Cross River Rail Project

Monthly Environmental Report

January 2021

CROSSRIVERRAIL

Queensland Government

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Executive Summary

This Monthly Environmental Report (MER) has been produced for Project Works undertaken on site for January 2021 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 – *Coordinator-General's change report – design refinements and condition changes 2020 (July 2020)* 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 (OEMP). The Cross River Rail Delivery Authority (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** (RIS Monthly Report) and **Appendix B** (TSD Monthly Report).

The Environmental Monitor (EM) has reviewed and endorsed this MER. This endorsement follows ongoing and new document reviews, and surveillance across the relevant project worksites.

The CEMPs prepared by both Unity Alliance (RIS Contractor) and CBGU JV on behalf of Pulse (TSD Contractor) for their Relevant Project Works were endorsed by the 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:

Imposed Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
1.	**General conditions** – compliance with the Project Changes relevant to the contractor's scope	Yes	The CEMP and site management plans are in accordance with the Project Changes.
2.	**Outline Environmental Management Plan** – timely submission to the Coordinator-General including required sub-plans	Yes	OEMP dated June 2020 is effective for the reporting period. OEMP has been updated as part of the RfPC9 submission and submitted to the Coordinator-General on 20 November 2020. Updated OEMP is no longer applicable as the proposed haulage route for Suthern Portal Worksite has been reverted back to the currently approved routes under the evaluated project.
3.	**Design** – achievement of the Environmental Design Requirements	NA	RIS – Detailed flood modelling is in progress to ensure design will not cause property damage from flood impacts to third parties for events up to and including the 1 in 100 Annual Exceedance Probability flood event. Detailed operational noise modelling associated with railway surface track emissions and ground-borne emissions is in progress.

Imposed Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
			Documents continue to be reviewed related to compliance with the environmental design standards. TSD – ongoing progress with design packages relating to tunnel and station work.
4.	**Construction Environmental Management Plan** – all relating to Relevant Project Works.	Yes	RIS – CEMP Revision 8 has been updated to include Clapham Yard – Stage 1 as additional scope. Revision 8 was endorsed by the EM, submitted to the Coordinator-General in January and became effective on 11 February 2021. TSD – CEMP Revision 7 for tunnelling and ongoing activities in the Central area was endorsed by the EM, submitted to the Coordinator-General in June and became effective on 5 July 2020.
5.	**Compliance and Incident management** – Non-compliance events, notifications and reporting.	Yes	There were no non-compliance events (NCEs) recorded in January 2021. Refer to Section 2.5 of this report.
6.	**Reporting** – Monthly and Annual reporting.	Yes	This MER including RIS and TSD Monthly Reports have been submitted in accordance with the conditioned requirements. RIS – Refer to **Appendix A (RIS Monthly Report)**. TSD – Refer to **Appendix B (TSD Monthly Report)**.
7.	**Environmental Monitor (EM)** – engaged and functions resumed.	Yes	Ongoing. Weekly site inspections and document reviews continue to take place.
8.	**Community Relations Monitor (CRM)** – engaged and functions resumed	Yes	Ongoing.
9.	**Community Engagement Plan** – developed and endorsed by Environmental Monitor.	Yes	CEMPs endorsed with Community Engagement Plan.
10.	**Hours of work** – Project Works undertaken during approved hours.	Yes	Project Works have been undertaken in accordance with project requirements. This has been achieved through Standard working hours, Extended work hours and Managed Work.

Imposed Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
11.	**Noise** – Project Works must aim to achieve internal noise goals for human health and well-being.	Yes	Noise monitoring following predictive modelling met project noise requirements at Sensitive Places. RIS – Refer to **Appendix A (Table 2** and **Section 3.1.4)**. TSD – Refer to **Appendix B (Table 3)**.
	Vibration – Project Works must aim to achieve vibration goals for cosmetic damage, human comfort and sensitive building contents.	Yes	Vibration monitoring following predictive vibration assessments met project requirements. RIS – Refer to **Appendix A (Table 3)** and **Section 3.1.4.** TSD – Vibration monitoring continues across the sites and results are compliant with conditioned requirements Refer to **Appendix B (Table 2)**.
12.	**Property damage** – relating to ground movement.	Yes	Predicitve vibration modelling has been undertaken for Relevant Project Works and Property Damage Sub-plans have been developed and implemented RIS – Pre-condition surveys have been completed at heritage, commercial and residential buildings at RNA, Northern Corridor and Fairfield to Salisbury stations. TSD – Vibration modelling has been prepared and is ongoing. Where required, building condition survey reports are completed for heritage and residential buildings.
13.	**Air quality** – Works must aim to achieve air quality goals for human health and nuisance.	Yes	Project Works met air quality goals. RIS – Refer to **Appendix A (Table 4, Section 3.2.4,** and **Figures 1, 2 and 3)**. TSD – Refer to **Appendix B (Table 4** and **Table 5)**.
14.	**Traffic and transport** – Works must minimise adverse impacts on road safety and traffic flow.	Yes	Traffic Management Plans covered in the CEMPs and Sub-plans for all active worksites have been reviewed by the EM.
15.	**Water quality** – Works must not discharge groundwater from the construction site above the relevant environmental values and water quality objectives.	Yes	Monitoring and reporting on groundwater and surface water quality was undertaken in accordance with RIS and TSD Water Quality Management Plans. RIS – No groundwater discharges occurred for the month. Post-rainfall monitoring was triggered at Mayne Yard. Surface water monitoring results for Breakfast Creek

Imposed Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
	Monitor and report on water quality in accordance with CEMP and Sub-plans.		confirmed off-site discharges met project discharge criteria. Refer to **Appendix A (Table 6** and **Section 3.3.5)** for more details. Refer to **Appendix A (Table 7)** for routine surface water monitoring results. TSD – Seven groundwater discharges from Albert Street, Roma Street, Boggo Road and Woolloongabba worksites were monitored and shown to be consistent with pre-construction water quality levels, however are just outside the Water Quality Objectives. No external influences were introduced by the construction activities. Refer to **Appendix B (Table 6)** for ground water monitoring results. Refer to **Appendix B (Table 7** and **Table 8)** for surface water monitoring results.
16.	**Water resources** – Evaluate potential impact, plan works, implement controls and monitor inflow of groundwater associated with drawdown.	Yes	RIS – There will be no sustained groundwater extraction involved in the RIS scope of works so predictive modelling of groundwater drawdown is not required. Collection of hydrological data to model potential inflow rates into excavations during construction has been undertaken. TSD – Inflow of groundwater into the worksites is being continously monitored to validate the predictive modelling.
17.	**Surface water** – 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.	**Erosion and sediment control** – 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	Site specific ESC plans for all active work sites have been reviewed by the EM and implemented on site.

Imposed Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
19.	**Acid sulfate soils** – managed as per the Queensland Acid Sulfate Soil Technical Manual.	Yes	Acid Sulfate Soil Management Plans for all active worksites are in place.
20.	**Landscape and open space** – general requirement to minimise impacts on landscapes and open space values and specific requirements around Victoria Park.	Yes	Sewer relocation works in Victoria Park continued under the Site Environmental Plan and the Department of Environment and Science (DES) approved Heritage Exemption Certificates.
21.	**Worksite rehabilitation** – worksites rehabilitated as soon as practicable upon completion of works or commissioning, and in consultation with Brisbane City Council.	NA	N/A

Non-Compliance Events

There were no NCE's raised in January 2021.

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
CGCR	Coordinator-General's Change Report
CRM	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
DES	Department of Environment and Science
EIS	Environmental Impact Statement
EM	The Environmental Monitor engaged in accordance with Imposed Condition 7
ESC	Erosion and sediment control
IECA	International Erosion Control Association
Imposed condition/s	A condition/s imposed by the Coordinator-General under section 54B of the SDPWO Act for the Project
MER	Monthly Environment Report
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
RfPC	Request for Project Change
RIS	Rail, Integration and Systems
SDPWO Act	*State Development and Public Works Organisation Act 1971*
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, a number of Requests for Project Change (RfPC) submissions have been evaluated by the Coordinator-General. RfPC 8 is applicable for the works that took place in January 2021.

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 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. The Project established environmental management plans and secured some of the secondary environmental approvals in addition to enabling works.

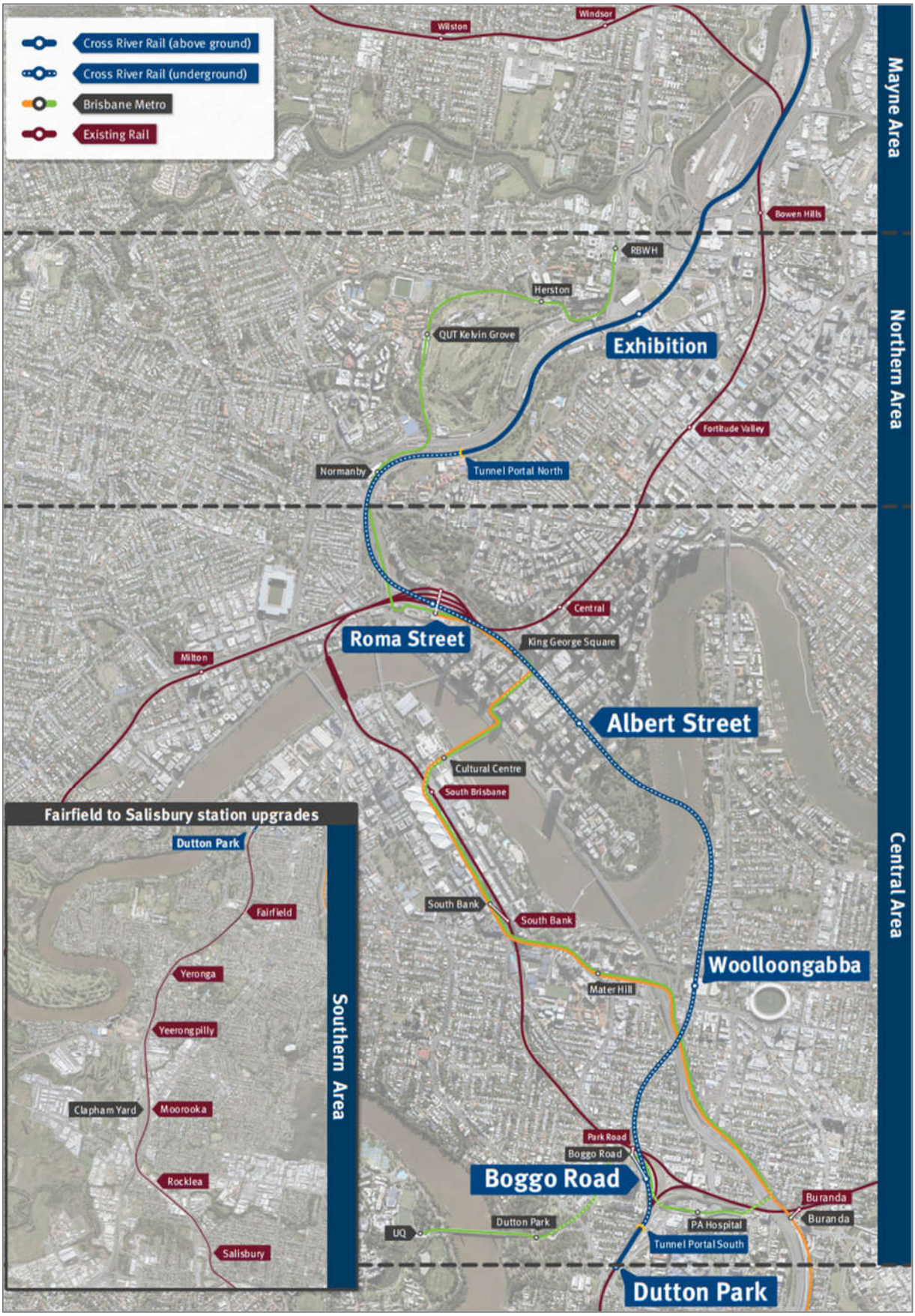
The two main delivery packages which require reporting under the Coordinator-General's imposed conditions are:

- 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; and
- Southern Area.

These are shown in the figure over.


Cross River Rail (above ground)
Cross River Rail (underground)
Brisbane Metro
Existing Rail
Mayne Area
Northern Area
Central Area
Southern Area
Windsor
Wilston
Bowen Hills
RBWH
Herston
QUT Kelvin Grove
Exhibition
Fortitude Valley
Normanby
Tunnel Portal North
Central
Roma Street
King George Square
Milton
Albert Street
Cultural Centre
South Brisbane
South Bank
South Bank
Woolloongabba
Mater Hill
Park Road
Boggo Road
Boggo Road
Buranda
Buranda
PA Hospital
Tunnel Portal South
Dutton Park
UQ
Dutton Park
Fairfield to Salisbury station upgrades
Dutton Park
Fairfield
Yeronga
Yeerongpilly
Clapham Yard
Moorooka
Rocklea
Salisbury

1.3. Reporting Framework

This MER has been prepared to comply with Imposed 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 NCE's, 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 EM.

1.4. Monthly Environment Report Endorsement

This MER has been endorsed by the EM and the endorsement provided to the Coordinator-General.

2. Compliance Review

This Monthly Environment Report has been reviewed and endorsed by the EM as per Imposed Condition 7 of the CGCR.

2.1. Relevant Project Works

The following Project Works were undertaken in January 2021:

Area	Project Works
Mayne Area	• Stormwater drainage works; • Earthworks for new combined services route alignment; • Ground improvement piling for reinforced soil structure walls; • Ground improvement for Graffiti Wash facility, Crew Change building, and track sectioning cabin and slab; • Stabling yard security fence installation; • Preparation works for piling of Ferny Grove Flyover pier protection; and • Retaining wall works.
Northern Area	• Piling preparation for Bowen Bridge and Inner-City Bypass pier protection; • Line drilling and rock excavation to widen the rail corridor adjacent to O'Connell Terrace; • Soil nail installation adjacent to O'Connell Terrace; • Public Utility Provider (PUP) relocations (sewer, water, electrical); • Overhead line installations and wire transfers to facilitate the demolition of western platform; • Western platform demolition; • Piling pad installation and associated service relocations; • Temporary retention piling and water main relocation at the Northern Portal; and • Ongoing site establishment at Northern Portal.
Central Area	• Roma Street – demolition of the Brisbane Transit Centre complete; lower adit blasting; cavern heading excavation continues; Services Building excavation commenced; station building piling pad complete and piling commenced; and services diversion underway.
	• Albert Street – station box excavation continues and all stressed anchors and shotcrete complete along Albert Street and Mary Street elevations on Lot 1; tunnel and adit excavation and ground stabilisation works continue; prep works for ATA1 collar underway and alimak installation complete on Lot 2; and piling commenced and is ongoing on Lot 3.

Area	Project Works
	• Woolloongabba – TBM #1 (Else) and 8 gantries assembled and ready to commence in February; TBM #2 (Merle) Shield onsite and assembly underway; conveyor assembly complete; southern cavern heading excavation complete and bench excavation nearing completion; continuous slab pouring occurring within the station box; and the first alimak installed and commissioned.
	• Boggo Road – excavation and retention work in the station box continues; installation of canopy tubes under busway and Park Road station continues; erection of tower crane; and established fencing at Outlook Park.
	• Southern Portal – perimeter fencing along site boundary along Kent Street and bikeway commenced; first two sections of the piling pad utilising tunnel spoil from Roma Street completed; commenced sewer and utilities relocation works in Railway terrace, Kent Street and Pound Street; and completed establishment works for shaft 4/1 at the TRI building.
Southern Area	• Early works continuing at Cope Street, Dutton Park; • Yeronga site establishment; • Yeronga water main relocation; • Yeronga track lowering enabling works; and • Geotechnical, contaminated land and acid sulphate soil investigations at Clapham Yard.

2.2. Key Environmental Elements

2.2.1. Noise

The Coordinator-General's conditions establish a framework for managing the impacts of noise. The Imposed Conditions do not establish noise limits. Compliance with the Imposed Conditions noise requirements involves demonstrating the implementation of the endorsed CEMP and associated Noise and Vibration Management Plan. This establishes the management measures to be applied which aims to achieve the identified noise goals as far as reasonably practicable. The CEMP also includes requirements for the provision of the required community notifications of upcoming work, potential impacts, and how the project team can be contacted in relation to any potential impacts. For Project Works where potential noise impacts are modelled to be above the noise goal but below the noise goal plus 20dBA, this work is authorised where the endorsed CEMP and associated Noise and Vibration Management Plan is being implemented. For Project Works where potential noise impacts are predicted to be more than 20dBA above the relevant noise goal, specific engagement is required with Directly Affected Persons (DAPs) for these works.

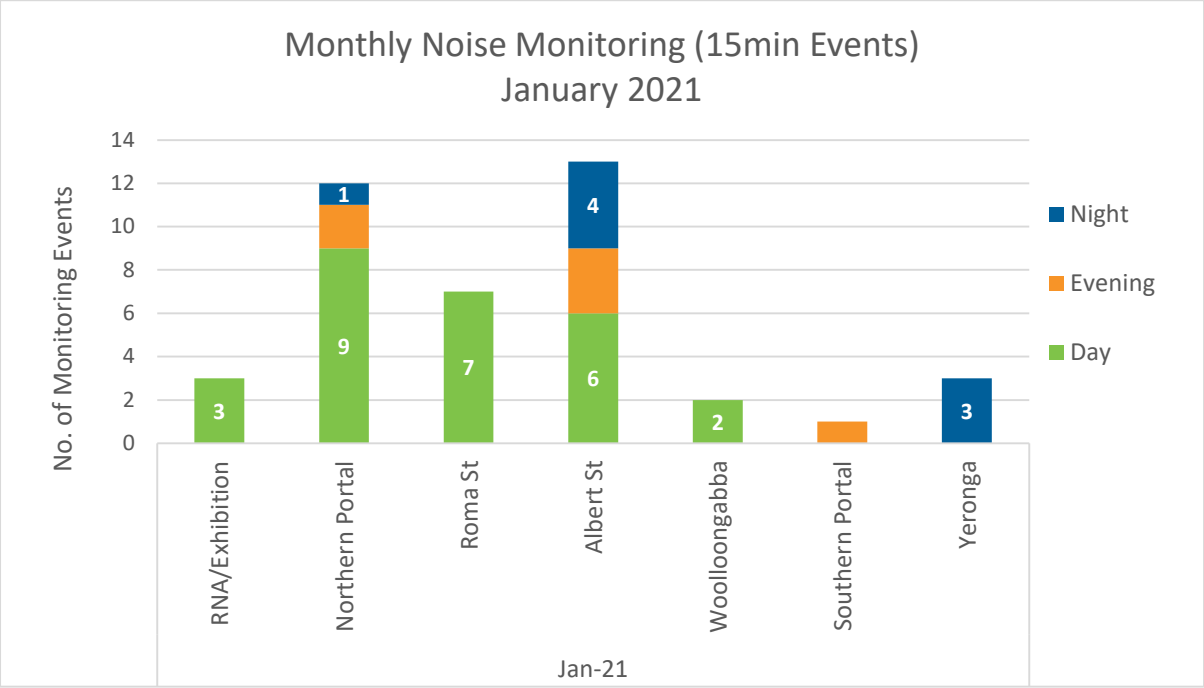
Where internal monitoring was not possible, contractors have undertaken external monitoring at nominated locations. To determine compliance with the project's noise requirements and to calibrate modelled predictions the project applies recommended façade attenuation corrections, which consider receiver property type.

In the Northern Area, attended noise monitoring was undertaken to validate predictive modelling at sensitive places during micro-piling works and station demolition works at RNA/Exhibition out of standard hours. Monitoring was also undertaken during temporary retention piling and utility relocation works at the Northern Portal within standard hours. Noise levels met project requirements. Noise monitoring in response to complaints was not triggered. Monitoring results for the Northern Area are detailed in Table 2, **Appendix A** and Table 3, **Appendix B**.

In the Central Area, noise monitoring was undertaken to validate predictive modelling at sensitive places close to the project worksites and in response to noise complaints. Monitoring results for the Central Area are detailed in Table 3, **Appendix B**. The TSD contractors reported that the project noise requirements have been met during this reporting month.

In the Southern Area, noise monitoring was undertaken to validate predictive modelling at sensitive places during water main relocation works at Yeronga during standard hours. Monitoring verified predicted exceedances at residential properties consistent with the noise model. Directly Affected Persons (DAPs) were notified in accordance with project requirements. There were no noise complaints received during these works.

A summary of noise monitoring events for the month is provided in the chart below.



2.2.2. Vibration

In the Northern Area, vibration monitoring was undertaken at the Northern Portal to validate predictive modelling for ground stabilisation works. The contractor confirmed the results met the project goals for the nominated receiver types. Vibration monitoring results for Northern Portal are detailed in **Appendix B** (table 2). Vibration monitoring was undertaken at heritage structures at RNA during rock excavation and platform demolition works. Results confirmed compliance with building specific vibration limits as outlined in the Property Damage Sub-plan. Vibration monitoring results for RNA/Exhibition are detailed in **Appendix A** (Table 3).

In the Central Area, vibration monitoring took place to validate predictive modelling of piling, excavation and controlled blasting activities at Roma Street, Woolloongabba and Albert Street worksites. One vibration complaint was received from works occurring at Albert Street. The contractor reported results met the project's nominated goals. Vibration monitoring results for the Central Area are detailed in **Appendix B** (Table 2).

2.2.3. Air Quality

2.2.3.1. Dust Deposition

Dust deposition monitoring was conducted at Mayne Yard, Northern Area and Central Area worksites from mid-December to mid-January.

Monitoring results for Mayne Yard, Northern Area and the Central Area worksites met the dust deposition air quality goal. A summary of dust deposition monitoring is provided in the table below.

Air Quality – Dust Deposition Monitoring			
Area	**Active Site***	**Monitoring Location**	**Comments**
Mayne Area	Mayne Yard	Mayne Yard East	- Results met air quality goal.
Northern Area	RNA / Exhibition	RNA Showgrounds	- Results met air quality goal.
	Northern Corridor	Northern Corridor (near Brisbane Girls Grammar School)	- Results met air quality goal.
Central Area	Albert Street	Mary Street	- Results met air quality goal.
	Boggo Road	Quarry Street (north of the site)	- Results met air quality goal.
		Peter Doherty Street/Leukemia Foundation	- Results met air quality goal.
	Southern Portal	Dutton Park Station	- Results met air quality goal.
		PA Hospital - Central Energy Unit along Kent Street	- Results met air quality goal.
	Roma Street	Roma Street Station	- Results met air quality goal.
	Woolloongabba	Russian Orthodox Cathedral	- Results met air quality goal.
		Woolloongabba Busway	- Results met air quality goal.

* Southern Area (Dutton Park and Fairfield to Salisbury) had no active high-risk worksites.

2.2.3.2. Particulate Matter and Total Suspended Particulates

Monitoring for particulate matter (PM_{10}) and total suspended particulates (TSP) was conducted at Mayne Yard, Northern Area and Central Area worksites during the reporting period. All worksites met project air quality goals. The Albert Street monitoring unit stopped functioning on the 10, 20 and 26 January due to a technical fault. The first fault occurred on a Sunday and was rectified as soon as practicable. The nearby DES air quality station (Brisbane CBD) demonstrated levels in the area were below the project air quality goals for the dates specified above when the monitor had stopped functioning.

A summary of particulates monitoring is provided in the table below.

Air Quality – PM_{10} / TSP Monitoring			
Area	**Active Site***	**Monitoring Location**	**Comments**
Mayne Area	Mayne Yard	Mayne Yard North - Eastern Air Shed (Burrows St, Bowen Hills)	- Results met air quality goals.
Northern Area	RNA / Exhibition	RNA - Western Air Shed (Lanham Street, Bowen Hills)	- Results met air quality goals.
	Northern Corridor	Brisbane Girls Grammar School	- Results met air quality goals.
Central Area	Albert St	iStay River City and Capri (Corner of Mary Street and Albert Street)	- Results met air quality goals. - Results met air quality goals (note that the monitoring unit had a technical fault on 10, 20 and 26 January).
	Boggo Rd / Southern Portal	North-east of Boggo Road worksite	- Results met air quality goals.
	Roma St	Roma Street Station	- Results met air quality goals.
	Woolloongabba	Place Park, Woolloongabba	- Results met air quality goals.

*Southern Area (Dutton Park, Fairfield to Salisbury Stations and Clapham Yard) had no active high-risk worksites. Northern Portal PUP/utility works are exempt from CG requirements.

2.2.4. Water Quality

Monitoring and reporting on water quality was undertaken in accordance with the Project's Water Quality Management Plans.

2.2.4.1 Surface Water

Routine monitoring was undertaken at the receiving waters of all active worksites with the exception of York's Hollow as the TSD contractor has held the Northern Portal site for less than a month and is required to monitor on a monthly basis as per the Water Quality Monitoring Plan. Monitoring will commence in February. Post-rainfall monitoring was triggered at Mayne Yard following rainfall events that exceeded 20-25mm over 24 hrs from 16-18 January. Post-rainfall monitoring in receiving waters at Breakfast Creek met project water quality discharge criteria[1].

Active surface water discharge (dewatering by pumping) was undertaken in the Central Area at the Boggo Road worksite. Surface water discharge results met project water quality discharge criteria.

Surface water quality monitoring is summarised in the table below:

Surface Water Quality Monitoring					
Area	**Site**	**Discharge**	**Post-Rain Monitoring**	**Routine Monitoring**	**Comments**
Mayne Area	Mayne Yard North	Yes	Yes	Yes	- Passive surface water discharge. - Post-rainfall monitoring in Breakfast Creek met project water quality discharge criteria.
Northern Area	Northern Corridor	Yes	No	No	- Passive surface water discharge. - Post-rainfall monitoring was not triggered.
Central Area	Albert Street	No	No	Yes	- No surface water discharges.
	Boggo Road / Southern Portal	Yes	No	Yes	- Active surface water discharges. - Results met project water quality discharge criteria.
	Roma Street	No	No	Yes	- No surface water discharges.
	Woolloongabba	No	No	Yes	- No surface water discharges.
Southern Area	Dutton Park and Fairfield to Salisbury Stations	No	No	Yes	- No surface water discharges.

2.2.4.1. Groundwater

There were no groundwater discharges at Mayne, Northern and Southern Area worksites.

[1] Guidelines for Best Practice Erosion and Sediment Control (IECA, 2008) and the Department of Transport and Main Roads' Technical Standard MRTS52 – Erosion and Sediment Control

Groundwater discharges occurred in the Central Area at Roma Street, Albert Street, Woolloongabba and Boggo Road worksites. The groundwater discharge results reported for the month exceeded the Project's Water Quality Objectives (WQO's) for Total Nitrogen, Oxidised Nitrogen, Ammonia Nitrogen and Organic Nitrogen and filterable reactive phosphorous. These results however were consistent with the receiving environments baseline monitoring pre-construction data.

Groundwater Quality Monitoring			
Area	**Site**	**Discharge**	**Comments**
Mayne Area	Mayne Yard North	No	- No groundwater discharges.
Northern Area	Northern Corridor	No	- No groundwater discharges.
Central Area	Albert Street	Yes	- Groundwater discharge (dewatering) - Discharge of groundwater did not meet Project WQO's but was generally consistent with pre-construction conditions and no external influences were introduced by construction activity.
	Boggo Road / Southern Portal	Yes	- Laboratory results have not yet been received and will be reported in the next monthly report.
	Roma Street	Yes	- Groundwater discharge (dewatering) - Discharge of groundwater did not meet Project WQO's but was generally consistent with pre-construction conditions and no external influences were introduced by construction activity.
	Woolloongabba	Yes	- Groundwater discharge (dewatering) - Discharge of groundwater did not meet Project WQO's but was generally consistent with pre-construction conditions and no external influences were introduced by construction activity.
Southern Area	Fairfield to Salisbury Stations	No	- No groundwater discharges.

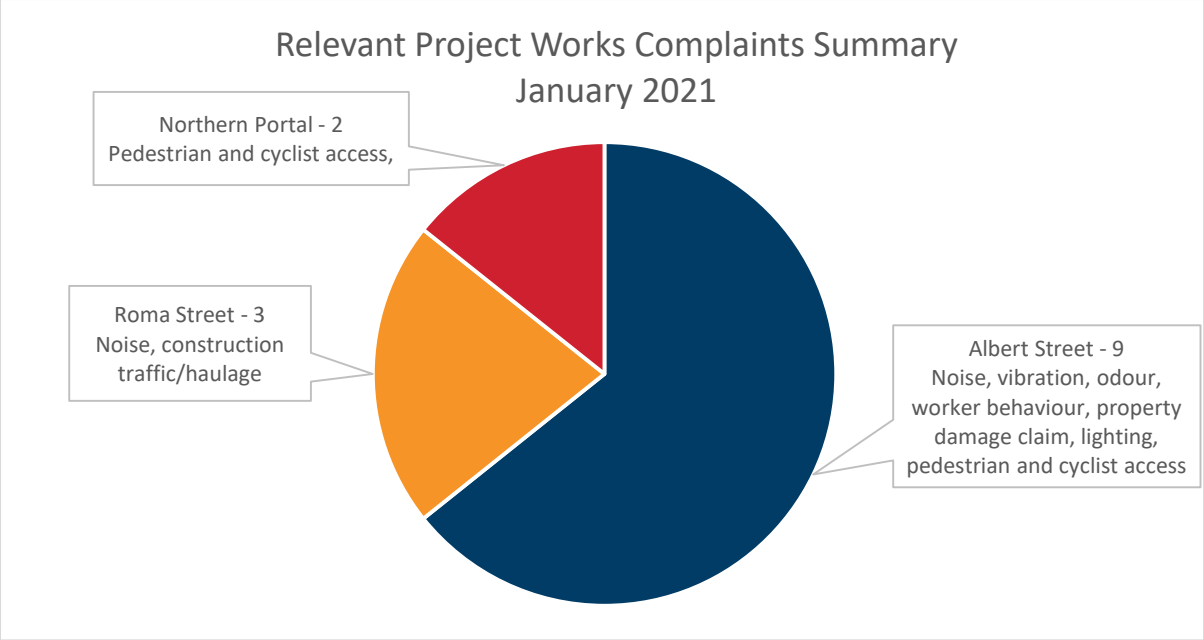
2.2.5. Erosion and Sediment Control

Site specific Erosion and Sediment Control (ESC) Plans have been prepared, updated, and implemented at Mayne Yard, Northern Corridor, RNA Showgrounds, Roma Street, Albert Street, Woolloongabba, Boggo Road, the Southern Portal and Clapham Yard.

2.3. Complaints Management

A total of 18 complaints were received during the month, of which three were identified as not being related to the project. RIS works received one complaint related to out of hours works during water main relocation works at Yeronga Station, however utility works are excluded from the Coordinator-General's conditions. It verified that all necessary notifications had been undertaken for the project. TSD activities received 14 complaints related to works at the Northern Portal, Roma Street and Albert Street worksites. All complaints were responded to within the required timeframes.

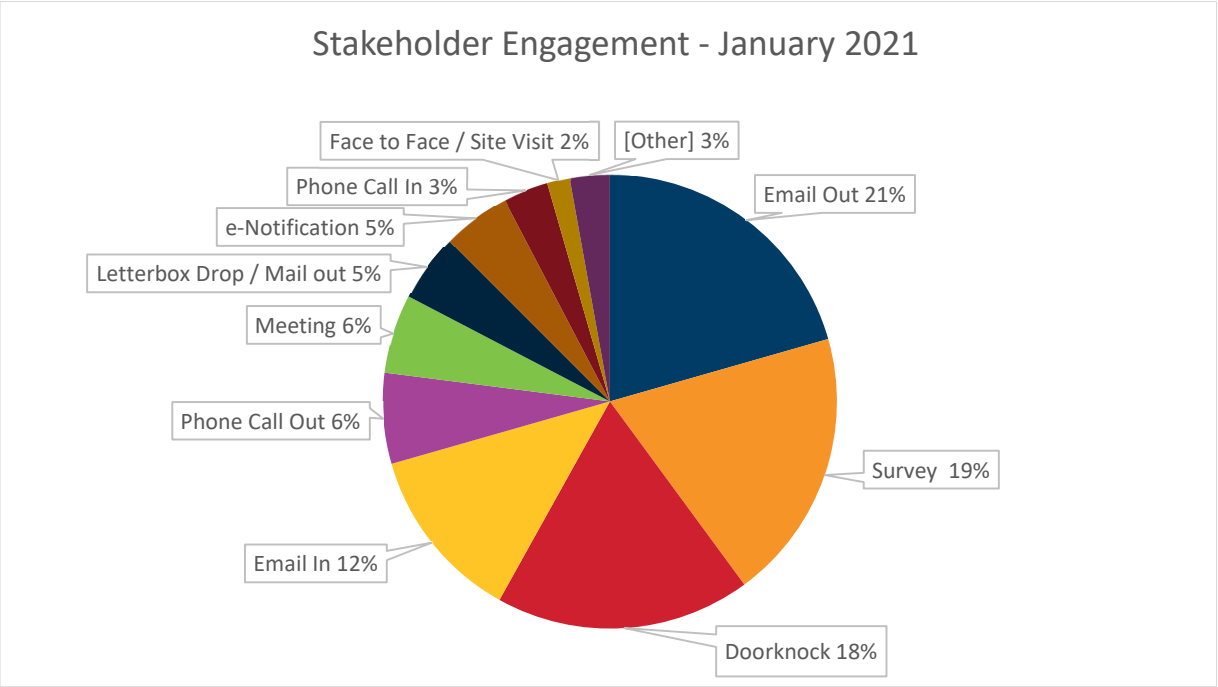
The Relevant Project Works related complaints summary for the month is provided in the chart below.



Where attended noise monitoring was undertaken in response to a complaint, the contractor confirmed on all occasions that works undertaken at the time of the complaint adhered to project requirements. In some instances, previous attended noise monitoring data, representative of the relevant construction activities was used to confirm the works adhered to the project noise requirements.

To close out a complaint the monitoring data is reviewed (where applicable), against compliance with the CEMP, site environmental management plans and permits, and checks that required community notification has taken place. They will also confirm planned mitigation to reduce the impact was implemented. This is reviewed together to demonstrate if project requirements have been met.

For scheduled out of hours works, community notification was provided, as well as regular project updates. The following chart summarises the types of stakeholder engagement undertaken on the project during the month.



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	• Ground improvement piling for reinforced soil structures wall; • Signaling and commissioning works in Mayne Yard North; • Piling of Ferny Grove flyover pier protection works; and • Breakfast Creek bridge platform works.
Northern Area	• Piling for Bowen Bridge and ICB pier protection; • Removal of billboard near Bowen Bridge Road; • OHLE temporary relocations; • Northern Portal piling, bulk excavation, shotcrete and sewer works; • RNA Platform 3 demolition; • Ground stabilisation for bridge BR43; and • Sacrificial retaining wall RW225.
Central Area	• Roma Street – enabling works for the Services Building and the new station building including piling and excavation, continued excavation and controlled blasting within the cavern; • Albert Street – excavation of station box to continue to mid-2021 on Lot 1, 24-hour tunnelling will continue within the acoustic enclosure on Lot 2 and capping beam construction and station box excavation to commence on Lot 3 in April-May; • Woolloongabba – Launch TBM #1 and #2 north towards Albert Street Station, excavation of southern cavern area and blasting of southern tunnels to commence in March; • Boggo Road – ongoing excavation of station box and installation of canopy tubes, excavation of northern cavern beneath the canopy tubes and construction of foundations within station box to commence in Late Feb - early March; and • Southern Portal – continue utility relocation and Scheduled Corridor Access System (SCAS) works, and piling works to commence in February.
Southern Area	• Clapham Yard enabling works including import of fill and stockpiling of material; • Clapham Yard ground surface treatment - remove and replace; • Yeronga tree clearing; and • Yeronga retaining wall demolition.

2.5 Non-Compliance Events

No new NCEs have been raised this month. The summary of NCEs to date is shown in the table below.

Status	Date of event	Category	Area as on the Report	Conditions affected	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
⊞ **Open**									
⊟ **Closed**									
CRRDA-001-RIS-001	11/09/19	Noise	Yeronga Station	4, 10, 11	11/10/19	14/11/19	26/11/19	18/12/19	01/10/20
CRRDA-002-TSD-001	27/03/20	ESC	Woolloongabba	4, 15, 18	30/03/20	31/03/20	22/04/20	06/11/20	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	06/11/20	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	06/11/20	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	06/11/20	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	06/11/20	31/05/20
⊟ **Withdrawn**									
CRRDA-007-RIS-002	04/01/20	Air Quality	Mayne Yard, Victoria Park, Yeronga, Fairfield	13	28/04/20	30/04/20	Withdrawn		
CRRDA-008-TSD-006	04/08/20	Working Hours	Roma Street	4,10	28/04/20	30/04/20	Withdrawn		

Gate 1 - EM notification to contractor. NCE confirmed
Gate 2 - 48 hour NCE notification submitted to CG
Gate 3 - 14 day report submitted
Gate 4 - 14 day report uploaded to CRR website
Gate 5 - Records of mitigation / preventative measures submitted to the CG — Complete

Throughout construction activities, events and incidents are routinely investigated to verify compliance with the Imposed Conditions and to verify that management and mitigation measures are implemented in accordance with CEMP and sub-plans.

Appendix A – RIS Monthly Report

Monthly CGCR Report – January 2021

Cross River Rail – Rail, Integration and Systems Alliance

Assured Integration for a New Era

Table of Contents

1 Progress Summary

1.1 Summary of Project Works

The following *Project Works* continued in January 2021:

- Mayne Yard North
  - Stormwater drainage works
  - Mayne Yard Suburban Line Earthworks for new Combined Services Route alignment
  - Ground improvement piling for Reinforced Soil Structures (RSS) walls
  - Stabling yard security fence installation
  - Ground Improvement of Graffiti Wash Facility and Crew Change Building
  - Ground Improvement works for track sectioning cabin and slab.
- Northern Corridor
  - Piling preparations for Bowen Bridge and Inner City Bypass (ICB) pier protection (RC22/RC23)
- RNA Showgrounds
  - Line drilling and rock excavations to widen the Northern corridor adjacent O'Connell Terrace
  - Soil nail installation adjacent to O'Connell Terrace
  - Public Utility Plant (PUP) relocations (Communications and Electrical)
  - RC21 pier protection works
  - Overhead line installations and wire transfers to facilitate the demolition of Western Platform
- Fairfield to Salisbury (F2S)
  - Yeronga site establishment
  - Yeronga water main relocation
- Clapham Yard
  - Geotechnical and CLASS (Contaminated land and acid sulphate soil) investigations

The following *Project Works* started in January 2021:

- Mayne Yard North
  - Preparation works for RC14 cast in place (CIP) piling of Ferny Grove Flyover pier protection
  - RW110 works
- Northern Corridor
  - No new works commenced in January 2021
- RNA Showgrounds
  - Western platform demolition
  - RW225 piling pad installation and associated service relocations.
- F2S
  - PUP location works
  - Enabling works for Yeronga track lowering
- Clapham Yard
  - No new works commenced in January 2021

The following *Project Works* are proposed in February 2021:

- Mayne Yard North
  - Commence continuous flight auger ground improvement piling for Reinforced Soil Structures wall RW110
  - RC14 CIP piling of Ferny Grove Flyover pier protection
- Northern Corridor
  - Commence piling for Bowen Bridge and ICB pier protection
  - Removal of billboard near Bowen Bridge Road
  - OHLE temporary relocations
- RNA
  - Ground stabilisation for BR43
  - Sacrificial retaining wall RW225
- F2S
  - Yeronga tree clearing
  - Yeronga Retaining Wall demolition
  - New Platform retaining wall FRP
- Clapham Yard
  - Enabling Works including fill import and stockpiling of imported material

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	Activity source of the concern	Period	Unity Response	Status
21/01/21	Yeronga	Out of Hours Notification	Water main works	Out of standard Working Hours	The Unity team were made aware of this complaint once the activity was completed. The complaint was related to the traffic disruption notification not mentioning noise impacts. The relevant Directly Affected Persons (DAPs) were notified as per the project requirements which is a separate notification to the traffic disruption notification. The project is therefore compliant with the Project's community engagement plan (Condition 9).	Closed
29/01/21	Spring Hill	Traffic	N/A	Standard Hours	Stakeholder phoned community hotline to complain about heavy traffic along Gregory Terrace after being referred to the project by Brisbane City Council. The complaint was investigated, and it was confirmed the heavy traffic experienced by the stakeholder was due to school traffic and not UNITY works. There were no UNITY activities with the potential of affecting traffic in this area underway at the time of the complaint.	Closed

3 Environmental Monitoring Results

The below section summarises the monitoring results to be reported in accordance with 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 (CEMP) occurs.

3.1.1 Noise Monitoring

Attended noise monitoring was triggered based on the predictive noise assessments for

- Micro-piling works (O'Connell Terrace Bridge – Non-standard hours) and station demolition works (RNA Western Platform – Non-standard hours) (concurrent activity)
- Service Location works (Fairfield Road and Cowper Street – Non-standard hours)

In accordance with the CEMP, attended outdoors monitoring was undertaken to validate the predictive assessment.

Monitoring was undertaken in order to confirm that the model was accurate and that works could continue to proceed as planned.

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

3.1.2 Noise monitoring Results

The below table summarises the noise monitoring results for reporting period.

Table 2 Summary of Noise Monitoring Data

Location and Receiver Type Details	Type of Monitoring	Working Hours	Noise Type	Purpose of Monitoring	Predictive model LA_{10} (dBA)	Performance Goal (dBA) (Condition 11(a), Table 2, LA_{10} noise goals)	Performance Goal (dBA) – (Condition 11(c), Table 2 LA_{10} noise goal + 20dBA))	Measured LA_{10} (dBA)	Measured LA_{eq} (dBA)	Is performance Goal exceeded?	Comments
Tufton Street, Bowen Hills Residential	Attended – Outdoors[1]	Out of Standard Hours Sunday 24/1/21 09:44	Intermittent	Construction Monitoring at Sensitive Places - Model Verification	67	52 (Outdoors) (42dBA default goal + 10dBA façade reduction)[2]	72 (Outdoors) (52+ 20dBA)	70	67	No exceedance	Micro-piling Works and station demolition works For interpretation, please refer to section 3.1.4.1.1
Cowper Street, Yeronga Residential	Attended – Outdoors[1]	Out of Standard Hours Thursday 28/1/21 20:54	Intermittent	Construction Monitoring at Sensitive Places - Model Verification	82	52 (Outdoors) (42dBA default goal + 10dBA façade reduction)[2]	72 (Outdoors) (52+ 20dBA)	75	73	Exceedance	Service location Works For interpretation, please refer to section 3.1.4.1.2
Cowper Street, Yeronga Residential	Attended – Outdoors[1]	Out of Standard Hours Thursday 28/1/21 21:10	Intermittent	Construction Monitoring at Sensitive Places - Model Verification	77	52 (Outdoors) (42dBA default goal + 10dBA façade reduction)[2]	72 (Outdoors) (52+ 20dBA)	76	73	Exceedance	Service location Works For interpretation, please refer to section 3.1.4.1.2
Shottery Street, Yeronga Residential	Attended – Outdoors[1]	Out of Standard Hours Thursday 28/1/21 21:27	Intermittent	Construction Monitoring at Sensitive Places - Model Verification	74	52 (Outdoors) (42dBA default goal + 10dBA façade reduction)[2]	72 (Outdoors) (52+ 20dBA)	74	72	Exceedance	Service location Works For interpretation, please refer to section 3.1.4.1.2
Tufton Street, Bowen Hills Residential	Attended – Outdoors[1]	Out of Standard Hours Sunday 31/1/21 09:25	Intermittent	Construction Monitoring at Sensitive Places - Model Verification	78	52 (Outdoors) (42dBA default goal + 10dBA façade reduction)[2]	72 (Outdoors) (52+ 20dBA)	71	68	No exceedance	Micro-piling Works and station demolition works For interpretation, please refer to section 3.1.4.1.1
Tufton Street, Bowen Hills Residential	Attended – Outdoors[1]	Out of Standard Hours Sunday 31/1/21 09:42	Intermittent	Construction Monitoring at Sensitive Places - Model Verification	78	52 (Outdoors) (42dBA default goal + 10dBA façade reduction)[2]	72 (Outdoors) (52+ 20dBA)	69	66	No exceedance	Micro-piling Works and station demolition works For interpretation, please refer to section 3.1.4.1.1

- Note (1) - Monitoring Method
  - Note 2 of Imposed Condition 11 Table 2 states *Where internal noise levels are unable to be measured or monitored, the typical noise reductions presented in Guideline Planning for Noise Control, Ecoaccess, DEHP, January 2017 (PFNC) apply*.
  - The monitoring was undertaken to validate the model therefore external noise measurements are appropriate to determine the impact of construction noise.
- Note (2) – Façade Attenuation
  - Note 2 of Imposed Condition 11 Table 2 states *Where internal noise levels are unable to be measured or monitored, the typical noise reductions presented in Guideline Planning for Noise Control, Ecoaccess, DEHP, January 2017 (PFNC) apply*.
  - The PFNC guideline can no longer be accessed. The Department of Environment and Science (DES) website still states this guideline is under review and is yet to release an alternative guideline
  - Former revisions of the PFNC, in particular Table 7 stated the following regarding typical noise reductions through the building façade:
    - 5 dB – Window wide open
    - 10 dB – Partially closed
    - 20 dB – single glazed, closed
    - 25 dB – Thermal double glazing, closed
  - The RfPC-4 Technical Report considered that all receptors had closed external single glazing for the assessment of construction noise impacts.
  - The Queensland Ombudsman assessed this assumption for the Airport Link Project and recommended that 10dB be adopted for major infrastructure projects in Queensland[1].
  - Additionally, a number of acoustic studies have shown that 10 dB is a suitable assumption for open windows. Most importantly this requirement only applies to temporary rail works within the project footprint and does not apply to long term operational rail noise exposure.
  - Accordingly, it is considered appropriate to consider a 10 dB reduction on this basis. This assumption can be used for predictive modelling and for noise measurements, where indoor noise measurements are not practicable.

[1] https://www.ombudsman.qld.gov.au/ArticleDocuments/218/Airport_Link_Ombudsman_Statement.pdf.aspx, pages 208-210, Section 9.8.6

3.1.3 Vibration Monitoring

Vibration monitoring was triggered during the reporting period based on the predictive vibration assessments for specific activities.

Table 3 Summary of Vibration Data

Location	Date (Start and Finish)	Time of day	Closest DAP / Sensitive Place	Receiver Type (table 3 – Imposed Condition 11(e))	Purpose of Monitoring	Maximum vibration Level (mm/s)	Vibration goal for receiver (mm/s)	Exceedance of vibration limit?	Comments
RNA Vet's Office and Quarters building	05/01/21-06/01/21	N/A	Beef Cattle Pavilion and O'Connell Terrace Wall	Heritage Structure (DIN4150-3 Group 1)	Construction Monitoring at Sensitive Places - Model Verification	0.45	20 – (source: Property Damage Sub-Plan)	No exceedance	Lanham Street Rock Demolition For interpretation, please refer to section 3.1.4.2.1
Industrial Pavilion	23/01/21-24/01/21	N/A	Industrial Pavilion	Heritage Structure (DIN4150-3 Group 3)	Construction Monitoring at Sensitive Places – Model Verification	Vibration meter lost data – the data from this monitoring session (48 hours) was lost due to settings failure on unit. The relevant vibration exceedance alarms were active during this monitoring period with no exceedances or warning levels of vibration triggered. The settings were rectified, and further monitoring undertaken at the same location once this was rectified (below).	3 – (source: Property Damage Sub-Plan)	No exceedance	RNA Station Demolition For interpretation, please refer to section 3.1.4.2.2
John MacDonald Stand	23/01/21-24/01/21	N/A	John MacDonald Stand	Heritage Structure (DIN4150-3 Group 3)	Construction Monitoring at Sensitive Places – Model Verification	0.05	3 – (source: Property Damage Sub-Plan)	No exceedance	RNA Station Demolition For interpretation, please refer to section 3.1.4.2.3
Industrial Pavilion	30/01/21-31/01/21	N/A	Industrial Pavilion	Heritage Structure (DIN4150-3 Group 3)	Construction Monitoring at Sensitive Places – Model Verification	0.48	3 – (source: Property Damage Sub-Plan)	No exceedance	RNA Station Demolition For interpretation, please refer to section 3.1.4.2.2
John MacDonald Stand	30/01/21-31/01/21	N/A	John MacDonald Stand	Heritage Structure (DIN4150-3 Group 3)	Construction Monitoring at Sensitive Places – Model Verification	0.43	3 – (source: Property Damage Sub-Plan)	No exceedance	RNA Station Demolition For interpretation, please refer to section 3.1.4.2.3

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

3.1.4 Interpretation

3.1.4.1 Noise Monitoring[2]

3.1.4.1.1 Micropiling Works – O'Connell Terrace

Noise monitoring of Micropiling works at O'Connell Terrace was undertaken externally at the nearest DAP (Tufton Street, Bowen Hills, multi-level unit building), approximately 5m from the façade of the building. Monitoring was undertaken during standard and non-standard construction hours. The measured LA_{10} readings were compliant with the Imposed Conditions for works during standard and non-standard working hours. No additional monitoring was triggered for this activity.

Therefore, the RIS scope of works achieved the outcomes set out by the CGCR and OEMP.

3.1.4.1.2 Service location Works – Fairfield Road and Cowper Street

Exceedances of the non-standard hour noise goals were modelled by the predictive noise assessment. Additional consultation was undertaken with the DAPs identified in the predictive noise assessments as potentially experiencing noise levels above the upper limit as per the project requirements. These works were required to occur outside of standard hours in line with the traffic permit provided by the road authority.

Monitoring of service locating works was undertaken approximately 5m from the façade of the sensitive places along Cowper and Shottery Street, Yeronga.

The measured LA_{10} readings were consistent or less than the predictive noise assessment. There were no noise complaints received during the execution of the works.

Therefore, the RIS scope of works achieved the outcomes set out by the CGCR and OEMP.

3.1.4.2 Vibration Monitoring

3.1.4.2.1 Lanham Street Rock Breaking - Beef Cattle Pavilion and O'Connell Terrace Wall

Vibration monitoring during rock breaking works along Lanham Street was undertaken at the foundation of the RNA *Vet's Office and Quarters* building. This location was selected as the most secure location to set up the vibration meter. This location also was the optimum location to monitor the potential impacts to the nearby heritage structures (Beef Cattle Pavilion and O'Connell Terrace Wall). The meter was located between the vibration intensive works and the two buildings. The measured readings were compliant with the revised vibration limits based on building specific vibration goals presented in the latest revision of the endorsed Property Damage Sub-Plan (Revision 03).

Therefore, the RIS scope of works achieved the outcomes set out by the CGCR and OEMP.

3.1.4.2.2 Station Demolition Works – Industrial pavilion

Vibration monitoring during station demolition works was undertaken at the foundation of the RNA Industrial Pavilion building (façade). The measured readings were compliant with the revised vibration limits presented in the endorsed Property Damage Sub-Plan (Revision 03).

Therefore, the RIS scope of works achieved the outcomes set out by the CGCR and OEMP.

3.1.4.2.3 Station Demolition Works – John MacDonald Stand

Vibration monitoring during station demolition works was undertaken inside of the John Macdonald Stand. The measured readings were compliant with the revised vibration limits presented in the endorsed Property Damage Sub-Plan (Revision 03).

Therefore, the RIS scope of works achieved the outcomes set out by the CGCR and OEMP.

[2] All free field measurements are undertaken in accordance with the latest revision of the Noise Measurement Manual from the Department of Environment and Science (DES) reference ESR/2016/2195

3.2 Air Quality

Imposed 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 CEMP occurs.

Visual monitoring was undertaken during routine environmental inspections. A total of twelve (12) inspections were undertaken by the environment team across Mayne Yard, RNA Showgrounds and the Northern Corridor.

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.

Table 4 Summary of Air Quality devices

Monitoring Device Installed by UNITY	Area	Name	Date Installed	Status for the Month of January
Dust Deposition Gauge	RNA Showgrounds	AQ-01	13 December 2019	Active
Dust Deposition Gauge	Northern Corridor (near BGGS)	AQ-02	13 December 2019	Decommissioned 13/01/2021 as UNITY works have been completed in area
Dust Deposition Gauge	Mayne Yard (Eastern Air Shed)	AQ-04	13 February 2020	Active
TSP / PM_{10} Monitor	Mayne Yard (Eastern Air Shed)	UNI324	23 April 2020	Active
TSP / PM_{10} Monitor	Northern Corridor (Eastern Air Shed)	UNI327	23 April 2020	Decommissioned 13/01/2021 as UNITY works have been completed in area
TSP / PM_{10} Monitor	RNA (Western Air Shed)	UNI319	25 August 2020	Active

3.2.1 Dust results

Since passive dust deposition gauges are analysed on a monthly basis, results span from 14 December 2020 to 13 January 2021.

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

Table 5 Dust deposition gauge results for period 14 December 2020 to 13 January 2021

CGCR Goal ($mg/m^2/day$)	AQ-01 Results - RNA Showgrounds ($mg/m^2/day$)	AQ-02 Results - BGGS ($mg/m^2/day$)	AQ-04 Abbotsford Rd (E Mayne) ($mg/m^2/day$)
120	10	20	37
Total Rainfall during Period	105.4mm	105.4mm	105.4mm

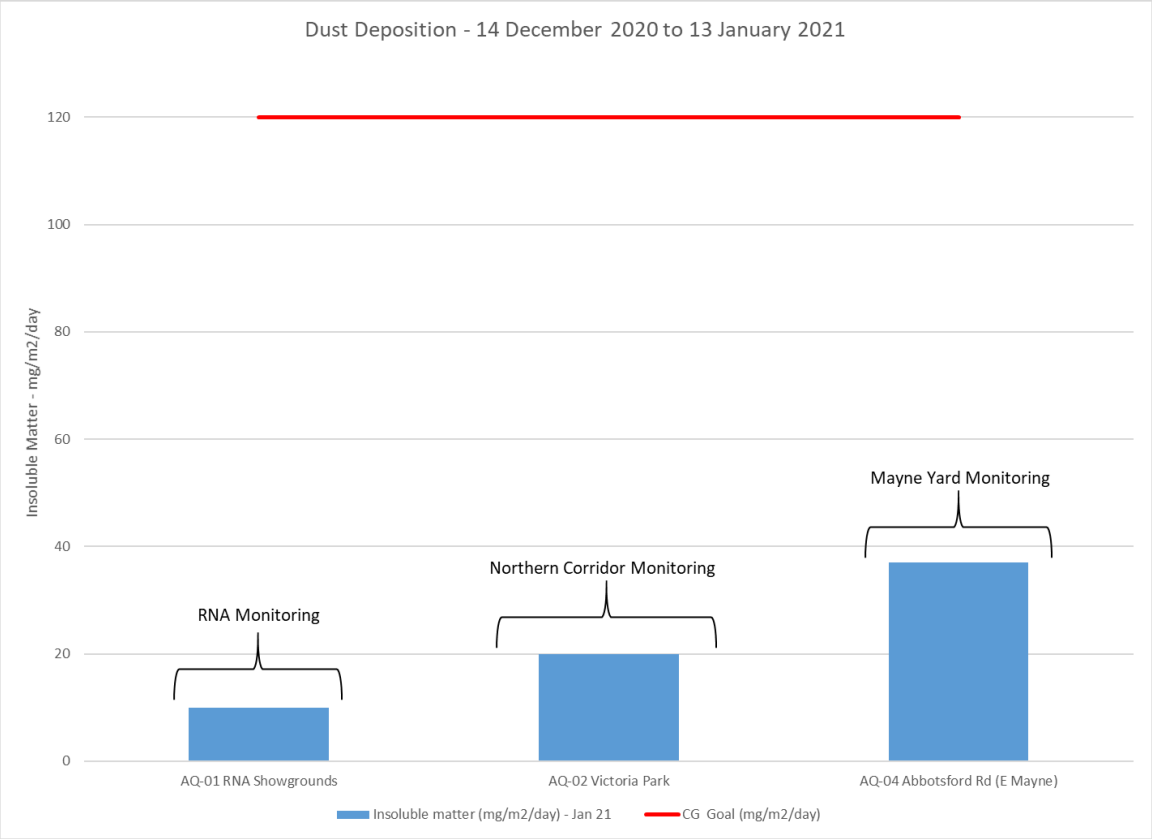


Figure 1: Air Quality Monitoring (Deposited Dust) 14 December 2020 – 13 January 2021 Results

3.2.2 Interpretation

3.2.3 Particulates results

3.2.3.1 UNITY Air Quality Monitoring Stations

Unity had two (2) operational air quality monitoring stations set up for the entire reporting period as the Northern Corridor monitoring station was decommissioned on 13 January 2021.

3.2.3.2 Monitoring results

External ambient air quality data was collected for total suspended particles (TSP), and particulate matter less than 10 µm (PM_{10}).

TSP is one of the indicators for which the Coordinator-General has imposed a goal of 80 µg/m^3 (over an averaging period of 24 hours) the project must aim to achieve under Imposed Condition 13(a).

PM_{10} is one of the indicators for which the Coordinator-General has imposed a goal of 50 µg/m^3 (over an averaging period of 24 hours) that the project must aim to achieve under Imposed Condition 13(a).

These stations have been set up on site as per AS/NZS 3850 1.1 following consultation with UNITY air quality professionals.

The results are represented in the below figures.

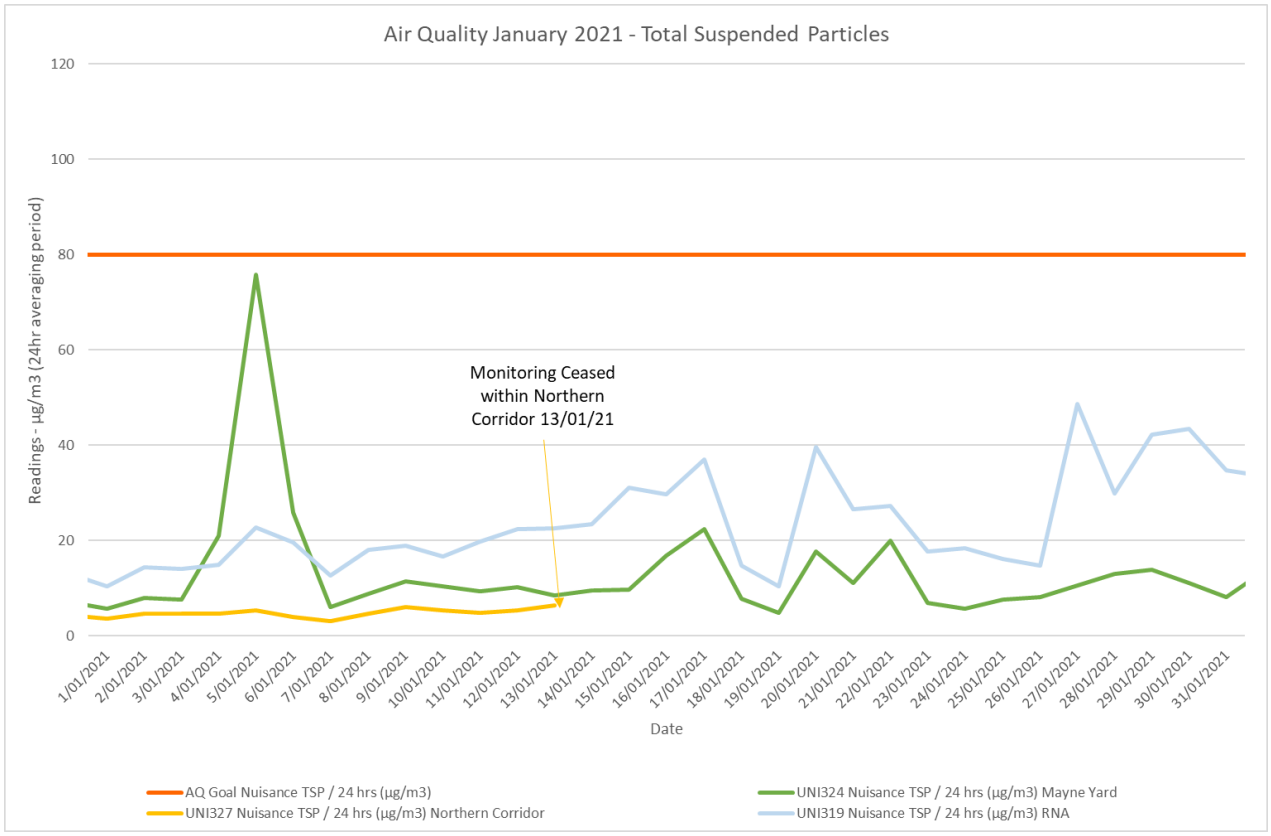


Figure 2: Air Quality Monitoring (TSP) - January 2021 Results

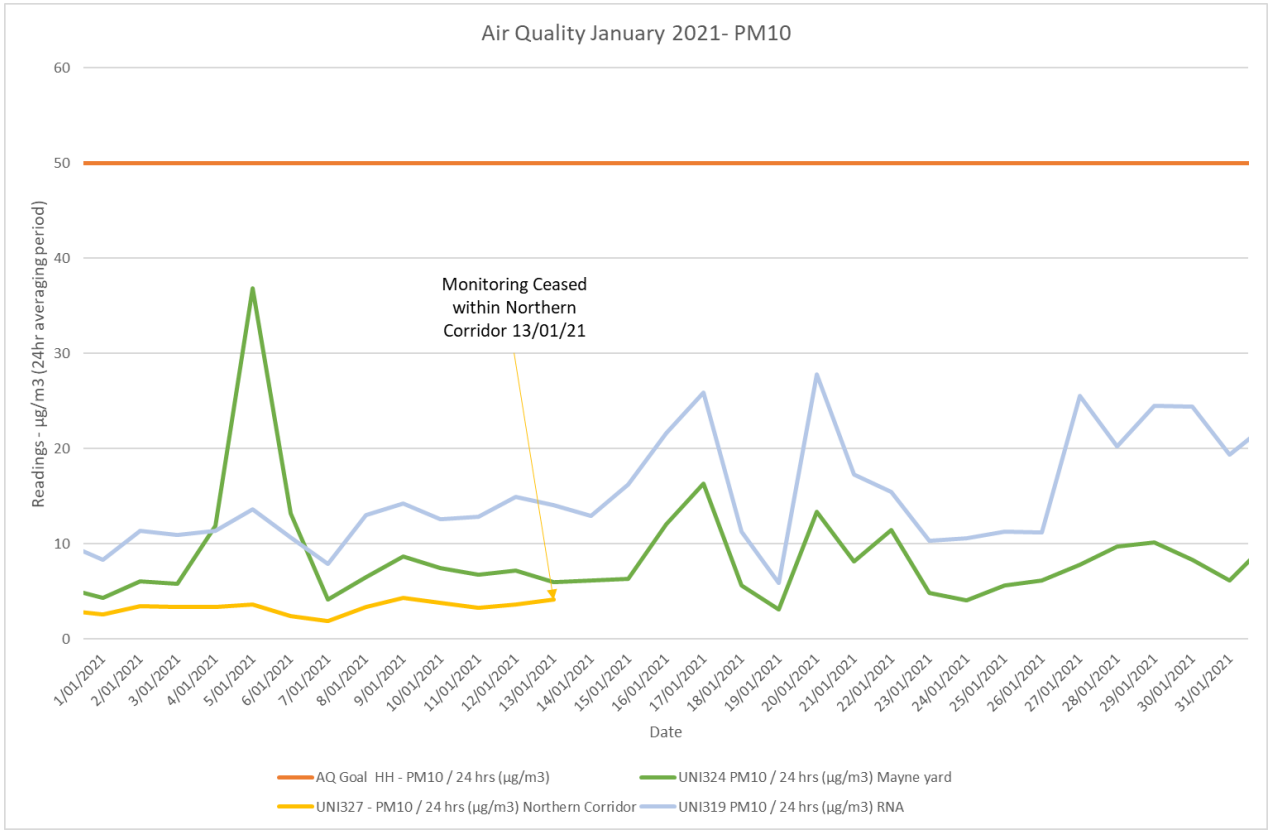


Figure 3: Air Quality Monitoring (PM_{10}) - January 2021 Results

3.2.4 Interpretation

Particulate monitoring results did not exceed the relevant air quality goals specified by Imposed Condition 13.

The CEMP and the AQMP recognise that particulate matter monitoring can be a lag indicator. Therefore, the monitoring regime detailed in the CEMP consists of a combination of surveillance regimes through inspections at the time the works are occurring and particulate matter monitoring to validate the surveillance regime findings and potential complaints.

Site inspections at Mayne Yard, RNA Showgrounds, Clapham Yard, Yeronga Station and the Northern Corridor by the environment team confirmed that:

- There was no visible dust leaving the site boundaries;
- Water carts were on site and used for dust suppression / fill conditioning;
- During rock breaking activities at RNA, continuous dust suppression with hoses has been undertaken; and
- 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

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 CEMP, occurs.

Condition 15(a) requires that discharges of groundwater from Project Works within the Breakfast Creek catchment 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*.

Condition 15(a) requires that discharges of groundwater from Project Works within Moolabin Creek, Yeerongpilly – Oxley Creek catchment must comply with the Oxley Creek - Lowland freshwater environmental values and water quality objectives (Basin no.143 (part) – including all tributaries of the creek) in the *Environment Protection (Water) Policy 2009*.

Water quality monitoring to demonstrate compliance with Condition 15(a) was not triggered during the reporting period. There were no groundwater discharges.

Water quality monitoring to demonstrate compliance with Condition 15(b) and Condition 18 was triggered:

- There were passive discharges through Type 2 and 3 ESC devices during January associated with rain events:
  - 16-18 January 2021. A rain event occurred which generated run-off from the active worksite of Mayne Yard which triggered a post-rain monitoring event at this location.

There were no active surface water discharges during January (e.g. dewatering through pumping, sediment basin release).

In-situ physico-chemical parameters results for all monitoring undertaken during the reporting period are presented below.

3.3.1 Rainfall Records

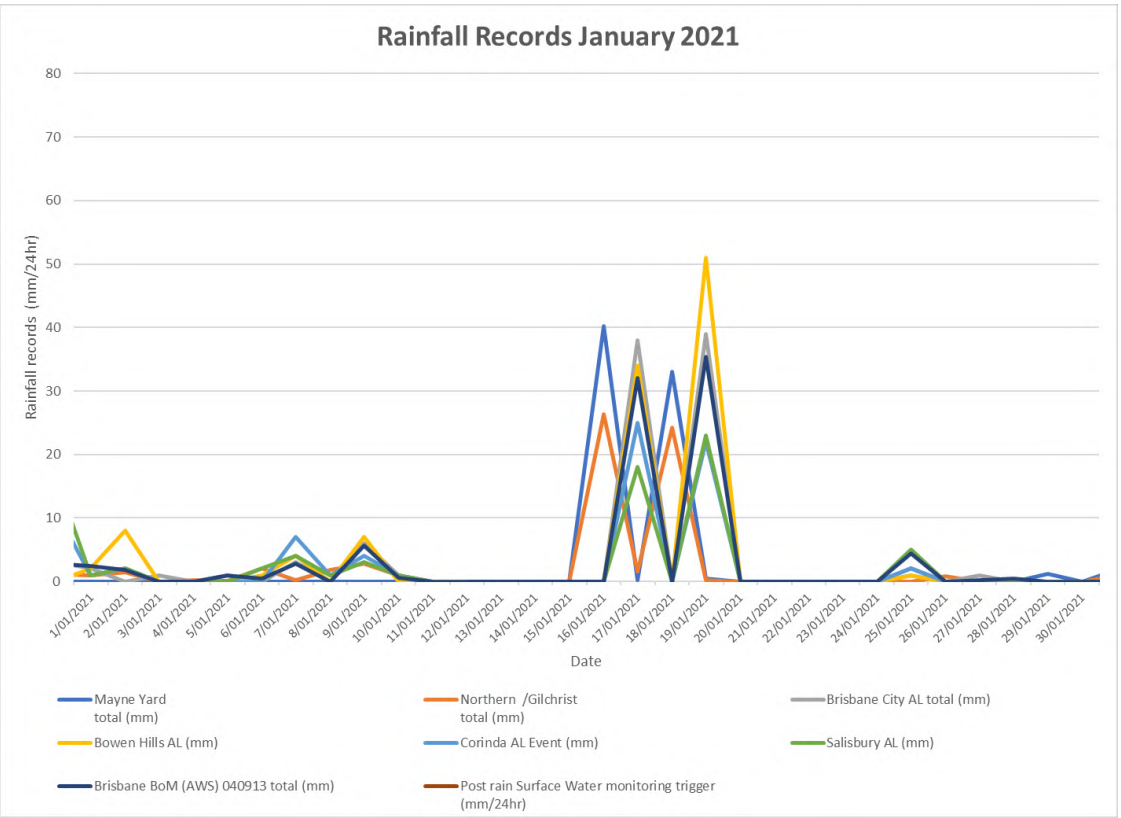


Figure 4: Rainfall – January 2021 Results

3.3.2 Surface Water Discharge Monitoring / Post Rainfall Monitoring Results

Post rainfall monitoring is triggered typically following any rainfall event exceeding 20 to 25 mm over 24 hours, however storm events during the high-risk period of the year (November to March) of lesser amounts but higher intensity may cause run-off which would also trigger post rain monitoring consistent with the C-EMP.

Post rainfall monitoring was triggered during the reporting period at the active worksite of Mayne Yard.

The result of monitoring at the relevant waterways are presented in the below. When results are in red, they exceed / do not meet the Project discharge criteria for compliance with Imposed Conditions 15 and 18.

Table 6: Surface Water Discharge Monitoring Results

Date	Location	Waterway	Tide	Turbidity (NTU)	TSS (mg/L)	DO (%)	pH (pH Unit)
Discharge Criteria[3]				Nil until Turbidity / TSS correlation achieved[4]	50	Nil	Stable pH reading; and General sites: 6.5 – 8.5, or Wallum/Acidic Ecosystems: 5.0 – 7.0
18/01/21	SW 1 – Upstream of Mayne Yard	Breakfast Creek	Rising Brackish to marine conditions	In field: 15 Lab:13	30	54	7.1
18/01/21	SW 2 – Adjacent to Mayne Yard	Breakfast Creek	Rising Brackish to marine conditions	In field: 7 Lab: 8	21	57	7.2
18/01/21	SW 3 – Downstream of Mayne Yard	Breakfast Creek	Rising Brackish to marine conditions	In field: 22 Lab: 19	28	62	7.3

3.3.3 Groundwater Discharge Monitoring Results

Groundwater discharge monitoring was not triggered during the reporting period.

3.3.4 Routine Surface Water Monitoring Results

During the reporting period, UNITY undertook one (1) round of routine surface water monthly monitoring. This monitoring is being undertaken as it may inform the Dis-1 Credit for the ISCA 'Excellent Rating' the Project is pursuing. The results are presented in Table 7.

Table 7: Routine Surface Water Monitoring Results

Date	Location	Waterway	Tide	Turbidity (NTU)	TSS (mg/L)	DO (%)	pH (pH Unit)
21/01/21	SW 1 – Upstream of Mayne Yard	Breakfast Creek	Rising Brackish to marine conditions	In field: 12 Lab: 9	<5	77	7.1
21/01/21	SW 2 – Adjacent to Mayne Yard	Breakfast Creek	Rising Brackish to marine conditions	In field: 7 Lab: 8	<5	83	7.3
21/01/21	SW 3 – Downstream of Mayne Yard	Breakfast Creek	Rising Brackish to marine conditions	In field: 11 Lab: 13	6	91	7.4
21/01/21	SW 4 – Downstream of Northern Corridor	Barrambin / York's Hollow	Not applicable – non tidal environment	In field: 2 Lab:8	6	94	7.4

[3] Refer to the waterways and water quality management plan, a C-EMP sub-plan for details of derivation of the discharge criteria

[4] Correlations are typically run on the source water (i.e. basins) not the receiving system where there is a dilution component of potentially diffuse sources of sediments from non-Project related areas. Due to the very limited amount of discharged the RIS Scope of Works has experienced, there is no correlation available for Mayne Yard. Typically, a minimum of 20 data points is used to determine TSS / in field turbidity correlation for site waters.

Date	Location	Waterway	Tide	Turbidity (NTU)	TSS (mg/L)	DO (%)	pH (pH Unit)
21/01/21	SW 5 – Upstream rail corridor	Moolabin Creek	Not applicable – non tidal environment	In field: 4 Lab: 4	6	93	7.1
21/01/21	SW 6 – Downstream rail corridor	Moolabin Creek	Not applicable – non tidal environment	In field: 3 Lab: 3	<5	99	7.4
21/01/21	SW 7 – Upstream Rail corridor	Rocky Water Holes Creek	Not applicable – non tidal environment	In field: 5 Lab: 12	11	51	7.4
21/01/21	SW 8 – Downstream Rail corridor	Rocky Water Holes Creek	Not applicable – non tidal environment	In field: 1 Lab: 7	11	68	7.0
21/01/21	SW 9 – Downstream Rail corridor	Stable Swamp Creek	Not applicable – non tidal environment	In field: 0 Lab: 6	<5	89	7.4

3.3.5 Interpretation

3.3.5.1 18 January 2021 Post Rainfall Monitoring

Post rainfall monitoring undertaken following the 16-18 January 2021 rainfall events confirmed off-site discharges met the discharge criteria at the relevant receiving waters.

Therefore, compliance with Imposed Conditions 15 and 18 was met.

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 (NCE) is defined as Project Works that do not comply with the Imposed Conditions.

4.1.1 Non - Compliance Events Summary

Table 8 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					

4.2 CEMP Compliance

The below table summarises compliance status with the CEMP and monitoring requirements of relevant sub-plans for the reporting period.

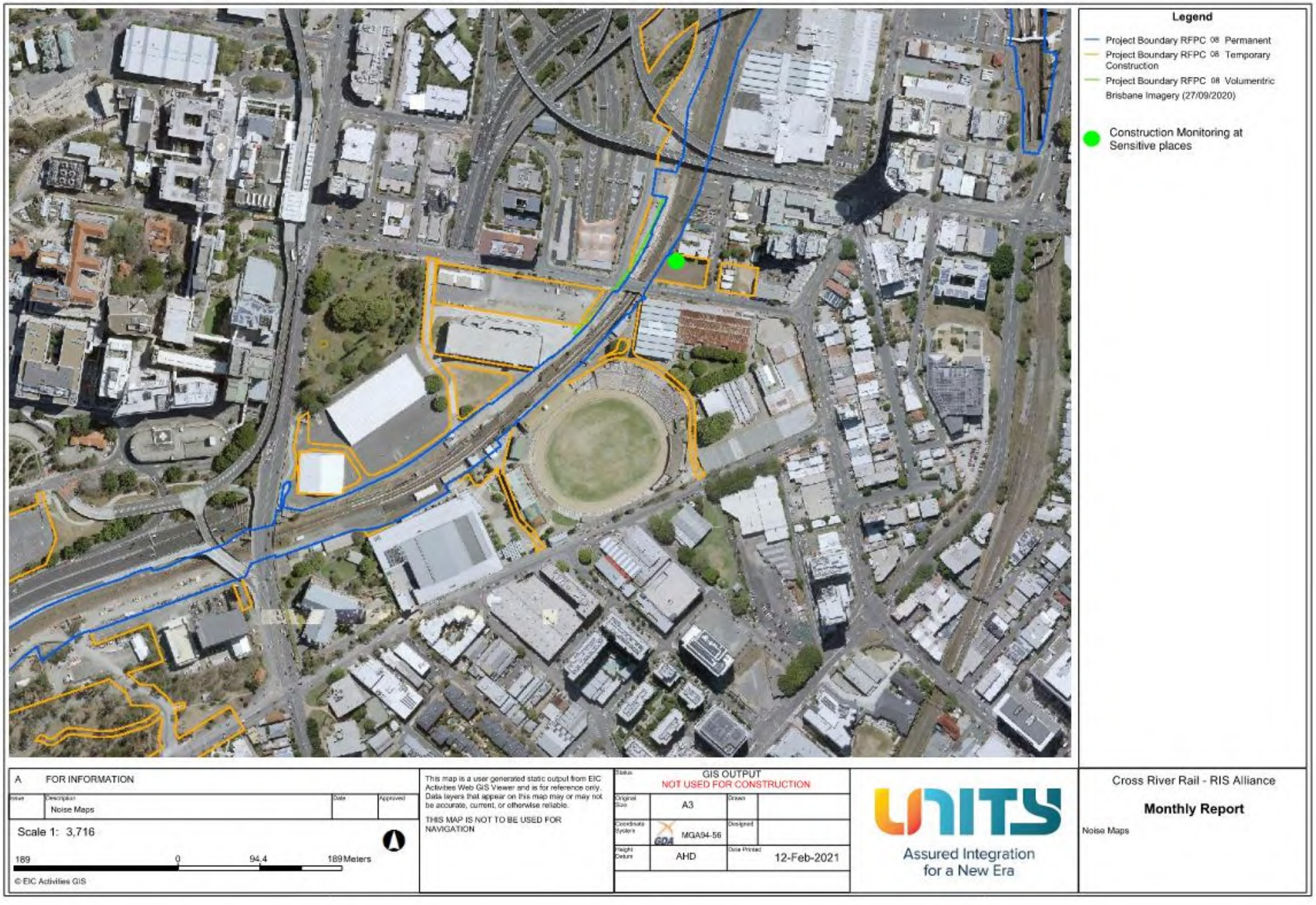
Table 9 CEMP and relevant Subplans monitoring requirements – Compliance Status for the reporting period

Aspect	Monitoring requirement	Activities risk profile	Monitoring undertaken	Compliance status with 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	Moderate to High	Yes – visual monitoring undertaken as part of routine inspections Monitoring for TSP, PM10 and deposited dust also undertaken	Compliant	Not Applicable
Air Quality	Complaints response	Moderate to High	Not triggered – no complaints	Compliant	Not Applicable
Noise	Buffer distance tests based on the outcomes of the predictive assessment based / risk profile of activities	Moderate to High	Yes	Compliant	Not Applicable
Noise	Plant noise audits for noisy plant to validate models input as required	Moderate to High	No	N/A	Not Applicable
Noise	Complaints response	Moderate to High	Not triggered – no complaints	Compliant	Not Applicable
Vibration	Construction Monitoring at Sensitive Places / DAPs - Model verification based on the outcomes of the predictive assessment based / risk profile of activities	Moderate to High	Yes	Compliant	Not Applicable
Vibration	Complaints response	Moderate to High	Not triggered – no complaints	Compliant	Not Applicable
Water Quality	Monthly monitoring	N/A	Yes	Compliant	Not Applicable
Water Quality	Post Rainfall	Moderate to High	Yes	Compliant	Not Applicable
Water Quality	Dewatering	Moderate to High	Not triggered – no dewatering to receiving water systems	N/A	Not Applicable

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

None for this reporting period.

Attachment 2 Monitoring Locations – Noise


Legend
Project Boundary RFPC 08 Permanent
Project Boundary RFPC 08 Temporary Construction
Project Boundary RFPC 08 Volumentric
Brisbane Imagery (27/09/2020)
Construction Monitoring at Sensitive places
A FOR INFORMATION
Noise Maps
Scale 1: 3,716
189 0 94.4 189 Meters
© EIC Activities GIS
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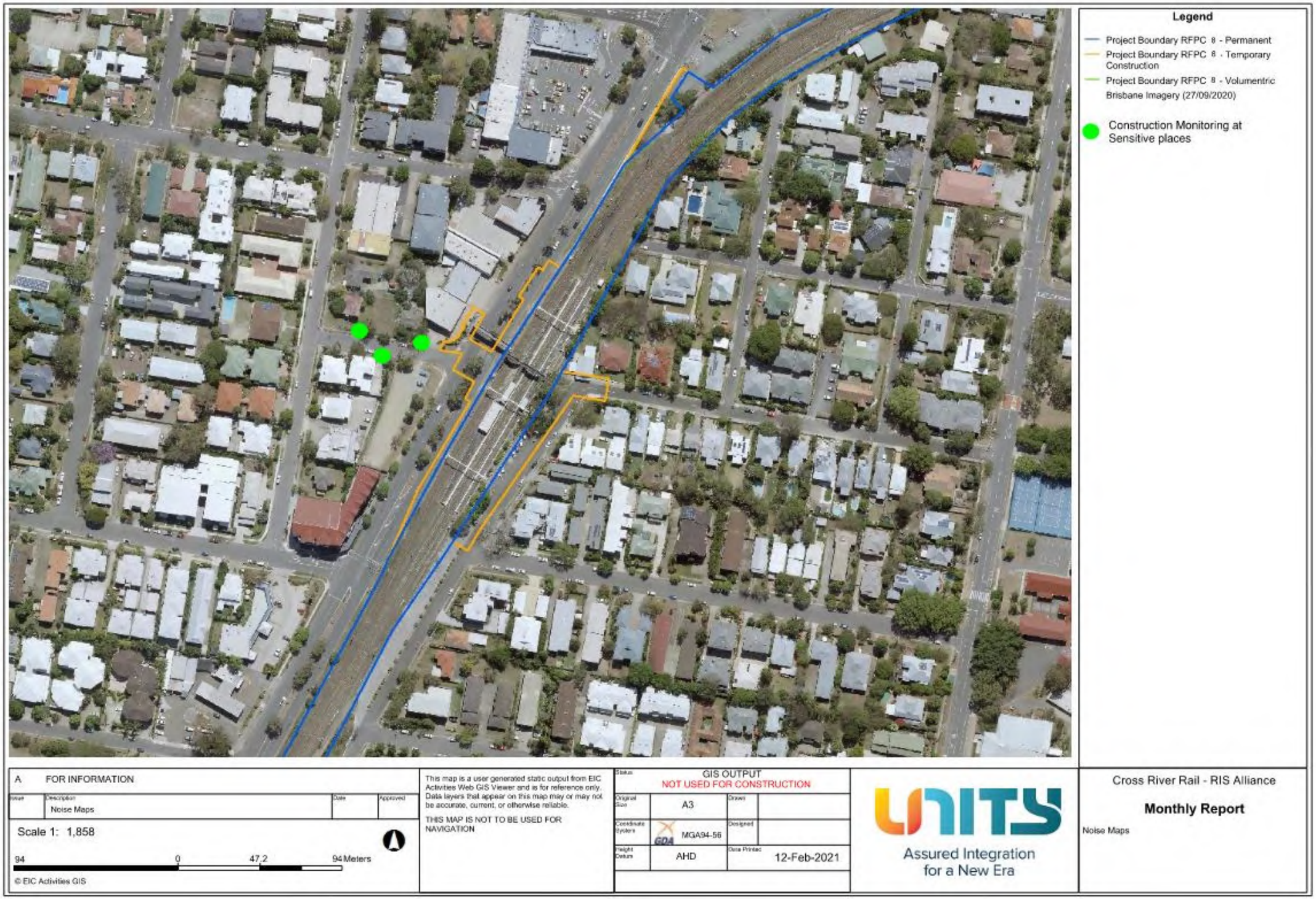
Monthly Report
Noise Maps


Legend
Project Boundary RFPC 8 - Permanent
Project Boundary RFPC 8 - Temporary Construction
Project Boundary RFPC 8 - Volumentric
Brisbane Imagery (27/09/2020)
Construction Monitoring at Sensitive places
A FOR INFORMATION
Issue
Description
Noise Maps
Date
Approved
Scale 1: 1,858
94 0 47.2 94 Meters
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Status
GIS OUTPUT
NOT USED FOR CONSTRUCTION
Original Size
A3
Drawn
Coordinate System
GDA MGA94-56
Designed
Height Datum
AHD
Data Printed
12-Feb-2021
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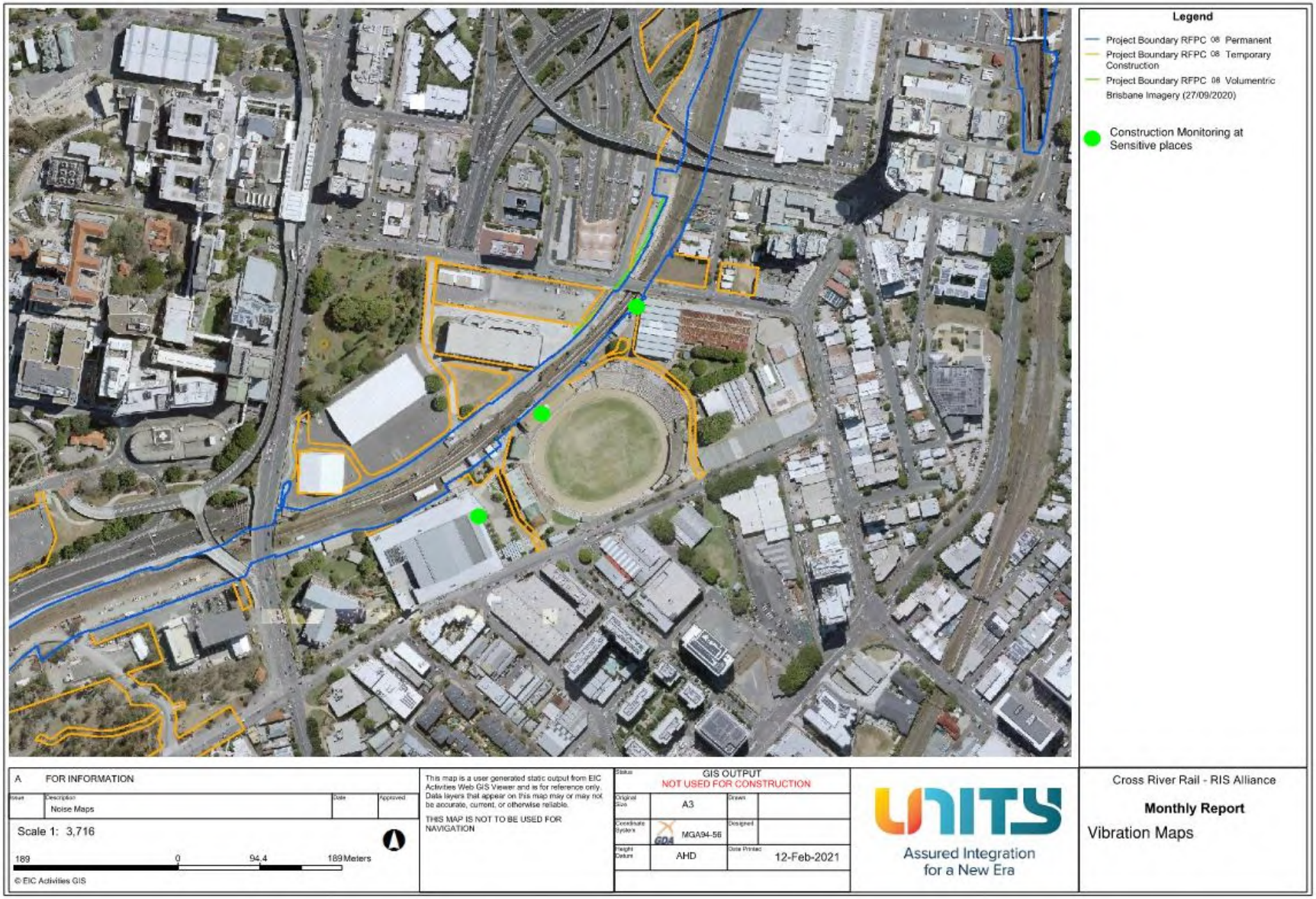
Monthly Report
Noise Maps

Attachment 3 Monitoring Locations – Vibration


Legend
Project Boundary RFPC 08 Permanent
Project Boundary RFPC 08 Temporary Construction
Project Boundary RFPC 08 Volumentric
Brisbane Imagery (27/09/2020)
Construction Monitoring at Sensitive places
A FOR INFORMATION
Noise Maps
Scale 1: 3,716
189 0 94.4 189 Meters
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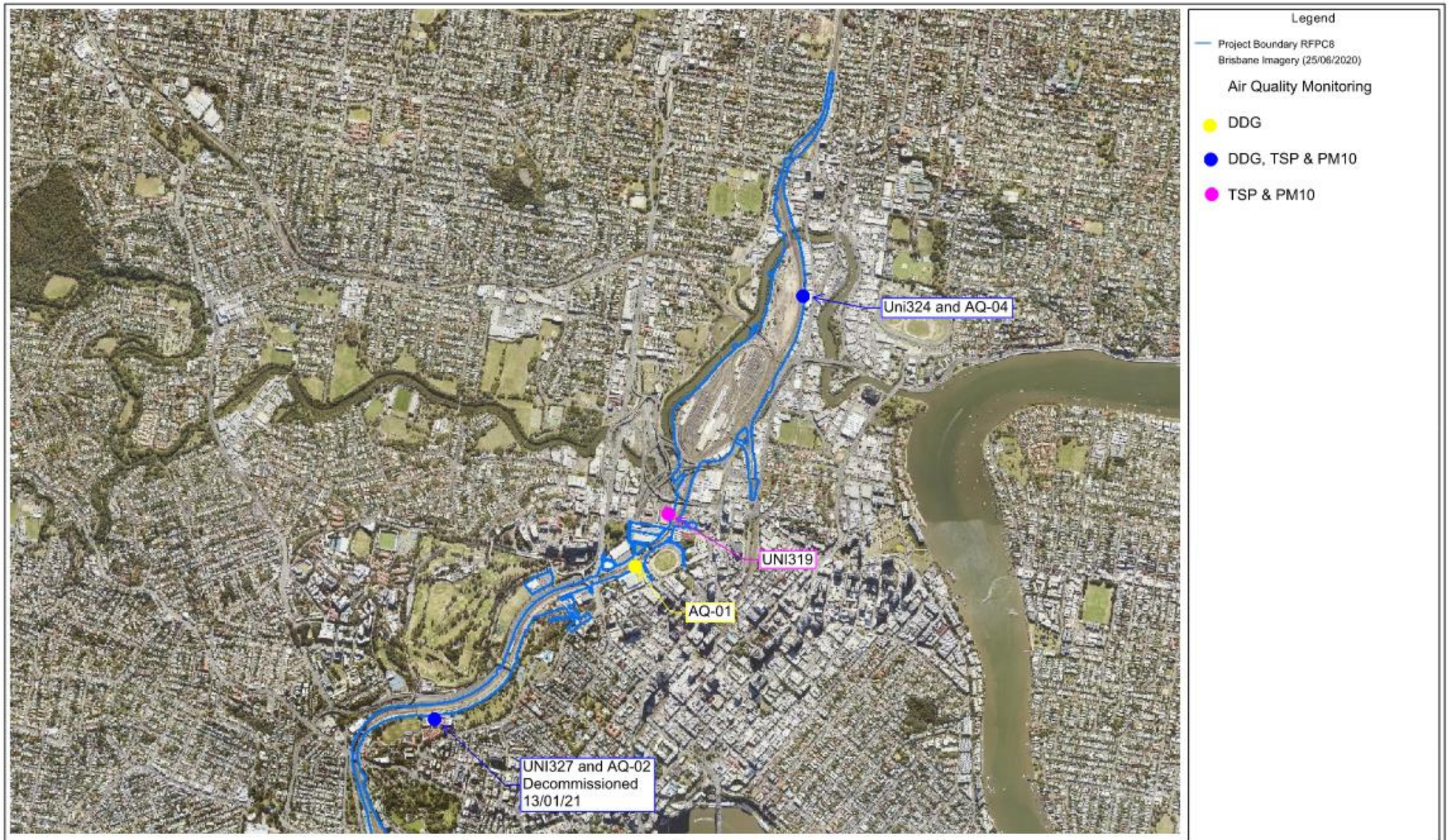
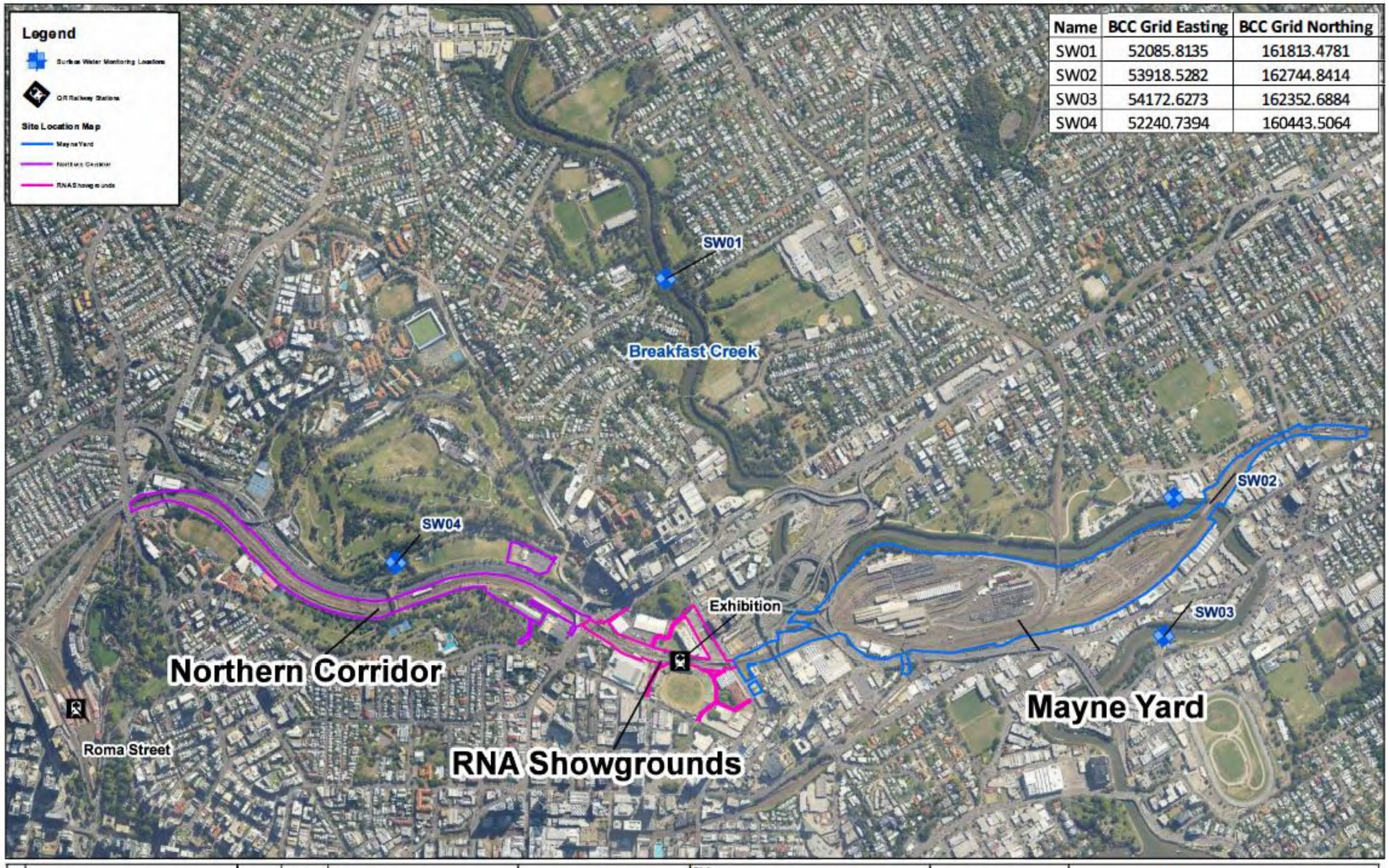
Vibration Maps

Attachment 4 Monitoring Locations – Air Quality



A FOR INFORMATION	This map is a user generated static output from EIC Activities Web GIS Viewer and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION	Status: GIS OUTPUT NOT USED FOR CONSTRUCTION	Cross River Rail - RIS Alliance
Issue: — Description: August 2020 — Date: — Approved: —		Original Size: A3 — Drawn: —	Air Quality Monitoring locations
Scale 1: 20,000		Coordinate System: GDA MGA94-56 — Designed: —	
1,016 0 508.0 1,016 Meters		Height Datum: AHD — Date Printed: 11-Sep-2020	
© EIC Activities GIS			Assured Integration for a New Era

Attachment 5 Monitoring Locations – Surface Water



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	UNITY

0 100 200 400 600 m
Scale 1 : 12,000 cm

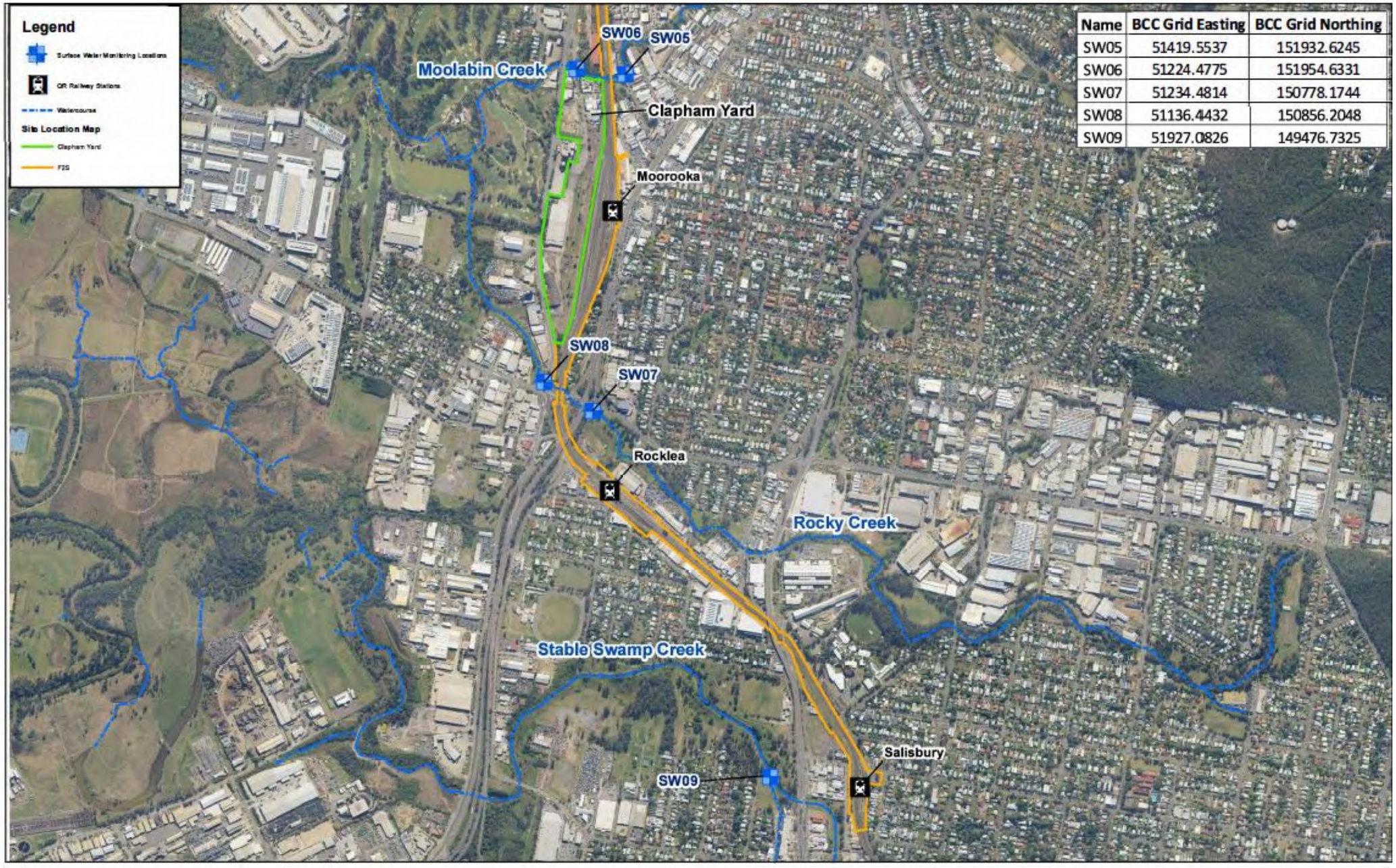
Status: Issued for Information

Original Size	A3	Drawn	GIS
Coordinate System	GDA 1994 BCSG02	Designed	UNITY
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



Name	BCC Grid Easting	BCC Grid Northing
SW05	51419.5537	151932.6245
SW06	51224.4775	151954.6331
SW07	51234.4814	150778.1744
SW08	51136.4432	150856.2048
SW09	51927.0826	149476.7325

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

0 100 200 400 600 m
Scale 1 : 12,000 cm

Status: Issued for Information

Original Size	A3	Drawn	GIS
Coordinate System	GDA 1994 BCSG02	Designed	Unity
Height Datum	AHD	Date Printed	2/13/2020
Filename:	Surface_Water_Southern_Area_Map.mxd		

N

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

COORDINATOR-GENERAL'S MONTHLY REPORT: JANUARY 2021

Prepared in accordance with Coordinator-General Imposed Condition 6 - Reporting.

1. Monthly 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 nine (9) occasions, and noise monitoring was conducted on thirty-five (35) occasions during January 2021. Each vibration and noise monitoring event confirmed works adhered to project requirements.

Ambient air quality monitoring was conducted at the Roma Street, Albert Street, Woolloongabba and Boggo Road precinct sites during January 2021. Air quality monitoring confirmed works adhered to project requirements.

Water quality monitoring was conducted before the release of water from the site on twelve (12) occasions. Each monitoring event confirmed project requirements were adhered to. One (1) round of surface water quality monitoring was also conducted that confirmed no impacts were generated by the Project.

2. CG Monthly Report – Compliance Assessment Against Imposed Conditions

Whilst not a requirement of Imposed Condition 6, CBGU offers the below Compliance Status Table as a good-will gesture to demonstrate the Project's ongoing environmental performance.

Table 1: Compliance Status – CG Imposed Conditions

CG Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
1.	**General conditions** – compliance with the Project Changes relevant to the Contractor's scope.	Yes	Project works have been conducted compliant with the Imposed Conditions.
2.	**Outline Environmental Management Plan** – timely submission to the Coordinator-General, including required sub plans.	N/A	The OEMP is not an obligation of the CBGU Joint Venture.
3.	**Design** – the achievement of the Environmental Design Requirements.	Yes	Design and implementation proceeded in accordance with the Environmental Design Requirements.
4.	**Construction Environmental Management Plan** – all relating to Relevant Project Works.	Yes	All works were conducted in accordance with the Construction Environmental Management Plan (CEMP) (Rev 7).
5.	**Compliance and Incident management** – Non-compliance events, notifications and reporting.	Yes	Nil non-compliances occurred during the monitoring period (refer to Section 4).
6.	**Reporting** – Monthly and Annual reporting.	Yes	All reporting requirements are completed in accordance with Imposed Condition 6.
7.	**Environmental Monitor** – engaged and functions resumed.	Yes	An Environmental Monitor (EM) is appointed to the Project, and CBGU is committed to working collaboratively to aid the EM's functions under Imposed Condition 7.
8.	**Community Relations Monitor** – engaged and functions resumed.	Yes	A Community Relations Monitor (CRM) is appointed to the Project, and CBGU is committed to working collaboratively to aid the CRM's functions under Imposed Condition 8.
9.	**Community engagement plan** – developed and endorsed by Environmental Monitor.	Yes	A Community Engagement Plan (CEP) has been developed and implemented in accordance with Imposed Condition 9. The CEMP has been endorsed with the CEP.
10.	**Hours of work** – works undertaken during approved hours.	Yes	Project works have been conducted in accordance with the approved hours of work.

CG Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
11.	**Noise** – Work must aim to achieve internal noise goals for human health and well-being.	Yes	Project work has aimed to achieve internal noise goals for human health and well-being. Where internal noise levels have been unable to be measured, suitable noise reductions have been applied in accordance with Imposed Condition 11. Noise monitoring data is provided within Section 3.2.
	Vibration – Works must aim to achieve vibration goals for cosmetic damage, human comfort and sensitive building contents.	Yes	Project work has aimed to achieve vibration goals for cosmetic damage, human comfort and sensitive buildings. Vibration monitoring data is provided within Section 3.1.
12.	**Property damage** relating to ground movement	Yes	The management of potential impacts relating to property damage has been completed in accordance with Imposed Condition 12.
13.	**Air quality** – Works must aim to achieve air quality goals for human health and nuisance.	Yes	Project works have aimed to achieve air quality goals. Air quality monitoring data is provided within Section 3.3.
14.	**Traffic and transport** – Works must minimise adverse impacts on road safety and traffic flow.	Yes	Project works have been conducted in a manner that has minimised adverse impacts on road safety and traffic flow.
15.	**Water quality** – Works must not discharge surface water and groundwater from the construction site above the relevant environmental values and water quality objectives.	Yes	The Project possesses processes that ensure water quality is managed in accordance with Imposed Condition 15.
16.	**Water resources** – evaluate potential impact, plan works, implement controls and monitor the inflow of groundwater associated with drawdown.	Yes	Project works are managed in accordance with Imposed Condition 16.
17.	**Surface water** – 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	Design of the Project considers the requirements of Imposed Condition 17.
18.	**Erosion and sediment control** – 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	Yes	The Project possesses processes that ensure erosion & sediment control is managed in accordance with Imposed Condition 18.

CG Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
	Department of Transport and Main Roads' Technical Standard MRTS52.		
19.	**Acid Sulfate Soils** managed as per the *Queensland Acid Sulfate Soil Technical Manual.*	Yes	The Project possesses processes that ensure acid sulphate soils are managed in accordance with Imposed Condition 19.
20.	**Landscape and open space** – general requirement to minimise impacts on landscapes and open space values and specific requirements around Victoria park	Yes	Project works are designed and implemented in accordance with Condition 20.
21.	**Worksite rehabilitation** – worksites rehabilitated as soon as practicable upon completion of works or commissioning, and in consultation with Brisbane City Council.	Yes	Project works are designed and implemented in accordance with Condition 21.

3. Environmental Monitoring Results

Monitoring data is provided below in accordance with Imposed Condition 6(b)(i).

3.1 Vibration

Vibration requirements (levels) are defined as goals within Imposed Condition 11. The goals are to be aimed for.

The Coordinator-General Change Report acknowledges instances exist that these goals may not be achieved.

Nine (9) vibration monitoring sessions were conducted during January 2021.

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

Table 2: Vibration Monitoring Data

Start Date	**Time** (AM/PM)	**Finish Date**	**Location** (Street Name) (Construction Precinct)	**Average Vibration level** (mm/s)	**Max Vibration Level** (mm/s)	**Vibration Goal** (mm/s)	**Receiver / Goal Type**	**Adhered to Project Requirements** (Yes / No)
05/01/2021	11:00:00 AM	5/01/2021	Gregory Terrace (Northern Portal)	0.11	0.24	50	Structure	Yes
06/01/2021	12:14:00 PM	15/01/2021	Gregory Terrace (Northern Portal)	0.09	0.88	50	Structure	Yes
12/01/2021	3:30:00 PM	12/01/2021	Roma Street (Roma Street Precinct)	-	5.10	10	Heritage Structure (Controlled Blast)	Yes
13/01/2021	12:43:00 PM	20/01/2021	Stanley Street (Woolloongabba)	0.11	0.49	2	Heritage Structure	Yes
15/01/2021	9:36:00 AM	27/01/2021	Roma Street (Roma Street Precinct)	0.13	0.47	50	Structure	Yes

Start Date	Time (AM/PM)	Finish Date	Location (Street Name) (Construction Precinct)	Average Vibration level (mm/s)	Max Vibration Level (mm/s)	Vibration Goal (mm/s)	Receiver / Goal Type	Adhered to Project Requirements (Yes / No)
18/01/2021	3:30:00 PM	18/01/2021	Roma Street (Roma Street Precinct)	-	5.35	10	Heritage Structure (Controlled Blast)	Yes
19/01/2021	8:47:00 AM	22/01/2021	Albert Street (Albert Street Precinct)	0.16	1.09	50	Structure	Yes
20/01/2021	1:00:00 PM	25/01/2021	Gregory Terrace (Northern Portal)	0.09	0.62	50	Commercial	Yes
27/01/2021	8:35:00 AM	1/02/2021	Mary Street (Albert Street Precinct)	0.12	0.60	50	Residential	Yes

3.2 Noise

Noise requirements (levels) are defined as goals within Imposed Condition 11. The goals are to be aimed for.

The Coordinator-General Change Reports acknowledge instances exist that these goals may not be achieved.

Noise monitoring was conducted on thirty-five (35) occasions during January 2021. All noise monitoring data adhered to project requirements and is provided in the table below.

Table 3: Noise Monitoring Data

Date	Time (AM / PM)	Location (Street Name) (Construction Precinct)	Purpose of Monitoring	Internal or External [3] Monitoring	Activity	Dominate noise source	Noise Goal LA10[1]	Noise level LA10[1]	Noise Goal LAeq[2]	Noise level LAeq[2]	Adhered to Project Requirements (Yes / No)
5/01/2021	11:05:00 AM	Gregory Terrace (Northern Portal)	Model Verification	External	Ground Stabilisation	Construction and Road Traffic	62	66.1	52	64.1	Yes
5/01/2021	11:41:00 AM	Gregory Terrace (Northern Portal)	Model Verification	External	Ground Stabilisation	Construction and Road Traffic	62	65.8	52	63.9	Yes
5/01/2021	1:09:00 PM	Gregory Terrace (Northern Portal)	Model Verification	External	Ground Stabilisation	Construction and Road Traffic	62	68.7	52	67.2	Yes
7/01/2021	9:38:00 AM	Gregory Terrace (Northern Portal)	Construction Monitoring at Sensitive Places	External	Utilities Work	Road Traffic	57	61.6	47	58.9	Yes
8/01/2021	1:06:00 PM	Gregory Terrace (Northern Portal)	Construction Monitoring at Sensitive Places	External	Utilities Work	Road Traffic	57	64.4	47	60.9	Yes

Date	Time (AM / PM)	Location (Street Name) (Construction Precinct)	Purpose of Monitoring	Internal or External [3] Monitoring	Activity	Dominate noise source	Noise Goal LA10[1]	Noise level LA10[1]	Noise Goal LAeq[2]	Noise level LAeq[2]	Adhered to Project Requirements (Yes / No)
9/01/2021	1:44:00 PM	Gregory Terrace (Northern Portal)	Construction Monitoring at Sensitive Places	External	Utilities Work	Road Traffic	57	66.4	47	62.5	Yes
12/01/2021	3:30:00 PM	Roma Street (Roma Street Precinct)	Supreme Court	External	Controlled Blast	Construction	-	-	130[4]	96.6[4]	Yes
13/01/2021	11:57:00 AM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	External	Demolition	Construction and Road Traffic	67	72.6	57	70.2	Yes
13/01/2021	12:14:00 PM	George Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	External	Demolition	Construction and Road Traffic	72	74.5	62	71.6	Yes
13/01/2021	12:47:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Internal	Demolition	General Public / Station and Construction	60	69.6	50	66.9	Yes
15/01/2021	1:20:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	External	Equipment Delivery	Construction	54	64.1	47	64.3	Yes
15/01/2021	1:39:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	External	Equipment Delivery	Construction	54	64.7	47	63.1	Yes

Date	Time (AM / PM)	Location (Street Name) (Construction Precinct)	Purpose of Monitoring	Internal or External [3] Monitoring	Activity	Dominate noise source	Noise Goal LA10[1]	Noise level LA10[1]	Noise Goal LAeq[2]	Noise level LAeq[2]	Adhered to Project Requirements (Yes / No)
15/01/2021	1:55:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	External	Equipment Delivery	Construction	54	70.9	47	68.3	Yes
15/01/2021	2:42:00 AM	Elizabeth Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	External	Equipment Delivery	Construction	59	72	52	69.1	Yes
18/01/2021	8:32:00 AM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	External	Excavation and Material Haulage	Construction and Road Traffic	67	71.1	57	69.1	Yes
18/01/2021	8:52:00 AM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Internal	Excavation and Material Haulage	General Public / Station	60	69.8	50	67.5	Yes
18/01/2021	3:30:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	External	Controlled Blast	Construction	-	-	130[4]	106.7[4]	Yes
19/01/2021	8:51:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	Internal	Ground Stabilisation	Construction and General Public	55	61.8	45	62.9	Yes
19/01/2021	9:13:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	External	Ground Stabilisation	Construction	67	68.4	57	68.8	Yes

Date	Time (AM / PM)	Location (Street Name) (Construction Precinct)	Purpose of Monitoring	Internal or External [3] Monitoring	Activity	Dominate noise source	Noise Goal LA10[1]	Noise level LA10[1]	Noise Goal LAeq[2]	Noise level LAeq[2]	Adhered to Project Requirements (Yes / No)
19/01/2021	9:33:00 AM	Elizabeth Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	External	Ground Stabilisation	Construction and General Public	72	68.4	62	67.3	Yes
19/01/2021	10:07:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	External	Ground Stabilisation	Construction and Road Traffic	72	70.2	62	73.3	Yes
20/01/2021	1:04:00 PM	Gregory Terrace (Northern Portal)	Model Verification	External	Ground Stabilisation	Road Traffic	62	67.3	52	65.4	Yes
20/01/2021	1:36:00 PM	Gregory Terrace (Northern Portal)	Model Verification	External	Ground Stabilisation	Construction and Road Traffic	62	65.6	52	63.6	Yes
20/01/2021	1:53:00 PM	Gregory Terrace (Northern Portal)	Model Verification	External	Ground Stabilisation	Construction	62	66	52	64.2	Yes
21/01/2021	6:24:00 PM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	External	Material Haulage	Construction and Road Traffic	67	67.8	57	65.5	Yes
21/01/2021	6:42:00 PM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	External	Material Haulage	Construction and Road Traffic	67	68.4	57	67.1	Yes

Date	Time (AM / PM)	Location (Street Name) (Construction Precinct)	Purpose of Monitoring	Internal or External [3] Monitoring	Activity	Dominate noise source	Noise Goal LA10[1]	Noise level LA10[1]	Noise Goal LAeq[2]	Noise level LAeq[2]	Adhered to Project Requirements (Yes / No)
21/01/2021	7:01:00 PM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	External	Material Haulage	Construction and Road Traffic	67	69.1	57	67.1	Yes
25/01/2021	9:19:00 PM	Gregory Terrace (Northern Portal)	Construction Monitoring at Sensitive Places	External	Material Haulage	Construction and Road Traffic	49	66.6	42	61.5	Yes
25/01/2021	9:43:00 PM	Gregory Terrace (Northern Portal)	Construction Monitoring at Sensitive Places	External	Traffic and Pedestrian Management	Construcion and Road Traffic	49	68.9	42	65.4	Yes
25/01/2021	10:14:00 PM	Gregory Terrace (Northern Portal)	Construction Monitoring at Sensitive Places	External	Traffic and Pedestrian Management	Construction and Road Traffic	49	65.1	42	61	Yes
27/01/2021	9:36:00 AM	Dutton Street (Southern Portal)	Model Verification	External	Utilities Works	Road Traffic and Queensland Rail	57	70.4	47	66.7	Yes
28/01/2021	12:11:00 PM	Mark Lane (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	External	Tunnelling	Road Traffic	67	60.9	57	57.3	Yes
28/01/2021	12:40:00 PM	Reid Street (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	External	Tunnelling	Road Traffic	62	57.1	52	56.2	Yes

Date	Time (AM / PM)	Location (Street Name) (Construction Precinct)	Purpose of Monitoring	Internal or External [3] Monitoring	Activity	Dominate noise source	Noise Goal LA10[1]	Noise level LA10[1]	Noise Goal LAeq[2]	Noise level LAeq[2]	Adhered to Project Requirements (Yes / No)
29/01/2021	9:24:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	External	Excavation	Road Traffic	72	69	62	67	Yes
29/01/2021	9:41:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	External	Excavation	Construcion and Road Traffic	72	69.2	62	67.8	Yes

- *[1] Intermittent noise goal (LA10)*
- *[2] Continuous noise goal (LAeq)*
- *[3] In accordance with Imposed Condition 11 where internal noise levels were unable to be measured, external noise goals were developed by an acoustic specialist using the following standards: ISO 140-5:1998 Acoustics – Measurement of Sound Insulation in Buildings and of Building Elements, Part 5: Field measurements of airborne sound insulation of façade elements and facades and ISO 354:1985 Acoustics – Measurement of sound absorption in a reverberation room.*
- *[4] Blasting is measured in dB Linear Peak.*

3.3 Air Quality

3.3.1 Deposited Dust Results

Air quality requirements (levels) are defined as goals within Imposed Condition 13. The goals are to be aimed for.

The Coordinator-General Change Report acknowledges instances exist that these goals may not be achieved.

Dust deposition monitoring was performed during January 2021. The dust deposition gauges result for the reporting period are detailed below, and all monitoring data adhered to project requirements.

Table 4: Air Quality Monitoring – Deposited Dust Data

Location	Project Wide Air Quality Criteria & Goals[1]			Monitoring results	Comments
	Criterion	Air Quality Indicator	Goal		
Roma Street Precinct	Nuisance	Deposited dust	120 mg/m2/day	17.24 mg/m2/day	*Air quality monitoring was performed during the reporting period. All results adhered to project requirements.*
Albert Street Precinct				19.35 mg/m2/day	
Woolloongabba Precinct(North)				25.00 mg/m2/day	
Woolloongabba Precinct (South)				43.75 mg/m2/day	
Boggo Road Precinct (North)				3.13 mg/m2/day	
Boggo Road Precinct (South)				50.00 mg/m2/day	
Southern Portal (East)				10.00 mg/m2/day	
Southern Portal (West)				10.00 mg/m2/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.*

3.3.2 Particulates and Ambient Air Quality Results

Total Suspended Particules (TSP) and particulate matter less than 10µm (PM10) monitoring was conducted during January 2021.

TSP and PM10 are monitored using portable air quality units, as well as nearby Government air quality stations. Targeted monitoring of potential dust-generating activities is conducted by the mobile air quality units and was completed at the Roma Street, Albert Street, Woolloongabba, and Boggo Road Precincts during January 2021. Three (3) Government air quality stations near to the Construction Precincts are also utilised.

Table 5: Targeted Air Quality Monitoring – Total Suspended Particles and PM10 Data

Date	Woolloongabba				Roma Street				Boggo Road				Albert Street			
	TSP GOAL	TSP	PM10 GOAL	PM10	TSP GOAL	TSP	PM10 GOAL	PM10	TSP GOAL	TSP	PM10 GOAL	PM10	TSP GOAL	TSP	PM10 GOAL	PM10
	(µg/m3/24 hr)															
01-Jan-21	80	2.37	50	2.34	80	5.66	50	5.65	80	3.07	50	3.07	80	6.79	50	6.78
02-Jan-21	80	3.44	50	3.38	80	6.92	50	6.9	80	3.38	50	3.36	80	7.92	50	7.91
03-Jan-21	80	3.19	50	3.17	80	6.04	50	6.03	80	3.85	50	3.85	80	6.92	50	6.91
04-Jan-21	80	3.89	50	3.84	80	5.58	50	5.57	80	3.55	50	3.55	80	6.04	50	6.04
05-Jan-21	80	3.98	50	3.91	80	6	50	5.96	80	3.89	50	3.88	80	11.79	50	11.78
06-Jan-21	80	4.97	50	4.82	80	7.07	50	7.01	80	5.03	50	5.02	80	12.04	50	12.01
07-Jan-21	80	4.04	50	3.98	80	6.45	50	6.4	80	3.71	50	3.7	80	10.75	50	11.06
08-Jan-21	80	3.10	50	3.03	80	6.74	50	6.71	80	3.17	50	3.17	80	6.69	50	6.69
09-Jan-21	80	3.38	50	3.35	80	6.64	50	6.63	80	3.93	50	3.92	80	5.46	50	5.45
10-Jan-21	80	2.38	50	2.33	80	5.57	50	5.55	80	- [1]	50	- [1]	80	3.75	50	3.74
11-Jan-21	80	2.48	50	2.44	80	6.17	50	6.13	80	4.25	50	4.25	80	5.48	50	5.46
12-Jan-21	80	3.34	50	3.27	80	6.63	50	6.61	80	4.1	50	4.1	80	15.15	50	15.13
13-Jan-21	80	5.62	50	5.00	80	6.92	50	6.87	80	4.22	50	4.22	80	11.53	50	11.51
14-Jan-21	80	3.32	50	3.25	80	12.39	50	12.27	80	2.38	50	2.37	80	5.88	50	5.81
15-Jan-21	80	3.70	50	3.58	80	5.83	50	5.81	80	3.03	50	3.03	80	6.33	50	6.31
16-Jan-21	80	8.68	50	8.52	80	12.46	50	12.42	80	6.83	50	6.83	80	16.26	50	16.22

Date	Woolloongabba				Roma Street				Boggo Road				Albert Street			
	TSP GOAL	TSP	PM10 GOAL	PM10	TSP GOAL	TSP	PM10 GOAL	PM10	TSP GOAL	TSP	PM10 GOAL	PM10	TSP GOAL	TSP	PM10 GOAL	PM10
	(µg/m3/24 hr)															
17-Jan-21	80	7.86	50	7.73	80	11.87	50	11.81	80	4.1	50	4.09	80	12.83	50	12.78
18-Jan-21	80	8.52	50	8.45	80	17.07	50	9.37	80	4.85	50	4.85	80	11.11	50	11.07
19-Jan-21	80	5.15	50	5.06	80	7.6	50	7.57	80	1.49	50	1.49	80	14.62	50	14.58
20-Jan-21	80	10.31	50	10.26	80	14.71	50	14.66	80	- [1]	50	- [1]	80	27.17	50	27.15
21-Jan-21	80	5.75	50	5.70	80	7.92	50	7.87	80	4.49	50	4.48	80	11.11	50	11.07
22-Jan-21	80	5.02	50	4.95	80	6.97	50	6.94	80	3.66	50	3.66	80	11.08	50	11.02
23-Jan-21	80	3.70	50	3.66	80	5.35	50	5.32	80	2.98	50	2.97	80	11.10	50	11.05
24-Jan-21	80	3.56	50	3.52	80	5.26	50	5.24	80	3.32	50	3.32	80	7.31	50	7.29
25-Jan-21	80	4.28	50	4.24	80	6.36	50	6.34	80	2.81	50	2.8	80	9.26	50	9.24
26-Jan-21	80	4.98	50	4.93	80	8.41	50	8.38	80	- [1]	50	- [1]	80	8.72	50	8.70
27-Jan-21	80	6.64	50	6.60	80	8.95	50	8..92	80	6.48	50	6.48	80	10.84	50	10.79
28-Jan-21	80	4.49	50	4.44	80	8.77	50	8.72	80	5.34	50	5.34	80	18.66	50	18.61
29-Jan-21	80	6.10	50	6.02	80	10.17	50	10.11	80	5.55	50	5.55	80	17.69	50	17.63
30-Jan-21	80	5.05	50	5.00	80	8.9	50	8.87	80	4.23	50	4.23	80	11.23	50	11.19
31-Jan-21	80	3.15	50	3.12	80	6.49	50	6.47	80	2.23	50	2.23	80	11.65	50	11.64

- [1] Due to a technical fault, the Boggo Road mobile air quality unit stopped functioning on 10th, 20th and 26th January 2021. The fault was rectified as soon as practicable. A nearby (Brisbane CBD) DES Air Quality Station demonstrated compliant air quality during January 2021. The levels are also consistent with levels recorded early in the month when the unit was operating.

CBGU also utilises three (3) Government air quality monitoring stations to monitor PM10 near to the project sites. The results during this reporting period were as follows:

- Brisbane CBD: PM_{10} daily Maximum average: **32.3 µg/m3/24 hr** (https://apps.des.qld.gov.au/air-quality/chart/?station=cbd&parameter=18&date=1/01/2021&timeframe=month)
- South Brisbane: PM_{10} daily Maximum average: **38.5 µg/m3/24 hr** (https://apps.des.qld.gov.au/air-quality/chart/?station=sbr&parameter=18&date=1/01/2021&timeframe=month)
- Woolloongabba: PM_{10} daily Maximum average: **33.7 µg/m3/24 hr** (https://apps.des.qld.gov.au/air-quality/chart/?station=woo&parameter=18&date=1/01/2021&timeframe=month)

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

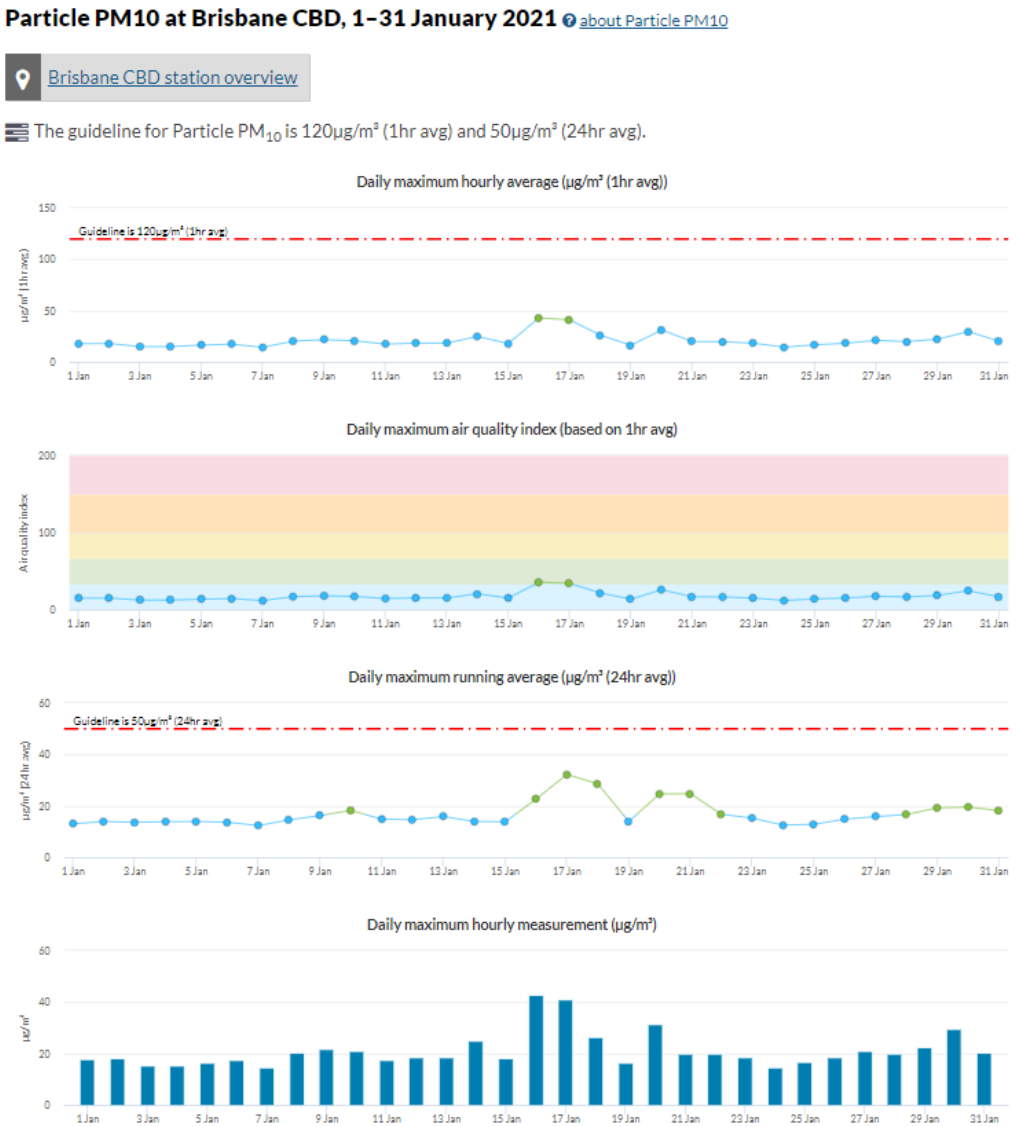


Figure 1: Brisbane CBD – DES Station - PM10 graph for January 2021 (reproduction from the DES website).

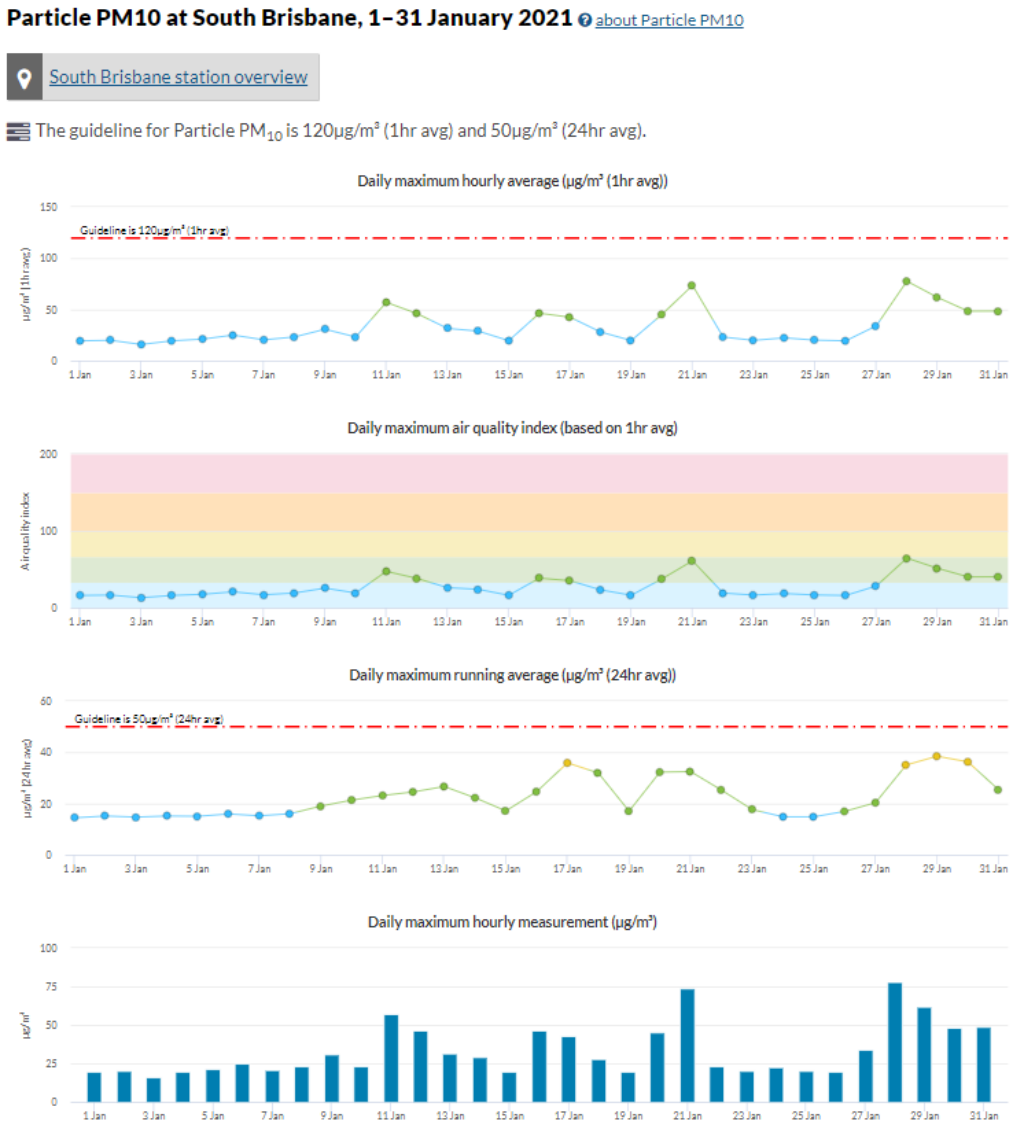


Figure 2: South Brisbane – DES Station - PM10 graph for January 2021 (reproduction from the DES website accessed).

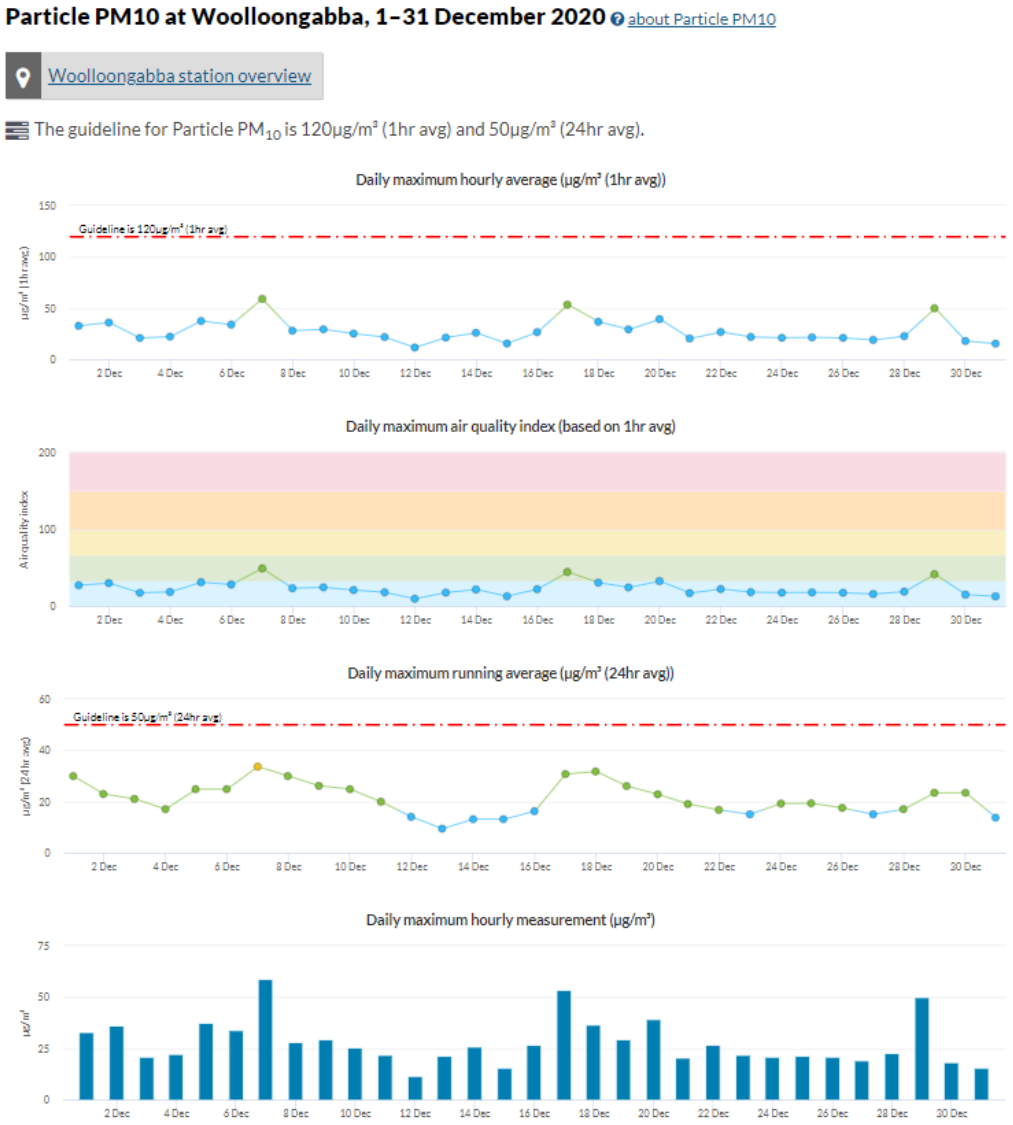


Figure 3: Woolloongabba – DES Station - PM10 graph for January 2021 (reproduction from the DES website).

3.4 Water Quality – Discharge

CBGU undertook twelve (12) water quality monitoring events prior to the release (groundwater and surface water) from the site during January 2021.

3.4.1 Groundwater Discharge

Water quality monitoring data is provided in the table below.

Table 6: Groundwater Discharge – Water Quality Monitoring Data

Location	Date	Water Quality Objectives [1]											Adhered to Project Requirements (Yes / No)
		pH	Suspended solids (mg/L)	Turbidity (NTU)	Ammonia N (µg/L) [3]	Oxidised N (µg/L) [3]	Organic N (µg/L) [3]	Total nitrogen (µg/L) [3]	Total phosphorus (µg/L)	Filterable Reactive phosphorus (FRP) (µg/L)	Chlorophyll a (µg/L)	Dissolved oxygen (%) [2]	
Woolloongabba	4/01/2021	7.50	<5	1.30	80.00	180.00	700.00	1000.00	20.00	<10	<1	89.56	Yes
Woolloongabba	11/01/2021	7.00	<5	0.40	130.00	210.00	900.00	1200.00	10.00	<10	1.00	105.30	Yes
Roma Street	13/01/2021	7.44	<5	0.30	1920.00	210.00	1400.00	3500.00	70.00	<10	<1	90.77	Yes
Albert Street	14/01/2021	7.57	<5	1.28	1550.00	40.00	1600.00	3100.00	20.00	<10	<1	73.29	Yes
Woolloongabba	18/01/2021	7.15	<5	2.40	160.00	190.00	500.00	900.00	110.00	<10	<1	105.30	Yes
Woolloongabba	25/01/2021	The laboratory results had not been received and will be reported in next month's report.											Yes
Boggo Road	29/01/2021	The laboratory results had not been received and will be reported in next month's report.											Yes

- [1] The Project's discharge procedure is designed to minimise environmental impact and aim to achieve the water quality objectives. Water quality objectives are defined as goals within the Brisbane River estuary environmental values and water quality objectives document.
- [2] Adhered to project requirements regarding aiming to achieve the water quality objective. The dissolved oxygen samples were acquired prior to discharge from the site. Pumping of the water will have inadvertently aerated the water, thus influencing the dissolved oxygen level.
- [3] Adhered to project requirements regarding aiming to achieve the water quality objective. These samples identified results generally consistent with pre-construction conditions, and no external influences were introduced by construction activity.
- Note: EPP (Water) Quality Objectives are analysed at a NATA accredited laboratory each month (results provided above). Field testing (turbidity, pH) is done regularly during ongoing discharge.

3.4.2 Ponded/surface water Discharge

Surface water quality monitoring data is provided in the table below.

Table 7: Surface Water Discharge - Water Quality Monitoring Data

Location	Date	Water Quality Objectives [1]		Adhered to Project Requirements (Yes / No)
		Turbidity (NTU)	pH	
Boggo Road	2/01/2021	5.74	7.50	Yes
Boggo Road	3/01/2021	12.46	7.61	Yes
Boggo Road	4/01/2021	14.10	8.38	Yes
Boggo Road	4/01/2021	2.41	8.25	Yes
Boggo Road	13/01/2021	2.24	7.57	Yes

- [1] The Project's discharge procedure is designed to minimise environmental impact and aim to achieve the water quality objectives. All discharges were compliant with *Guidelines for Best Practice Erosion and Sediment Control (IECA, 2008) and* the *Department of Transport and Main Roads' Technical Standard MRTS 52 – Erosion and Sediment Control.*

3.5 Water Quality – Surface Water

During January 2021, CBGU JV undertook one (1) round of surface water sampling at four (4) locations (upstream and downstream).

Results from the below-monitoring locations reflect the condition of the broader catchment (not just the influence of the Project). Water quality generally appears good, and water discharge from the Project would not have had an impact on the catchment considering the results provided within section 3.4 above.

Table 8: Offsite Upstream & Downstream Water Quality Data

Location	Upstream / Downstream	Date	Purpose of Monitoring	Turbidity (NTU)	EC (µS/cm)	Dissolved oxygen (%)	pH
Boggo Road / Southern Portal	Downstream	12/01/2021	Monthly	26.5	20800	48.41	7.58
Gabba	Upstream	12/01/2021	Monthly	20.1	44500	94.4	7.12
Gabba	Downstream	12/01/2021	Monthly	50.4	42800	90.77	7.57
Roma Street	Upstream	13/01/2021	Monthly	46	31000	87.14	7.72
Roma Street	Downstream	13/01/2021	Monthly	11.8	31700	88.35	7.76
Albert Street	Upstream	14/01/2021	Monthly	19.1	42900	91.81	7.84
Albert Street	Downstream	14/01/2021	Monthly	26.5	42900	90.39	7.88

- [1] 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.

4 Non-Compliances

Details of non-compliances are provided in accordance with Imposed Condition 6(b)(ii).

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.

Table 9: 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					

5 Complaints

Reporting of complaints is provided below in accordance with Imposed Condition 6(b)(iii).

During January 2021, fifteen (15) complaints relating to the Project were received as detailed in Table 10 below.

Table 10: Summary of Complaints

No.	Date	Location	Description of Issue	Responses	Status of Event
1.	06/01/2021	Albert Street (Albert Street Precinct)	Odour	A stakeholder contacted the Project regarding odour from the Albert Street precinct. CBGU provided the stakeholder with an outline of the mitigation measures used to alleviate potential impacts and ensure compliance. The Project also reviewed the circumstances and monitoring confirmed works adhered to project requirements.	Closed

No.	Date	Location	Description of Issue	Responses	Status of Event
2.	08/01/2021	Albert Street	Lighting	A stakeholder contacted the Project regarding a pedestrian lighting outage at Albert Street gantry. CBGU immediately reinstated the light.	Closed
3.	11/01/2021	Albert Street	Property Condition	A stakeholder contacted the Project hotline to advise changes to their property. No further details were provided.	Closed
4.	13/01/2021	Northern Portal	Pedestrian and Cyclist Safety	A stakeholder contacted the Project regarding the pedestrian and cyclist management along Gregory Terrace. CBGU provided the stakeholder with an overview of the pedestrian and cyclist set up and advised the design had been developed in consultation with Local Government Authorities.	Closed
5.	13/01/2021	Northern Portal	Worker Behaviour	A stakeholder contacted the Project regarding inappropriate usage of a mobile device at the Northern Portal. CBGU investigated the issue and confirmed the worker was using a mobile device in an appropriate manner (stationary vehicle).	Closed
6.	13/01/2021	Roma Street	Construction Hours	A stakeholder called the Project Hotline regarding works at Roma Street precinct during non-standard hours. CBGU provided the stakeholder with an overview of the works occurring and their duration at the Roma Street precinct. The Project also outlined the mitigation measures used to alleviate potential impacts and ensure compliance. The Project also reviewed the circumstances and monitoring confirmed works adhered to project noise requirements.	Closed
7.	15/01/21	Albert Street	Pedestrian Safety	A stakeholder contacted the Project regarding an interaction with a CBGU traffic controller at the Albert Street precinct. CBGU provided the stakeholder with an overview of the pedestrian set up and advised the design had been developed in consultation with Local Government Authorities.	Closed
8.	19/01/2021	Albert Street	Traffic Management	A stakeholder contacted the Project regarding the duration of works and traffic hold times at the Albert Street precinct.	Closed

No.	Date	Location	Description of Issue	Responses	Status of Event
				CBGU provided the stakeholder with an overview of the works occurring and their duration at the Albert Street precinct.	
9.	16/01/2021	Roma Street	Noise	A stakeholder called the Project Hotline regarding noise from the Roma Street precinct during standard hours. CBGU provided the stakeholder with an overview of the works occurring and their duration at the Roma Street precinct. The Project also outlined the mitigation measures used to alleviate potential impacts and ensure compliance. The Project also reviewed the circumstances and monitoring confirmed works adhered to project noise requirements.	Closed
10.	19/01/2021	Albert Street	Worker Behaviour	A stakeholder contacted the Project regard inappropriate workforce behaviour at Albert Street precinct. CBGU addressed the workforce via toolbox talk about appropriate behaviour when working adjacent to the public and pedestrians.	Closed
11.	19/01/2021	Albert Street	Property Condition	A stakeholder contacted the Project regarding their property condition. CBGU consulted the stakeholder and agreed minor mitigation measures that could be applied on-site.	Closed
12.	20/01/2021	Roma Street	Traffic Management	A stakeholder contacted the Project regarding approved haulages routes at Roma Street. CBGU explained the approved haulage routes to the stakeholder and raised the importance of adhering to approved routes with hauliers.	Closed
13.	21/01/21	Albert Street	Vibration	A stakeholder contacted the Project regarding vibration from the Albert Street precinct. CBGU provided the stakeholder with an overview of the works occurring and their duration at the Albert Street precinct. The Project also outlined the mitigation measures used to alleviate potential impacts and ensure compliance. The Project also reviewed the circumstances and monitoring confirmed works adhered to project vibration requirements.	Closed

No.	Date	Location	Description of Issue	Responses	Status of Event
14.	28/01/21	Albert Street	Noise	A stakeholder called the Project Hotline regarding noise from the Albert Street precinct during non-standard hours. The Project also reviewed the circumstances and determined that the noise source was not related to the CBGU's Project works.	Closed
15.	29/01/2021	Albert Street	Noise	A stakeholder called the Project Hotline regarding noise from the Albert Street precinct during non-standard hours. CBGU provided the stakeholder with an overview of the works occurring and their duration at the Roma Street precinct. The Project also outlined the mitigation measures used to alleviate potential impacts and ensure compliance. The Project also reviewed the circumstances and monitoring confirmed works adhered to project noise requirements.	Closed