

# Cross River Rail Project

## Monthly Environmental Report

April 2020



Queensland  
Government

# Table of Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>3</b>
<b>DEFINITIONS .....</b>	<b>7</b>
<b>1. INTRODUCTION.....</b>	<b>7</b>
1.1 BACKGROUND.....	7
<b>2. COMPLIANCE REVIEW .....</b>	<b>11</b>
2.1 RELEVANT PROJECT WORKS.....	11
2.2 KEY ENVIRONMENTAL ELEMENTS .....	11
2.2.1 <i>Noise</i> .....	11
2.2.2 <i>Vibration</i> .....	12
2.2.3 <i>Air Quality</i> .....	12
2.2.4 <i>Water Quality</i> .....	13
2.2.5 <i>Erosion and Sediment Control</i> .....	13
2.3 COMPLAINTS.....	13
2.4 NEW UPCOMING PROJECT WORKS .....	14
2.5 MONTHLY ENVIRONMENT REPORT ENDORSEMENT .....	14
2.6 NON-COMPLIANCE EVENTS .....	14
<b>APPENDIX A – RIS MONTHLY REPORT .....</b>	<b>17</b>
<b>APPENDIX B – TSD MONTHLY REPORT .....</b>	<b>18</b>
<b>APPENDIX C – NON-COMPLIANCE EVENT REPORTS.....</b>	<b>19</b>

# Executive Summary

This monthly report has been produced for Project Works undertaken on site for April 2020 for the Rail, Integration and Systems (RIS), and Tunnel, Stations and Development (TSD) packages. The report addresses the obligations outlined in the Coordinator-General’s change report – condition change (hours of works) 2019 (CGCR, October 2019) and the individual contractor’s Construction Environmental Management Plans (CEMPs) which have been developed generally in accordance with the Project’s Outline Environmental Management Plan. The Delivery Authority, as the Proponent of the Cross River Rail Project, is required to submit a monthly report to the Coordinator-General to demonstrate compliance with the imposed conditions.

Section 1 of this report provides a background to the project and the Coordinator-General’s conditions. Section 2 provides a review of the contractor’s reports contained in **Appendix A** (Rail, Integration and Systems) and **Appendix B** (Tunnel, Stations and Development). Non-Compliance Event Reports submitted in April are attached in **Appendix C**.

The Environmental Monitor has reviewed and endorsed this Monthly. This endorsement follows ongoing and new document reviews, and surveillance across the construction sites (from late April taken place through surveillance officers designated to single sites in response to the COVID-19 restrictions).

The CEMPs prepared by both Unity Alliance (RIS Contractor) and CBGU JV (TSD Contractor) for their Relevant Project Works were endorsed by the Environmental Monitor (EM) and submitted to the Coordinator-General in accordance with Condition 4 (a) and 4 (b) respectively.

The table below presents a summary of compliance status against each condition with a short comment against each condition:

CG Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
1.	<b>General conditions</b> – compliance with the Project Changes relevant to the Contractor’s scope	Yes	The CEMP and site plans are in accordance with the Project Changes.
2.	<b>Outline Environmental Management Plan</b> – timely submission to the Coordinator-General including required sub plans	Yes	This has been submitted to the Coordinator-General and the project is working under the currently approved version. Following any future Requests for Project Change (RfPC), this document will be updated and resubmitted.
3.	<b>Design</b> - achievement of the Environmental Design Requirements	NA	Documents continue to be reviewed related to compliance with the environmental design standards.
4.	<b>Construction Environmental Management Plan</b> – all relating to Relevant Project Works	Yes	TSD - CEMP Rev 3 became effective on 11 February, a further revision is going through the final stages of review and endorsement,  RIS - CEMP endorsed for Enabling and Advanced Works on 23 August 2019. CEMP for upcoming Northern Portal (Stage 1) works is being developed for submission to the CG.

CG Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
5.	<b>Compliance and Incident management</b> - Non-compliance events, notifications and reporting	Yes	Refer to section 2.6 of this report.
6.	<b>Reporting</b> – Monthly and Annual reporting	No	TSD - Reporting continues to be refined in consultation with the Office of Coordinator-General (OCG), EM and Contractors to ensure all requirements are adequately addressed. To make sure this has been captured formally, this has been raised as an NCE (CRRDA-005-TSD-004) and will be closed out with the May report.
7.	<b>Environmental Monitor</b> - engaged and functions resumed	Yes	Ongoing
8.	<b>Community Relations Monitor</b> - engaged and functions resumed	Yes	Ongoing
9.	<b>Community engagement plan</b> - developed and endorsed by Environmental Monitor	Yes	CEMP's endorsed with Community Engagement Plan
10.	<b>Hours of work</b> – works undertaken during approved hours	Yes	This has been achieved through standard working hours, Extended work hours and Managed Work.
11.	<b>Noise</b> – Work must aim to achieve internal noise goals for human health and well-being	Yes	TSD - Refer to <b>Appendix B (Table 2)</b> . RIS – Noise monitoring was not triggered under the CEMP for works in April.
	<b>Vibration</b> - Works must aim to achieve vibration goals for cosmetic damage, human comfort and sensitive building contents.	Yes	TSD - Refer to <b>Appendix B (Table 1)</b> . RIS - Vibration monitoring was not triggered under the CEMP for works in April.
12.	<b>Property damage</b> relating to ground movement	Yes	TSD - ongoing vibration modeling has been prepared and, where required, building condition survey reports completed. RIS - No specific management plan required due to low risk construction works.
13.	<b>Air quality</b> - Works must aim to achieve air quality goals for human health and nuisance.	Yes	Refer to <b>Appendix A (Table 2)</b> and <b>Appendix B (Table 3)</b> .
14.	<b>Traffic and transport</b> - Works must minimise adverse impacts on road safety and traffic flow.	Yes	TSD - Traffic Management Plan covered in the CEMP and sub plans reviewed by the Environment Monitor..

CG Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
15.	<b>Water quality</b> - Works must not discharge surface water and groundwater from the construction site above the relevant environmental values and water quality objectives.	Yes	No discharges of surface water or groundwater occurred in April. Post rain monitoring was not triggered.
16.	<b>Water resources</b> – evaluate potential impact, plan works, implement controls and monitor inflow of groundwater associated with drawdown	Yes	Ongoing
17.	<b>Surface water</b> - Must be designed 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 and constructed to avoid afflux or cause the redirection of uncontrolled surface water flows, including stormwater flows, outside of worksites.	Yes	Contractors continue to consider this condition in their site planning and design.
18.	<b>Erosion and sediment control</b> - Provisions for erosion and sediment control must be 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.	Yes	TSD - Site specific ESC plans for all active work sites were in the process of being provided to the Environmental Monitor for review during April and implemented on site. Monitoring is undertaken in site inspections. NCE reference CRRDA-002-TSD-001 and CRRDA-003-TSD-002 details the measures being taken. This will be closed out in the May report.  RIS - Site specific ESC plans have been certified and implemented for all active worksites.
19.	<b>Acid sulfate soils</b> managed as per the Queensland Acid Sulfate Soil Technical Manual.	Yes	TSD - CEMP covers Acid Sulfate Soils Management Plan  RIS - Not applicable for Relevant Project Works.
20.	<b>Landscape and open space</b> – general requirement to minimise impacts on landscapes and open space values and specific requirements around Victoria Park	Yes	RIS - Site Environmental Plan prepared and implemented for Victoria Park Access Road works.
21.	<b>Worksite rehabilitation</b> – worksites rehabilitated as soon as practicable upon completion of works or commissioning, and in consultation with Brisbane City Council.	NA	

## Non-Compliance Events

The five non-compliance events raised on 31 March 2020 were investigated and the 14-day NCE Reports submitted to the Coordinator-General within April. The reports are provided in Appendix C and have been uploaded to the Cross River Rail website, with a summary provided in section 2.6.

# Definitions

Acronym	Definition
ARI	Average Recurrence Interval - The average or expected value of the periods between exceedances of a given rainfall total accumulated over a given duration.
CEMP	Construction Environmental Management Plan
CG	Coordinator-General
CGCR	Coordinator-General's Change Report
Community Relations Monitor	The Community Relations Monitor engaged in accordance with Imposed Condition 8
Contractor	The Contractors appointed to design, construct and commission the Project
Coordinator-General	The corporation sole preserved, continued and constituted under section 8 of the SDPWO Act
CRR	Cross River Rail
EIS	Environmental Impact Statement
Environmental Monitor	The Environmental Monitor engaged in accordance with Imposed Condition 7
ESC	Erosion and sediment control
Imposed condition/s	A condition/s imposed by the Coordinator-General under section 54B of the SDPWO Act for the Project
MRTS52	Transport and Main Roads Specifications MRTS52 Erosion and Sediment Control
NCE	Non-Compliance Event
OEMP	Outline Environmental Management Plan
Project	The Cross River Rail Project
Project Works	As defined in the Imposed Conditions
Proponent	The Cross River Rail Delivery Authority
QR	Queensland Rail
RfPC	Request for Project Change
RIS	Rail, Integration and Systems
SDPWO Act	<i>State Development and Public Works Organisation Act 1971</i>
Sub-plan	Any sub-plan of the CEMP
The Delivery Authority	The Cross River Rail Delivery Authority
TSD	Tunnel, Stations and Development

## 1. Introduction

### 1.1 Background

The Cross River Rail Project (the Project) is a declared coordinated project under the *State Development and Public Works Organisation Act 1971* (SDPWO Act). The CRR Environmental Impact Statement (EIS) was evaluated by the Coordinator-General who recommended the Project proceed,

subject to Imposed Conditions and recommendations. Since the evaluation of the EIS, six Requests for Project Change (RfPCs) have been evaluated by the Coordinator-General, at the time of writing this report.

The Coordinator-General has imposed conditions on the Project that apply throughout the design, construction and commissioning phases. These are referred to as the Imposed Conditions. In addition, the Coordinator-General has approved the Project's Outline Environmental Management Plan (OEMP) which outlines the environmental management framework for the Project. The OEMP includes environmental outcomes and performance criteria which must be achieved for the Project.

Imposed Conditions 5 and 6 nominate the compliance and reporting requirements for the Project. This monthly report addresses these requirements.

## 1.2 Project Delivery

The Delivery Authority is responsible for planning and delivering the Project. During initial Project Delivery phase, the Project established environmental management plans and secured some of the secondary environmental approvals in addition to enabling works.

The two main delivery packages which require reporting under the Coordinator-General's imposed conditions are:

- Tunnel, Stations and Development (TSD) being delivered by CBGU JV; and
- Rail, Integration and Systems (RIS) being delivered by Unity Alliance.

The Project is geographically divided into four areas:

- Mayne Area
- Northern Area
- Central Area
- Southern Area

These are shown in the figures 1 and 2 overleaf.



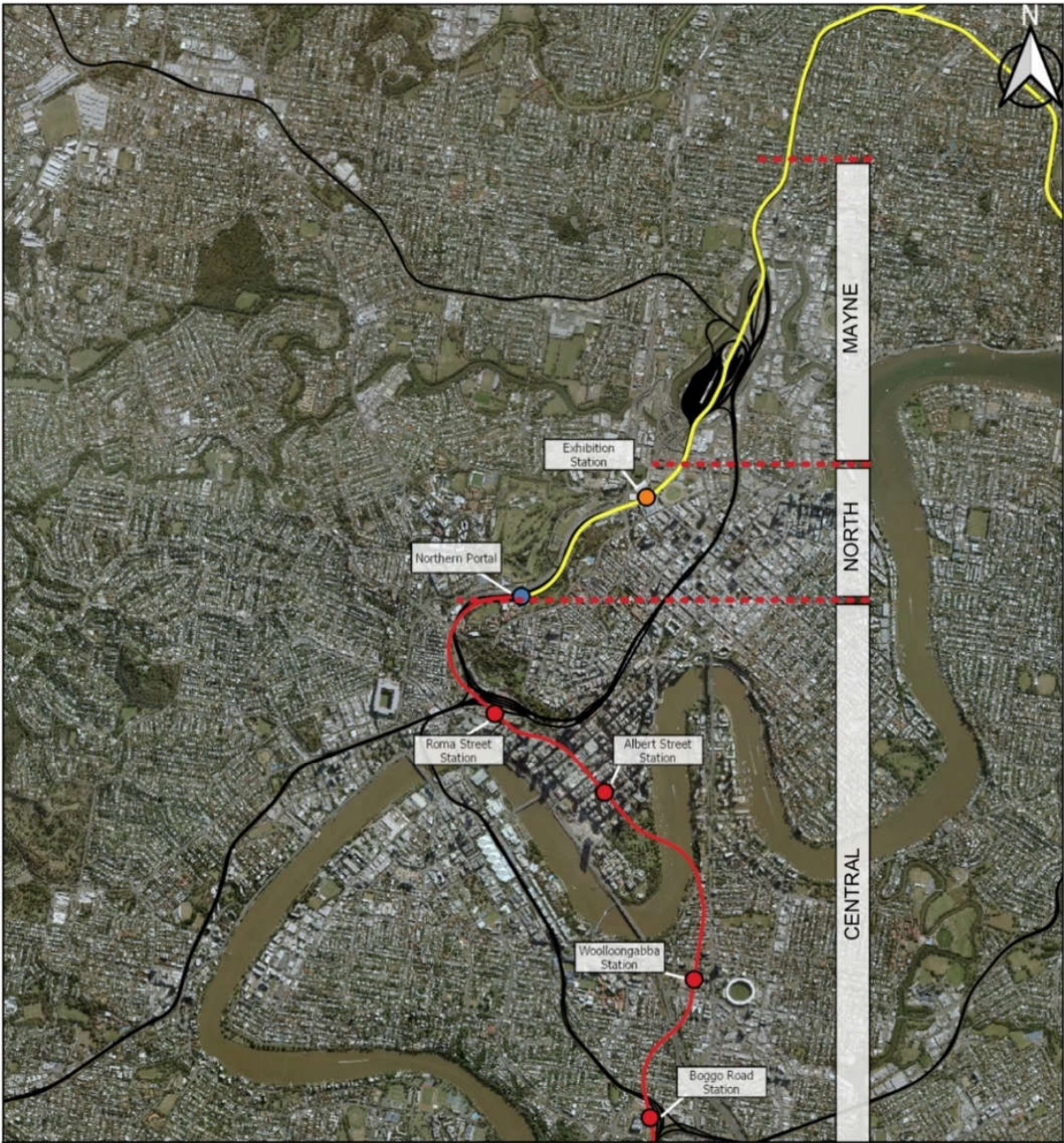


Figure 1 : Project Geographical Areas - North

**Legend**

- Above Ground Alignment
- Above Ground Station
- Tunnel Portal
- Tunnel Alignment
- Underground Station
- Existing Railway Network



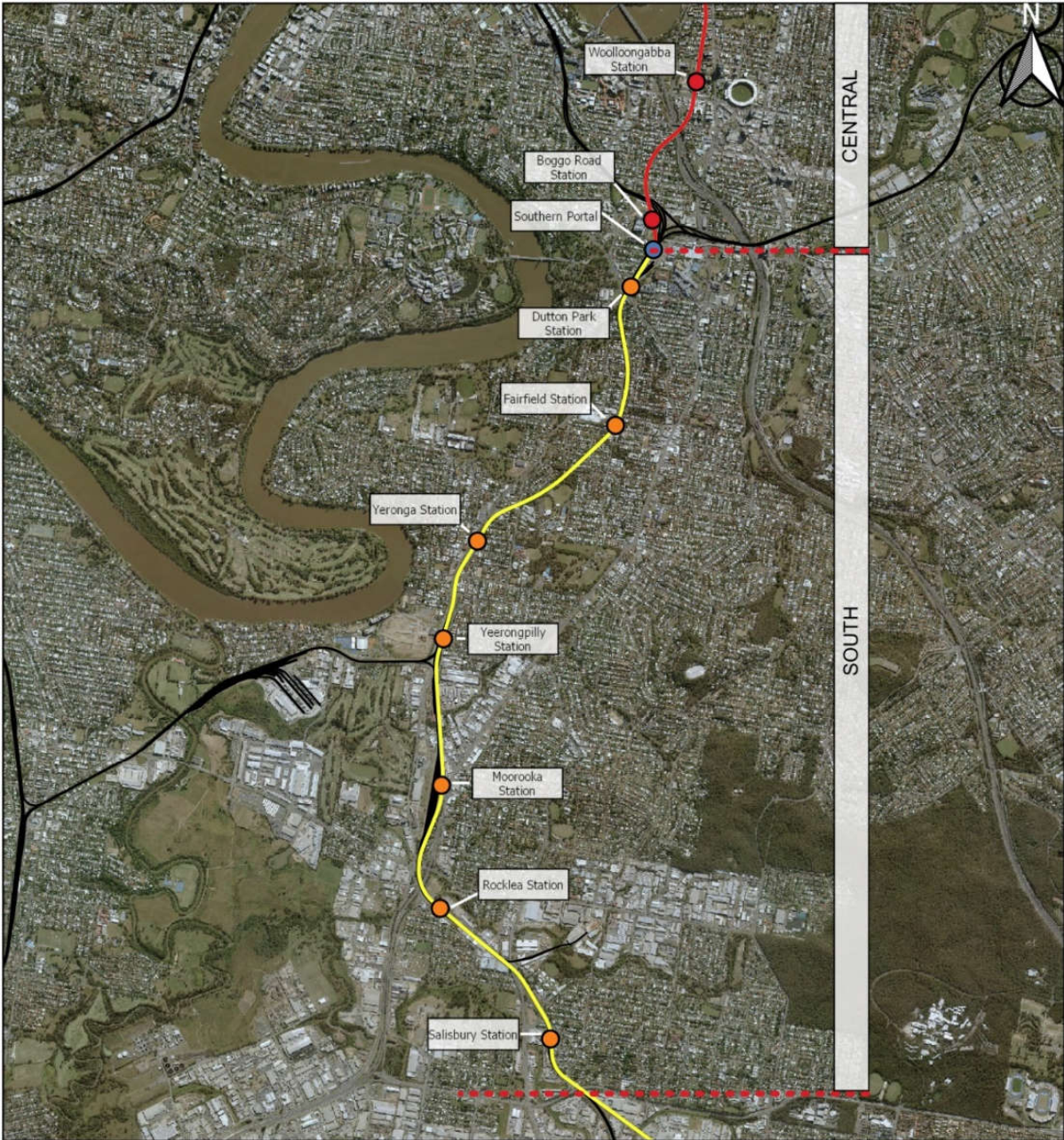


Figure 2: Project Geographical Areas - South

**Legend**

- Above Ground Alignment      ● Above Ground Station      ● Tunnel Portal
- Tunnel Alignment              ● Underground Station      — Existing Railway Network



## 1.3 Reporting Framework

This report has been prepared for the month of April to comply with Conditions 6 and 7 of the Coordinator-General Change Report (CGCR) and includes:

- Monitoring data and associated interpretation of the results required by the imposed conditions and Construction Environmental Management Plan (CEMP);
- Details of any Non-Compliance Event (NCE), including incidents, corrective actions and preventative actions; and
- Details of any complaints, including description, responses and corrective actions.

Reporting on environmental elements captured in each monthly environmental report, including the annual environmental report, will be reviewed and endorsed by the Environmental Monitor.

## 2. Compliance Review

This Monthly Report has been reviewed and endorsed by Environmental Monitor as per Condition 7 of the Coordinator-General Change Report (CGCR).

### 2.1 Relevant Project Works

The following Project Works were undertaken in April 2020:

Area	Project Works
Mayne Area	Demolition and removal of redundant infrastructure such as fences, pits, service, overhead line equipment (OHLE) foundations and asbestos, drainage culverts completed; completed geotechnical earthworks / preloading operations; and settlement monitoring of localised Mayne Yard surcharge area.
Northern Area	Demolition and removal of redundant pits, services, OHLE foundations in the northern rail corridor; finalisation of access road in Victoria Park with asphaltting of shared user path and main access; and site establishment of site office at Herston and RNA Showgrounds.
Central Area	Roma Street - Continued demolition of the Brisbane Transit Centre and Hotel Jen; acoustic shed construction; shaft excavation; and site establishment work across the site.
	Albert Street - Piling and site establishment; shaft excavation; and acoustic shed construction.
	Woolloongabba - Piling; site establishment; decline and shaft excavation
	Boggo Road – Piling and site establishment
Southern Area	OHLE works scheduled during Easter rail possession at Fairfield and Yeronga was cancelled.

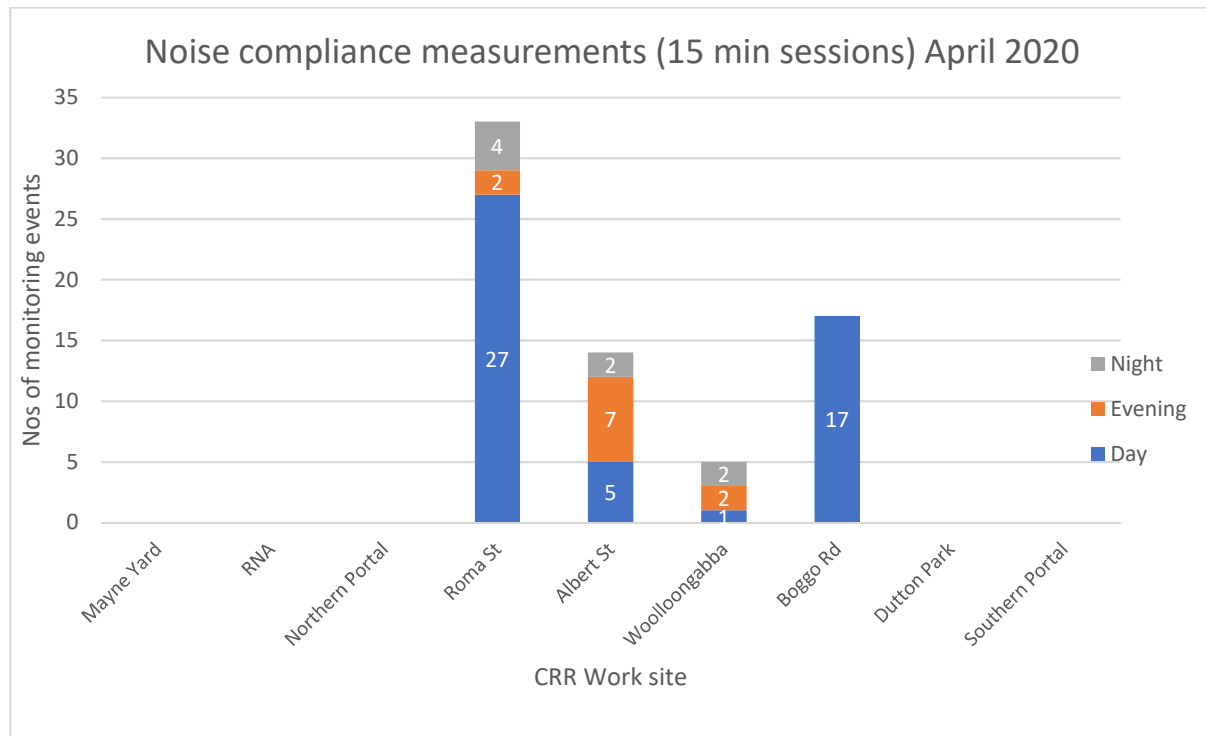
## 2.2 Key Environmental Elements

### 2.2.1 Noise

Noise monitoring was not triggered under the RIS CEMP for works during April (refer to Attachment 4 Construction Environmental Monitoring Program of the RIS CEMP).

TSD undertook noise monitoring on 69 occasions during April as summarised in the graph below and detailed in **Appendix B**. Compliance monitoring was completed at the Albert Street, Boggo Road, Roma

Street and Woolloongabba worksites as well as Dutton Park Station. It should be noted that the noise goals have been nominated as internal levels. Where internal monitoring has not been possible for the contractors, they have undertaken external monitoring at nominated locations pending their work activities. The contractors noise consultants have then nominated suitable façade attenuation corrections, considering receiver property type, to determine compliance against the project’s noise goals and to provide further calibration of the completed modelled predictions. The contractors have reported that the project noise goals have been met during this reporting month.



## 2.2.2 Vibration

Vibration monitoring was not triggered under the CEMP for RIS works in April (refer to Attachment 4 Construction Environmental Monitoring Program of the RIS CEMP).

TSD undertook vibration monitoring on three occasions at the Boggo Road precinct, twice to verify the predictive modelling and once for compliance monitoring. The contractor reported the results were within the project’s nominated goals on each occasion.

## 2.2.3 Air Quality

The Delivery Authority has received additional information from the Contractor relating to air quality monitoring information as raised in the March report for earthworks in the Northern Area and at Mayne Yard. The predictive air quality assessment undertaken for these works prior to commencement did not predict any exceedances at nearby sensitive receivers. Based on the findings of the predictive model, and in accordance with Attachment 4 Construction Environmental Monitoring Program of the RIS CEMP, air quality monitoring or any additional mitigation measures were not triggered. On this basis, the earthworks conducted at these worksites in March were considered low risk and compliant with the endorsed CEMP. No visible dust was noted during site inspections conducted for the works. There were no complaints received during earthworks at these sites.

### 2.2.3.1 Dust Deposition

Dust deposition monitoring was conducted at Mayne Yard, RNA Showgrounds, Northern Corridor, Albert Street, Boggo Road, Roma Street and Woolloongabba precinct sites during the month.

Monitoring results showed all levels were within the project's air quality goals except for a Northern Corridor dust deposition gauge near The Centenary Pool. Further investigation revealed that the exceedance was not associated with the project works (Section 4.1.2 of **Appendix A**).

### 2.2.3.2 Particulate Matter (PM10)

Particulate Matter (PM10) monitoring was not triggered under the CEMP for RIS works in April (refer to Attachment 4 Construction Environmental Monitoring Program of the RIS CEMP).

New monitoring stations for PM10 were installed at Mayne Yard and in the Northern Corridor for upcoming high-risk activities.

Whilst dispersion modelling for the TSD packages does not indicate any exceedances of PM10 at any TSD worksite for the current works, monitoring of PM10 was undertaken at the Woolloongabba site throughout the reporting period. The contractors noted no exceedances of the air quality goals. The Contractors also reviewed air quality results for PM10 from the DES monitoring stations in Brisbane CBD, South Brisbane and Woolloongabba, and Transurban monitoring stations at Victoria Park (E1) and The Centenary Pool (E2). No exceedances were identified.

### 2.2.3.3 Total Suspended Particulates (TSP)

Total Suspended Particulates (TSP) monitoring was not triggered under the CEMP for RIS works in April (refer to Attachment 4 Construction Environmental Monitoring Program of the RIS CEMP). New monitoring stations for TSP were installed at Mayne Yard and in the Northern Corridor for upcoming high-risk activities.

TSD undertook TSP monitoring adjacent to the Woolloongabba site throughout the month of April and no exceedances were recorded.

## 2.2.4 Water Quality

No post rainfall monitoring events were triggered during the reporting month.

Two rounds of routine surface water quality monitoring were conducted in April at Breakfast Creek, York's Hollow, Moolabin Creek, Rocky Water Holes Creek and Stable Swamp Creek for RIS works.

For the TSD package, one round of surface water quality monitoring was conducted in April. This included five locations upstream and downstream from all TSD worksite discharge points.

As there were no discharge events recorded from any active worksite, any changes to the surrounding water quality were not related to the project and served as good baseline monitoring data.

## 2.2.5 Erosion and Sediment Control

Site specific Erosion and Sediment Control (ESC) plans have been prepared and continue to be updated for the changing TSD sites at Roma Street, Albert Street, Woolloongabba, and Boggo Road.

## 2.3 Complaints Management

No complaints were recorded during the reporting month for RIS works.

The TSD contractors report (**Appendix B**) notes 14 noise complaints reported in April. Of these, eight complaints related to work in the evening and out of hours and six (6) complaints were related to works undertaken during standard work hours. However, 21 complaints have been confirmed by Pulse relating to the project. An updated **Appendix B** will be provided in due course.

Where attended noise monitoring was in response to a complaint, the contractor confirmed that the works undertaken at the time of the complaint adhered to project requirements. The TSD contractor also stated that for all scheduled Out of Hours works being undertaken, community notification had been provided. All complaints were closed out by the TSD contractor.

## 2.4 New Upcoming Project Works

The key new planned Project Works for the coming months include:

Area	New planned works in the coming months
Mayne Area	<ul style="list-style-type: none"> <li>• Removal of three radio towers and crane pad construction.</li> <li>• Re-decking of the existing shunting bridge over Breakfast Creek as an alternative construction access into Mayne Yard.</li> <li>• Commence earthworks formation.</li> <li>• Commence drainage works.</li> </ul>
Northern Area	<ul style="list-style-type: none"> <li>• Complete Victoria Park access road works and concrete driveway at Gregory Terrace.</li> <li>• Commence signalised interchange on Gregory Terrace.</li> <li>• RNA site establishment, removal of vegetation and redundant structures.</li> <li>• Commence pre-planning and mobilisation activities for stormwater drainage works.</li> <li>• Temporary protection of existing sewer and demolition of eastern section of pedestrian underpass for temporary access south of the land bridge.</li> <li>• Lighting tower removals.</li> <li>• Lanham Street Brisbane City Council yard relocation.</li> </ul>
Central Area	<ul style="list-style-type: none"> <li>• Roma Street – Works in the rail corridor to be carried out in mid-June and coach deck demolition in late May.</li> <li>• Albert Street – Test blasting in the Lot 2 shaft to commence in June and excavation of station box on Lot 1 to start in late June.</li> <li>• Woolloongabba – Test blasting in station box to commence in June cavern excavation and spoil shed construction to occur in July.</li> <li>• Boggo Road – Traffic realignment to commence in June and station box excavation to occur until August.</li> </ul>
Southern Area	<ul style="list-style-type: none"> <li>• Construction works of OHLE masts and portals at Yeronga and Fairfield.</li> <li>• Relocation of heritage shade structure at Fairfield station.</li> <li>• Commence Fairfield to Salisbury station upgrade works.</li> </ul>

## 2.5 Monthly Environment Report Endorsement

This Monthly Report has been endorsed by the Environment Monitor and this has been provided to the Coordinator-General.

## 2.6 Non-Compliance Events

Five 14-day Non-Compliance Event Reports were submitted to the Coordinator- General in April. The summary of Non-Compliance Events is shown in the table below:

## Non Compliance Event Summary

Status	Date of event	Category	Area as on the Report	Condition	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
<b>Open</b>									
CRRDA-002-TSD-001	27/03/20	ESC	Woolloongabba	4, 15, 18	30/03/20	31/03/20	22/04/20	31/05/20	31/05/20
CRRDA-003-TSD-002	27/03/20	ESC	Boggo Rd	4, 15, 18	30/03/20	31/03/20	22/04/20	31/05/20	31/05/20
CRRDA-004-TSD-003	28/03/20	Traffic	Boggo Rd	4, 10, 14	30/03/20	31/03/20	22/04/20	31/05/20	31/05/20
CRRDA-005-TSD-004	27/03/20	Reporting	Albert St, Boggo Rd, Roma St, Woolloongabba	4, 6, 11, 13	30/03/20	31/03/20	22/04/20	31/05/20	31/05/20
CRRDA-006-TSD-005	27/03/20	Air Quality	Albert St, Boggo Rd, Roma St, Woolloongabba	13	30/03/20	31/03/20	22/04/20	31/05/20	31/05/20
<b>Closed</b>									
CRRDA-001-RIS-001	09/11/19	Noise	Yeronga Station	4, 10, 11	10/11/19	14/11/19	26/11/19	18/12/19	10/01/20
<b>Gate 1</b> - EM notification to contractor. NCE confirmed									
<b>Gate 2</b> - 48 hour NCE notification submitted to CG									
<b>Gate 3</b> - 14 day report submitted									
<b>Gate 4</b> - 14 day report uploaded to CRR website									
<b>Gate 5</b> - Records of mitigation / preventative measures submitted to the CG					Submitted				

A summary of the five open NCE's is shown in the table below with the close-out requirements due in May:

NCE Ref.	NCE Description	Close-out Requirements (as per NCE)
CRRDA-002-TSD-001	Woolloongabba – Erosion and Sediment Control (ESC) Plan not developed and implemented in accordance with approved CEMP	Site ESC plan to be reviewed and updated on an ongoing basis to ensure all changes to site conditions have been captured and suitable erosion and sediment controls nominated.
		Site supervisor to be fully briefed on the ESC Plan and ESC design detail.
		Site supervisor to perform daily checks of vulnerable areas for ESC maintenance (i.e. especially around stormwater drains) and ensure best practice ESC is implemented.
		The Delivery Authority will encourage the Contractor to carry out Lessons Learned toolbox talks to Environmental Advisors and Site Supervisors across the project worksites and to include in daily site briefings, especially during wet weather.
		Close out statement: To be completed by end of May 2020. NCE closeout status: pending.
CRRDA-003-TSD-002	Boggo Road worksite – ESC not developed and implemented in accordance with approved CEMP	Site ESC plan to be reviewed and updated on an ongoing basis to ensure all changes to site conditions have been captured and suitable ESC nominated. Certified Professional in ESC sign off required.
		Site supervisor to be fully briefed on the ESC Plan and ESC design detail.
		Site supervisor to perform daily checks of vulnerable areas for ESC maintenance (i.e. especially around stormwater drains) and ensure the ESC design is implemented.
		The Delivery Authority will encourage the Contractor to carry out Lessons Learned toolbox talks to Environmental Advisors and Site Supervisors across the project worksites and to include in daily site briefings, especially during wet weather.
		Close out statement: To be completed by end of May 2020. NCE closeout status: pending.
CRRDA-004-TSD-003	Boggo Road worksite – deliveries arriving at site in lockout hours	Corrective action advice to be documented in a corrective action register (consistent with OEMP) and implemented and communicated consistent with the endorsed CEMP Rev3.
		Spoil haulage and materials/equipment delivery restricted hours to be clearly communicated to suppliers.
		Delivery order forms to state the restricted delivery hours
		Close out statement: To be completed by end of May 2020. NCE closeout status: pending.
CRRDA-005-TSD-004	Monthly Reporting – an interpretation of monitoring results, required under the CEMP, has not been provided to support statements that noise monitoring adheres to project requirements.	Workshop between Pulse, the Delivery Authority, and the Environmental Monitor to confirm reporting obligation in accordance with the endorsed CEMP Rev 3, the imposed conditions and the approved OEMP.
		Review of the draft monthly report by the Delivery Authority, Department Transport and Main Roads and the Environmental Monitor prior to formal issue to the Delivery Authority. Issues raised are to be provided to the Project Contractors in a timely manner to allow them to update their report prior to formal submission to the Delivery Authority (used to support the projects monthly submission to the office of the Coordinator-General.
		Close out statement: To be completed by end of May 2020. NCE closeout status: pending.
CRRDA-006-TSD-005	All TSD worksites - air quality monitoring equipment not installed in accordance with CEMP	Contractor to establish air quality monitoring stations at each worksite to meet the obligations under Condition 13 and the endorsed CEMP.
		Close out statement: To be completed by end of May 2020. NCE closeout status: pending.



# Appendix A – RIS Monthly Report

# Monthly CGCR Report – April 2020

Cross River Rail – Rail, Integration and Systems Alliance

## Table of Contents

<b>1</b>	<b>Progress Summary</b> .....	<b>3</b>
1.1	Summary of Project Works .....	3
1.2	Progress Photos .....	3
<b>2</b>	<b>Complaints</b> .....	<b>4</b>
<b>3</b>	<b>Environmental Monitoring Results</b> .....	<b>5</b>
3.1	Acoustics.....	5
3.2	Air Quality .....	5
3.3	Water Quality – Surface Water .....	12
<b>4</b>	<b>Compliance Review</b> .....	<b>16</b>
4.1	Non-Compliance Events .....	16
4.2	C-EMP Compliance .....	19
<b>5</b>	<b>Good News Stories</b> .....	<b>21</b>
<b>Attachment 1</b>	<b>CGCR Non-Compliance Event Report (if required)</b> .....	<b>22</b>
<b>Attachment 2</b>	<b>Monitoring Locations – Noise</b> .....	<b>23</b>
<b>Attachment 3</b>	<b>Monitoring Locations – Vibration</b> .....	<b>24</b>
<b>Attachment 4</b>	<b>Monitoring Locations – Air Quality</b> .....	<b>25</b>
<b>Attachment 5</b>	<b>Monitoring Locations – Surface Water</b> .....	<b>27</b>

# 1 Progress Summary

## 1.1 Summary of Project Works

The following *Project Works* continued in April 2020

- Site establishment of the Main Site Office at Herston, which is nearing completion
- Finalisation of the Access Road in Victoria Park with Asphaltting of Shared User Path and Main Access

The following *Project Works* started in April 2020

- Site establishment of the Ancillary Site Office at RNA Showgrounds

## 1.2 Progress Photos

Nil for the reporting period

## 2 Complaints

The below section summarises the complaints relating to the Project Works to be reported in accordance with condition 6(b)(iii) of the CGCR.

*Table 1: Summary of Complaints*

Date	Location	Issue	CGCR Non-Compliance	Status
None for this reporting period				

## 3 Environmental Monitoring Results

The below section summarises the monitoring results to be reported in accordance condition 6(b)(i) of the CGCR.

### 3.1 Acoustics

Condition 11(b) of the CGCR requires that during construction, monitoring and reporting on noise and vibration in accordance with the Noise and Vibration Management Plan, a sub-plan of the Construction Environmental Management Plan occurs.

#### 3.1.1 Noise Monitoring

There were no noise intensive activities during the month of April that triggered the need to undertake noise monitoring.

Noise monitoring because of complaints was not triggered. No complaints related to noise occurred during the Month.

#### 3.1.2 Noise monitoring Results

Nil for the reporting period.

#### 3.1.3 Vibration Monitoring

There were no vibration intensive activities during the month of April that triggered the need to undertake noise monitoring.

Vibration monitoring because of complaints was not triggered. No complaints related to vibration occurred during the Month.

#### 3.1.4 Vibration Monitoring Results

Nil for the reporting period.

#### 3.1.5 Interpretation

##### 3.1.5.1 Noise Monitoring

The RIS scope of works is achieving the outcomes set out by the CGCR and OEMP.

##### 3.1.5.2 Vibration Monitoring

The RIS scope of works is achieving the outcomes set out by the CGCR and OEMP.

### 3.2 Air Quality

Condition 13(b) of the CGCR requires that during construction, monitoring and reporting on air quality in accordance with the Air Quality Management Plan, a sub-plan of the Construction Environmental Management Plan occurs.

Visual Monitoring was undertaken during routine environmental inspections. A total of nine (9) inspections were undertaken.

No issues related to air quality were identified that required corrective actions to be raised.

There were no high risk activities with regards to Air Quality during the month of April that triggered particulate monitoring.

It is however noted that UNITY has installed the following Air Quality Monitoring devices, therefore data collected from these devices, when active, is reported on in the monthly report regardless of the Project Works occurring.

Monitoring Device Installed by UNITY	Area	Name	Date Installed	Status for the Month of April
Dust Deposition Gauge	Mayne Yard (Eastern Air Shed)	AQ-04	13 February 2020	Active
Dust Deposition Gauge	Mayne Yard (Western Air Shed)	AQ-05	13 February 2020	Active
Dust Deposition Gauge	RNA Showgrounds	AQ-01	13 December 2019	Active
Dust Deposition Gauge	Northern Corridor (near BGGs)	AQ-02	13 December 2019	Active
Dust Deposition Gauge	Northern Corridor (near Centenary Pool)	AQ-03	13 January 2020	Active
TSP / PM <sub>10</sub> Monitor	Mayne Yard (Eastern Air Shed)	Unit324	23 April 2020	Not fully operational – K factor calibration occurred between 23 and 29 April
TSP / PM <sub>10</sub> Monitor	Northern Corridor (Eastern Air Shed)	Unit327	23 April 2020	Not fully operational – K factor calibration occurred between 23 and 29 April

### 3.2.1 Dust results

Since passive dust deposition gauges are analysed on a monthly basis, results span from 13 March 2020 to 14 April 2020.

The dust deposition gauges result for the reporting period are detailed below and complied with Condition 13(b) of the CGCR.

Table 2: 13 March 2020 to 14 April 2020

CGCR Goal (mg/m <sup>2</sup> /day)	AQ-01 Results - RNA Showgrounds (mg/m <sup>2</sup> /day)	AQ-02 Results - BGGs (mg/m <sup>2</sup> /day)	AQ-03 Centenary Pool (mg/m <sup>2</sup> /day)	AQ-04 Abbotsford Rd (E Mayne) (mg/m <sup>2</sup> /day)	AQ-05 Cartwright St (W Mayne) (mg/m <sup>2</sup> /day)
120	10	47	176	53	73
Total Rainfall during Period	8.6mm	8.6mm	8.6mm	6.4mm	6.4mm



### 3.2.2 Interpretation

Please refer to section 4.1.2 for a detailed discussion on the exceedance of the deposited dust air quality goal at AQ-03.

Visual monitoring during routine inspections during the month of April did not identify any issues it is therefore intimated standard dust mitigation measures were effective at managing dust during the inspections.

### 3.2.3 Particulates results

Transurban Queensland operates the Legacy Way tunnel in accordance with conditions established by the Queensland Co-ordinator General.

Transurban has engaged third parties to establish External Ambient Air Quality Monitoring Stations along their footprint. Two of the monitoring stations are located near the Northern Corridor Area, within 1km from where the works occurred.

They are

- East Victoria Park (E1) which is located approximately 300m due north from the northern corridor, and
- Eastern Centenary Pool (E2) which is located approximately 150m due east from the northern corridor.

External Ambient Air Quality data is collected for Carbon monoxide (CO), Nitrogen dioxide (NO<sub>2</sub>), Particulate matter less than 10 µm (PM<sub>10</sub>), and Particulate matter less than 2.5 µm (PM<sub>2.5</sub>).

PM<sub>10</sub> is one of the indicators for which the Coordinator General has imposed a goal of 50 µg/m<sup>3</sup> (over an averaging period of 24 hours) the project must aim to achieve under Condition 13(a) of the CGCR.

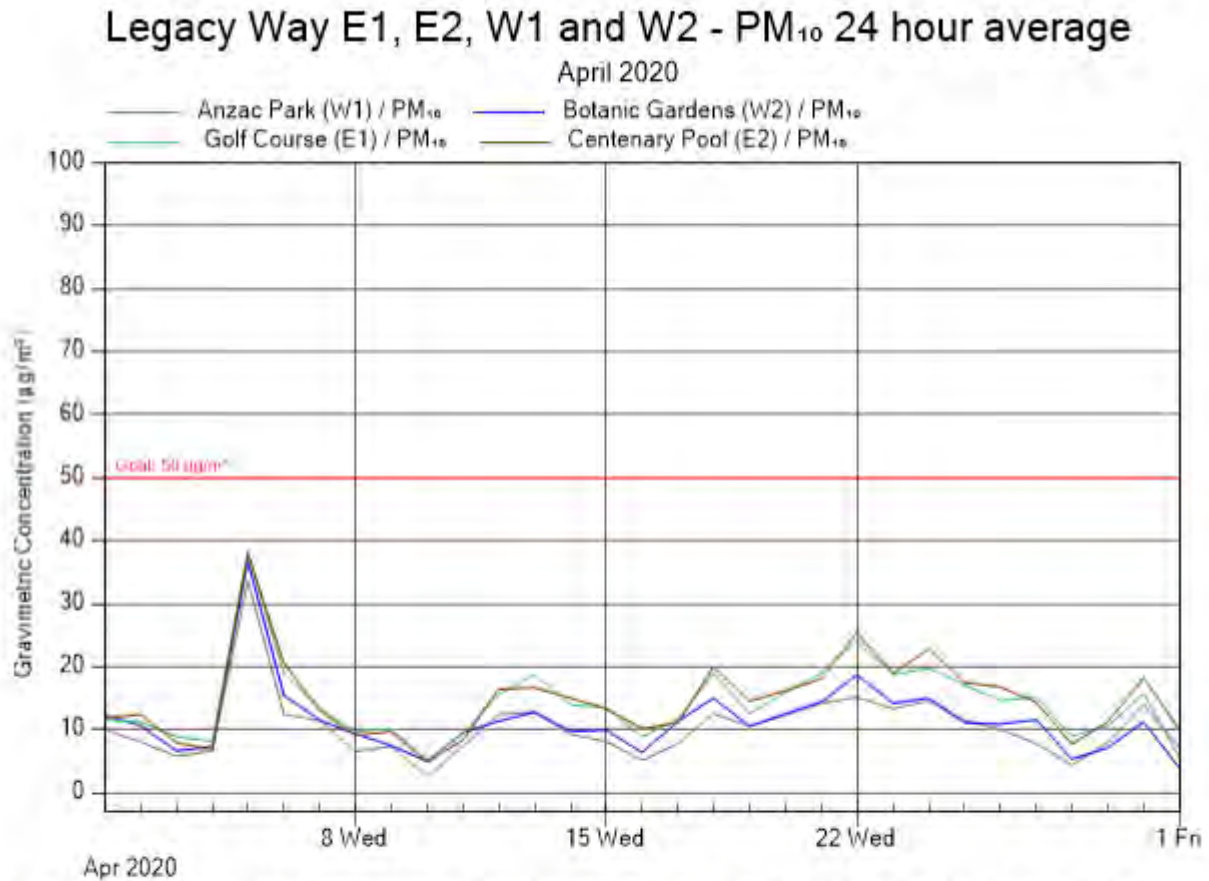
The same goal has been imposed on the Cross-River Rail Project.

Validated air quality data for the Legacy Way tunnel is shown below. The information has been sourced from the Legacy Way website. The data used on this webpage is collected by third parties using equipment which



is not controlled by Transurban Queensland and as such may be subject to faults or errors by third parties, external weather or environmental events, or server access issues.

There were no exceedances recorded for the reporting period for PM<sub>10</sub> near the northern corridor.



**Figure 5: Transurban QLD Legacy Way (E1, E2, W1 and W2) - PM<sub>10</sub> graph for April 2020**

Figure 1: PM<sub>10</sub> Monitoring for the Northern Corridor - April 20 Results – reproduced from Legacy Way Air Monitoring report accessed 18 May 2020

### 3.2.4 Interpretation

There were no exceedances recorded for the reporting period for PM<sub>10</sub> near the northern corridor.

Unity also reviewed the DES air quality results for PM<sub>10</sub> from other stations in Brisbane for the reporting period. The results were as follows:

- Brisbane CBD: PM<sub>10</sub> - No exceedances of the 50 µg/m<sup>3</sup> (24hr avg) were reported for the month of April. (<https://apps.des.qld.gov.au/air-quality/chart/?station=cbd&parameter=18&date=1/04/2020&timeframe=month>)
- South Brisbane (Woolloongabba): PM<sub>10</sub> - No exceedances of the 50 µg/m<sup>3</sup> (24hr avg) were reported for the month of April. (<https://apps.des.qld.gov.au/air-quality/chart/?station=sbr&parameter=18&date=1/04/2020&timeframe=month>)
- Rocklea: PM<sub>10</sub> - No exceedances of the 50 µg/m<sup>3</sup> (24hr avg) were reported for the month of April. (<https://apps.des.qld.gov.au/air-quality/chart/?station=roc&parameter=18&date=1/04/2020&timeframe=month>)

The graphical representation of the DES air quality data is presented in the below charts.

### Particle PM10 at Brisbane CBD, 1-30 April 2020 [about Particle PM10](#)

[Brisbane CBD station overview](#)

The guideline for Particle PM<sub>10</sub> is 50µg/m<sup>3</sup> (24hr avg).

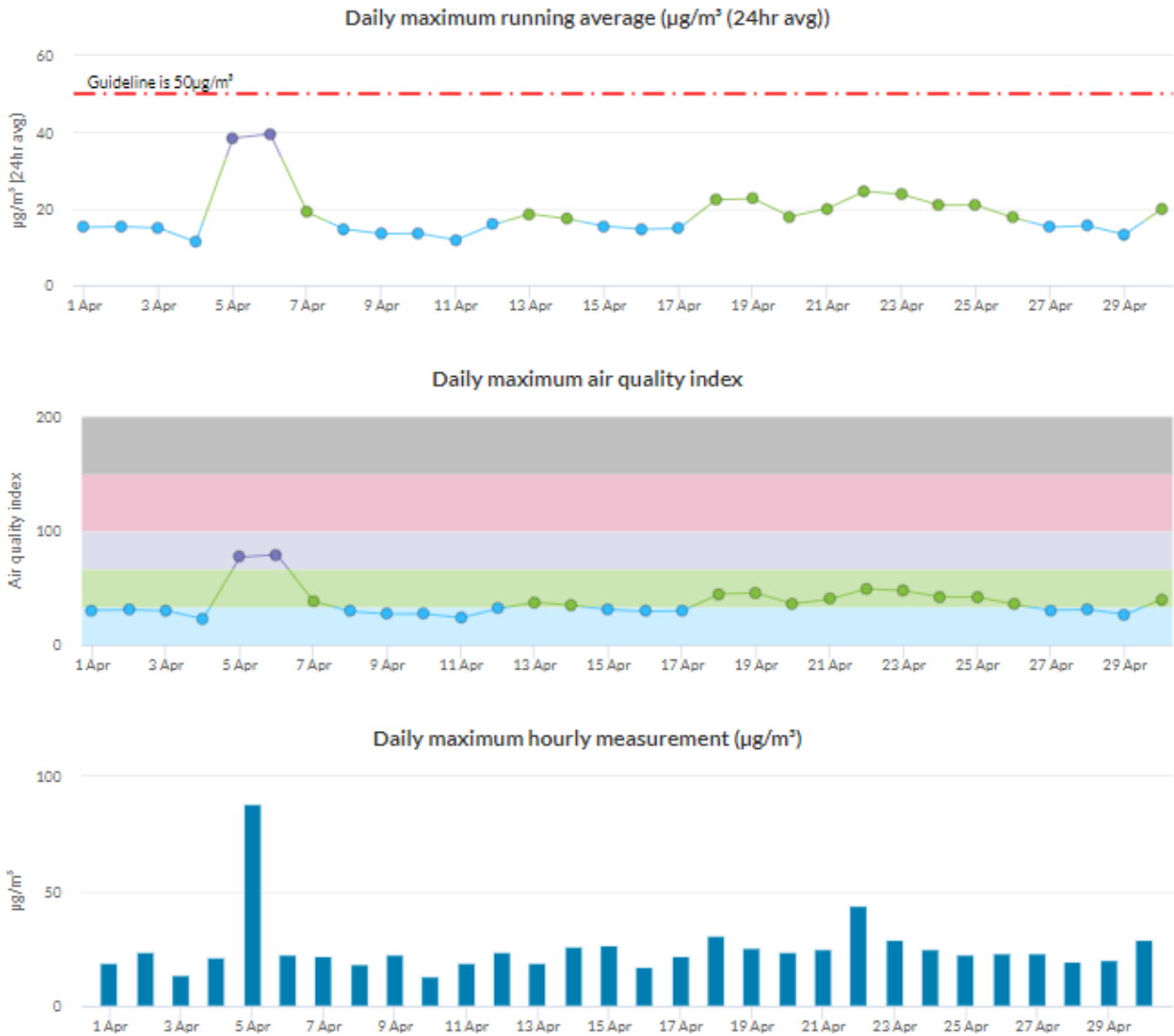


Figure 2: Brisbane CBD – DES Station - PM<sub>10</sub> graph for April 2020 (reproduction from the DES website accessed 18 May 2020)

## Particle PM10 at South Brisbane, 1–30 April 2020 [about Particle PM10](#)

[South Brisbane station overview](#)

The guideline for Particle PM<sub>10</sub> is 50µg/m<sup>3</sup> (24hr avg).

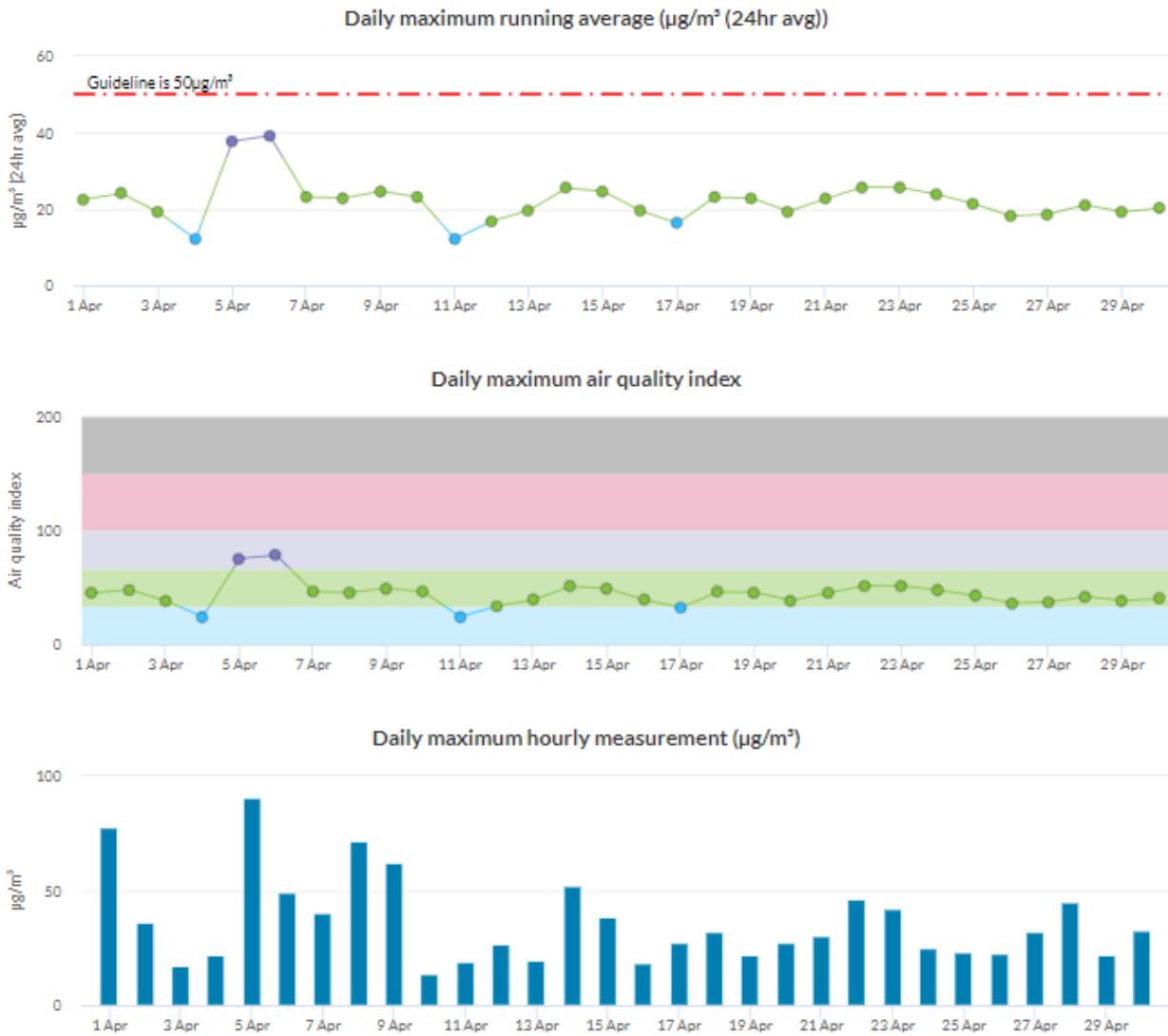


Figure 3: South Brisbane – DES Station - PM<sub>10</sub> graph for April 2020 (reproduction from the DES website accessed 18 May 2020)

## Particle PM<sub>10</sub> at Rocklea, 1–30 April 2020 [about Particle PM<sub>10</sub>](#)

[Rocklea station overview](#)

The guideline for Particle PM<sub>10</sub> is 50µg/m<sup>3</sup> (24hr avg).

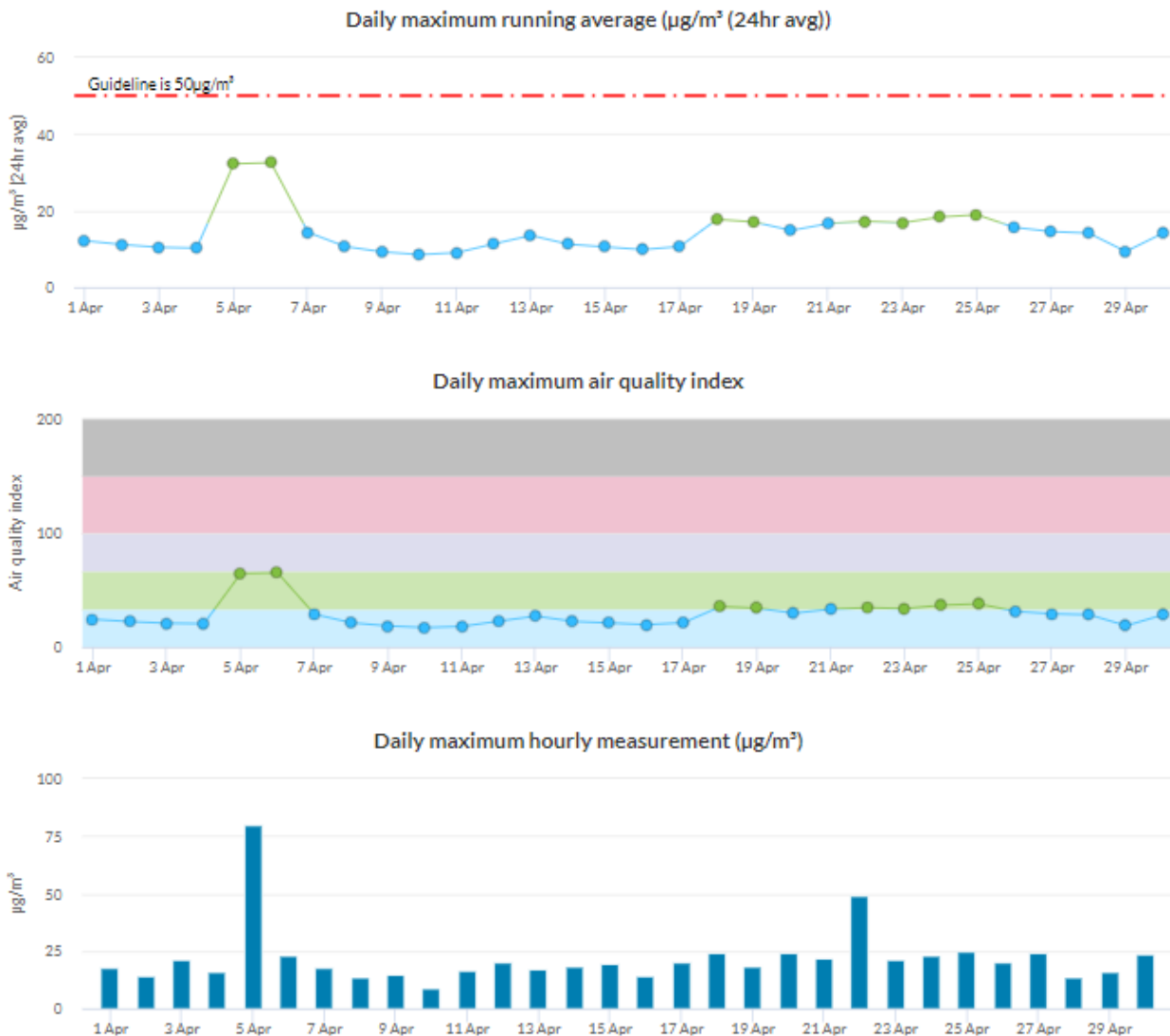


Figure 4: Rocklea – DES Station - PM<sub>10</sub> graph for April 2020 (reproduction from the DES website accessed 18 May 2020)

The C-EMP and the AQMP recognise that particulate matter monitoring can be a lag indicator. Therefore, the monitoring regime detailed in the C-EMP consists of a combination of surveillance regimes via inspections at the time the works are occurring and particulate matter monitoring to support the surveillance regime findings and response to potential complaints.

There were limited works during the month of April with the earthworks associated with the surcharge works at Mayne Yard North having been completed on 30 March 2020.

There were no complaints relating to dust and all site inspections confirmed that

- There was no visible dust leaving the site boundaries,
- Stabilised egress was in place and in functioning order at each access point

The RIS scope of works therefore achieved the outcomes set out by the CGCR and OEMP.

### 3.3 Water Quality – Surface Water

Condition 15(a) requires that discharges 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 Environment Protection (Water) Policy 2009.

Water Quality monitoring to demonstrate compliance with Condition 15(a) was not triggered. There were no surface water discharges either active (e.g. dewatering through pumping, sediment basin release) or visibly passive (through temporary or permanent stormwater drainage) from site.

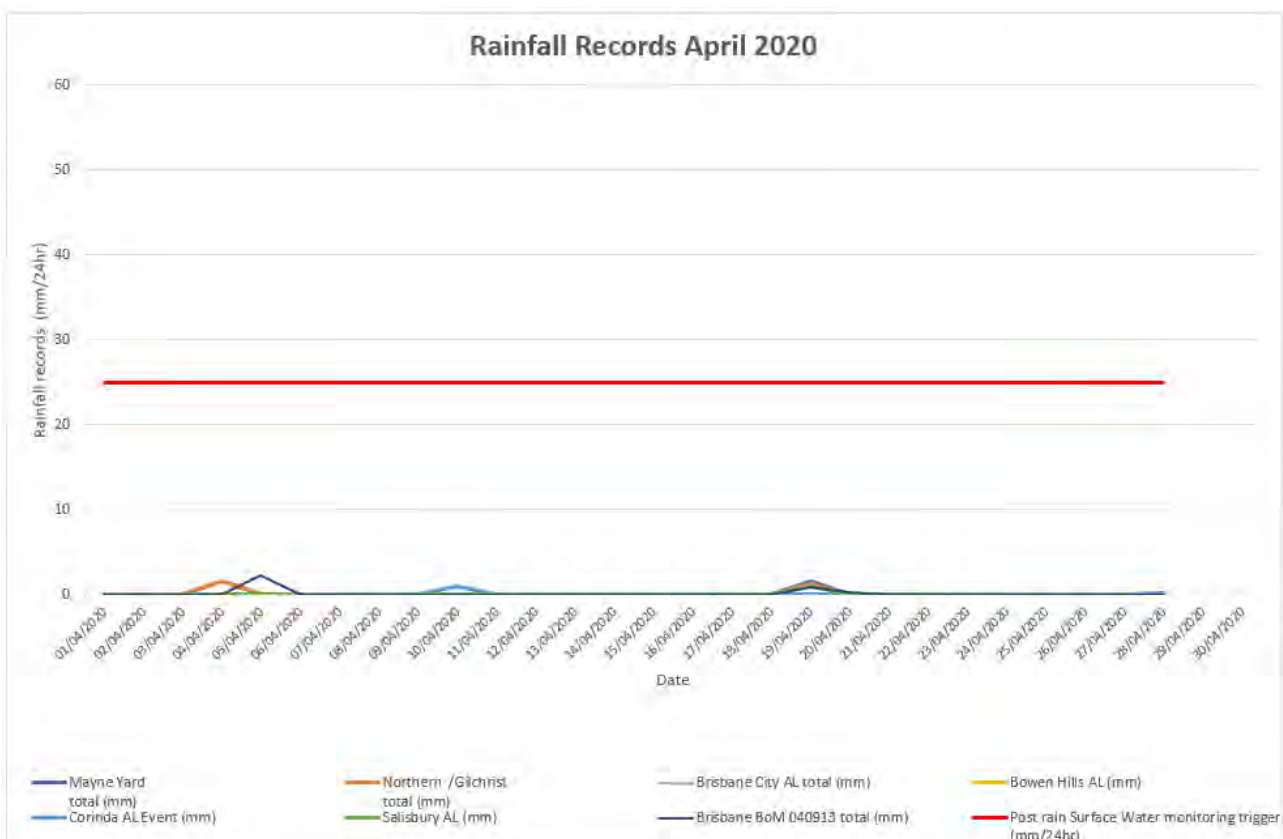
There were no groundwater discharges.

Condition 15(b) of the CGCR requires that during construction, monitoring and reporting on water quality in accordance with the Water Quality Management Plan, a sub-plan of the Construction Environmental Management Plan occurs.

During April 2020, Unity undertook two (2) surface water monitoring events which both consisted of baseline monitoring. The event planned for March 2020 was postponed to 01 April 2020 and as such the results of the monitoring round are contained within this report.

There were no post rainfall monitoring events triggered with a maximum monthly rain record of 4.2mm recorded at the Mayne Yard weather stations.

#### 3.3.1 Rainfall Records



#### 3.3.2 Discharge Monitoring

Nil for this reporting period.

#### 3.3.3 C-EMP Monitoring

The following sections summarise the findings of the surface water monitoring undertaken in April 2020.

As identified in previous reports, Imposed Condition 15a references WQOs for mid-estuary receivers despite four out of the five waterways / surface water bodies near, or being intersected by, the Project footprint being lowland freshwaters. Were alternative Water Quality Objectives (WQOs) contained in the relevant Environmental Protection Policy (Water and Wetland Biodiversity) 201 (EPP Water) documents exist, they have been referenced.

### 3.3.3.1 Breakfast Creek

The below table summarises the in-situ records collected during two rounds of routine surface water monitoring at Breakfast Creek, the relevant surface water receiver for Mayne Yard.

Results highlighted in yellow exceed / do not meet the WQOs referenced in imposed Condition 15a.

Date	Tide	Sampling Purpose	SW 1 – Upstream of Mayne Yard						
			Turbidity (NTU) 8	TSS (mg/L) 20	DO (%) 85 – 105% saturation	EC (µS/cm)	pH 7.0-8.4	Flow (NF / LF / BF / FF)	Visual (sheen / odour / litter)
01/04/2020	Rising	Background	7	<5	49	28,640	6.81	Base Flow	Brown, Murky, no sheen, mangrove odour, bats - water column ca. 5m deep
27/04/2020	Rising	Background	17	16	33	33,261	7.07	Base Flow	No visible sheen, no odour, no litter, slight turbidity. Slow moving water

Date	Tide	Sampling Purpose	SW2 – Adjacent to Mayne Yard						
			Turbidity (NTU) 8NTU	TSS (mg/L) 20	DO (%) 85 – 105% saturation	EC (µS/cm)	pH 7.0-8.4	Flow (NF / LF / BF / FF)	Visual (sheen / odour / litter)
01/04/2020	Rising	Background	26	18	71	37,900	7.44	Base Flow	Brown / cloudy , estuarine odour
27/04/2020	Rising	Background	20	24	78	38,199	6.95	Base Flow	Slight sheen close to bank, visibly turbid, minor leaf litter

Date	Tide	Sampling Purpose	SW3 – Downstream of Mayne Yard						
			Turbidity (NTU) 8NTU	TSS (mg/L) 20	DO (%) 85 – 105% saturation	EC (µS/cm)	pH 7.0-8.4	Flow (NF / LF / BF / FF)	Visual (sheen / odour / litter)
01/04/2020	Rising	Background	11.2	25	71.2	37,900	7.44	Base Flow	minimal debris on surface, light brown colour.
27/04/2020	Rising	Background	27.4	28	88	41200	7.56	Base Flow	No sheen, litter and foam present

### 3.3.3.2 York's Hollow

The below table summarises the in-situ records collected during two rounds of routine surface water monitoring at York's Hollow, the potential surface water receiver for the Northern Corridor.

Results highlighted in yellow exceed / do not meet the WQOs referenced in imposed Condition 15a.

Date	Sampling Purpose	SW4 – Downstream of the Northern Corridor						
		Turbidity (NTU) 8NTU	TSS (mg/L) 20	DO (%) 85 – 105%	EC (µS/cm)	pH 7.0-8.4	Flow (NF / LF / BF / FF)	Visual (sheen / odour / litter)
<i>Alternative WQOs</i>		50 NTU	6 mg/L	85-110%	600	6.5-8.0		
01/04/2020	Background	4.45	<5	40	649	7.18	No Flow	Clear brown, muddy odour, no sheen, ca. 4m deep, fish and birds observed
27/04/2020	Background	4.7	<5	61	28	7.83	No Flow - pond	Algal blooms, no odour, no sheen, no litter. Clear to green in colour

### 3.3.3.3 Moolabin Creek, Rocky Water Holes Creek and Stable Swamp Creek

The below table summarises the in-situ records collected during two rounds of routine surface water monitoring at Moolabin Creek, Rocky Water Holes Creek and Stable Swamp Creek, the relevant surface water receivers for the Southern Corridor (F2S).

Results highlighted in yellow exceed / do not meet the WQOs referenced in imposed Condition 15a.

Date	Sampling Purpose	Moolabin Creek - SW5 – Upstream of the rail corridor						
		Turbidity (NTU) 8NTU	TSS (mg/L) 20	DO (%) 85 – 105%	EC (µS/cm)	pH 7.0-8.4	Flow (NF / LF / BF / FF)	Visual (sheen / odour / litter)
<i>Alternative WQOs</i>		50 NTU	6 mg/L	85-110%	-	6.5-8.0		
01/04/2020	Background	3.28	6	35	547	6.71	Low Flow	clear brown, no odour, no sheen, 0.3m deep, light grey deposit on base of concrete culver resembling concrete slurry
27/04/2020	Background	13.3	<5	95	1425	7.06	Low Flow	Iron mottling, no odour, no sheen, very low flow

Date	Sampling Purpose	Moolabin Creek – SW6 – Downstream of the rail corridor / Clapham Yard						
		Turbidity (NTU) 8NTU	TSS (mg/L) 20	DO (%) 85 – 105%	EC (µS/cm)	pH 7.0-8.4	Flow (NF / LF / BF / FF)	Visual (sheen / odour / litter)
<i>Alternative WQOs</i>		50 NTU	6 mg/L	85-110%	-	6.5-8.0		
01/04/2020	Background	5.69	16	7.4	538	6.6	Low Flow	Murky brown, no odour, small amount of sheen, additional new sediments deposits since last sampling event, ca. 0.4m deep
27/04/2020	Background	12.8	<5	75	1,220	7.3	Low Flow	Iron bacteria sheen, iron mottling, low water flow, stagnant odour

Date	Sampling Purpose	Rocky Water Holes Creek – SW7 – Upstream of the rail corridor / Clapham Yard						
		Turbidity (NTU) 8NTU	TSS (mg/L) 20	DO (%) 85 – 105%	EC (µS/cm)	pH 7.0-8.4	Flow (NF / LF / BF / FF)	Visual (sheen / odour / litter)
<i>Alternative WQOs</i>		<i>50 NTU</i>	<i>6 mg/L</i>	<i>85-110%</i>	-	<i>6.5-8.0</i>		
01/04/2020	Background	3.6	<5	21	507	6.6	Low Flow	brown, clear, fish, no sheen, ca 0.6 m deep
27/04/2020	Background	3.9	<5	92	663	7.6	Low Flow	Green algal bloom, no sheen, odour or litter

Date	Sampling Purpose	Rocky Water Holes Creek – SW8 – Downstream of the rail corridor / Clapham Yard						
		Turbidity (NTU) 8NTU	TSS (mg/L) 20	DO (%) 85 – 105%	EC (µS/cm)	pH 7.0-8.4	Flow (NF / LF / BF / FF)	Visual (sheen / odour / litter)
<i>Alternative WQOs</i>		<i>50 NTU</i>	<i>6 mg/L</i>	<i>85-110%</i>	-	<i>6.5-8.0</i>		
01/04/2020	Background	3.5	5	37	505	6.8	Low Flow	brown, clear, scum on surface, some bacterial sheen, ca 0.4m deep, bubbles on surface water
27/04/2020	Background	7.9	<5	67	676	7.5	Low Flow	Highly vegetated, no sheen, no odour

Date	Sampling Purpose	Stable Swamp Creek – SW9 – Downstream of Salisbury Station						
		Turbidity (NTU) 8NTU	TSS (mg/L) 20	DO (%) 85 – 105%	EC (µS/cm)	pH 7.0-8.4	Flow (NF / LF / BF / FF)	Visual (sheen / odour / litter)
<i>Alternative WQOs</i>		<i>50 NTU</i>	<i>6 mg/L</i>	<i>85-110%</i>	-	<i>6.5-8.0</i>		
01/04/2020	Background	1.4	<5	32	490	6.4	Low Flow	brown / clear, no odour, no sheen, ca 0.8 m deep
27/04/2020	Background	3.1	<5	64	858	7.5	Low Flow	No sheen, odour or litter, tilapia spotted, green in colour

### 3.3.4 Interpretation

The RIS scope of works is achieving the outcomes set out by the CGCR and OEMP.



## 4 Compliance Review

### 4.1 Non-Compliance Events

The below section summarises the events to be reported in accordance with condition 5 and condition 6(b)(ii) of the CGCR.

A Non-Compliance Event is defined as Project Works that do not comply with the Imposed Conditions.

#### 4.1.1 Non - Compliance Events Summary

Table 3: Summary of Non-Compliance Events

Event Title	Location, Date and time of event	Date the Event was Formally Notified to CG/IEM	Conditions Affected	Date the Event Report Formally Sent to CG/IEM	Status of Event
None for this reporting period					

#### 4.1.2 Review of Air Quality Data

##### 4.1.2.1 Issues Summary

As presented in Section 3.2 the dust deposition results at AQ-03 (Centenary Pool) located near the northern corridor exceeded the CGCR Air Quality Objective of 120 mg/m<sup>2</sup>/day.

Since the dust deposition results span the period of 13 March 2020 to 14 April 2020, UNITY reviewed the following information to ascertain whether the exceedance of the CG Air Quality Goal for Deposited Dust (Nuisance) is likely related to UNITY's Project Works:

- Location of the gauges and compliance with AS3580.10.1
- Main potential contributing activities that were likely to generate dust (e.g. earthworks), inclusive of duration and location of the works, during the monitoring period
- Prevalent wind conditions during the aforementioned activities
- Field observation for visible dust during routine surveillance undertaken during the monitoring period.
- Complaints (residents, workers, Victoria Park users) related to air quality during the monitoring period.
- Other monitoring data available (PM10, other dust deposition gauge data)

##### 4.1.2.2 Findings

The findings of the review as per the below

- Location of the gauges and compliance with AS3580.10.1
  - AQ-03 (Centenary pool) was sited in accordance with AS3580.10.1
  - AQ-04 (Brisbane Girls Grammar School) was sited in accordance with AS3580.10.1
- Potential contributing activities during the monitoring period:
  - Earthworks activities which consisted of gaining suitable fill material in an area of the northern corridor located between the edge of Brisbane Girls Grammar School occurred between 16 March and 30 March 2020 (week ends excluded)
  - Excavation and Haulage of material typically occurred between 7 am and 5 pm each day for a total of 10 days out of the 30 days of monitoring
  - No other activities undertaken by UNITY in the northern corridor area were identified as potential contributing activities

- The prevalent wind conditions between 16 March and 30 March 2020 are presented in Plate 1 and summarised on Figure 5.
  - The winds were predominantly from the North-Eastern quadrant in the mornings, meaning AQ-02 dust deposition gauge was Upwind of the earthworks.
  - The winds were predominantly from the North Western quadrant in the afternoons meaning
    - AQ-02 dust deposition gauge was downwind of the haulage but not from the earthworks
    - AQ-03 dust deposition gauge was downwind of the earthworks
  - All the winds were deemed a light breeze under the Beaufort Scale.

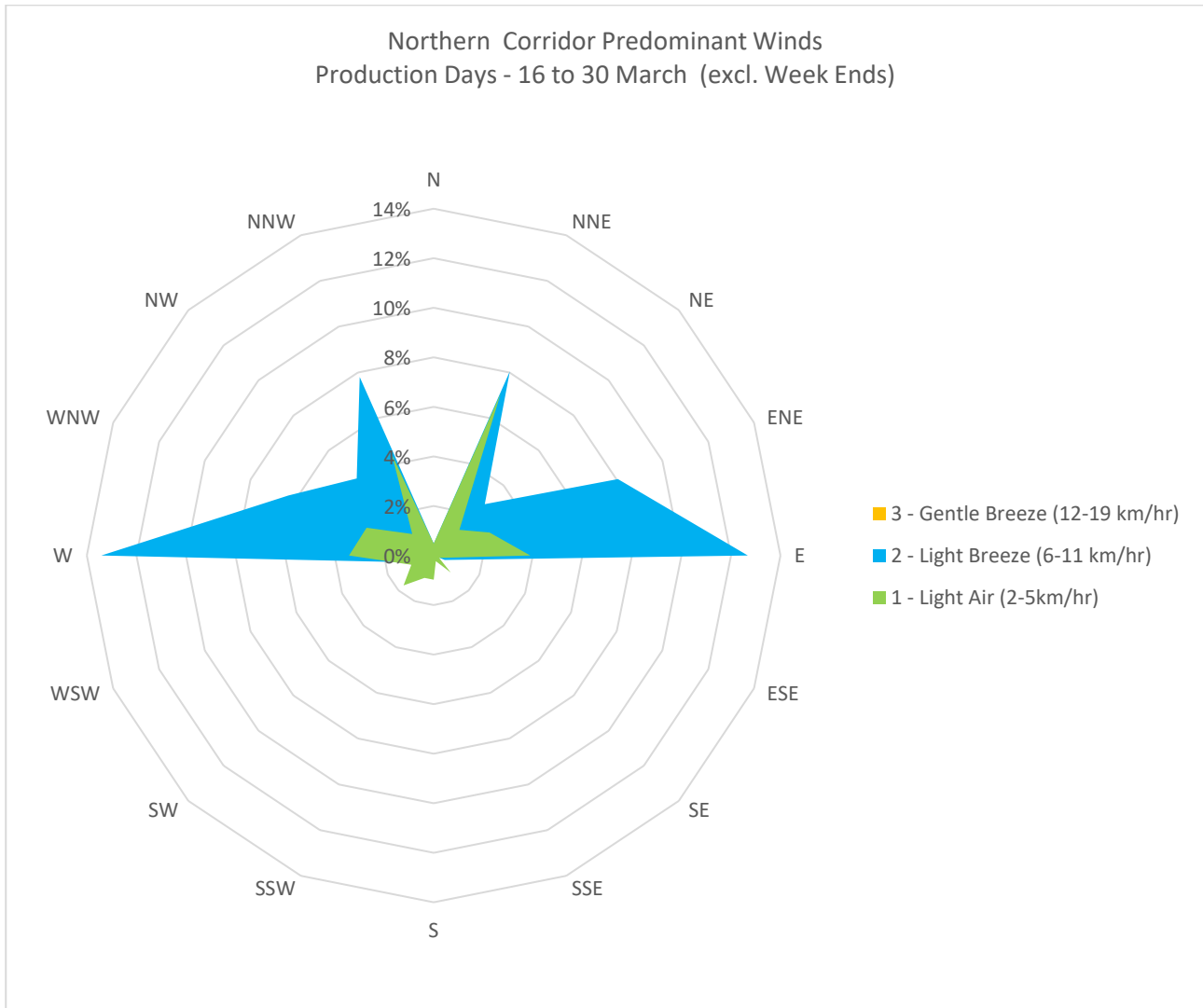


Plate 1: Prevalent Wind Conditions

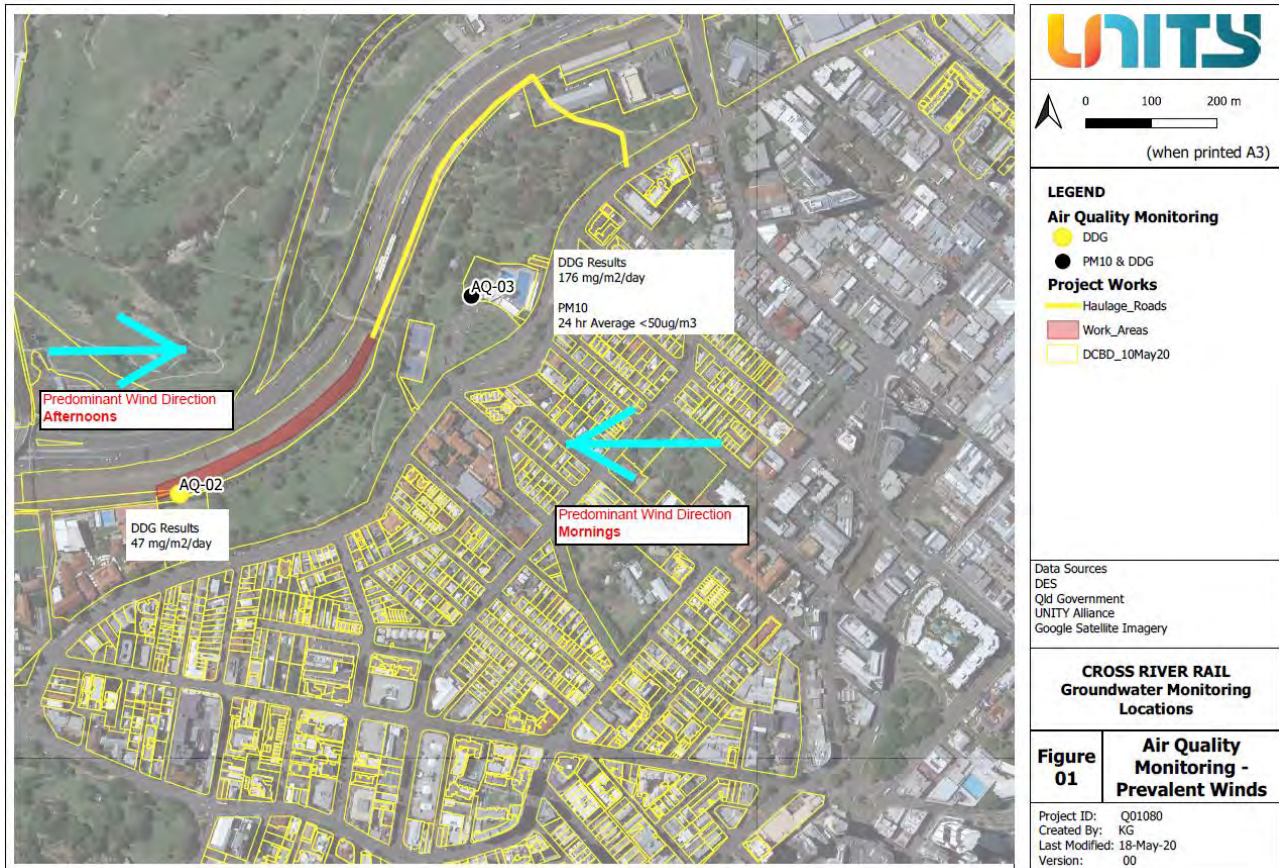


Figure 5: Prevalent Winds - Northern Corridor

- Field observations for visible dust during routine surveillance did not record visible dust beyond the project boundaries
- There were nil complaints related to air quality within the Northern Corridor Air Shed during the monitoring period.
- Other available data were
  - The results from the dust deposition gauge AQ-02, the closest to the works and typically downwind of the earthworks in the afternoons, did not exceed the Deposited Dust Air Quality Goal (120 mg/m<sup>2</sup>/day) with a reading of 47 mg/m<sup>2</sup>/day.
  - There was no recorded exceedance of the daily PM<sub>10</sub> Air Quality Goal during the days of earthworks.
  - The highest PM<sub>10</sub> results were recorded when no earthworks activities were being undertaken. The results have been reproduced below in Figure 6.

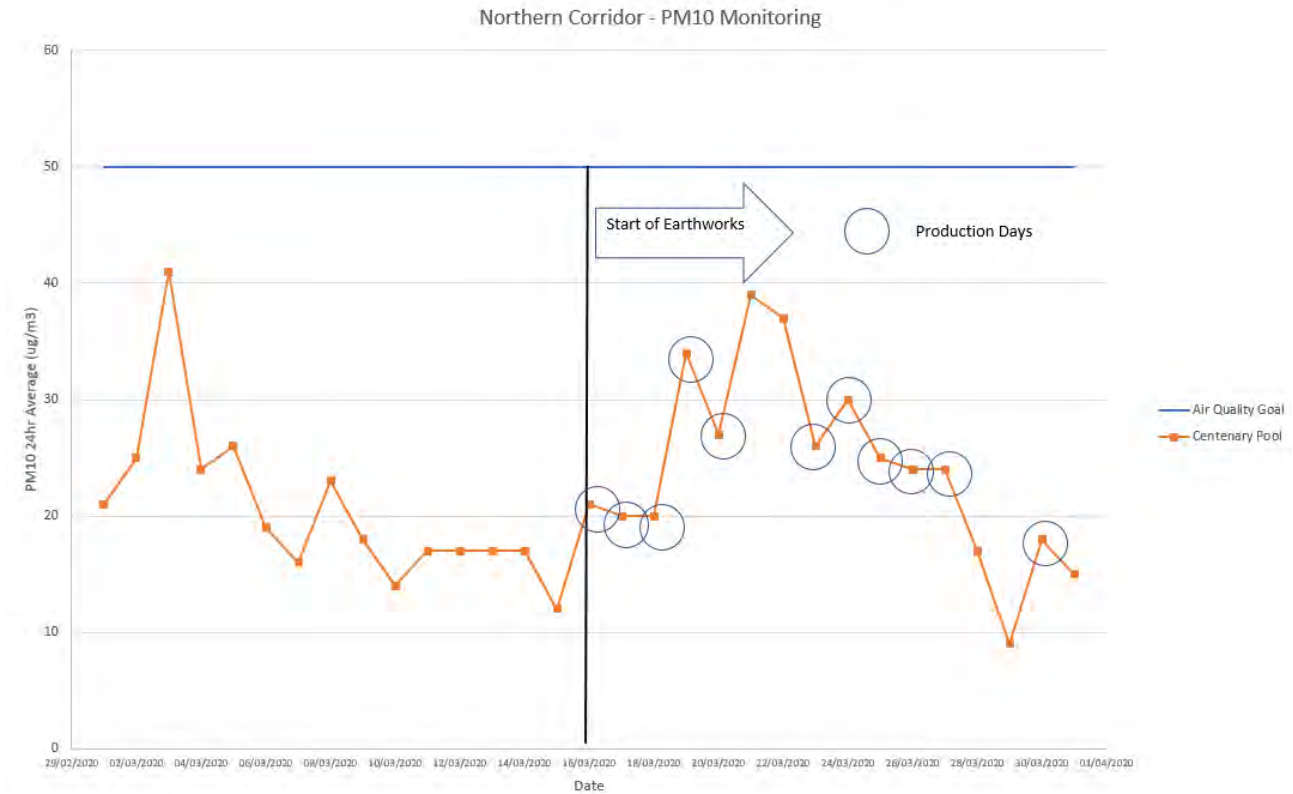


Figure 6: PM10 Results

### 4.1.2.3 Conclusion

Based on the review of the findings presented in the previous section, the exceedance of the deposited dust air quality goal at the one dust deposition gauge located near Centenary Pool cannot be associated with UNITY’s Project Works.

On this basis there is no Non-Compliance Event with Imposed Condition 13a.

Unity however identified, as an outcome of the review, that the location is of the dust deposition gauge may be

- an easy target for tampering and
- influenced by external sources such as maintenance works around the pool and the park.

This Dust Deposition Gauge was therefore relocated at a more secure location on 13 May 2020, at the same location as the recently installed DustMasterPro 7000 (which monitors PM<sub>10</sub> and TSP).

## 4.2 C-EMP Compliance

The below table summarise compliance status with the C-EMP and relevant Subplans monitoring requirements for the reporting period.

Table 4: C-EMP and relevant Subplans monitoring requirements – Compliance Status for the reporting period

Aspect	Monitoring requirement	Activities Risk profile	Monitoring undertaken	Compliance status with C-EMP / CEMP Subplan	Effect of the non-compliance
Air Quality	Visual monitoring program + Additional particulate monitoring as required based on the outcomes of the predictive assessment / risk profile	Low	Yes – visual monitoring undertaken as part of routine inspections  Additional monitoring for PM10 and Deposited Dust also undertaken despite not required for low risk activities	Compliant	Not Applicable
Noise	Buffer Distance Tests based on the outcomes of the predictive assessment based / risk profile of activities	Low	Not required	Compliant	Not Applicable
Noise	Plant Noise Audits for Noisy Plant to validate models input as required	Low	Not required	Compliant	Not Applicable
Noise	Complaints response	-	Not triggered – no complaints	Compliant	Not Applicable
Vibration	Buffer Distance Tests based on the outcomes of the predictive assessment based / risk profile of activities	Low	Not required	Compliant	Not Applicable
Vibration	Complaints response	-	Not triggered – no complaints	Compliant	Not Applicable
Water Quality	Monthly monitoring	Low	Yes	Compliant	Not Applicable
Water Quality	Post Rainfall	-	Not triggered -rainfall did not exceed the 20-25mm / 24 hr threshold	Compliant	Not Applicable
Water Quality	Dewatering	-	Not triggered – no dewatering to receiving water systems	Compliant	Not Applicable

## 5 Good News Stories

No Non-Compliance events occurred during the reporting period.

There were no complaints recorded associated with the Project Works. This is the fifth month in a row.

## Attachment 1 CGCR Non-Compliance Event Report (if required)

None for this reporting period.

## Attachment 2 Monitoring Locations – Noise

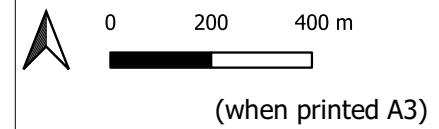
Not applicable for the reporting period



## Attachment 3 Monitoring Locations – Vibration

Not applicable for the reporting period

## Attachment 4 Monitoring Locations – Air Quality



- LEGEND**
- Air Quality Monitoring**
- DDG
  - PM10 & DDG
  - DCBD\_10May20
- Rail**
- Stations Railway\_stations\_and\_sid
  - +— Rail Network Rail\_network

Data Sources  
 DES  
 Qld Government  
 UNITY Alliance  
 Google Satellite Imagery

**CROSS RIVER RAIL  
 Air Quality  
 Monitoring Locations**

<b>Figure 01</b>	<b>April 2020</b>
------------------	-------------------

Project ID: Q01080  
 Created By: KG  
 Last Modified: 04-June-20  
 Version: 00

## Attachment 5 Monitoring Locations – Surface Water

**Legend**

- Surface Water Monitoring Locations
- QR Railway Stations

**Site Location Map**

- Mayne Yard
- Northern Corridor
- RNA Showgrounds

Name	BCC Grid Easting	BCC Grid Northing
SW01	52085.8135	161813.4781
SW02	53918.5282	162744.8414
SW03	54172.6273	162352.6884
SW04	52240.7394	160443.5064



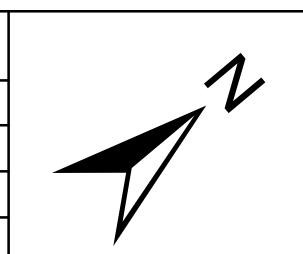
Rev	Description	Date	Approved
1	Overview Map	17/09/2019	J Perry

Scale 1 : 12,000 cm

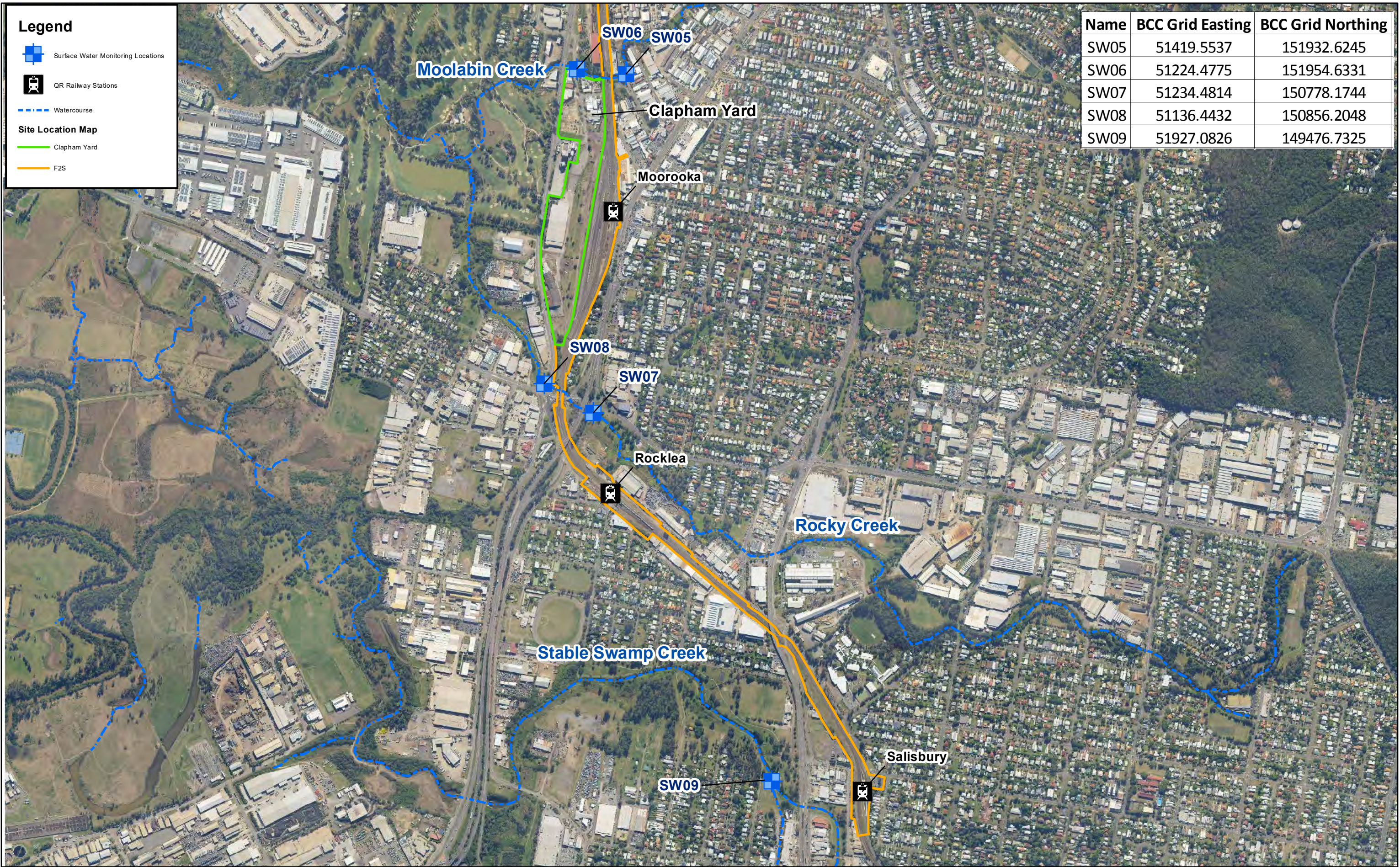
0 100 200 400 600 m



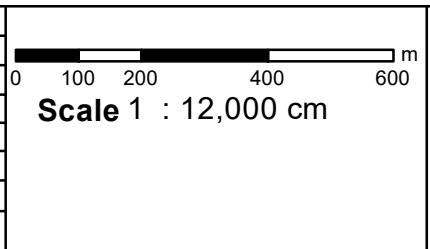
Status			
Issued for Information			
Original Size	A3	Drawn	GIS
Coordinate System	GDA 1994 BCSG02	Designed	J Clothier
Height Datum	AHD	Date Printed	2/13/2020
Filename:	Surface_Water_Northern_Area_Map.mxd		



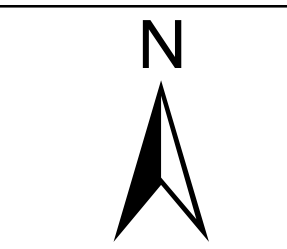
Project Wide Surface Water Investigation				
Figure 1 - Surface Water Monitoring Locations				
Project Number	Discipline	Document	Document Number	Rev
	ENV	PL	002	1



Rev	Description	Date	Approved
1	Southern Overview Map	17/09/2019	J Perry



Status			
<b>Issued for Information</b>			
Original Size	A3	Drawn	GIS
Coordinate System	GDA 1994 BCSG02	Designed	J Clothier
Height Datum	AHD	Date Printed	2/13/2020
Filename:	Surface_Water_Southern_Area_Map.mxd		



Project Wide Surface Water Investigation				
Figure 2 - Surface Water Monitoring Locations				
Project Number	Discipline	Document	Document Number	Rev
	ENV	PL	002	1

# Appendix B – TSD Monthly Report

## April 2020 Monthly Report Summary

### Monitoring Summary

It is the project's intent to aim for the Goals and Objectives relevant to vibration, noise, air quality and water monitoring within the practical extent of delivering the project.

Vibration monitoring was conducted on three (3) occasions, and noise monitoring was conducted on sixty-nine (69) occasions during April 2020. Each vibration and noise monitoring event confirmed project requirements were adhered to.

Ambient air quality monitoring was conducted at the Roma Street, Albert St, Woolloongabba and Boggo Rd precinct sites during April 2020. Air quality monitoring confirmed project requirements were adhered to.

One (1) round of surface water quality monitoring was also conducted that confirmed no project impacts.



## Environmental Monitoring Results

Monitoring data is provided below in accordance with Condition 6(b)(i) of the Coordinator-General Change Report.

### Vibration

Vibration monitoring was conducted during April 2020.

All vibration monitoring adhered to project requirements and is detailed in the table below.

*Table 1: Vibration Monitoring Data*

Start Date	Time	Finish Date	Location	Purpose of Monitoring	Average Vibration levels (mm/s)	Max Vibration Level (mm/s)	Adhered to Project Requirements (Yes / No)
16/04/2020	10:54:00 AM	17/04/2020	Boggo Road (Boggo Road Precinct)	Model Verification	0.2	1.66	Yes
20/04/2020	8:50:00 AM	21/04/2020	Boggo Road (Boggo Road Precinct)	Model Verification	0.11	0.45	Yes
22/04/2020	12:08:00 PM	22/04/2020	Boggo Road (Boggo Road Precinct)	Construction Monitoring at Sensitive Places	0.15	0.35	Yes

## Noise

Attended noise monitoring was conducted during April 2020.

All noise monitoring data adhered to project requirements and is provided in the table below.

Table 2: Noise Monitoring Data

Date	Time	Location	Purpose of Monitoring	Activity	Noise level LA10 <sup>[1]</sup>	Noise level LAeq <sup>[2]</sup>	Adhered to Project Requirements (Yes / No)
1/04/2020	11:41:00 AM	Herschel Street (Roma Street Precinct)	Complaint response	Demolition	69.5	67.2	Yes
2/04/2020	8:14:00 AM	Herschel Street (Roma Street Precinct)	Complaint response	Demolition	68.8	65.9	Yes
2/04/2020	8:44:00 AM	Herschel Street (Roma Street Precinct)	Complaint response	Demolition	67.9	64.5	Yes
3/04/2020	10:32:00 AM	Herschel Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Demolition	73	71.1	Yes
3/04/2020	10:55:00 AM	Herschel Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Demolition	72.4	69.4	Yes
3/04/2020	1:10:00 PM	Joe Baker Street (Boggo Road Precinct)	Model Verification	Site Establishment and Piling	61.8	67.9	Yes
4/04/2020	8:40:00 AM	Joe Baker Street (Boggo Road Precinct)	Model Verification	Site Establishment and Piling	64.4	61.9	Yes
4/04/2020	9:00:00 AM	Peter Doherty Street (Boggo Road Precinct)	Model Verification	Site Establishment and Piling	68	66.6	Yes
6/04/2020	9:38:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Demolition	67.9	64.6	Yes

6/04/2020	10:00:00 PM	Herschel Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Demolition	66.2	64.3	Yes
6/04/2020	10:18:00 PM	Herschel Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Demolition	64	62.6	Yes
6/04/2020	9:30:00 AM	Joe Baker Street (Boggo Road Precinct)	Construction Monitoring at Sensitive Places	Site Establishment and Piling	72.1	69.5	Yes
6/04/2020	12:15:00 PM	Joe Baker Street (Boggo Road Precinct)	Model Verification	Site Establishment and Piling	61.8	60.1	Yes
6/04/2020	12:41:00 PM	Peter Doherty Street (Boggo Road Precinct)	Model Verification	Site Establishment and Piling	72.9	69.1	Yes
7/04/2020	8:30:00 AM	Joe Baker Street (Boggo Road Precinct)	Construction Monitoring at Sensitive Places	Site Establishment and Piling	78.2	75.1	Yes
7/04/2020	9:10:00 AM	Elliot Street (Boggo Road Precinct)	Model Verification	Site Establishment and Piling	69.6	64.5	Yes
7/04/2020	9:30:00 AM	Elliot Street (Boggo Road Precinct)	Model Verification	Site Establishment and Piling	60.8	58.4	Yes
8/04/2020	10:16:00 AM	Roma Street (Roma Street Precinct)	Complaint response	Demolition	70.7	67.2	Yes
8/04/2020	10:49:00 AM	Roma Street (Roma Street Precinct)	Complaint response	Demolition	69.9	66.5	Yes
8/04/2020	11:12:00 AM	Roma Street (Roma Street Precinct)	Complaint response	Demolition	70.5	67.3	Yes
8/04/2020	11:34:00 AM	George Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Demolition	75.3	75	Yes
10/04/2020	7:53:00 AM	George Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Tunnel Construction	64.3	64.8	Yes

10/04/2020	8:15:00 AM	Herschel Sreet (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Tunnel Construction	59.1	58.9	Yes
10/04/2020	9:13:00 AM	Herschel Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Tunnel Construction	62.2	68.6	Yes
10/04/2020	9:51:00 AM	George Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Tunnel Construction	64.7	62.9	Yes
10/04/2020	1:00:00 PM	Herschel Sreet (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Tunnel Construction	62.2	59.5	Yes
10/04/2020	1:22:00 PM	George Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Tunnel Construction	67.5	65	Yes
10/04/2020	8:00:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	Construction Stage 1	70.5	68.6	Yes
10/04/2020	8:22:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	Construction Stage 1	68	66.2	Yes
10/04/2020	8:49:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	Construction Stage 1	60.4	58.9	Yes
10/04/2020	9:21:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	Construction Stage 1	66.7	63.8	Yes
10/04/2020	1:41:00 PM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	Construction Stage 1	68.8	65.5	Yes
10/04/2020	11:40:00 AM	Vulture Street (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	Site establishment	70.7	66.6	Yes
14/04/2020	9:48:00 PM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	Construction Stage 1	81.5	75.7	Yes
15/04/2020	10:12:00 PM	Vulture Street (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	Site Establishment	69.4	65.3	Yes

15/04/2020	4:05:00 PM	Joe Baker Street (Boggo Road Precinct)	Model Verification	Site Establishment and Piling	65.3	63.1	Yes
15/04/2020	3:40:00 PM	Peter Doherty Street (Boggo Road Precinct)	Model Verification	Site Establishment and Piling	60.8	57.8	Yes
16/04/2020	12:45:00 PM	Joe Baker Street (Boggo Road Precinct)	Model Verification	Site Establishment and Piling	66	63.4	Yes
16/04/2020	11:45:00 AM	Peter Doherty Street (Boggo Road Precinct)	Model Verification	Site Establishment and Piling	65	63.1	Yes
17/04/2020	9:07:00 PM	Reid Street (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	Site Establishment	55.2	56.5	Yes
20/04/2020	3:00:00 PM	Herschel Sreet (Roma Street Precinct)	Complaint response	Demolition	70.2	67.1	Yes
20/04/2020	3:18:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Demolition	74.6	71.2	Yes
20/04/2020	6:32:00 PM	Albert Street (Albert Street Precinct)	Model Verification	Construction Stage 1	66.5	65.9	Yes
20/04/2020	7:08:00 PM	Albert Street (Albert Street Precinct)	Model Verification	Construction Stage 1	70.9	69.1	Yes
20/04/2020	7:58:00 PM	Albert Street (Albert Street Precinct)	Model Verification	Construction Stage 1	73.5	70.5	Yes
20/04/2020	8:33:00 PM	Mary Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	Construction Stage 1	41.3	40	Yes
20/04/2020	12:06:00 PM	Joe Baker Street (Boggo Road Precinct)	Model Verification	Site Establishment and Piling	62.4	64.2	Yes
20/04/2020	12:30:00 PM	Peter Doherty Street (Boggo Road Precinct)	Model Verification	Site Establishment and Piling	68	65.1	Yes

22/04/2020	9:54:00 PM	Herschel Sreet (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Demoliton and Tunnel Construction	64.7	62.4	Yes
22/04/2020	10:17:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Demoliton and Tunnel Construction	63.4	60.9	Yes
22/04/2020	11:13:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Stage 2 Demoliton and Tunnel Construction	65.7	62.5	Yes
23/04/2020	12:30:00 PM	Roma Street (Roma Street Precinct)	Model Verification	Site Establishment and Piling	67.8	65.1	Yes
23/04/2020	12:50:00 PM	Joe Baker Street (Boggo Road Precinct)	Model Verification	Site Establishment and Piling	70	67.4	Yes
24/04/2020	1:30:00 PM	Peter Doherty Street (Boggo Road Precinct)	Construction Monitoring at Sensitive Places	Stage 2 Demoliton and Tunnel Construction	73.4	70.1	Yes
24/04/2020	1:49:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Stage 2 Demoliton and Tunnel Construction	74.7	71.5	Yes
24/04/2020	2:06:00 PM	George Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Stage 2 Demoliton and Tunnel Construction	69.3	65.8	Yes
24/04/2020	2:00:00 PM	Herschel Sreet (Roma Street Precinct)	Model Verification	Site Establishment and Piling	63.8	61.7	Yes
24/04/2020	2:20:00 PM	Joe Baker Street (Boggo Road Precinct)	Model Verification	Site Establishment and Piling	62.3	59.6	Yes
27/04/2020	9:04:00 AM	Peter Doherty Street (Boggo Road Precinct)	Construction Monitoring at Sensitive Places	Stage 2 Demoliton and Tunnel Construction	77.7	75.3	Yes
27/04/2020	9:22:00 AM	George Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Stage 2 Demoliton and Tunnel Construction	73	69.5	Yes
27/04/2020	9:43:00 AM	Herschel Sreet (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Stage 2 Demoliton and Tunnel Construction	71.3	68.4	Yes

27/04/2020	9:24:00 AM	George Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Site Establishment	73.6	75.1	Yes
27/04/2020	8:45:00 PM	Vulture Street (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	Construction Stage 1	43.9	42.9	Yes
27/04/2020	9:11:00 PM	Mary Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	Construction Stage 1	51.8	51.2	Yes
29/04/2020	4:10:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	Construction Stage 1	70	66.9	Yes
29/04/2020	4:26:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	Construction Stage 1	71.6	68.8	Yes
29/04/2020	6:40:00 PM	Albert Street (Albert Street Precinct)	Model Verification	Site Establishment and Piling	58.2	54.8	Yes
29/04/2020	7:30:00 PM	Elliot Street (Woolloongabba Precinct)	Model Verification	Site Establishment and Piling	59	60.5	Yes
30/04/2020	10:27:00 AM	Peter Doherty Street (Boggo Road Precinct)	Construction Monitoring at Sensitive Places	Site Establishment	72.4	69.2	Yes

- [1] Intermittent noise goal (LA10)

- [2] Continuous noise goal (LAeq)

## Air Quality

### Deposited Dust Results

Air quality monitoring for deposited dust was performed during April 2020.

The dust deposition gauges result for the reporting period are detailed below, and all monitoring data adhered to project requirements and is provided in the table below.

Table 3: Air Quality Monitoring – Deposited Dust Data

Location	Project Wide Air Quality Criteria & Goals <sup>[1]</sup>			Monitoring results	Comments
	Criterion	Air Quality Indicator	Goal		
Roma Street Precinct/ Northern Portal	Nuisance	Deposited dust	120 mg/m <sup>2</sup> /day	33.3 mg/m <sup>2</sup> /day	<i>Air quality monitoring was performed during the reporting period. All results adhered to project requirements.</i>
Albert Street Precinct				23.3 mg/m <sup>2</sup> /day	
Woolloongabba Precinct				33.3 mg/m <sup>2</sup> /day 16.67 mg/m <sup>2</sup> /day	
Boggo Road Precinct/ Southern Portal				13.3 mg/m <sup>2</sup> /day	
				23.3 mg/m <sup>2</sup> /day	

[1] Project works must aim to achieve construction air quality goals. The *Coordinator-General Change Report – Whole of Project Refinements 2019* acknowledges instances exist that these goals may not be achieved.



### Particulates and Ambient Air Quality Results

Air quality monitoring for Total Suspended Particules (TSP) and particulate matter less than 10 µm (PM10) was performed at the Woolloongabba site during April 2020. TSP and PM10 monitoring data adhered to project requirements and is provided in the table below.

Table 4: Air Quality Monitoring – Total Suspended Particules and PM10 Data

Date	Total Suspended Particules (µg/m3/24 hr)	PM10 (µg/m3/24 hr)
01-Apr-20	7.1	7.0
02-Apr-20	8.3	8.3
03-Apr-20	11.8	11.8
04-Apr-20	6.4	6.2
05-Apr-20	11.7	11.5
06-Apr-20	7.6	7.5
07-Apr-20	4.7	4.6
08-Apr-20	2.8	2.7
09-Apr-20	4.0	3.9
10-Apr-20	3.4	3.3
11-Apr-20	6.5	6.3
12-Apr-20	5.0	4.9
13-Apr-20	7.2	7.1
14-Apr-20	8.0	8.0

15-Apr-20	7.8	7.8
16-Apr-20	7.2	7.2
17-Apr-20	NA <sup>[1]</sup>	NA <sup>[1]</sup>
18-Apr-20	NA <sup>[1]</sup>	NA <sup>[1]</sup>
19-Apr-20	NA <sup>[1]</sup>	NA <sup>[1]</sup>
20-Apr-20	NA <sup>[1]</sup>	NA <sup>[1]</sup>
21-Apr-20	9.1	8.9
22-Apr-20	17.8	17.4
23-Apr-20	11.1	10.9
24-Apr-20	16.9	16.8
25-Apr-20	15.9	15.9
26-Apr-20	12.3	12.3
27-Apr-20	10.0	9.9
28-Apr-20	6.2	6.1
29-Apr-20	5.7	5.7
30-Apr-20	12.3	12.2

[1] As a result of air quality monitoring equipment being vandalised, monitoring data was not captured between the 17th April 2020 to the 20<sup>th</sup> April 2020.

CBGU JV also reviewed the DES air quality results for PM10 from nearby air quality stations during the reporting period. The results were as follows:

- Brisbane CBD: PM<sub>10</sub> daily Maximum average: **39.5 µg/m<sup>3</sup>** (<https://apps.des.qld.gov.au/air-quality/chart/?station=cbd&parameter=18&date=1/04/2020&timeframe=month>)
- South Brisbane: PM<sub>10</sub> daily Maximum average: **39.1 µg/m<sup>3</sup>** (<https://apps.des.qld.gov.au/air-quality/chart/?station=sbr&parameter=18&date=1/04/2020&timeframe=month>)
- Woolloongabba: PM<sub>10</sub> daily Maximum average: **38.0 µg/m<sup>3</sup>** (<https://apps.des.qld.gov.au/air-quality/chart/?station=woo&parameter=18&date=1/04/2020&timeframe=month>)

The graphical representation of the DES air quality data is presented in the below charts (refer to Figure 1-3).

There were no exceedances of the PM10 daily criterion recorded at the Brisbane CBD, Woolloongabba and Boggo Rd worksites.

# Particle PM10 at Brisbane CBD, 1–30 April 2020 [about Particle PM10](#)

[Brisbane CBD station overview](#)

The guideline for Particle PM<sub>10</sub> is 50µg/m<sup>3</sup> (24hr avg).

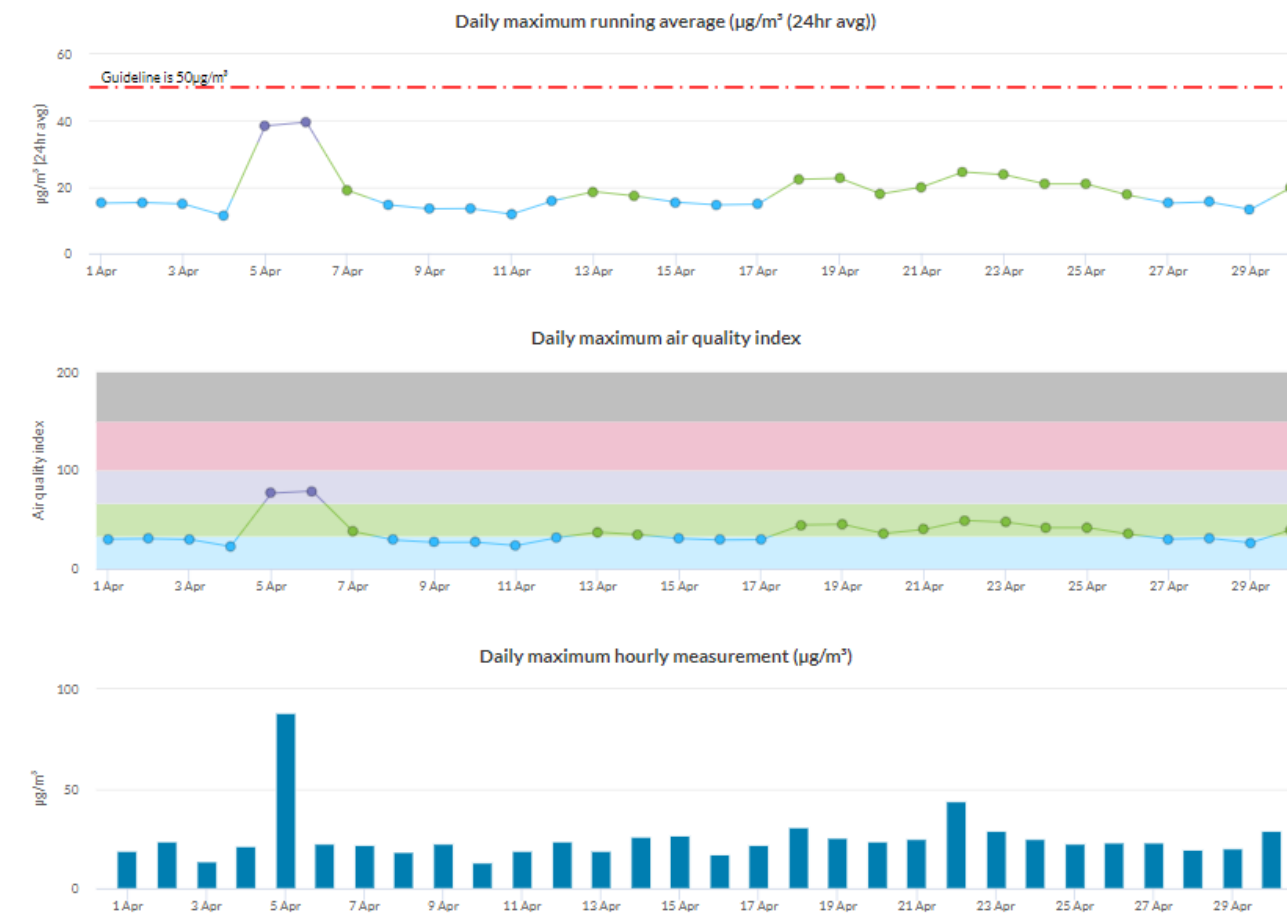


Figure 1: Brisbane CBD – DES Station - PM10 graph for April 2020 (reproduction from the DES website accessed May 2020)

## Particle PM10 at South Brisbane, 1–30 April 2020 [about Particle PM10](#)

[South Brisbane station overview](#)

The guideline for Particle PM<sub>10</sub> is 50µg/m<sup>3</sup> (24hr avg).

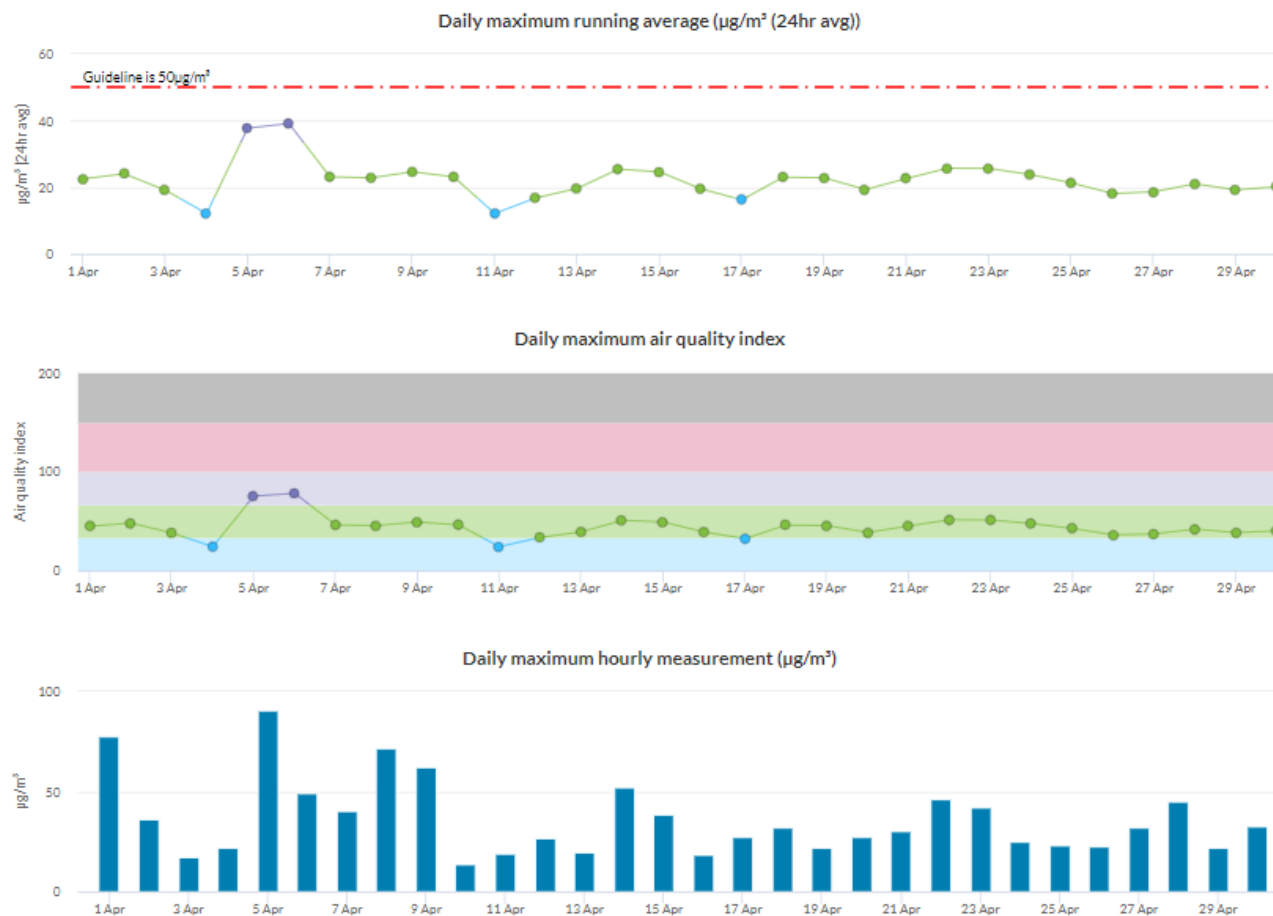


Figure 2: South Brisbane – DES Station - PM10 graph for April 2020 (reproduction from the DES website accessed May 2020)

# Particle PM10 at Woollongabba, 1–30 April 2020 [about Particle PM10](#)

[Woollongabba station overview](#)

The guideline for Particle PM<sub>10</sub> is 50µg/m<sup>3</sup> (24hr avg).

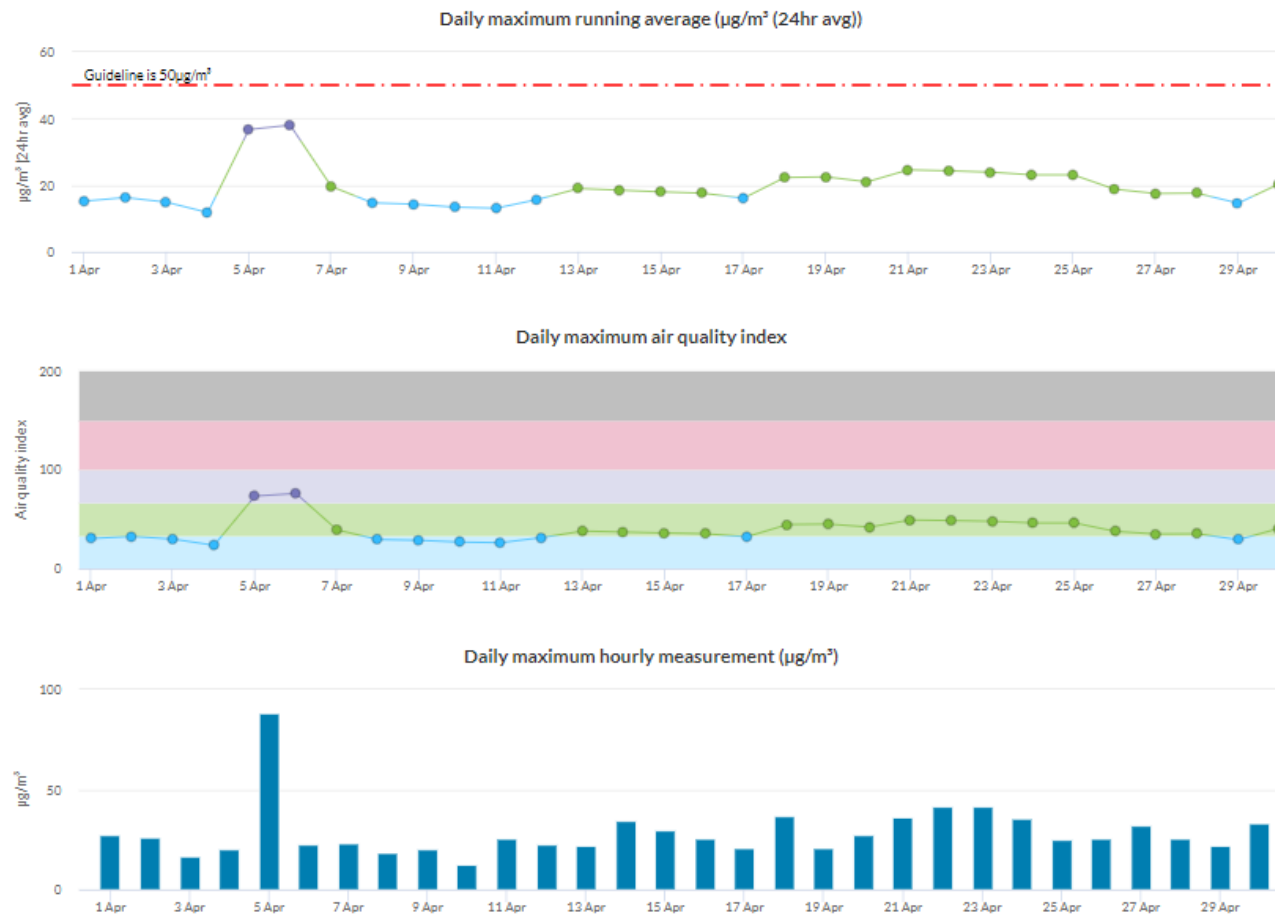


Figure 3: Woollongabba – DES Station - PM10 graph for April 2020 (reproduction from the DES website accessed May 2020)

## Water Quality – Discharge

Water Quality monitoring to demonstrate compliance with Condition 15(a) was not triggered. There were no active discharge of site water during April 2020.

## Water Quality – Surface Water

During April 2020, CBGU JV undertook one (1) round of surface water sampling at five (5) locations (upstream and downstream).

The monitoring locations are representative of the broader catchment, and since no significant offsite discharges were occurring at the time of monitoring, no results are attributed to the project.

*Table 5: Offsite Upstream & Downstream Water Quality Data*

Location	Date	Purpose of Monitoring	Turbidity (NTU)	Suspended solids (mg/L)	EC (µS/cm)	Dissolved oxygen (%)	pH	Adhered to Project Requirements (Yes / No)
Roma Street - Upstream	17/04/2020	Monthly	16.52	16	>3999	84.72	7.83	Yes
Roma Street - Downstream	17/04/2020	Monthly	16.87	13	>3999	85.93	7.86	Yes
Gabba - Upstream	17/04/2020	Monthly	21.2	24	>3999	85.58	7.68	Yes
Gabba - Downstream	17/04/2020	Monthly	26.3	41	>3999	87.93	7.79	Yes
Boggo Road*	17/04/2020	Monthly	5.63	<5	>3999	35.17	7.25	Yes
Albert Street - Upstream	21/04/2020	Monthly	15.18	18	>3999	85.51	7.81	Yes
Albert Street - Downstream	21/04/2020	Monthly	27.4	30	>3999	82.89	7.77	Yes

\* Monitoring at the Boggo Rd site occurs at a pipe outlet at the beginning of the surface catchment. There is no upstream/downstream monitoring point as such. The pipe outlet receives water released from the site, as well as a broader stormwater catchment.

## Non-Compliances

A Non-Compliance Event is defined as Project Works that do not comply with the Imposed Conditions. Nil non-compliances occurred during the monitoring period.

### Non- Compliance Events Summary

Table 6: Non-Compliance Events

Event Title	Location, Date and time of the event	Date the Event was Formally Notified to CG/IEM	Conditions Affected	Date the Event Report Formally Sent to CG/IEM	Status of Event
Nil for this reporting period					

## Complaints

The below section summarises the complaints to be reported in accordance with Condition 6(b)(iii) of the CGCR.

Table 7: Summary of Complaints

Date	Location	Issue	CGCR Non-Compliance	Status of Event
06/04/2020	Herschel Street (Roma Street Precinct)	Noise	A complaint was raised regarding project works undertaken during standard hours. Attended noise monitoring confirmed that works adhered to project requirements.	Closed
08/04/2020	Herschel Street (Roma Street Precinct)	Noise	A complaint was raised regarding project works undertaken during night hours. Scheduled Out of Hours Work was being undertaken and community notification had been provided.	Closed
08/04/2020	Herschel Street (Roma Street Precinct)	Noise	A complaint was raised regarding project works undertaken during night hours. Scheduled Out of Hours Work was being undertaken and community notification had been provided.	Closed



Date	Location	Issue	CGCR Non-Compliance	Status of Event
09/04/2020	Mary Street (Albert Street Precinct)	Noise	A complaint was raised regarding project works undertaken during night hours. Scheduled Out of Hours Work was being undertaken and community notification had been provided.	Closed
11/04/2020	Mary Street (Albert Street Precinct)	Noise	A complaint was raised regarding project works undertaken during night hours. Scheduled Out of Hours Work was being undertaken and community notification had been provided.	Closed
15/04/2020	Albert Street (Albert Street Precinct)	Noise	A complaint was raised regarding project works undertaken during night hours. Scheduled Out of Hours Work was being undertaken and community notification had been provided.	Closed
17/04/2020	Mary Street (Albert Street Precinct)	Noise	A complaint was raised regarding project works undertaken during night hours. Scheduled Out of Hours Work was being undertaken and community notification had been provided.	Closed
20/04/2020	Herschel Street (Roma Street Precinct)	Noise	A complaint was received as a result of project works during standard hours. Monitoring was conducted, which concluded works were in accordance with project conditions.	Closed
21/04/2020	Mary Street (Albert Street Precinct)	Noise	A complaint was raised regarding project works undertaken during night hours. Scheduled Out of Hours Work was being undertaken and community notification had been provided.	Closed
22/04/2020	Mary Street (Albert Street Precinct)	Noise	A complaint was raised regarding project works undertaken during night hours. Scheduled Out of Hours Work was being undertaken and community notification had been provided.	Closed
22/04/2020	Roma Street (Roma Street Precinct)	Noise	A complaint was received as a result of project works during standard hours. Monitoring was conducted, which concluded works were in accordance with project conditions.	Closed


Date	Location	Issue	CGCR Non-Compliance	Status of Event
22/04/2020	Herschel Street (Roma Street)	Noise	A complaint was received as a result of project works during standard hours. Monitoring was conducted, which concluded works were in accordance with project conditions.	Closed
27/04/2020	Albert Street (Albert Street Precinct)	Noise	A complaint was received as a result of project works during standard hours. Monitoring was conducted, which concluded works were in accordance with project conditions.	Closed
30/04/2020	Boggo Rd (Boggo Road Precinct)	Noise	A complaint was received as a result of project works during standard hours. Monitoring was conducted, which concluded works were in accordance with project conditions.	Closed



# Appendix C – Non-Compliance Event Reports

No Non-Compliance Events were raised in April; however, five 14-day reports that were submitted in April are provided in this Appendix.

# Non-Compliance Event 14-day Report

In accordance with Condition 5 (c) of the Coordinator General Change Report (CGCR) – this report provides written advice to the Environmental Monitor and the Coordinator-General, within 14 days of the 48-hour NCE notification.

<b>NCE Ref</b>	<b>CRRDA-NCE-TSD -001</b>	<b>NCE Ref (DA)</b>	<b>CRRDA-002</b>
<b>Reported by</b>	Delivery Authority	<b>Date Reported to CG</b>	21 April 2020 (note: a 7-day extension was agreed to by the Coordinator-General)
<b>Date, time and location of event</b>	Inspections completed at the Woolloongabba worksite on 19 February 2020 and 27 March 2020. NCE Notification 31 March 2020.		
<b>Short description of the Event</b>	<p>The relevant project works for the Woolloongabba worksite are operating under a Construction Environmental Management Plan (CEMP) (Rev 3) and sub-plans which included an Erosion and Sediment Control (ESC) Sub-plan. In accordance with Imposed Condition 18, this sub-plan must also be consistent with the Guidelines for Best Practice Erosion and Sediment Control (International Erosion and Sediment Control Association, 2008) (IECA, 2008). These management plans have been reviewed and endorsed by the Project's approved Environmental Monitor (EM).</p> <p>In accordance with IECA, 2008, the ESC requires that site specific ESC designs must be prepared for each phase of construction works to manage site runoff from changing groundcover, landform, gradients and site drainage.</p> <p>During a site inspection of the Woolloongabba worksite completed by the Environmental Monitor the following observations were made:</p> <ol style="list-style-type: none"> <li>1) Based on evidence of site scouring, it was identified that overland flow had left the site through a damaged erosion and sediment control device, earth-bund, and entered a stormwater inlet.</li> <li>2) Following review of the ESC design (Site Establishment Works and Piling Pad – 22.2.2020) prepared as part of the ESC sub-plan, it was identified that even though the earth-bund control had been constructed it was not included on the ESC design drawing.</li> </ol>		
<b>Circumstances under which the non-compliance event occurred (include activity being undertaken, predictive modelling, monitoring etc)</b>	<p>The Woolloongabba worksite has been undergoing regular change in type of groundcover, landform, gradients and site drainage as a result of ongoing civil works within the site. During a site inspection completed by the Environmental Monitor on 19/02/202, he observed through site scouring, that overland flow had left the site through a damaged erosion and sediment control (earth-bund) and entered into a stormwater inlet. Refer to photos below captured on the day of the inspection which formed part of the Environmental Monitor Inspection Record (19/02/2020).</p> <p>19 February 2020 - Environmental Monitor Inspection Report.</p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px;"> <p>Southern side internal haul road</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Overland flow rilling by sediment laden runoff entering un-protected stormwater inlet.</p>  </div> </div>		

NCE Ref	CRRDA-NCE-TSD -001	NCE Ref (DA)	CRRDA-002
	<p>Southern side internal haul road</p>	<p>Large pooling zone of dirty runoff prior to entering un-protected stormwater inlet (Item 08.03).</p> 	
	<p>Southern catchment above sediment basin.</p>	<p>Upstream stormwater runoff zone draining to un-protected stormwater inlet (Item 08.03).</p> 	
<p>Consultation with DAP's (if applicable)</p>	<p>Not applicable.</p>		
<p>Description of the non-compliance event</p>	<p><b>This event has resulted in non-compliance with the following CG imposed conditions:</b>            Activities on site relating to erosion and sediment control are non-compliant with the following:</p> <ul style="list-style-type: none"> <li>Imposed Condition 4 – Construction Environmental Management Plan: Site ESC controls have been not been implemented in accordance with the CEMP for the duration of works.</li> </ul>		
<p>Details of any complaints in relation to this incident</p>	<p>Nil. The NCE was initiated as a result from the Environmental Monitor inspection dated 19.02.2020 and subsequent document review of the ESC design drawing (Site Establishment and Piling Pad).</p>		

NCE Ref	CRRDA-NCE-TSD -001	NCE Ref (DA)	CRRDA-002
<b>Root cause of non-compliance</b>	<ul style="list-style-type: none"> <li>The erosion and sediment controls not properly maintained which allowed site water to travel to open drain.</li> <li>The ESC design drawing had not captured all latest site conditions and had not nominated an erosion and sediment control for this location within the worksite.</li> </ul>		
<b>Description of environmental effects and impacts</b>	Site water (unknown quality) entered stormwater inlet on site during a rain event breaking through bunding that wasn't repaired following the disturbance from plant and equipment moving along the haul road.		
<b>Was sampling or monitoring performed in relation to this event? (if so attach results)</b>	No. Visual observation by the Environmental Monitor only.		
<b>Actions already undertaken to mitigation environmental effects of this NCE</b>	Update of ESC design drawing to reflect site condition and inclusion of additional erosion and sediment control for this location, i.e. earth-bund.		
<b>Additional actions to be undertaken (and timeframes for completion)</b>	<p>The Delivery Authority will continue to work with the Contractor to seek the following outcomes:</p> <ul style="list-style-type: none"> <li>Site Erosion and Sediment Control design to be reviewed and updated on an ongoing basis to ensure all changes to site conditions have been captured and suitable erosion and sediment controls nominated.</li> <li>Site supervisor to be fully briefed on the Erosion and Sediment Control Plan and ESC design.</li> <li>Site supervisor to perform daily checks of vulnerable areas for ESC maintenance (i.e. especially around stormwater drains) and ensure the ESC design is implemented.</li> </ul> <p><b>Completed actions by 29.05.2020</b></p> <ul style="list-style-type: none"> <li>Provision of Erosion and Sediment Control Plan (ESCP) which reflects the current site conditions and has been certified by a Certified Professional in Erosion and Sediment Control (CPESC).</li> <li>Confirmation has been received that the nominated erosion and sediment controls are implemented on site.</li> </ul>		
<b>Proposed actions to prevent reoccurrence of the NCE (include responsibility and timeframes)</b>	<p><b>Preventative Actions</b></p> <ul style="list-style-type: none"> <li>The Delivery Authority will encourage the Contractor to carry out Lessons Learned toolbox talks to other Environmental Advisors and Site Supervisors across the project worksites and to include in daily site briefings, especially during wet weather.</li> </ul>		
<b>Report completed by</b>	The Delivery Authority with advice from the Environment Monitor		
<b>Completion statement</b>	Erosion and sediment control plans finalised with nominated erosion and sediment controls in place. NCE closed.		


## Non-Compliance Event 14-day Report







In accordance with Condition 5 (c) of the Coordinator General Change Report (CGCR) – this report provides written advice to the Environmental Monitor and the Coordinator-General, within 14 days of the 48-hour NCE notification.


<b>NCE Ref</b>	<b>CRRDA-NCE-TSD -002</b>	<b>NCE Ref (DA)</b>	<b>CRRDA-003</b>
<b>Reported by</b>	Delivery Authority	<b>Date Reported to CG</b>	21 April 2020 (note: a 7-day extension was agreed to by the Coordinator-General)
<b>Date, time and location of event</b>	Inspection completed at the Boggo Road worksite on 19 February 2020 and 27 March 2020. NCE Notification 31 March 2020.		
<b>Short description of the Event</b>	<p>The relevant project works for the Boggo Road worksite are operating under a Construction Environmental Management Plan (CEMP) (Rev 3) and sub-plans which included an Erosion and Sediment Control (ESC) Sub-plan. In accordance with Imposed Condition 18, this sub-plan must also be consistent with the Guidelines for Best practice Erosion and Sediment Control (International Erosion and Sediment Control Association, 2008) (IECA, 2008). These management plans have been reviewed and endorsed by the Project's approved Environmental Monitor (EM). In accordance with IECA, 2008, site specific ESC design (Site Establishment Works and Piling Works – 8.01.2020) was prepared for this phase of construction works to manage site runoff from changing groundcover, landform, gradients and site drainage.</p> <p>During a site inspection (Site Inspection Record 19/02/2020) of the Boggo Road worksite completed by the Environmental Monitor the following observations were made:</p> <ol style="list-style-type: none"> <li>1) Main drainage channel immediately above flume pipe appeared not to be in accordance with the ESC design drawing (Site Establishment Works and Piling Works – 8.01.2020)</li> <li>2) The installed flume pipe diameter size was not nominated on the ESC design drawing.</li> <li>3) The installed flume pipe was covered and occluded by rip rap rock, thereby preventing adequate flow through to the stormwater inlet.</li> </ol>		
<b>Circumstances under which the non-compliance event occurred (include activity being undertaken, predictive modelling, monitoring etc)</b>	<p>The Boggo Road site inspection completed by the Environmental Monitor on 19 February identified that:</p> <ul style="list-style-type: none"> <li>• Main drainage channel immediately above flume pipe appeared not to be in accordance with the ESC design drawing (Site Establishment Works and Piling Works – 8.01.2020)</li> <li>• The installed flume pipe diameter size was not nominated on the ESC design drawing.</li> <li>• The installed flume pipe was covered and occluded by rip rap rock, thereby preventing adequate flow through to the stormwater inlet.</li> </ul> <p>Refer to photos below captured on the day of the inspection which formed part of the Environmental Monitor Inspection Record (19/02/2020).</p>		

NCE Ref	CRRDA-NCE-TSD -002	NCE Ref (DA)	CRRDA-003
	BOGGO	<p>Stormwater drain not installed as per ESCP. Dimensions are not as described within additional design detail (email CK 11 Feb). A clearly defined channel is not evident, it is not clear how this matches the as-built channel base of 1.5m. Sed fence damaged.</p> 	
	BOGGO	<p>QR corridor access road across main drainage channel, without adequate boundary ESC measures. The main drainage channel was occluded with potential to cause over-topping and escape of stormwater past internal ESC controls.</p> 	



NCE Ref	CRRDA-NCE-TSD -002	NCE Ref (DA)	CRRDA-003
	<p>BOGGO</p>	<p>Boundary perimeter sediment fence requires maintenance, visible gap allowing stormwater release. This item was observed during Feb 6 inspection (Item 07.11)</p> 	<p>As part of the investigation into the failing of the erosion and sediment controls on the site a number of minor errors in the RUSLE calculations (such as gradient of the site) were also identified which led to incorrect outputs and nomination of controls. These design calculations have been revised and included in the next ESC design drawings.</p>
<p><b>Consultation with DAP's (if applicable)</b></p>	<p>Not applicable.</p>		
<p><b>Description of the non-compliance event</b></p>	<p><b>This event has resulted in non-compliance with the following CG imposed conditions:</b>            Activities on site relating to erosion and sediment control are non-compliant with the following:</p> <ul style="list-style-type: none"> <li>Imposed Condition 4 – Construction Environmental Management Plan: Site ESC controls have been not been implemented in accordance with the CEMP for the duration of works.</li> </ul>		
<p><b>Details of any complaints in relation to this incident</b></p>	<p>Nil. NCE generated as a result of Environmental Monitor inspections only.</p>		
<p><b>Root cause of non-compliance</b></p>	<p>The erosion and sediment controls not constructed in accordance with IECA.</p>		
<p><b>Description of environmental effects and impacts</b></p>	<p>ESC not constructed in accordance with the IECA (as required by the CEMP) leading to a potential risk that it will not perform in accordance with required standard.</p>		
<p><b>Was sampling or monitoring performed in relation to this event? (if so attach results)</b></p>	<p>No.</p>		
<p><b>Actions already undertaken to mitigation environmental effects of this NCE</b></p>	<p>When the ESC issues were observed by the Environment Monitor on the site inspection the site team were alerted to the issues and the repairs were undertaken including an additional flume pipe, correctly installing the required drain with a vehicle crossing (refer to photos below).</p>		

NCE Ref	CRRDA-NCE-TSD -002	NCE Ref (DA)	CRRDA-003
	BOGGO	<p>Maintenance of ESC measures at stormwater pit immediately downstream of site's final sed pit.</p>  	
<p><b>Additional actions to be undertaken (and timeframes for completion)</b></p>	<p>Rectification work was undertaken, refer to site photos below.</p>	<p>South eastern quadrant</p> <p>Additional larger flume pipe installed (post 12 Feb inspection) next to previous smaller original pipe.</p>   <p>South eastern quadrant</p> <p>Looking upstream. Newly installed drainage channel upstream of flume and vehicle crossing to replace previous undersize channel.</p>  	

NCE Ref	CRRDA-NCE-TSD -002	NCE Ref (DA)	CRRDA-003
	<p>South eastern quadrant</p>	<p>Looking downstream. Newly installed drainage channel upstream of flume and vehicle crossing to replace previous undersize channel.</p> 	<p>In addition to the above measures, the site is still changing as the construction program progresses. The Delivery Authority has requested that the Contractor undertake regular reviews at a frequency to ensure changes to site conditions can be captured and suitable controls installed as more areas become hard standing, slope changes and other opportunities arise to minimise clean water entering site (such as rainwater runoff from the site office roofs and hard standing areas).</p> <ul style="list-style-type: none"> <li>• Site Erosion and Sediment Control design to be reviewed and updated on an ongoing basis to ensure all changes to site conditions have been captured and suitable erosion and sediment controls nominated.</li> <li>• Site supervisor to be fully briefed on the Erosion and Sediment Control Plan and ESC design.</li> <li>• Site supervisor to perform daily checks of vulnerable areas for ESC maintenance (i.e. especially around stormwater drains) and ensure the ESC design is implemented.</li> </ul> <p><b>Actions completed by 29.05.2020</b></p> <ul style="list-style-type: none"> <li>• Provision of Erosion and Sediment Control Plan (ESCP) which reflects the current site conditions and has been certified by a Certified Professional in Erosion and Sediment Control (CPESC).</li> <li>• Confirmation that the nominated erosion and sediment controls are implemented on site.</li> </ul>
<p><b>Proposed actions to prevent reoccurrence of the NCE (include responsibility and timeframes)</b></p>	<p><b>Preventative Actions</b></p> <ul style="list-style-type: none"> <li>• The Delivery Authority will encourage the Contractor to carry out Lessons Learned toolbox talks to other Environmental Advisors and Site Supervisors across the project worksites and to include in daily site briefings, especially during wet weather.</li> </ul>		
<p><b>Report completed by</b></p>	<p>The Delivery Authority with advice from the Environment Monitor</p>		
<p><b>Completion statement</b></p>	<p>Erosion and Sediment Control plan finalised with nominated sediment controls implemented. NCE closed.</p>		

## Non-Compliance Event 14-day Report

In accordance with Condition 5 (c) of the Coordinator General Change Report (CGCR) – this report provides written advice to the Environmental Monitor and the Coordinator-General, within 14 days of the 48-hour NCE notification.

NCE Ref	<b>CRRDA-NCE-TSD -003</b>	NCE Ref (DA)	<b>CRRDA-004</b>
Reported by	Delivery Authority	Date Reported to CG	21 April 2020 (note: a 7-day extension was agreed to by the Coordinator-General)
Date, time and location of event	17 February - 8:30am, 3:00pm and 3:09pm (approx.) 24 February 7:36am - 8:42am (approx.) NCE Notification to Coordinator-General 31 March 2020.		
Short description of the Event	Deliveries arriving at site outside of approved hours.		
Circumstances under which the non-compliance event occurred (include activity being undertaken, predictive modelling, monitoring etc)	<p>The Environmental Monitor has provided Environmental Monitor Inspection Report 2020 Boggo to the Delivery Authority which noted the following observations:</p> <p>Monday 17 February 2020 Boggo Road worksite precinct:</p> <ol style="list-style-type: none"> <li>1. During the morning drop-off time (approximately 8:30am - (outside permitted hours) a truck was observed making a delivery to the Boggo Road Site (off Boggo Road), which was carrying reinforcing mesh.</li> <li>2. During the afternoon pick-up time (approximately 3pm) a number of concrete trucks were observed making deliveries to the Boggo Road Site off Joe Baker Road.</li> <li>3. One of these concrete trucks was observed travelling on the wrong side of the road (and traffic island) to avoid the traffic associated with the school pick-up.</li> <li>4. A second concrete truck was observed at 3.09pm in the same queue.</li> </ol> <p>The Environmental Monitor provided advice that this constitutes a non-compliance event in relation to Imposed Condition 10 (spoil haulage and materials/equipment delivery – Boggo Road)</p> <p>This was formally reported to the contractor via Project Independent Certifier PIC on 21 February 2020.</p> <p>The Environmental Monitor, in an Environmental Monitor Non-Compliance Notification of 24 Feb 2020 noted the following observations:</p> <p>Monday 24 February 2020 Boggo Road worksite precinct:</p> <ol style="list-style-type: none"> <li>1. 1 x large skip truck at 7:36am</li> <li>2. 1 x cement truck at 7:59am</li> <li>3. 1 x B-double haulage truck at 8:42am</li> </ol> <p>The Environmental Monitor advised that this constitutes a non-compliance event in relation to Imposed Condition 10 (spoil haulage and materials/equipment delivery – Boggo Road).</p> <p>This was formally communicated to the contractor via the Project Independent Certifier on 25 February 2020.</p>		
Consultation with DAP's (if applicable)	Not applicable.		

NCE Ref	CRRDA-NCE-TSD -003	NCE Ref (DA)	CRRDA-004
Details of any complaints in relation to this incident	None received.		
Root cause of non-compliance	The sub-contractor was interpreting the imposed conditions to allow spoil haulage and materials/equipment delivery to be conducted as managed works. The contractor has advised the Delivery Authority that there have been a series of discussions with the sub-contractor and the EM to resolve the issue.		
Description of environmental effects and impacts	Heavy vehicle movements safety during the heavy vehicle lockout period.		
Was sampling or monitoring performed in relation to this event? (if so attach results)	No, sampling and monitoring not required.		
Actions already undertaken to mitigate environmental effects of this NCE	<p>The Contractor has advised that it has applied the following actions [relevant to Condition 10]:</p> <ul style="list-style-type: none"> <li>Project compliance requirements have been communicated clearly to suppliers through contracts, delivery instructions and project inductions. Whereby, delivery order forms to suppliers clearly state, "strictly no deliveries between the hours of 7:30am to 9:00am and 2:30pm to 4:30pm".</li> <li>The contractor has undertaken regular driver-specific inductions for concrete truck drivers which emphasise the safety standard required by all personnel who work on the project.</li> </ul>		
Additional actions to be undertaken (and timeframes for completion)	<p><b>Actions completed by 29.05.2020</b></p> <ul style="list-style-type: none"> <li>Relevant teams have been toolbox talked on site.</li> <li>External contractors have been contacted and the contractor comms team are in regular contact with Dutton Park State School.</li> <li>Project compliance requirements have been communicated clearly to suppliers through contracts.</li> <li>The contractor has undertaken regular driver-specific inductions for concrete truck drivers which emphasise the safety standard required by all personnel who work on the project.</li> </ul>		
Proposed actions to prevent reoccurrence of the NCE (include responsibility and timeframes)	<p><b>Preventative Actions</b></p> <ul style="list-style-type: none"> <li>The Delivery Authority will request that any deliveries that do occur out of approved hours will be immediately raised as an internal incident in accordance with the requirements of endorsed CEMP R3 section 6, followed by the identification and implementation of corrective actions in accordance with section 7.4 of the endorsed CEMP R3. Corrective action advice is to be documented in a corrective actions register (consistent with OEMP section 7.4) and implemented and communicated consistent with section 7.4 of the endorsed CEMP R3.</li> </ul> <p><b>Responsibility:</b> Delivery Authority: Friday 24 April 2020.</p> <ul style="list-style-type: none"> <li>The Delivery Authority will request that a copy of an updated Site Environment Plan be provided to the Environment Monitor with evidence that the SEP has been communicated to the Boggo Road site team).</li> </ul> <p><b>Responsibility:</b> Delivery Authority by Friday 24 April 2020.</p>		
Report completed by	The Delivery Authority with advice from the Environment Monitor		
Completion statement	<p>All relevant site and external party briefing, advice and training regarding hours of delivery and traffic management complete.</p> <p>NCE closed.</p>		

## Non-Compliance Event 14-day Report

In accordance with Condition 5 (c) of the Coordinator General Change Report (CGCR) – this report provides written advice to the Environmental Monitor and the Coordinator-General, within 14 days of the 48- hour NCE notification.

<b>NCE Ref</b>	<b>CRRDA-NCE-TSD-004</b>	<b>NCE Ref (DA)</b>	<b>CRRDA-005</b>
<b>Reported by</b>	Delivery Authority	<b>Date Reported to CG</b>	21 April 2020 (note: a 7-day extension was agreed to by the Coordinator-General)
<b>Date, time and location of event</b>	27 March 2020; Location – not applicable.		
<b>Short description of the Event</b>	An interpretation of monitoring results, required under Endorsed CEMP R3 S7.5, has not been provided to support the statement provided in Monthly Report February 2020 that “all noise monitoring data adhered to project requirements”		
<b>Circumstances under which the non-compliance event occurred (include activity being undertaken, predictive modelling, monitoring etc)</b>	<p>Endorsed CEMP R3, at section 7.5 (Reporting) provides that:</p> <p>To ensure compliance with Coordinator-General Condition 6 and where relevant the OEMP, [the Contractor] will prepare and submit a monthly report within 6 weeks from the end of the month to the Delivery Authority, which includes the following information:</p> <ul style="list-style-type: none"> <li>Monitoring data required by the Imposed Conditions or CEMP undertaken for the period and, where required, an interpretation of the results;</li> <li>A schedule of all validated monitoring results.</li> <li>Validated monitoring results must be produced for the preceding month’s monitoring programme (OEMP p 33);</li> </ul> <p>Imposed Condition 11(a) requires that Project Works must “<i>aim to achieve the project noise goals for human health and well-being presented in Table 2</i>”.</p> <p>Imposed Condition 11(b) requires that during construction, [the contractor must] “<i>monitor and report on noise and vibration in accordance with the Noise and Vibration Management Plan.</i>”</p> <p>The Noise and Vibration Management Plan within endorsed CEMP R3 states that ‘based on modelling data without mitigation, for site establishment and phase 2 works, a number of properties in the Roma Street, Albert Street, Woolloongabba, and Boggo Road/Southern Portal precincts would experience potential noise exceedances’.</p> <p>The endorsed CEMP R3, section 7.5 refers to OEMP requirements. The OEMP, at Noise and Vibration Management Plan section 5.4.5, provides for monitoring requirements that include:</p> <ul style="list-style-type: none"> <li>“Monitoring must be conducted in locations where predictive modelling indicates exceedances of either the noise or vibration goals are likely to occur, or where verified noise and/or vibration complaints have occurred”; and,</li> <li>“The results of noise and vibration monitoring must be reported in the monthly environment report, along with details of any incidents or complaints relating to noise and vibration management”</li> </ul> <p>As an example, the February 2020 Monthly report for Tunnels and Stations Development provides a tabularisation of attended noise monitoring conducted during February 2020. The tabularised results provide a statement that “all noise monitoring data adhered to project requirements”.</p> <p>The entry for 19/02/2020, Albert Street, provides monitoring results for LA10 and LAeq of 83 dBA and 78.7 dBA respectively. These monitored results are above the noise goals provided for in Condition 11 (a) Table 2.</p> <p>The report does not include an interpretation of the results as required under Endorsed CEMP R3 section 7.5 to address CEMP R3 section 4.6.5.2 (Environmental Outcomes), 4.6.5.3 (Performance Criteria), 4.6.5.5 (Mitigation Measures). The report does not include interpretation details against the CEMP R3 requirements support the statement “all noise monitoring data adhered to project requirements”.</p> <p>In December 2019 and January 2020, the Delivery Authority formally provided information and guidance to assist with the preparation of future monthly reports.</p>		

NCE Ref	CRRDA-NCE-TSD-004	NCE Ref (DA)	CRRDA-005
	On this basis, the Environmental Monitor has advised the Delivery Authority and the contractor that there is insufficient information provided to support these statements and as a consequence, a non-compliance event has occurred.		
<b>Consultation with DAP's (if applicable)</b>	Not applicable.		
<b>Details of any complaints in relation to this incident</b>	None received.		
<b>Root cause of non-compliance</b>	<p>The February 2020 Monthly report for Tunnels and Stations Development provides a tabularisation of attended noise monitoring conducted during February 2020. The tabularised results provide a statement that "all noise monitoring data adhered to project requirements".</p> <p>The report does not include an interpretation of the results as required under Endorsed CEMP R3 section 7.5. Specifically, the report does not include interpretation details that demonstrate consideration of the Condition 11 (a) noise goals to support the statement "all noise monitoring data adhered to project requirements".</p>		
<b>Description of environmental effects and impacts</b>	No environmental effects/impacts identified.		
<b>Was sampling or monitoring performed in relation to this event? (if so attach results)</b>	No additional monitoring was required relevant to this event.		
<b>Actions already undertaken to mitigate environmental effects of this NCE</b>	During December 2019 and January 2020, the Delivery Authority has provided formal correspondence and guidance to assist Project contractors satisfy Imposed Condition requirements related to monthly reporting.		
<b>Additional actions to be undertaken (and timeframes for completion)</b>	<p>The Delivery Authority will seek to undertake a workshop with the Environmental Monitor and project contractors to confirm reporting obligations in accordance with the endorsed CEMP, Imposed Conditions and the approved Outline Environmental Management Plan.</p> <p><b>Actions completed by 29.05.2020</b></p> <ul style="list-style-type: none"> <li>• Agreed monthly reporting content and level of interpretation.</li> <li>• Agreement in principle has been reached that the monthly report will be updated. After receiving the formal comments/recommendations from the OCG, dated 29/05/2020, it has been agreed further review will be completed to ensure all items are addressed. This will be managed outside of the NCE 004 process.</li> </ul>		
<b>Proposed actions to prevent reoccurrence of the NCE (include responsibility and timeframes)</b>	<p>Review of Draft monthly report by the Cross River Rail Delivery Authority, Department of Transport and Main Roads (DTMR) and the Environmental Monitor prior to formal issue to the Delivery Authority.</p> <p>Any comments raised during this review are to be provided to project contractors in a timely manner to allow them to update their report prior to formal submission to the Cross River Rail Delivery Authority which is required to support the Project's monthly submission to the Office of Coordinator-General.</p>		

<b>NCE Ref</b>	<b>CRRDA-NCE-TSD-004</b>	<b>NCE Ref (DA)</b>	<b>CRRDA-005</b>
<b>Report completed by</b>	The Delivery Authority with advice from the Environment Monitor		
<b>Completion statement</b>	Monthly reporting content and level of interpretation has been reviewed and requirements for future monthly reports agreed. NCE closed.		



## Non-Compliance Event 14-day Report

In accordance with Condition 5 (c) of the Coordinator General Change Report (CGCR) – this report provides written advice to the Environmental Monitor and the Coordinator-General, within 14 days of the 48- hour NCE notification.

<b>NCE Ref</b>	<b>CRRDA-NCE-TSD-005</b>	<b>NCE Ref (DA)</b>	<b>CRRDA-006</b>
<b>Reported by</b>	Delivery Authority	Date of 14-day Investigation Report	21 April 2020 (note: a 7-day extension was agreed to by the Coordinator-General)
<b>Date, time and location of event</b>	Boggo Road Worksite, Woolloongabba Worksite, Albert Street Worksite and Roma Street Worksite (worksites). <b>31 March 2020.</b>		
<b>Short description of the Event</b>	<p>Coordinator-General's change report – conditions change (hours of work) 2019 Annex 1, Part C, Condition 4(d) and 13.</p> <p>Based on the information provided to the CRRDA from the Environmental Monitor, the contractor has not installed the required air quality monitoring equipment to be able to fully monitor compliance with Imposed Condition 13 relating to construction emissions including total suspended particulates (TSP), particulate matter (PM<sup>10</sup>) and deposited dust.</p>		
<b>Circumstances under which the non-compliance event occurred (include activity being undertaken, predictive modelling, monitoring etc)</b>	<p>During a site inspection undertaken by the Environmental Monitor and upon review of monthly reports, it was confirmed that neither dust deposition gauges nor calibrated weather stations were installed at the worksites. It was also noted that none of the worksites are currently measuring PM10 or TSP in accordance with the Environmental Monitor endorsed CEMP.</p> <p>Only the Woolloongabba worksite is measuring PM10 using the nearby DES air quality monitoring station (which is directly north of the site) with no other monitoring of PM10 at the south of the site. The other worksites are relying on DES or Eastern Centenary Pool monitoring stations which are up to 1.5km away from the worksites.</p> <ul style="list-style-type: none"> <li>• Boggo Road – recently established dust deposition monitoring at the western site boundary and to the east of the site. No PM10 or TSP monitoring occurring on site or close to the boundary,</li> <li>• Woolloongabba – Relies on the DES monitoring station directly north of the site for PM10 and dust deposition. No monitoring is undertaken on site or south of the site and no TSP monitoring is undertaken at all,</li> <li>• Albert Street - recently established dust deposition monitoring at the southern site boundary. No PM10 or TSP monitoring occurring on site or close to the boundary,</li> <li>• Roma Street – No monitoring is taking place on site or close by. The contractors are referring to the Eastern Centenary Pool monitoring over 1km away for dust deposition.</li> </ul>		
<b>Consultation with DAP's (if applicable)</b>	Nil, although in response to complaints from adjacent residents the contractor has described dust management measures being implemented on site.		
<b>Details of any complaints in relation to this incident</b>	There have been a total of nine complaints relating to dust across the worksites.		
<b>Root cause of non-compliance</b>	Based on the information available to CRRDA, there has been no establishment of worksite specific air quality monitoring stations in accordance with Imposed Condition 13 and endorsed CEMP.		
<b>Description of environmental effects and impacts</b>	Construction activities have the potential to generate dust with potential impacts to the surrounding environment and residents. Without local, site specific monitoring, compliance with the conditions cannot be determined and complaints cannot be verified.		
<b>Was sampling or monitoring performed in relation to this</b>	Not applicable		

NCE Ref	CRRDA-NCE-TSD-005	NCE Ref (DA)	CRRDA-006
<b>event?</b> (if so attach results)			
<b>Actions already undertaken to mitigate environmental effects of this NCE</b>	An investigation has been undertaken by the Environmental Monitor in consultation with the contractor.		
<b>Additional actions to be undertaken (and timeframes for completion)</b>	<p><b>Actions completed by 29.05.2020</b></p> <p>The contractor has confirmed there is suitable monitoring equipment available on the project to sample air quality at each site. This includes a dust deposition gauge @ Roma Street site, Albert St site, Boggo Road site and the Woolloongabba site. These gauges are collected monthly in accordance with the Australian Standard. The contractor currently also has two mobile low volume TSP &amp; PM10 air quality sampling units that are operated in addition to existing (DES) air quality stations. The mobile units are rotated around each site to collect the required data. Timing and location of each unit is dictated by type of activity being undertaken at each site. The contractor has also confirmed two additional low volume TSP &amp; PM10 air quality sampling units have been ordered for the project to supplement the current monitoring program. The technical units are sourced from overseas and delivery has been delayed due to the current Covid-19.</p>		
<b>Proposed actions to prevent reoccurrence of the NCE (include responsibility and timeframes)</b>	The Delivery Authority has been advised by the Environmental Monitor that he has requested the contractor to establish air quality monitoring stations at each worksite to meet the obligations under condition 13 and endorsed CEMP		
<b>Report completed by</b>	The Delivery Authority with advice from the Environment Monitor.		
<b>Completion statement</b>	<p>Suitable air quality monitoring equipment for the project is available to sample air quality at each relevant worksite.</p> <p>NCE closed.</p>		