

The background of the entire page is a dark blue map. It shows a network of streets and a prominent river that winds through the center of the map. The map is rendered in a lighter shade of blue, creating a subtle, textured background for the text.

Cross River Rail Project

Monthly Environmental Report

May 2023

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Executive Summary

This Monthly Environmental Report (MER) has been produced for Project Works undertaken on site for May 2023 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. 13 (March 2022)*. Plus, 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 for 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 13 covering full scope of RIS works is effective from 14 March 2022. TSD – CEMP Revision 11 covering full scope of TSD works is effective from 24 November 2022.
5.	Compliance and Incident management – Non-compliance events, notifications and reporting.	Yes	No Non-Compliance Events (NCEs) occurred in May 2023.

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, has 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 met project noise requirements at Sensitive Places. RIS – Noise monitoring was not triggered during the reporting period. Refer to Appendix A (Section 3.1.6). TSD – Noise monitoring was undertaken to validate predicted noise modelling. Noise monitoring confirmed project requirements were met. Refer to Appendix B (Table 3 and Section 3.2).
	Vibration – Project Works must aim to achieve vibration goals for cosmetic damage, human comfort and sensitive building contents.	Yes	Vibration monitoring met project vibration requirements at Sensitive Places. RIS – Vibration monitoring occurred at RNA. The results met the requirements of the endorsed CEMP. Refer to Appendix A (Table 5 and Section 3.1.3). TSD – Vibration monitoring occurred at Roma Street. The results met the requirements of the endorsed CEMP. Refer to Appendix B (Section 3.1).

Imposed Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
12.	Property damage – relating to ground movement.	Yes	<p>RIS – 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 Dutton Park to Salisbury stations.</p> <p>TSD – Vibration modelling has been prepared and is ongoing. Where required, building condition survey reports are completed for heritage and residential buildings. No enquiries relating to property damage were received during May 2023.</p>
13.	Air quality – Works must aim to achieve air quality goals for human health and nuisance.	Yes	<p>Air quality monitoring met Project air quality requirements. A regional scale (controlled burning) event occurred throughout the final days of May 2023 resulting in multiple worksites experiencing elevated results and in some cases exceedances of the air quality goals.</p> <p>RIS – Contractor confirmed they continued to meet the requirements under Condition 13 and the OEMP. Refer to Appendix A (Tables 7, 8 and 9 and Section 3.1.11, plus Figures 1, 2, 3 and 4).</p> <p>TSD – Contractor confirmed they continued to meet the requirements under Condition 13 and the OEMP while experiencing a regional scale event that resulted in exceedances in Total Suspended Particulates (TSP) and Particulate Matter (PM) levels. Refer to Appendix B (Tables 4.2.1, 5.2.2, 6 plus Section 3.3).</p>
14.	Traffic and transport – Works must minimise adverse impacts on road safety and traffic flow.	Yes	Traffic Management Plans are covered in the CEMPs. Sub-plans for all active worksites have been reviewed by the EM.
15.	<p>Water quality – Works must not discharge groundwater from the construction site above the relevant environmental values and water quality objectives.</p> <p>Monitor and report on water quality in accordance with CEMP and Sub-plans.</p>	Yes	<p>Monitoring and reporting on groundwater and surface water quality was undertaken in accordance with RIS and TSD Water Quality Management Plans.</p> <p>RIS – No groundwater discharges occurred during May 2023.</p> <p>Post-rainfall monitoring occurred at Breakfast Creek, Moolabin Creek and Rocky Water Holes Creek. Refer to Appendix A (Section 3.1.13 and Table 10)</p>

			<p>for further details.</p> <p>TSD – Active discharge of groundwater occurred from Roma Street, Albert Street, Woolloongabba and Boggo Road worksites. Monitoring results of groundwater quality prior to discharge is consistent with the pre-construction water quality levels. Refer to Appendix B (Table 7) for groundwater monitoring results.</p> <p>Surface water discharges occurred at the Northern Portal worksite on 21 occasions. The monitoring results demonstrated surface water discharges met project water quality discharge criteria. Refer to Appendix B (Table 8) for surface water monitoring results.</p> <p>Post rainfall monitoring occurred in receiving waters of the Northern Portal, Roma Street, Albert Street, Woolloongabba, Southern Portal and Boggo Road sites. Refer to Appendix B (Section 3.5 and Table 9) for further details.</p>
16.	<p>Water resources – Evaluate potential impact, plan works, implement controls and monitor inflow of groundwater associated with drawdown.</p>	Yes	<p>RIS – There is no sustained groundwater extraction involved in the RIS scope of works so predictive modelling of groundwater drawdown is not required. Collection of hydrological data to model potential inflow rates into excavations during construction has been undertaken.</p> <p>TSD – Inflow of groundwater into the worksites is being continuously monitored to validate the predictive modelling.</p>
17.	<p>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.</p>	Yes	<p>Contractors continue to consider this condition in their site planning and design.</p>
18.	<p>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.</p>	Yes	<p>Site specific ESC plans for all active work sites have been reviewed by the EM and implemented on site.</p>

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	The construction of a temporary access road through Victoria Park was undertaken under a Heritage Exemption Certificate approved by the Department of Environment and Science (DES) on 24 June 2021. Consideration has been taken to minimise loss of trees and the area of park impacted during these temporary works.
21.	Worksite rehabilitation – worksites rehabilitated as soon as practicable upon completion of works or commissioning, and in consultation with Brisbane City Council.	N/A	N/A

Non-Compliance Events

There were no NCEs raised in May 2023.

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	<i>State Development and Public Works Organisation Act 1971</i>
Sub-plan	Any sub-plan of the CEMP
The Delivery Authority	The Cross River Rail Delivery Authority
TSD	Tunnel, Stations and Development

1. Introduction

1.1. Background

The Cross River Rail Project (the Project) is a declared coordinated project under the *State Development and Public Works Organisation Act 1971* (SDPWO Act). The CRR Environmental Impact Statement (EIS) was evaluated by the Coordinator-General who recommended the Project proceed, subject to Imposed Conditions and recommendations. Since the evaluation of the EIS, several Requests for Project Change (RfPC) submissions have been evaluated by the Coordinator-General. RfPC 13 was endorsed in March 2022 by the Coordinator-General.

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.

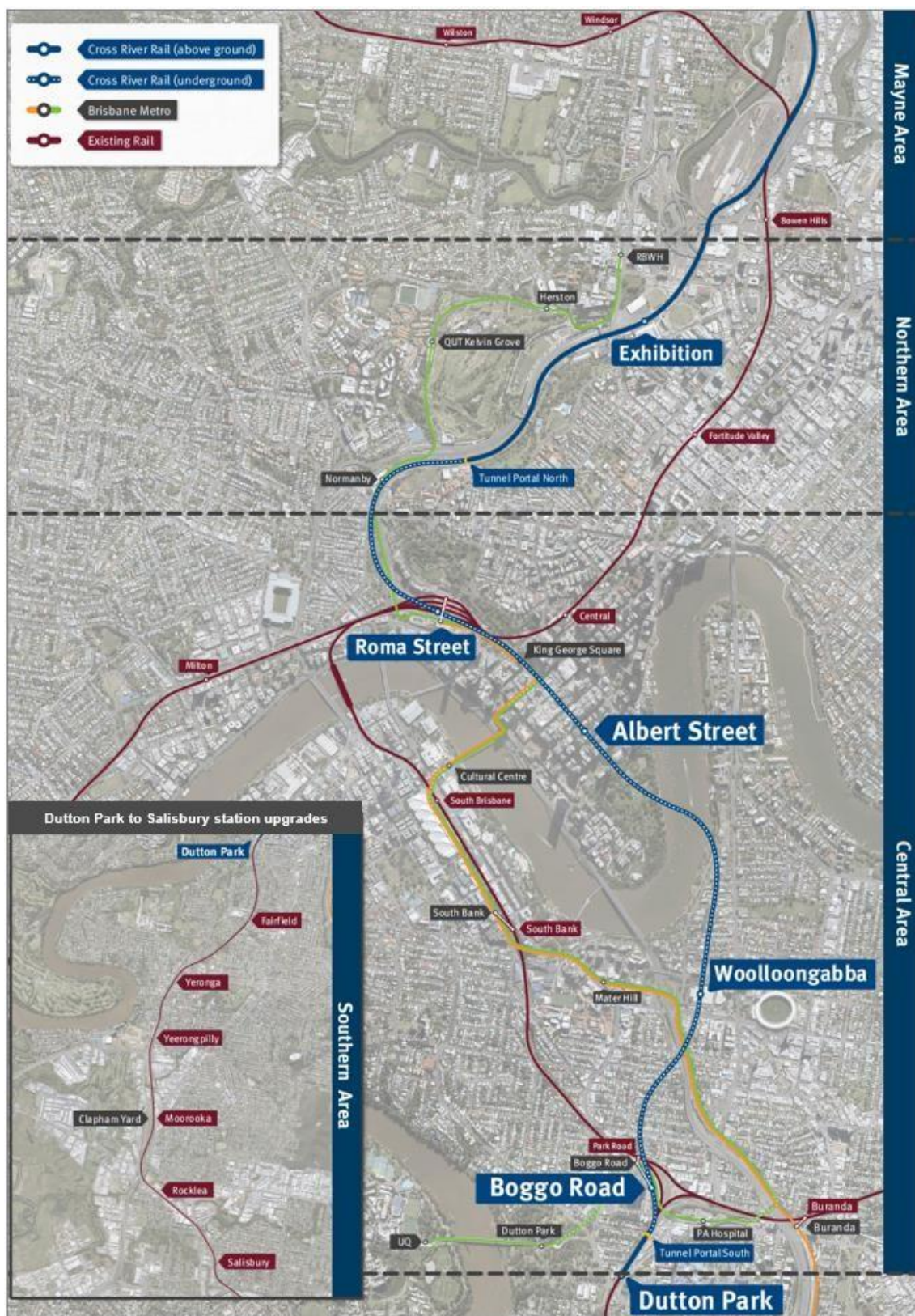
The two main delivery packages which require reporting under the Coordinator-General's imposed conditions are:

- 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 areas and delivery packages are shown in the figure below.



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 NCEs, 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, is 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 May 2023:

Area	Project Works
Mayne Area	<p>Mayne Yard North –</p> <ul style="list-style-type: none">• BR08 (Breakfast Creek Bridge) 36m centre span girder installation completed;• Shunting Bridge demolition of superstructure commenced (over Breakfast Creek);• Mayne North Vehicle access road pavements commenced; and• QR requested modifications in Mayne Yard North continuing – currently focusing on shunters shed and Graffiti Removal Facility. <p>Mayne Yard East / West –</p> <ul style="list-style-type: none">• Mayne Yard East entry road removals and demolition of redundant facilities has been completed;• BR11/13 (vehicle access tripod bridge over future CRR lines) road barrier installation has been completed;• BR12 (pedestrian bridge from Bowen Hills Station to MY-West) all piling and headstocks completed, awaiting final truss structure installation in May; and• Mayne East / West Drainage, CSR and earthworks continuing.
Northern Area	<p>RNA/ Northern Corridor –</p> <ul style="list-style-type: none">• Demolition of redundant QR embankment, under path and bridge structure has been completed;• Embankment excavation incl rock removal has been completed;• Piling of Station and BR44 nearing completion (80% complete);• Station and Shared path service install ongoing (25% complete);• Station FRP strip footings commenced;• Museum Link FRP commenced (25% complete);• BR44 Pier 1 FRP commenced;• Drainage ongoing (50% complete);• Steel fabrication for BR44 ongoing (50% complete) and Station Structural Steel fabrication 20% complete;

	<ul style="list-style-type: none"> Corridor widening between RW260 and BR44 (eastern side); Rock trimming under O'Connell Terrace (eastern side); Partial handover of isolated sections from TSD to RIS commenced; and CSR in the Northern Portal area commenced. <p>Northern Portal –</p> <ul style="list-style-type: none"> Physical works complete.
Central Area	<p>Roma Street –</p> <ul style="list-style-type: none"> Main Station Building Entry L2 slab 50% complete, verticals L2 to Roof underway, service installation progressing B4, B3 and RA3; Main Station L1 slab 75% complete, vertical to L2 underway; QR Platform 2 canopy steel complete, roofing and ceiling works ongoing; and M&E building works to roof level commenced, and services installation and fit outs progressing WSB basement levels including RA6. <p>Albert Street –</p> <ul style="list-style-type: none"> Lot 1 – B10 basement slab, internal stairwells and landings struck completed, B10 to B9 external perimeter and internal load bearing walls and columns complete and B9 suspended slabs and level slipform complete; Lot 2 – Adit AA6 and AA2 arch lining complete, Back of House (BoH) South, North B4 walls and slab complete, BoH South B6 walls and mezzanine span 5 complete; and Lot 3 – B4 base slab and B1 slab complete, SW102, 103, t SW107 and SW106 walls complete and a range of other pours complete. <p>Woolloongabba –</p> <ul style="list-style-type: none"> Main Station Box external wall continues to SW5, SW3 and SW6; M&E Services - HV transformer SAT test undertaken; M&E Services to Service Building continue across all levels of the building damper install top B7 & B9 underway; M&E Services nearing completion to first two RIS Rooms in South Cavern, North Cavern RIS rooms progressing well; PSD trial install underway in North Cavern; OME Framing installed to South Cavern; Ceiling and Partitions in progress on B9, B7, B4, B3, B2 and B1; and Decline backfill underway. <p>Tunnel fitout –</p> <ul style="list-style-type: none"> Leaky feeder and fire main brackets, cables and pipework installation ongoing; ETCS cable brackets and cable containment installations ongoing; Emergency access and egress walkway installation is ongoing; and Rail stored in tunnels for future station works. <p>Boggo Road –</p> <ul style="list-style-type: none"> Concrete to in-situ structure at 74% complete; Reinforcement to in-situ structure 77% complete; Mezzanine precast trusses - 161 of 222 installed; Precast platform culverts and planks – 456 of 461 installed; and Super T's – 29 of 39 installed. <p>Southern Portal –</p> <ul style="list-style-type: none"> Internal tunnel roof soffit and concrete works in MC02 ongoing; Fire separation wall concrete pours ongoing; Retention basin and outlet drainage works commenced; Princess Alexandra Hospital (PAH) Bridge fully supportive cable stays; Ongoing works on the western and eastern approaches; and Services works completed on final sewer connections at Railway Terrace and pavement reinstatement works recommenced.
Southern Area	<p>Southern / Dutton Park –</p> <ul style="list-style-type: none"> Closure and demolition of Platform 2 (inbound platform);

- UP Sub – Formation rebuild;
- Construction of Platform 01 Precast Walls including lower-level services installation;
- Relocation of 2 existing turnouts;
- Installation of 2 new turnouts;
- Moving the up sub closer to Future Dutton Park Platform 1;
- Continue CSR network construction; and
- Drainage scope installation.

Fairfield station –

- Continue with station building fit-out works;
- Mildmay Street gravity wall Stage 2 complete;
- Overpass flooring (permanent) completed;
- Complete new Stair 1;
- Complete permanent Equity St & Mildmay St Entrances;
- Lift 2 & Lift 3 – lift construction ongoing;
- Offsite manufacture of electrical boards (DB's, MSB's, MDB's etc);
- Installation of Platform 03 tactiles & coping stones; and
- Installation of PL2 / PL3 'Klic' lighting to the soffit.

Yeronga station –

- Final completion and certification of the station remains ongoing.

Clapham Yard –

- BR93 (Moolabin Creek Track Bridge) Stage 1 complete (except walkways and Northern relieving slab);
- BR94 (Chale Street Bridge) Southern Span 2, FRP deck pours and barrier footing completed;
- HV relocation to Underground (along Chale Street) complete;
- Relocation of SER/PER temporary power complete;
- Recommenced CSR and light pole foundations for Shunters walkways; and
- Northern drainage (in front of Aurizon) recommenced.

Rocklea station –

- Continued inground services throughout platform areas – PL1 & PL2/3;
- Continue platform concrete slab pours for the platform slabs;
- Continued FRP work for structural foundations for the canopy foundations;
- Commence FRP works for the building foundation; and
- Completion of structural work structural steel package – Overpass Columns, now ready for coating.

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.

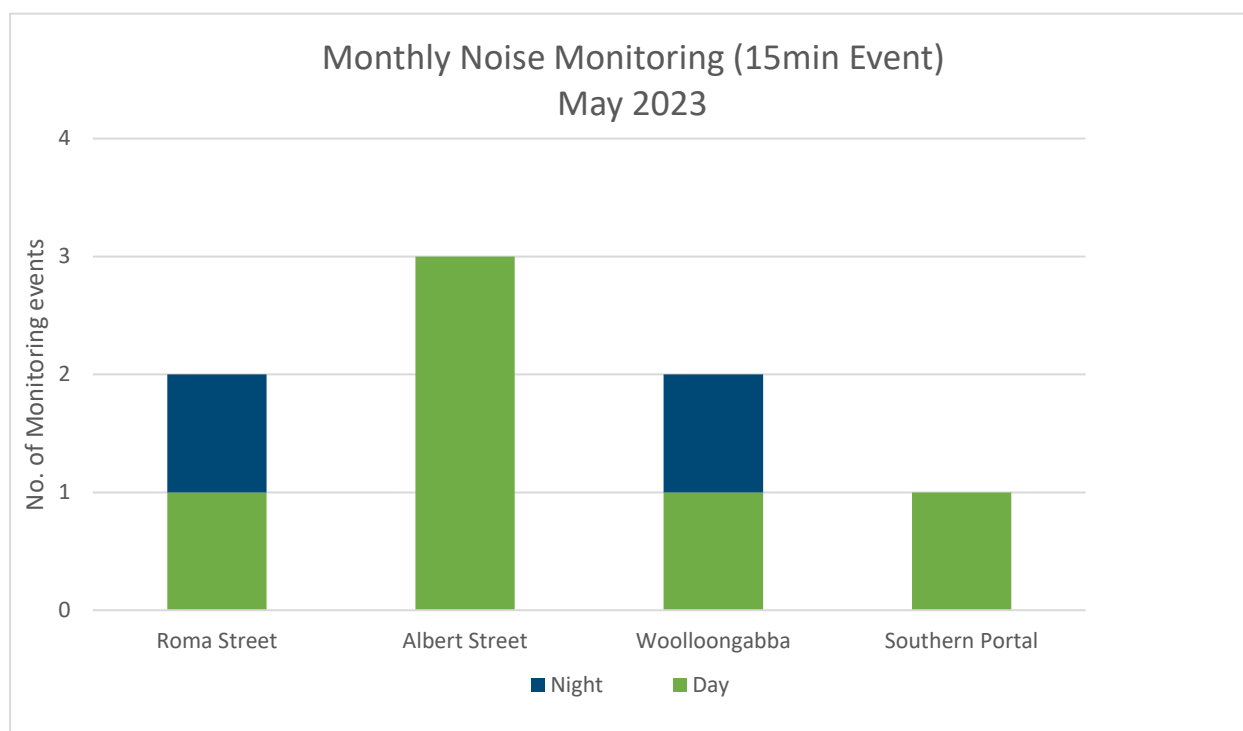
For Project Works where potential noise impacts are modelled to be above the noise goal but below the noise goal plus 20dBA, this work is authorised where the endorsed CEMP and associated Noise and Vibration Management Plan is being implemented, including communicating construction activities to potential 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 assess external monitoring and determine compliance with the project's noise requirements, the project applies recommended façade attenuation corrections, which considers receiver property type.

In the Central Area, noise monitoring was undertaken for both model verification and construction monitoring at sensitive places for locations in proximity to Roma Street, Albert Street, Woolloongabba and Southern Portal. The TSD contractors reported that the project noise requirements have been met during this reporting month. Monitoring results for the Central Area are detailed in **Appendix B** (Table 3).

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



2.2.2. Vibration

In the Northern Area, vibration monitoring continued at the State heritage listed John MacDonald Stand inside a storeroom. The monitor was approximately 93m away from the 5T hydraulic hammer which was being used for demolition of the stations' existing platform. The RIS contractor reported that the vibration requirements have been met and the monitoring results are as detailed in **Appendix A** (Table 5).

In the Central Area, vibration monitoring was conducted at the Roma Street site due to piling works occurring in close proximity to the heritage structure of Roma Street Station. All vibration monitoring adhered to the project requirements and is 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 Areas. Results met the project air quality goal¹ for all active worksites.

April 2023 dust deposition results for Boggo Road and Southern Portal are included in this reporting cycle as they had yet to be received from the laboratory prior to the finalisation of the April MER. The TSD contractor confirmed the remaining April dust deposition results met the air quality goals.

A summary of the dust deposition results for the month are in the table below.

Air Quality – Dust Deposition Monitoring			
Area	Worksite	Monitoring Location	Comments
Mayne Area	Mayne Yard	Mayne Yard East	- Results met air quality goal
Northern Area	RNA / Exhibition	RNA Showgrounds	- Results met air quality goal
	Northern 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 in April and May 2023
		Peter Doherty Street/Leukemia Foundation	- Results met air quality goal in April and May 2023
	Southern Portal	Dutton Park Station	- Results met air quality goal in April and May 2023
		PA Hospital - Central Energy Unit along Kent Street	- Results met air quality goal in April and May 2023
	Roma Street	Roma Street Station	- Results met air quality goal
	Woolloongabba	Russian Orthodox Cathedral	- Results met air quality goal
		Woolloongabba Busway	- Results met air quality goal
Southern Area	Dutton Park	Dutton Park	- Results met air quality goal
	Clapham Yard	Clapham Yard	- Results met air quality goal

¹ CG air quality goal for dust deposition - 120µg/m² (over an averaging period of 30 days).

2.2.3.2. Particulate Matter and Total Suspended Particulates

Monitoring for particulate matter (PM₁₀) and total suspended particulates (TSP) was conducted at Northern, Central and Southern Area worksites. Results met the project goals at all active worksites with the exception of several days at the end of the month for multiple sites due to a regional scale event as described below.

The TSD contractor recorded exceedances of the TSP and PM₁₀ air quality goals across Northern Portal, Woolloongabba and Boggo Road worksites over multiple days. Upon further investigation, it was confirmed that Brisbane experienced elevated smoke and particulate concentration during 28 May to 31 May 2023. This was due to a regional scale controlled burning event that had a significant impact on reported particulate concentrations. Nearby Department of Environment and Science (DES) air

quality monitoring results showed a strong correlation of elevated concentration levels between 28 May and 31 May 2023.

Clapham Yards' original Dust Monitor Pro (DMP) that was recently refurbished was installed back on site in May 2023. However, due to recharging issues with the battery, a large portion of recorded data did not meet the applicable monitoring standards and was therefore invalid. Issue rectification has occurred by swapping out the faulty battery. Valid data was intermittently recorded throughout the month and met the air quality goals. Refer to **Appendix A** (Figures 2 and 3 and section 3.1.11).

UNITY has confirmed that a long-term rectification strategy is underway and encompasses additional air quality modelling to determine if monitoring of particulates is required for current and future works and the procurement of a brand new air quality monitor that is anticipated to be delivered and commissioned early Quarter 3 2023.

Due to the lack of valid air quality data for PM₁₀ and TSP, UNITY have undertaken an investigation to confirm the scope of works at Clapham Yard met the Project requirements. This has included supplementary information validated by the Certified Air Quality Professional (CAQP). The investigation considered a range of factors including current works on site and staging, implemented mitigation measures, meteorological conditions and if there were any air quality related complaints. The investigation confirmed that despite the absence of particulate data for a large portion of the month, UNITY's scope of works and implementation of their Air Quality Management Plan has met the project outcomes set out by the Imposed Conditions.

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	- Monitoring not required as per Project's CAQP advice
	Mayne Yard	Mayne Yard East	- Results met air quality goals
Northern Area	RNA / Exhibition	RNA showgrounds	- Results met air quality goals
	Northern Portal	Brisbane Girls Grammar School	- Results exceeded air quality goals on multiple days in late May 2023 due to a regional scale event
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 exceeded air quality goals in late May 2023 due to a regional scale event
	Woolloongabba	Place Park, Woolloongabba	- Results exceeded air quality goals on multiple days in late May 2023 due to a regional scale event
Southern Area	Clapham Yard	Clapham Yard	- Power supply issues prevented valid data from being recorded consistently in May 2023 - Valid data met air quality goals

2.2.4. Water Quality

Water quality monitoring and reporting was undertaken in accordance with the contractors CEMP and Water Quality Management Plans.

2.2.4.1. Surface Water

During May, active surface water discharges occurred in the Northern Area. Post-rainfall water quality monitoring occurred in the receiving waters in the Northern, Central and Southern Areas.

In the Northern Area, water quality monitoring was triggered on twenty-one occasions from the Northern Portal worksite as water used for construction activities and stormwater was treated and actively discharged to the stormwater network. The TSD contractors confirmed the discharge criteria was met on all occasions. Refer to **Appendix B** (Table 8) for further details.

Post-rainfall monitoring was triggered in receiving waters at Mayne Yard, Northern Portal, Roma Street, Albert St, Woolloongabba, Boggo Road, Southern Portal and Clapham Yard worksites due to a rainfall event that exceeded the trigger to monitor. Where in-situ monitoring was carried out and downstream locations' water quality data exhibited >10% increase in turbidity (NTU), further investigation was undertaken to ascertain whether this change in water quality is related to released water from the Project Works. This was observed at Mayne Yard and further assessment found that the storm event size was above the design criteria for the controls on site and the site-specific erosion and sedimental control measures were appropriately implemented as per the site-specific Erosion and Sedimental Control Plan. Therefore, compliance with Imposed Conditions 15 and 18 were met. Refer to **Appendix A** (Section 3.1.13, Table 10).

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	Yes	No	<ul style="list-style-type: none"> - ESC was implemented in accordance with site specific ESC Plan. - Post-rainfall monitoring undertaken.
Northern Area	Exhibition/ RNA	No	No	No	<ul style="list-style-type: none"> - ESC was implemented in accordance with site specific ESC Plan.
	Northern Portal	Yes	Yes	Yes	<ul style="list-style-type: none"> - Post rainfall monitoring undertaken in accordance with WQMP. - Active surface water discharge met water quality investigation criteria.
	Northern Corridor	No	No	N/A	<ul style="list-style-type: none"> - ESC was implemented in accordance with site specific ESC Plan.
Central Area	Albert Street	No	Yes	Yes	<ul style="list-style-type: none"> - Post-rainfall/routine monitoring undertaken. - Routine in-stream monitoring undertaken in accordance with WQMP

	Boggo Road	No	Yes	Yes	<ul style="list-style-type: none"> - Post-rainfall/ routine monitoring undertaken. - Routine in-stream monitoring undertaken in accordance with WQMP.
	Roma Street	No	Yes	Yes	<ul style="list-style-type: none"> - Post-rainfall/ routine monitoring undertaken. - Routine in-stream routine monitoring undertaken in accordance with WQMP.
	Woolloongabba	No	Yes	Yes	<ul style="list-style-type: none"> - Post-rainfall/ routine monitoring undertaken. - Routine in-stream monitoring undertaken in accordance with WQMP.
	Southern Portal	No	Yes	Yes	<ul style="list-style-type: none"> - Post-rainfall/ routine monitoring undertaken. - Routine in-stream monitoring undertaken in accordance with WQMP.
Southern Area	Fairfield station	No	No	No	<ul style="list-style-type: none"> - ESC was implemented in accordance with site specific ESC Plan.
	Clapham Yard	No	Yes	No	<ul style="list-style-type: none"> - Post-rainfall monitoring undertaken. - ESC was implemented in accordance with site specific ESC Plan.
	Rocklea station	No	No	No	<ul style="list-style-type: none"> - ESC was implemented in accordance with site specific ESC Plan.

2.2.4.2. Groundwater

Groundwater discharge occurred at Albert Street, Boggo Road, Roma Street and Woolloongabba worksites. The groundwater discharge results exceeded relevant water quality objectives (WQO's)² for total nitrogen, organic nitrogen, oxidized nitrogen, ammonia nitrogen and total phosphorus. However, these results are consistent with the receiving environment baseline monitoring pre-construction data. The contractor confirmed no changes have occurred onsite to the construction methodologies that would have affected the groundwater results. Refer to **Appendix B** (Table 7) for further details.

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

Groundwater quality monitoring is summarised in the table below:

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	- Discharge of groundwater met Project requirements
	Boggo Road / Southern Portal	Yes	- Discharge of groundwater met Project requirements
	Roma Street	Yes	- Discharge of groundwater met Project requirements
	Woolloongabba	Yes	- Discharge of groundwater met Project requirements
Southern Area	Clapham Yard	No	- No groundwater discharges.

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

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, Dutton Park, Fairfield, Yeronga, Clapham Yard and Rocklea worksites.

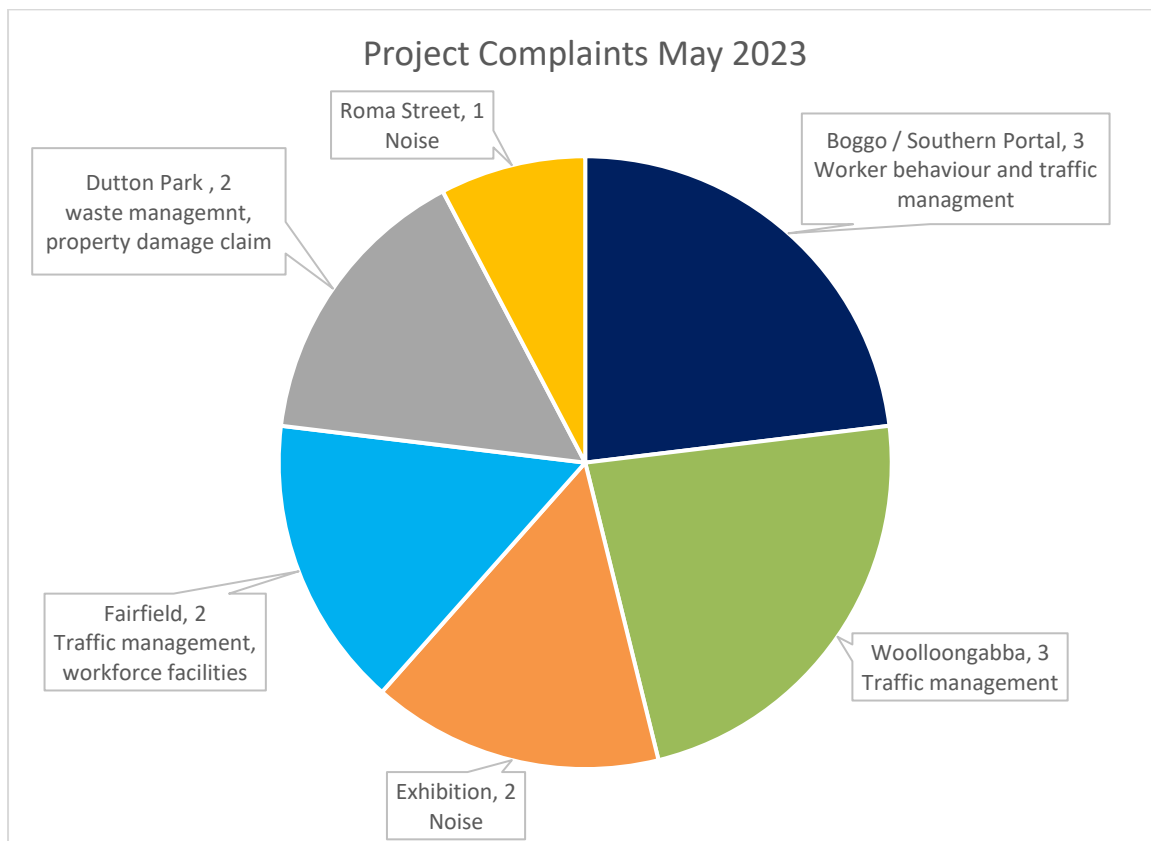
2.3. Complaints Management

A total of thirteen complaints were received during the month, all of which were project related.

RIS works received six complaints during May relating to waste management and property damage during the Easter SCAS works at Dutton Park, workforce facilities and traffic management at Fairfield Station and noise at Exhibition. For further details and breakdown of complaints, refer to **Appendix A** (Table 3).

The TSD works received seven complaints relating to traffic management at Gibbon Street (Woolloongabba), traffic management and workforce behaviour at Annerley Road (Southern Portal) and noise at Roma Street.. For further details refer to **Appendix B** (Table 11).

The Project Works complaints summary for the month is provided in the following chart.

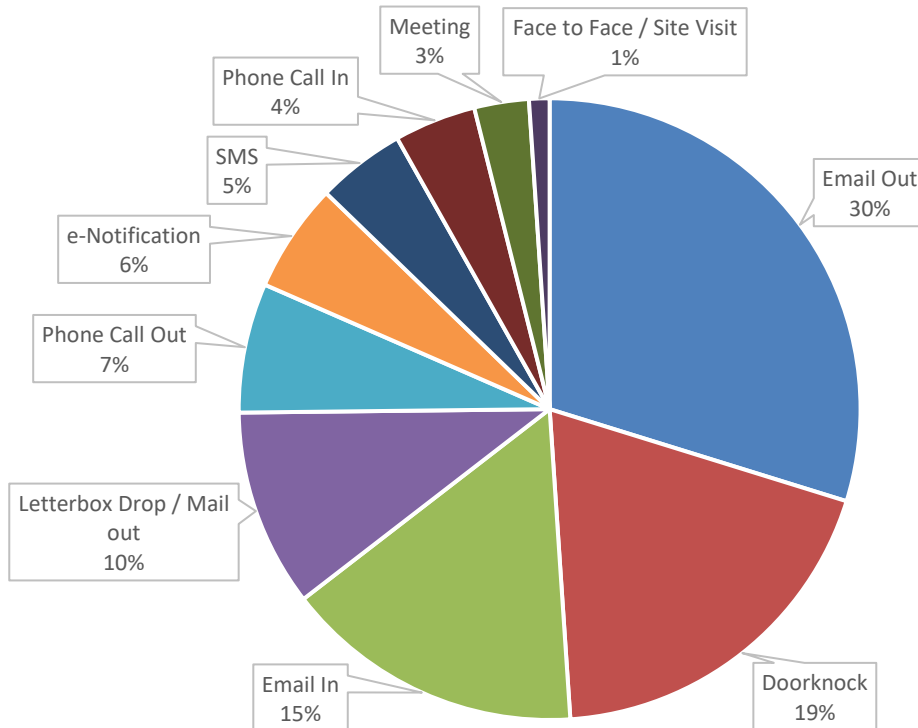


When attended noise monitoring was undertaken in response to a complaint, the contractor confirmed on all occasions that works undertaken at the time of the complaint adhered to project requirements. In some instances, previously attended noise monitoring data, representative of the relevant construction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

Stakeholder Engagement May 2023



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 – <ul style="list-style-type: none"> Access Road and Shunt Road construction (North of Ferny Grove Flyover); Cross drainage modifications of pre-load impacted area; Surcharge Load Stage 2 placement; and BR08 (Breakfast Creek Bridge) temporary jetty removal. Mayne Yard East / West – <ul style="list-style-type: none"> BR12 (QR pedestrian bridge to Mayne West) complete structural steel and stair installation; SCAS N-7A entry road mods to QR's Western Maintenance Facilities; Commence Earthworks and CSR for new Vehicle Access Road between MY-East and MY-West; and Handover of Vehicle Access Road to QR (north of Ferny Grove Flyover).
Northern Area	RNA / Exhibition – <ul style="list-style-type: none"> Structural Steel installation of Platform (south) in EXT –19, commencing 18 May 2023; Installation of underslung services; FRP on BR44 Pier 2 and Pier 3; FRP on Station stairs, lift shafts, pad foundations; Ground retention, micro piles; and Continue inground services including electrical, comms, stormwater, server, and wet fire. Northern Corridor – <ul style="list-style-type: none"> CSR, TFR and drainage scope in Northern Portal; and

	<ul style="list-style-type: none"> • SCAS EXT-19, commencing 18 May 2023.
	<p>Northern Portal –</p> <ul style="list-style-type: none"> • Ongoing handover of sections of the Northern Portal project area from CBUG JV and UNITY; • Defects repair; and • QR pedestrian bridge works.
Central Area	<p>Roma Street –</p> <ul style="list-style-type: none"> • Mezzanine beam post tensioning to be completed in June 2023; • Platform slab FRP works to commence in July 2023; and • Stage 3 walkway demolition and piling works. <p>Albert Street –</p> <ul style="list-style-type: none"> • Lot 1 – slip 11-12 FRP works upcoming and internal jump form system assembly; • Lot 2 –completion of AS1 shaft FRP works and southern Back of House (BoH) structure; and • Lot 3 – internal lift core 1 & 2 jump 6 of 11 and perimeter wall jump pours ongoing. <p>Woolloongabba –</p> <ul style="list-style-type: none"> • Southern wall SW5 final pour; • Escalators installation to commence in 2-week time after the steel trusses are installed first; • Shoring/propping towers to be lowered down to station box to assist with installing first mezz beam in station box in June 2023; and • Telstra comms pit on Main St footpath to be constructed after the Energex pit is completed. <p>Boggo Road –</p> <ul style="list-style-type: none"> • Ongoing precast platform culverts and Super T's and truss installation; • Perimeter and internal wall FRP works, including topping slab works; and • Single crane removal in June. <p>Southern Portal –</p> <ul style="list-style-type: none"> • Boggo Road south – last deck units to be installed; • MC02 roof and roof slab FRP works; • Ongoing firewall and liner wall FRP works; • Western and eastern abutment construction; and • Ongoing sewer works at Dutton Street. <p>Southern / Dutton Park –</p> <ul style="list-style-type: none"> • Retaining wall FRP works to Cope St and Kent St retaining walls; • Continue Soil Nailing and Shotcrete works; • Finalise Noise Wall construction at Cope Street then move down to Fenton Street; and • Continue Platform 01 construction including associate Cope St infrastructure.
Southern Area	<p>Fairfield Station –</p> <ul style="list-style-type: none"> • Commence construction of Lift 1; • Continue lift construction, Lift 02, Lift 03; • Continue station building construction & fit-out; • Equity & Mildmay Streets finishing work; and • Electrical, comms & security cabling, installation of fittings. <p>Yeronga Station –</p> <ul style="list-style-type: none"> • Focusing on finalising defect lists closeout documentation. <p>Clapham Yard –</p> <ul style="list-style-type: none"> • Open drains along Retaining walls; • Aurizon fence (on top of RW650); and • Driveways and stone pitching along Fairfield Road. <p>Rocklea Station –</p> <ul style="list-style-type: none"> • Continue inground services throughout platform areas – PL1 & PL2/3; • Continued FRP work for the canopy foundations;

- Continue platform slab construction;
- Continue FRP for DG retaining wall;
- Blockwork trade to commence; and
- Installation of structural steel columns for the overpass modules.

2.5 Non-Compliance Events

No new NCEs were 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	Relevant Condition	Gate 1	Gate 2	Gate 3	Gate 4
▲								
☐ Open								
☐ Closed								
CRRDA-001-RIS-001	9/11/19	Noise	Yeronga Station	4, 10, 11	10/11/19	14/11/19	26/11/19	18/12/19
CRRDA-002-TSD-001	27/03/20	ESC	Woolloongabba	4, 15, 18	30/03/20	31/03/20	22/04/20	11/06/20
CRRDA-003-TSD-002	27/03/20	ESC	Boggo Rd	4, 15, 18	30/03/20	31/03/20	22/04/20	11/06/20
CRRDA-004-TSD-003	28/03/20	Traffic	Boggo Rd	4, 10, 14	30/03/20	31/03/20	22/04/20	11/06/20
CRRDA-005-TSD-004	27/03/20	Reporting	Multiple sites	4, 6, 11, 13	30/03/20	31/03/20	22/04/20	11/06/20
CRRDA-006-TSD-005	27/03/20	Air Quality	Multiple sites	13	30/03/20	31/03/20	22/04/20	11/06/20
CRRDA-009-RIS-003	6/05/22	ESC	Clapham Yard	4, 15, 18	28/10/22	28/10/22	12/12/22	12/12/22
CRRDA-010-RIS-004	10/05/22	Potential Acid Sulphate Soils Management	Clapham Yard	4, 19	28/10/22	28/10/22	12/12/22	12/12/22
☐ Withdrawn								
CRRDA-007-RIS-002	1/04/20	Air Quality	Multiple sites	13	28/04/20	30/04/20	Withdrawn	
CRRDA-008-TSD-006	8/04/20	Working Hours	Roma Street	4,10	28/04/20	30/04/20	Withdrawn	

Appendix A RIS Monthly Report

Monthly CGCR Report May 2023

**Cross River Rail – Rail, Integration and Systems
Alliance**

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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 <ul style="list-style-type: none"> BR08 (Breakfast Creek Bridge) 36m centre span girder installation completed Shunting Bridge demolition of superstructure commenced (over Breakfast Creek) Mayne North Vehicle access road pavements commenced QR requested modifications in Mayne Yard North continuing – currently focusing on shunters shed and Graffiti Removal Facility platform modifications. Mayne Yard East / West <ul style="list-style-type: none"> Mayne Yard East entry road removals and demolition of redundant facilities has been completed BR11/13 (vehicle access tripod bridge over future CRR lines) road barrier installation has been completed BR12 (pedestrian bridge from Bowen Hills Station to MY-West) all piling and headstocks completed, awaiting final truss structure installation in May. Mayne East / West Drainage, CSR and earthworks continuing.
Northern Area	RNA / Exhibition <ul style="list-style-type: none"> Demolition of redundant QR embankment, under path and bridge structure has been completed Embankment excavation incl rock removal has been completed Piling of Station and BR44 nearing completion (80% complete) Station and Shared path service install ongoing (25% complete) Station FRP strip footings commenced Museum Link FRP commenced (25% complete) BR44 Pier 1 FRP commenced Drainage ongoing (50% complete) Steel fabrication for BR44 ongoing (50% complete) and Station Structural Steel fabrication 20% complete. Northern Corridor <ul style="list-style-type: none"> Corridor widening between RW260 and BR44 (eastern side) Rock trimming under O'Connell Terrace (eastern side). Partial handover of isolated sections from TSD to RIS commenced CSR in the Northern Portal area commenced.
Southern Area	Southern Portal / Dutton Park <ul style="list-style-type: none"> Closure and demolition of Platform 2 (inbound platform) UP Sub - Formation rebuild Construction of Platform 01 Precast Walls including lower-level services installation Relocation of 2 existing turnouts Installation of 2 new turnouts Moving the up sub closer to Future Dutton Park Platform 1 Continue CSR network construction Drainage scope installation.

Area	Project Works
Southern Area	Fairfield Station <ul style="list-style-type: none"> Continue with station building fit-out works Mildmay Street gravity wall Stage 2 complete Overpass flooring (permanent) completed Remove existing temporary stair 1 scaffold Complete new Stair 1 Complete permanent Equity St & Mildmay St Entrances Implement Stage 2C temporary stage (new stair, entrance, and overpass arrangement) Lift 2 & Lift 3 – lift construction ongoing Offsite manufacture of electrical boards (DB's, MSB's, MDB's etc) Installation of Platform 03 tactiles & coping stones Installation of PL2 / PL3 'Klic' lighting to the soffit.
Southern Area	Yeronga Station <ul style="list-style-type: none"> Final completion and certification of the station remains ongoing.
Southern Area	Clapham Yard <ul style="list-style-type: none"> BR93 (Moolabin Creek Track Bridge) Stage 1 complete (except walkways and Northern relieving slab) BR94 (Chale Street Bridge) Southern Span 2, FRP deck pours and barrier footing completed. HV relocation to Underground (along Chale Street) complete, ready for Energex' cut over on 10th May Relocation of SER/PER temporary power complete Recommended CSR and light pole foundations for Shunters walkways Northern drainage (in front of Aurizon) recommenced Track works commenced with bottom ballast.
Southern Area	Rocklea Station <ul style="list-style-type: none"> Continued inground services throughout platform areas – PL1 & PL2/3 Continue platform concrete slab pours for the platform slabs Continued FRP work for structural foundations for the canopy foundations Commence FRP works for the building foundation Completion of structural work structural steel package - Overpass columns now ready for coating.

Acronyms:

CIP – Cast in Situ Piles

CSR – Combined Services Route

DL – Drainage Line

FRP – Form Reo Pour

HV – High Voltage

OHLE – Overhead Line Equipment

OTV – On Track Vehicle

PUP – Public Utility Plant

RNA - Royal National Agricultural and Industrial Association of Queensland

R&R – Remove and Replace

RSS – Reinforced Soil Slopes

RW – Retaining Wall

SCAS – Scheduled Corridor Access Schedule

UTX – Under Track Crossing

The following table summarises the upcoming Project Works:

Table 2: Summary of upcoming Project Works

Area	Project Works
Mayne Area	<p>Mayne Yard North</p> <ul style="list-style-type: none"> Access Road and Shunt Road construction (North of Ferny Grove Flyover) Cross drainage modifications of pre-load impacted area Surcharge Load Stage 2 placement BR08 (Breakfast Creek Bridge) temporary jetty removal <p>Mayne Yard East / West</p> <ul style="list-style-type: none"> BR12 (QR pedestrian bridge to Mayne West) complete structural steel and stair installation SCAS N-7A entry road mods to QR's Western Maintenance Facilities Commence Earthworks and CSR for new Vehicle Access Road between MY-East and MY-West. Handover of Vehicle Access Road to QR (north of Ferny Grove Flyover).
Northern Area	<p>RNA / Exhibition</p> <ul style="list-style-type: none"> Structural Steel installation of Platform (south) in EXT -19, commencing 18 May 2023 Installation of underslung services FRP on BR44 pier 2 and Pier 3 FRP on Station stairs, lift shafts, pad foundations Ground retention, micro piles Continue inground services including electrical, comms, stormwater, server, and wet fire. <p>Northern Corridor</p> <ul style="list-style-type: none"> CSR, TFR and drainage scope in Norther Portal area SCAS EXT-19, commencing 18 May 2023.
Southern Area	<p>Southern Portal / Dutton Park</p> <ul style="list-style-type: none"> Retaining wall FRP works to Cope St and Kent St retaining walls Continue Soil Nailing and Shotcrete works Finalise Noise Wall construction at Cope Street then move down to Fenton Street Continue Platform 01 construction including associate Cope St infrastructure.
Southern Area	<p>Fairfield Station</p> <ul style="list-style-type: none"> Commence construction of Lift 1 Continue lift construction, Lift 02, Lift 03 Continue station building construction & fit-out Equity & Mildmay Streets finishing work Electrical, comms & security cabling, installation of fittings.
Southern Area	<p>Yeronga Station</p> <ul style="list-style-type: none"> Focusing on finalising defect lists and closeout documentation.
Southern Area	<p>Clapham Yard</p> <ul style="list-style-type: none"> Open drains along Retaining walls Aurizon fence (on top of RW650) Driveways and stone pitching along Fairfield Road.
Southern Area	<p>Rocklea Station</p> <ul style="list-style-type: none"> Continue inground services throughout platform areas – PL1 & PL2/3 Continued FRP work for the canopy foundations Continue platform slab construction Continue FRP for DG retaining wall Blockwork trade to commence Installation of structural steel columns for the overpass modules.

2 Complaints

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

Table 3: Summary of Complaints

Date Received	Location	Issue	Project Works / Activity source of the concern	Reporting Period	Complaint Detail	Unity Response	Status
Saturday, 06 May 2023	Dutton Park	Waste management	SCAS works	May 2023	Stakeholder complained about cable ties left on their lawn by the workforce.	Team went to inspect the property and removed the cable ties from the lawn.	Closed
Sunday, 07 May 2023	Dutton Park	Property damage	Easter SCAS works	May 2023	Stakeholder complained about trucks that had damaged the curb of their driveway.	Team undertook an inspection and detailed images of the damage. The images were forwarded to the delivery team to review against any pre-construction images of the area.	Closed
Wednesday, 10 May 2023	Fairfield	Workforce facilities	Station upgrade works	May 2023	Stakeholder complained about the temporary placement of a portable site toilet on the residential side of Equity Street.	Team advised that the clean portable toilet was placed there to access the heritage shelter and was moved back the same day.	Closed
Saturday, 13 May 2023	Fairfield	Traffic management	Station upgrade works	May 2023	Stakeholder complained about the temporary closure of the pedestrian overpass at Fairfield Station.	Team advised that due to urgent re-work required for compliance the overpass had to be temporarily closed. Closure signs were placed mid-week at all access locations once re-works were scheduled.	Closed
Wednesday, 31 May 2023	Exhibition	Noise	Station upgrade works	May 2023	Stakeholder complained about hammering noise early in the morning.	Team provided the most recent works notice and provided an update on upcoming out of hours works in June.	Closed
Wednesday, 31 May 2023	Exhibition	Noise	Station upgrade works	May 2023	Stakeholder complained about hammering noise early in the morning and that they were not notified of the works.	Team provided the most recent works notice and advised that the stakeholder had been notified of the activity via letterbox drop and email.	Closed

3 Environmental Monitoring Results

The below section summarises the monitoring results to be reported in accordance with Imposed Condition 6(b)(i).

Acoustics

Imposed Condition 11(b) 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 (C-EMP) occurs.

3.1.1 Noise Monitoring

Attended noise monitoring was not triggered based on the predictive noise assessments for the Relevant Project Works during the reporting period.

Complaint-based noise monitoring because of Project Works was not triggered during the reporting period as the activity which generated two (2) complaints was completed by the time the complaints were received the following day.

3.1.2 Noise Monitoring Results

Table 4 Summary of Noise Monitoring Data

Location	Receiver Type Details	Type of Monitoring	Work Hours	Monitoring date and time	Noise Type	Purpose of Monitoring	Predictive model (dBA)	Performance Goal 1 (dBA) (Condition 11(a), Table 2, LA _{10/eq} 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 For interpretation, please refer to section Error! Reference source not found.
Nil	Not triggered during reporting period.													

- 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 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 Queensland¹.
 - Additionally, several 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.

² Refer to the waterways and water quality management plan, a C-EMP sub-plan for details of derivation of the discharge criteria

3.1.3 Vibration Monitoring

Vibration monitoring to validate the predictive model was triggered for:

- The use of a hydraulic hammer (4.5T) at the redundant Exhibition Station (RNA) in proximity to State heritage listed buildings (John MacDonald Stand).

The results are presented in the below Table.

Complaint-based vibration monitoring was not triggered. No complaints related to vibration were received during the reporting period.

Vibration monitoring to address property damage was not triggered by the predictive assessment.

3.1.4 Vibration Monitoring Results

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	Vibration intensive equipment	Maximum predicted vibration level	Shortest distance between Equipment and Sensitive Place @Time of Monitoring"	Maximum recorded vibration level	Vibration goal for receiver	Exceedance of vibration limit?	Comments
John MacDonald Stand	01/05/2023 to 31/05/2023	24 hours/ 7days	John MacDonald Stand	Heritage – DIN4150 Group 3	Construction Monitoring at Sensitive Places – Model Verification	4.5T rock breaker/ hydraulic hammer	1.6mm/s	38m	0.5mm/s	3mm/s State heritage building	No	Monitor was installed at the John MacDonald Stand within a storeroom at the building's foundation. The monitor was approximately 93m away from the hammer (predicted 0.6mm/s) and the closest point of the John Mac Stand from the hammering was 38m (predicted 1.6mm/s). The recorded peak of 0.5mm/s can be attributed to the hammer being used during the demolition of the existing platform approximately.

3.1.5 Interpretation

The RIS scope of works continues to achieve the outcomes set out by the Imposed Conditions and OEMP.

3.1.6 Noise Monitoring

Noise monitoring was not triggered during the reporting period.

Therefore, the RIS scope of works continues to achieve the outcomes set out by the CGCR and OEMP.

3.1.7 Vibration Monitoring

3.1.7.1 Model Verification

3.1.7.1.1 John MacDonald Stand Results

Vibration monitoring during platform demolition at the redundant Exhibition Station (RNA) was undertaken at the foundation of the State heritage John MacDonald Stand inside a storeroom. This location was selected based on the outcomes of predictive assessments.

Demolition of the platform was undertaken as part of Stage 3 demolition works. The peak reading of 0.5mm/s is attributed to the platform demolition. As the predictive model was validated for the monitors location (approximately 93m away), the predicted vibration level for the closest point of the John Mac Stand façade (approximately 38m away) is considered accurate (predicted 1.6mm/s).

No exceedances of the revised vibration goal (3 mm/s) were recorded.

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

Air Quality

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

Visual monitoring was undertaken during routine environmental inspections. A total of 36 inspections were undertaken by the Environment Team across Mayne Yard, RNA Showgrounds, Northern Corridor, Southern Area, Fairfield Station, Yeronga Station, Clapham Yard and Rocklea Station.

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
Dust Deposition Gauge	Yeronga Station	AQ-07	12 August 2021	Inactive DDG was decommissioned on 10 December 2021 following the completion of earthworks
Dust Deposition Gauge	Dutton Park	AQ-08	8 July 2022	Active

Monitoring Device Installed by UNITY	Area	Name	Date Installed	Status for the Reporting Period
TSP / PM ₁₀ Monitor	Mayne Yard North (Eastern Air Shed)	Mayne Yard North	26 August 2022	Inactive as of 11 May 2022 CAQP confirmed that the Mayne Yard DMP can be temporarily decommissioned following the completion of Mayne Yard North earthworks. DMP was reinstated for Mayne Yard East Works on 26 August 2022 – see below
TSP / PM ₁₀ Monitor	Mayne Yard East (Eastern Air Shed)	Mayne Yard East	26 August 2022	Active
TSP / PM ₁₀ Monitor	Clapham Yard (Eastern Air Shed)	Clapham Yard	9 August 2021	Partially active during reporting period. The rental DMP battery intermittently ran out of charge and had to be manually recharged during the reporting period.
TSP / PM ₁₀ Monitor	RNA (Western Air Shed)	RNA	25 August 2020	Active

3.1.8 Dust results

As passive dust deposition gauges (DDG) are analysed monthly, results span:

- Mayne Yard, RNA, Dutton Park & Clapham Yard:
 - 10 April 2023 to 10 May 2023

The results are detailed below and compared against Imposed Condition 13(b).

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 Grafton Street (E Mayne) (mg/m ² /day)	AQ-06 – Clapham Yard (mg/m ² /day)	AQ-08 – Dutton Park (mg/m ² /day)
120	40	30	27	83
Total Rainfall during Period (mm)	55.6mm	43.8mm	81.8mm	34.8mm

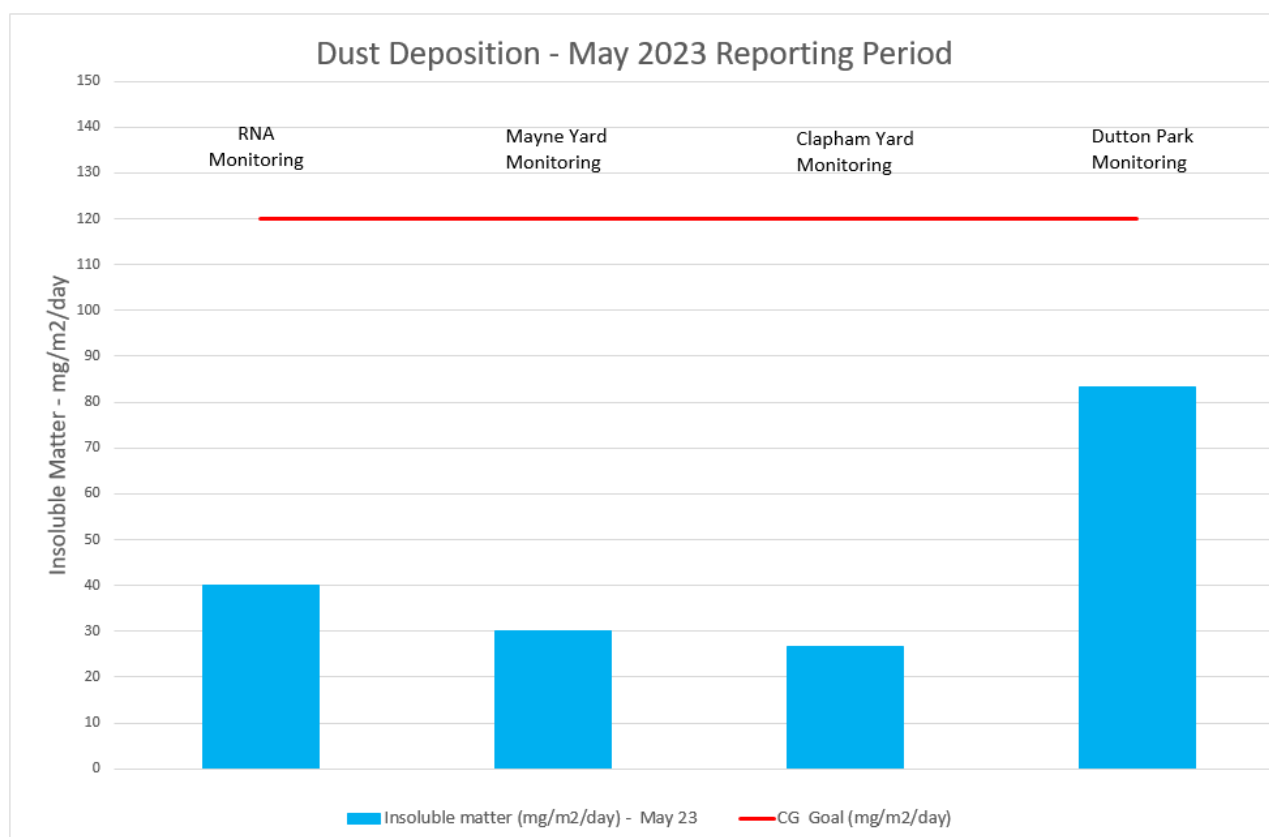


Figure 1 Air Quality Monitoring (Deposited Dust) Results

No exceedances of the dust deposition goal were recorded during the reporting period.

Therefore the Project continues to meet their requirements under Imposed Condition 13 and the OEMP.

3.1.9 Particulates Results

3.1.9.1 Air Quality Monitoring Stations

UNITY had two (2) active and one (1) partially active air quality monitoring stations in place for the reporting period as detailed in Table 6.

3.1.9.2 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 $\mu\text{g}/\text{m}^3$ (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 $\mu\text{g}/\text{m}^3$ (over an averaging period of 24 hours) the project must aim to achieve under Imposed Condition 13(a).

These stations have been installed on-site as per AS/NZS 3850 1.1 following consultation with UNITY air quality professionals. The results are represented in the below figures.

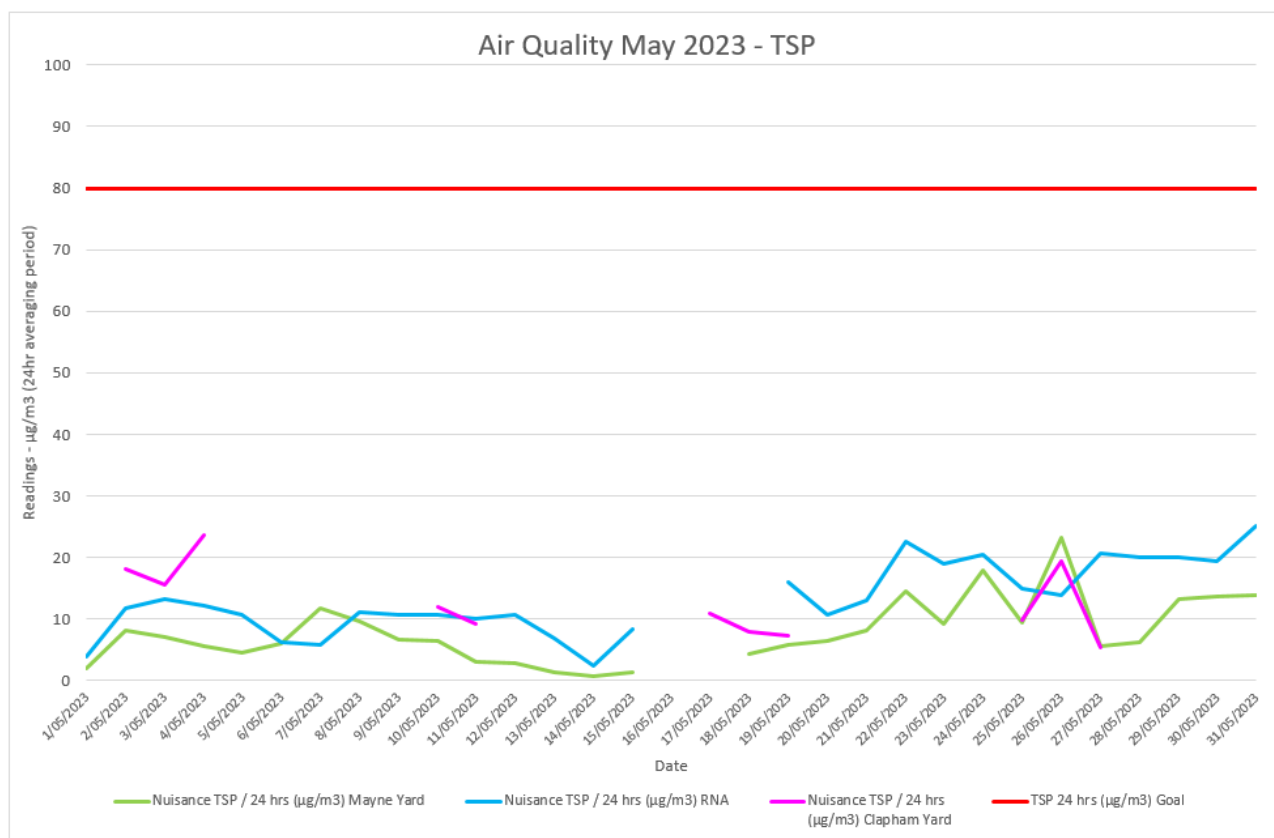


Figure 2 Air Quality Monitoring (TSP) Results

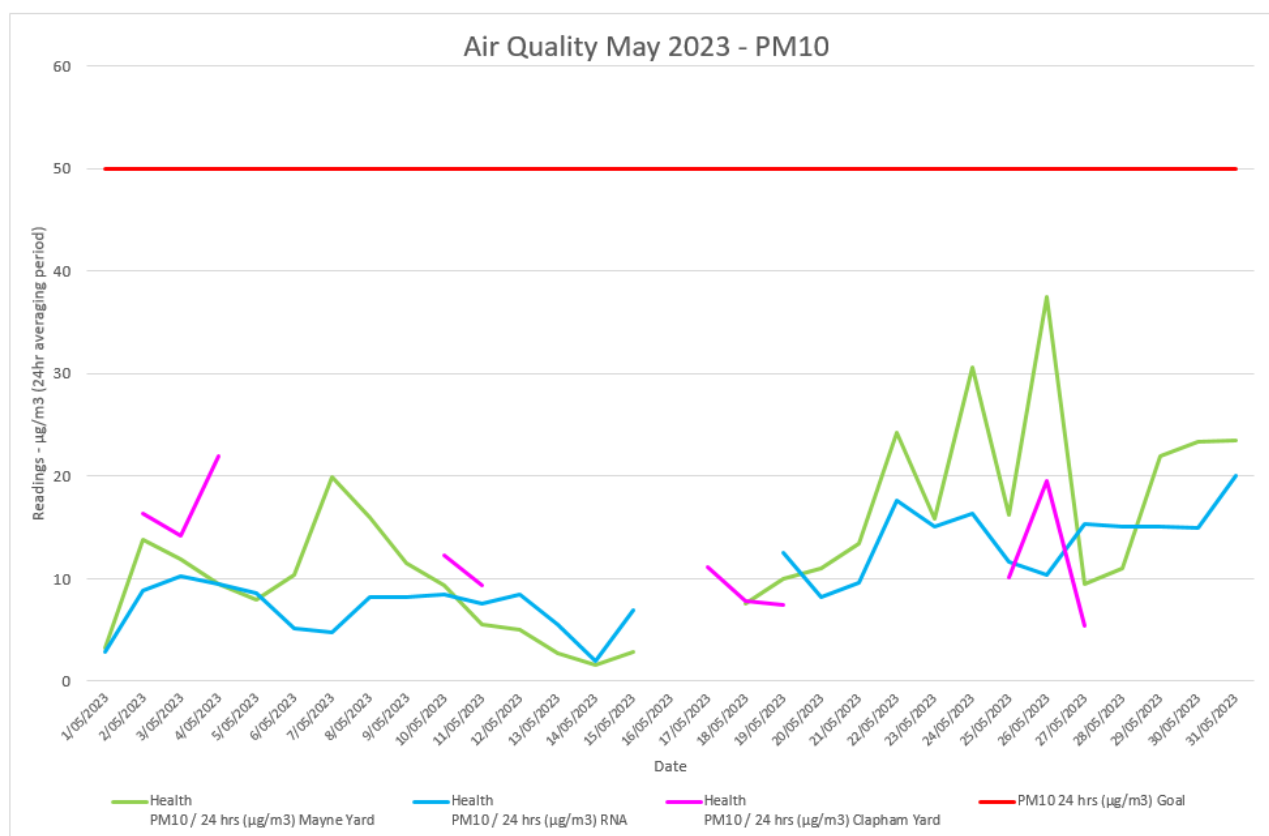


Figure 3 Air Quality Monitoring (PM10) Results

3.1.10 Monitoring Results – Annual Averaging

Imposed Condition 13 (a) sets annual average air quality goals for TSP (Human health) and PM₁₀ (Human health).

The below table summarises where TSP and PM₁₀ monitoring have 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-d92804e4d3a4b25c/files/aagprctp05datacollection200105final.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 PM₁₀ monitoring was 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 12 months

Monitoring Device Installed by UNITY	Area	Date Installed	Date Decommissioned	Number of days data was captured over 365 days period	Data capture over an annual period	Annual performance reporting
TSP / PM ₁₀ Monitor	Northern Corridor (Eastern Air Shed)	23 April 2020	13 January 2021	260 over 365 days	71% over 365 days	<i>Indicative only</i> Data capture did not meet the minimum data capture requirements
TSP / PM ₁₀ Monitor	Mayne Yard North (Eastern Air Shed)	23 April 2020	11 May 2022	Period 1 (to 23 April 2021) 358 over 365 days Period 2 (24 April 2021 to 25 April 2022) 364 over 365 days Period 3 (26 April 2022 to 11 May 2022) 3 days over 47 days	Period 1 98% over 365 days Period 2 99% Over 365 days Period 3 17% Over 47 days	Applicable for Period 1 Data capture met minimum data capture requirements Applicable for Period 2 Data capture has met minimum data capture requirements Applicable for Period 3 Data capture has not met minimum data capture requirements
TSP / PM ₁₀ Monitor	Mayne Yard East (Eastern Air Shed)	26 August 2022	Not yet decommissioned	Period 1 (Started 26 August 2022) 207 days over 250 days	Period 1 83% Over 250 days	Not yet applicable for Period 1 Data capture has not yet met minimum data capture requirements
TSP / PM ₁₀ Monitor	RNA (Western Air Shed)	11 June 2020	Not yet decommissioned	Period 1 (to 11 June 2021) 314 over 365 days Period 2 (12 June 2021 to 12 June 2022) 290 over 365 days Period 3 (Started 13 June 2022) 300 over 350 days	Period 1 86% over 365 days Period 2 79% Over 365 days Period 3 86% Over 350 days	Applicable for Period 1 Data capture met minimum data capture requirements Applicable for Period 2 Data capture met minimum data capture requirements Not yet applicable for Period 3 Data capture has not yet met minimum data capture requirements

Monitoring Device Installed by UNITY	Area	Date Installed	Date Decommissioned	Number of days data was captured over 365 days period	Data capture over an annual period	Annual performance reporting
TSP / PM ₁₀ Monitor	Clapham Yard (Eastern Air Shed)	1 February 2021	Not yet decommissioned	Period 1 (to 31 January 2022) 326 over 364 days Period 2 (01 February 2022 to 31 January 2023) 190 over 365 days Period 3 (started 01 February 2023) 69 over 120 days	Period 1 90% over 364 days Period 2 57% Over 365 days Period 3 57% Over 120 days	Applicable for Period 1 Data capture met minimum data capture requirements Applicable for Period 2 Data capture did not meet the minimum data capture requirements Not yet applicable for Period 3 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 PM₁₀ against the performance goals imposed under Condition 13(a). Results in *italic* are indicative only.

Table 9 Annual Performance Results

Air Quality Indicator	Goal	Period	Northern Corridor	Mayne Yard North	Mayne Yard East	RNA	Clapham Yard
TSP 90 µg/m ³		Period 1	8 µg/m ³	11 µg/m ³	Not yet applicable	18 µg/m ³	8 µg/m ³
		Period 2	-	10 µg/m ³	-	15 µg/m ³	16 µg/m ³
		Period 3	-	Not applicable	-	Not yet applicable	Not yet applicable
PM ₁₀ 25 µg/m ³		Period 1	5 µg/m ³	7 µg/m ³	Not yet applicable	11 µg/m ³	5 µg/m ³
		Period 2	-	7 µg/m ³	-	10 µg/m ³	14 µg/m ³
		Period 3	-	Not yet applicable	-	Not yet applicable	Not yet applicable

3.1.11 Interpretation

3.1.11.1 Particulates Results

External ambient air quality was collected for total suspended particulates (TSP) and particulate matter less than 10µm (PM₁₀).

TSP is one of the indicators for which the Coordinator General has imposed a goal of 80µg/m³ (over an averaging period of 24 hours) the project must aim to achieve under Imposed Condition 13(a).

PM₁₀ is one of the indicators for which the Coordinator General has imposed a goal of 50µg/m³ (over an averaging period of 24 hours) the project must aim to achieve under Imposed Condition 13(a).

These stations have been installed on-site as per AS/NZS 3850 1.1 following consultation with UNITY Certified Air Quality Professionals (CAQP).

During the reporting period:

- None of the particulate results exceeded their relevant goals for TSP and PM₁₀ at Mayne Yard, RNA and Clapham Yard
- There were no complaints received associated with air quality concerns during the reporting period for the sites of Mayne Yard, RNA and Clapham Yard.

3.1.11.2 Mayne Yard and RNA Showgrounds 16 – 18 May Data Loss

Due to inclement weather including an intense rainfall event, data for the Mayne Yard and RNA DMPs for the period of 16 – 18 May 2023 did not meet the required 18-hours of data or 75% threshold over a 24-hour period. As a result, UNITY has undertaken an investigation to provide supplementary information for this period to confirm the RIS scope of works has met the project outcomes set by the CGCR and the OEMP.

3.1.11.2.1 UNITY Works

During the measurement period works at Mayne Yard and RNA consisted primarily of bridge girder install, drainage works, CSR, FRP and piling.

3.1.11.2.2 Meteorological Conditions

As shown in the wind rose below (refer Figure 4) the predominant winds during the measurement period were from a south-easterly direction. As a result, any potential dust generated from UNITY works would have travelled west across the Mayne Yard and RNA work areas and away from sensitive receivers (refer to Attachment 3).

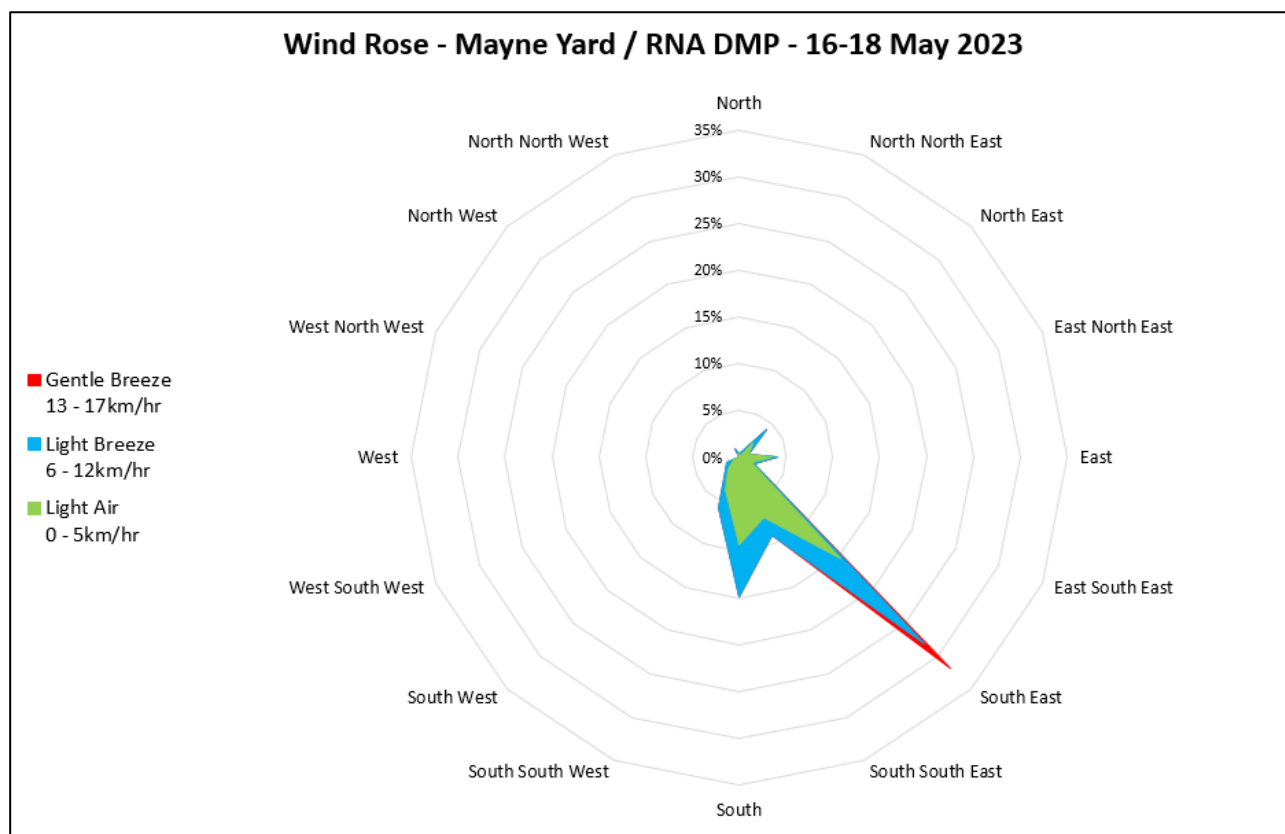


Figure 4 Mayne Yard / RNA DMP Wind Rose 16-18 May 2023

3.1.11.2.3 Air Quality Complaints

During the measurement period no complaints were received related to air quality associated with works at Mayne Yard or RNA.

3.1.11.3 Clapham Yard May Interpretation

Due to the rental battery intermittently losing charge there was not a full set of particulates data for the reporting period at Clapham Yard. The battery was manually recharged every 2 – 3 days to reduce as much data loss as possible. Recharging took ca. one day to complete, hence the regular pattern in data loss.

At the start of June 2023 the battery was replaced with the Mayne Yard East DMP battery as that DMP was due for annual calibration. The results will be reported and discussed in next month's report.

As a result of the data loss, UNITY has undertaken an investigation to provide supplementary information to confirm the RIS scope of works has met the project outcomes set out by the CGCR and the OEMP.

3.1.11.3.1 UNITY Works

During the reporting period Clapham Yard Works consisted of FRP works, RSS and RW barrier installation, HV relocation, drainage works and landscaping.

The Clapham Yard site is almost entirely capped and exposed areas such as batters and stockpiles have been glued down with polymer spray.

3.1.11.3.2 Meteorological Conditions

As shown in the wind rose below (refer Figure) the predominant winds during the reporting period were from a westerly and south-easterly direction. As a result, any potential dust generated from UNITY works

would have travelled east across the Clapham Yard work area and towards the dust deposition gauge located at Unwin Street, Moorooka (refer to Attachment 3).

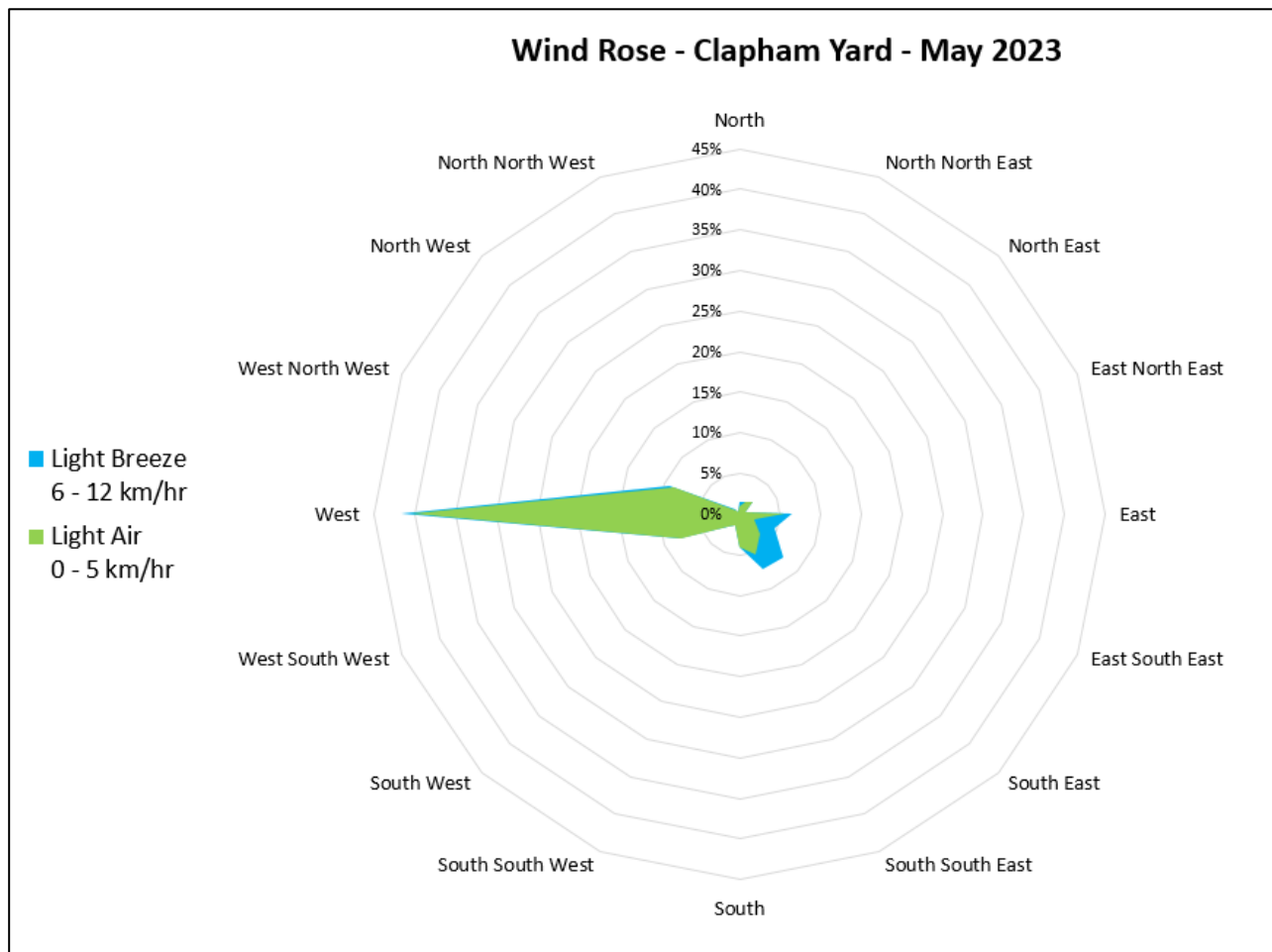


Figure 5 Clapham Yard Wind Rose May 2023

3.1.11.3.3 Air Quality Complaints

During the reporting period, no air quality complaints were received for works associated with Clapham Yard from nearby sensitive receivers.

The Project CAQP has assessed the requirement for particulates monitoring at Clapham Yard and determined that for the current stage of works particulates monitoring is not required. However, continuity of monitoring is being maintained and equipment functionality resolved to ensure sufficient data continuity for potential higher intensity Works.

Therefore, despite the absence of particulates data for the reporting period, the RIS scope of works has met the project outcomes set out by the CGCR and OEMP.

Finally, the Project continues to meet their requirements under Imposed Condition 13 and the OEMP.

Water Quality

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

Imposed 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*.

Imposed 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 Imposed Condition 15(a) was not triggered during the reporting period. There were no groundwater discharges during the reporting period.

Water quality monitoring to demonstrate compliance with Condition 15(b) and Condition 18 was triggered during the reporting period. Post rainfall response monitoring was undertaken.

3.1.12 Rainfall Records

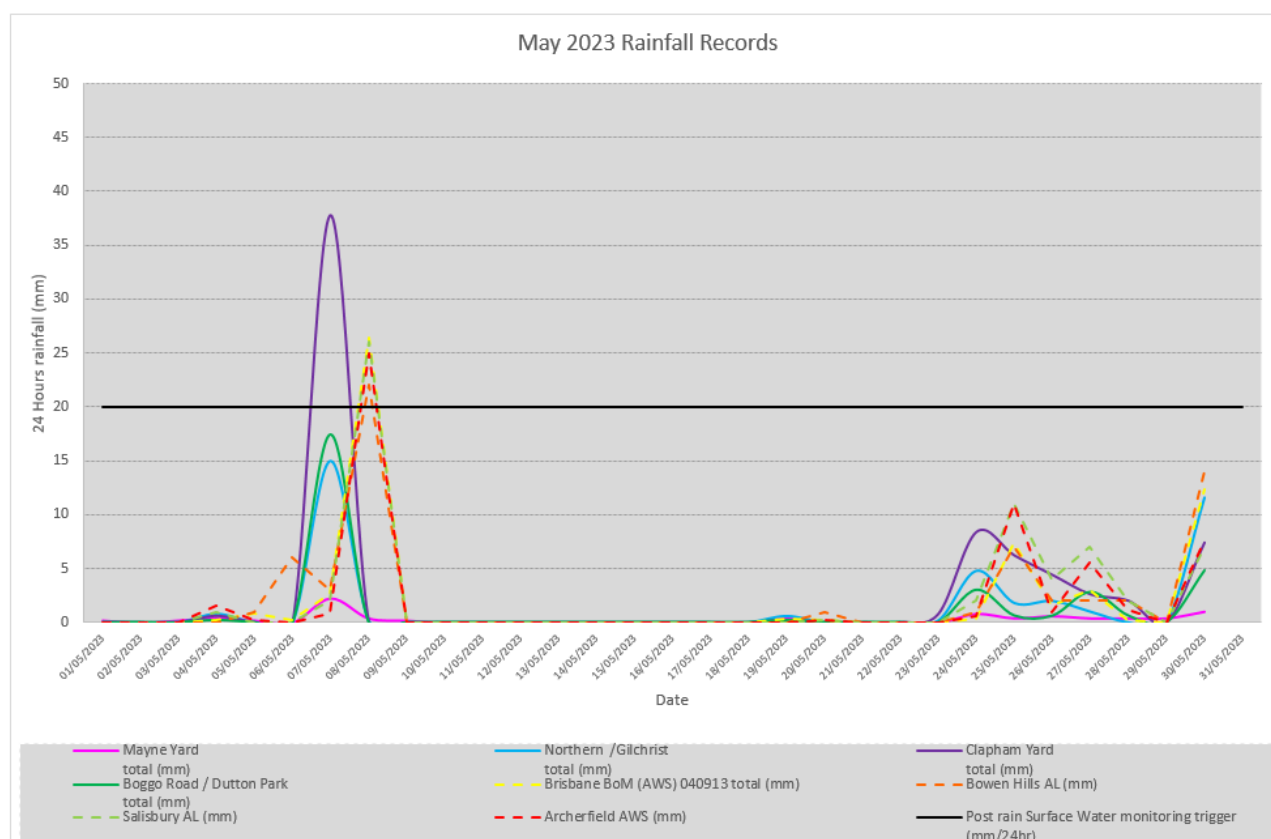


Figure 5 May 2023 Rainfall Records

3.1.13 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 of a higher intensity may cause run-off which would also trigger post-rain monitoring consistent with the C-EMP.

Post rainfall monitoring was triggered as per Condition 15(b) and Condition 18.

Table 10 Post Rainfall Monitoring Results

Date	Location	Waterway	Tide	Discharge Criteria ²				TSS Delta change of 5mg/L or 10% increase (whichever is the greatest)
				Turbidity (NTU) Nil until Turbidity / TSS correlation achieved ³	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	
16 May 2023	SW-01 (Upstream)	Breakfast Creek	Low tide	22.4 NTU	26	92	8.5	Yes Refer to section 3.1.13.1.1 for further details
16 May 2023	SW-03 (Downstream)	Breakfast Creek	Low tide	47.3 NTU	78	94	8.5	
16 May 2023	SW-05 (Upstream)	Moolabin Creek	N/A	22.5 NTU	17	92	7.3	N/A
16 May 2023	SW-06 (Downstream)	Moolabin Creek	N/A	25.9 NTU	14	87	7.2	
16 May 2023	SW-7A (Upstream)	Rocky Water Holes Creek	N/A	32.6 NTU	20	80	7.9	N/A
16 May 2023	SW-07 (Midstream)	Rocky Water Holes Creek	N/A	32.1 NTU	<5	88	7.5	
16 May 2023	SW-08 (Downstream)	Rocky Water Holes Creek	N/A	23.3 NTU	16	89	7.3	

3.1.13.1 Post Rainfall Monitoring Results Interpretation

Post rainfall monitoring events during the reporting period identified that water quality was visually more turbid than baseline conditions throughout the system at some of the monitoring locations.

Where in situ monitoring was carried out, some downstream locations' water quality data exhibited >10% increase in turbidity (NTU). Further investigation was required to ascertain whether this change in water quality is related to released water from the Project Works.

Therefore, a detailed review of the data was required to ascertain whether:

- The source of the increased turbidity could be reasonably attributed solely to the Project Works; and
- If so, had the Project implemented all reasonable and practicable measures to minimise environmental impacts.

3.1.13.1.1 16 May 2023 Breakfast Creek Monitoring Event

The assessment found that the storm event size was above the design criteria for the controls required for the Mayne Yard North work area (RIS work site reporting to the monitored water body). The entire rainfall event was ca. 2EY with 15-minute microbursts above 0.2EY.

The Site-Specific Erosion and Sediment Control Plan (ESCP) was developed by a suitably qualified person (SQP) consistent with the Guidelines for Best Practice Erosion and Sediment Control (IECA 2008) as per Imposed Condition 18.

² Refer to the waterways and water quality management plan, a C-EMP sub-plan for details of derivation of the discharge criteria

³ 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.

Pre-rainfall site inspections of Clapham Yard and Rocklea Station confirmed that all controls required under the ESCPs were in place and functional prior to the rainfall event.

Therefore, the RIS scope of works were compliant with Imposed Conditions 15 and 18.

3.1.14 Routine Surface Water Monitoring Results

During the reporting period, UNITY did not undertake routine surface water quality monitoring.

A review of the data sample has identified that over 12 months of continuous data collection has occurred with over 20 monitoring events. The frequency of background monitoring has therefore been reduced to bi-annually, with the wet season monitoring completed in February 2023.

Dry season (April to August) monitoring is scheduled for June 2023.

This reduction of monitoring frequency is acceptable to continue informing the Dis-1 Credit for the ISCA 'Excellent Rating' the Project is pursuing.

3.1.15 Groundwater Discharge Monitoring Results

Groundwater discharge monitoring was not triggered during the reporting period.

3.1.16 Surface Water Discharge Monitoring

Surface water discharge monitoring was not triggered during the reporting period.

Table 11 Surface Water Discharge Results

Date	Location	Waterway	Discharge Criteria ⁴			
			Turbidity (NTU) Nil until Turbidity / TSS correlation achieved ⁵	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
Nil – Not Triggered						

⁴ Refer to the waterways and water quality management plan, a C-EMP sub-plan for details of derivation of the discharge criteria

⁵ 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.

4 Compliance Review

Non-Compliance Events

The below section summarises the events to be reported in accordance with Imposed Condition 5 and Imposed Condition 6(b)(ii). 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 12 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
N/A for reporting period					

C-EMP Compliance

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

Table 13 C-EMP and relevant Subplans monitoring requirements – Compliance Status for the reporting period

Aspect	Monitoring requirement	Activities risk profile	Monitoring undertaken	Compliance status with C-EMP / 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 is undertaken as part of routine inspections. Monitoring for TSP, PM ₁₀ , and deposited dust was also undertaken TSP, PM ₁₀ monitoring was carried out for three active Worksites	Compliant Compliant Compliant	Not Applicable
Air Quality	Complaint's response	Moderate to High	Yes – visual monitoring undertaken during inspection	Compliant	Not Applicable
Noise	Buffer distance tests based on the outcomes of the predictive assessment based / risk profile of activities	Moderate to High	Not triggered	N/A	Not Applicable
Noise	Plant noise audits for noisy plant to validate models input as required	Moderate to High	No	N/A	Not Applicable
Noise	Complaint's response	Moderate to High	Not triggered	N/A	Not Applicable
Vibration	Construction Monitoring at Sensitive Places / DAPs - Model verification based on the outcomes of the predictive assessment based / risk profile of activities	Moderate to High	Yes – monitoring triggered for RNA Stage 3 Works	Compliant	Not Applicable
Vibration	Complaint's response	Moderate to High	Not triggered No complaints	N/A	Not Applicable

Aspect	Monitoring requirement	Activities risk profile	Monitoring undertaken	Compliance status with C-EMP / Subplan	Effect of the non-compliance
Water Quality	Bi-Annual monitoring	N/A	Wet season monitoring completed during earlier in the year Dry Season monitoring to be completed next month	Compliant	Not Applicable
Water Quality	Post Rainfall	Moderate to High	Yes – one monitoring event (7 locations) undertaken 16 May 2023	Compliant	Not Applicable
Water Quality	Dewatering	Moderate to High	Not triggered No dewatering to stormwater	Compliant	Not Applicable

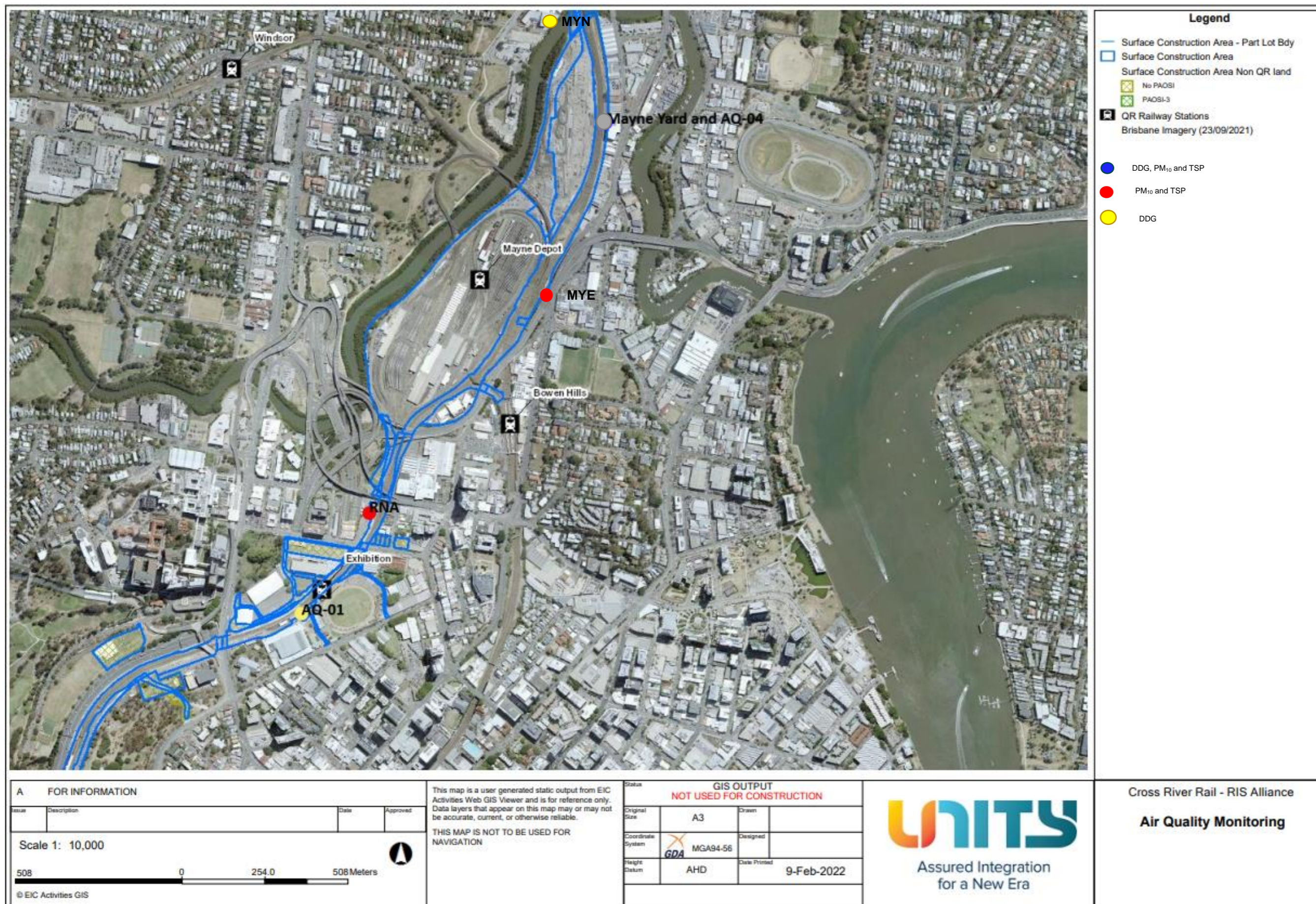
Attachment 1 Imposed Conditions Non-Compliance Event Report (if required)

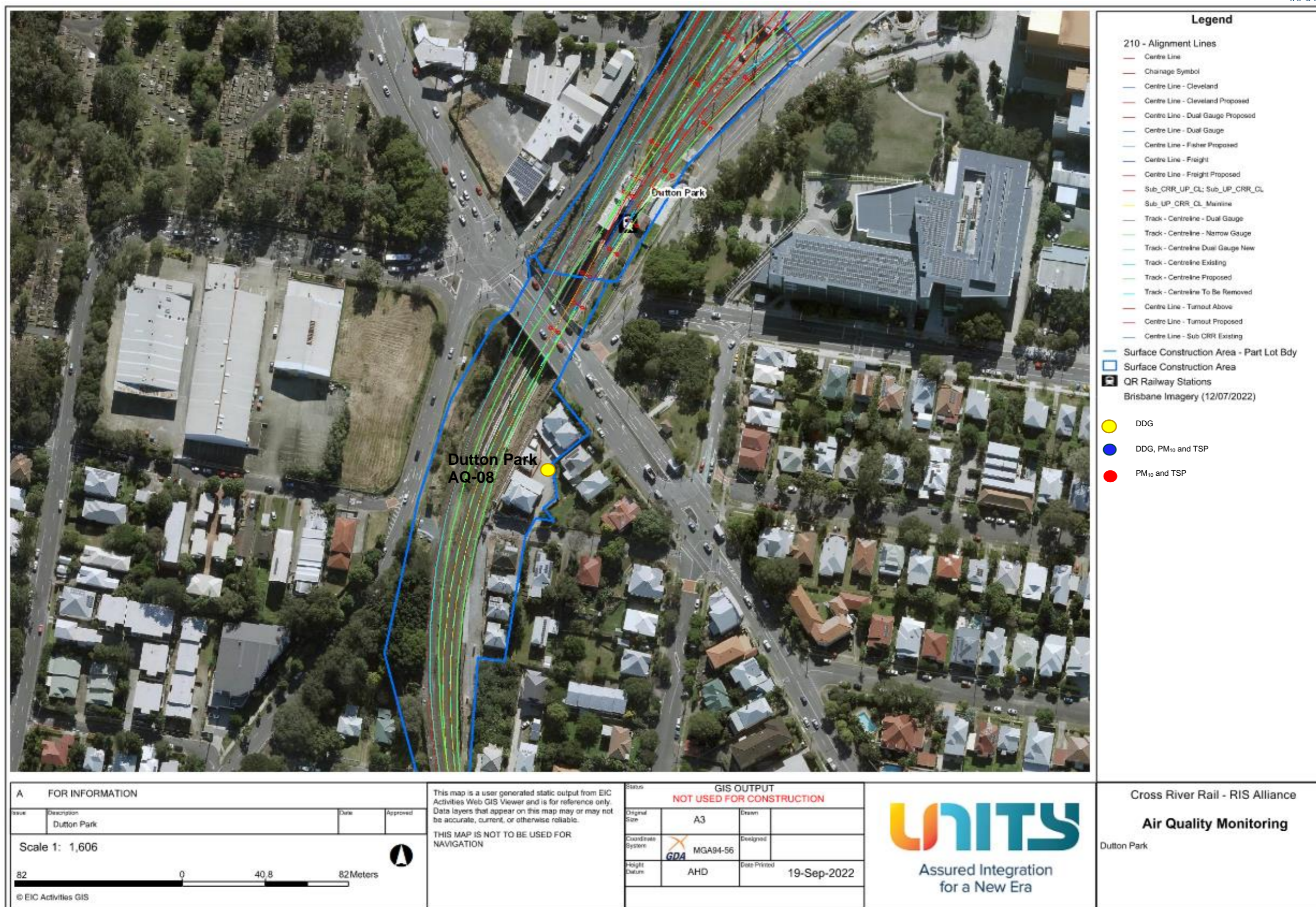
Attachment 2 Monitoring Locations – Noise and Vibration

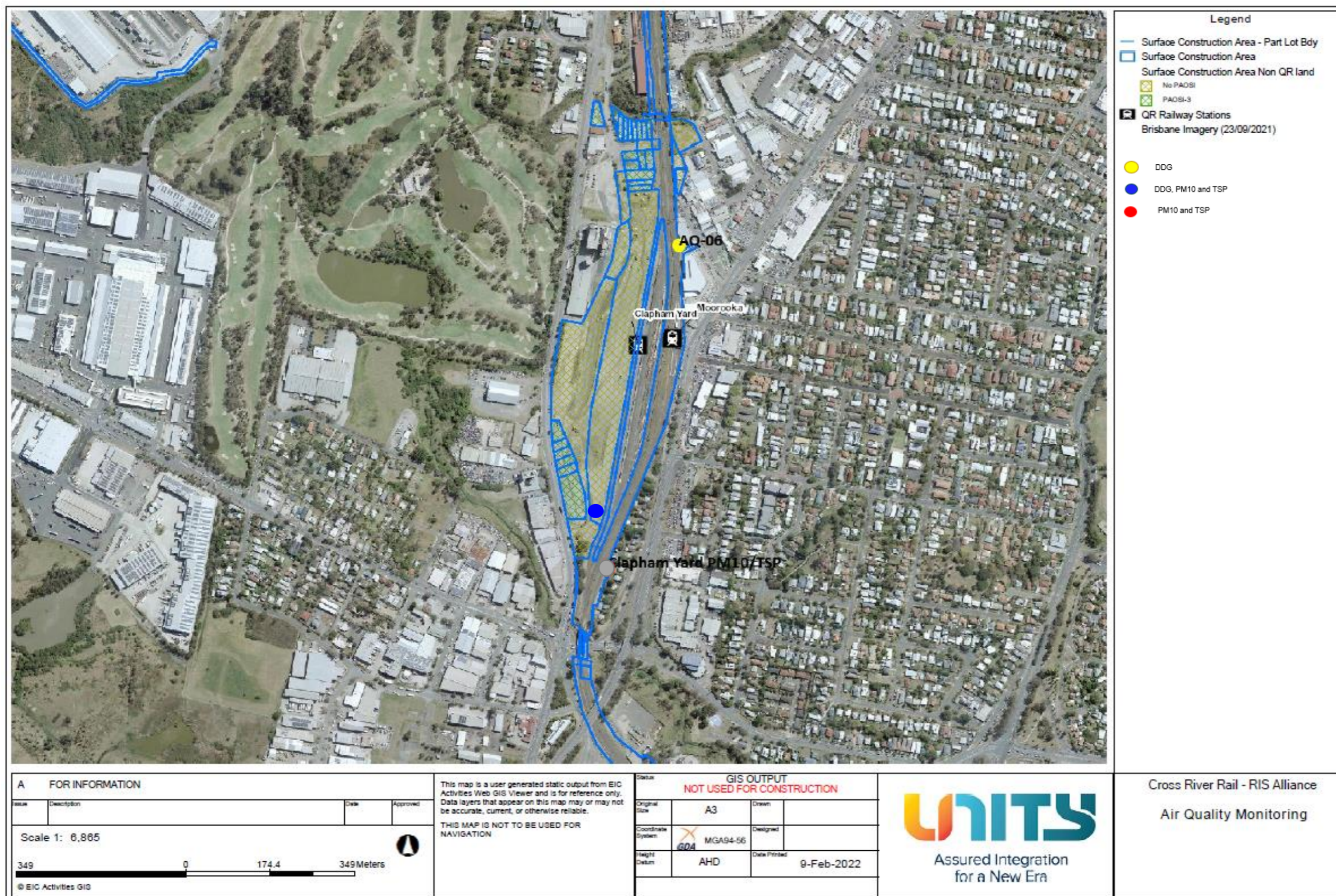


Figure 6 RNA May 2023 Vibration Monitoring

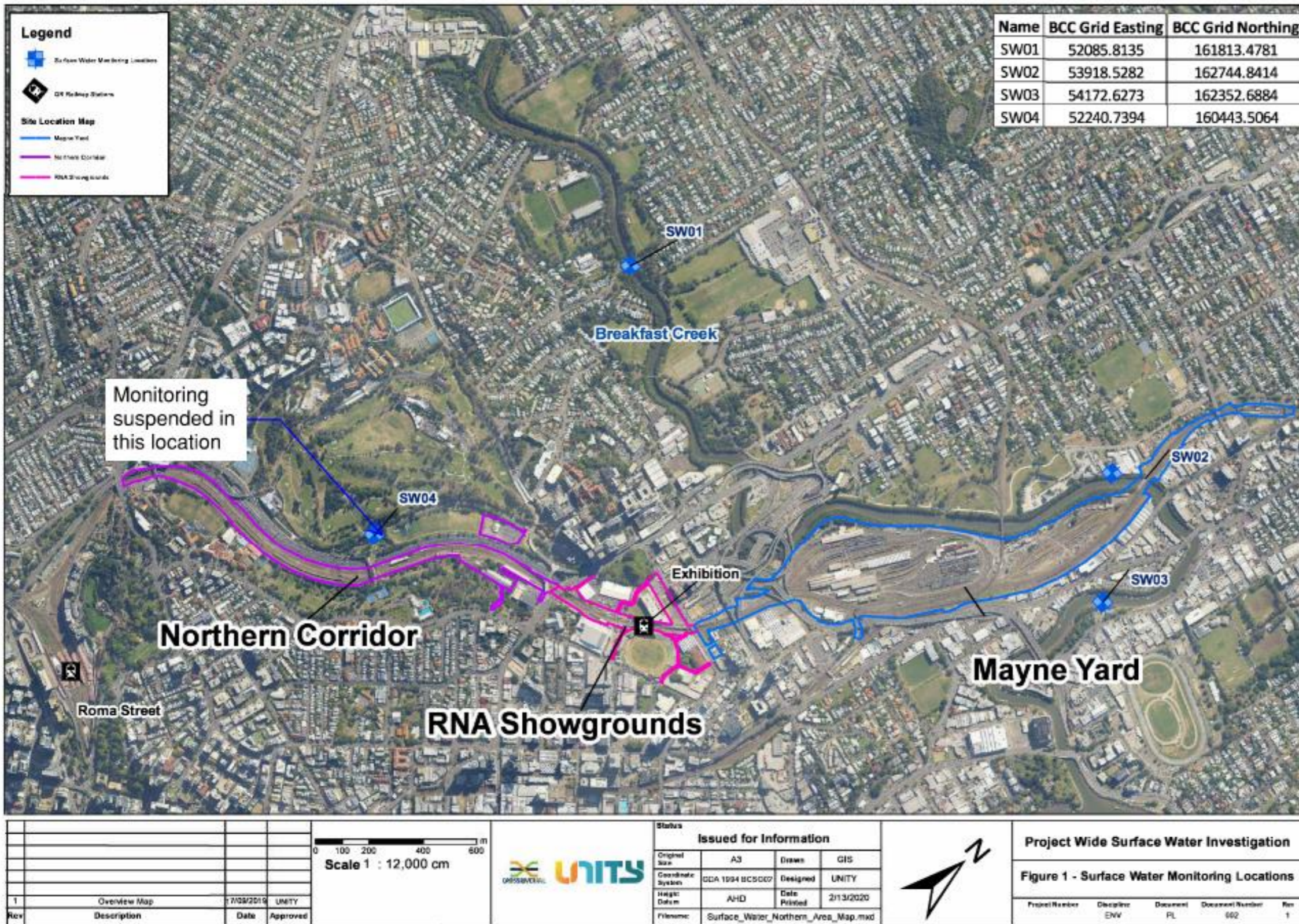
Attachment 3 Monitoring Locations – Air Quality

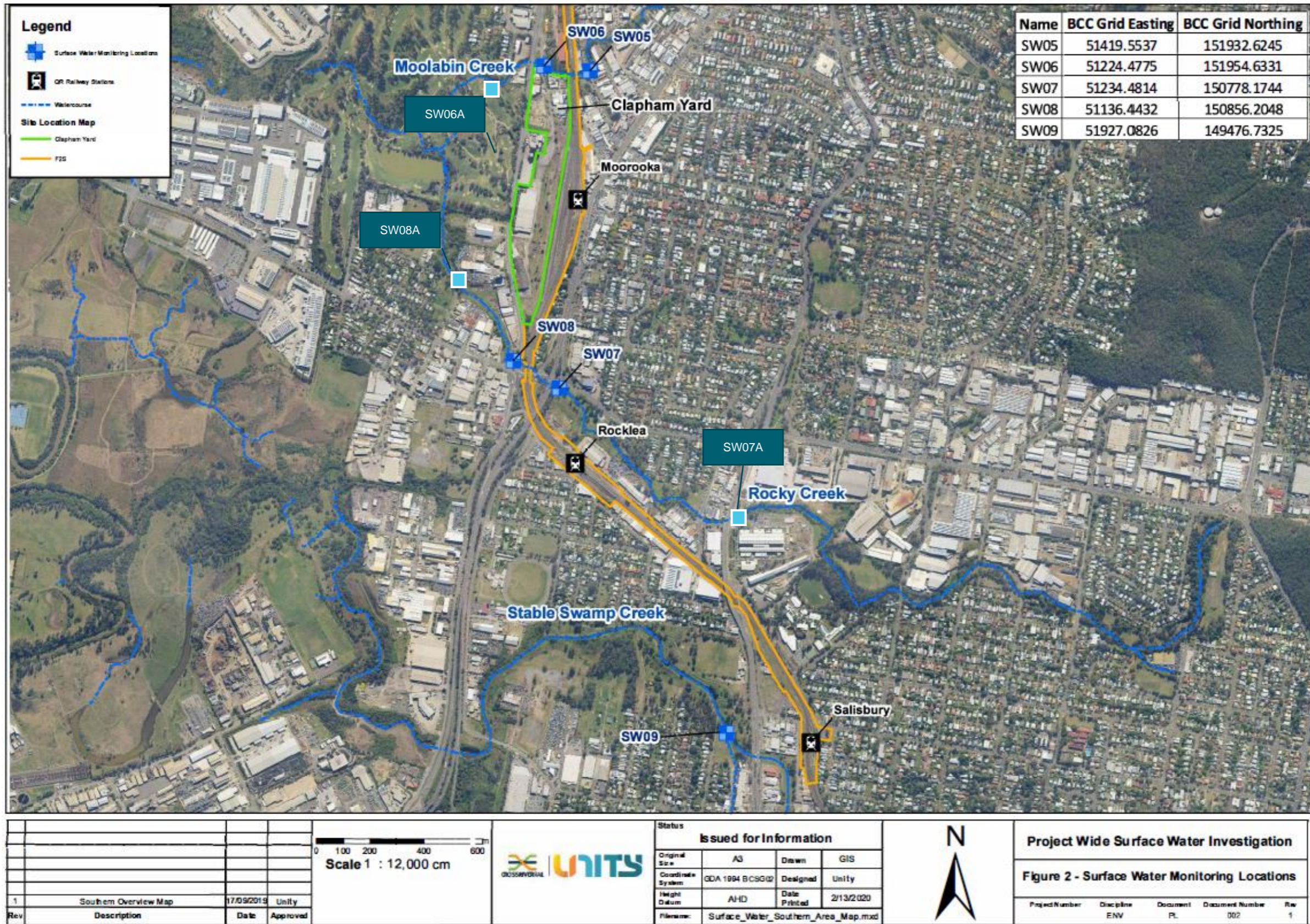






Attachment 4 Monitoring Locations – Surface Water





Appendix B TSD Monthly Report

COORDINATOR-GENERAL'S MONTHLY REPORT: MAY 2023

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 one (1) occasion during May 2023. Noise monitoring was conducted on eight (8) occasions during May 2023. Each noise and vibration monitoring event that was undertaken 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 May 2023. Air quality monitoring confirmed works adhered to project requirements.

Water quality monitoring was conducted before the release of water from the site on twenty-one (21) occasions. Each monitoring event confirmed project requirements were adhered to. Two (2) rounds of surface water quality monitoring were conducted; the 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 11).
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 <i>Queensland Acid Sulfate Soil Technical Manual</i> .	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.
22.	Flood Water – Temporary emission to allow the release of Flood Waters to high flow receiving waters.	Yes	CBGU project works have been conducted in accordance with the provisions available to manage floodwaters.

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's Change Reports acknowledges instances that exist that these goals may not be achieved.

Vibration monitoring was conducted on one (1) occasion during May 2023. 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	Average Vibration level (mm/s)	Max Vibration Level (mm/s)	Vibration Goal (mm/s)	Receiver / Goal Type	Adhered to Project Requirements (Yes / No)
1.	18/05/2023	14:46	24/05/2023	Roma Street Precinct	0.15	0.74	2	Heritage	Yes

3.2 Noise

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

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

Noise monitoring was conducted on eight (8) occasions during May 2023. 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	Noise Goal LAeq ^[2]	Noise level LAeq	Adhered to Project Requirements (Yes / No)
1.	2/05/2023	11:38:00 AM	Railway Terrace (Southern Portal)	Model Verification	External	Utilities works	Construction	57	62.2	47	58.2	Yes
2.	5/05/2023	10:55:00 AM	Vulture Street (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	External	Demolition works	Traffic	62	70.5	52	67.3	Yes
3.	8/05/2023	7:53:00 PM	Vulture Street (Woolloongabba Precinct)	Construction Monitoring at Sensitive Places	External	Earth works	Traffic	57	73.9	47	70.6	Yes
4.	9/05/2023	2:17:00 AM	Roma Street (Roma Street Precinct)	Model Verification	External	Demolition works	Traffic	54	63.8	47	63.3	Yes
5.	9/05/2023	12:44:00 PM	Roma Street (Roma Street Precinct)	Model Verification	External	Demolition works	Traffic	67	74.7	57	72.2	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	Noise Goal LAeq ^[2]	Noise level LAeq	Adhered to Project Requirements (Yes / No)
6.	24/05/2023	2:25:00 PM	Albert Street (Albert Street Precinct)	Model Verification	External	Concrete works	Construction	72	69.6	62	67.1	Yes
7.	26/05/2023	12:30:00 PM	Mary Street (Albert Street Precinct)	Model Verification	External	Oversize delivery	Traffic	72	71.5	62	68.9	Yes
8.	29/05/2023	9:06:00 AM	Albert Street (Albert Street Precinct)	Model Verification	External	Concrete works	Construction	72	70.7	62	68.9	Yes

- [1] Intermittent noise goal (LA10)

- [2] Continuous noise goal (LAeq)

- [3] Condition 11(c) implemented

- Note: 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.

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 that exist that these goals may not be achieved. Dust deposition monitoring was performed in May 2023. The dust deposition gauges results for the reporting period are detailed below, and all monitoring data adhered to project requirements.

Table 4.2.1: Air Quality Monitoring – April Deposited Dust Data

Location	Project Wide Air Quality Goals ^[1]			Monitoring results (mg/m ² /day)	Comments
	Criterion	Air Quality Indicator	Goal (mg/m ² /day)		
Boggo Road Precinct (North)	Nuisance	Deposited dust	120	24.24	Air quality monitoring was performed during the reporting period. All results adhered to project requirements.
Boggo Road Precinct (South)				12.12	
Southern Portal (South)				12.12	
Southern Portal (East)				6.06	

Note: At the completion of the April report the above results had not been received from the laboratory.

Table 5.2.2: Air Quality Monitoring – May Deposited Dust Data

Location	Project Wide Air Quality Goals ^[1]			Monitoring results (mg/m ² /day)	Comments
	Criterion	Air Quality Indicator	Goal (mg/m ² /day)		
Northern Portal	Nuisance	Deposited dust	120	34.48	Air quality monitoring was performed during the reporting period. All results adhered to project requirements.
Roma Street Precinct				27.59	
Albert Street Precinct (North)				20.00	
Albert Street Precinct (South)				40.00	
Woolloongabba Precinct (North)				16.67	
Woolloongabba Precinct (South)				30.00	
Boggo Road Precinct (North)				29.63	
Boggo Road Precinct (South)				44.44	
Southern Portal (South)				70.37	
Southern Portal (East)				51.85	

3.3.2 Particulates and Ambient Air Quality Results

Total Suspended Particles (TSP) and particulate matter less than 10µm (PM10) monitoring were conducted during May 2023.

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 May 2023. Three (3) Government air quality stations near the Construction Precincts are also utilised.

Table 6: Targeted Air Quality Monitoring – Total Suspended Particles and PM10 Data

Date	TSP	PM10	Woolloongabba		Albert		Boggo Road		Northern Portal	
	Project Goal ^[1]	Project Goal	TSP	PM 10	TSP	PM 10	TSP	PM 10	TSP	PM 10
	(µg/m ³ /24 hr)									
01-May-23	80	50	– [2]	– [2]	4.92	3.67	2.47	2.45	3.08	3.04
02-May-23	80	50	– [2]	– [2]	16.56	10.96	2.47	2.45	4.91	4.87
03-May-23	80	50	– [2]	– [2]	15.19	10.58	3.05	3.04	6.70	6.67
04-May-23	80	50	15.24	14.93	27.58	20.27	– [3]	– [3]	29.00	28.95
05-May-23	80	50	17.26	17.04	23.85	17.22	– [3]	– [3]	15.64	15.61
06-May-23	80	50	19.02	18.88	11.46	10.03	9.81	9.79	23.31	23.28
07-May-23	80	50	15.94	15.72	8.98	7.50	11.86	11.83	14.84	14.80
08-May-23	80	50	5.39	4.94	9.73	6.37	2.76	2.75	3.96	3.85
09-May-23	80	50	13.40	13.03	19.89	14.00	– [3]	– [3]	10.69	10.63
10-May-23	80	50	16.08	15.81	21.37	16.16	9.25	9.19	17.17	17.15
11-May-23	80	50	10.75	10.60	19.51	14.74	8.07	7.94	12.87	12.85
12-May-23	80	50	9.22	9.10	19.37	14.44	– [3]	– [3]	9.38	9.37
13-May-23	80	50	10.30	10.11	12.02	9.85	4.92	4.88	10.57	10.56
14-May-23	80	50	8.05	7.95	6.68	6.07	4.83	4.82	9.73	9.71
15-May-23	80	50	7.21	7.10	11.14	9.10	– [3]	– [3]	8.00	7.99
16-May-23	80	50	3.81	3.73	7.34	5.63	– [3]	– [3]	4.37	4.37

Date	TSP	PM10	Woolloongabba		Albert		Boggo Road		Northern Portal	
	Project Goal ^[1]	Project Goal	TSP	PM 10	TSP	PM 10	TSP	PM 10	TSP	PM 10
	(µg/m ³ /24 hr)									
17-May-23	80	50	9.33	9.16	15.23	11.40	8.06	8.03	8.17	8.14
18-May-23	80	50	6.26	6.12	13.15	9.40	4.21	4.19	6.16	6.15
19-May-23	80	50	15.90	15.72	17.49	13.10	- [3]	- [3]	19.14	19.12
20-May-23	80	50	18.87	18.38	15.20	11.63	7.78	7.76	19.21	19.18
21-May-23	80	50	6.83	6.56	7.72	5.63	4.80	4.76	5.23	5.18
22-May-23	80	50	11.52	11.25	19.98	14.09	4.02	4.02	9.31	9.25
23-May-23	80	50	19.10	18.75	23.49	17.51	12.23	12.20	19.36	19.32
24-May-23	80	50	26.57	26.27	14.18	12.31	20.48	20.46	22.77	22.74
25-May-23	80	50	20.89	20.63	14.71	11.59	- [3]	- [3]	22.73	22.70
26-May-23	80	50	16.07	15.51	26.04	17.34	- [3]	- [3]	15.41	15.29
27-May-23	80	50	9.71	9.53	13.64	10.27	13.72	13.71	7.72	7.69
28-May-23	80	50	46.75	46.55	26.50	24.80	37.76	37.75	132.69 ^[4]	132.64 ^[4]
29-May-23	80	50	38.60	38.30	33.02	26.01	- [3]	- [3]	69.39	69.34 ^[4]
30-May-23	80	50	65.21	64.93 ^[4]	47.07	40.84	- [3]	- [3]	129.67 ^[4]	129.63 ^[4]
31-May-23	80	50	85.97 ^[4]	85.65 ^[4]	54.77	48.81	54.40	54.39 ^[4]	149.81 ^[4]	149.76 ^[4]

- [1] Project works must aim to achieve construction air quality goals. The Coordinator-General Change Report – Whole of Project Refinements 2019 acknowledges instances that exist that these goals may not be achieved.
- [2] The Woolloongabba air quality unit experienced technical difficulties intermittently during May. As soon as practicable, the unit was inspected, and the problem was resolved. A nearby (South Brisbane) DES Air Quality Station demonstrated compliant air quality during this outage period. These results are provided below. Low levels were also consistently monitored throughout the month when the unit was operating.
- [3] The Boggo Road air quality unit experienced technical difficulties intermittently during May. As soon as practicable, the unit was inspected, and the problem was resolved. A nearby (Woolloongabba) DES Air Quality Station demonstrated compliant air quality during this outage period. These results are provided below. Low levels were also consistently monitored throughout the month when the unit was operating.
- [4] Brisbane experienced elevated smoke and particulate concentration during 28th -31st May 2023, due to regional scale events(controlled burning), which likely had a significant impact on reported particulate concentrations.

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

- Brisbane CBD: PM10 daily Maximum average: **240.6 µg/m3/24 hr** (<https://apps.des.qld.gov.au/air-quality/chart/?station=cbd¶meter=18&date=1/5/2023&timeframe=month>)
- South Brisbane: PM10 daily Maximum average: **210.4 µg/m3/24 hr** (<https://apps.des.qld.gov.au/air-quality/chart/?station=sbr¶meter=18&date=1/5/2023&timeframe=month>)
- Woolloongabba: PM10 daily Maximum average: **155.6 µg/m3/24 hr** (<https://apps.des.qld.gov.au/air-quality/chart/?station=woo¶meter=18&date=1/5/2023&timeframe=month>).

Brisbane experienced elevated smoke and particulate concentration during 28th -31st May 2023, due to regional scale events (controlled burning), which likely had a significant impact on reported particulate concentrations.

The consistency of the PM₁₀ goal exceedances (order of magnitude, day, duration) of the DES air quality stations confirms that the exceedances of the PM₁₀ air quality goal over a 24hours averaging period are not relating to CBGU JV's works. Ambient air quality measurements can be influenced by external events outside of CBGU JV's controls (e.g. control burning, road traffic, dust storms, etc).

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

Particle PM₁₀ at Brisbane CBD, 1-31 May 2023 [about Particle PM₁₀](#)

[Brisbane CBD station overview](#)

The guideline for Particle PM₁₀ is 100µg/m³ (1hr avg) and 50µg/m³ (24hr avg).



Figure 1: Brisbane CBD – DES Station - PM10 graph for May 2023 (reproduction from the DES website).

Particle PM₁₀ at South Brisbane, 1–31 May 2023 [about Particle PM₁₀](#)

[South Brisbane station overview](#)

The guideline for Particle PM₁₀ is 100µg/m³ (1hr avg) and 50µg/m³ (24hr avg).

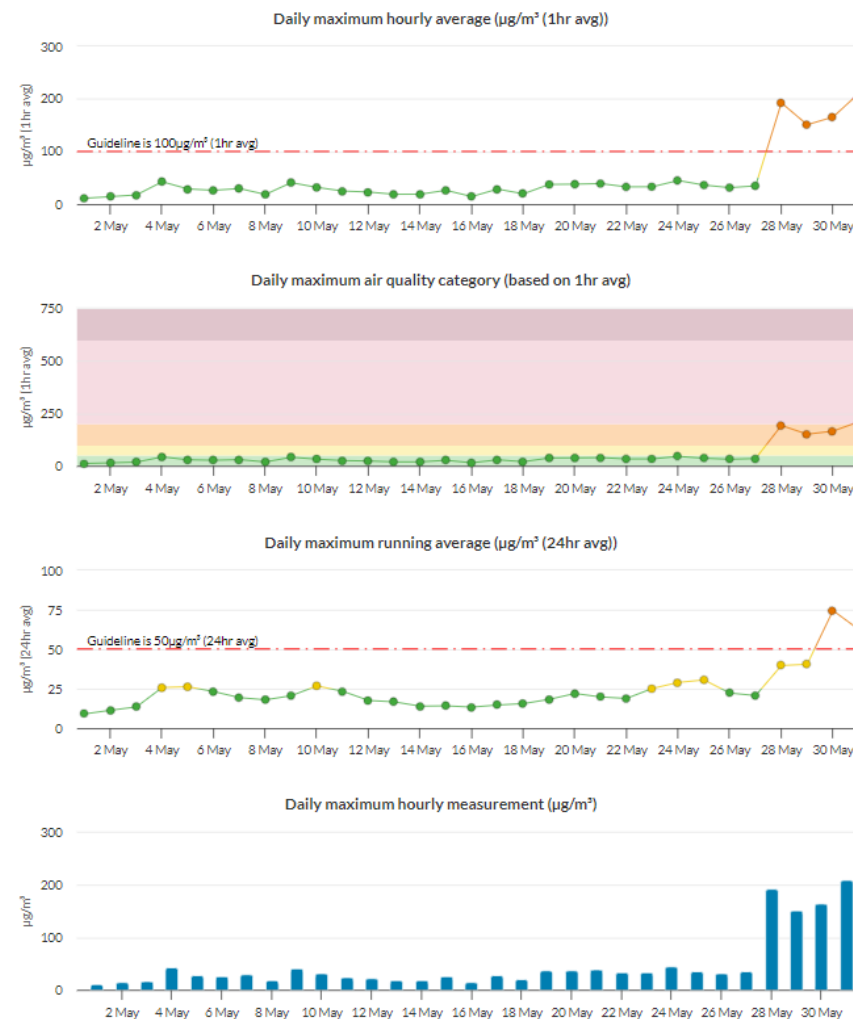


Figure 2: South Brisbane – DES Station - PM10 graph for May 2023 (reproduction from the DES website).

Particle PM₁₀ at Woolloongabba, 1–31 May 2023 [about Particle PM₁₀](#)

[Woolloongabba station overview](#)

The guideline for Particle PM₁₀ is 100µg/m³ (1hr avg) and 50µg/m³ (24hr avg).

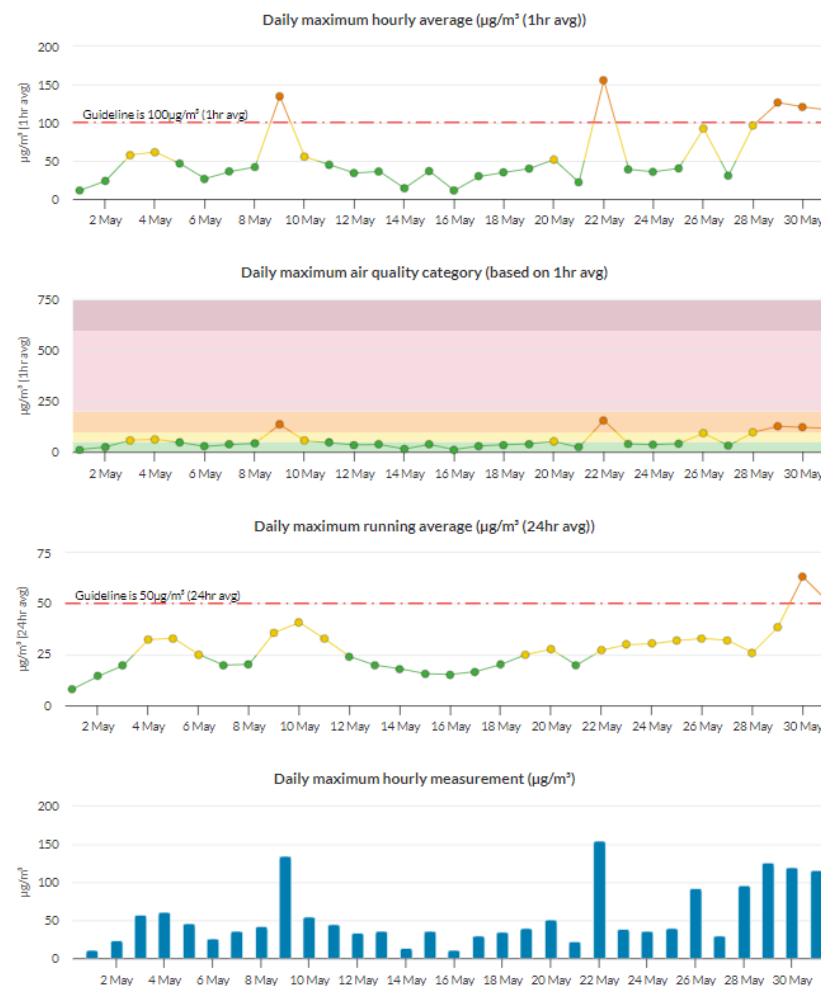


Figure 3: Woolloongabba – DES Station - PM10 graph for May 2023 (reproduction from the DES website).

3.4 Water Quality – Discharge

CBGU undertook four (4) water quality monitoring events before the release (groundwater and surface water) from the site.

3.4.1 Groundwater Discharge

Water quality monitoring data is provided in the table below.

Table 7: 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) ^[4]	Total phosphorus (µg/L)	Filterable Reactive phosphorus (µg/L) ^[3]	Chlorophyll a (µg/L)	Dissolved oxygen (%) ^[2]	
Roma Street	11/05/2023	8.19	<5	0.64	70	610	700	1400	<10	<10	<1	104.09	Yes
Albert Street	12/05/2023	7.30	<5	0.70	260	220	400	900	40	<10	<1	101.67	Yes
Boggo Road	12/05/2023	8.08	<5	3.47	20	770	400	1200	10	<10	<1	100.95	Yes
Woolloongabba	12/05/2023	7.79	<5	0.66	120	550	500	1200	<10	<10	<1	92.30	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] All results adhere to Project requirements in that site practices are designed to aim to achieve the water quality objectives. The dissolved oxygen samples were acquired before discharge from the site. Pumping of the water will have inadvertently aerated the water, thus influencing the dissolved oxygen level.
- [3] All results adhere to Project requirements in that site practices aim to achieve the water quality objectives. These samples identified results generally consistent with pre-construction conditions, and no external influences were introduced by construction activity.
- [4] Total nitrogen levels adhered to project requirements in that site practices are designed to aim to achieve the water quality objectives. The results are mostly below that of the receiving environment. They are also considered abnormal compared to results from previous months, and are influenced by external factors (e.g., high rainfall events, overloaded sewage systems, fertilising natural areas, etc.) rather than related to construction activities.
- 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

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

Table 8: 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.	Northern Portal	2/05/2023	8.09	4.23	Yes
2.	Northern Portal	3/05/2023	7.92	16.17	Yes
3.	Northern Portal	4/05/2023	7.99	17.21	Yes
4.	Northern Portal	5/05/2023	8.11	3.69	Yes
5.	Northern Portal	6/05/2023	8.10	4.01	Yes
6.	Northern Portal	8/05/2023	8.16	5.35	Yes
7.	Northern Portal	9/05/2023	8.09	5.40	Yes
8.	Northern Portal	10/05/2023	8.03	6.11	Yes
9.	Northern Portal	11/05/2023	8.00	6.37	Yes
10.	Northern Portal	12/05/2023	8.02	6.39	Yes
11.	Northern Portal	13/05/2023	8.01	7.73	Yes
12.	Northern Portal	15/05/2023	7.99	6.81	Yes
13.	Northern Portal	16/05/2023	8.10	28.50	Yes
14.	Northern Portal	17/05/2023	8.17	25.30	Yes
15.	Northern Portal	18/05/2023	8.23	3.21	Yes

16.	Northern Portal	19/05/2023	8.17	3.34	Yes
17.	Northern Portal	22/05/2023	8.27	0.47	Yes
18.	Northern Portal	23/05/2023	8.20	1.11	Yes
19.	Northern Portal	24/05/2023	8.23	1.08	Yes
20.	Northern Portal	25/05/2023	8.19	1.21	Yes
21.	Northern Portal	26/05/2023	8.22	2.04	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 May 2023, CBGU JV undertook one (1) round of surface water sampling at five (5) site 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 also provided within section 3.4 above.

Table 9: Offsite Upstream & Downstream Water Quality Data

Location	Upstream / Downstream	Date	Purpose of Monitoring	Turbidity (NTU)	EC (µS/cm)	Dissolved oxygen (%)	pH
Albert Street	Upstream	16/05/2023	Monthly/Post rain	34.20	35600	85.93	7.91
Albert Street	Downstream	16/05/2023	Monthly/Post rain	45.60	36400	82.3	7.97
Woolloongabba	Upstream	17/05/2023	Monthly/Post rain	13.52	35800	91.60	7.88
Woolloongabba	Downstream	17/05/2023	Monthly/Post rain	26.80	28900	91.42	8.02
Boggo Road ^[1]	Downstream	17/05/2023	Monthly/Post rain	149.00	799	94.95	8.02
Northern Portal	Upstream	17/05/2023	Monthly/Post rain	7.65	537	76.20	7.61
Northern Portal	Downstream	17/05/2023	Monthly/Post rain	34.50	495	64.13	7.85
Roma Street	Upstream	17/05/2023	Monthly/Post rain	9.74	43900	77.12	7.74
Roma Street	Downstream	17/05/2023	Monthly/Post rain	7.20	41000	86.27	7.72

[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 10: Non-Compliance Events this Month

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					

5 Complaints

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

During May 2023, seven (7) complaints relating to the Project were received, as detailed in

Table 11 below.

Table 11: Summary of Complaints

No.	Date	Location	Description of Issue	Responses	Status of Event
1.	6/05/2023	Gibbon Street (Woolloongabba Precinct)	Traffic Management	A stakeholder contacted the Project regarding the Gibbon Street closure. CBGU investigated and provided the stakeholder with an overview of the works occurring and their duration. CBGU also informed the stakeholder that changes have been approved by the local authority prior to implementation.	Closed
2.	12/05/2023	Gibbon Street (Woolloongabba Precinct)	Traffic Management	A stakeholder contacted the Project regarding the Gibbon Street closure. CBGU investigated and provided the stakeholder with an overview of the works occurring and their duration. CBGU also informed the stakeholder that changes have been approved by the local authority prior to implementation.	Closed
3.	19/05/2023	Annerley Road (Boggo Road Precinct)	Traffic Management & Workforce Behaviour	A stakeholder contacted the Project regarding workforce parking and workforce behaviour. CBGU investigated and informed the workforce, via toolbox talk, about parking requirements and employee expectations.	Closed
4.	19/05/2023	Gibbon Street (Woolloongabba Precinct)	Traffic Management	A stakeholder contacted the Project regarding the Gibbon Street closure. CBGU investigated and provided the stakeholder with an overview of the works occurring and their duration. CBGU also informed the stakeholder that changes have been approved by the local authority prior to implementation.	Closed
5.	22/05/2023	Annerley Road (Boggo Road Precinct)	Traffic Management	A stakeholder contacted the Project regarding workforce parking. CBGU investigated and informed the workforce, via toolbox talk, about parking requirements.	Closed

6.	23/05/2023	Annerley Road (Boggo Road Precinct)	Traffic Management	<p>A stakeholder contacted the Project regarding parking.</p> <p>CBGU investigated and informed the workforce, via toolbox talk, about parking expectations.</p>	Closed
7.	25/05/2023	Roma Street (Roma Street Precinct)	Noise	<p>A stakeholder contacted the Project regarding noise generated from the Roma Street Worksite during extended work hours. CBGU provided the stakeholder with an overview of the works occurring and their duration. CBGU also outlined the mitigation measures used to alleviate potential impacts and ensure compliance.</p> <p>CBGU reviewed the circumstances and monitoring confirmed works adhered to the Project's noise requirements, and the works undertaken were consistent with the community notification.</p>	Closed