners and occupants and must return the premises at least to the condition existing prior to commencement of Project Works. The Proponent must agree the timing, method and extent of works required with the affected landowner and must gain permission to undertake such reparation works prior to their commencement.

Condition 13. Air quality

(a) Project Works must aim to achieve the goals in Table 4.

Table 4. Air quality criteria and goals

Criterion	Air quality indicator	Goal	Averaging period
Human Health	Total Suspended Particulates (TSP)	90 µg/m^3	1 year
	Particulate matter ((PM_{10})[1]	50 µg/m^3	24 hours
		25 µg/m^3	1 year
Nuisance	TSP[2]	80 µg/m^3	24 hours
	Deposited dust[3]	120 mg/m^2/day	30 days

(b) During construction monitor and report on air quality in accordance with the Air Quality Management Plan, a sub-plan of the Construction Environmental Management Plan.

Condition 14. Traffic and transport

(a) Project construction traffic must be managed to avoid or minimise adverse impacts on road safety and traffic flow, public transport, freight rail movements, pedestrian and cyclist safety, and property access.

(b) During construction workforce car parking must be provided and managed to avoid workforce parking on local streets.

(c) Access for emergency services to project worksites and adjoining properties must be maintained throughout the construction phase.

(d) Practicable access is maintained to adjacent properties throughout the construction phase.

(e) Heavy construction vehicles use only designated routes for spoil haulage and deliveries of major plant, equipment and materials, in accordance with the Construction Environmental Management Plan. The designated haulage routes for each worksite must follow major or arterial roads to the extent practicable and be developed in consultation with the Department of Transport and Main Roads and the Brisbane City Council in preparation of the Construction Environmental Management Plan.

(f) The Construction Traffic Management Plan must be supported by a road safety assessment for the spoil haulage route.

(g) Construction traffic must operate within the requirements of a construction traffic management sub-plan (Construction Traffic Management Plan) incorporated within the Construction Environmental Management Plan.

(h) The Construction Traffic Management Plan must include:

(i) the proposed access to worksites, with local or minor roads only used where unavoidable to access a project worksite;

(ii) a process for advance notice to Directly Affected Persons and local communities within the vicinity of the spoil haulage routes and worksite accesses;

(iii) local traffic management measures developed in consultation with Brisbane City Council for key intersections:

(A) in Bowen Hills including Bowen Bridge Road, College Road and O'Connell Terrace;

(B) in the CBD including Albert Street, Charlotte Street, Elizabeth Street and Roma Street;

(C) at Woolloongabba including Leopard Street, Stanley Street, Vulture Street and Main Street;

(D) at Dutton Park including Annerley Road, Peter Doherty Street, Joe Baker Street and Boggo Road, as well as Kent Street, Cornwall Street and Ipswich Road;

(E) in the area of the Fairfield to Salisbury stations and Clapham Yard works.

(iv) specific traffic management measures developed in consultation with other key stakeholders, including:

(A) the department administering the *Economic Development Act 2012* with regards traffic management in the Queens Wharf Brisbane priority development area;

(B) Queensland Rail about maintaining access to railway stations; and

(C) the department administering the *Transport Infrastructure Act 1994* and the Brisbane City Council about maintaining operations for bus services along streets affected by the Project Works.

(i) Project Works must be designed, planned and implemented to maintain acceptable footpath and cycle paths in areas adjacent to project worksites in terms of capacity, legibility and pavement condition. The proponent must consult with the Brisbane City Council and Queensland Rail about changes in pedestrian and cycle paths required to facilitate Project Works.

Condition 15. Water quality

(a) Discharge of surface water and groundwater from Project Works must comply with the Brisbane River Estuary environmental values and water quality objectives (Basin no. 143 - mid-estuary) in the Environmental Protection (Water) Policy 2009.

(b) During construction monitor and report on water quality in accordance with the Water Quality Management Plan, a sub-plan of the Construction Environmental Management Plan.

Condition 16. Water resources

(a) Prior to the commencement of Project Works involving excavation, the Proponent must undertake predictive modelling of the potential for groundwater drawdown. The predictive

modelling must be based on validated monitoring data and must address the likely extent of any drawdown over time, up to the time when such movement reaches equilibrium.

(b) Project Works must be designed, planned and implemented to avoid where practicable and otherwise minimise the inflow of groundwater to the Project Works, including excavations, the underground stations and tunnels, having regard for the predictive modelling.

(c) The Proponent must monitor the inflow of groundwater to the Project Works and compare monitoring data with the predictive modelling. If the rate of groundwater inflow rate exceeds 1L/sec in any worksite, the proponent must revise work methods and devise and implement mitigation measures as soon as practicable.

Condition 17. Surface water

(a) Project Works, and worksites, must be designed and implemented to avoid inundation from stormwater due to a 2 year (6hr) ARI rainfall event and flood waters due to a 5 year ARI rainfall event.

(b) Project works must be designed and implemented to avoid afflux or cause the redirection of uncontrolled surface water flows, including stormwater flows, outside of worksites.

Condition 18. Erosion and sediment control

(a) An erosion and sediment control sub-plan that is consistent with the Guidelines for Best Practice Erosion and Sediment Control (International Erosion Control Association, 2008) and the Department of Transport and Main Roads' Technical Standard MRTS52 – Erosion and Sediment Control must be submitted as part of the Construction Environmental Management Plan.

Condition 19. Acid sulphate soils

(a) Acid sulphate soils must be managed in accordance with the methods and requirements of the latest edition of the *Queensland Acid Sulphate Soil Technical Manual*.

Condition 20. Landscape and open space

(a) Project Works are designed and implemented to minimise impacts on landscape and open space values.

(b) Project works and worksites in Victoria Park must be designed, planned and implemented to avoid, or minimise the loss of trees and ornamental plantings, and must minimise the area of the park directly impacted during such works.

(c) Worksites in Victoria Park must be enclosed with a visually solid screen and any night lighting including security lighting must be situated to minimise the spill of light beyond the worksite enclosures.

(d) Existing pathways and recreational facilities in Victoria Park must be relocated within the park for the duration of the works, in consultation with the Brisbane City Council. Upon completion of the project works, such pathways and facilities must be re-established in locations in the park in consultation with the Brisbane City Council.

Condition 21. Worksite rehabilitation

(a) Worksites for project infrastructure, such as the surface connections, stations and ancillary buildings must be rehabilitated as soon as practicable upon completion of the works.

(b) All other worksites required to support commissioning activities must be rehabilitated as soon as practicable on completion of commissioning or sooner where possible.

(c) Rehabilitation must address soil erosion and sedimentation, dust nuisance and landscape and visual impact.

(d) Any planting, landscaping and streetscape works undertaken as part of rehabilitation must be undertaken in accordance with landscape and urban design plans prepared in consultation with the Brisbane City Council.

Part D. Imposed Conditions (Commissioning)

Condition 22. Environmental design requirements

(a) The Proponent must conduct such testing and monitoring as is necessary to demonstrate that the Environmental Design Requirements in Schedule 1 have been satisfied.

(b) At the completion of Commissioning, the Proponent must give written notice to the Coordinator-General that the Project has achieved the Environmental Design Requirements in Schedule 1.

Condition 23. Commissioning

(a) Commissioning may be carried out in stages.

(b) Testing for commissioning must be supported by advanced notice to local residents and businesses.

(c) Testing for commissioning must not cause an exceedance of the goals in Table 2, Table 3, Table 4 or Condition 15.

Schedule 1. Environmental Design Requirements

1. Traffic and transport

(a) Emergency access and evacuation for each station and the tunnel is designed in consultation with the Emergency Service Authorities.

(b) Station plazas and forecourts are of a sufficient size and dimension to avoid peak pedestrian flows spilling onto adjacent carriageways. Where the overflow of pedestrians onto carriageways cannot be avoided, local traffic management measures addressing such circumstances must be designed and implemented prior to the commencement of Project operations.

(c) Pedestrian and cycle pathways in the vicinity of stations are designed in accordance with Rail Infrastructure Manager's and TMR's requirements.

(d) The design of driveways and roadworks for the Project avoid conflicts between construction traffic and cyclists and pedestrians.

(e) New footpaths, pedestrian walkways and pedestrian road crossings in the vicinity of stations are designed, in consultation with BCC and emergency services authorities, to allow safe and efficient pedestrian movement during peak periods and, where applicable, major events at the Brisbane Cricket Ground (Woolloongabba station), Lang Park (Roma Street station) and the RNA Showgrounds (Exhibition station).

(f) The Project design provides for pedestrian connectivity between the PA Hospital, Boggo Road Busway station and Park Road Railway station, and incorporates appropriate crime prevention through environmental design (CPTED) principles and Disability Discrimination Act 1992 (DDA) compliant vertical transport facilities.

2. Air Quality

(a) Ventilation outlets from underground stations are designed and sited so as not to cause an increase in air temperature of more than one degree Celsius, measured as an hourly average, or concentrations of ambient air contaminants that exceed air quality objectives.

(b) The Project is designed so that it does not cause the air quality objectives specified in Table 5 to be exceeded.

(c) The ventilation outlets are designed to avoid discharging directly into an air intake for any other ventilation or air conditioning system that is in place at the time of detailed design and construction of the relevant ventilation outlet.

Table 5. Ambient air quality outcomes

Pollutant	Air Quality Objective	Average Period
Total Suspended Particulates (TSP)	90 µg/m^3	Annual
Particulates as PM10 (<10 µm)	50 µg/m^3	24 hours
	25 µg/m^3	Annual

3. Noise and Vibration

(a) Where practicable, the Project is designed to achieve the following noise criteria for railway surface track airborne noise emissions:

(i) 65 dBA, evaluated as the 24 hour average equivalent continuous A-weighted sound pressure level;

(ii) 87 dBA, evaluated as a Single Event Maximum sound pressure level.

Note: The Single Event Maximum (SEM) Sound Level will be calculated as follows:

- If the number of single events due to train passing is larger than 15 over a 24-hour period, use the arithmetic average of the maximum levels for the highest 15 events.
- If the number of single events due to train passing is equal to or less than 15 over a 24-hour period, use the arithmetic average of the maximum levels for all the train events (e.g. if a total of 13 passes occur over a 24-hour period, use the arithmetic average of all 13 movements).
- Noise modelling or monitoring activities aimed at assessing performance against the Planning Levels must be undertaken 1 metre from the most exposed façade of an affected building an 0.5 metres below the eave height.

(b) Where practicable, the Project is designed to achieve the goals for ground-borne noise provided in Table 6 and for vibration provided in Table 7.

(c) Ventilation systems, mechanical plant, and electricity feeder stations at or near stations are designed and sited to operate within the noise goals outlined in Table 8.

Table 6. Ground-borne noise design criteria (rail operations) – tunnels and underground station

Receiver	Time of day	Internal noise design criteria (dBA)
Residential	07:00-22:00	40dBA
	22:00-07:00	35dBA
Schools, educational institutions, places of worship.	When in use	40dBA to 45dBA
Retail areas	When in use	50dBA to 55dBA
General office areas	When in use	45dBA
Private offices and conference rooms	When in use	40dBA
Theatres	When in use	35dBA

Table 7. Ground-borne vibration design criteria (rail operations)

Receiver type	Period	Vibration goal (vibration velocity)
Residential	Day/ night	106dBV (0.2 mm/s)
Commercial and community facilities (including schools and places of worship)	When in use	112dBV (0.4 mm/s)
Industrial	When in use	118dBV (0.8 mm/s)
Sensitive equipment within medical or research facilities	When in use	82dBV (0.013 mm/s)

Table 8. Mechanical plant noise goals (operations)

Receiver	Time of day	Background (b/g) noise creep dBA LA_{90} (1 hour)	Acoustic quality objectives dBA LA_{eq} (1 hour)
Residential (for outdoors)	07:00 - 22:00	b/g + 0	-
	22:00 - 07:00	b/g + 0	50
Residential (for outdoors)	07:00 - 22:00	-	35

Receiver	Time of day	Background (b/g) noise creep dBA LA_{90} (1 hour)	Acoustic quality objectives dBA LA_{eq} (1 hour)
	22:00 - 07:00	-	30
Library and educational institution (for indoors)	When in use	-	35
Commercial and retail activity (for indoors)	When in use	-	45

4. Settlement

(a) Detailed design of the alignment and underground stations will be informed by a detailed ground settlement analysis, based on hydrogeological and geological modelling

(b) The settlement analysis will indicate the predicted horizontal and vertical extent of ground settlement for the Project Works and the time period over which such ground settlement would occur.

5. Hydrology

(a) A hydrogeological model will be developed during detailed design and before construction of relevant sections to determine ground conditions along the tunnel section.

(b) Further borehole investigations, groundwater monitoring and permeability testing at the station locations and along the tunnel alignment to identify and characterise any major transmissive features and better constrain the local hydrogeological model for detailed design.

(c) Review available bore construction records and target aquifers to determine the suitability of monitoring bores installed during the geotechnical investigations for ongoing groundwater monitoring for construction and commissioning. Following this review, additional bores may be proposed to address gaps identified in the groundwater monitoring network.

(d) Identify through surveys and consultation, water bores in the area potentially affected by groundwater drawdown and implement measures to mitigate potential effects on identified bores.

(e) In the event a new 'groundwater feature' (e.g. areas of high groundwater flow/ yield) is identified along the Project alignment, further detailed groundwater monitoring would be undertaken to characterise the feature and identify potential impacts to the environment. Additional management measures would be developed, where required.

(f) Develop and implement design measures and construction methods to minimise groundwater inflows in to the construction area.

(g) The Project design provides for the capture of groundwater seepage, should it enter the underground structures, and the subsequent treatment of such groundwater prior to its release to an approved discharge point.

(h) Where the project design anticipates groundwater entering underground structures, the design provides:

  (i) measures to minimise settlement due to project-induced drawdown;

  (ii) measures to ensure structural integrity and Project operational safety; and

  (iii) measures to minimise the risk of exposing acid sulphate soils to air or the chance for oxidation.

(i) The Project design achieves the water quality objectives stated for the Brisbane River Estuary environmental values and water quality objectives (Basin No. 143 mid-estuary)

referred to in the Environmental Protection (Water) Policy 2009 for any water, including groundwater, released from Project infrastructure to surface waters.

(j) The Project design is based on current flooding information to achieve flood immunity to the tunnel infrastructure and underground stations in a 1 in 10,000 year annual exceedance probability (AEP) regional flood event, and a 1 in 100 AEP overland flow event.

(k) The Project design will not cause property damage from flood impacts to third parties for events up to and including the 1 in 100 AEP flood event.

(l) Project Works in Mayne Rail Yard must be designed on the basis of detailed flood modelling.

6. Cultural Heritage

(a) The Project design reflects and minimises the impact on the cultural and historical significance of places where surface works occur, and where reasonable and practicable, avoids or minimises the direct impact on heritage values of such places.

(b) The Project design acknowledges a locality's historical significance or cultural significance to Aboriginal people through input to:

  (i) place naming;

  (ii) interpretative signage and other landmarks; and

  (iii) the themes for public art.

(c) In developing the Project design, the Proponent would provide opportunities for architectural design sympathetic to the cultural heritage landscape and streetscape.

7. Climate change and sustainability

(a) Project ventilation systems are designed to minimise energy consumption while achieving acceptable passenger comfort and air quality outcomes in both the ambient environment and the Project stations and tunnel system.

(b) The Project is designed to be adaptable to conditions that may arise as a result of climate change, including accommodating the predicted 1.0 m sea level rise scenario in 2100 (upper range).

(c) Sustainability initiatives, particularly in relation to energy consumptions and savings throughout the Project lifecycle are incorporated in detailed design and tracked via a Sustainability Tool (e.g. ISCA's rating tool) through to Project implementation.

(d) In design and construction, devise and implement a process for optimising energy efficiency in construction planning and delivery (e.g. component sourcing and transportation, spoil and materials handling – no double handling, programing to avoid re-work or redundant work).

(e) In operations, energy efficient design that meets the performance criteria of all Project plant and equipment would be included in the design specification.

8. Land use and tenure

(a) Minimise the 'footprint' of the Project during both construction and operations to reduce impacts on existing land uses through design refinement.

(b) The Project design seeks to optimise land use and transport integration with:

  (i) PA Hospital, Boggo Road Busway station, Park Road Railway station and Boggo Road Urban Village;

  (ii) Woolloongabba Priority Development Area (PDA);

(iii) Albert Street;

(iv) Roma Street; and

(v) Bowen Hills PDA.

(c) The Project is to be designed in consultation with:

(i) Rail Infrastructure Manager in relation to use of Railway land required for project worksites; and

(ii) Proponents for urban development projects at Boggo Road Urban Village, Woolloongabba PDA, Albert Street and Roma Street redevelopment and Royal National Agricultural and Industrial Association of Queensland (RNA) redevelopment.

(d) The Project design minimises the loss of public open space in Victoria Park during construction.

9. Visual amenity and lighting

(a) The Project design seeks to minimise the visual impact of the above-ground infrastructure with regards to its scale, height and bulk. Specific urban design and visual impact studies are required to inform detailed design for:

(i) the station ventilation outlets and intake structures;

(ii) the above-ground electricity feeder stations;

(iii) the portals and transition structures; and

(iv) noise barriers and other impact mitigation devices or structures.

(b) Where required, noise barriers are designed to reduce the visual impacts to surrounding properties and roadways by:

(i) incorporating urban design treatments and landscape elements such as massed plantings;

(ii) using clear or transparent materials to maintain existing expansive views beyond the rail corridor, subject to security and maintenance considerations being evaluated; and

(iii) avoiding the use of highly reflective materials and materials that support graffiti.

(c) Landscaping, urban design and public art treatments sympathetic to heritage landscape and streetscape values are incorporated into the design of Project Works at stations and thoroughfares accessing stations.

10. Social environment

(a) The design of stations and public spaces developed as part of the Project stations incorporate CPTED principles to maximise commuter safety.

11. Waste

(a) The Project is designed to minimise waste generation and maximise the reuse and recycling of waste materials generated by the Project during its construction and operation.

(b) Opportunities are investigated during the detailed design phase for the use of recycled materials, including for Project infrastructure produced from concrete, road base, asphalt and other construction materials.

(c) During detailed design, the feasibility of re-using material excavated from the Project is investigated.

Schedule 2. Nominated entities with jurisdiction for conditions

Table A1 lists the organisations/agencies responsible for each of the Coordinator-General's Imposed Conditions (Appendix 1).

Table A1. Entities with jurisdiction for Coordinator-General Imposed Conditions

Part	Approval	Condition no.	Entity with jurisdiction
A	General conditions	1	Coordinator-General
A	Outline Environmental Management Plan	2	Coordinator-General
B	Design	3	Chief Executive, TMR
C	Construction Environmental Management Plan	4	Chief Executive, TMR
C	Compliance	5	Chief Executive, TMR
C	Reporting	6	Chief Executive, TMR
C	Environmental Monitor	7	Coordinator-General
C	Community Relations Monitor	8	Coordinator-General
C	Community engagement plan	9	Chief Executive, TMR
C	Hours of work	10	Chief Executive, TMR
C	Construction Noise and Vibration	11	Chief Executive, TMR
C	Property Damage	12	Chief Executive, TMR
C	Air Quality	13	Chief Executive, TMR
C	Traffic and Transport	14	Chief Executive, TMR
C	Water quality	15	Chief Executive, TMR
C	Water resources	16	Chief Executive, TMR
C	Surface water	17	Chief Executive, TMR
C	Erosion and sediment control	18	Chief Executive, TMR
C	Acid sulphate soils	19	Chief Executive, TMR
C	Landscape and open space	20	Chief Executive, TMR
C	Worksite rehabilitation	21	Chief Executive, TMR
D	Environmental design requirements	22	Chief Executive, TMR
D	Commissioning	23	Chief Executive, TMR

Schedule 3. Definitions

Directly Affected Persons means an entity being either the owner or occupant of premises for which predictive modelling or monitoring indicates the project impacts would be above the performance criteria in the Imposed Conditions.

Construction Environmental Management Plan means the Construction Environmental Management Plan referred to in Condition 4.

Outline EMP means the Outline EMP approved by the Coordinator-General in Condition 2.

Managed Work means Project Work for which either the predicted or monitored impacts meet the performance criteria at a Sensitive Place.

Non-Compliance Event means Project Works that do not comply with the Imposed Conditions

Predictive Modelling means the use of appropriate analytical scenario testing, whether or not by numerical measurements, undertaken prior to the commencement of Project Works.

Project Work means any works, including early works, demolition works or site preparation works, for construction of the project. Project Work does not include:

- any works associated with the demolition of buildings and structures on State owned land;
- works involving the relocation or replacement of public utilities when undertaken by a public utility authority or provider;
- the placement and management of spoil at spoil placement locations
- works associated with the temporary Roma Street Coach Terminal.

Sensitive Place means:

- a dwelling (including residential allotment, mobile home or caravan park, residential marina or other residential premises, motel, hotel or hostel)
- a library, childcare centre, kindergarten, school, university or other educational institution
- a medical centre, surgery or hospital
- a protected area
- a public park or garden that is open to the public (whether or not on payment of money) for use other than for sport or organised entertainment
- a work place used as an office or for business or commercial purposes, which is not part of the project activity(ies) and does not include employees accommodation or public roads.

Appendix 2. Coordinator-General's recommendations for the Cross River Rail project

This appendix includes the Coordinator-General's recommendations for the Cross River Rail project.

Recommendation 1. Ecosciences building planning

The proponent should continue to undertake consultation with the key stakeholders to minimise constraints on the planned development of the stage 2 of the Ecosciences Precinct.

Recommendation 2. Greenspace planning

The proponent should liaise with Brisbane City Council to offset the loss of public open space/pocket parks in accordance with Element 6 Nature Conservation of the OEMP.

Recommendation 3. Silicosis

The proponent should consider the findings from the Coal Workers' Pneumoconiosis Select Committee final report, Black Lung White Lies – Inquiry into the re-identification of Coal Workers' Pneumoconiosis in Queensland. Implement relevant recommendations regarding the potential impacts from silica to underground workers involved in tunnelling construction (silicosis) and include in:

(a) The Hazard and Risk sub-plan and/or

(b) The Air Quality sub-plan

Recommendation 4. Mined tunnelling

Mined tunnelling should be implemented in accordance with the *Work Health and Safety Act – Tunnelling Code of Practice 2011* and the Excavation Work Code of Practice 2017.

Recommendation 5. Myer Centre carpark

The proponent should undertake an assessment taking into consideration the potential impacts on surface pedestrian, traffic and public transport networks of the proposed changes to exit arrangements for the Myer Centre carpark in consultation with Brisbane City Council and Myer Centre management.

Recommendation 6. Freight

The proponent should engage and consult with key stakeholders such as the Western Freight Users Group and the Rail Infrastructure Manager regarding the possession of the rail corridor to reduce potential impacts on rail freight movements during construction in accordance with Element 2 of the OEMP.

Recommendation 7. Pavement impacts

In consultation with Brisbane City Council, the proponent should develop mitigation measures to address any assessed pavement damage on local roads from project spoil haulage.

Recommendation 8. Noise and Vibration

The proponent should consult with relevant advisory agencies in the development of mitigation measures for predicted and monitored noise and vibration impacts above the goals for the CEMP.

Recommendation 9. Dust impacts - Southern Portal / Boggo Road Railway station worksites

The proponent should conduct predictive air quality modelling for early construction earthworks prior to the commencement of Project Works. Should exceedance of the goals in Table 4 of the Imposed Conditions be predicted, I recommend that consultation be undertaken with relevant entities including representatives of the PA Hospital, Leukaemia Foundation ESA Village, Ecosciences Precinct and the TRI building in the development of mitigation measures.

The proponent should establish real-time monitoring, with monitoring stations positioned at appropriate locations around the proposed worksites. Should exceedances of the goals in Table 4 be monitored or occur during construction, that are attributable to the project, the proponent should revise their adaptive management approach where necessary.

Recommendation 10. Boggo Road Pedestrian Connection

It is recommended that the Proponent refine the "Boggo Road Pedestrian Bridge Concept" (as shown in the Response to Submission Report dated June 2019) in consultation with the Department of Transport and Main Roads, Brisbane City Council, Ecosciences and the Princess Alexandra Hospital to maintain consistency with the Environmental Design Requirements for Traffic and Transport.

Recommendation 11. Traffic Management

In developing the Construction Traffic Management Plans required by Imposed Condition 14, it is recommended that the Proponent:

- continue to participate in the Traffic Management Liaison Group, together with Brisbane City Council, Translink and DTMR;
- undertake detailed analysis and modelling of the proposed temporary closure and diversion of the Inner Northern Busway at Roma Street;
- provide the outcomes of that analysis to Brisbane City Council and Translink to inform future public transport timetable management to accommodate the temporary diversion;
- consider the concurrent construction of other projects in the central business district in determining the appropriate spoil haulage hours in the central business district through the Construction Traffic Management Plan;
- consider the appropriate spoil haulage and materials equipment delivery hours at worksites in the vicinity of schools, taking into consideration student drop-off and pick-up hours between 7-9am and 2-4pm on school days.

Recommendation 12. Parkland Boulevard

It is recommended that the Proponent investigate the feasibility of upgrading access between the Roma Street Parklands and Parkland Boulevard Apartments and the external road network, with particular emphasis given to considering whether

amendments to the College Road/Wickham Terrace/Gregory Terrace/Parkland Boulevard intersection could accommodate an alternative egress point for Roma Street Parklands residents.

Recommendation 13. Flood studies

It is recommended that detailed hydraulic modelling be conducted as part of the final detailed design for the bridge structures in Breakfast Creek and Moolabin Creek. Brisbane City Council should be consulted on hydraulic modelling which will inform construction methodology and bridge design. Hydraulic modelling should be provided to Brisbane City Council for review and comment.

Recommendation 14. Consultation with key stakeholders

It is recommended that the Proponent should continue to undertake consultation with directly affected persons and key stakeholders for the duration of construction, to minimise and manage Project impacts.

Recommendation 15. Noise mitigation at Dutton Park

Consistent with achieving the Environmental Design Requirements for Noise and Vibration, it is recommended that where predictive modelling indicates exceedances of the noise criteria for railway surface track airborne noise emissions, the Proponent consult with Queensland Rail and residents of Cope Street during detailed design and consider noise mitigation measures that balance achieving compliance with MD-15-317, operational rail requirements and amenity impacts for residents of Cope Street.

Recommendation 16. Noise mitigation at Albert Street and Roma Street

To assist with meeting the project's construction noise criteria for night time cavern excavation and construction works, it is recommended that the Proponent consider (as part of the detailed construction planning) the use of a high performance enclosure for noise attenuation generally in the location of the "purpose built acoustic enclosure" shown on Drawing CRR-0003-CD-GA-150 and Drawing CRR-0003-CD-GA-155.

Recommendation 17. Managing impacts on homeless persons and associated community service providers

It is recommended that the Proponent continue to work in cooperation with key stakeholders, including the Queensland Council of Social Service, Department of Housing and Public Works, Department of Communities, Queensland Health, Brisbane City Council and government funded Micah Projects to provide appropriate assistance to homeless persons who may be adversely affected by the Project Works. In particular. the proponent should use targeted communication at each construction site and engage relevant stakeholders early to ensure appropriate notice is provided to homeless people and service providers prior to construction commencing.

Appendix 3. Imposed conditions – Temporary Roma Street Coach Terminal Works

This appendix includes conditions imposed by the Coordinator-General under section 54B of the SDPWO Act.

All of the conditions imposed in this Appendix take effect from the date of this Coordinator-General's change report.

These conditions do not relieve the proponent of the obligation to obtain all approvals and licenses from all relevant authorities required under any other Act.

In accordance with section 54B(3) of the SDPWO Act, I have nominated entities to have jurisdiction for the imposed conditions for the project in Schedule 1.

Pursuant to section 54D of the SDPWO Act, these conditions apply to anyone who undertakes the project, such as the proponent and an agent, contractor, subcontractor or licensee of the Proponent.

Defined terms that are part of the imposed conditions are contained in Schedule 2.

Part A Imposed Conditions (General)

Condition 1. General conditions

(a) The temporary coach terminal works must be carried out generally in accordance with the Cross River Rail Request for Project Change dated June 2018.

(b) The proponent must notify the Coordinator-General in writing of the commencement of construction of the temporary coach terminal and the commencement of the operational phase at least 20 business days prior to the relevant commencement date.

(c) The temporary coach terminal works must be carried out in accordance with the Imposed Conditions (temporary coach terminal works) in Appendix 3.

Part B Imposed Conditions (Temporary Coach Terminal Works)

Condition 2. Construction Environmental Management Plan

(a) A Construction Environmental Management Plan must be submitted to the Coordinator-General for approval at least 20 business days prior to the commencement of construction of the temporary coach terminal.

(b) The Construction Environmental Management Plan (temporary coach terminal works) must:

  (i) describe the temporary coach terminal works;

  (ii) be based on predictive studies and assessments of construction impacts which have regard to the scale, intensity, location and duration of construction works, and impact to Directly Affected Persons;

  (iii) incorporate and respond to the Imposed Conditions (temporary coach terminal works);

  (iv) demonstrate how the Imposed Conditions (temporary coach terminal works) will be complied with during the construction of the temporary coach terminal;

  (v) incorporate the stakeholder engagement plan, including the complaints management process, in accordance with Condition 5 in this Part B;

(vi) where predictive studies indicate impacts beyond those provided for in the performance criteria, incorporate mitigation measures to achieve the environmental outcomes;

(vii) establish specific mitigation measures and processes for consultation with Directly Affected Persons for temporary coach terminal works under Conditions 5(c), 7(c), and 7(f) in this Part B;

(viii) contain a program and procedures for ongoing monitoring to identify the effectiveness of mitigation measures in achieving the Imposed Conditions (temporary coach terminal works);

(ix) include a process for regular review and if required updating of the Construction Environmental Management Plan, including a process to review and implement additional or different mitigation measures in response to monitoring results;

(c) The Construction Environmental Management Plan (temporary coach terminal works) must be implemented for the duration of construction of the temporary coach terminal.

(d) Temporary coach terminal work is authorised if it is undertaken in accordance with the approved Construction Environmental Management Plan (temporary coach terminal works).

(e) The Construction Environmental Management Plan (temporary coach terminal works) must be available on the Cross River Rail website for the duration of construction of the temporary coach terminal.

(f) The Construction Environmental Management Plan (coach terminal works) may be developed in stages and/or updated. Any major update or additional stage will be submitted to the Coordinator-General 10 business days prior to issuing for use.

Condition 3. Compliance

(a) The proponent must notify the Coordinator-General in writing, within 48 hours after becoming aware of a non-compliance incident (incident) with the Imposed Conditions (temporary coach terminal works)

(b) The notification must include:

(i) a description of the incident, including details of the location, date and time of the Incident;

(ii) the name and contact details of a designated contact person;

(iii) an outline of actions that have been or will be taken to respond to the incident.

(c) Within 14 days following the notification of an Incident, written advice detailing the following information must be provided to the Coordinator-General:

(i) a description of the incident, including details of the location, date and time of the Incident;

(ii) the name and contact details of a designated contact person;

(iii) the circumstances in which the Incident occurred;

(iv) details of any complaint in relation to the incident;

(v) the cause of the incident;

(vi) a description of the environmental effects of the incident;

(vii) the results of any sampling or monitoring performed in relation to the Incident;

(viii) actions taken to mitigate the environmental effects of the incident;

(ix) proposed actions to prevent a recurrence of the Incident, including timing and responsibility for implementation.

(d) The incident report must be made available on the project website and remain available for the duration of the construction phase of the temporary coach terminal.

Condition 4. Reporting

(a) The proponent must prepare a monthly report that summarises compliance and monitoring results for the duration of the temporary coach terminal works.

(b) The Monthly Report must include:

(i) monitoring data required by the Imposed Conditions (temporary coach terminal works) or Construction Environmental Management Plan (temporary coach terminal works) undertaken for the period and, where required, an interpretation of the results;

(ii) details of any incident, including a description of the incident, resulting effects, corrective actions, revised construction practices to prevent a recurrence, responsibility and timing;

(iii) reporting of complaints, including the number of complaints, description of issues, responses and corrective actions.

(iv) an evaluation of compliance in relation to the Construction Environmental Management Plan (temporary coach terminal works);

(v) a summary of any Incidents during the reporting period;

(vi) a summary of any Incidents during the previous reporting period, with details of site remediation activities, corrective actions taken or to be taken and revised practices implemented or to be implemented (as relevant).

(c) The Monthly Report must be provided to the Coordinator-General and made available on the project website within four weeks of the end of the month to which the report relates and continue to be available on the project website for the duration of the construction phase of the temporary coach terminal.

Condition 5. Stakeholder engagement plan

(a) The proponent must develop a stakeholder engagement plan as part of the Construction Environmental Management Plan (temporary coach terminal works).

(b) The stakeholder engagement plan must provide for:

(i) Directly Affected Persons to be consulted prior to commencement of temporary coach terminal works and for the duration of the temporary coach terminal works;

(ii) Directly Affected Persons to be consulted about predicted impacts and possible mitigation measures;

(iii) local communities near temporary coach terminal works to be informed about the nature of construction, including the timing, duration and predicted impacts of the temporary coach terminal works in advance of their commencement;

(iv) information to be provided to public transport, road users, pedestrians and cyclists about the predicted effects of temporary coach terminal works on road, rail and pedestrian and cycle network operations, in advance of their commencement;

(v) specific community consultation plans for identified key stakeholders;

(vi) a process for advance notification to local communities of temporary coach terminal works, including the timing, duration, predicted impacts and mitigation measures, which is available on the project website and through other media.

(c) The stakeholder engagement plan must incorporate a complaints management system developed specifically for the temporary coach terminal works, which is established prior to the commencement of temporary coach terminal works.

(d) The complaints management system must deliver a prompt response to community concerns with relevant information, action where required, and reporting of incidents.

(e) As a minimum, the complaints management system must include the following elements:

(i) a procedure for receiving complaints on a 24 hour, seven days a week basis, during temporary coach terminal works;

(ii) a mechanism for notifying the community of the complaints procedure and how it may be accessed;

(iii) a process for registering and handling complaints received, including a database for tracking of complaints and actions taken in response;

(iv) a procedure for verifying complaints through monitoring and detailed investigation, and escalating and resolving verified complaints;

(v) regular reporting via the monthly environmental report, to the community of complaints and corrective actions, maintaining appropriate confidentiality.

(f) All information regarding complaints must be made available to the Coordinator-General on request.

Condition 6. Hours of work

(a) Construction works for the temporary coach terminal are authorised to be undertaken within the hours of work set out in Table 1.

Table 1 Construction hours

Standard hours	Extended work hours
Monday to Saturday, 6.30am - 6.30pm	Monday to Friday, 6:30pm - 10:00pm

(b) Works carried out because of an emergency that:

(i) is endangering the life or health of a person; or

(ii) is endangering the structural safety of a building; or

(iii) is endangering the operation or safety of community infrastructure that is not a building; or

(iv) is required to prevent environmental harm, may be undertaken outside the hours set out in Table 1.

(c) The following work may be undertaken during Extended Work Hours as set out in Table 1, subject to compliance with specific measures for Extended Work Hours in the Construction Environmental Management Plan (temporary coach terminal works):

(i) Paving, line marking, structural installation;

(ii) Temporary coach terminal works within a road reserve or busway that cannot be undertaken reasonably nor practicably during standard hours due to potential disruptions to peak traffic flows or bus operations;

(iii) Temporary coach terminal works involving the transport, assembly or decommissioning of oversized plant, equipment, components or structures;

(iv) delivery of "in time" materials such as concrete, hazardous materials, large components and machinery;

(v) Temporary coach terminal works that require continuous construction support, such as continuous concrete pours, or other forms of ground support necessary to avoid a failure or construction incident.

Condition 7. Construction noise and vibration

(a) Temporary coach terminal works must aim to achieve the project noise goals for human health and well-being presented in Table 2.

Table 2. Noise goals (internal) for temporary coach terminal works

	Monday – Saturday 6.30am – 6.30pm	Monday – Friday 6.30pm – 10.00pm
Continuous (LAeq adj)(1hr)	AS 2107 Maximum design level	40 dBA LAeq adj (1hr)
Intermittent (LA10 adj)(15min)	AS 2107 Maximum design level + 10 dBA	50 dBA LA10, adj

Notes

1. All goals are internal noise levels for human health and well-being outcomes.

2. Where internal noise levels are unable to be measured or monitored, the typical noise reductions presented in the relevant State guideline, such as the Guideline Planning for Noise Control, Ecoaccess, DEHP, January 2017 (currently under review).

(b) During construction of temporary coach terminal works monitor and report on noise and vibration in accordance with the Construction Environmental Management Plan (temporary coach terminal works).

(c) Temporary coach terminal works predicted to or monitored as generating noise levels more than 20dBA (LA eq 10min, adj) above the relevant goal in Table 2 may occur only in accordance with the mitigation measures developed in consultation with and agreed by Directly Affected Persons that are incorporated in the Mitigation Register.

(d) Temporary coach terminal works must aim to achieve the construction vibration goals in Table 3.

Table 3. Vibration goals (internal) for Temporary Coach Terminal Works

Receiver type	Cosmetic Damage		Human comfort (mm/s PPV)		Sensitive building contents (mms/PPV)
	Continuous vibration (mm/s PPV)	Transient vibration (mm/s PPV)	Day	Night	
Residential	According to BS7385 reduced by 50%[1]	According to BS7385	According to AS2670	0.5[2]	
Commercial	According to BS7385 reduced by 50%[1]	According to BS7385	According to AS2670		0.5[3]
Heritage Structures	2				

Notes:

1. If resonance is present, or if investigation to detect resonance were not able to be undertaken due to a lack of access

2. Residential sleep disturbance

3. Equipment specific vibration criteria are required for highly sensitive equipment (i.e. electron microscopes, MRI systems or similar), as part of future site-specific detailed investigations

(e) Where vibration protection criteria are available for sensitive building contents, predictive modelling must take into account the manufacturer's specifications for tolerance to vibration. To the extent reasonable and practicable, those specifications apply in lieu of the construction vibration goals in Table 3. Where predictive modelling indicates the specified

criteria would not be achieved by the temporary coach terminal works, such works may proceed only in accordance with specific mitigation measures agreed with the potentially Directly Affected Persons.

(f) Temporary coach terminal works predicted to or monitored as generating vibration levels more than 2mm/s for continuous vibration and 10mm/s for transient vibration may occur only in accordance with the mitigation measures developed in consultation with and agreed by Directly Affected Persons that are incorporated in the Mitigation Register.

(g) The temporary coach terminal must incorporate dynamic signage and ensure equitable access is provided for visually impaired persons in accordance with relevant Australian Standards and design principles.

Condition 8. Air quality

(a) Construction of the temporary coach terminal works must aim to achieve the goals in Table 4.

Table 4. Air quality goals

Criterion	Air quality indicator	Goal	Averaging Period
Human health	Total Suspended Particulates (TSP)	90 µg/m^3	1 year
	Particulate matter (PM_{10})	50 µg/m^3	24 hours
		25 µg/m^3	1 year
Nuisance	TSP	80 µg/m^3	24 hours
	Deposited dust	120 mg/m^2/day	30 days

(b) During construction monitor and report on air quality in accordance with the Construction Environmental Management Plan (temporary coach terminal works).

Condition 9. Traffic and transport

(a) Construction traffic associated with the temporary coach terminal works must be managed to avoid or minimise adverse impacts on road safety and traffic flow, public transport, freight rail movements, pedestrian and cyclist safety, and property access.

(b) During temporary coach terminal works, workforce car parking will be provided within the worksite where possible, and parking on local streets is to be avoided.

(c) Access for emergency services to temporary coach terminal worksites and adjoining properties must be maintained throughout the construction phase.

(d) Practicable access is maintained to adjacent properties throughout temporary coach terminal works.

(e) Heavy construction vehicles use only designated routes for spoil haulage and deliveries of major plant, equipment and materials, in accordance with the Construction Environmental Management Plan. The designated haulage routes for each worksite must follow major or arterial roads to the extent practicable.

(f) Construction traffic must operate within the requirements of the Construction Environmental Management Plan (temporary coach terminal works).

(g) Prepare a Construction Traffic Management Plan (temporary coach terminal works) that includes:

(i) the proposed access to worksites, with local or minor roads only used where unavoidable to access a temporary coach terminal worksite;

(ii) a process for advance notice to Directly Affected Persons and local communities within the vicinity of the haulage routes and worksite accesses;

(iii) local traffic management measures developed in consultation with Brisbane City Council for key intersections including the reconfiguration of the intersection between Parkland Boulevard and Parkland Crescent to provide better sight distances and improved safety for road users;

(iv) specific traffic management measures developed in consultation with other key stakeholders, including:

(A) Queensland Rail about maintaining access to railway stations; and

(B) the department administering the *Transport Infrastructure Act 1994* and the Brisbane City Council about maintaining operations for bus services along streets affected by the temporary coach terminal works.

(h) Temporary coach terminal works must be designed, planned and implemented to maintain acceptable footpath and cycle paths in areas adjacent to temporary coach terminal worksites in terms of capacity, legibility and pavement condition. The proponent must consult with the Brisbane City Council and Queensland Rail about changes in pedestrian and cycle paths required to facilitate temporary coach terminal works.

Condition 10. Water quality

(a) Discharge of surface water and groundwater from the construction of the temporary coach terminal works must comply with the Brisbane River Estuary environmental values and water quality objectives (Basin no. 143 - mid-estuary) in the Environmental Protection (Water) Policy 2009.

(b) During construction monitor and report on water quality in accordance with the Construction Environmental Management Plan (temporary coach terminal works).

Condition 11. Surface water

(a) Temporary coach terminal works, and worksites, must be designed and implemented to avoid inundation from stormwater due to a 2-year (6hr) ARI rainfall event and flood waters due to a 5-year ARI rainfall event.

(b) Temporary coach terminal works must be designed and implemented to avoid afflux or cause the redirection of uncontrolled surface water flows, including stormwater flows, outside of worksites.

Condition 12. Erosion and sediment control

(a) An erosion and sediment control sub-plan that is consistent with the Guidelines for Best Practice Erosion and Sediment Control (International Erosion Control Association, 2008) and the Department of Transport and Main Roads' Technical Standard MRTS51 – Environmental Management must be submitted as part of the Construction Environmental Management Plan (temporary coach terminal works).

Condition 13. Cultural heritage

(a) Temporary coach terminal works that involve excavation, construction or other activities that may cause harm to Aboriginal cultural heritage must not take place without the development and approval of a cultural heritage management plan for the Project in accordance with the *Aboriginal Cultural Heritage Act 2003*.

(b) Temporary coach terminal works that do not have the potential to harm Aboriginal cultural heritage may be carried out without the development and approval of a cultural heritage management plan for the Project, however must be carried out in accordance with the cultural heritage duty of care prescribed under section 23(1) of the *Aboriginal Cultural Heritage Act 2003*.

(c) Temporary coach terminal works that do not constitute Project Works may be carried out for the Project without the development and approval of a cultural heritage management plan for the Project, however must be carried out in accordance with the cultural heritage duty of care prescribed by section 23(1) of the *Aboriginal Cultural Heritage Act 2003*.

Schedule 1. Nominated entities with jurisdiction for conditions

Table A1 lists the organisations/agencies responsible for each of the Coordinator-General's Imposed Conditions (Appendix 3).

Table A2. Entities with jurisdiction for Coordinator-General Imposed Conditions

Part	Approval	Condition no.	Entity with jurisdiction
A	General conditions	1	Coordinator-General
B	Construction Environmental Management Plan	2	Coordinator-General
B	Compliance	3	Chief Executive, TMR
B	Reporting	4	Chief Executive, TMR
B	Stakeholder engagement plan	5	Coordinator-General
B	Hours of work	6	Chief Executive, TMR
B	Construction noise and vibration	7	Chief Executive, TMR
B	Air quality	8	Chief Executive, TMR
B	Traffic and transport	9	Chief Executive, TMR
B	Water quality	10	Chief Executive, TMR
B	Surface water	11	Chief Executive, TMR
B	Erosion and sediment control	12	Chief Executive, TMR
B	Cultural heritage	13	Chief Executive, TMR

Schedule 2. Definitions

Definitions

Temporary Coach Terminal Works means all works associated with the design, construction and commissioning of the temporary coach terminal.

Directly Affected Persons means an entity being either the owner or occupant of premises for which predictive modelling or monitoring indicates the temporary coach terminal works impacts would be above the performance criteria in the conditions imposed for the temporary coach terminal works.

Acronyms and abbreviations

Acronym	Definition
AEP	annual exceedance probability
AHD	Australian Height Datum
AQMP	Air Quality Management Plan
ARI	Annual Recurrence Interval
AS	Australian Standard
ASS	acid sulphate soils
BCC	Brisbane City Council
BCM	bank cubic metres
BGGS	Brisbane Girls Grammar School
BRCFS	Brisbane River Catchment Flood Study
BTC	Brisbane Transit Centre
BTS	Biomedical Technology Services
CBD	Central Business District
CEMP	Construction Environmental Management Plan
CGCR	Coordinator-General's change report
CGER	Coordinator-General's evaluation report
CHMP	Cultural Heritage Management Plan
CPTED	Crime Prevention Through Environmental Design
CRRDA	Cross River Rail Delivery Authority
CRRDA Act	*Cross River Rail Delivery Authority Act 2016*
CSEP	Community and Stakeholder Engagement Plan
CTMP	Construction Traffic Management Plan
DAF	Department of Agriculture and Fisheries
DATSIP	Department of Aboriginal and Torres Strait Islander Partnerships
DES	Department of Environment and Science
DTMR	Department of Transport and Main Roads
dB(A)	adjusted decibels
EIS	environmental impact statement
EMR	Environmental Management Register
ESCP	Erosion and Sediment Control Plan
EPBC Act	*Environment Protection and Biodiversity Act 1999*
ETCS	European Train Control System
EVNT	Endangered, Vulnerable or Near Threatened
FABZ	Fire Ant Biosecurity Zones
HA	high attenuation
INB	Inner Northern Busway
km	kilometres
km/hr	kilometres per hour

Acronym	Definition
$L_{Aeq,24hr}$	Time average A-weighted sound level having the same total energy as the time varying sound being measured between the 12 hours between 6:00 am to 6:00 pm.
L_{Amax}	The maximum A-weighted noise level
LOS	level of service
m	metres
m^2	square metre
m^3	cubic metre
mg	milligram
mm	millimetre
mm/s	millimetre per second
NALL	*Natural Assets Local Law 2013*
NC Act	*Nature Conservation Act 1997*
NCMP	Nature Conservation Management Plan
OEMP	Outline Environmental Management Plan
PA	Princess Alexandra
PDA	Priority Development Area
$PM_{2.5}$	particulate matter 2.5 micrometre or less in diameter
PM_{10}	particulate matter 10 micrometres or less in diameter
QR	Queensland Rail
RE	Regional Ecosystem
SDPWO Act	*State Development and Public Works Organisation Act 1971*
TEM	Transmission Electron Microscope
TSP	total suspended particles
VHA	very high attenuation
µg/m^3	micrograms per cubic meter

Glossary

Term	Definition
2011 EIS	The EIS publicly notified from 30 August 2011 to 21 October 2011.
2012 CGER	The CGER dated 20 December 2012.
August 2018 CGCR	The CGCR dated 30 August 2018.
March 2019 CGCR	The CGCR dated 13 March 2019
June 2019 CGCR	The CGCR dated 26 June 2019
coordinated project	A project declared as a 'coordinated project' under section 26 of the SDPWO Act. Formerly referred to as 'significant project'.
Coordinator-General	The corporation sole constituted under section 8A of the SDPWO Act and preserved continued and constituted under section 8 of the SDPWOA Act.
February 2017 project change application	The project change application dated 10 February 2017.
imposed condition	A condition imposed by the Queensland Coordinator-General under section 54B of the SDPWO Act. The Coordinator-General may nominate an entity that is to have jurisdiction for that condition
June 2017 CGCR	The CGCR dated 9 June 2017.
June 2018 project change application	The project change application dated 28 June 2018.
November 2018 project change application	The project change application dated 19 November 2018.
April 2019 project change application	The project change application dated April 2019
September 2019 project change application	The project change application dated 23 September 2019
significant project	A project declared (prior to December 2012) as a 'significant project' under section 26 of the SDPWO Act. Projects declared after 21 December 2012 are referred to as 'coordinated projects'.
the project	The project described in the Coordinator-General's Evaluation Report dated 20 December 2012.

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