Cross River Rail Project

Monthly Environmental Report

June 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 June 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 – no. 10 (June 2021)* 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:

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.
3.	**Design** – achievement of the Environmental Design Requirements	NA	Ongoing progress with design packages.
4.	**Construction Environmental Management Plan** – all relating to Relevant Project Works.	Yes	RIS – CEMP Revision 10 covering full scope of RIS works is effective from 29 April 2021. TSD – CEMP Revision 8 covering full scope of TSD works is effective from 9 June 2021.
5.	**Compliance and Incident management** – Non-compliance events, notifications and reporting.	Yes	There were no non-compliance events (NCEs) raised in June 2021. Refer to Section 2.5 of this report.

Imposed Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
6.	**Reporting** – Monthly and Annual reporting.	Yes	This MER including RIS and TSD Monthly Reports have been submitted in accordance with the conditioned requirements. Refer to **Appendix A** and **Appendix B**.
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.
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 (Sections 3.1.2 and 3.1.4,** and **Table 4)**. TSD – Refer to **Appendix B (Section 3.2** and **Table 3)**.
	Vibration – Project Works must aim to achieve vibration goals for cosmetic damage, human comfort and sensitive building contents.	Yes	RIS - Vibration monitoring was not required during the reporting period. TSD – Vibration monitoring was undertaken to validate predicted vibration assessments and in response to vibration related complaints. The TSD contractor confirmed the monitoring results met project requirements. Refer to **Appendix B (Section 3.1** and **Table 2)**.
12.	**Property damage** – relating to ground movement.	Yes	RIS – Predictive vibration modelling has been undertaken for Relevant Project Works and Property Damage Sub-plans have been developed and implemented. Pre-condition surveys have been completed at heritage, commercial and residential buildings at RNA, Northern Corridor and Fairfield to Salisbury stations.

Imposed Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
			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 (Sections 3.2**, **Tables 7 and 9**, and **Figures 1, 2 and 3)**. TSD – Refer to **Appendix B (Sections 3.3. 1 and 3.3.2**, and **Tables 4 and 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 and implemented on site.
15.	**Water quality** – Works must not discharge groundwater from the construction site above the relevant environmental values and water quality objectives. Monitor and report on water quality in accordance with CEMP and Sub-plans.	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 Clapham Yard worksite. Surface water monitoring results for Moolabin Creek and Rocky Water Holes Creek confirmed off-site discharges met project discharge criteria. Refer to **Appendix A, Table 10** for post-rainfall monitoring results and **Section 3.3.5** for details of the investigation. TSD – Three groundwater discharges from Roma Street, Albert Street and Woolloongabba worksites were inconsistent with water quality objectives however consistent with pre-construction water quality levels. No external influences were introduced by the construction activities. Refer to **Appendix B (Table 6)** for ground water monitoring results. Refer to **Appendix B (Tables 7 and 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

Imposed Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
			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.
19.	**Acid sulfate soils** – managed as per the Queensland Acid Sulfate Soil Technical Manual.	Yes	Acid Sulfate Soil Management Plans have been prepared and implemented for all active worksites.
20.	**Landscape and open space** – general requirement to minimise impacts on landscapes and open space values and specific requirements around Victoria Park.	Yes	Extraction of TBMs from the Northern Portal requires minor modification to an existing temporary access road through Victoria Park. Consideration is being taken to minimise loss of trees and area of park impacted during these temporary works. Heritage Exemption Certificate was approved by the Department of Environment and Science (DES) for these works on 24 June 2021.
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 NCEs raised in June 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, several Requests for Project Change (RfPC) submissions have been evaluated by the Coordinator-General. RfPC 10 is applicable for the works that took place in June 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.

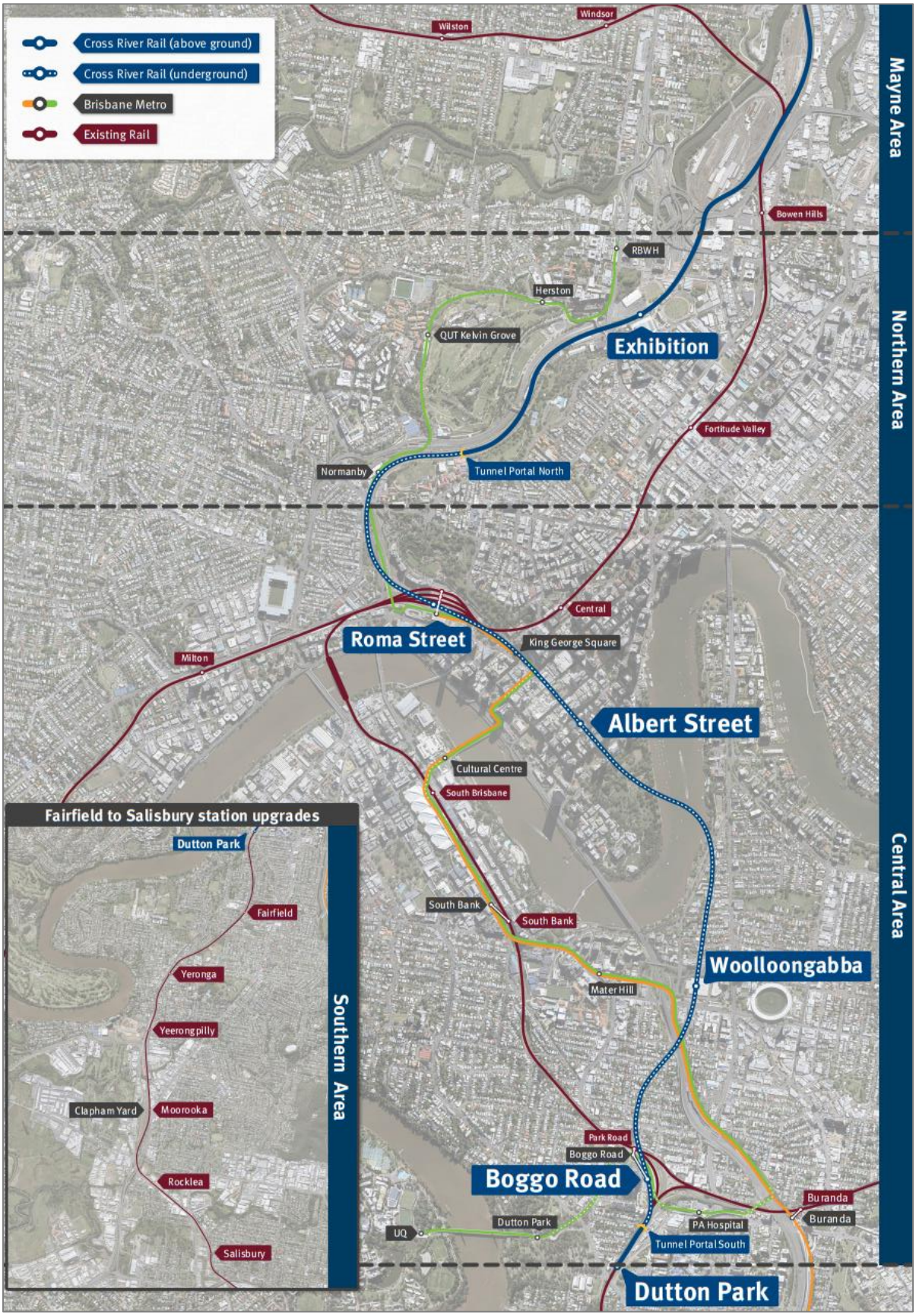
The two main delivery packages which require reporting under the Coordinator-General's imposed conditions are:

- 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
Wilston
Windsor
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
Mayne Area
Northern Area
Central Area
Southern Area
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 MER 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 June 2021:

Area	Project Works
Mayne Area	**Mayne Yard North** – • Civil scope continues - stabling yard fence installation, drainage works and combined services routes (CSR); • Access roads and carpark drainage continues; • BR11/13 (Tripod Bridge) piling is 60% complete and ground improvement piling for reinforced soil structure walls continues; • RC14 (Ferny Grove Flyover) pier protection piling continues; • RC14 form, reo, pour (FRP) continues; • BR08 clearing of mangroves completed for Breakfast Creek Bridge construction and erosion and sediment controls installed; and • Load transfer platforms for multiple retaining walls continues.
Northern Area	**Northern Corridor** – • Retaining wall RW270 completed and RW265 south of Bowen Bridge Rd has commenced; and • Stormwater drainage works have recommenced. **RNA** – • Rock excavation for western corridor widening is 90% complete; • BR43 (western viaduct) FRP on pile caps and blade walls commenced; and • Stage 1 drainage has commenced. **Northern Portal** – • Permanent piling, excavation and sewer main relocation ongoing; • Permanent capping beam continues; completed piles; and • Temporary retention is nearing completion with excavation down to permanent pile cut off complete.

Area	Project Works
Central Area	**Roma Street** – • Cavern bench blasting and excavation ongoing; • Services building adit excavation ongoing; Services building excavation and ground retention continues at bench 11 of 15; • Station building excavation and retention works in progress with bench 2 in progress; and • Inner Northern Busway (INB) underpinning continues and is 60% completed.
	Albert Street – • Lot 1 – station box excavation continues, 'row 2' props fabricated and ready for install, first 8m deep controlled blast completed, and Mantra third row of 25 strand stress anchors commenced; • Lot 2 – installation of passive lining at adits complete, adit excavation into Lot 1 and Lot 3 complete, TBM #1 commenced traverse through cavern, and cavern heading excavation towards the north continues; and • Lot 3 – excavation continuing for second row of anchors, first row of anchors stressed and second row ongoing, and preparation works for tower crane installation underway.
	Woolloongabba – • Station jump form system complete to lift 3, next lift underway and will bring the walls in this area up to B4 level; • Continuous slab pouring occurring and B7 soffit reinforcement has commenced within the station box; • Southern cavern waterproofing and lining ongoing; • TBM #1 (Else) continued mined tunnelling and segment installation works completing 1048 rings by the end of June; • TBM #2 (Merle) continued mined tunnelling and segment installation works completing 952 rings by the end of June; • Roadheader downline excavation continued with 480m excavated by the end of June; and • Roadheader upline excavation continued with 464m excavated by the end of June.
	Boggo Road – • Station box excavation nearing completion and western wall remedial works ongoing; • Central section complete, western section reinforcement complete and eastern section reinforcement commenced; • Tunnel excavation of heading beneath Park Road station complete and cavern bench excavation commenced; • Concrete pumping infrastructure installation at Kent Street commenced; • Ongoing slab pours; and • First station wall pour on the southern wall formed and ready to pour.
	Southern Portal – • Continued site establishment works including permanent power connections to the Kent Street facilities and decommissioning of the Kent Street start up facilities; • Stage 1 piling works complete to the greenfield portal structure; • Pile breakback and capping beam construction ongoing; • Completed Kent Street to Pound Street communications services relocation; • Continued construction of access shafts for the sewer and stormwater micro tunnelling relocations; and • Continued construction of new signaling, communications and power infrastructure within the triangle with inground service pits installed.

Area	Project Works
Southern Area	**Dutton Park** – • Continued installation of CSR during SCAS with new ground surface troughing in the Dutton Park Area; • Commenced Dutton Park Station modifications enabling works with redundant infrastructure removed and relocated during SCAS TSD21; and • Pier protection during SCAS. **Yeronga Station** – • Demolition of station building complete; • Temporary scaffold overpass complete; • Commencement of screw piling on Platform 1; • Platform 1 and 2 excavation; • Platform 3 excavation of retaining walls; and • Platform 1 retaining wall complete including ramps, landscaping features, fencing etc. **Clapham Yard** – • Demolition works of facilities is 80% complete with foundation slabs remaining; • Ground surface treatment, remove and replace earthworks continues; • Geotechnical investigations completed; and • Contaminated land investigations ongoing.

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, including communicating construction activities to potential and actual Directly Affected Persons (DAPs). For Project Works where potential noise impacts are predicted to be more than 20dBA above the relevant noise goal, specific engagement is required with 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, noise monitoring was undertaken to validate predictive modelling at sensitive places during piling, excavation and ground stabilisation works at the Northern Portal during standard hours. Noise levels met project requirements. Noise monitoring in response to noise complaints was undertaken and the monitoring results demonstrated compliance with the project noise goals. Monitoring results for the Northern Area are detailed in 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

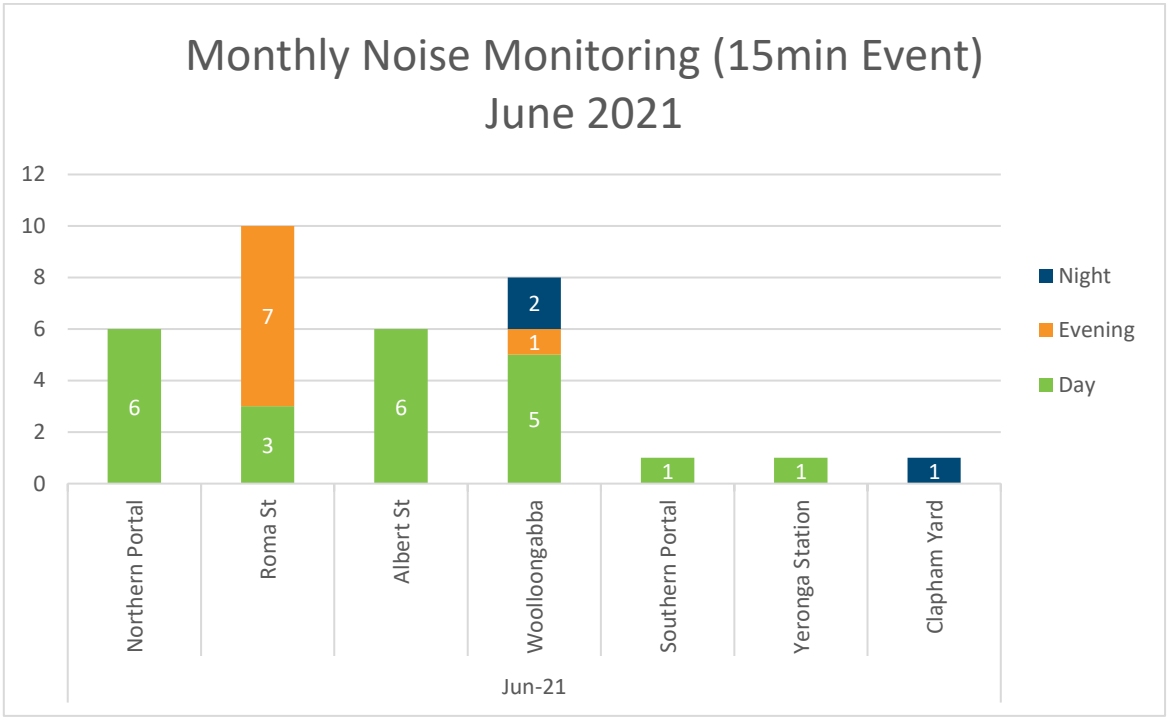
Area are detailed in Table 3, **Appendix B**. The TSD contractors reported that the project noise requirements have been met during this reporting month.

In the Southern Area, noise monitoring was undertaken to validate predictive modelling using a buffer distance testing for demolition of buildings at Clapham Yard during Non-Standard hours and at Sensitive Place for Platform 1 Station demolition at Yeronga Station during Standard hours. Monitored noise levels met project requirements. Noise monitoring in response to complaints was not triggered. Monitoring results for the Southern Area are detailed in Table 4, **Appendix A**.

Examples of noise management measures on the sites include:

- using plant and equipment separately adjacent to sensitive receptors;
- purpose built noise barriers on the sites or site boundary;
- change in plant type, such as at Boggo Road/Southern area where an almost silent sheet-piling machine had been sourced in place of one with a much higher sound power level;
- acoustic spoil sheds;
- positioning of equipment on site to maximise the effects of the site layout and barriers such as the spoil shed itself or other workshops; and
- noise blankets, such as those applied on the Woolloongabba site to further mitigate noise from tonal plant and equipment.

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



2.2.2. Vibration

Vibration monitoring in the Mayne and Southern Areas was not triggered.

In the Northern Area, Vibration monitoring took place to validate predictive modelling for piling, excavation, ground stabilisation and material haulage activities at the Northern Portal worksite. No complaints relating to vibration were received during the reporting period. The contractor reported results met the project's nominated goals. Vibration monitoring results for the central Area are detailed in **Appendix B** (Table 2)

In the Central Area, vibration monitoring took place to validate predictive modelling for tunnelling, piling, excavation and controlled blasting activities at Roma Street, Albert Street and Woolloongabba along

the tunnel alignment. No complaints relating to vibration were received during the reporting period. 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, Northern, Central and Southern Area worksites. Dust deposition results met the project air quality goal[1]. Two dust complaints were received, both in relation to the ongoing spoil handling from the conveyor system at Woolloongabba worksite. Upon investigation, the contractor confirmed the works adhered to the project air quality requirements. Representatives from Workplace Health and Safety Queensland attended the site to investigate one of the dust complaints and confirmed there were "no non-compliances identified in relation to this particular matter". Workplace Health and Safety Queensland was also satisfied with extra mitigation measures implemented on site by the contractor including additional screening and barriers along the conveyor, dust mitigation toolbox talks at pre-start and engaging an independent Certified Occupational Hygienist to monitor air quality. A summary of dust deposition monitoring is provided in the table below.

Air Quality – Dust Deposition Monitoring			
Area	**Worksite**	**Monitoring Location**	**Comments**
Mayne Area	Mayne Yard	Mayne Yard	- Results met air quality goal.
Northern Area	RNA / Exhibition	RNA Showgrounds	- Results met air quality goal.
	Northern Portal	Northern Portal (near Brisbane Girls Grammar School)	- Results met air quality goal.
Central Area	Albert Street	Mary Street	- Results met air quality goal.
		Elizabeth 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	Clapham Yard	Clapham Yard (East)	- Results met air quality goal. - Data gap noted from 25-26 June due to power malfunction.

[1] CG air quality goal for dust deposition - 50µg/m^3 (over an averaging period of 24 hours).

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, Northern, Central and Southern Area worksites. The Boggo Road air quality unit experienced a technical fault and stopped functioning on 4, 8, 16, 17, 21, 25, 26, and 27 June, requiring specialist repairs. The Woolloongabba air quality unit experienced technical issues and stopped functioning on 4, 8, 11, 18, 22, 26, 27 and 30 June. However, results for the days monitored met the project air quality goals. The review of nearby DES air quality monitoring stations (South Brisbane and Woolloongabba) demonstrated PM_{10} levels throughout June were compliant with project air quality goals.

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

Air Quality – PM_{10} / TSP Monitoring			
Area	**Worksite**	**Monitoring Location**	**Comments**
Mayne Area	Mayne Yard	Mayne Yard North	- Results met air quality goals.
Northern Area	RNA / Exhibition	Lanham Yard	- Results met air quality goals.
	Northern Portal	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.
	Boggo Rd / Southern Portal	North-east of Boggo Road worksite	- Results met air quality goals. - Monitoring unit experienced a technical fault with no results on 4, 8, 16, 17, 21, 25, 26, and 27 June.
	Roma St	Roma Street Station	- Results met air quality goals.
	Woolloongabba	Place Park, Woolloongabba	- Results met air quality goals. - Monitoring unit experienced a technical fault with no results on 4, 8, 11, 18, 22, 26, 27 and 30 June.
Southern Area	Clapham Yard	Clapham Yard	- Results met air quality goals.

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 TSD worksites in accordance with Water Quality Management Plan. Routine monitoring for RIS worksites has been reduced to bi-annual background monitoring from April 2021 and was not undertaken in June 2021.

In the Mayne and Northern Areas, no active surface water discharges occurred, and post rainfall monitoring was not triggered during the month.

In the Central Area, active surface water discharge was undertaken at Boggo Road (dewatering through water treatment plant). Surface water discharge results met project water quality discharge criteria. Post-rainfall monitoring was not triggered during the month. Routine instream monitoring occurred for all TSD worksites. Results are detailed in **Appendix B** (Table 8).

In the Southern Area, post-rainfall monitoring was triggered at Clapham Yard on 15 June 2021. Results from post-rainfall monitoring in receiving waters at Moolabin Creek and Rocky Water Holes Creek met project water quality discharge criteria. See **Section 3.3.2** in **Appendix A** for further details.

Surface water quality monitoring is summarised in the table below:

Surface Water Quality Monitoring					
Area	**Worksite**	**Discharge**	**Post-Rain Monitoring**	**Routine Monitoring**	**Comments**
Mayne Area	Mayne Yard North	No	No	N/A	- Monitoring was not triggered.
Northern Area	Northern Portal	No	No	Yes	- Routine monitoring undertaken in accordance with the WQMP.
Central Area	Albert Street	No	No	Yes	- Routine monitoring undertaken in accordance with the WQMP.
	Boggo Road	Yes	No	Yes	- Discharge monitoring met project water quality discharge criteria. - Routine monitoring undertaken in accordance with the WQMP.
	Roma Street	No	No	Yes	- Routine monitoring undertaken in accordance with the WQMP.
	Woolloongabba	No	No	Yes	- Routine monitoring undertaken in accordance with the WQMP.
	Southern Portal	No	No	Yes	- Routine monitoring undertaken in accordance with the WQMP.
Southern Area	Clapham Yard	No	Yes	N/A	- Post-rainfall monitoring undertaken at Moolabin Creek and Rocky Water Holes Creek. - Results met water quality discharge criteria.

2.2.4.2. Groundwater

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

Groundwater discharge occurred in the Central Area at Roma Street, Albert Street and Woolloongabba worksites. The groundwater discharge results reported for the month exceeded the Project's water quality objectives (WQO's)[2] for total nitrogen, ammonia nitrogen, organic nitrogen and dissolved oxygen. This result however was consistent with the receiving environment baseline monitoring pre-construction data.

[2] The Brisbane River Estuary environmental values and water quality objectives (Basin no 143 – mid-estuary) in the Environmental Protection (Water) Policy 2009.

Groundwater Quality Monitoring			
Area	**Worksite**	**Discharge**	**Comments**
Mayne Area	Mayne Yard North	No	- No groundwater discharges.
Northern Area	RNA/Exhibition	No	- No groundwater discharges.
	Northern Portal	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	No	- No groundwater discharges.
	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	Clapham Yard	No	- No groundwater discharges.

2.2.5. Erosion and Sediment Control

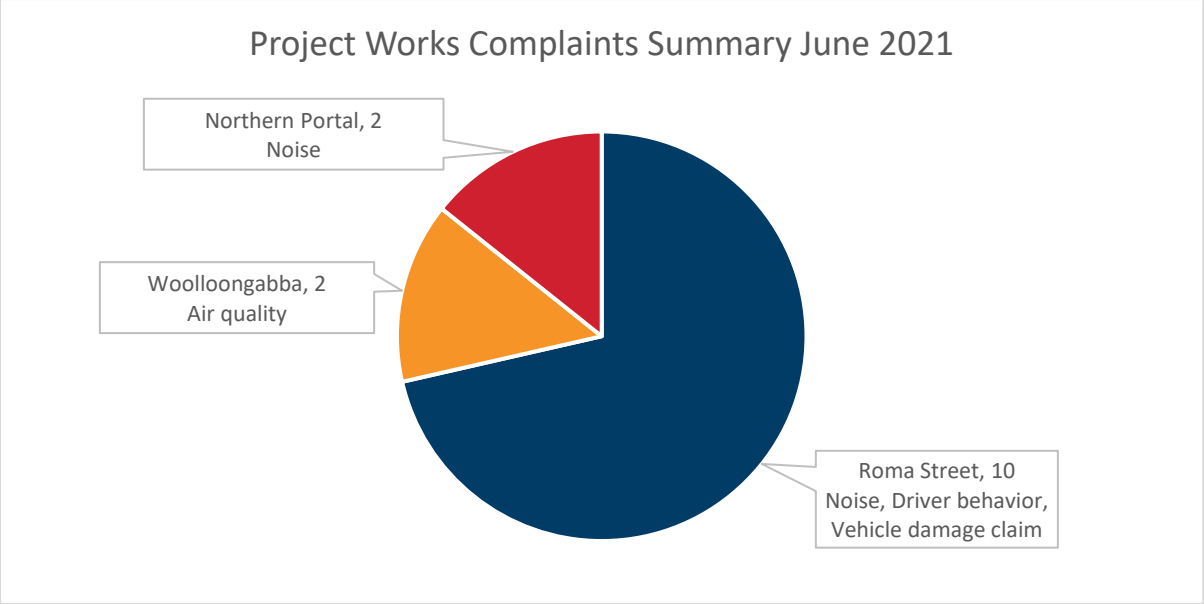
Site specific Erosion and Sediment Control (ESC) Plans have been prepared, updated, and implemented at Mayne Yard, Northern Portal, RNA Showgrounds, Roma Street, Albert Street, Woolloongabba, Boggo Road, Southern Portal, Yeronga, and Clapham Yard worksites.

2.3. Complaints Management

A total of 16 complaints were received during the month, of which two were not related to Project Works.

RIS works did not receive any complaints in the reporting period.

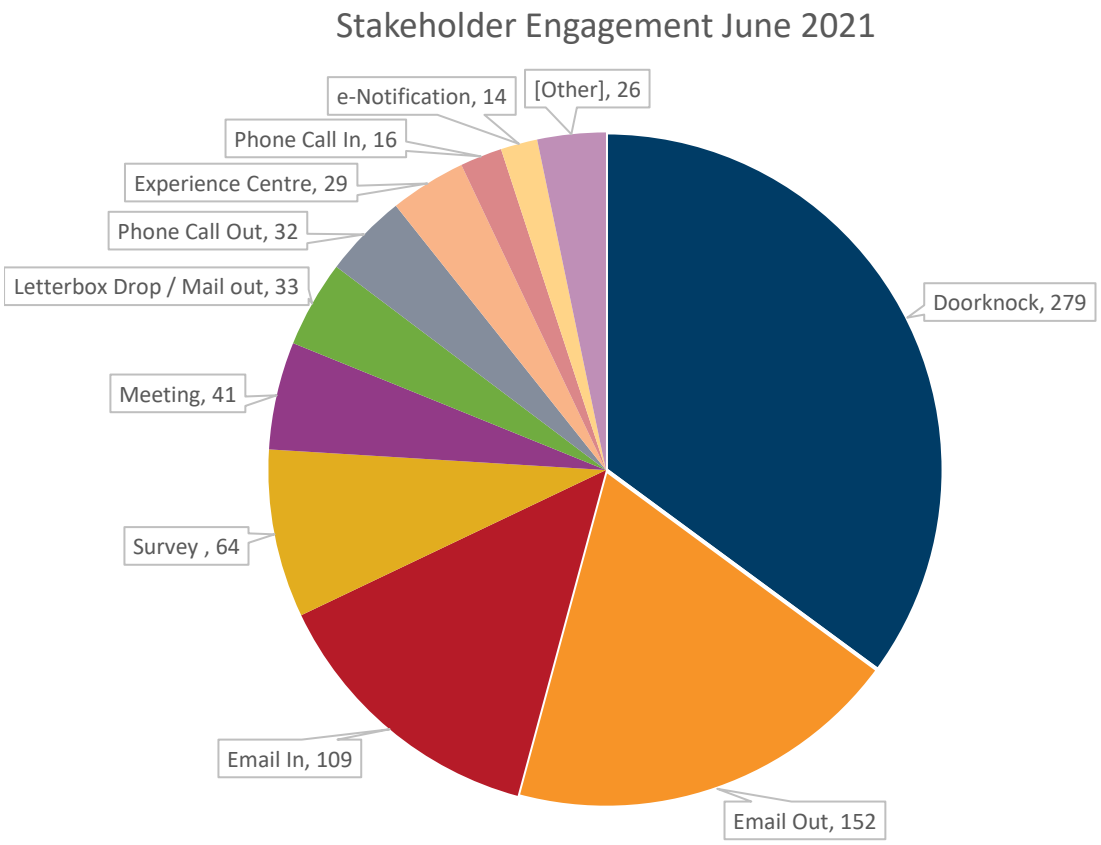
TSD activities received 14 complaints related to works at the Northern Portal, Roma Street, and Woolloongabba worksites. The TSD contractors reported that project requirements have been met during this reporting month. The Project Works complaints summary for the month is provided in the following chart.



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. Contractors have also confirmed that planned mitigation to reduce the impact was implemented. This is reviewed together to verify if project requirements have been met. For further details on close-out of complaints refer to **Appendix A,** Table 3 and **Appendix B,** Table 10.

For scheduled out of hours works, community notification was provided, as well as regular project updates. Stakeholder engagement undertaken on the project during the month is summarised in the chart below.



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	**Mayne Yard North** – • Commence sewer and water installation scope; • Commence Graffiti Removal Facility, Crew Facility Building services and FRP works; • Commence Breakfast Creek Bridge Works - install temporary rock platform on south side of Breakfast Creek; • Continue with civil scope including fencing, inground services, subsoil and subgrade preparation for capping; • Continue combined services route works; and • Continue OHLE Foundations.
Northern Area	**Northern Corridor** – • Complete Normanby drainage and sewer work; and • Complete rock excavation for western corridor widening. **RNA/Exhibition** – • Continue, FRP pile caps for western viaduct (BR43); and • Continue drainage works. **Northern Portal** – • Excavation and permanent retention (including canopy tubes); • Capping beam and portal beam construction to continue till August; • Ongoing excavating, loading and removing of material with trucks;

Area	New planned works in the coming months
	• Construction of TBM clearing pad in June-August; and • Installation of gantry crane in August.
Central Area	**Roma Street –** • TBM 1 break-through in August followed by TBM 2 expected to occur in late August; and • Permanent lining construction in July. **Albert Street –** • Lot 1 – controlled blasting to continue in July and second row of props to be installed in late July; • Lot 2 - 24-hour tunnelling will continue and waterproofing preparation works including drilling to commence in July; and • Lot 3 - ongoing station box excavation and ground support ongoing and tower crane installation in July. **Woolloongabba –** • 24/7 excavation operations with TBMs and road headers; • Continuous spoil haulage, large concrete deliveries for back of house and station building structures construction; and • Cross passage works north of Woolloongabba site to continue in July. **Boggo Road –** • Station box excavation completion in July and excavation of northern cavern beneath the canopy tubes ongoing; • Station structure wall pours to commence in July; and • Installation of second tower crane in August. **Southern Portal –** • Continue utility relocation and Scheduled Corridor Access System (SCAS) works in the rail corridor in July, August and September; and • Piling to commence for the Dutton Park retaining wall in July.
Southern Area	**Yeronga Station –** • Concrete overpass demolition; • Platform 1, 2 and 3 screw pile installation; • Platform 1, 2 and 3 civil and FRP works; and • Platform 3 precast retaining wall installation. **Clapham Yard –** • Continue import and stockpiling fill ahead of bulk earthworks activities; • Complete demolition of foundation slabs; and • Commence site establishment of offices.

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 – June 2021

Cross River Rail – Rail, Integration and Systems Alliance

Assured Integration for a New Era

Table of Contents

1 Progress Summary - Relevant Project Works

The following Project Works were undertaken during the reporting period:

Table 1: Summary of Project Works completed during the reporting period

Area	Project Works
Mayne Area	• **Mayne Yard North** Tripod Bridge (BR11/13) Cast in Place (CIP) piling 60% complete Continuous flight auger (CFA) ground improvement piling for RSS walls Load Transfer Platforms for multiple Retaining Walls (RW) ongoing RC14 (Ferny Grove Flyover pier protection) CIP piling ongoing RC14 (Ferny Grove Flyover pier protection) Form Reo Pour (FRP) scope ongoing BR08 (Breakfast Creek Bridge) clearing of mangroves completed and environmental controls installed Mayne Yard North civil scope continued (stabling yard fence, drainage works and Combined Services Routes [CSR]) Mayne Yard Access Roads and Carpark drainage scope continued
Northern Area	• **RNA** Retaining Wall RW210 Remove and Replace scope completed BR43 FRP on pile caps and blade walls continues Drainage DL 251 (Stage 1) commenced • **Northern Corridor** Retaining Wall RW270 (Infront of Victoria Park Feeder Station) commenced and base slab completed Retaining Wall RW265 (south of Bowen Bridge) commenced Drainage works in Normanby section (DL 230, 241 between ICB and Queensland Rail live tracks) has re-commenced and team is working through redesign and temporary works, DL 246 (at Victoria Park Feeder Station) has been completed Rock excavation for western corridor widening 90% complete
Southern Area	• **Yeronga Station** Temporary Scaffold Overpass complete during the SCAS 19–20 June Demolition of station building complete during the SCAS 19–20 June Commencement of screw piling on Platform 1 Yeronga excavation on Platform 1 and 2 underway Yeronga Platform 3 excavation of retaining walls underway. • **Clapham Yard** Demolition works of facilities 80% complete only slabs remaining Earthworks continues Geotechnical investigation completed Contaminated land testing ongoing

The following table summarises the upcoming Project Works:

Table 2: Summary of upcoming Project Works

Area	Project Works
Mayne Area	• **Mayne Yard North** Commence Sewerage, Water and Decanting scope in Yard Commence Graffiti Removal Facility and Crew Facility Building services and FRP Commence temporary rock platform (south) for Breakfast Creek Bridge (BR08) in August 2021 Continue with civil scope in Yard including fencing, inground services, subsoils and subgrade preparation for capping to commence in August 2021 Continue CSR works Continue OHLE Foundations in Mayne Yard North
Northern Area	• **RNA** Ekka 2021 embargo (15 July–23 August) Continue FRP BR43 pile caps and blade walls (western viaduct). Pier 9 will continue through Ekka 2021 Commence falsework for Span 1 to 3 Continue drainage at Southern section (Stage 1). • **Northern Corridor** Complete Drainage works in Normanby section at ICB side (DL 230, 241) Complete all rock excavation for western corridor widening
Southern Area	• **Yeronga Station** Finalisation of Yeronga Station return plan Yeronga Platform 1, 2 and 3 civil and FRP works Yeronga opening of temporary scaffold overpass Yeronga Station overpass demolition Yeronga Station screw pile installation on Platforms 1, 2 and 3 Yeronga Platform 3 precast retaining wall installation • **Clapham Yard** Complete demolition Continue earthworks scope Commence extended site establishment of offices

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 3: Summary of Complaints

Date	Location	Issue	Activity source of the concern	Period	Unity Response	Status
June 2021	Not Applicable	Nil for the reporting period	Not Applicable	Not Applicable	Not Applicable	Not Applicable

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:

- Platform 2 and 3 demolition at Yeronga Station during rail possessions works over Standard and Non-Standard hours

Attended noise monitoring undertaken to validate the predictive noise assessment for:

- Earthworks activities at Clapham Yard undertaken as Managed Works

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

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

Complaint-based noise monitoring because of Project Works was not triggered.

3.1.2 Noise monitoring Results

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

The results from noise monitoring are assessed against two performance goals.

The first performance goal (herein referred to as Performance Goal 1), is determined as per Condition 11(a), Table 2, LA_{10} noise goals.

The second performance goal (herein referred to as Performance Goal 2), is determined as per (Condition 11(c), using Table 2 LA_{10} noise goal and adding + 20dBA.

An exceedance (predicted or measured) of either of these performance goals does not necessarily represent a potential or actual Non-Compliance Event.

Indeed, if the Project Works are authorised to proceed under Imposed Condition 10 and the DAP engagement process has occurred as per Imposed Condition 11 (c), then Project Works that are predicted to generate noise above the Noise Goal + 20dBA can proceed.

The purpose of these two performance goals is to inform:

- The extent of management measures that can reasonably and practically be implemented during the execution of the Relevant Project Works to minimise impact to DAPs, and
- Extent and type of consultation with DAPs prior to and leading up to the Relevant Project Works commencing.

The community, stakeholders and DAP consultation and engagement process which is based on the outcomes of the predictive modelling is presented in Attachment 6.

Attachment 6 must be read in conjunction with the Noise and Vibration Management sub-plan (C-EMP sub-plan) with a focus on Attachment 1 and 2 of the subplan.

Table 4: 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 1 (dBA) (Condition 11(a), Table 2, LA_{10} noise goals)	Performance Goal 2 (dBA) – (Condition 11(c), Table 2 LA_{10} noise goal + 20dBA))	Measured LA_{10} (dBA)	Measured LA_{eq} (dBA)	DAP engagement prior to works	Is performance Goal exceeded?	Comments
Not applicable buffer distance testing between noise source and Ipswich Road Yeerongpilly	Attended – Outdoors[1]	Out of Standard Hours 01/06/21 – 05:00	Intermittent	Buffer Distance Validation testing	56 (outdoors)	Not Applicable for Buffer Distance Testing	Not Applicable for Buffer Distance Testing	56	59	Yes Standard	Not applicable	Earthworks at Clapham Yard For interpretation, please refer to section 3.1.4.1.1
Residential 2 Lake Street Yeronga	Attended – Outdoors[1]	Standard Hours Saturday daytime Out of Standard Hours Sunday daytime Monitoring undertaken 19/06/21 – 14:30	Intermittent	Construction Monitoring at Sensitive Places - Model Verification	82 (outdoors)	**Standard hours** 65 (Outdoors) (AS2107 maximum design level [45dBA] + 10dBA+ 10dBA façade reduction)[2] **Out of Standard Hours** 52 (Outdoors) (42dBA default goal + 10dBA façade reduction)[2]	**Standard hours** 85 (Outdoors) (65+ 20dBA) **Out of Standard hours** 72 (Outdoors) (52+ 20dBA)	72	68	Yes Standard and Bespoke	**Standard hours** Exceedance of Performance Goal 1 No exceedance of Performance Goal 2 **Out of Standard hours** Exceedance of Performance Goal 1 No exceedance of Performance Goal 2	Platform Demolition – Yeronga station under approved rail possession For interpretation, please refer to section 3.1.4.1.2

- 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 not required during the reporting period based on the predictive vibration assessments for specific activities and previous validation monitoring having been undertaken.

Table 5 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
None required for the reporting period									

Complaint-based vibration monitoring 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 Earthworks – Clapham Yard

Noise monitoring of Earthworks at Clapham Yard during non-standard working hours was undertaken to validate that Earthworks were indeed Managed Works.

During the noise monitoring:

- The Earthworks activities were not the dominant noise sources
- Road Noise from Ipswich Road could be heard continuously
- Train pass-bys noise and sounding of Train Horns was also heard over the 15-minute monitoring period.

Noise monitoring was carried out at a buffer distance between the Project Works and the closest Residential Receiver located along Ipswich Road and behind an existing noise wall.

The noise logger was set up between the noise source and the residents. The location of the noise logger was 160 m away from the noise source and 80m away from the closest façade of the Ipswich Road residents. The existing suburban rail lines and the existing noise barriers were located between the noise logger and the Ipswich Road residential receivers.

Noise levels (LA10) 160 m away from the noise source were predicted to be 56dBA (outdoors). The measured noise levels (LA10) 160m away from the noise predicted were 56dBA (outdoors).

Predictive noise modelling at the Sensitive Places (Ipswich Road Residents) also predicted the following noise levels to be generated from the relevant Project Works.

- 52dBA (outdoors, at facade) without the benefit of the existing noise barrier attenuation
- 40dBA (outdoors, at façade) with the existing noise barriers provided up to an 11 dBA attenuation

The monitored noise levels did not exceed the predicted noise levels at the relevant offset distance from the noise source.

The predictive noise assessment identified that the predicted noise levels would meet the Managed Works Noise Goal for out of hours prior to any attenuation being provided by the noise wall.

Therefore, it is unlikely that the actual noise levels would have exceeded the Managed Works noise goal at the residential receivers.

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.

3.1.4.1.2 Platform Demolition – Yeronga station under approved rail possession

Noise monitoring of noise intensive activities associated with platform demolition works at Yeronga Station during an approved rail possession was undertaken externally. Monitoring was carried out at the Sensitive Place identified as being likely to experience the highest noise levels during the works. The sensitive place was identified as residential (DAPs) and comprises an apartment / townhouses complex.

Monitoring was undertaken during standard construction hours (Saturday day) to inform whether the works were likely to exceed noise goals + 20dBA on Sunday day (non-standard working hours).

No demolition occurred at night.

The measured LA_{10} readings were compliant with the Imposed Conditions for works during standard hours. The LA_{10} readings was equal to the noise goal + 20dBA for works during non-standard working hours.

[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

The works were authorised to proceed under Imposed Condition 10 as they were carried out during extended works hours (approved rail possession). DAP engagement had also occurred with the level of consultation as per the requirements of Imposed Condition 11 (c).

Mitigation measures proactively implemented by the project included scheduling of works during daytime only with respite periods throughout the day (Saturday and Sunday).

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

Not applicable for reporting period.

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 17 inspections were undertaken by the environment team across Mayne Yard, RNA Showgrounds, Yeronga Station, Clapham Yard 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 6: Summary of Air Quality monitoring devices

Monitoring Device Installed by UNITY	Area	Name	Date Installed	Status for the Reporting Period
Dust Deposition Gauge	RNA Showgrounds	AQ-01	13 December 2019	Active
Dust Deposition Gauge	Mayne Yard (Eastern Air Shed)	AQ-04	13 February 2020	Active
Dust Deposition Gauge	Clapham Yard (Eastern Air Shed)	AQ-06	1 February 2021	Active
TSP / PM_{10} Monitor	Mayne Yard (Eastern Air Shed)	Mayne Yard	23 April 2020	Active
TSP / PM_{10} Monitor	Clapham Yard (Eastern Air Shed)	Clapham Yard	1 February 2021	Active Data gap on 25 and 26 June 2021 due to power malfunction
TSP / PM_{10} Monitor	RNA (Western Air Shed)	RNA	25 August 2020	Active

3.2.1 Dust results

As passive dust deposition gauges are analysed monthly, results span from 12 May 2021 to 11 June 2021

The May 2021 results are detailed below and complied with Imposed Condition 13(b) of the CGCR.

Table 7 Dust deposition gauge results for the reporting period

CGCR Goal ($mg/m^2/day$)	AQ-01 - RNA Showgrounds ($mg/m^2/day$)	AQ-04 Abbotsford Rd (E Mayne) ($mg/m^2/day$)	AQ-06– Clapham yard Showgrounds ($mg/m^2/day$)
120	50	27	23
Total Rainfall during Period	29	29	76.4

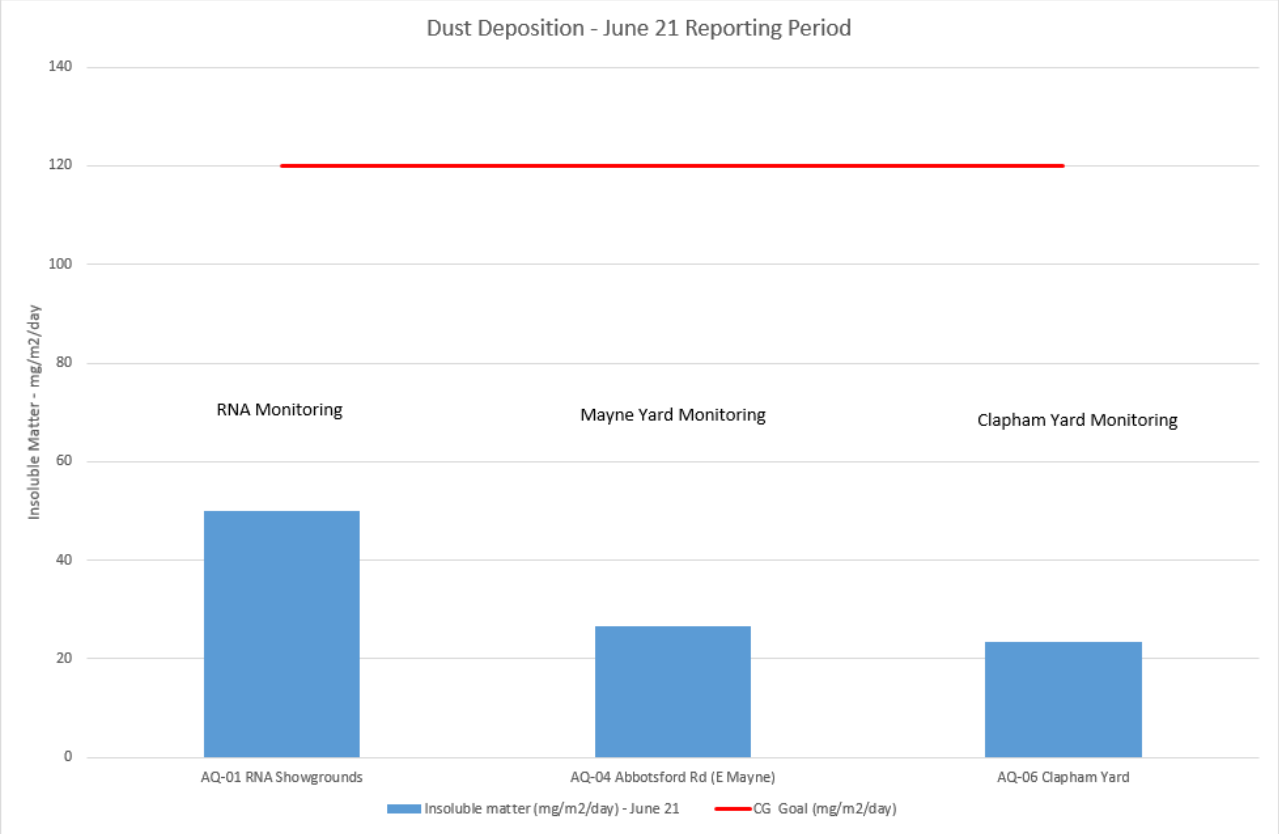


Figure 1 Air Quality Monitoring (Deposited Dust) Results

3.2.2 Particulates results

3.2.2.1 Air Quality Monitoring Stations

Unity had three (3) active air quality monitoring stations set up for the reporting period. The Clapham Yard station suffered a power failure for two (2) days. This issue has now been rectified.

3.2.2.2 Monitoring results – Reporting Period

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) 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.

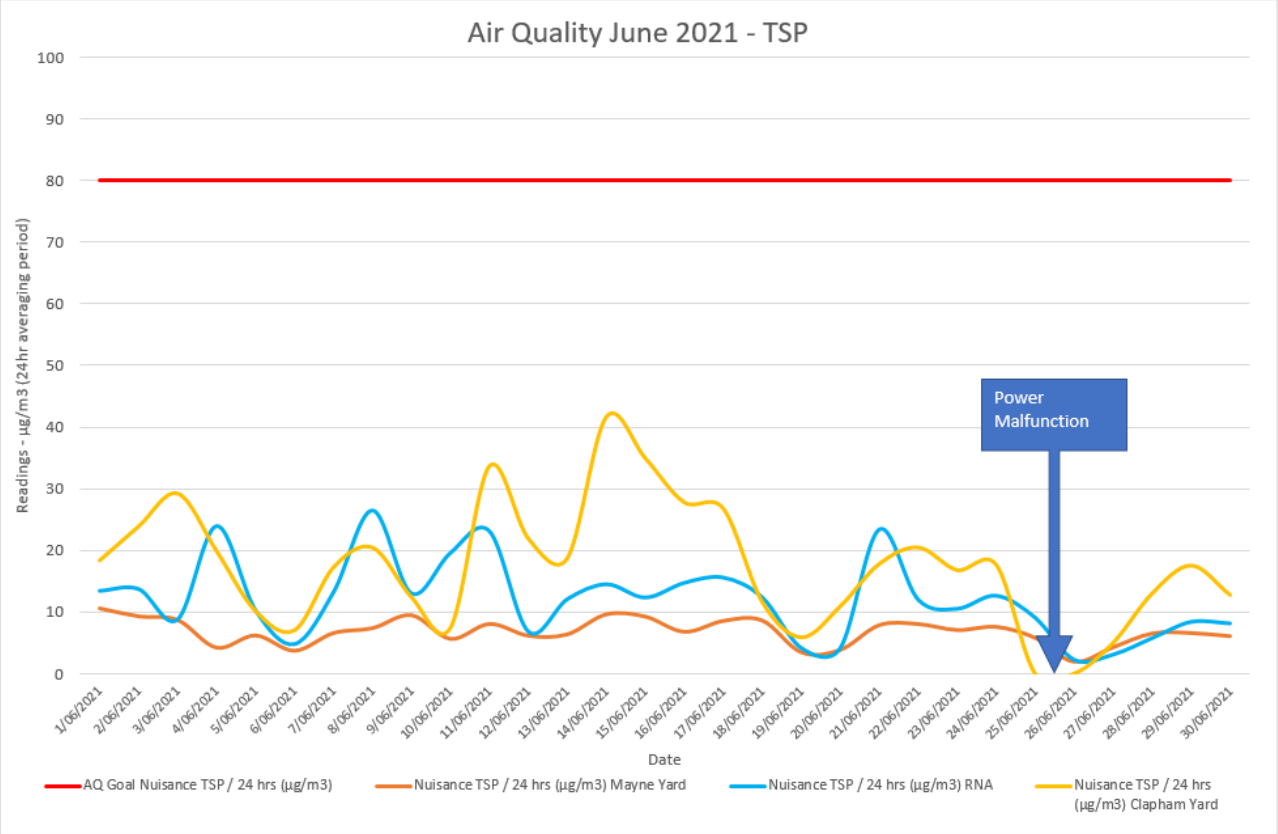


Figure 2 Air Quality Monitoring (TSP) Results

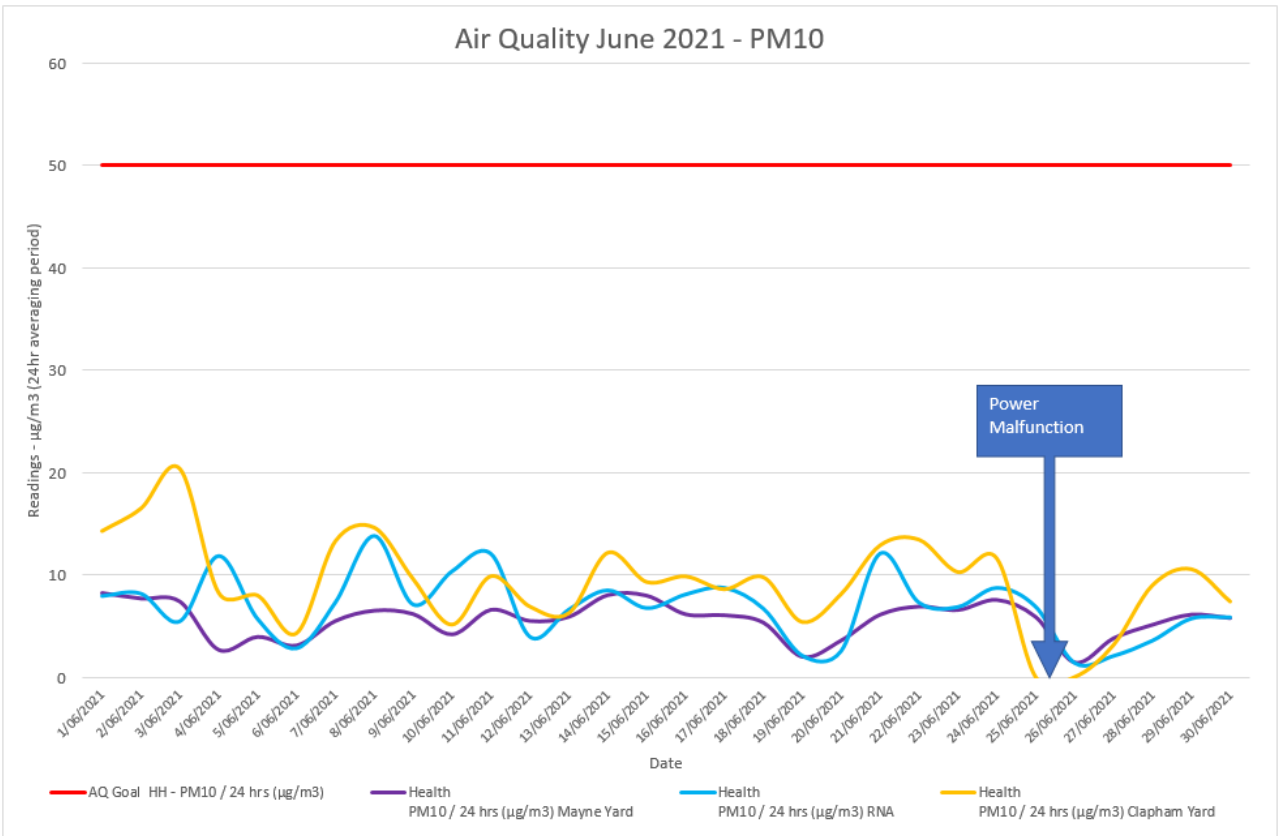


Figure 3 Air Quality Monitoring (PM_{10}) Results

3.2.2.3 Monitoring results – Annual averaging

Imposed Condition 13 (a) sets annual average air quality goals for TSP (Human health) and PM_{10} (Human health).

The below table summarises where TSP and PM_{10} monitoring has been carried out over the last 12 months.

The National Environment Protection (Ambient Air Quality) measure Technical paper No.5 provides guidance and procedures for uniform data recording and handling. (https://www.nepc.gov.au/system/files/resources/9947318f-af8c-0b24-d928-04e4d3a4b25c/files/aaqprctp05datacollection200105final.pdf).

For air quality data to be officially reported, as per section 4.5 of Technical Paper No. 5, the minimum data capture would be 75% of the year or 274 days.

"It is essential that data loss is kept to an absolute minimum. For representative monitoring data and for credible compliance assessment it is desirable to have data capture rates higher than 95%. 75% data availability is specified as an absolute minimum requirement for data completeness".

In some instances, Relevant Project Works, which triggered TSP and PM_{10} monitoring were carried out for less than 274 days (e.g. at the Northern Corridor). In such instances the annual averages are still reported but are indicative only as data capture did not meet the 75% data capture requirements of *National Environment Protection (Ambient Air Quality) Measure Technical Paper No. 5 – Data Collection and Handling.*

Table 8: Summary of Air Quality monitoring devices over a 12-month period

Monitoring Device Installed by UNITY	Area	Date Installed	Date Decommissioned	Number of Days data was captured over 365 days period	Data capture over annual period	Annual performance reporting
TSP / PM_{10} Monitor	Northern Corridor (Eastern Air Shed)	23 April 2020	13 January 2021	260	71% over 365 days	*Indicative only* Data capture did not meet the minimum data capture requirements
TSP / PM_{10} Monitor	Mayne Yard (Eastern Air Shed)	23 April 2020	Not yet decommissioned	358	98% over 365 days	Applicable Data capture met minimum data capture requirements
TSP / PM_{10} Monitor	RNA (Western Air Shed)	11 June 2020	Not yet decommissioned	314	86% over 365 days	Applicable Data capture met minimum data capture requirements
TSP / PM_{10} Monitor	Clapham Yard (Eastern Air Shed)	01 February 2021	Not yet decommissioned	126 (over 147 days)	86% over 147 days	Not Applicable Data capture has not yet met the minimum data capture requirements

The below table summarises the applicable and indicative annual data results for TSP and PM_{10} against the performance goals imposed under Condition 13(a). Results in italic are indicative only.

Table 9 Annual Performance Results

Air quality Indicator	Goal	Northern Corridor	Mayne Yard	RNA
TSP	90 µg/m^3	*8 µg/m^3*	12 µg/m^3	20 µg/m^3
PM_{10}	25 µg/m^3	*5 µg/m^3*	8 µg/m^3	13 µg/m^3

3.2.3 Interpretation

During the reporting period:

- None of the particulate results exceeded their relevant goals
- There was no evidence of dust being generated and leaving the site boundaries
- There were no complaints received associated with air quality concerns.

Annual averages for TSP and PM_{10} did not exceed the relevant goals.

The RIS scope of works have met the project 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 associated with rain events:
  - 15 June 2021 - A rain event occurred which generated run-off from the active worksite of Clapham Yard which triggered a post-rain monitoring event at these locations.
  - Visual observations along Moolabin Creek and Rocky Water Holes Creek identified a visible water quality difference at the downstream monitoring locations. Photographic records and in-situ physico-chemical parameters were collected.

There were no active surface water discharges (e.g. dewatering through pumping, sediment basin release) to receiving waters.

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

3.3.1 Rainfall Records

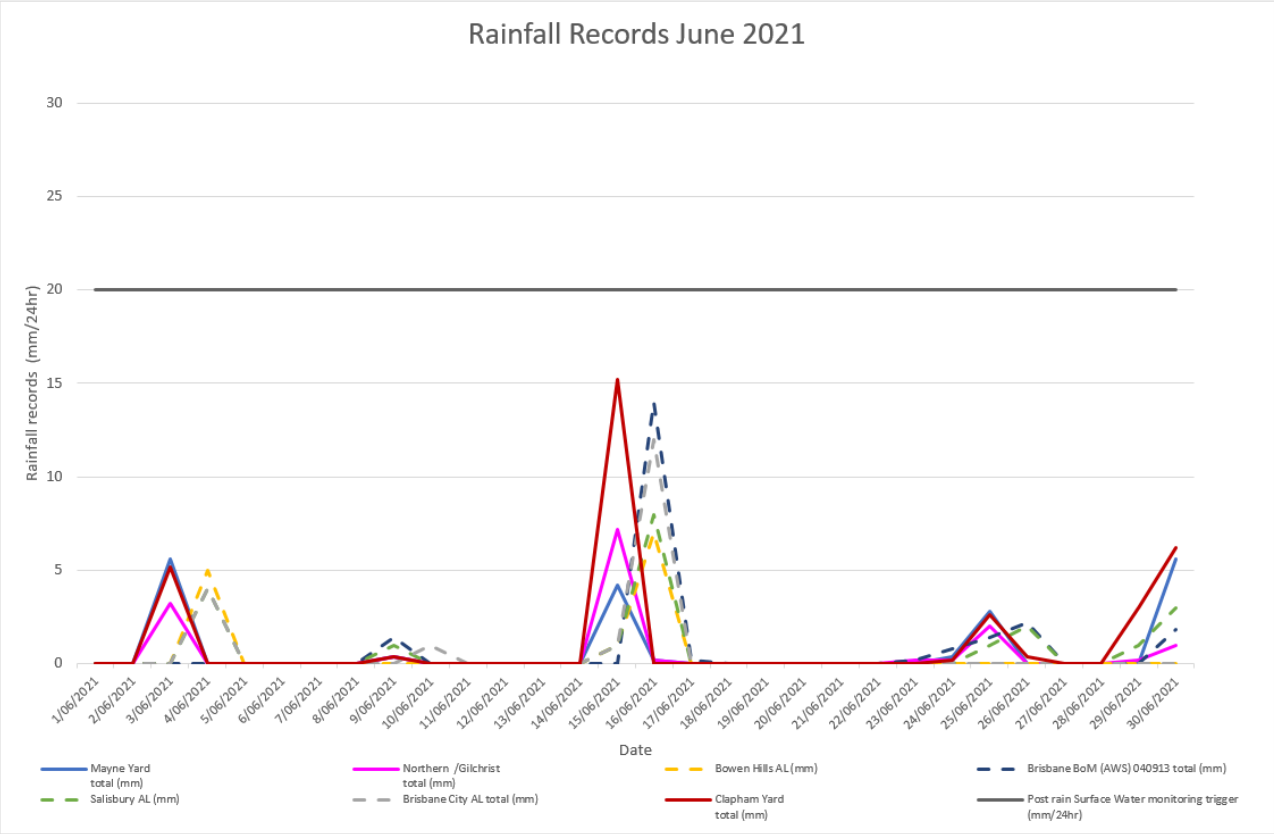


Figure 4 Rainfall Records

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 Clapham Yard.

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

Table 10: Surface Water Discharge Monitoring Results

Date	Location	Waterway	Tide	Discharge Criteria[3]			
				Turbidity (NTU) Nil until Turbidity / TSS correlation achieved[4]	TSS (mg/L) <50	DO (%) Nil	pH (pH Unit) Stable pH reading; and General sites: 6.5 – 8.5, or Wallum/Acidic Ecosystems: 5.0 – 7.0
15/06/21	Clapham Yard	Moolabin Creek (SW-05 - upstream)	N/A	Field: 36 Lab: 24	19	109	7.1
15/06/21	Clapham Yard	Moolabin Creek (SW-06 - downstream)	N/A	Field: 65 Lab: 43	34	88	7.2
15/06/21	Clapham Yard	Rocky Water Holes Creek (SW-07 - upstream)	N/A	Field: 58 Lab:34	28	90	7.1
15/06/21	Clapham Yard	Rocky Water Holes Creek (SW-08 – downstream)	N/A	Field: 52 Lab:36	33	113	7.2

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 did not undertake routine surface water monthly monitoring. A review of the data sample has identified that over 12 months of continuous data collection has occurred with a total of over 18 monitoring events. The frequency of background monitoring has therefore been reduced to bi-annually, with the next sampling round to be undertaken during the dry season (April to September), likely mid-2021. This reduction of monitoring frequency is acceptable to continue informing the Dis-1 Credit for the ISCA 'Excellent Rating' the Project is pursuing.

3.3.5 Interpretation

Post rainfall monitoring undertaken at Moolabin Creek identified that water quality was visibly more turbid than usually observed following rainfall events less than 20mm. There were no visible sources of turbid water discharges from site.

However, significant vegetation clearing, not associated with the Project Works, had been carried out upstream of the Project Boundary (see below plate) at Moolabin Creek. This clearing is the likely source of the increased in stream turbidity.

[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 discharges the RIS Scope of Works has experienced, there is no correlation available. Typically, a minimum of 20 data points is used to determine TSS / in field turbidity correlation for site waters.

Plate 1: Bed and Bank Vegetation Clearing at Moolabin Creek Upstream of the Project Boundaries

Therefore, the source of the increased turbidity cannot not be reasonably accredited to the Project Works.

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 11 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 12 CEMP and relevant Subplans monitoring requirements – Compliance Status for the reporting period

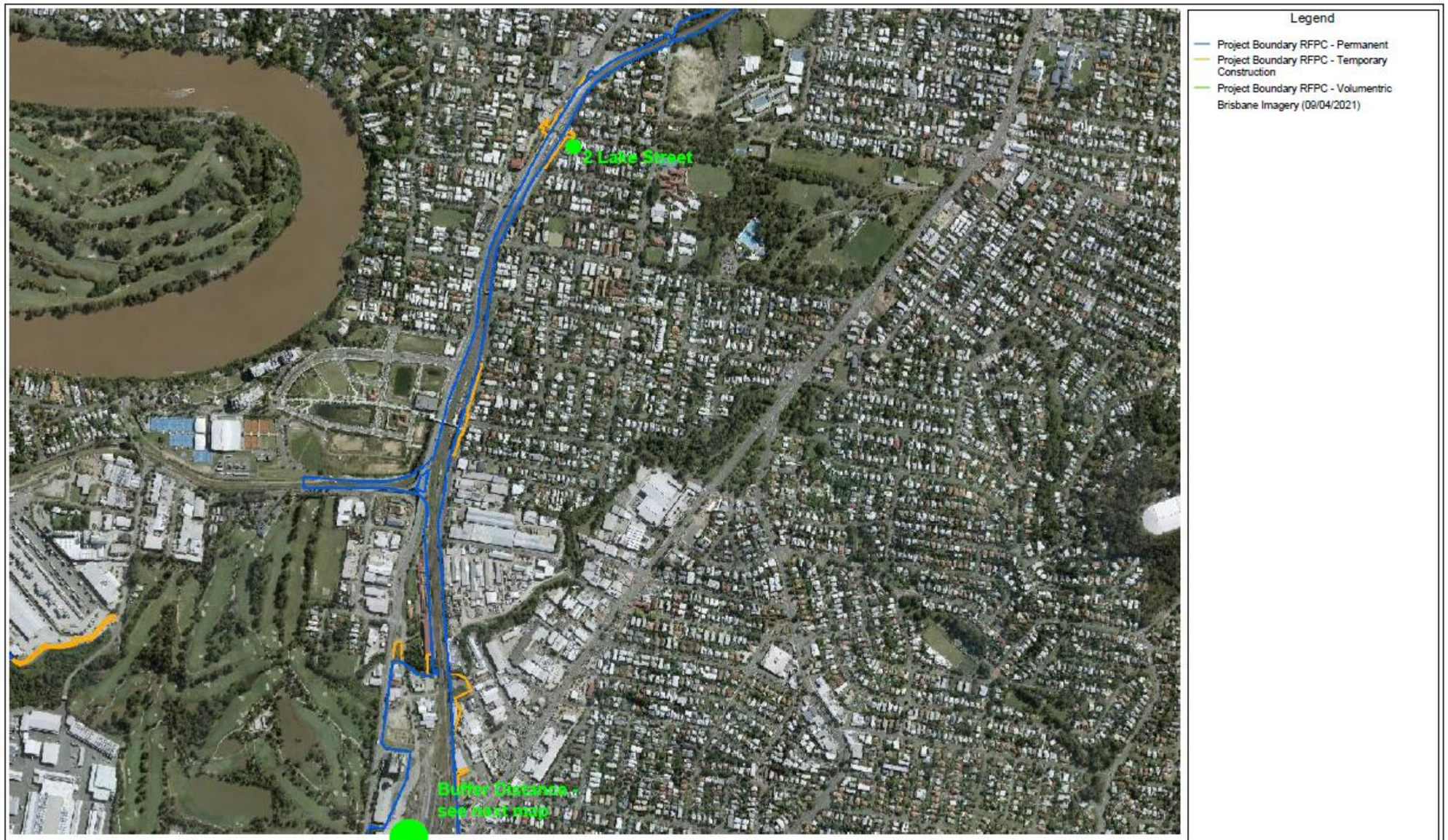
Aspect	Monitoring requirement	Activities risk profile	Monitoring undertaken	Compliance status with CEMP / Subplan	Effect of the non-compliance
Air Quality	Visual monitoring program + Additional particulate monitoring as required based on the outcomes of the predictive assessment / risk profile	Moderate 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	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	Not triggered	Compliant	Not Applicable
Vibration	Complaints response	Moderate to High	Not triggered – no complaints	Compliant	Not Applicable
Water Quality	Monthly monitoring	N/A	No – monitoring regime reduced to bi-annually	Compliant	Not Applicable
Water Quality	Post Rainfall	Moderate to High	Yes	Compliant	Not Applicable

Aspect	Monitoring requirement	Activities risk profile	Monitoring undertaken	Compliance status with CEMP / Subplan	Effect of the non-compliance
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 - Permanent
- Project Boundary RFPC - Temporary Construction
- Project Boundary RFPC - Volumentric

Brisbane Imagery (09/04/2021)

A FOR INFORMATION

Issue	Description	Date	Approved
	Construction Noise Monitoring at Sensitive Places		

Scale 1: 10,000

508 0 254.0 508 Meters

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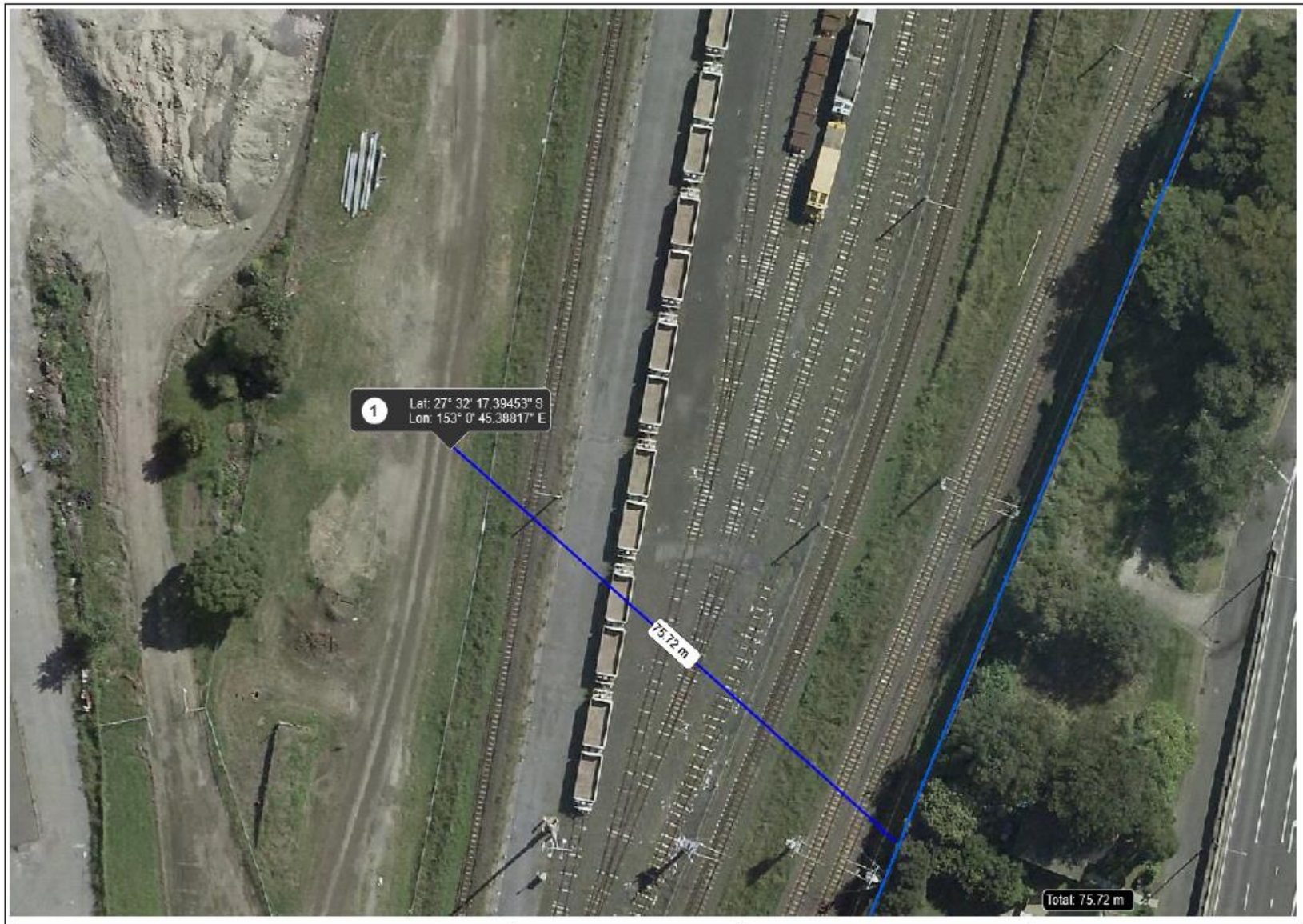
Status	GIS OUTPUT NOT USED FOR CONSTRUCTION		
Original Size	A3	Drawn	
Coordinate System	GDA MGA94-56	Designed	
Height Datum	AHD	Date Printed	17-Jun-2021

Assured Integration for a New Era

Cross River Rail - RIS Alliance

Noise Monitoring Locations

Construction Noise Monitoring at Sensitive Places



Legend

- Project Boundary RFPC - Permanent
- Project Boundary RFPC - Temporary Construction
- Project Boundary RFPC - Volumentric

Brisbane Imagery (09/04/2021)

Issue	Description	Date	Approved
A	FOR INFORMATION		

Scale 1: 500

25 0 12.7 25 Meters

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THIS MAP IS NOT TO BE USED FOR NAVIGATION

Status	GIS OUTPUT NOT USED FOR CONSTRUCTION		
Original Size	A3	Drawn	
Coordinate System	GDA MGA94-56	Designed	
Height Datum	AHD	Date Printed	15-Jul-2021

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for a New Era

Cross River Rail - RIS Alliance

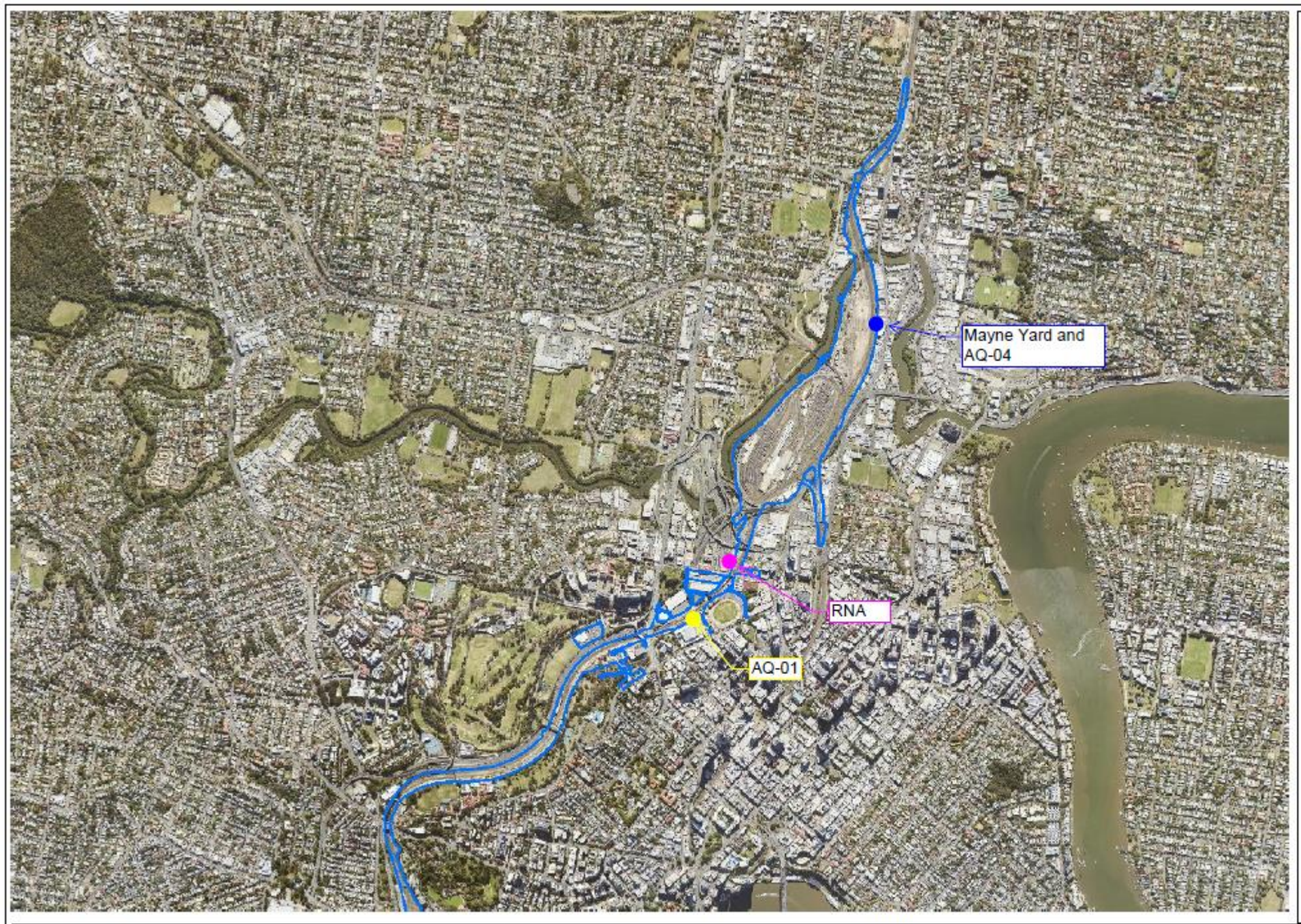
Title

Description

Attachment 3 Monitoring Locations – Vibration

Not applicable for the reporting period

Attachment 4 Monitoring Locations – Air Quality



Legend

Project Boundary RFPC8

Brisbane Imagery (25/06/2020)

Air Quality Monitoring

DDG

DDG, TSP & PM10

TSP & PM10

A FOR INFORMATION

Issue	Description	Date	Approved
	August 2020		

Scale 1: 20,000

1,016 0 508.0 1,016 Meters

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THIS MAP IS NOT TO BE USED FOR NAVIGATION

Status	GIS OUTPUT NOT USED FOR CONSTRUCTION		
Original Size	A3	Drawn	
Coordinate System	GDA MGA94-56	Designed	
Height Datum	AHD	Date Printed	11-Sep-2020

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Cross River Rail - RIS Alliance

Air Quality Monitoring locations

Legend

- Project Boundary RFPC- Permanent
- Project Boundary RFPC - Volumetric
- Brisbane Imagery (27/09/2020)
- DDG, TSP and PM10

A	FOR INFORMATION		
Issue	Description	Date	Approved
	Description		

Scale 1: 8,000

406 0 203.2 406 Meters

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THIS MAP IS NOT TO BE USED FOR NAVIGATION

Status	GIS OUTPUT NOT USED FOR CONSTRUCTION		
Original Size	A3	Drawn	
Coordinate System	GDA MGA94-56	Designed	
Height Datum	AHD	Date Printed	22-Apr-2021

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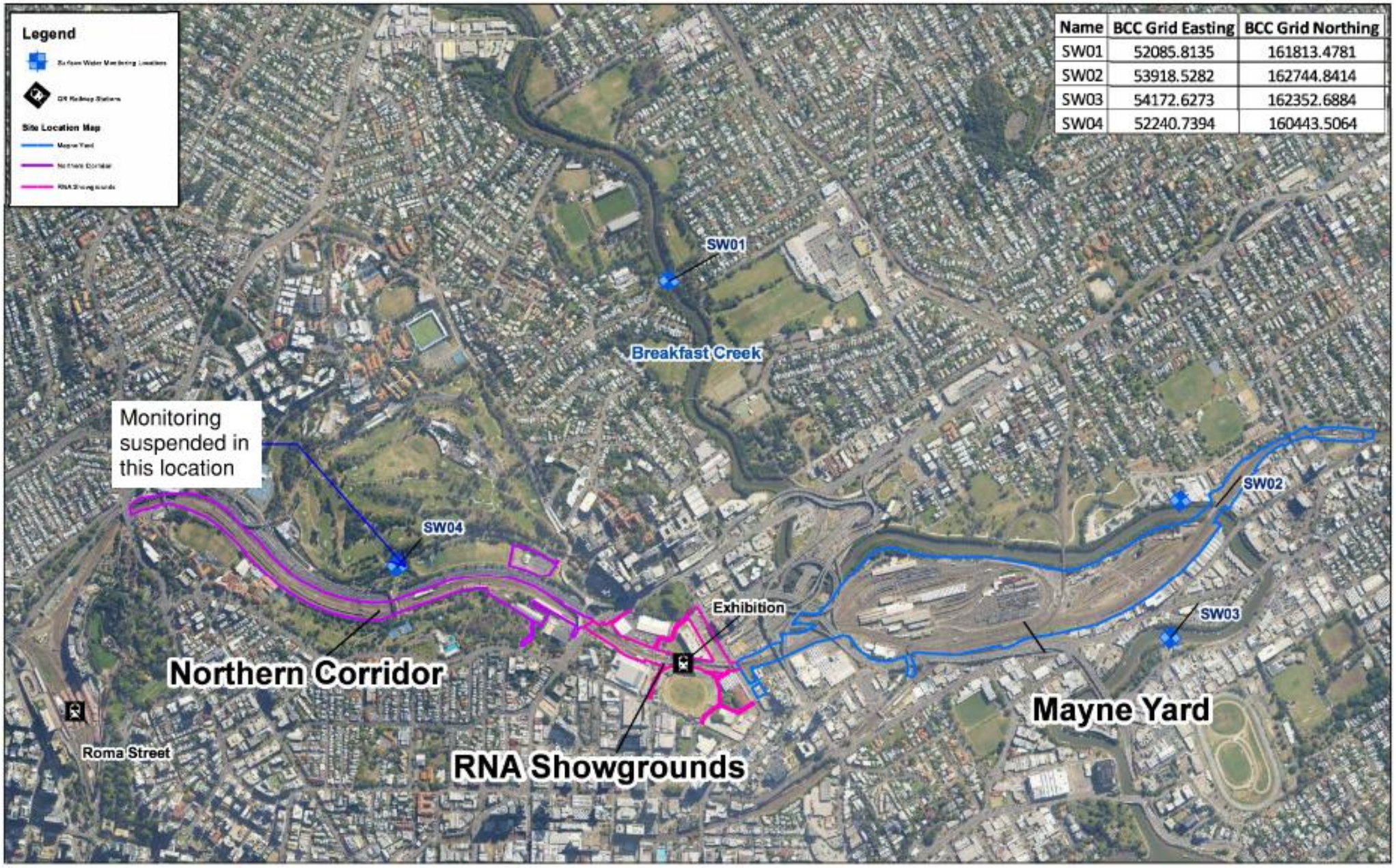
Air Quality Monitoring Stations

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

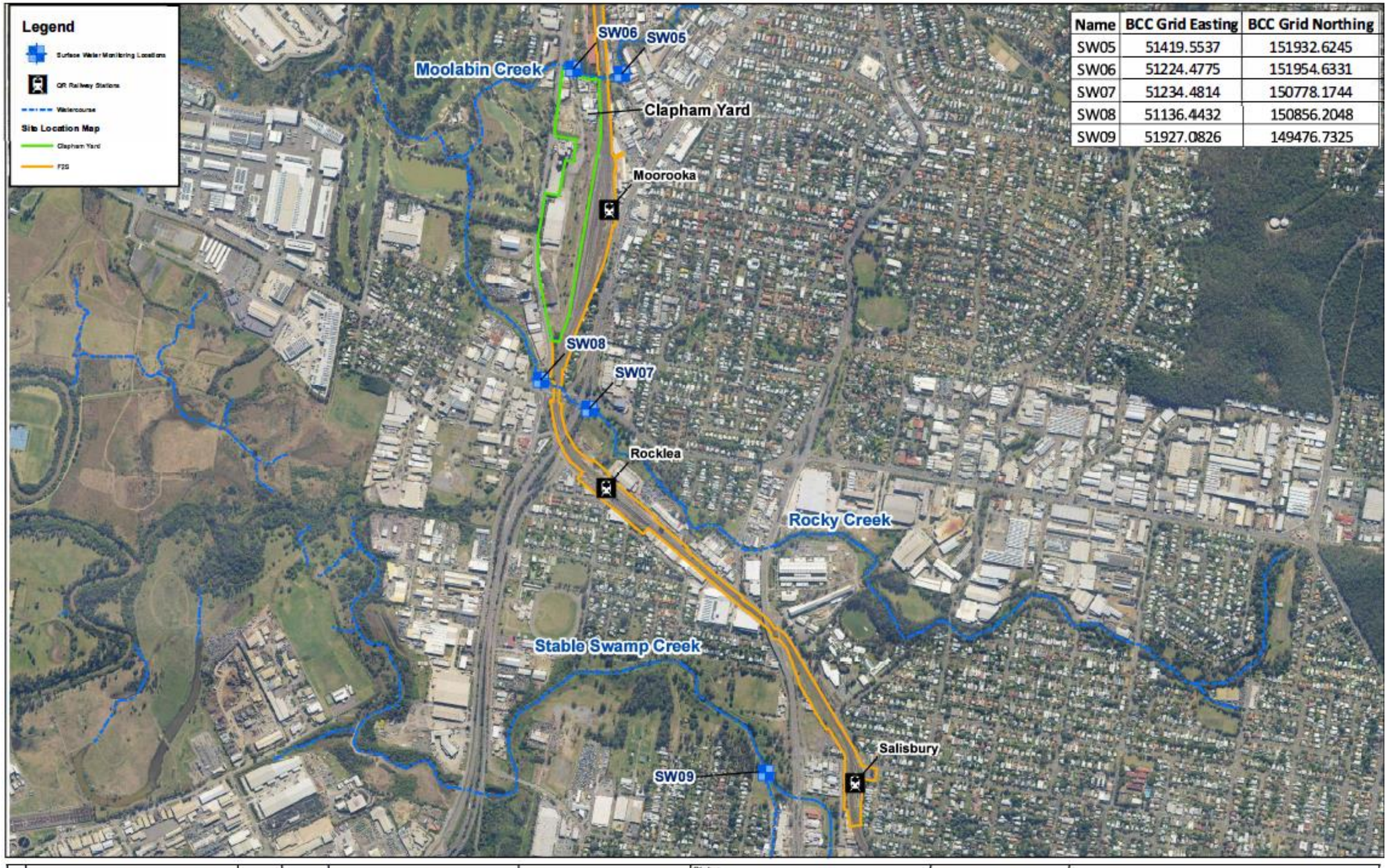
Status: Issued for Information

Original Size	A3	Drawn	GIS
Coordinate System	GDA 1994 BCS007	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		

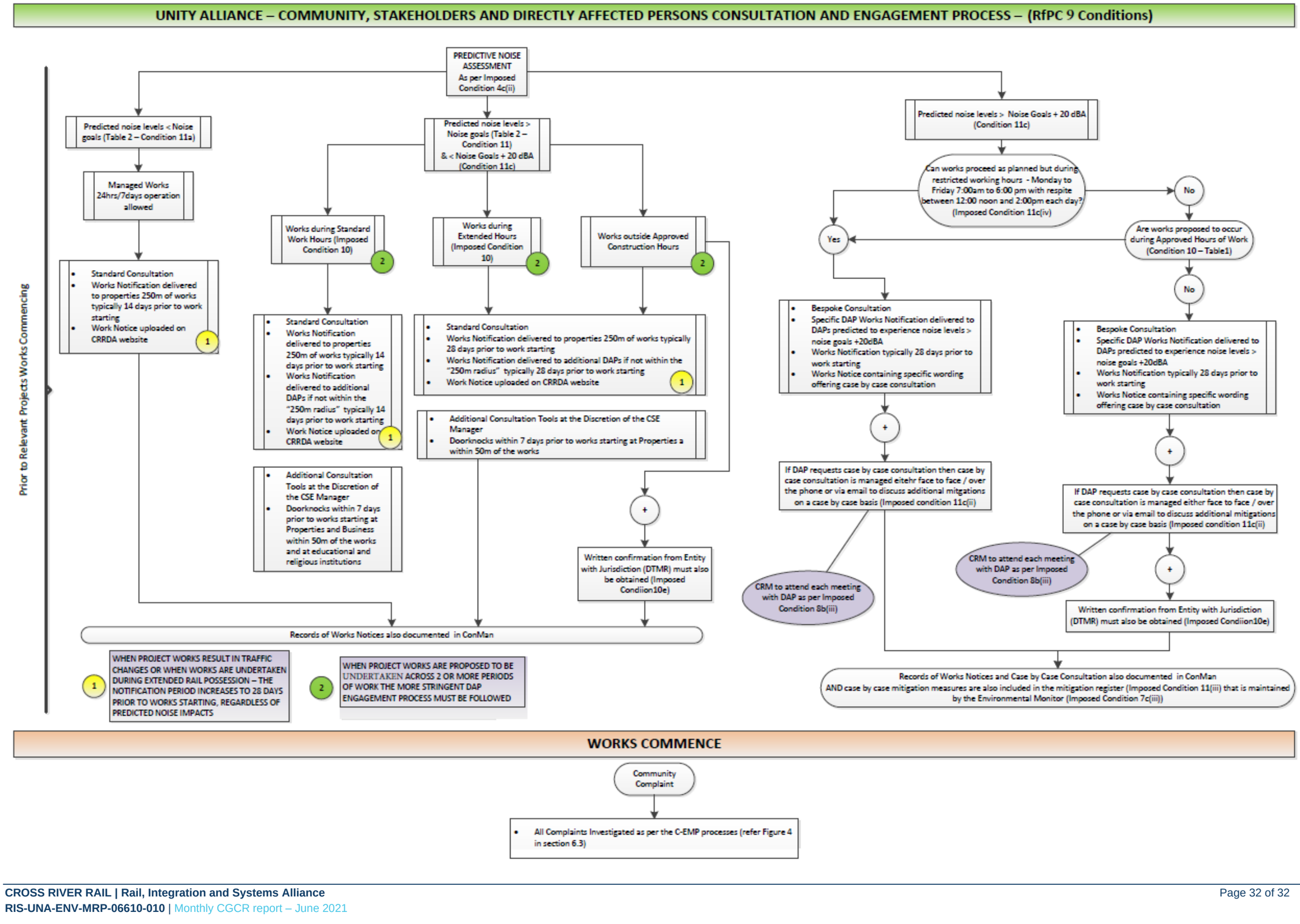
N

Project Wide Surface Water Investigation

Figure 2 - Surface Water Monitoring Locations

Project Number	Discipline	Document	Document Number	Rev
	ENV	PL	002	1

Attachment 6 DAP Engagement Process



Appendix B TSD Monthly Report

COORDINATOR-GENERAL'S MONTHLY REPORT: JUNE 2021

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

1. Monthly Monitoring Summary

It is CBGU Joint Venture'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 twenty-two (22) occasions, and noise monitoring was conducted on thirty-one (31) occasions during June 2021. Each vibration and noise monitoring event confirmed works adhered to project requirements.

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

Water quality monitoring was conducted before the release of water from the site on eight (8) occasions. Each monitoring event confirmed project requirements were adhered to. One (1) rounds of surface water quality monitoring were conducted; these monitoring events 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	CBGU project works have been conducted in compliance 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 CBGU works were conducted in accordance with the Construction Environmental Management Plan (CEMP) (Rev 8).
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	CBGU 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	CBGU 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	CBGU 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	CBGU 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	CBGU 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	CBGU has prepared and manages processes to 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	CBGU 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 CBGU project works 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 Department of Transport and Main Roads' Technical Standard MRTS52.	Yes	CBGU has prepared and manages processes to ensure erosion & sediment control is managed in accordance with Imposed Condition 18.

CG Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
19.	**Acid Sulfate Soils** managed as per the *Queensland Acid Sulfate Soil Technical Manual.*	Yes	CBGU has prepared and manages processes to 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	CBGU 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	CBGU 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.

Twenty-two (22) vibration monitoring sessions were conducted during June 2021.

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

Table 2: Vibration Monitoring Data

No.	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)
1.	01/06/2021	09:00 AM	4/06/2021	Peterson Street (Woolloongabba Precinct)	0.11	0.15	0.5[1]	Residential	Yes
2.	01/06/2021	08:25 AM	2/06/2021	Peterson Street (Woolloongabba Precinct)	0.11	0.21	0.5[1]	Residential	Yes
3.	02/06/2021	03:35 PM	4/06/2021	Fleurs Street (Woolloongabba Precinct)	0.07	0.08	0.5[1]	Residential	Yes
4.	02/06/2021	3:22 PM	3/06/2021	Peterson Street (Woolloongabba Precinct)	0.1	0.14	0.5[1]	Residential	Yes
5.	03/06/2021	01 :30 PM	03/06/2021	Roma Street (Roma Street Precinct)	-	2.65	10	Heritage Structure (Controlled Blast)	Yes

No.	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)
6.	03/06/2021	08:31 AM	4/06/2021	Peterson Street (Woolloongabba Precinct)	0.1	0.15	0.5[1]	Residential	Yes
7.	04/06/2021	12:15 PM	7/06/2021	Peterson Street (Woolloongabba Precinct)	0.09	0.13	0.5[1]	Residential	Yes
8.	07/06/2021	01:30 PM	07/06/2021	Roma Street (Roma Street Precinct)	-	0.95	10	Heritage Structure (Controlled Blast)	Yes
9.	08/06/2021	09:04 AM	17/06/2021	Lockhart Street (Woolloongabba Precinct)	0.09	0.1	0.5[1]	Residential	Yes
10.	09/06/2021	04:04 PM	09/06/2021	Roma Street (Roma Street Precinct)	-	0.6	10	Heritage Structure (Controlled Blast)	Yes
11.	11/06/2021	09:42 AM	16/06/2021	Lockerbie Street (Woolloongabba Precinct)	0.06	0.07	0.5[1]	Residential	Yes
12.	16/06/2021	07:30 AM	16/06/2021	Albert Street (Albert Street Precinct)	-	20.2	50	Commercial Structure (Controlled Blast)	Yes
13.	17/06/2021	03:16 PM	21/06/2021	Lockhart Street (Woolloongabba Precinct)	0.09	0.16	0.5[1]	Residential	Yes
14.	21/06/2021	08:39 AM	23/06/2021	Lockhart Street (Woolloongabba Precinct)	0.11	0.21	0.5[1]	Residential	Yes
15.	21/06/2021	08:21 AM	22/06/2021	River Terrace (Woolloongabba Precinct)	0.06	0.08	0.5[1]	Residential	Yes
16.	22/06/2021	07:30 AM	22/06/2021	Albert Street (Albert Street Precinct)	-	4.75	50	Commercial Structure (Controlled Blast)	Yes

No.	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)
17.	22/06/2021	01:21 PM	22/06/2021	River Terrace (Woolloongabba Precinct)	0.06	0.14	0.5[1]	Residential	Yes
18.	24/06/2021	12:52 PM	25/06/2021	Lockhart Street (Woolloongabba Precinct)	0.13	0.26	0.5[1]	Residential	Yes
19.	25/06/2021	07:30 AM	25/06/2021	Albert Street (Albert Street Precinct)	-	21.5	50	Commercial Structure (Controlled Blast)	Yes
20.	29/06/2021	09:52 AM	1/07/2021	Gregory Terrace (Northern Portal)	0.08	0.16	50	Commercial	Yes
21.	30/06/2021	07:52 AM	30/06/2021	Albert Street (Albert Street Precinct)	-	10.7	50	Commercial Structure (Controlled Blast)	Yes
22.	30/06/2021	10:38 AM	2/07/2021	Albert Street (Albert Street Precinct)	0.12	0.38	50	Commercial	Yes

- *[1] Moniotring at times proceeds over the day & night time periods. The most conservative (night) goal has been noted above, however vibration recorded outside the night-time period is subject to a seperate criteria.*

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-one (31) occasions during June 2021. All noise monitoring data adhered to project requirements and is provided in the table below.

Table 3: Noise Monitoring Data

No.	Date	Time (AM / PM)	Location (Street Name) (Construction Precinct)	Purpose of Monitoring	Internal or External [3] Monitoring	Activity	Dominant Noise Source	Noise Goal LA10[1]	Noise level LA10[1]	Noise Goal LAeq[2]	Noise level LAeq[2]	Adhered to Project Requirements (Yes / No)
1.	1/06/2021	11:08:00 AM	Gregory Terrace (Northern Portal)	Construction Monitoring at Sensitive Places	External	Ground Support and Scaffold Installation	Construction	62	67.7	52	66.2	Yes
2.	1/06/2021	12:02:00 PM	Gregory Terrace (Northern Portal)	Construction Monitoring at Sensitive Places	External	Ground Support and Scaffold Installation	Construction	62	66.9	52	65.5	Yes
3.	1/06/2021	12:24:00 PM	Gregory Terrace (Northern Portal)	Construction Monitoring at Sensitive Places	External	Ground Support and Scaffold Installation	Construction	62	71.9	52	71	Yes
4.	1/06/2021	12:44:00 PM	Peterson Street (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	Internal	Tunnelling	Road Traffic	62	48.6	52	45.7	Yes
5.	2/06/2021	3:40:00 PM	Fleurs Street (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	Internal	Tunnelling	Road Traffic	62	39.9	52	37.7	Yes

No.	Date	Time (AM / PM)	Location (Street Name) (Construction Precinct)	Purpose of Monitoring	Internal or External [3] Monitoring	Activity	Dominant Noise Source	Noise Goal LA10[1]	Noise level LA10[1]	Noise Goal LAeq[2]	Noise level LAeq[2]	Adhered to Project Requirements (Yes / No)
6.	2/06/2021	8:04:00 PM	Fleurs Street (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	Internal	Tunnelling	Road Traffic	50	41.5	40	39	Yes
7.	3/06/2021	1:30:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	External	Controlled Blast	Construction	-	-	130[4]	113.5[4]	Yes
8.	3/06/2021	8:08:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	External	Excavation	Construction and Road Traffic	62	64.6	52	62.6	Yes
9.	3/06/2021	8:26:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Internal	Excavation	Construction	50	54.5	40	53	Yes
10.	3/06/2021	8:45:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Internal	Excavation	Construction	50	54.6	40	51.3	Yes
11.	3/06/2021	9:02:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Internal	Excavation	Construction and Road Traffic	50	44.7	40	43.2	Yes
12.	3/06/2021	9:23:00 PM	Herschel Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Internal	Excavation	Air Conditioner / Ventilation	50	39.5	40	38	Yes

No.	Date	Time (AM / PM)	Location (Street Name) (Construction Precinct)	Purpose of Monitoring	Internal or External [3] Monitoring	Activity	Dominant Noise Source	Noise Goal LA10[1]	Noise level LA10[1]	Noise Goal LAeq[2]	Noise level LAeq[2]	Adhered to Project Requirements (Yes / No)
13.	4/06/2021	1:32:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	External	Public Utilities Investigation	Road Traffic	59	69.1	52	69.8	Yes
14.	7/06/2021	1:30:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	External	Controlled Blast	Construction	-	-	130[4]	110.3[4]	Yes
15.	9/06/2021	4:04:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	External	Controlled Blast	Construction	-	-	130[4]	112.2[4]	Yes
16.	11/06/2021	9:50:00 PM	Lockerbie Street (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	Internal	Tunnelling	Construction	42	37.7	35	34.4	Yes
17.	14/06/2021	10:17:00 AM	Gregory Terrace (Northern Portal)	Construction Monitoring at Sensitive Places	External	Earthworks	Construction and Road Traffic	62	65.1	52	63	Yes
18.	14/06/2021	10:44:00 AM	Gregory Terrace (Northern Portal)	Construction Monitoring at Sensitive Places	External	Piling and Excavation	Construction and Road Traffic	62	65.1	52	63.7	Yes
19.	16/06/2021	7:30:00 AM	Albert Street (Albert Street Precinct)	Controlled Blast	External	Controlled Blast	Construction	-	-	130[4]	115.7[4]	Yes

No.	Date	Time (AM / PM)	Location (Street Name) (Construction Precinct)	Purpose of Monitoring	Internal or External [3] Monitoring	Activity	Dominant Noise Source	Noise Goal LA10[1]	Noise level LA10[1]	Noise Goal LAeq[2]	Noise level LAeq[2]	Adhered to Project Requirements (Yes / No)
20.	21/06/2021	8:28:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	Internal	Public Utilities Works	Construction	50	51.4	40	50.4	Yes
21.	21/06/2021	8:44:00 PM	Roma Street (Roma Street Precinct)	Construction Monitoring at Sensitive Places	External	Public Utilities Works	Construction	62	71	52	68.1	Yes
22.	21/06/2021	1:01:00 PM	Dutton Street (Southern Portal)	Construction Monitoring at Sensitive Places	External	Piling	Construction	57	59.8	47	58.6	Yes
23.	22/06/2021	10:37:00 AM	Elliott Street (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	External	Crane Operations	Construction and Railway	57	68.5	47	65.8	Yes
24.	22/06/2021	7:30:00 AM	Albert Street (Albert Street Precinct)	Controlled Blast	External	Controlled Blast	Construction	-	-	130[4]	117.5[4]	Yes
25.	25/06/2021	8:05:00 AM	Lockhart Street (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	Internal	Tunnelling	Domestic	55	48.1	45	46.5	Yes
26.	25/06/2021	9:15:00 AM	Albert Street (Albert Street Precinct)	Construction Monitoring at Sensitive Places	External	Ground stabilisation	Traffic	72	67	62	64.9	Yes

No.	Date	Time (AM / PM)	Location (Street Name) (Construction Precinct)	Purpose of Monitoring	Internal or External [3] Monitoring	Activity	Dominant Noise Source	Noise Goal LA10[1]	Noise level LA10[1]	Noise Goal LAeq[2]	Noise level LAeq[2]	Adhered to Project Requirements (Yes / No)
27.	25/06/2021	7:30:00 AM	Albert Street (Albert Street Precinct)	Controlled Blast	External	Controlled Blast	Construction	-	-	130[4]	116.6[4]	Yes
28.	29/06/2021	10:19:00 AM	Gregory Terrace (Northern Portal)	Construction Monitoring at Sensitive Places	External	Piling and Material Haulage	Construction and Road Traffic	62	65.3	52	63.4	Yes
29.	30/06/2021	9:57:00 PM	Mark Lane (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	External	Concrete Preparation Works	Road Traffic	54	57.6	47	56	Yes
30.	30/06/2021	10:20:00 PM	Stanley Street (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	External	Concrete Preparation Works	Road Traffic	54	61.7	47	59	Yes
31.	30/06/2021	7:52:00 AM	Albert Street (Albert Street Precinct)	Controlled Blast	External	Controlled Blast	Construction	-	-	130[4]	117.7[4]	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 June 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 Goals[1]			Monitoring results (mg/m2/day)	Comments
	Criterion	Air Quality Indicator	Goal (mg/m2/day)		
Northern Portal	Nuisance	Deposited dust	120	38.71	*Air quality monitoring was performed during the reporting period. All results adhered to project requirements.*
Roma Street Precinct				12.90	
Albert Street Precinct (South)				4.88	
Albert Street Precinct (North)				29.27	
Woolloongabba Precinct (North)				25.81	
Woolloongabba Precinct (South)				35.48	
Boggo Road Precinct (North)				12.90	
Boggo Road Precinct (South)				12.90	
Southern Portal (South)				35.48	
Southern Portal (East)				25.81	

- [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 June 2021.

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

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

Date	TSP Project Goal	PM10 Project Goal	Woolloongabba		Albert		Boggo Road		Northern Portal	
			TSP	PM 10	TSP	PM 10	TSP	PM 10	TSP	PM 10
	(µg/m3/24 hr)									
01-June-21	80	50	12.68	12.48	13.40	13.35	7.81	7.81	13.91	13.88
02-June-21	80	50	17.12	16.95	20.15	20.08	12.02	11.99	16.09	16.07
03-June-21	80	50	28.07	27.90	14.61	14.56	18.74	18.74	13.57	13.55
04-June-21	80	50	-	-	9.77	9.69	-	-	5.87	5.82
05-June-21	80	50	22.79	22.68	14.86	14.80	17.27	17.25	8.55	8.53
06-June-21	80	50	19.99	19.92	16.99	16.96	15.92	15.92	17.41	17.39
07-June-21	80	50	18.56	18.41	18.86	18.78	26.97	26.95	17.03	17.00
08-June-21	80	50	-	-	14.90	14.83	-	-	21.42	21.41
09-June-21	80	50	8.06	7.74	8.44	8.35	2.03	1.97	3.13	3.09
10-June-21	80	50	5.73	5.52	7.02	6.95	3.67	3.64	3.26	3.22
11-June-21	80	50	-	-	9.73	9.65	4.09	4.07	6.42	6.34
12-June-21	80	50	14.37	14.22	15.27	15.20	0.04	0.04	12.37	12.34
13-June-21	80	50	14.82	14.66	11.68	11.65	4.37	4.35	9.51	9.50
14-June-21	80	50	13.39	13.31	14.55	14.49	12.77	12.74	13.53	13.50
15-June-21	80	50	24.01	23.80	19.87	19.78	20.34	20.34	20.47	20.45
16-June-21	80	50	23.99	23.91	21.43	21.37	-	-	18.04	18.04
17-June-21	80	50	34.49	34.49	16.07	15.99	-	-	11.37	11.31
18-June-21	80	50	-	-	10.08	9.99	1.45	1.4	2.62	2.53

Date	TSP Project Goal	PM10 Project Goal	Woolloongabba		Albert		Boggo Road		Northern Portal	
			TSP	PM 10	TSP	PM 10	TSP	PM 10	TSP	PM 10
	(µg/m3/24 hr)									
19-June-21	80	50	4.00	3.76	8.90	8.80	1.35	1.31	1.86	1.79
20-June-21	80	50	6.54	6.42	12.03	11.99	1.72	1.71	5.66	5.62
21-June-21	80	50	9.68	9.62	21.08	20.99	-	-	8.95	8.90
22-June-21	80	50	-	-	14.87	14.82	7.89	7.85	9.62	9.58
23-June-21	80	50	10.90	10.74	11.76	11.71	6.47	6.46	7.92	7.88
24-June-21	80	50	15.95	15.83	19.14	19.10	9	9	12.40	12.37
25-June-21	80	50	8.32	8.29	26.41	26.38	-	-	9.99	9.97
26-June-21	80	50	-	-	10.91	10.88	-	-	4.42	4.40
27-June-21	80	50	-	-	16.12	16.08	-	-	7.72	7.70
28-June-21	80	50	9.51	9.32	18.90	18.86	6.98	6.96	11.54	11.49
29-June-21	80	50	8.04	7.97	8.12	8.07	6.34	6.33	10.07	10.06
30-June-21	80	50	-	-	11.27	11.24	7.81	7.81	11.89	11.87

- [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.
- [2] Due to a technical fault, the Woolloongabba and Boggo Road mobile air quality units stopped functioning on several days in June 2021. The issues have been resolved. A nearby (Woolloongabba and Southern Brisbane) DES Air Quality Stations demonstrated compliant air quality during June 2021, these results are provided below. The low levels are also consistent with levels recorded otherwise throughout 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: **23.8 µg/m3/24 hr** (https://apps.des.qld.gov.au/air-quality/chart/?station=cbd&parameter=18&date=1/06/2021&timeframe=month)
- South Brisbane: PM_{10} daily Maximum average: **28.6 µg/m3/24 hr** (https://apps.des.qld.gov.au/air-quality/chart/?station=sbr&parameter=18&date=1/06/2021&timeframe=month)
- Woolloongabba: PM_{10} daily Maximum average: **29.4 µg/m3/24 hr** (https://apps.des.qld.gov.au/air-quality/chart/?station=woo&parameter=18&date=1/06/2021&timeframe=month)

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

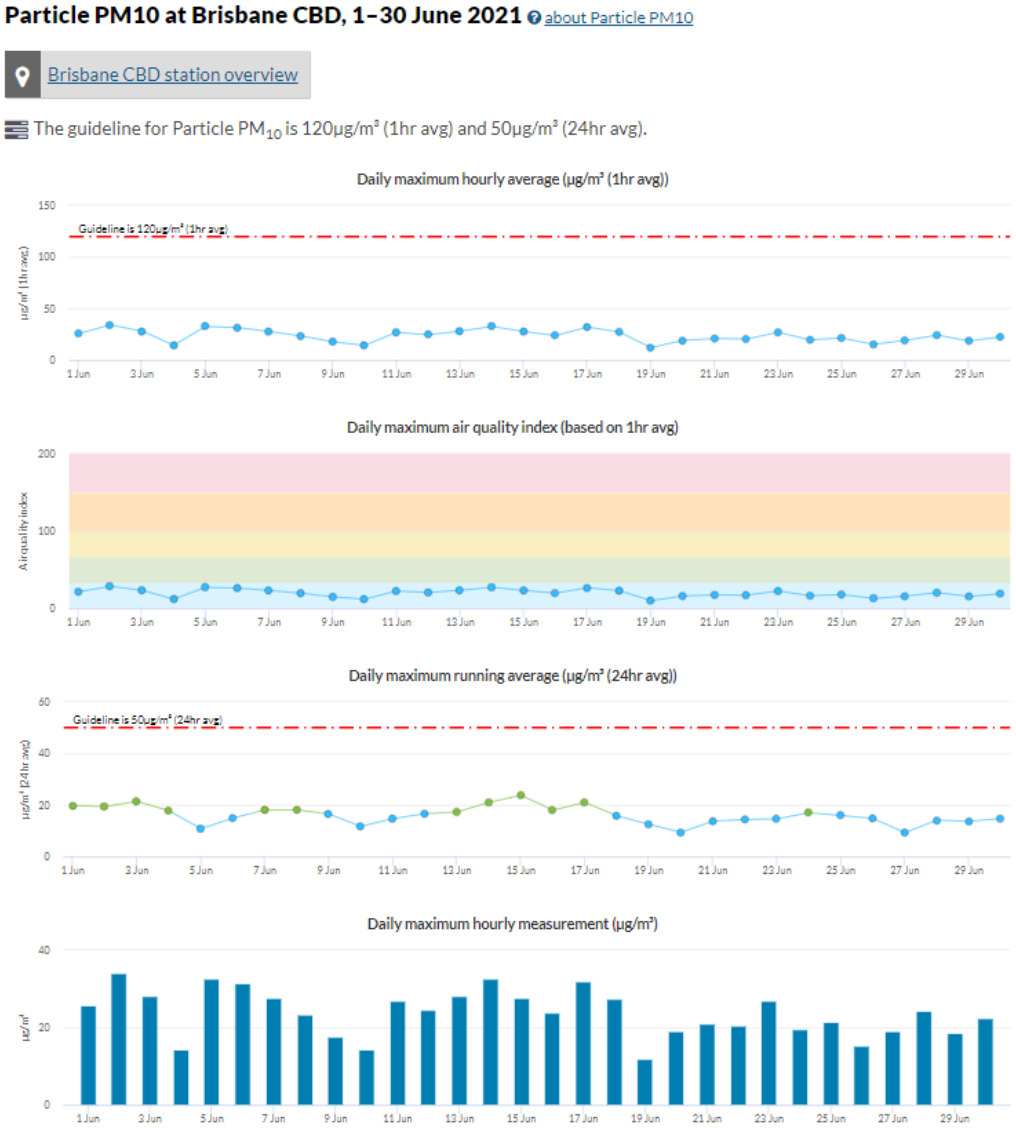


Figure 1: Brisbane CBD – DES Station - PM10 graph for June 2021 (reproduction from the DES website).

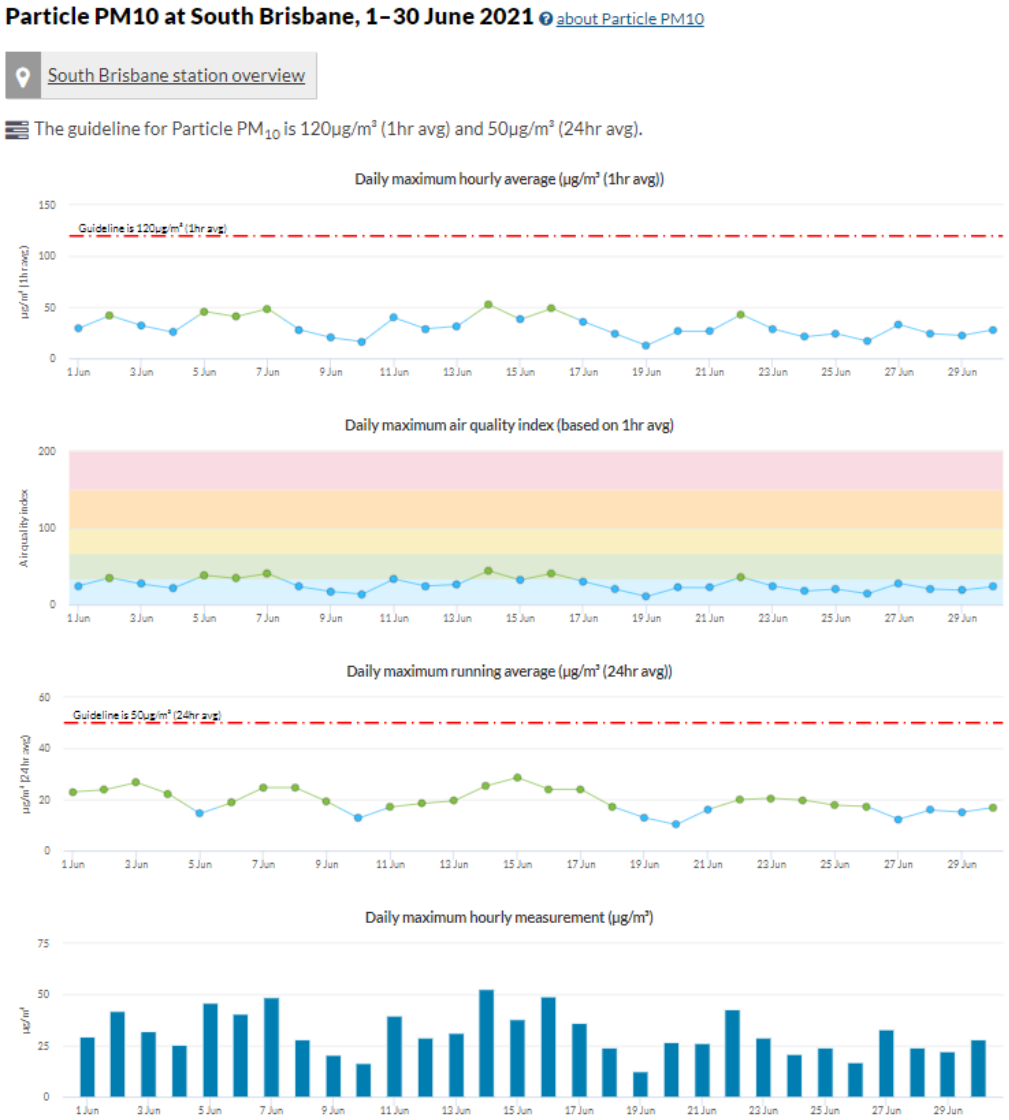


Figure 2: South Brisbane – DES Station - PM10 graph for June 2021 (reproduction from the DES website accessed).

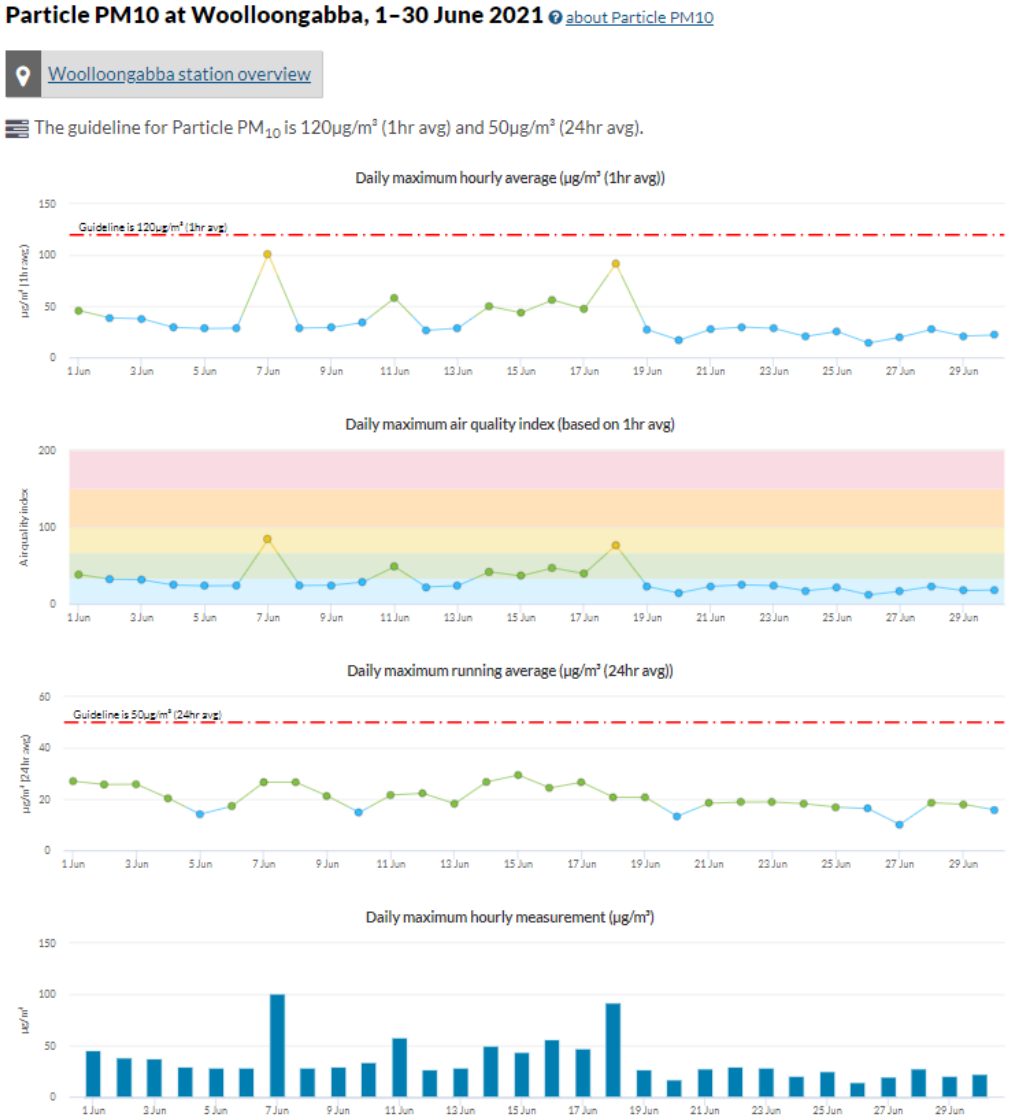


Figure 3: Woolloongabba – DES Station - PM10 graph for June 2021 (reproduction from the DES website).

3.4 Water Quality – Discharge

CBGU undertook eight (8) water quality monitoring events prior to the release (groundwater and surface water) from the site during June 2021. The June entry has been included as the results were not received before the completion of the June Monthly report.

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	Testing of 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	1/06/2021	7.40	9	1.10	510	130	700	1,300	20	10	<1	88.35	Yes
Albert Street	14/06/2021	7.40	<5	3	1,500	250	90	2,600	20	<10	<1	108.93	Yes
Roma Street	17/06/2021	7.79	<5	0.90	8,210	12,400	1600	22,200	<10	<10	<1	105.30	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: testing of 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

No.	Location	Date	Testing of Water Quality Objectives [1]		Adhered to Project Requirements (Yes / No)
			pH	Turbidity (NTU)	
1.	Boggo Road	1/06/2021	7.30	0.80	Yes
2.	Boggo Road	11/06/2021	7.90	1.10	Yes
3.	Boggo Road	14/06/2021	7.40	2.40	Yes
4.	Boggo Road	17/06/2021	7.14	4.11	Yes
5.	Boggo Road	25/06/2021	7.20	0.20	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 June 2021, CBGU JV undertook one (1) rounds of surface water sampling at five (5) 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[1]	Downstream	15/06/2021	Monthly	52.7	165	119.82	8.01
Gabba	Upstream	15/06/2021	Monthly	13.39	34,800	107.72	7.88
Gabba	Downstream	15/06/2021	Monthly	10.5	34,700	107.72	7.87
Roma Street	Upstream	17/06/2021	Monthly	33.5	29,200	102.88	7.89
Roma Street	Downstream	17/06/2021	Monthly	35.1	28,900	104.09	7.81
Northern Portal	Upstream	17/06/2021	Monthly	0.6	530	33.89	7.56
Northern Portal	Downstream	17/06/2021	Monthly	1.0	525	33.89	7.54
Albert Street	Upstream	18/06/2021	Monthly	10.85	31,300	106.51	7.42
Albert Street	Downstream	18/06/2021	Monthly	10.5	31,200	106.51	7.4

- [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 June 2021, fourteen (14) 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.	1 June 21	Herschel street (Roma Street Precinct)	Noise	A stakeholder emailed the Project regarding noise from the Roma Street precinct. CBGU provided the stakeholder with an overview of the works occurring and their duration at the Roma Street precinct. CBGU also outlined the mitigation measures used to alleviate potential impacts and ensure compliance. CBGU also reviewed the circumstances and monitoring confirmed works adhered to project noise requirements and the works undertaken were consistent with the community notification.	Closed
2.	3 June 21	(Roma Street Precinct)	Nosie	A stakeholder emailed the Project regarding noise from the Roma Street precinct. CBGU provided the stakeholder with an overview of the works occurring and their duration at the Roma Street precinct. CBGU also outlined the mitigation measures used to alleviate potential impacts and ensure compliance.	Closed

No.	Date	Location	Description of Issue	Responses	Status of Event
				BGU also reviewed and amended work practices to reduce noise levels and duration of the works. CBGU also reviewed the circumstances and monitoring confirmed works adhered to project noise requirements and the works undertaken were consistent with the community notification.	
3.	3 June 21	Herschel street (Roma Street Precinct)	Noise	A stakeholder called the Project hotline regarding noise from the Roma Street precinct. CBGU provided the stakeholder with an overview of the works occurring and their duration at the Roma Street precinct. CBGU also outlined the mitigation measures used to alleviate potential impacts and ensure compliance. CBGU also reviewed the circumstances and monitoring confirmed works adhered to project noise requirements and the works undertaken were consistent with the community notification.	Closed
4.	8 June 21	Gregory Terrace (Northern Portal)	Noise	A stakeholder contacted the Project regarding noise at the Northern Portal. CBGU provided the stakeholder with an overview of the works occurring and their duration at the Northern Portal. CBGU also outlined the mitigation measures used to alleviate potential impacts and ensure compliance. BGU also reviewed and amended work practices to reduce noise levels and duration of the works. CBGU also reviewed the circumstances and monitoring confirmed works adhered to project noise requirements and the works undertaken were consistent with the community notification.	Closed
5.	8 June 21	Roma Street (Roma Street Precinct)	Noise	A stakeholder contacted the Project regarding noise from the Roma Street precinct. CBGU provided the stakeholder with an overview of the works occurring and their duration at the Roma Street precinct. CBGU also outlined the mitigation measures used to alleviate potential impacts and ensure compliance. CBGU also reviewed the circumstances and monitoring confirmed works adhered to project noise requirements and the works undertaken were consistent with the community notification.	Closed
6.	9 June 21	Roma Street (Roma Street Precinct)	Noise	A stakeholder contacted the Project regarding noise from the Roma 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 Roma Street precinct. CBGU also outlined the mitigation measures used to alleviate potential impacts and ensure compliance. *Note: the works related to Public Utilities Works with the Road Corridor, which had to occur during non-standard hours due a temporary closure of Roma Street.* CBGU also reviewed the circumstances and monitoring confirmed works adhered to project noise requirements and the works undertaken were consistent with the community notification.	
7.	11 June 21	Roma Street (Roma Street Precinct)	Traffic Management	A stakeholder contacted the Project regarding property condition. CBGU reviewed the circumstances and informed the respective subcontractor/s.	Closed
8.	15 June 21	Gregory Terrace (Northern Portal)	Noise	A stakeholder contacted the Project regarding noise at the Northern Portal. CBGU provided the stakeholder with an overview of the works occurring and their duration at the Northern Portal. CBGU also outlined the mitigation measures used to alleviate potential impacts and ensure compliance. CBGU also reviewed and implemented additional mitigation measures to reduce noise levels. CBGU also reviewed the circumstances and monitoring confirmed works adhered to project noise requirements and the works undertaken were consistent with the community notification.	Closed
9.	16 June 21	(Woolloongabba Precinct)	Air Quality	A stakeholder contacted the Project regarding dust from the Woolloongabba precinct. CBGU provided the stakeholder with an overview of the works occurring and their duration at the Woolloongabba precinct. CBGU also outlined the mitigation measures used to alleviate potential impacts and ensure compliance. CBGU also reviewed the circumstances and monitoring confirmed works adhered to project Air Quality requirements.	Closed
10.	19 June 21	Herschel street (Roma Street Precinct)	Noise	A stakeholder contacted the Project regarding noise from the Roma Street precinct. CBGU provided the stakeholder with an overview of the works occurring and their duration at the Roma Street precinct. CBGU also outlined the mitigation measures used to alleviate potential impacts and ensure compliance.	Closed

No.	Date	Location	Description of Issue	Responses	Status of Event
				CBGU also reviewed the circumstances and monitoring confirmed works adhered to project noise requirements and the works undertaken were consistent with the community notification.	
11.	29 June 21	Stanley Street (Woolloongabba Precinct)	Air Quality	A stakeholder contacted the Project regarding dust from the Woolloongabba precinct. CBGU provided the stakeholder with an overview of the works occurring and their duration at the Woolloongabba Street precinct. CBGU also outlined the mitigation measures used to alleviate potential impacts and ensure compliance. CBGU also reviewed the circumstances and monitoring confirmed works adhered to project Air Quality requirements.	Closed
12.	30 June 21	North Quay (Roma Street Precinct)	Noise	A stakeholder contacted the Project regarding noise from the Roma Street precinct. CBGU provided the stakeholder with an overview of the works occurring and their duration at the Roma Street precinct. CBGU also outlined the mitigation measures used to alleviate potential impacts and ensure compliance. CBGU also reviewed the circumstances and monitoring confirmed works adhered to project noise requirements and the works undertaken were consistent with the community notification.	Closed
13.	30 June 21	Roma Street (Roma Street Precinct)	Traffic Management	A stakeholder contacted the Project regarding road-use. CBGU reviewed the circumstances and informed the workforce about road-use via a toolbox talk.	Closed
14.	30 June 21	Roma Street (Roma Street Precinct)	Noise	A stakeholder contacted the Project regarding noise from the Roma Street precinct. CBGU provided the stakeholder with an overview of the works occurring and their duration at the Roma Street precinct. CBGU also outlined the mitigation measures used to alleviate potential impacts and ensure compliance. CBGU also reviewed the circumstances and monitoring confirmed works adhered to project noise requirements and the works undertaken were consistent with the community notification.	Closed