



# Cross River Rail Project

Monthly Environmental Report

November 2023

# Table of Contents

Monthly Environmental Report .....	1
<b>Executive Summary .....</b>	<b>3</b>
Non-Compliance Events .....	7
<b>Definitions .....</b>	<b>8</b>
<b>1. Introduction .....</b>	<b>9</b>
1.1. Background .....	9
1.2. Project Delivery .....	9
1.3. Reporting Framework .....	11
1.4. Monthly Environment Report Endorsement .....	11
<b>2. Compliance Review .....</b>	<b>11</b>
2.1. Relevant Project Works .....	11
2.2. Key Environmental Elements .....	13
<b>2.2.1. Noise .....</b>	<b>13</b>
<b>2.2.2. Vibration .....</b>	<b>14</b>
<b>2.2.3. Air Quality .....</b>	<b>14</b>
<b>2.2.4. Water Quality .....</b>	<b>16</b>
<b>2.2.5. Erosion and Sediment Control .....</b>	<b>18</b>
2.3. Complaints Management .....	19
2.4. New Upcoming Project Works .....	20
2.5. Non-Compliance Events .....	22
<b>Appendix A RIS Monthly Report .....</b>	<b>23</b>
<b>Appendix B TSD Monthly Report .....</b>	<b>24</b>

# Executive Summary

This Monthly Environmental Report (MER) has been produced for Project Works undertaken on site for November 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 CBUG 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.	<b>General conditions</b> – 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.	<b>Outline Environmental Management Plan</b> – timely submission to the Coordinator-General including required sub-plans	Yes	OEMP dated June 2020 is effective for the reporting period.
3.	<b>Design</b> – achievement of the Environmental Design Requirements	NA	Ongoing progress with design packages.
4.	<b>Construction Environmental Management Plan</b> – 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.	<b>Compliance and Incident management</b> – Non-compliance events, notifications and reporting.	Yes	No Non-Compliance Event (NCE) were reported in November 2023.

Imposed Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
6.	<b>Reporting</b> – Monthly and Annual reporting.	Yes	This MER, including RIS and TSD Monthly Reports, has been submitted in accordance with the conditioned requirements.  Refer to <b>Appendix A</b> and <b>Appendix B</b> .
7.	<b>Environmental Monitor (EM)</b> – engaged and functions resumed.	Yes	Ongoing weekly site inspections and document reviews continue to take place.
8.	<b>Community Relations Monitor (CRM)</b> – engaged and functions resumed	Yes	Ongoing.
9.	<b>Community Engagement Plan</b> – developed and endorsed by Environmental Monitor.	Yes	CEMPs endorsed with Community Engagement Plan.
10.	<b>Hours of work</b> – 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.	<b>Noise</b> – 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 for the reporting period  TSD – Noise monitoring was undertaken to validate predicted noise modelling and monitoring at sensitive places. Noise monitoring confirmed project requirements were met. Refer to <b>Appendix B</b> (Table 3 and Section 3.2).
	<b>Vibration</b> – 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 was undertaken to validate predicted vibration modelling. The results met the requirements of the endorsed CEMP. Refer to <b>Appendix A</b> (Table 4 and section 3.1.7)  TSD – Vibration monitoring was not triggered



Imposed Condition	Requirement Summary	Compliance Met (Yes/No/NA)	Comment
12.	<b>Property damage</b> – 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 November 2023.</p>
13.	<b>Air quality</b> – Works must aim to achieve air quality goals for human health and nuisance.	Yes	<p>Air quality monitoring met Project air quality requirements.</p> <p>RIS – Exceedance recorded at Mayne Yard North for dust deposition. Contractor confirmed they continued to meet the requirements under Condition 13 and the OEMP. Refer to Section 2.2.3 below and <b>Appendix A</b> (Tables 5, 6, and 7 and Section 3.1.11, plus Figures 1, 2, 3 and 4).</p> <p>TSD – Data gaps experienced for dust deposition gauges at Woolloongabba and Boggo Road. Contractor confirmed they continued to meet the requirements under Condition 13 and the OEMP. Refer to Section 2.2.3 below and <b>Appendix B</b> (Table 4 and Section 3.3).</p>
14.	<b>Traffic and transport</b> – 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><b>Water quality</b> – 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 November 2023.</p> <p>Post rainfall monitoring was triggered as per Condition 15(b). The contractor confirmed the project outcomes were met.</p> <p>TSD – Active discharge of groundwater</p>

			<p>occurred from Roma Street. Monitoring results of groundwater quality prior to discharge is consistent with the pre-construction water quality levels. Refer to <b>Appendix B</b> (Table 6) for groundwater monitoring results.</p> <p>Surface water discharges occurred at the Northern Portal. The monitoring results demonstrated surface water discharges met project water quality discharge criteria. Refer to <b>Appendix B</b> (Table 7) for surface water monitoring results.</p> <p>Post rainfall monitoring was triggered on two occasions as per Condition 12(b). The TSD contractor confirmed the project outcomes were met.</p> <p>Routine surface water monitoring occurred across TSD project sites. Refer to Appendix B (Section 3.5 and Table 8) for further details.</p>
16.	<p><b>Water resources</b> – 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><b>Surface water</b> – Must be designed to avoid inundation from stormwater due to a 2-year (6hr) ARI rainfall event and flood waters due to a 5-year ARI rainfall event and constructed to avoid afflux or cause the redirection of uncontrolled surface water flows, including stormwater flows, outside of worksites.</p>	Yes	<p>Contractors continue to consider this condition in their site planning and design.</p>
18.	<p><b>Erosion and sediment control</b> – Provisions for erosion and sediment control must be consistent with the Guidelines for Best Practice Erosion and Sediment Control (International Erosion Control Association, 2008) and the Department of Transport and Main Roads' Technical Standard MRTS52.</p>	Yes	<p>Site specific ESC plans for all active work sites have been reviewed by the EM and implemented on site.</p>

19.	<b>Acid sulfate soils</b> – 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.	<b>Landscape and open space</b> – 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 July 2021. Consideration has been taken to minimise loss of trees and the area of park impacted during these temporary works.
21.	<b>Worksite rehabilitation</b> – worksites rehabilitated as soon as practicable upon completion of works or commissioning, and in consultation with Brisbane City Council.	N/A	N/A

## Non-Compliance Events

There were no NCE raised in November 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.

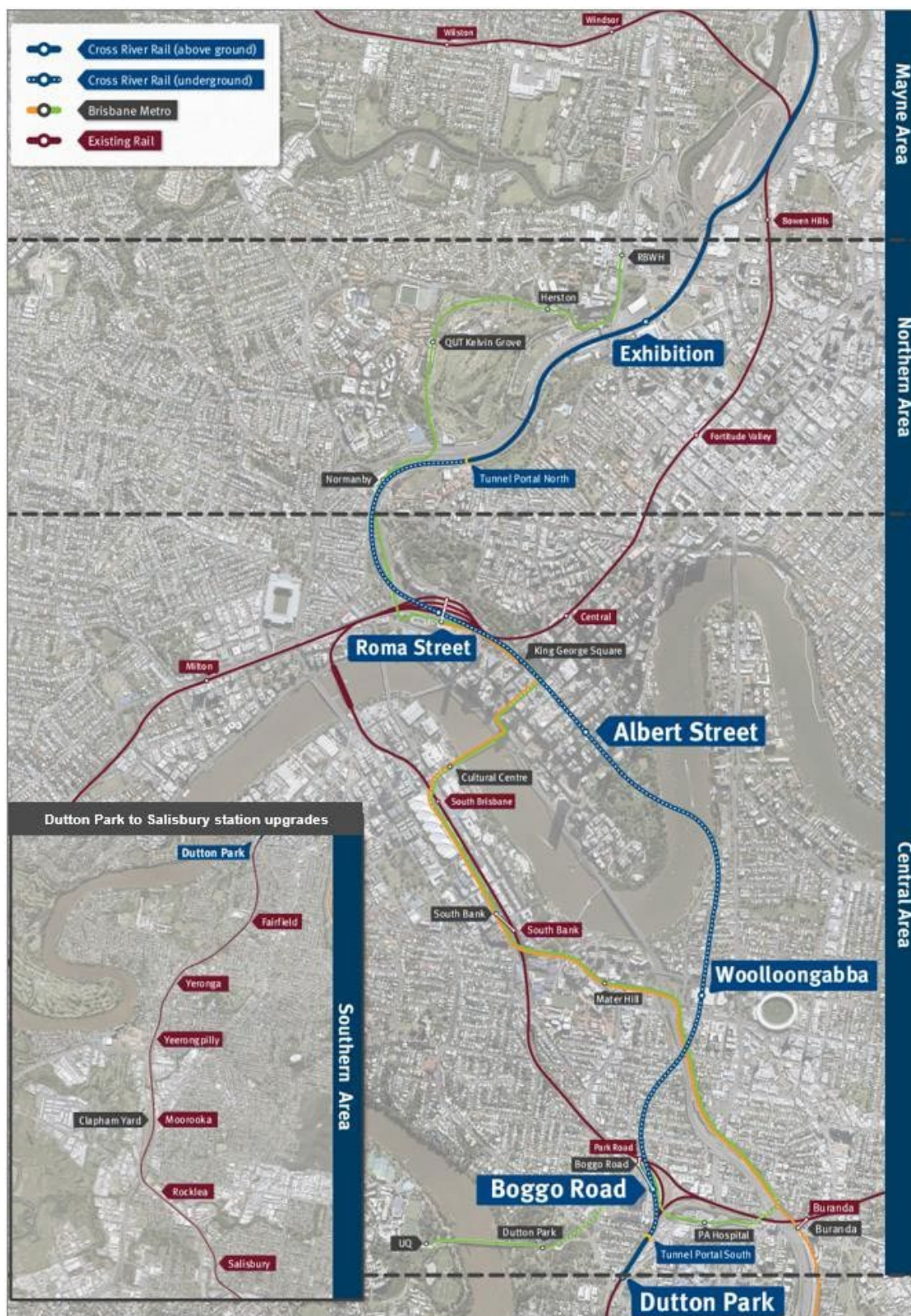
The two main delivery packages which require reporting under the Coordinator-General's imposed conditions are:

- 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 November 2023:

Area	Project Works
Mayne Area	<b>Mayne Yard North –</b> <ul style="list-style-type: none"><li>• Completions documentation being compiled for SP01 (Northern Stabling Yard); and</li><li>• Final Rail Systems Close out progressing.</li></ul> <b>Mayne Yard East / West –</b> <ul style="list-style-type: none"><li>• Balloon Loop decommissioning and Shunt Rd commissioning on schedule. Greenfield civil and track nearly complete;</li><li>• Access Change on schedule. Lighting, road furniture and TP&amp;C commenced;</li><li>• Shunter Shed commissioning on schedule. Building nearing completion, focus on service install and CER;</li><li>• Mayne East reconfiguration on schedule with drainage, CSR, hydraulics and bulk earthworks ongoing as planned; and</li><li>• Submain installation, termination and testing to Shunter's Shed.</li></ul>
Northern Area	<b>RNA/ Northern Corridor –</b> <ul style="list-style-type: none"><li>• FRP BR44 nearing completed;</li><li>• Service installation progressing on schedule;</li><li>• Plaza area underground services; and</li><li>• Canopy roofing lifted in position.</li></ul> <b>Northern Portal –</b> <ul style="list-style-type: none"><li>• TSD pending surface works includes portal electrification screens, coms and drainage pit scope, removal of water treatment plant and office demob;</li><li>• Victoria Park ROS installation ongoing, Energex VPFS pre-commissioning;</li><li>• Traction Power cabling from VPFS to Roma St installed, cabling from VPFS to Roma St Joints and pit earthing and cable supports underway; and</li><li>• EXT22 completed successfully.</li></ul>
Central Area	<b>Roma Street –</b> <ul style="list-style-type: none"><li>• Main Station Building Entry roof slab complete, including vent structure, service installation progressing, pavilion slab progressing;</li><li>• M&amp;E Building HV transformers commissioning works, service lift operating and services installation and fit-out continues; and</li><li>• Track MC02 slab concrete complete an under track services and escalator installation commenced.</li></ul>

	<p><b>Albert Street –</b></p> <ul style="list-style-type: none"> <li>• Lot 1 – continuing B4 slab table forms install and ongoing internal wall pours;</li> <li>• Lot 2 – Completed CER B room handover to RIS, continued platform culvert installation and continued track level mass fill; and</li> <li>• Lot 3 – concrete structure concrete pours nearing completion and continuing slab steel fixing.</li> </ul> <p><b>Woolloongabba –</b></p> <ul style="list-style-type: none"> <li>• External wall pours continue to progress;</li> <li>• Last of the remaining culvert topping slabs between P16 and P17 in progress;</li> <li>• Lift shafts 1 and 2 installation commencing in the Atrium;</li> <li>• Framing for aluminium soffit ceilings in caverns has commenced; and</li> <li>• M&amp;E building services ongoing in South Cavern BOH and platform culverts; B6 platform electrical earthing is ongoing.</li> </ul> <p><b>Tunnel fit-out –</b></p> <ul style="list-style-type: none"> <li>• BR2G MC01 walkway install ongoing; and MC02 rail damper installation is ongoing;</li> <li>• G2A MC01 and MC02 raised emergency access and egress walkway installation is ongoing and LV cable pulling is ongoing;</li> <li>• A2R MC01 rising main pipe install ongoing and MC02 LV cable pull commenced;</li> <li>• R2NP MC01 and MC02 CCTV bracket install ongoing and fire cable pulling ongoing; and</li> <li>• Ongoing M&amp;E fit-out works in the cross passages.</li> </ul> <p><b>Boggo Road –</b></p> <ul style="list-style-type: none"> <li>• Concrete to insitu structure ongoing;</li> <li>• Reinforcement to insitu structure ongoing;</li> <li>• Mezzanine precast trusses - 230 of 230 installed;</li> <li>• Buttress plank – 29 of 34 installed;</li> <li>• Deck units install – 82 of 119 complete;</li> <li>• Super T's – 39 of 39 installed;</li> <li>• Goods Lift 2 commissioned and operational;</li> <li>• Commenced RIS room access handovers underway;</li> <li>• M&amp;E fit-out continuing in northern and southern Back of House; and</li> <li>• Platform screen door steel installation ongoing.</li> </ul> <p><b>Southern Portal –</b></p> <ul style="list-style-type: none"> <li>• Continue FRP works to Eastern and Western Approach Bridges substructures;</li> <li>• Relieving slab works in open trough area;</li> <li>• MC01 and MC02 in-situ ski jump FRP going;</li> <li>• Continued eastern approach bridge girder installation; and</li> <li>• Patching and defect works and repairs ongoing.</li> </ul>
<p><b>Southern Area</b></p>	<p><b>Southern / Dutton Park –</b></p> <ul style="list-style-type: none"> <li>• Progressed work on PL1, PL2, Kent St entry, and Noble St entry. Predominately structural foundations, piling, inground services, platform slabs, structural steel, roofing;</li> <li>• Installed lift 2 structural steel and precast concrete lift shaft walls;</li> <li>• Progressed work external to the station including CSR / TFR progress throughout the corridor, finalisation of noise walls, demolition of temporary noise walls;</li> <li>• PR TSC lift and shift – completed; and</li> <li>• B15 signal hut installed.</li> </ul> <p><b>Fairfield station –</b></p> <ul style="list-style-type: none"> <li>• Minor defect closeout;</li> <li>• Closeout of final electrical items;</li> <li>• Completions documentation compilation;</li> <li>• Closeout of residual additional / changed scope due to 'D2S Improvements' POD received during September; and</li> <li>• Completion of ay QR critical defects and finalising completion documentation</li> </ul>



for PC.

**Yeronga station –**

- Progressed defect items, weekly certification walkthroughs to closeout items; and
- All physical certification items have been addressed; final paperwork closeout is ongoing.

**Yeerongpilly station –**

- Excavation on platform 01 and installation of the new platform precast panels (northern half). Southern half waiting for corridor cable cutovers to occur in December;
- Progressed installation of Northern half of the platform1;
- Progressed lower-level services, bulk backfill, conduits installation for platforms 2/3; and
- Progressed foundations and installation of stage 1 of temporary gantry.

**Clapham Yard –**

- Muriel Ave Bridge Maintenance Access Walkway installation continues;
- Drainage line in front of Aurizon completed;
- BR94 nearing completion;
- BR93 Stage 1 nearing completion; and
- OHW Foundation and Structure install.

**Rocklea station –**

- Installation of structural steel elements (stair 2, stair 3);
- Commence installation of lifts;
- Installation of roofing to station buildings and platform canopies;
- Installation of platform canopy soffit framing and cable rough-in; and
- Internal and external framing and lining of station buildings.

**Salisbury –**

- Preliminary planning and procurement.

## 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.

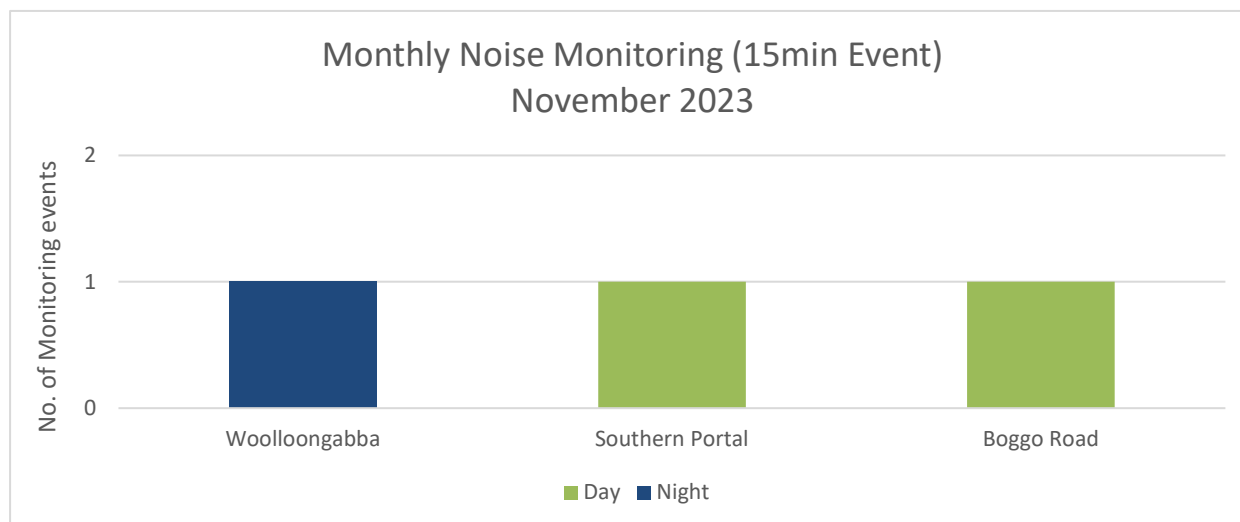
For Project Works where potential noise impacts are modelled to be above the noise goal but below the noise goal plus 20dBA, this work is authorised where the endorsed CEMP and associated Noise and Vibration Management Plan is being implemented, including communicating construction activities to potential 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 model verification and at sensitive places at Woolloongabba, Boggo Road and Southern Portal. The TSD contractor 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 occurred at the State heritage listed John MacDonald Stand located in proximity to the Exhibition station worksite. The RIS contractor reported the vibration requirements have been met, monitoring results are detailed in **Appendix A** (Table 4).

## 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 goal<sup>1</sup> for all active worksites. The RIS contractor activated two new dust deposition monitors at Northern Portal and Yeerongpilly in accordance with project requirements.

At Mayne Yard, an exceedance of the dust deposition goal was recorded at Mayne Yard North in November. Due to the tight constraints of the site, the gauge was located only 15m from the bulk earthworks activities to establish the structural foundation of Bridge 08.

The location of the dust monitoring gauge was reassessed after an incident and exceedance occurred in October 2023. The assessment confirmed the current location was an appropriate monitoring location that is still representative of the surrounding sensitive receivers, as confirmed by the Projects CAQP. When excluding organic contamination from the measures result, which would not have been due to site activities, the level was compliant with the air quality goal. This can be considered a more accurate representation of the air quality at Mayne Yard North for the reporting period. Metrological conditions confirmed the gauge was located downwind of the works for over a quarter of the reporting period and due to the close proximity of the gauge to the construction activities, the results were skewed and would not be representative of dust levels experienced by surrounding stakeholders.

The October 2023 depositional dust incident is being appropriately addressed by the contractor and closed out. Site management practices were implemented as per the CEMP and Sub-Plans. No air quality complaints have been received to date. Demonstrating the requirements of the imposed Conditions have been met. For further details see **Appendix A** (Section 3.1.8.1 and Figure 2).

In the Central Area, the Woolloongabba (south) and Boggo Road (north) dust deposition gauges were tampered with, and the funnels were stolen resulting in no air quality results reported for the month. New funnels were installed at both locations and will be active for the December monitoring period.



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 North	<ul style="list-style-type: none"> <li>- Exceedance of air quality goal due to the gauge's close proximity to bulk earthworks and wind conditions resulting in dust levels that are not representative of the levels experienced by surrounding stakeholders.</li> <li>- Contractor demonstrated project requirements were met through the implementation of site management practices as per the CEMP and Sub-Plans.</li> </ul>
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)	- No data recorded as gauge was vandalised. Gauge has been repaired and re-activated.
		Peter Doherty Street/Leukemia Foundation	- Results met air quality goal
	Southern Portal	Dutton Park station	- Results met air quality goal
		PA Hospital - Central Energy Unit along Kent Street	- Results met air quality goal
	Roma Street	Roma Street station	- Results met air quality goal
	Woolloongabba	Russian Orthodox Cathedral	- Results met air quality goal
		Woolloongabba Busway	- No data recorded as gauge was vandalised. Gauge has been repaired and re-activated.
Southern Area	Dutton Park	Dutton Park	- Results met air quality goal
	Yeerongpilly	Yeerongpilly	- Results met air quality goal
	Clapham Yard	Clapham Yard	- Results met air quality goal

<sup>1</sup> CG air quality goal for dust deposition - 120µg/m<sup>2</sup> (over an averaging period of 30 days).

### 2.2.3.2. Particulate Matter and Total Suspended Particulates

Monitoring for particulate matter (PM<sub>10</sub>) and total suspended particulates (TSP) was conducted at Northern, Central and Southern Area worksites the reporting period. Results obtained met the project goals at all active worksites.

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

Air Quality – PM <sub>10</sub> / 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. - Rental monitor active onsite.
Northern Area	RNA / Exhibition	RNA showgrounds	- Results met air quality goals. - Rental monitor active onsite.
	Northern Portal	Brisbane Girls Grammar School	- Monitor decommissioned.
Central Area	Albert Street	iStay River City and Capri (Corner of Mary Street and Albert Street)	- Results met air quality goals.
	Boggo Road / Southern Portal	North-east of Boggo Road worksite	- Results met air quality goals.
	Woolloongabba	Place Park, Woolloongabba	- Results met air quality goals.
Southern Area	Clapham Yard	Clapham Yard	- Results 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 November 2023, active surface water discharges occurred in the Northern Area. Post-rainfall water quality monitoring was triggered for Breakfast Creek, Brisbane River, Norman Creek, Moolabin Creek and Rocky Water Holes Creek.

In the Northern Area, active surface water discharge monitoring occurred on 19 occasions at Northern Portal. The monitoring results demonstrated active surface water discharges met project water quality discharge criteria. Refer to **Appendix B** (Table 7) for further details. Post rainfall monitoring was triggered in receiving waters of the Northern Portal.

In the Central Area, post rainfall monitoring was triggered in receiving waters of Roma Street, Albert Street, Woolloongabba and Boggo Road/Southern Portal.

In the Southern Area, post rainfall monitoring was triggered in receiving waters of Mayne Yard and Clapham Yard including Moolabin Creek and Rocky Water Holes Creek.

Routine surface water monitoring was undertaken across the TSD worksites during the reporting period. Results from the locations reflect the condition of the broader catchment upstream from the worksites. Refer to **Appendix B** (Table 8 and Section 3.5) for further details.

Surface water quality monitoring is summarised in the table below:

Surface Water Quality Monitoring					
Area	Worksite	Discharge	Post-Rain Monitoring	Routine Monitoring	Comments

<b>Mayne Area</b>	Mayne Yard North	No	Yes	No	- ESC was implemented in accordance with site specific ESC Plan.
<b>Northern Area</b>	Exhibition/ RNA	No	No	No	- ESC was implemented in accordance with site specific ESC Plan.
	Northern Portal	Yes	Yes	Yes	- Active surface water discharge met water quality investigation criteria. - Routine in-stream monitoring undertaken in accordance with WQMP - Post-rainfall monitoring undertaken.
	Northern Corridor	No	No	N/A	- ESC was implemented in accordance with site specific ESC Plan.
<b>Central Area</b>	Albert Street	No	Yes	Yes	- Routine in-stream monitoring undertaken in accordance with WQMP. - Post-rainfall monitoring undertaken.
	Boggo Road	No	Yes	Yes	- Routine in-stream monitoring undertaken in accordance with WQMP. - Post-rainfall monitoring undertaken.
	Roma Street	No	Yes	Yes	- Routine in-stream routine monitoring undertaken in accordance with WQMP. - Post-rainfall monitoring undertaken.
	Woolloongabba	No	Yes	Yes	- Routine in-stream monitoring undertaken in accordance with WQMP. - Post-rainfall monitoring undertaken.
	Southern Portal	No	Yes	Yes	- Routine in-stream monitoring undertaken in accordance with WQMP. - Post-rainfall monitoring undertaken.
<b>Southern Area</b>	Dutton Park	No	No	No	- ESC was implemented in accordance with site specific ESC Plan.
	Fairfield station	No	No	No	- ESC was implemented in accordance with site specific ESC Plan.
	Yeronga	No	No	No	- ESC was implemented in accordance with site specific ESC Plan.
	Clapham Yard	No	Yes	Yes	- ESC was implemented in accordance with site specific ESC Plan.

					- Post-rainfall monitoring undertaken.
	Rocklea station	No	Yes	Yes	- ESC was implemented in accordance with site specific ESC Plan. - Post-rainfall monitoring undertaken.

#### 2.2.4.2. Groundwater

Groundwater discharge occurred at Roma Street. The groundwater discharge results exceeded relevant water quality objectives (WQO's)<sup>2</sup> for several water quality parameters. However, these results are consistent with the receiving environment baseline monitoring pre-construction data and are therefore acceptable. The contractor confirmed no changes have occurred onsite to the construction methodologies that would have affected the groundwater results. The contractor reduced the water treatment sampling regime in accordance with project requirements. Water treatment plant results will be reported quarterly. Refer to **Appendix B** (Table 6) 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	No	- Water treatment sampling regime reduced in accordance with project requirements. Results to be reported quarterly.
	Boggo Road / Southern Portal	No	- Water treatment sampling regime reduced in accordance with project requirements. Results to be reported quarterly.
	Roma Street	Yes	- Discharge of groundwater met Project requirements.
	Woolloongabba	No	- Water treatment sampling regime reduced in accordance with project requirements. Results to be reported quarterly.
Southern Area	Clapham Yard	No	- No groundwater discharges.

<sup>2</sup> 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, RNA Showgrounds, Northern Portal, Normanby, Roma Street, Albert Street, Woolloongabba, Boggo Road, Southern Portal, Dutton Park, Fairfield, Yeronga, Yeerongpilly, Clapham Yard, Rocklea and Salisbury worksites.

## 2.3. Complaints Management

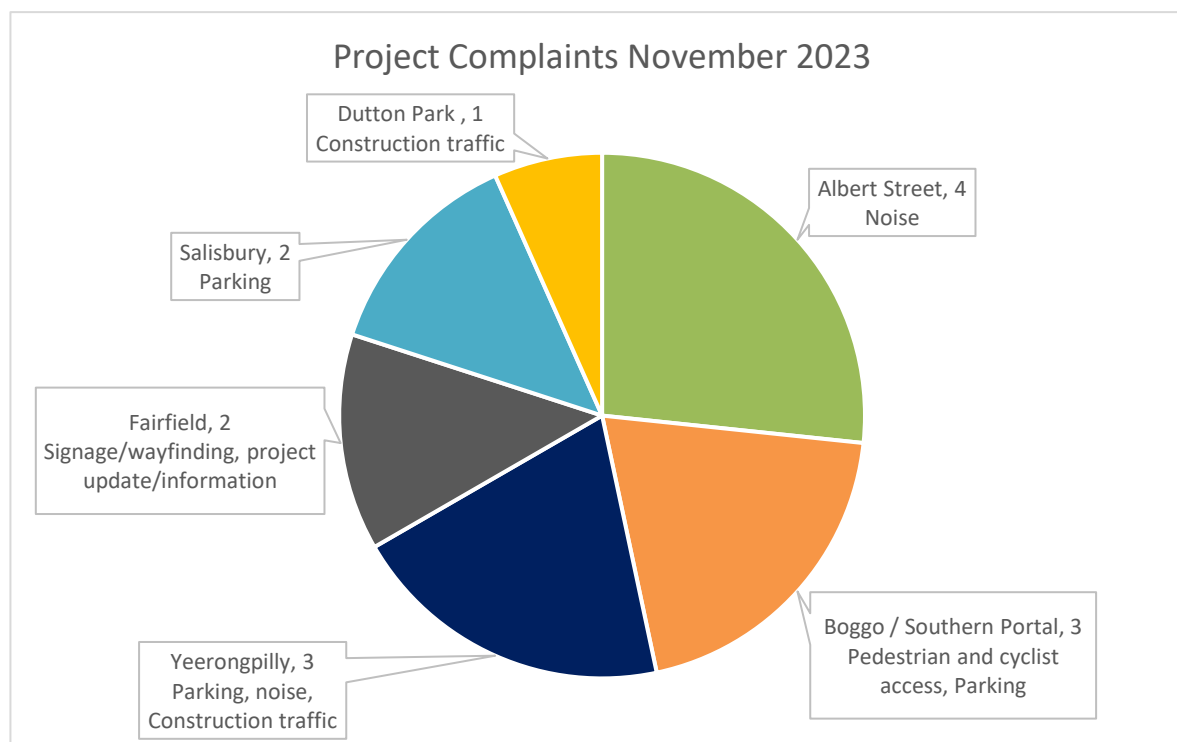
A total of sixteen (16) complaints were received during the month, of which fifteen (15) were project related.

RIS works received eight (8) complaints related to project works in November 2023 relating to construction traffic impacts at Dutton Park, signage/wayfinding and project update/information at Fairfield, parking at Salisbury and noise, construction traffic and parking at Yeerongpilly. For further details and breakdown of complaints, refer to **Appendix A** (Table 3).

TSD works received six (6) project related complaints, related to noise at Albert Street, and pedestrian/cyclist access and parking at Boggo Road. For further details and a breakdown of complaints, refer to **Appendix B** (Table 10).

One additional complaint was received by the Cross River Rail Delivery Authority relating to property condition concerns near the Southern Portal. The Delivery Authority has responded appropriately and closed the complaint out in collaboration with the RIS and TSD contractors.

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

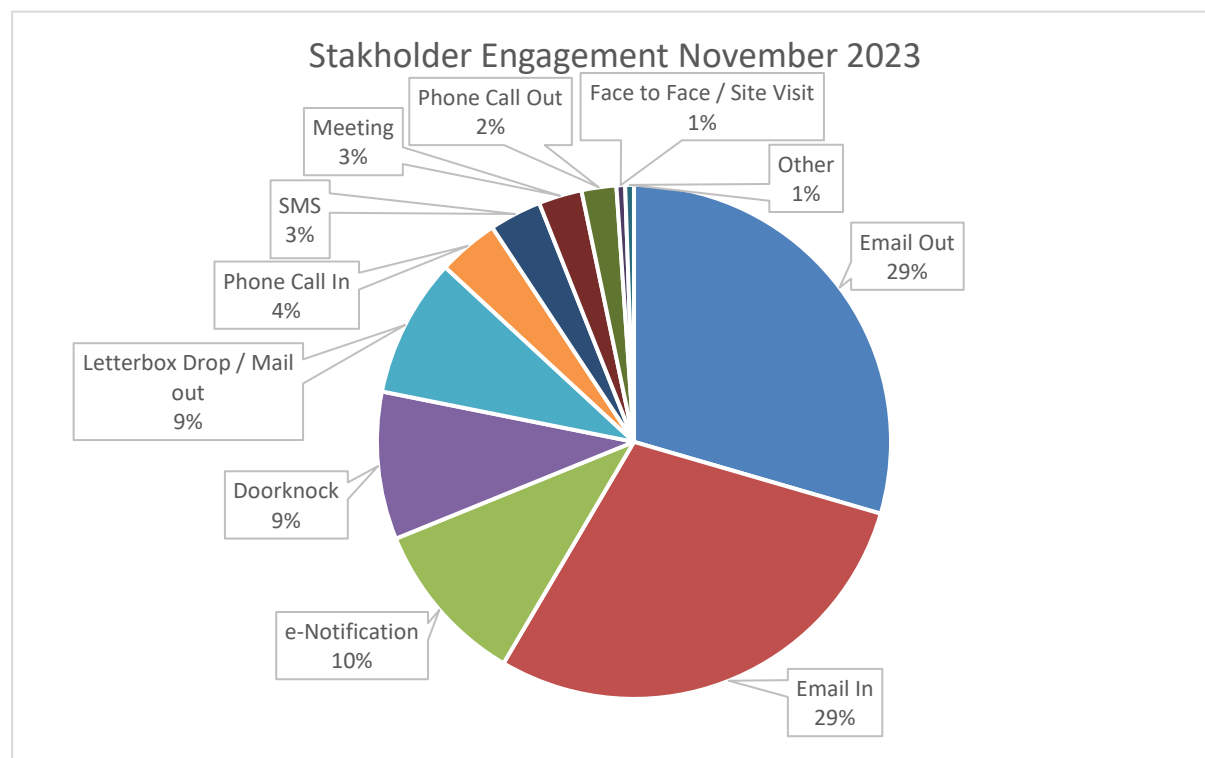


When attended noise monitoring was undertaken in response to a complaint, the contractor confirmed on all occasions that works undertaken at the time of the complaint adhered to project requirements. In some instances, previously attended noise monitoring data, representative of the relevant construction 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, such as timing of works and utilisation of noise blankets, to reduce the impact was implemented. This is reviewed together with the contractor to verify if project requirements have been met.

For scheduled out of hours works, community notification was provided, as well as regular project  
Monthly Environmental Report – November 2023

updates. Stakeholder engagement undertaken on the project during the month is in the chart below.



## 2.4. New Upcoming Project Works

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

Area	New planned works in the coming months
Mayne Area	<p><b>Mayne Yard North –</b></p> <ul style="list-style-type: none"> <li>Close out last 19 remaining minor defects;</li> <li>Final testing and commissioning documentation; and</li> <li>Warranties 34 remain outstanding.</li> </ul> <p><b>Mayne Yard East / West –</b></p> <ul style="list-style-type: none"> <li>RIS-11A.1 Balloon Loop Decom and Shunt Rd commissioning (Xmas scope);</li> <li>RIS-7A.1 (Western Yard facility Roads 37 – 40) QR shunter paths on hold due to pending QR possession approval till Easter '24 (nil impact to UNITY);</li> <li>RIS-6C.2 (QR Access Change), asphalt, lighting, DB's;</li> <li>N-18 (MY-E Shunter Shed) services and finishing trades;</li> <li>Commence inground works for Air-Compressor facility;</li> <li>DB installation;</li> <li>RIS-N-7A2 (Rd 40 realignment Southern end wheel lathe) On schedule for Feb 24; and</li> <li>BR12 submain.</li> </ul>
Northern Area	<p><b>RNA / Exhibition –</b></p> <ul style="list-style-type: none"> <li>Underslung services;</li> <li>Ceilings on platform canopy;</li> <li>Plaza area FRP scope; and</li> <li>RSS wall Northern end of BR44.</li> </ul> <p><b>Northern Corridor –</b></p> <ul style="list-style-type: none"> <li>Civils, CSR,196 and points198 rectification, OHLE Foundation, OHLE Wiring Mods, Comms and HV Cable install;</li> <li>VPFS ongoing ROS Installation; and</li> <li>Holding road driver platform installation.</li> </ul> <p><b>Northern Portal –</b></p>



Central Area	<ul style="list-style-type: none"> <li>Final inspection landscaping works by BCC and Victoria parklands;</li> </ul> <p><b>Roma Street –</b></p> <ul style="list-style-type: none"> <li>Escalator steel installation in cavern;</li> <li>Level B4 partition walls, fan cure units and fit out installation;</li> <li>External wall cladding bracket installation;</li> <li>Services building chimney FRP and water proofing; and</li> <li>Platform 2 cleaners room services and fit out.</li> </ul> <p><b>Albert Street –</b></p> <ul style="list-style-type: none"> <li>Lot 1 – complete slip system de-mobilisation and commence B4 suspended slab pours;</li> <li>Lot 2 – Commence Platform Screen door structural frame install and complete CER and SPER/SER rooms handover to RIS; and</li> <li>Lot 3 – Commence canopy/roof structural steel install and complete final ground slab pour.</li> </ul> <p><b>Woolloongabba –</b></p> <ul style="list-style-type: none"> <li>Platform screen door steel support install in Southern cavern;</li> <li>Scardo Nozzle install;</li> <li>TVS fans installation following installation of attenuators; and</li> <li>Escalator delivery and ongoing M&amp;E fit- out works.</li> </ul> <p><b>Boggo Road –</b></p> <ul style="list-style-type: none"> <li>ongoing perimeter/ internal wall and topping slab pours;</li> <li>Continue station box deck units and buttress plank installation;</li> <li>Commence station box above-ground structure; and</li> <li>Ongoing M&amp;E fit out works in RIS rooms.</li> </ul> <p><b>Southern Portal –</b></p> <ul style="list-style-type: none"> <li>Rail works in upcoming SCAS;</li> <li>Gider EG1 lift;</li> <li>Bridge eastern and western approach FRP for topping slabs; and</li> <li>Track slab installation within portal.</li> </ul>
Southern Area	<p><b>Southern / Dutton Park –</b></p> <ul style="list-style-type: none"> <li>December will see further progress of the station construction including structural steel elements, roofing, soil nails, platform slabs, and platform walls;</li> <li>TFR pit cable supports and earthing installation; and</li> <li>PRTSC early works and preparation for temp power for Pre-Commissioning, preservation and SAT.</li> </ul> <p><b>Fairfield station –</b></p> <ul style="list-style-type: none"> <li>Minor defect closeout; and</li> <li>Completion of ay QR critical defects and finalising completion documentation for PC.</li> </ul> <p><b>Yeronga station –</b></p> <ul style="list-style-type: none"> <li>Final defects are ongoing and additional / changed scope;</li> <li>Final document submission for unconditional and final building occupancy certificate;</li> <li>Application for SP8 practical completion planned to occur for end of December; and</li> <li>Completion of ay QR critical defects and finalising completion documentation for PC.</li> </ul> <p><b>Yeerongpilly station –</b></p> <ul style="list-style-type: none"> <li>Finalise site establishment in early December;</li> <li>Continue lower-level services, structural foundations on Platform 1;</li> <li>Continue structural foundations and upper-level services in readiness for installation of structural steel in early January for Platform 2/3; and</li> <li>Installation of stage 2 structure installs in early December SCAS (RIS_085) and then commissioning in the December / Christmas SCAS of Temporary Gantry.</li> </ul> <p><b>Moorooka –</b></p> <ul style="list-style-type: none"> <li>Nil.</li> </ul>

### Clapham Yard –

- Driveways and stone pitching along Fairfield Road;
- Civil Works, CSR works ongoing, commence driver pathways;
- Track Works include tamping of DG, DGL, HR1 and HR2 has commenced. Tamper remobilising Dec '23;
- OHW Works – Structure install recommences 24 July;
- Signalling works ongoing; and
- Procurement and Planning stage for Electrical / Comms.

### Rocklea station –

- Stair Fitout;
- Installation of bicycle shelter;
- Continue installation of lifts;
- Continue services rough in;
- Continue platform canopy and buildings lining; and
- Brookes St carpark works.

### Salisbury station –

- Minor Early Works continuing.

## 2.5 Non-Compliance Events

No NCEs were recorded in November 2023. A summary of NCE's 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-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-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-009-RIS-003	6/05/22	ESC	Clapham Yard	4	28/10/22	28/10/22	12/12/22	12/12/22
CRRDA-010-RIS-004	10/05/22	Acid Sulphate Soils Management	Clapham Yard	4, 19	28/10/22	28/10/22	12/12/22	12/12/22
CRRDA-11-RIS-005	23/11/22	Out Of Hours Works	Fairfield Station	4,10	14/07/23	14/07/23	14/07/23	12/09/23
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	

Gate 1 - EM notification to contractor. NCE confirmed

Gate 2 - 48 hour NCE notification submitted to CG

Gate 3 - 14 day report submitted

Gate 4 - 14 day report uploaded to CRR website

# Appendix A RIS Monthly Report

# **Monthly CGCR Report November 2023**

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

## Table of Contents

<b>1</b>	<b>Progress Summary - Relevant Project Works</b>	<b>3</b>
<b>2</b>	<b>Complaints</b>	<b>7</b>
<b>3</b>	<b>Environmental Monitoring Results</b>	<b>10</b>
	Acoustics	10
	Air Quality	12
	Water Quality	21
<b>4</b>	<b>Compliance Review</b>	<b>25</b>
	Non-Compliance Events	25
	C-EMP Compliance	25
<b>Attachment 1</b>	<b>Imposed Conditions Non-Compliance Event Report (if required)</b>	<b>27</b>
<b>Attachment 2</b>	<b>Monitoring Locations – Noise and Vibration (if required)</b>	<b>28</b>
<b>Attachment 3</b>	<b>Monitoring Locations – Air Quality</b>	<b>31</b>
<b>Attachment 4</b>	<b>Monitoring Locations – Surface Water</b>	<b>37</b>

# 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	<b>Mayne Yard North</b> <ul style="list-style-type: none"> <li>• Completions documentation being compiled for SP01 (Northern Stabling Yard).</li> <li>• Final Rail Systems Close out progressing.</li> </ul> <b>Mayne Yard East / West</b> <ul style="list-style-type: none"> <li>• Balloon Loop Decom &amp; Shunt Rd commissioning on schedule. Greenfield civil and track nearly complete.</li> <li>• Access Change on schedule. Lighting, road furniture and TP&amp;C commenced.</li> <li>• Shunter Shed commissioning on schedule. Building nearing completion, focus on service install and CER.</li> <li>• Mayne East reconfiguration on schedule with drainage, CSR, hydraulics and bulk earthworks ongoing as planned.</li> <li>• Submain installation, termination &amp; testing to Shunter's Shed.</li> </ul>
Northern Area	<b>RNA / Exhibition</b> <ul style="list-style-type: none"> <li>• FRP BR44 nearing completed.</li> <li>• Service installation progressing on schedule.</li> <li>• Plaza area underground services.</li> <li>• Canopy roofing lifted in position.</li> </ul> <b>Northern Corridor</b> <ul style="list-style-type: none"> <li>• TSD pending surface works includes portal electrification screens, coms and drainage pit scope, removal of water treatment plant and office demob.</li> <li>• Victoria Park ROS installation ongoing, Energex VPFS pre-commissioning (75% complete)</li> <li>• Traction Power cabling from VPFS to Roma St installed 100%, cabling from VPFS to Roma St Joints 15% and pit earthing &amp; cable supports 55%.</li> <li>• EXT22 completed successfully.</li> </ul>
Southern Area	<b>Southern Portal / Dutton Park</b> <ul style="list-style-type: none"> <li>• Progressed work on PL1, PL2, Kent St entry, and Noble St entry. Predominately structural foundations, piling, inground services, platform slabs, structural steel, roofing.</li> <li>• Installed lift 2 structural steel and precast concrete lift shaft walls.</li> <li>• Progressed work external to the station including CSR / TFR progress throughout the corridor, finalisation of noise walls, demolition of temporary noise walls.</li> <li>• PR TSC lift &amp; shift – completed.</li> <li>• B15 signal hut installed</li> </ul>
Southern Area	<b>Fairfield Station</b> <ul style="list-style-type: none"> <li>• Minor defect closeout.</li> <li>• Closeout of final electrical items.</li> <li>• Completions documentation compilation.</li> <li>• Closeout of residual additional / changed scope due to 'D2S Improvements' POD received during September.</li> <li>• Completion of ay QR critical defects and finalising completion documentation for PC.</li> </ul>
Southern Area	<b>Yeronga Station</b> <ul style="list-style-type: none"> <li>• Progressed defect items, weekly certification walkthroughs to closeout items.</li> <li>• All physical certification items have been addressed; final paperwork closeout is ongoing.</li> </ul>



Area	Project Works
Southern Area	<b>Yeerongpilly Station</b> <ul style="list-style-type: none"> <li>Excavation on platform 01 &amp; installation of the new platform precast panels (northern half). Southern half waiting for corridor cable cutovers to occur in December.</li> <li>Progressed installation of Northern half of the platform1.</li> <li>Progressed lower-level services, bulk backfill, conduits installation for platforms 2/3.</li> <li>Progressed foundations and installation of stage 1 of temporary gantry.</li> </ul>
Southern Area	<b>Clapham Yard</b> <ul style="list-style-type: none"> <li>Muriel Ave Bridge Maintenance Access Walkway installation continues.</li> <li>Drainage line in front of Aurizon completed.</li> <li>BR94 nearing completion.</li> <li>BR93 Stage 1 nearing completion</li> <li>OHW Foundation and Structure install.</li> </ul>
Southern Area	<b>Rocklea Station</b> <ul style="list-style-type: none"> <li>Installation of structural steel elements (stair 2, stair 3).</li> <li>Commence installation of lifts.</li> <li>Installation of roofing to station buildings &amp; platform canopies.</li> <li>Installation of platform canopy soffit framing &amp; cable rough-in.</li> <li>Internal &amp; external framing and lining of station buildings.</li> </ul>
Southern Area	<b>Salisbury</b> <ul style="list-style-type: none"> <li>Preliminary planning &amp; procurement.</li> </ul>

**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><b>Mayne Yard North</b></p> <ul style="list-style-type: none"> <li>Close out last 19 remaining minor defects.</li> <li>Final testing and commissioning documentation.</li> <li>Warranties 34 remain outstanding.</li> </ul> <p><b>Mayne Yard East / West</b></p> <ul style="list-style-type: none"> <li>RIS-11A.1 Balloon Loop Decom &amp; Shunt Rd commissioning (Xmas scope).</li> <li>RIS-7A.1 (Western Yard facility Roads 37 – 40) QR shunter paths on hold due to pending QR possession approval till Easter '24 (nil impact to UNITY).</li> <li>RIS-6C.2 (QR Access Change), asphalt, lighting, DB's</li> <li>N-18 (MY-E Shunter Shed) services and finishing trades.</li> <li>Commence inground works for Air-Compressor facility.</li> <li>DB installation.</li> <li>RIS-N-7A2 (Rd 40 realignment South end wheel lathe) On schedule for Feb 24.</li> <li>BR12 submain.</li> </ul>
Northern Area	<p><b>RNA / Exhibition</b></p> <ul style="list-style-type: none"> <li>Underslung services.</li> <li>Ceilings on platform canopy.</li> <li>Plaza area FRP scope.</li> <li>RSS wall Northern end of BR44.</li> </ul> <p><b>Northern Corridor</b></p> <ul style="list-style-type: none"> <li>Civils, CSR,196 &amp; points198 rectification, OHLE Foundation, OHLE Wiring Mods, Comms &amp; HV Cable install.</li> <li>VPFS ongoing ROS Installation</li> <li>Holding road driver platform installation.</li> </ul>
Southern Area	<p><b>Southern Portal / Dutton Park</b></p> <ul style="list-style-type: none"> <li>December will see further progress of the station construction including structural steel elements, roofing, soil nails, platform slabs, and platform walls.</li> <li>TFR pit cable supports &amp; earthing installation.</li> <li>PRTSC early works &amp; preparation for temp power for Pre-Commissioning, preservation &amp; SAT.</li> </ul>
Southern Area	<p><b>Fairfield Station</b></p> <ul style="list-style-type: none"> <li>Minor defect closeout.</li> <li>Completion of ay QR critical defects and finalising completion documentation for PC.</li> </ul>
Southern Area	<p><b>Yeerongpilly</b></p> <ul style="list-style-type: none"> <li>Finalise site establishment in early December.</li> <li>Continue lower-level services, structural foundations on Platform 1.</li> <li>Continue structural foundations and upper-level services in readiness for installation of structural steel in early January for Platform 2/3.</li> <li>Installation of stage 2 structure installs in early December SCAS (RIS_085) and then commissioning in the December / Christmas SCAS of Temporary Gantry.</li> </ul>
Southern Area	<p><b>Yeronga Station</b></p> <ul style="list-style-type: none"> <li>Final defects are ongoing and additional / changed scope.</li> <li>Final document submission for unconditional &amp; final building occupancy certificate.</li> <li>Application for SP8 practical completion planned to occur for end of December.</li> <li>Completion of ay QR critical defects and finalising completion documentation for PC</li> </ul>
Southern Area	<p><b>Moorooka</b></p> <ul style="list-style-type: none"> <li>Nil Specific.</li> </ul>

Area	Project Works
Southern Area	<b>Rocklea</b> <ul style="list-style-type: none"> <li>Stair Fitout.</li> <li>Installation of bicycle shelter.</li> <li>Continue installation of lifts.</li> <li>Continue services rough in.</li> <li>Continue platform canopy &amp; buildings lining.</li> <li>Brookes St carpark works.</li> </ul>
Southern Area	<b>Clapham Yard</b> <ul style="list-style-type: none"> <li>Driveways and stone pitching along Fairfield Road.</li> <li>Civil Works, CSR works ongoing, commence driver pathways.</li> <li>Track Works include tamping of DG, DGL, HR1 &amp; HR2 has commenced. Tamper remobilising Dec '23.</li> <li>OHW Works – Structure install recommences 24 July.</li> <li>Signalling works ongoing.</li> <li>Procurement &amp; Planning stage for Electrical / Comms.</li> </ul>
Southern Area	<b>Salisbury</b> <ul style="list-style-type: none"> <li>Minor Early Works continuing</li> </ul>

## 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
Wednesday 1 November	Fairfield	Resource wastage	Complaint on Stakeholder potential waste of materials and labour.	November	Stakeholder complained about reworking concrete kerbing as he believed it was a waste of money as kerb looked fine. Was concerned about waste of materials and labour.	Team provided reason for recent night works (station platform cleaning and sealing) and explained that the station is now in the defects (rectification) stage where some areas have to be reworked to be accepted by the asset owner. Stakeholder thanked the team for the information and clarification.	Closed
Sunday 12 November	Yeerongpilly	Noise	Complaint on unnecessary noise from excavator reversing alarm.	November	Stakeholder complained about still experiencing noise issues – unnecessary beeping when loading and unloading from an excavator to a truck and dog.	Stakeholder informed that complaint followed up with superintendent who will speak with the operators again about the use of horns when loading the trucks onsite. Furthermore, stakeholder was advised that issue will be discussed at a lessons learned session for the past weekend's possession.	Closed

Date Received	Location	Issue	Project Works / Activity source of the concern	Reporting Period	Complaint Detail	Unity Response	Status
Monday 13 November	Yeerongpilly	Traffic Management	Complaint about closing Wilkie Street when not required.	November	<p>Complaint received about the traffic management on Wilkie Street – street often closed well past where the work is being done, way longer than necessary without obvious reason.</p> <p>Also complained about traffic controller behaviour.</p> <p>Suggested local cooperation is needed for traffic management to ensure it is handled appropriately and with consideration.</p>	<p>Complainant informed that our traffic guidance schemes are designed by traffic engineers and approved by the Brisbane City Council (BCC) to ensure the safety of workers and motorists around Yeerongpilly station.</p> <p>Furthermore, when a piece of equipment or vehicle leaves or enters site, all directions of traffic are placed on hold along Wilkie Street and on all side streets leading into it.</p> <p>This is a requirement of the BCC permit. It is to eliminate the possibility of plant interactions with motorists, requirements are in place for the safety of everyone.</p> <p>During a track possession, as there was on the weekend, there is typically more plant and equipment entering and existing the site – which means more stop / go impacts on local traffic.</p> <p>The Yeerongpilly station team seeks to minimise construction and traffic impacts where reasonable and practical to do so. However, due to the nature and location of some works activities this is not always possible.</p>	Closed
Thursday 16 November	Dutton Park	Noise	Complaint on truck drivers using Brisbane Street as a waiting station or through road.	November	<p>Complaint about truck drivers continuing to use Brisbane Street as either a holding/ idling/ waiting station or as a through road.</p> <p>Reported that truck driver failed to heed the traffic rules and exited illegally out of Brisbane Street and onto Annerley Road.</p> <p>Requested that contractors be instructed not to use Brisbane Street as a through road or idling/waiting station.</p>	<p>Stakeholder advised that our subcontractors would be reminded about not using Brisbane Street as a parking or layover area.</p>	Closed

Date Received	Location	Issue	Project Works / Activity source of the concern	Reporting Period	Complaint Detail	Unity Response	Status
Tuesday 21 November	Fairfield	Signage	Complaints about perceived inaccurate information on signs.	November	Complaint that signs stating lifts will be out of service on Saturday 25 and Sunday 26 December. Complainant presumed these dates are incorrect as it was presumed work won't be undertaken on Christmas Day and Boxing Day again this year.  Complaint that no replacement of the Equity Street/ Lagonda Street sign and information contained on other signs.	Complainant advised that the notice regarding upcoming temporary disruption to lift services was resolved yesterday. Furthermore, that their feedback regarding station signage has been passed onto the Fairfield station team to investigate with the design team.	Closed
Thursday 23 November	Salisbury	Construction vehicle Parking	Complaint about workers private and construction vehicles.	November	Complaint about construction works private vehicles using and filling the station eastern car park which is resulting in station users having to park on the nearby streets. Furthermore, construction trucks are also parking in the kiss n ride area preventing it's use.	Stakeholder advised that UNITY Alliance is currently undertaking early works around Salisbury station in preparation for a station accessibility upgrade next year.  On occasion some car parks may be taken in the lead up to scheduled track closures to drop off plant and equipment, however workers vehicles shouldn't be parking here while normal train services are running.  Furthermore, that their feedback was forwarded onto the site team to address with their workers.	Closed
Saturday 25 November	Yeerongpilly	Air Quality	Complaint about diesel fumes from truck idling outside resident's property.	November	Stakeholder advised that a truck has been idling outside Crichton Street property for around 30 minutes. She is concerned about the diesel fumes.	Team called Stakeholder leaving a detailed message, advising her that the issue was actioned by the team, thanking her for the vehicle registration and providing her with UNITY Alliance contact details for any future issues.	Closed
Thursday 30 November	Salisbury	Construction vehicle Parking	Complaint about workers private and construction vehicles.	November	Stakeholder complaint about construction workers vehicles parking in the station carpark causing inconvenience to commuters.	Team advised stakeholder that they followed up with their Salisbury station workgroup, advising workers that they cannot park in the Lillian Avenue commuter carpark outside of a rail possession. Further that the team will continue to monitor workforce parking.	



## 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 during the reporting period. Out of hours works was undertaken during SCAS works. These have previously been assessed as part of the analysis under the conditions of approval to verify the assessments undertaken.

Other SCAS works undertaken over the reporting period were consistent with previous monitoring and assessment undertaken for the project.

Noise complaint about truck drivers using Brisbane Street, near Yeerongpilly Station, as a waiting station or through road was resolved by Communications team with subcontractors involved reminded about not using Brisbane Street as a parking or layover area.

#### 3.1.2 Noise Monitoring Results

Noise monitoring was not required to be undertaken during the reporting period.

### 3.1.3 Vibration Monitoring

Vibration monitoring to validate the predictive model was triggered for:

- John MacDonald Stand based on the proximity to the works. 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 4 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 (mm/s)	Vibration goal for receiver	Exceedance of vibration limit?	Comments
John MacDonald Stand	1/11/2023 - 30/11/2023	24hrs/7days	John MacDonald Stand	Heritage - DIN4150 Group 1	Construction Monitoring at Sensitive Places - Model Verification	n/a	n/a - Background monitoring	n/a	0.008	3mm/s Prop damage -- > Heritage	No Exceedance	Monitor permanently located in the John MacDonald Stand - no vibration intensive equipment in use during the monitoring period. Background monitoring only.
Yeerongpilly Station Wilkie Street	24/11/23 - 30/11/23	24hrs/7days	58 Wilkie Street	Commercial	Construction Monitoring at Sensitive Places - Model Verification	50t excavator with 5t hammer	1.56	39m	1.003	10mm/s human Comfort	No Exceedance	<p>Monitor installed beside the Helix Triathlon building to monitor the use of a 5t hydraulic hammer/general SCAS works.</p> <p>Monitor was approx. 39m from the area of works. The recorded peak of 1.0033mm/s was recorded on 28 November at 13:00.</p> <p>No exceedances were of the human comfort level recorded during the monitoring period.</p>

### 3.1.5 Interpretation

No results interpretation required this period. The RIS scope of works continues to achieve the outcomes set out by the Imposed Conditions and OEMP.

### 3.1.6 Noise Monitoring

The RIS scope of works continues to achieve the outcomes set out by the CGCR and OEMP. Monitoring was not triggered during the reporting period related to the activities undertaken.

### 3.1.7 Vibration Monitoring

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

Vibration monitoring was undertaken during the reporting period.

## 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 27 inspections were undertaken by the Environment Team across Mayne Yard, RNA Showgrounds, Northern Corridor, Southern Area, Yeerongpilly, Clapham Yard, Rocklea and Salisbury 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 5 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	Relocated to Mayne Yard North
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. This was moved to Yeerongpilly and will be reported during the next monitoring period.
Dust Deposition Gauge	Dutton Park	AQ-08	8 July 2022	Active
Dust Deposition Gauge	Mayne Yard North (Eastern Air Shed)	AQ-04 Mayne Yard North	26 August 2022	Active
Dust Deposition Gauge	Yeerongpilly (Wilkie Street)	AQ-09	6 October 2023	Active
Dust Deposition Gauge	Northern Portal (Brisbane Girls Grammar School)	AQ-10	10 October 2023	Active

Monitoring Device Installed by UNITY	Area	Name	Date Installed	Status for the Reporting Period
TSP / PM <sub>10</sub> Monitor	Mayne Yard East (Eastern Air Shed)	Mayne Yard East	26 August 2022	Partially active during reporting period. Monitor was reinstated however had battery and airflow issues preventing adequate data being captured during this period
TSP / PM <sub>10</sub> Monitor	Clapham Yard (Eastern Air Shed)	Clapham Yard	9 August 2021	Active
TSP / PM <sub>10</sub> Monitor	RNA (Western Air Shed)	RNA	25 August 2020	Out for calibration – rental monitor installed for duration of monitoring period

### 3.1.8 Dust results

As passive dust deposition gauges (DDG) are analysed monthly, results cover the last half of October and the first half of November.

The results are detailed below and compared against Imposed Condition 13(b). The monitoring results for the Mayne Yard North Dust Deposition Gauge at Grafton Street exceeded the CGCR Goal of 120mg/m<sup>2</sup>/day.

Two new sites were added in this reporting period, Yeerongpilly and Northern Portal (Brisbane Girls Grammar School).

Table 6 Dust deposition gauge results for the reporting period

CGCR Goal (mg/m <sup>2</sup> /day)	AQ-01 - RNA Showgrounds (mg/m <sup>2</sup> /day)	AQ-04 Grafton Street (E Mayne) (mg/m <sup>2</sup> /day)	AQ-06 – Clapham Yard (mg/m <sup>2</sup> /day)	AQ-08 – Dutton Park (mg/m <sup>2</sup> /day)	AQ-09 Yeerongpilly Station	AQ-10 Northern Portal
120	27	123	23	90	47	23
Total Rainfall during Period (mm)	107	72.8	142.4	122	146	56.2

Note: Results recorded in red indicate an exceedance of the CGCR Goal

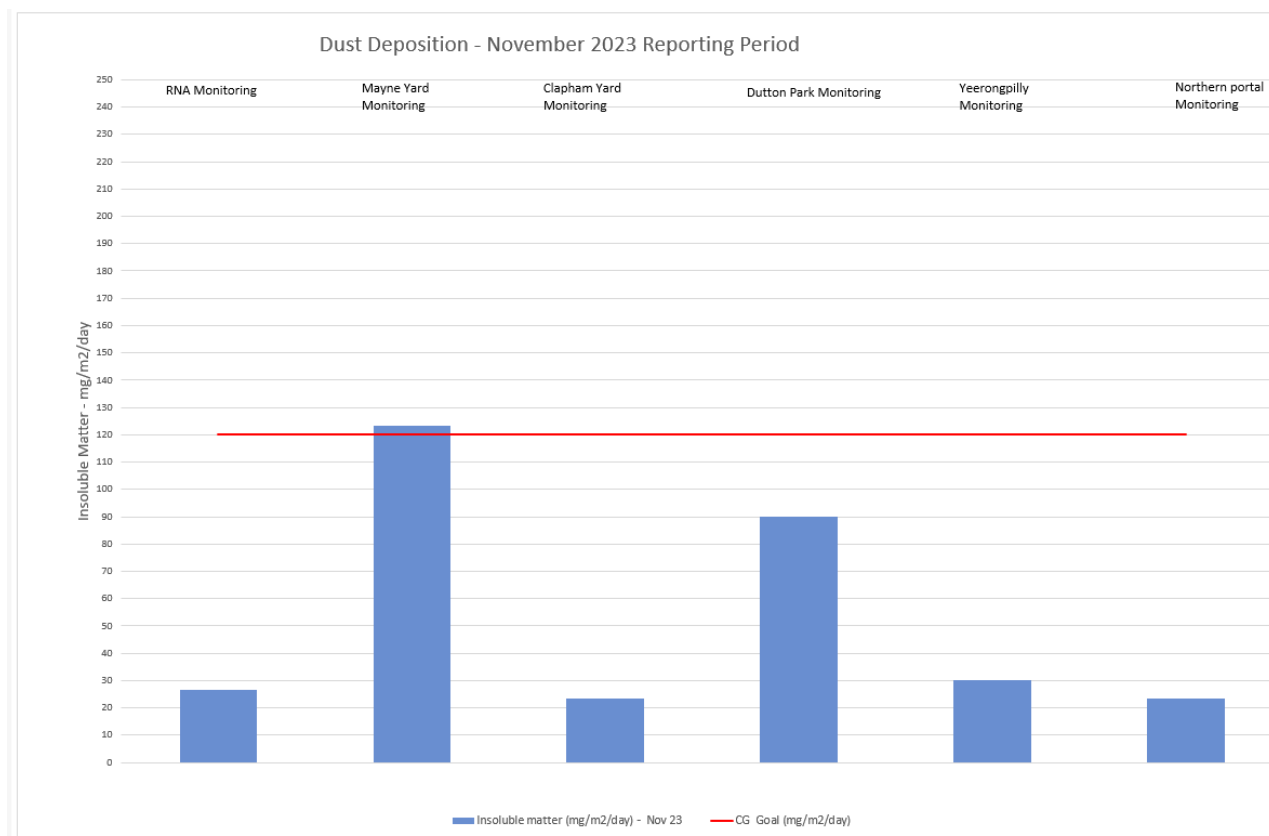


Figure 1 Air Quality Monitoring (Deposited Dust) Results

### 3.1.8.1 Interpretation

#### 3.1.8.1.1 Mayne Yard North Elevated Result

A predictive air quality assessment was carried out by the Project's certified air quality professional (CAQP) prior to relevant project works commencing.

The assessment triggered dust deposition monitoring during bulk earthworks at the Mayne Yard North construction site. The dust deposition gauge was established adjacent to the Grafton Street site location in October 2022.

Grafton Street was identified as the only appropriate monitoring location that was still representative of the surrounding sensitive receivers and was approved by the Project's CAQP. This dust deposition gauge is located approximately 15 m from the bulk earthworks location at the Northern bridge abutment. This location is substantially closer to the earthworks than the high-risk sensitive receivers this monitoring location is to represent.

The nearest sensitive receivers to the site are commercial/industrial receivers located directly adjacent to the dust deposition gauge. The nearest residential receivers are located approximately 130 m to the west of the dust deposition gauge.

During the measurement period (19 October 2023 - 16 November 2023) construction works at Mayne Yard North consisted primarily of bulk earthworks and pile breakback along the northern bridge abutment. Temporary stockpiling of material was also undertaken within close proximity to the DDG. The scale, duration and intensity of these activities is consistent with the activities reviewed as part of the predictive air quality assessment.

Monitoring data for reporting period recorded a value of 123 mg/m<sup>2</sup>/day. This 3mg exceedance represents 2.5% of the air quality goal of 120 mg/m<sup>2</sup>/day and is considered a marginal exceedance. The data recorded includes all insoluble matter from the recorded results.

Excluding organic contamination (taken as the ash content of the reportable dust) result for the monitoring period was 113.22 mg/m<sup>2</sup>/day. As organic matter cannot be attributed to project works, results excluding ash content are a more accurate representation of air quality at Mayne Yard North during the monitoring period.

The results recorded for the dust deposition gauge over the preceding 12 months at this location have only exceeded the air quality goal once. The proximity of the construction of the northern bridge abutment and the associated bulk earthworks in close proximity to dust deposition gauge appear likely to have resulted in the exceedance of the air quality goal.

The wind rose (Figure 2) identified the predominant winds during the measurement period and whether abnormal wind conditions occurred during the period.

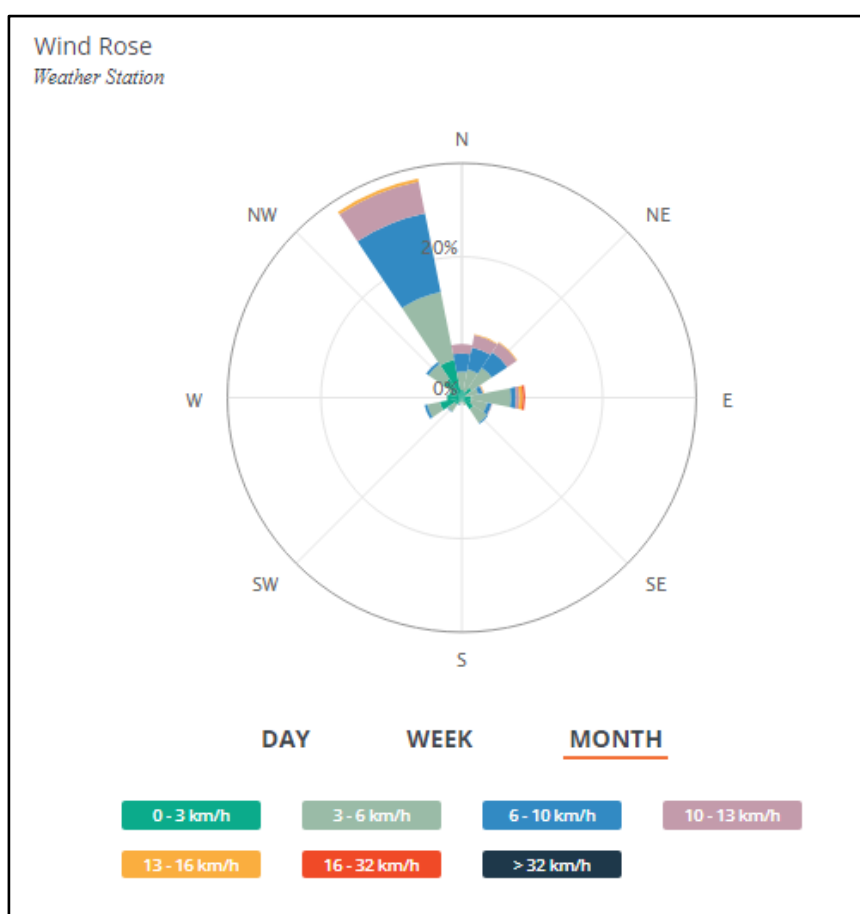


Figure 2 Mayne Yard North Windrose

The wind rose confirmed that:

- The DDG was downwind of the Project Works for over 26.5% of the monitoring time, and Wind conditions were high for approximately 16.5% of the measurement period from the north northwest.
- Based on the wind rose, the recorded data and the associated location of the dust deposition gauge it appears likely that the recorded data was due to the proximity of bulk earthworks associated with the construction at this location.

During the reporting period there were no complaints from nearby sensitive receptors regarding air quality for the Mayne Yard works. Dust deposition results are graphed in Figure 1 below.

While there was a marginal exceedance recorded for the reporting period at Mayne Yard North. As outlined above the exceedance does not appear representative of the impact for the area of Mayne Yard, rather a localised impact associated with close proximity of the site to the bulk earthworks at the northern abutment at Mayne Yard north within 15 metres of the earthworks associated with this location.

### 3.1.9 Particulates Results

UNITY had three (3) active air quality monitoring stations in place for the reporting period as detailed in Table 5.

To provide data consistency and to ensure compliance with the CG conditions, rental monitors were procured and installed at Mayne Yard and RNA for the duration of the monitoring period. The monitors were installed at the commencement of the November reporting period.

During the reporting period, works at Mayne Yard consisted primarily of bulk earthworks (drainage, PUP's, hydraulics), and structural works.

Works at the RNA (Exhibition grounds) have continued with the completion of bulk earthworks at the project site and works now focused on structures.

Works at Clapham have been ongoing with drainage, foundation, track, and structures work on the flyover.

This is discussed in detail in Section 3.1.8.

#### 3.1.9.1 Monitoring Results – Reporting Period

External ambient air quality data was collected for total suspended particles (TSP), and particulate matter less than 10  $\mu\text{m}$  ( $\text{PM}_{10}$ ).

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).

$\text{PM}_{10}$  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.

There were zero (0) exceedances of TSP and  $\text{PM}_{10}$  air quality goals under the CG conditions of approval.



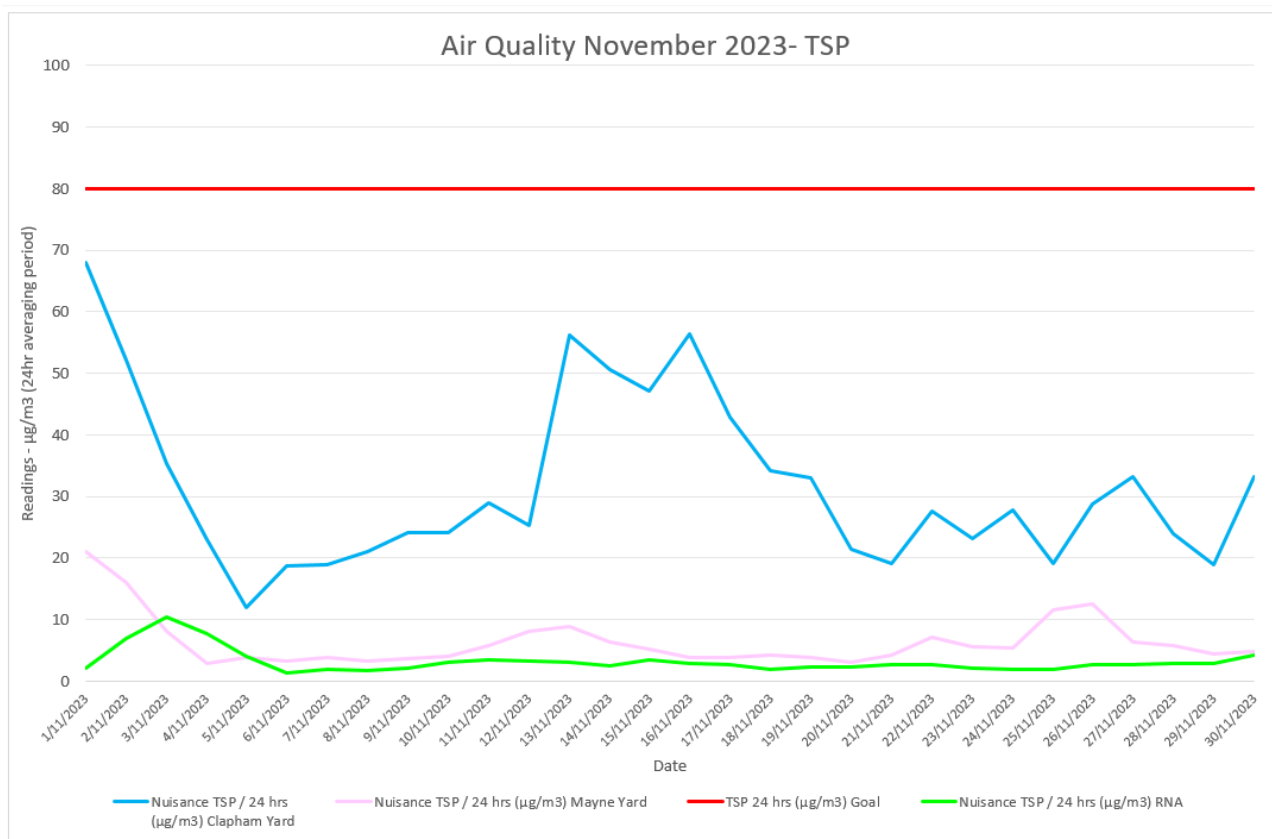


Figure 3 Air Quality Monitoring (TSP) Results

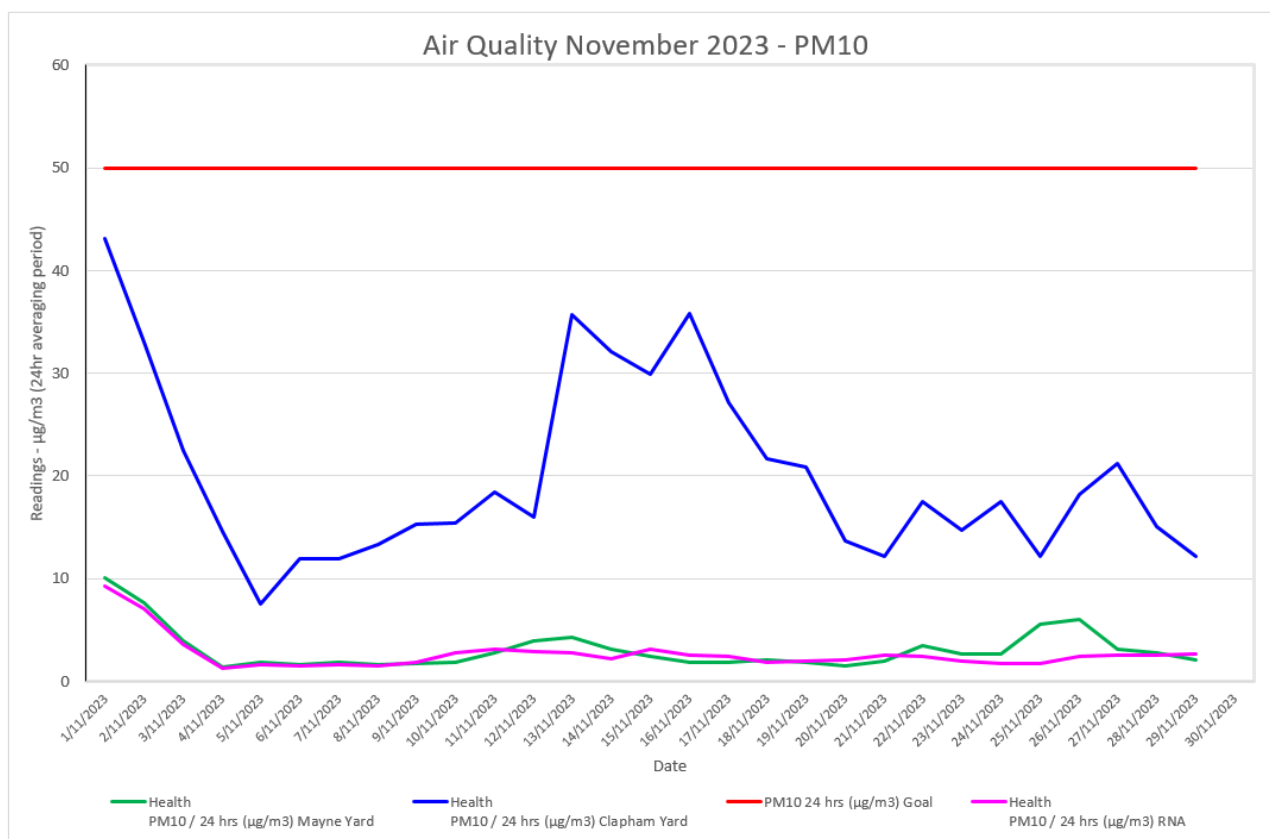


Figure 4 Air Quality Monitoring (PM10) Results

### 3.1.10 Monitoring Results – Annual Averaging

Imposed Condition 13 (a) sets annual average air quality goals for TSP (Human health) and PM<sub>10</sub> (Human health).

The below table summarises where TSP and PM<sub>10</sub> 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/aaqprctp05datacollection200105final.pdf>).

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

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

In some instances, Relevant Project Works, which triggered TSP and PM<sub>10</sub> 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 7 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 <sub>10</sub> 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 <sub>10</sub> Monitor	Mayne Yard North (Eastern Air Shed)	23 April 2020	11 May 2022	<b>Period 1</b> (to 23 April 2021) 358 over 365 days <b>Period 2</b> (24 April 2021 to 25 April 2022) 364 over 365 days <b>Period 3</b> (26 April 2022 to 11 May 2022) 3 days over 47 days	<b>Period 1</b> 98% over 365 days <b>Period 2</b> 99% Over 365 days <b>Period 3</b> 17% Over 47 days	<b>Applicable for Period 1</b> Data capture met minimum data capture requirements. <b>Applicable for Period 2</b> Data capture has met minimum data capture requirements. <b>Applicable for Period 3</b> Data capture has not met minimum data capture requirements.
TSP / PM <sub>10</sub> Monitor	Mayne Yard East (Eastern Air Shed)	26 August 2022	Not yet decommissioned	<b>Period 1</b> (Started 26 August 2022) 211 days over 280 days <b>Period 2</b> (Started 27 August 2023) 56 days over 67 days (October)	<b>Period 1</b> 75% Over 280 days <b>Period 2</b> 71% 53 over 74 days (November)	<b>Applicable for Period 1</b> Data capture has not yet met minimum data capture requirements. <b>Applicable for Period 2</b> 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 <sub>10</sub> Monitor	RNA (Western Air Shed)	11 June 2020	Not yet decommissioned	<b>Period 1</b> (to 11 June 2021) 314 over 365 days <b>Period 2</b> (12 June 2021 to 12 June 2022) 290 over 365 days <b>Period 3</b> (Started 13 June 2022) 310 over 365 days <b>Period 4</b> (Started 14 June 2023) 115 over 170 days.	<b>Period 1</b> 86% over 365 days <b>Period 2</b> 79% Over 365 days <b>Period 3</b> 85% Over 350 days <b>Period 4</b> 67% over 115 over 170 days.	<b>Applicable for Period 1</b> Data capture met minimum data capture requirements. <b>Applicable for Period 2</b> Data capture met minimum data capture requirements. <b>Applicable for Period 3</b> Data capture met minimum data capture requirements. <b>Not yet applicable for Period 4</b> Data capture has not yet met minimum data capture requirements.
TSP / PM <sub>10</sub> Monitor	Clapham Yard (Eastern Air Shed)	1 February 2021	Not yet decommissioned	<b>Period 1</b> (to 31 January 2022) 326 over 364 days <b>Period 2</b> (01 February 2022 to 31 January 2023) 190 over 365 days <b>Period 3</b> (Started 01 February 2023) 255 over 303 days	<b>Period 1</b> 90% over 364 days <b>Period 2</b> 57% Over 365 days <b>Period 3</b> 84% over 303 days	<b>Applicable for Period 1</b> Data capture met minimum data capture requirements. <b>Applicable for Period 2</b> Data capture did not meet the minimum data capture requirements. <b>Not yet applicable for Period 3</b> Data capture has not yet met the minimum data capture requirements.

The below table summarises the applicable and indicative annual data results for TSP and PM<sub>10</sub> against the performance goals imposed under Condition 13(a). Results in *italics* are indicative only.

Table 8 Annual Performance Results

Air Quality Indicator	Goal	Period	Northern Corridor	Mayne Yard North	Mayne Yard East	RNA	Clapham Yard
TSP 90 µg/m <sup>3</sup>		Period 1	8 µg/m <sup>3</sup>	11 µg/m <sup>3</sup>	9 µg/m <sup>3</sup>	18 µg/m <sup>3</sup>	8 µg/m <sup>3</sup>
		Period 2	-	10 µg/m <sup>3</sup>	-	15 µg/m <sup>3</sup>	16 µg/m <sup>3</sup>
		Period 3	-	Not applicable	-	13 µg/m <sup>3</sup>	Not yet applicable
		Period 4	-	Not applicable	-	Not yet applicable	-
PM <sub>10</sub> 25 µg/m <sup>3</sup>		Period 1	5 µg/m <sup>3</sup>	7 µg/m <sup>3</sup>	11 µg/m <sup>3</sup>	11 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>
		Period 2	-	7 µg/m <sup>3</sup>	-	10 µg/m <sup>3</sup>	14 µg/m <sup>3</sup>
		Period 3	-	Not yet applicable	-	10 µg/m <sup>3</sup>	Not yet applicable
		Period 4	-	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 (PM<sub>10</sub>).

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

PM<sub>10</sub> is one of the indicators for which the Coordinator-General has imposed a goal of 50µg/m<sup>3</sup> (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:

- No particulate results exceeded their relevant goals for PM<sub>10</sub>
- There were zero (0) complaints received associated with air quality at Mayne Yard, RNA and Clapham Yard
- All particulate monitors were recording for the duration of the November monitoring period.

## 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

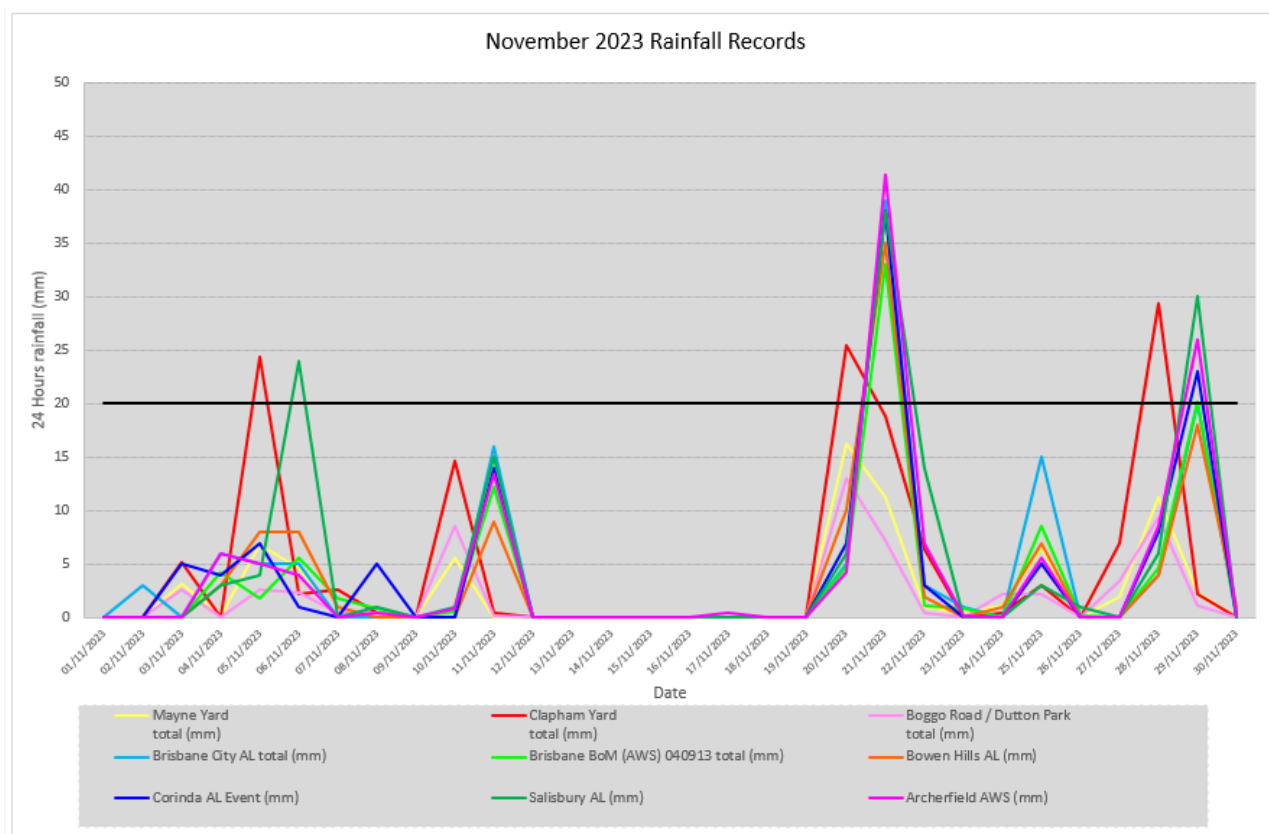


Figure 5 November 2023 Rainfall Records

### 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 on 6, 21 and 29 October and reported on below in Table 9 with the RIS scope of works remaining compliant with Imposed Conditions 15 and 18.

The TSS value at SW-1 (Upstream/Downstream) on 21 November exceeded the Project Water Quality Objectives as outlined in the C-EMP. However, as the SW-1 is located upstream of the project works this exceedance cannot be attributed to project works.

Table 9 – Summary of Post Rainfall Monitoring Results

Date	Location	Waterway	Discharge Criteria <sup>1</sup>			
			Turbidity (NTU) Nil until Turbidity / TSS correlation achieved <sup>2</sup>	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
21 Nov	SW1 (Upstream / Downstream)	Breakfast Creek	24.0	88	91.1	7.9
21 Nov	SW3 (Downstream / Upstream)	Breakfast Creek	15.5	45	87.1	7.32
6 Nov	SW-05 (Upstream)	Moolabin Creek	7.5	22	79.4	7.6
21 Nov	SW-05 (Upstream)	Moolabin Creek	4.7	16	90.6	7.36
29 Nov	SW-05 (Upstream)	Moolabin Creek	8.2	5	86.6	6.81
6 Nov	SW-06 (Downstream)	Moolabin Creek	6.6	5	83.9	7.35
21 Nov	SW-06 (Downstream)	Moolabin Creek	27.7	27	75.9	7.97
29 Nov	SW-06 (Downstream)	Moolabin Creek	6	11.7	88.7	6.56
6 Nov	SW-7A (Upstream)	Rocky waterholes	26.2	11	89	7.7
21 Nov	SW-7A (Upstream)	Rocky waterholes	24.4	21	99	7.8
29 Nov	SW-7A (Upstream)	Rocky Waterholes	14.9	6	89	6.6
6 Nov	SW-07 (Midstream)	Rocky waterholes	13.4	6	73	7.6
21 Nov	SW-07 (Midstream)	Rocky waterholes	30.2	30	83	7.7
29 Nov	SW-07 (Midstream)	Rocky Waterholes	15.3	12	78	6.5
6 Nov	SW-08 (Downstream)	Rocky waterholes	15.1	<5	76	7.61
21 Nov	SW-08 (Downstream)	Rocky waterholes	32.1	30	82.6	8.12
29 Nov	SW-08 (Downstream)	Rocky Waterholes	16	8	67.2	6.64

### 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 dry season (April to August) monitoring completed during the monitoring period.

Wet season (November to March) monitoring is scheduled for January 2024.

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

<sup>1</sup> Refer to the waterways and water quality management plan, a C-EMP sub-plan for details of derivation of the discharge criteria.

<sup>2</sup> 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.



### 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.

## 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 10 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 11 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 <sub>10</sub> , and deposited dust was also undertaken. TSP, PM <sub>10</sub> monitoring was carried out for three active Worksites	Compliant  Compliant  Compliant	Not Applicable
Air Quality	Complaint's response	Moderate to High	Not triggered	Compliant	Not Applicable
Noise	Buffer distance tests based on the outcomes of the predictive assessment based / risk profile of activities	Moderate to High	No – noise monitoring was not triggered based on the outcome of predictive noise models for the SCAS works in November.	Compliant	Not Applicable
Noise	Plant noise audits for noisy plant to validate models input as required	Moderate to High	No	N/A	Not Applicable
Noise	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	Dry Season monitoring completed during the reporting period. Wet season monitoring to be completed later in the year.	Compliant	Not Applicable
Water Quality	Post Rainfall	Moderate to High	Triggered in the south, Field and lab testing undertaken	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 (if required)

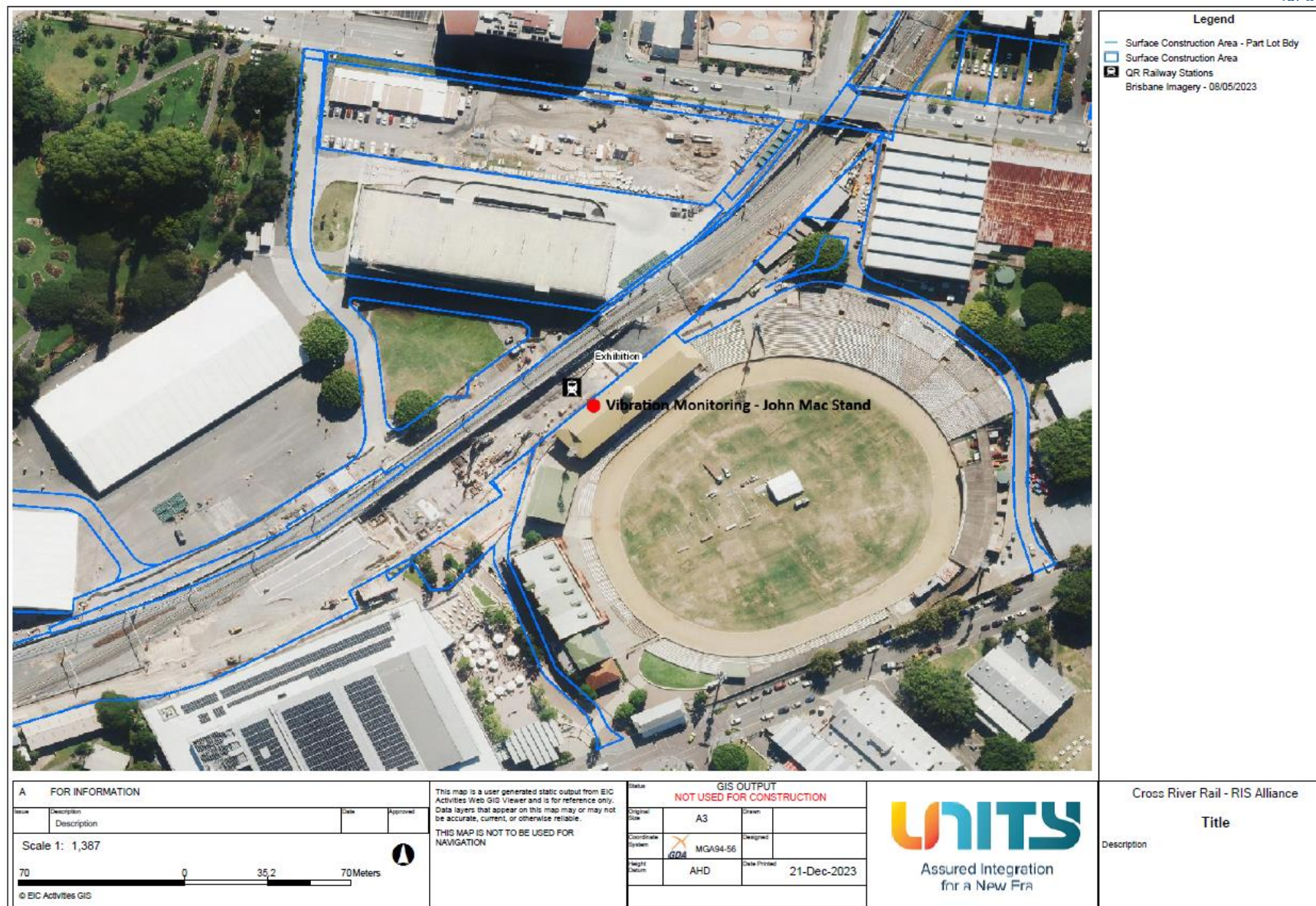


Figure 6 RNA Vibration Monitoring November 2023





Figure 7 Yeerongpilly Vibration Monitoring November 2023



## Attachment 3   Monitoring Locations – Air Quality

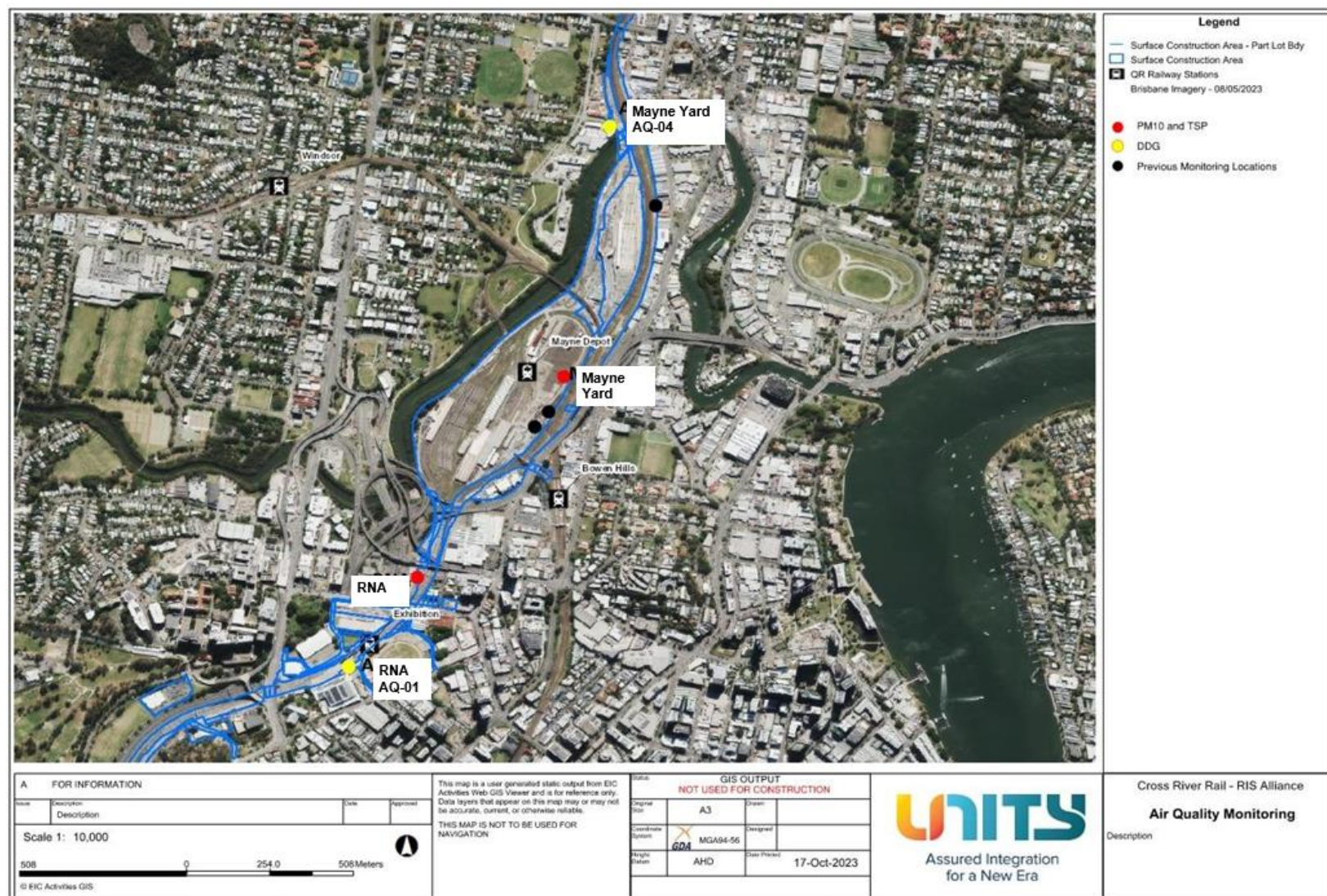


Figure 8 – Mayne Yard AQ locations



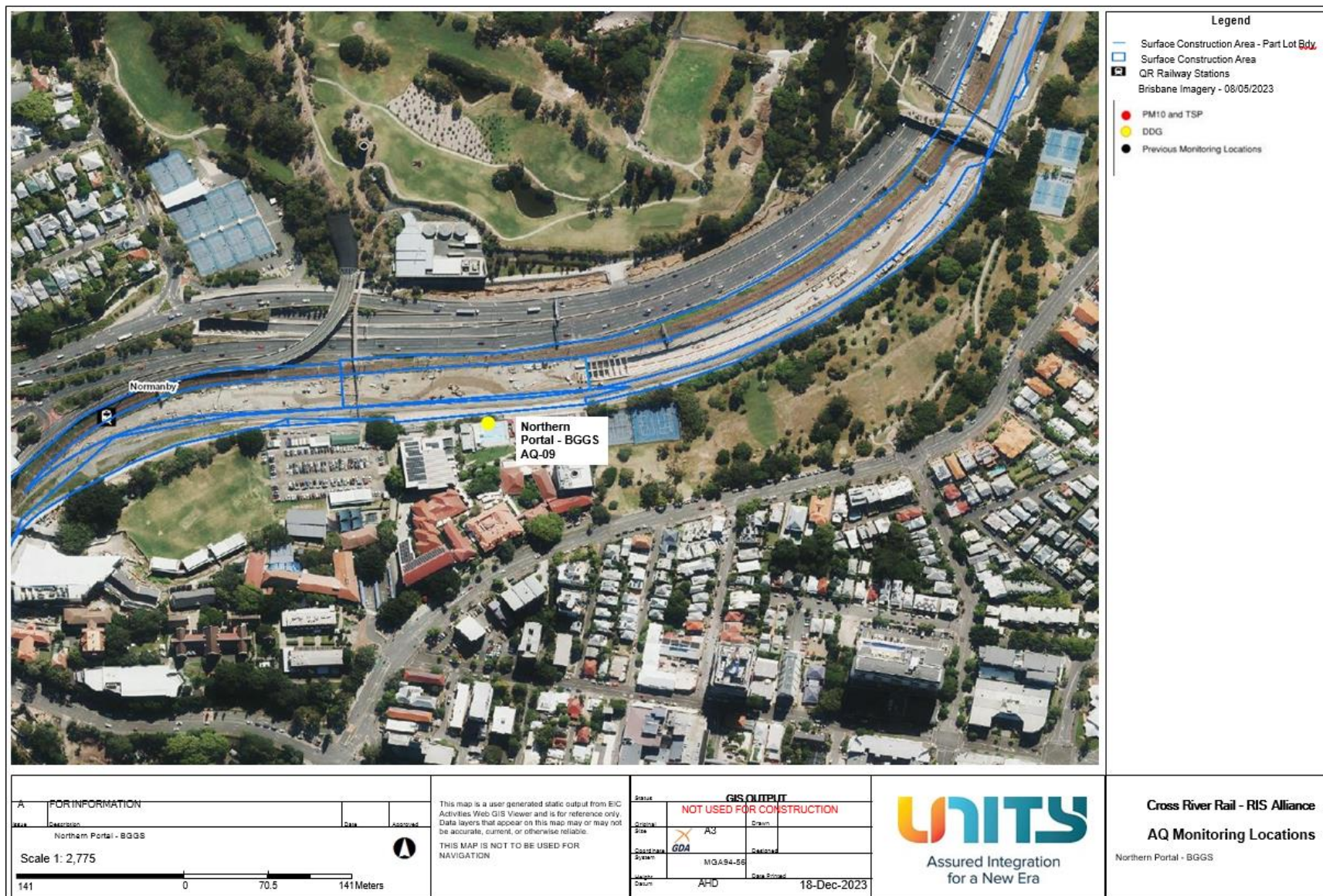


Figure 9 - Northern portal AQ locations



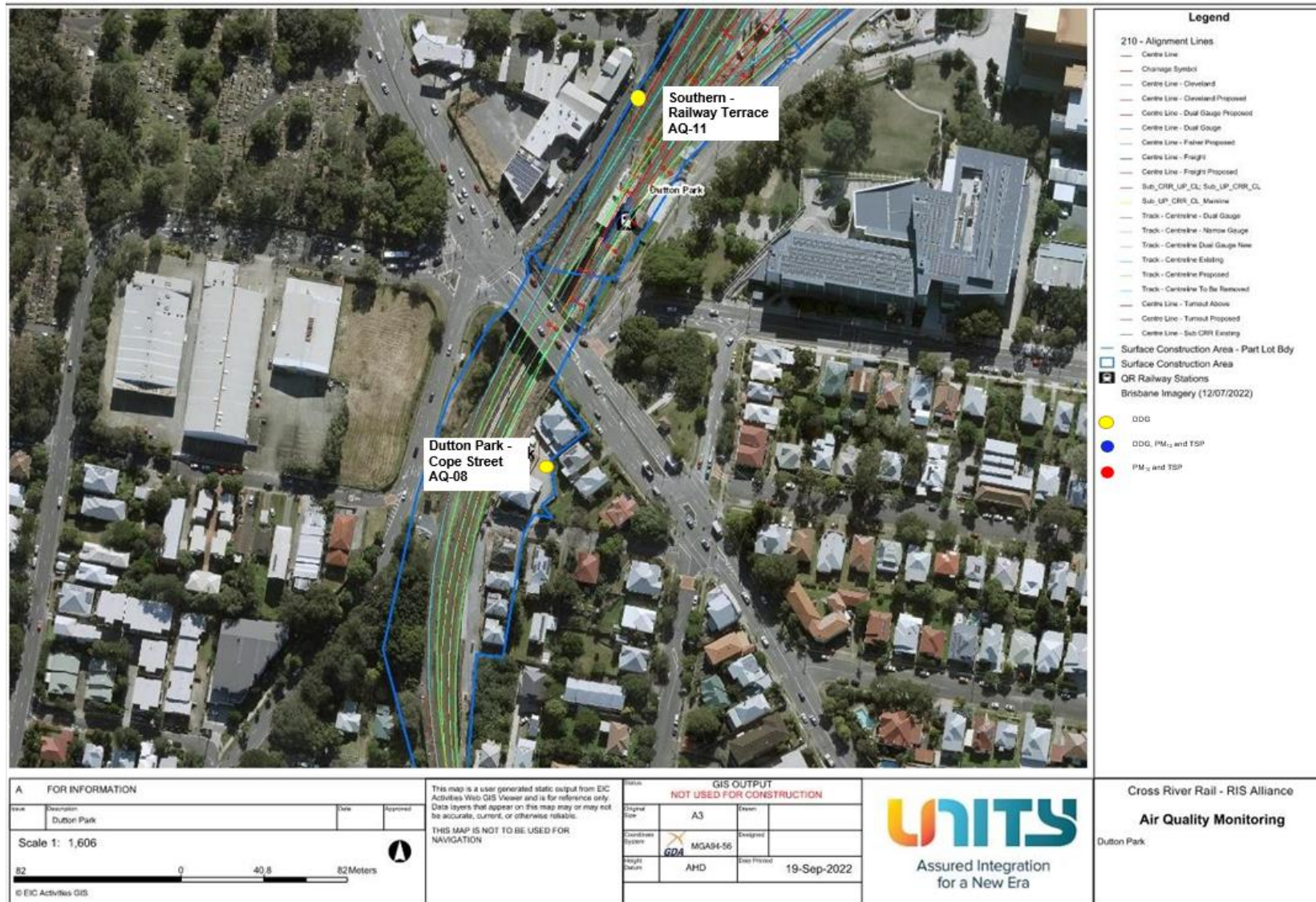


Figure 10 - Sothern portal AQ locations



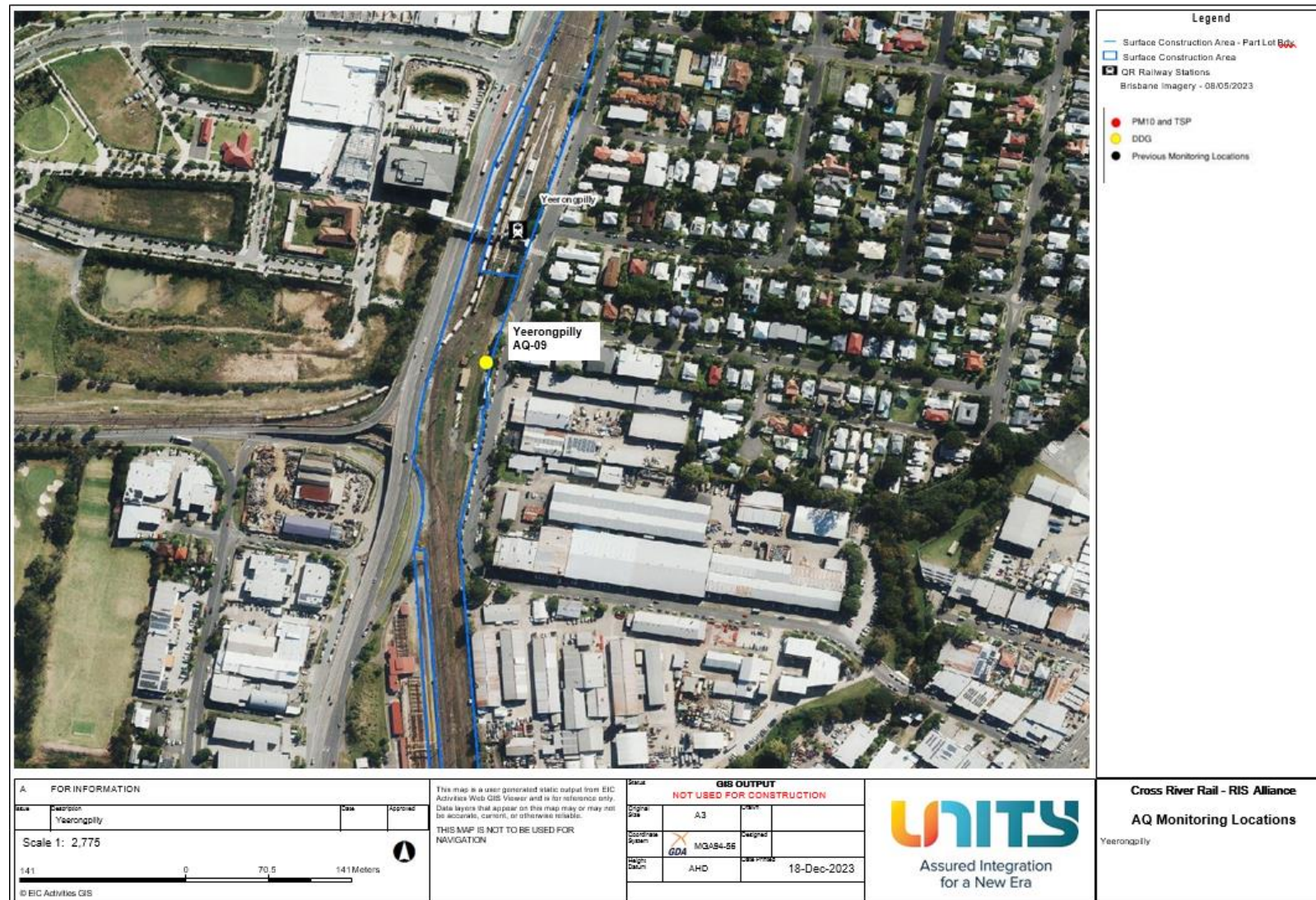


Figure 11 - Yeerongpilly AQ locations



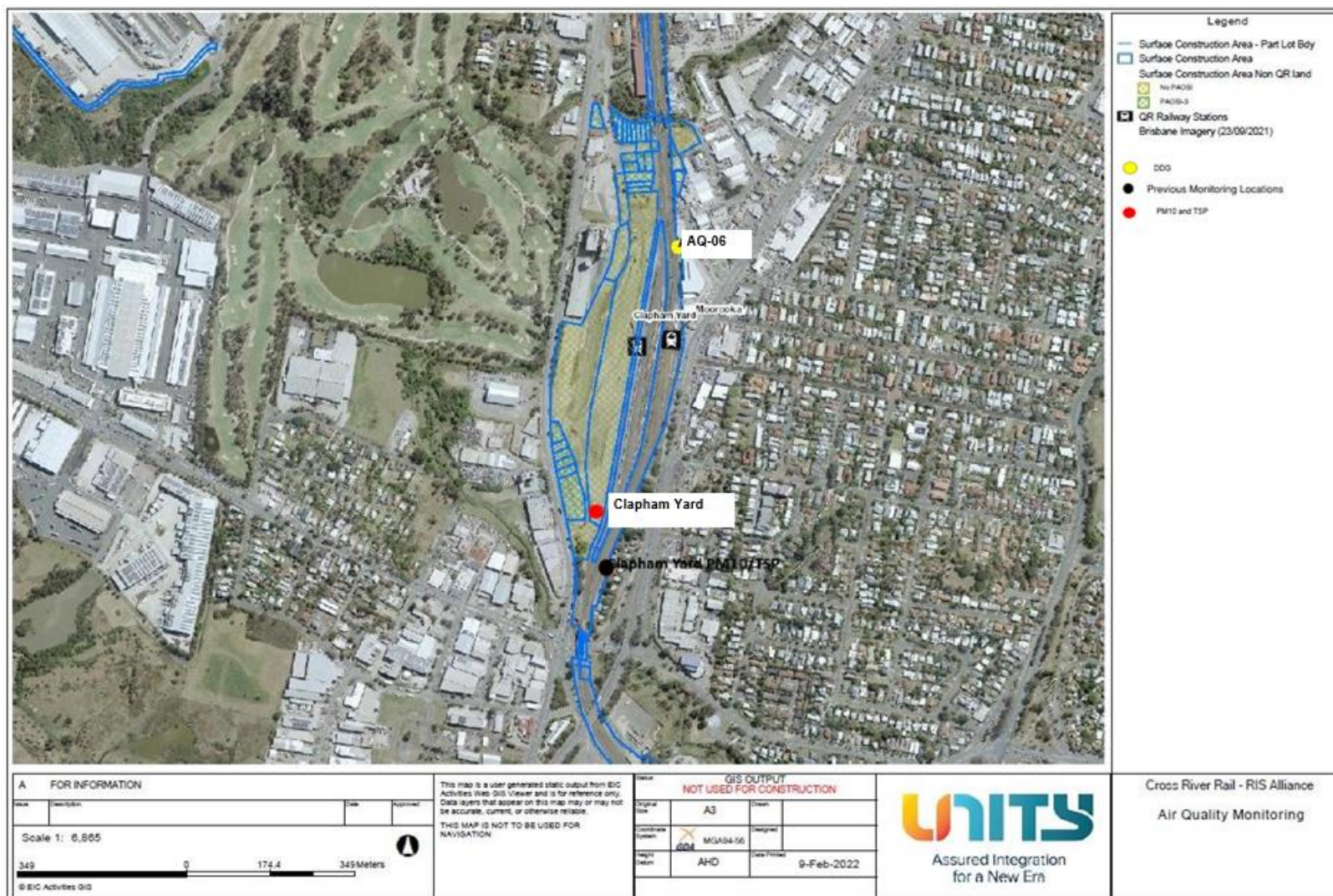


Figure 12 – Clapham yard AQ locations

## Attachment 4    Monitoring Locations – Surface Water



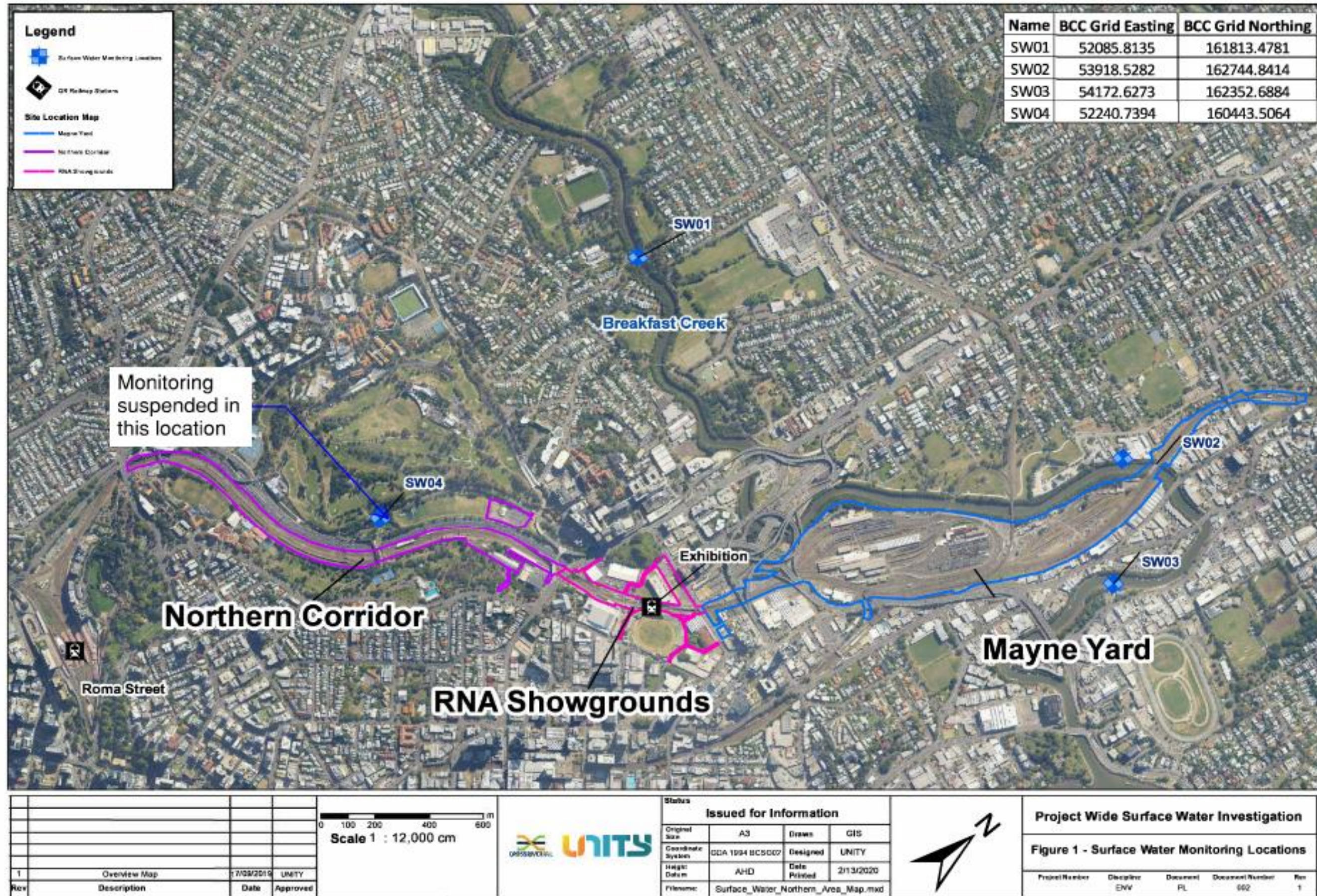


Figure 13 – Northern WQ Locations



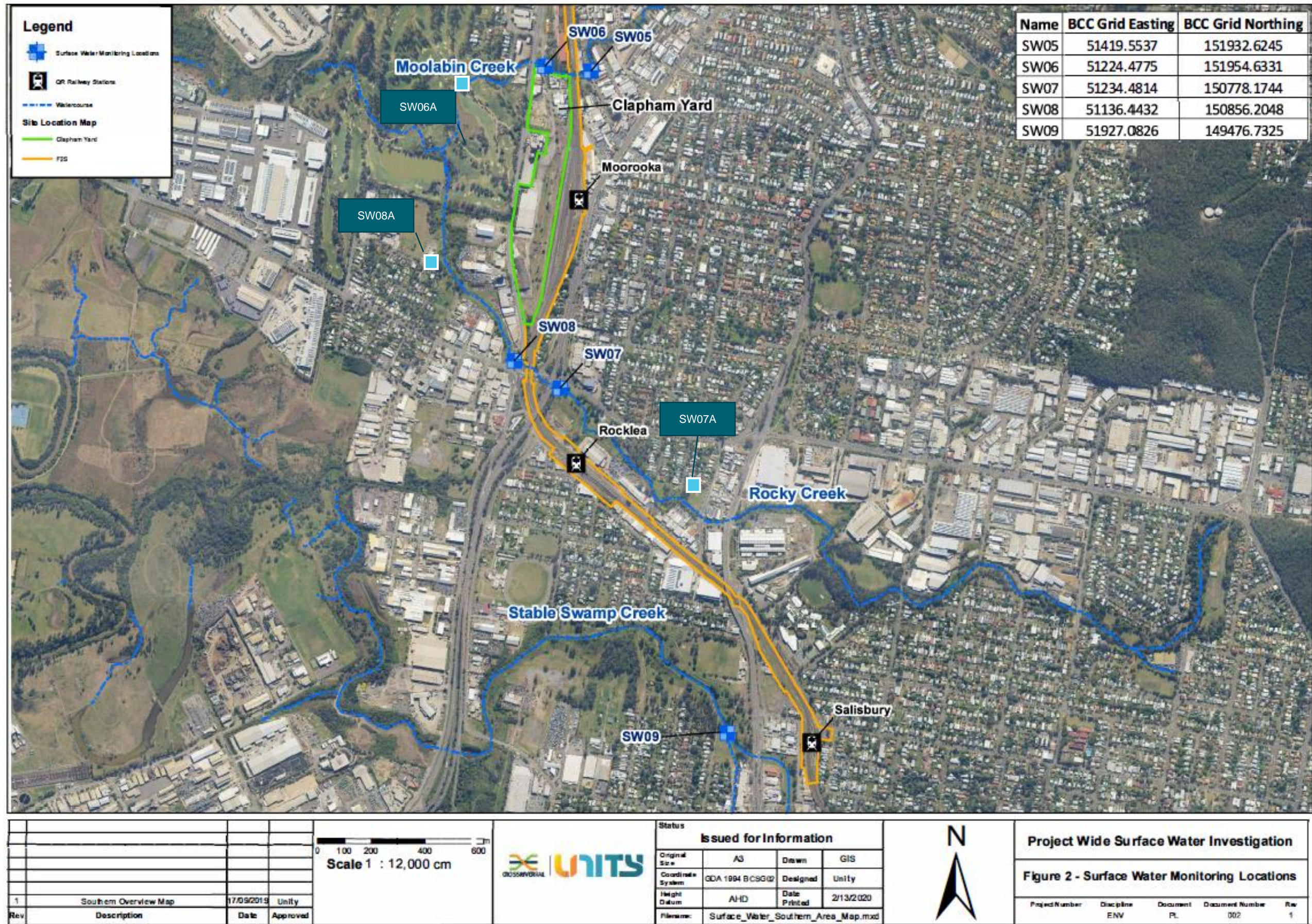


Figure 14 – Southern WQ Locations



# Appendix B TSD Monthly Report

## COORDINATOR-GENERAL'S MONTHLY REPORT: NOVEMBER 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.

No vibration monitoring was triggered or required in November 2023. Noise monitoring was conducted on three (3) occasions during November 2023. Each noise 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 and Southern Portal precinct sites during November 2023. Air quality monitoring confirmed works adhered to Project requirements.

Water quality monitoring was conducted before the release of water from the site on nineteen (19) occasions. Each monitoring event confirmed Project requirements were adhered to. Three (3) 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.	<b>General Conditions</b> – 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.	<b>Outline Environmental Management Plan</b> – timely submission to the Coordinator-General, including required sub-plans.	N/A	The OEMP is not an obligation of the CBGU Joint Venture.
3.	<b>Design</b> – the achievement of the Environmental Design Requirements.	Yes	Design and implementation proceeded in accordance with the Environmental Design Requirements.
4.	<b>Construction Environmental Management Plan</b> – all relating to Relevant Project Works.	Yes	All CBGU works were conducted in accordance with the Construction Environmental Management Plan (CEMP) (Rev 11).
5.	<b>Compliance and Incident Management</b> – Non-compliance events, notifications, and reporting.	Yes	Nil non-compliances occurred during the monitoring period (refer to Section 4).
6.	<b>Reporting</b> – Monthly and Annual reporting.	Yes	All reporting requirements are completed in accordance with Imposed Condition 6.
7.	<b>Environmental Monitor</b> – 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.	<b>Community Relations Monitor</b> – 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.	<b>Community Engagement Plan</b> – 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.	<b>Hours of Work</b> – 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.	<b>Noise</b> – 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.
	<b>Vibration</b> – 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.	<b>Property Damage</b> relating to ground movement	Yes	The management of potential impacts relating to property damage has been completed in accordance with Imposed Condition 12.
13.	<b>Air Quality</b> – 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.	<b>Traffic and Transport</b> – 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.	<b>Water Quality</b> – Works must not discharge surface water and groundwater from the construction site above the relevant environmental values and water quality objectives.	Yes	CBGU has prepared and manages processes to ensure water quality is managed in accordance with Imposed Condition 15.
16.	<b>Water Resources</b> – 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.	<b>Surface Water</b> – Must be designed to avoid inundation from stormwater due to a 2-year (6hr) ARI rainfall event and flood waters due to a 5-year ARI rainfall event and constructed to avoid afflux or cause the redirection of uncontrolled surface water flows, including stormwater flows, outside of worksites.	Yes	Design of the CBGU Project works considers the requirements of Imposed Condition 17.
18.	<b>Erosion and Sediment Control</b> – Provisions for erosion and sediment control must be consistent with the Guidelines for Best Practice Erosion and Sediment Control (International Erosion Control Association, 2008) and the Department of Transport and Main Roads' Technical Standard MRTS52.	Yes	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.	<b>Acid Sulfate Soils</b> 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.	<b>Landscape and Open Space</b> – 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.	<b>Worksite Rehabilitation</b> – 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.	<b>Flood Water</b> – 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 where these goals may not be achieved.

No vibration monitoring was triggered or required in November 2023.

*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)
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Nil

## 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 three (3) occasions during November 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 <sup>[3]</sup> Monitoring	Activity	Dominant Noise Source	Noise Goal LA10 <sup>[1]</sup>	Noise level LA10	Noise Goal LAeq <sup>[2]</sup>	Noise level LAeq	Adhered to Project Requirements (Yes / No)
1.	8/11/2023	10:46 PM	Stanley Street (Woolloongabba Precinct)	Model Verification	External	Utilities works	Construction and road traffic	54	69.7	47	66.6	Yes
2.	13/11/2023	9:26 AM	Peter Doherty Street (Southern Portal Precinct)	Construction Monitoring at Sensitive Places	External	Concrete works	Construction	67	72.9	62	71.4	Yes
3.	24/11/2023	11:30 AM	Railway Terrace (Southern Portal Precinct)	Construction Monitoring at Sensitive Places	External	Concrete and crane works	Construction and road traffic	57	57.9	47	58.3	Yes

- [1] Intermittent noise goal (LA10)

- [2] Continuous noise goal (LAeq)

- [3] In accordance with Imposed Condition 11, where internal noise levels were unable to be measured, external noise goals were developed by an acoustic specialist using the following standards: ISO 140-5:1998 Acoustics – Measurement of Sound Insulation in Buildings and of Building Elements, Part 5: Field measurements of airborne sound insulation of façade elements and facades and ISO 354:1985 Acoustics – Measurement of sound absorption in a reverberation room.

### 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 where these goals may not be achieved. Dust deposition monitoring was performed in November 2023. The dust deposition gauge results for the reporting period are detailed below, and all monitoring data adhered to Project requirements.

Table 4: Air Quality Monitoring – November Deposited Dust Data

Location	Project Wide Air Quality Goals <sup>[1]</sup>			Monitoring results (mg/m <sup>2</sup> /day)	Comments
	Criterion	Air Quality Indicator	Goal (mg/m <sup>2</sup> /day)		
Roma Street Precinct	Nuisance	Deposited dust	120	25.00	Air quality monitoring was performed during the reporting period. All results adhered to Project requirements.
Albert Street Precinct (North)				46.43	
Albert Street Precinct (South)				17.86	
Woolloongabba Precinct (North)				21.87	
Woolloongabba Precinct (South)				- <sup>[2]</sup>	
Boggo Road Precinct (North)				- <sup>[3]</sup>	
Boggo Road Precinct (South)				100.00	
Southern Portal (South) <sup>[3]</sup>				38.71	
Southern Portal (East)				22.58	

- <sup>[1]</sup> Project works must aim to achieve construction air quality goals. The Coordinator-General Change Report – Whole of Project Refinements 2019 acknowledges instances exist that these goals may not be achieved.
- <sup>[2]</sup> The Woolloongabba (South) Dust Deposition Gauge was tampered with and funnel was stolen during the reporting period. No sample was available for collection/analysis. A new funnel has been installed.
- <sup>[3]</sup> The Boggo Road (North) Dust Deposition Gauge was tampered with and funnel was stolen during the reporting period. No sample was available for collection/analysis. A new funnel has been installed.

### 3.3.2 Ambient Air Quality Results

Total Suspended Particles (TSP) and particulate matter less than 10µm (PM10) monitoring were conducted during November 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 and Boggo Road Precincts during November 2023. Three (3) Government air quality stations near the Construction Precincts are also utilised.

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

Date	TSP Project Goal <sup>[1]</sup>	PM10 Project Goal	Woolloongabba		Albert		Boggo Road	
			TSP	PM 10	TSP	PM 10	TSP	PM 10
			(µg/m <sup>3</sup> /24 hr)					
01-Nov-23	80	50	20.30	20.13	20.78	17.75	13.24	13.22
02-Nov-23	80	50	12.14	12.08	14.51	12.28	8.33	8.31
03-Nov-23	80	50	10.12	10.07	11.84	9.74	6.33	6.33
04-Nov-23	80	50	11.26	11.22	7.31	6.69	8.63	8.63
05-Nov-23	80	50	8.88	8.86	5.34	5.08	6.14	6.14
06-Nov-23	80	50	7.05	7.02	8.24	7.16	4.94	4.94
07-Nov-23	80	50	6.47	6.41	10.95	8.89	4.13	4.13
08-Nov-23	80	50	5.24	5.19	8.97	7.28	3.09	3.09
09-Nov-23	80	50	4.88	4.84	9.06	7.21	3.26	3.25
10-Nov-23	80	50	7.18	7.13	15.79	13.05	4.00	3.94
11-Nov-23	80	50	9.39	9.36	23.00	19.00	7.79	7.75
12-Nov-23	80	50	6.86	6.84	23.00	19.00	4.75	4.74
13-Nov-23	80	50	8.28	8.23	23.00	19.00	4.85	4.84
14-Nov-23	80	50	12.68	12.62	17.04	14.17	7.73	7.71
15-Nov-23	80	50	14.37	14.29	14.15	12.22	8.94	8.93
16-Nov-23	80	50	21.80	21.70	22.58	19.43	14.42	14.39
17-Nov-23	80	50	16.67	16.54	20.17	16.60	10.59	10.55
18-Nov-23	80	50	7.46	7.43	9.84	8.50	4.01	3.98

Date	TSP Project Goal <sup>[1]</sup>	PM10 Project Goal	Woolloongabba		Albert		Boggo Road	
			TSP	PM 10	TSP	PM 10	TSP	PM 10
			(µg/m <sup>3</sup> /24 hr)					
19-Nov-23	80	50	8.48	8.45	7.09	6.62	5.21	5.08
20-Nov-23	80	50	9.34	9.22	8.11	7.54	5.00	5.00
21-Nov-23	80	50	8.23	8.21	9.08	7.99	5.56	5.56
22-Nov-23	80	50	8.85	8.81	11.93	10.49	5.17	5.17
23-Nov-23	80	50	6.01	5.97	11.15	9.16	3.77	3.77
24-Nov-23	80	50	7.25	7.18	15.31	13.88	4.76	4.75
25-Nov-23	80	50	6.01	5.97	9.77	9.74	3.88	3.87
26-Nov-23	80	50	5.75	5.72	8.49	8.46	4.07	4.05
27-Nov-23	80	50	7.35	7.30	11.48	11.40	5.48	5.45
28-Nov-23	80	50	10.76	10.72	15.96	15.89	8.49	8.47
29-Nov-23	80	50	7.19	7.16	13.02	12.96	5.31	5.30
30-Nov-23	80	50	11.93	11.73	18.00	17.83	8.81	8.52

- [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.

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: **40.4 µg/m<sup>3</sup>/24 hr** (<https://apps.des.qld.gov.au/air-quality/chart/?station=cbd&parameter=18&date=1/11/2023&timeframe=month>)
- South Brisbane: PM10 daily maximum average: **40.9 µg/m<sup>3</sup>/24 hr** (<https://apps.des.qld.gov.au/air-quality/chart/?station=sbr&parameter=18&date=1/11/2023&timeframe=month>)
- Woolloongabba: PM10 daily maximum average: **36 µg/m<sup>3</sup>/24 hr** (<https://apps.des.qld.gov.au/air-quality/chart/?station=woo&parameter=18&date=1/11/2023&timeframe=month>).

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

# Particle PM<sub>10</sub> at Brisbane CBD, 1–30 November 2023 [about Particle PM<sub>10</sub>](#)

[Brisbane CBD station overview](#)

The guideline for Particle PM<sub>10</sub> is 100µg/m<sup>3</sup> (1hr avg) and 50µg/m<sup>3</sup> (24hr avg).

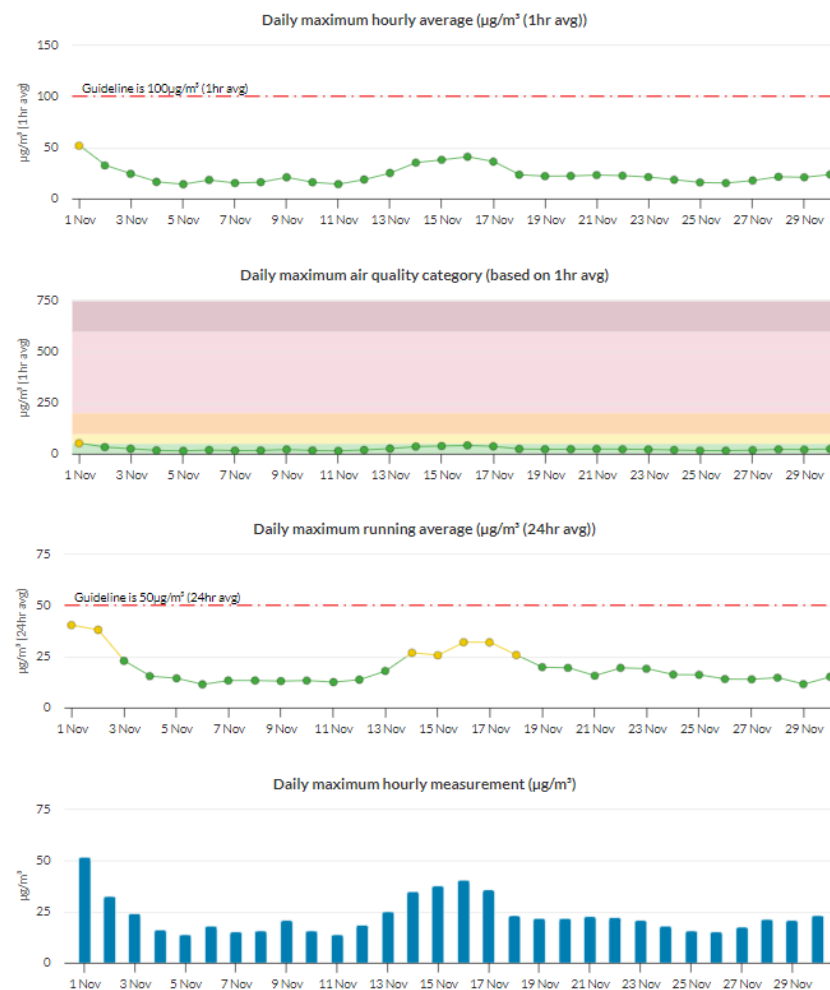


Figure 1: Brisbane CBD – DES Station - PM10 graph for November 2023 (reproduction from the DES website).



# Particle PM<sub>10</sub> at South Brisbane, 1–30 November 2023 [about Particle PM<sub>10</sub>](#)

[South Brisbane station overview](#)

The guideline for Particle PM<sub>10</sub> is 100µg/m<sup>3</sup> (1hr avg) and 50µg/m<sup>3</sup> (24hr avg).

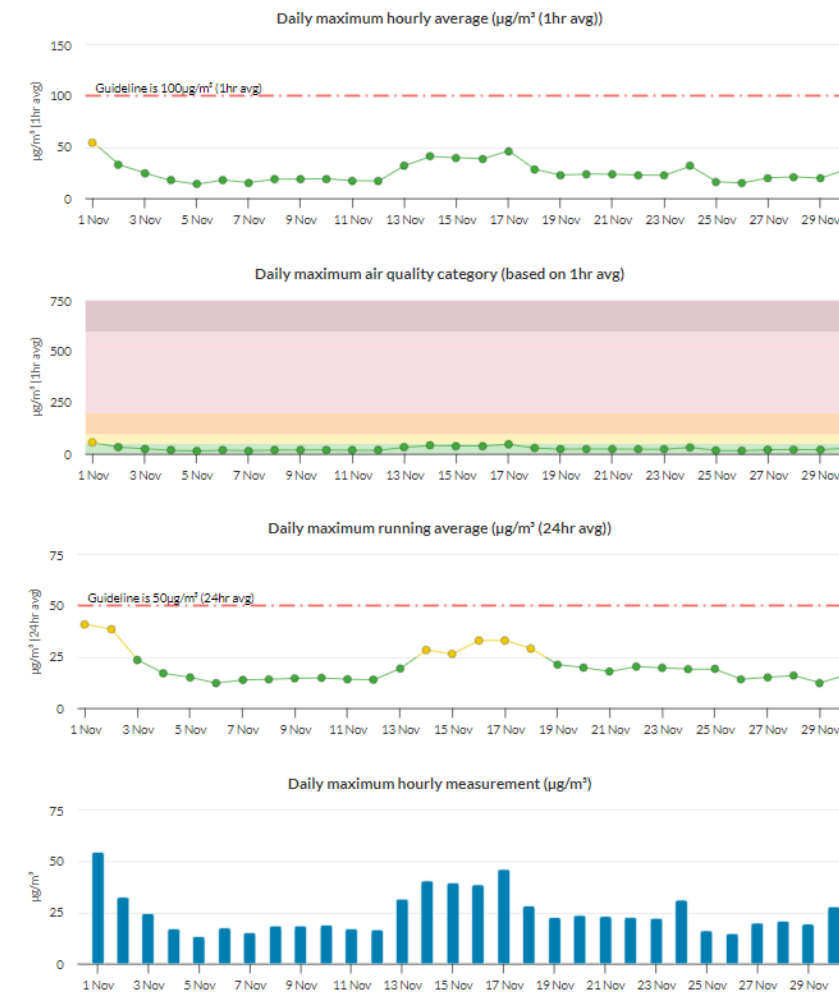


Figure 2: South Brisbane – DES Station - PM10 graph for November 2023 (reproduction from the DES website).

### Particle PM<sub>10</sub> at Woolloongabba, 1–30 November 2023 [about Particle PM<sub>10</sub>](#)

[Woolloongabba station overview](#)

The guideline for Particle PM<sub>10</sub> is 100µg/m<sup>3</sup> (1hr avg) and 50µg/m<sup>3</sup> (24hr avg).

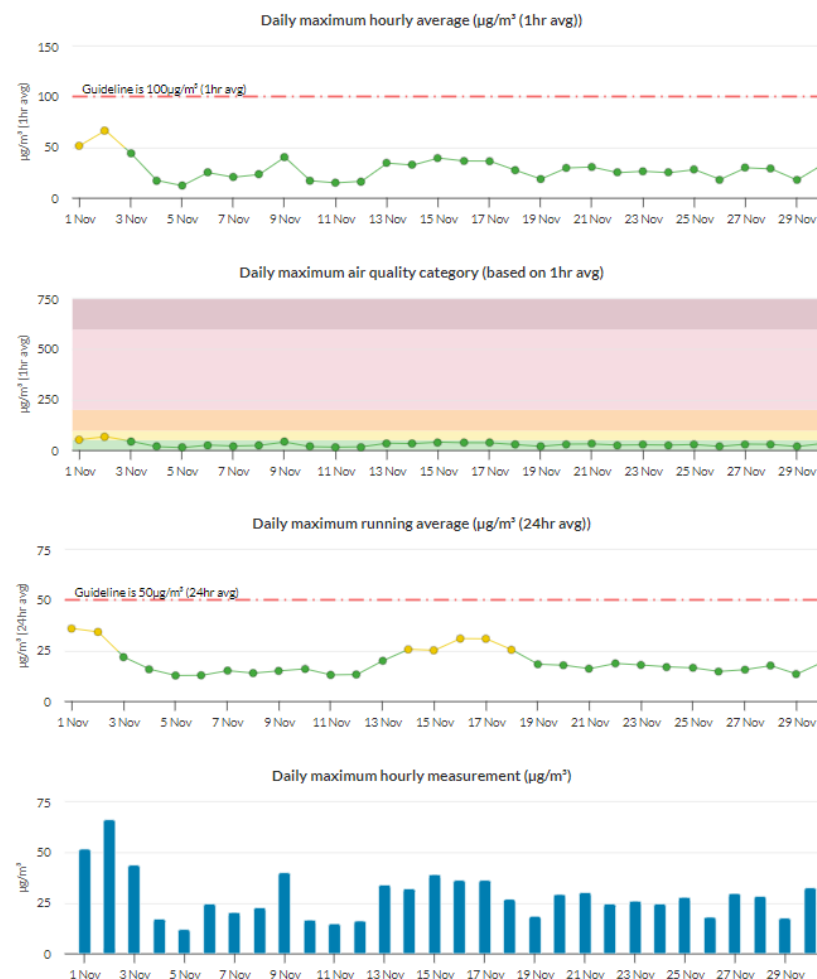


Figure 3: Woolloongabba – DES Station - PM<sub>10</sub> graph for November 2023 (reproduction from the DES website).

### 3.4 Water Quality – Discharge

CBGU undertook one (1) water quality monitoring event 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 6: Groundwater Discharge – Water Quality Monitoring Data

Location	Date	Testing of Water Quality Objectives <sup>[1]</sup>											Adhered to Project Requirements (Yes / No)
		pH	Suspended solids (mg/L)	Turbidity (NTU)	Ammonia N (µg/L) <sup>[3]</sup>	Oxidised N (µg/L) <sup>[3]</sup>	Organic N (µg/L) <sup>[3]</sup>	Total nitrogen (µg/L) <sup>[4]</sup>	Total phosphorus (µg/L)	Filterable Reactive phosphorus (µg/L) <sup>[3]</sup>	Chlorophyll a (µg/L)	Dissolved oxygen (%) <sup>[2]</sup>	
Roma Street <sup>[5]</sup>	16/11/2023	7.71	<5	0.45	480	580	400	1500	30	<10	<1	89.41	Yes

- <sup>[1]</sup> 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.
- <sup>[2]</sup> 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.
- <sup>[3]</sup> 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.
- <sup>[4]</sup> 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.
- <sup>[5]</sup> The Water Treatment Sampling regime has been reduced to be consistent with the Project requirements. Water treatment plant results will be reported quarterly.
- 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 7: Surface Water Discharge - Water Quality Monitoring Data

No.	Location	Date	Testing of Water Quality Objectives <sup>[1]</sup>		Adhered to Project Requirements (Yes / No)
			pH	Turbidity (NTU)	
1.	Northern Portal	1/11/2023	8.04	1.84	Yes
2.	Northern Portal	2/11/2023	8.10	1.60	Yes
3.	Northern Portal	3/11/2023	8.04	3.42	Yes
4.	Northern Portal	6/11/2023	7.82	38.40	Yes
5.	Northern Portal	7/11/2023	7.65	3.15	Yes
6.	Northern Portal	9/11/2023	8.01	12.30	Yes
7.	Northern Portal	10/11/2023	8.20	9.35	Yes
8.	Northern Portal	10/11/2023	8.05	16.40	Yes
9.	Northern Portal	13/11/2023	7.56	4.82	Yes
10.	Northern Portal	14/11/2023	7.40	2.52	Yes
11.	Northern Portal	15/11/2023	7.66	1.86	Yes
12.	Northern Portal	16/11/2023	7.85	2.97	Yes
13.	Northern Portal	17/11/2023	7.85	1.86	Yes
14.	Northern Portal	20/11/2023	7.80	27.40	Yes
15.	Northern Portal	22/11/2023	7.90	30.10	Yes

16.	Northern Portal	23/11/2023	7.85	2.60	Yes
17.	Northern Portal	24/11/2023	7.90	2.20	Yes
18.	Northern Portal	27/11/2023	8.01	12.48	Yes
19.	Northern Portal	28/11/2023	7.94	16.81	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 November 2023, CBGU JV undertook three (3) rounds 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 8: Offsite Upstream & Downstream Water Quality Data

Location	Upstream / Downstream	Date	Purpose of Monitoring	Turbidity (NTU)	Dissolved oxygen (%)	pH
Albert Street	Upstream	7/11/2023	Monthly	13.62	88.73	7.74
Albert Street	Downstream	7/11/2023	Monthly	15.51	89.56	7.65
Woolloongabba	Upstream	14/11/2023	Monthly	34.2	99.97	7.81
Woolloongabba	Downstream	14/11/2023	Monthly	30	93.49	7.91
Boggo Road <sup>[1]</sup>	Downstream	14/11/2023	Monthly	19.2	46.98	7.21
Northern Portal	Downstream	16/11/2023	Monthly	1.94	119.04	8.35
Northern Portal	Upstream	16/11/2023	Monthly	13.93	104.03	8.46
Roma Street	Upstream	16/11/2023	Monthly	38.2	90.06	8.49
Roma Street	Downstream	16/11/2023	Monthly	43.3	89.25	8.53
Woolloongabba	Upstream	21/11/2023	Post Rainfall	33.4	106.51	7.77
Woolloongabba	Downstream	21/11/2023	Post Rainfall	20.1	98.41	7.92
Boggo Road <sup>[1]</sup>	Downstream	21/11/2023	Post Rainfall	33.7	91.74	7.64

Location	Upstream / Downstream	Date	Purpose of Monitoring	Turbidity (NTU)	Dissolved oxygen (%)	pH
Albert Street	Upstream	21/11/2023	Post Rainfall	19.1	99.43	7.7
Albert Street	Downstream	21/11/2023	Post Rainfall	17.95	109.93	7.49
Northern Portal	Upstream	21/11/2023	Post Rainfall	12.7	84.26	7.29
Northern Portal	Downstream	21/11/2023	Post Rainfall	27.9	88.50	7.36
Roma Street	Upstream	21/11/2023	Post Rainfall	18.9	89.47	7.38
Roma Street	Downstream	21/11/2023	Post Rainfall	22.3	88.68	7.53
Northern Portal	Upstream	29/11/2023	Post Rainfall	4.59	80.47	6.84
Northern Portal	Downstream	29/11/2023	Post Rainfall	18.58	71.41	6.75
Roma Street	Upstream	29/11/2023	Post Rainfall	39.4	87.85	7.59
Roma Street	Downstream	29/11/2023	Post Rainfall	51.1	89.25	7.53
Woolloongabba	Upstream	29/11/2023	Post Rainfall	13.19	92.39	7.86
Woolloongabba	Downstream	29/11/2023	Post Rainfall	66.7	91.11	7.81
Boggo Road <sup>[1]</sup>	Downstream	29/11/2023	Post Rainfall	11.65	87.21	7.7
Albert Street	Upstream	29/11/2023	Post Rainfall	52.3	91.31	7.69
Albert Street	Downstream	29/11/2023	Post Rainfall	50.2	87.37	7.68

- [1] Monitoring at the Boggo Road site occurs at a culvert outlet at the beginning of the surface catchment. There is no upstream/downstream monitoring point as such. The culvert outlet receives water released from the site, as well as a broader stormwater catchment.



## 4 Non-Compliances

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

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

Table 9: Non-Compliance Events 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
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Nil

## 5 Complaints

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

During November 2023, six (6) complaints relating to the Project were received, as detailed in

Table 10 below.

Table 10: Summary of Complaints

No.	Date	Location	Description of Issue	Responses	Status of Event
1.	2/11/2023	Albert Street (Albert Street Precinct)	Noise	A stakeholder contacted the Project regarding noise generated from the Albert Street worksite. 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.  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.	Closed
2.	09/11/2023	Albert Street (Albert Street Precinct)	Noise	A stakeholder contacted the Project regarding noise generated from the Albert Street worksite. 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.  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.	Closed
3.	23/11/2023	Albert Street (Albert Street Precinct)	Noise	A stakeholder contacted the Project regarding noise generated from the Albert Street worksite. 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.  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.	Closed

4.	23/11/2023	Albert Street (Albert Street Precinct)	Noise	<p>A stakeholder contacted the Project regarding noise generated from the Albert Street worksite. 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
5.	24/11/2023	Boggo Road (Boggo Road Precinct)	Traffic Management	<p>A stakeholder contacted the Project regarding workforce parking.</p> <p>CBGU investigated and informed the workforce, via toolbox talk, about parking requirements.</p>	Closed
6.	30/11/2023	Boggo Road (Boggo Road Precinct)	Traffic Management	<p>A stakeholder contacted the Project regarding traffic management associated with pedestrians and cyclists.</p> <p>CBGU investigated and informed the stakeholder that all traffic is managed in line with the approved CBGU Traffic Management Plan (TMP).</p>	Closed