

Construction Air Quality Monitoring Program

Project Name: M6 Stage 1

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|-------------------------|------------------------------|
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1. Introduction

1.1. Context

This Construction Air Quality Monitoring Program (the Program) has been prepared for implementation during construction of the M6 Stage 1 (the Project). This Monitoring Program is Appendix A of the Air Quality and Odour CEMP Sub-plan and has been prepared to address the requirements of the Minister's Conditions of Approval (CoA), the Environmental Management Measures (EMM) listed in the M6 Stage 1 Environmental Impact Statement (EIS) and other applicable legislation. This Monitoring Program is part of the Construction Environmental Management Plan (CEMP) and further context and detail is provided in the Air Quality and Odour CEMP Sub-plan and CEMP.

1.2. Scope

This Construction Air Quality Monitoring Program describes how the CPB Contractors, Ghella, UGL Engineering (CGU) joint venture will monitor air quality impacts during construction of the Project in accordance with CoAs C13(e) and E1. The Project's EIS identified that the key risks to air quality during the construction phase of the Project were: annoyance due to dust soiling; the risk of health effects due to an increase in exposure to particulate matter for the nearest sensitive receivers; and harm to ecological receptors.

The Construction Air Quality Monitoring Program is focused on detecting dust and soiling impacts (the risks identified in Section 9.5 of the EIS) and considers the sensitivity of nearby receivers to dust impacts, noting that dust risk is also closely related to the distance from the source (as per Table 9-18 of the EIS). Monitoring has been tailored to these risks and is optimised to provide real-time data that can allow pro-active and reactive management to any issues identified through monitoring.

A Trigger Action Response Plan (TARP) was developed in consultation with the EPA and in addition to providing management responses for monitoring results detected through this Monitoring Program, it also includes management responses for the detection of odours related to general construction activities. During the consultative process, it was agreed that odour arising from general construction activities will be monitored through inspections and managed through the TARP in this Monitoring Program, while odour arising from:

- Remediation would be managed in accordance with the applicable Remediation Action Plan/s
- Bulk excavation of acid sulfate soils would be managed in accordance with the Acid Sulfate Soil Management Plan
- Excavation of material at Bicentennial Park would be managed in accordance with the Leachate and Landfill Gas CEMP Sub-plan and Monitoring Program

The purpose of monitoring is to measure potential impacts to local air quality and to facilitate the implementation of appropriate management measures to address impacts during construction. Information and data collected during the implementation of this Monitoring Program will be used in the assessment of mitigation measures applied during construction of the Project (refer to Table 12 of Air Quality and Odour CEMP Sub-plan).

Tunnel ventilation monitoring requirements are not within the scope of this construction phase Monitoring Program and this program does not attempt to address ambient air quality monitoring, which is required to commence at least 12 months prior to operation in accordance with CoAs E19 to E25.

1.3. Consultation

This Program was prepared in consultation with New South Wales (NSW) Environmental Protection Authority (EPA) in accordance with CoA C13(e). Comment was sought on a draft AQMP and the EPA provided feedback was used to update and correct the document. A subsequent meeting was held with the EPA to discuss the feedback and the proposed updates to the plan. The Monitoring Program was also provided to relevant councils (Bayside Council, Canterbury Bankstown Council and Georges River Council) and NSW Health during consultation on the Air Quality and Odour CEMP Sub-plan.

Key matters raised by the stakeholders during this process are listed in Table 1.

Table 1: Summary of consultation

| Relevant Public Authority | Query | Action |
|---------------------------|---|--|
| Bayside Council | "Confirm the criteria that will be used for the assessment of dust impact..... Is it a visual assessment?" | The Monitoring Program focusses on the detecting particulate matter in air near site boundaries, using fixed location and mobile sampling devices. A response was provided to the council and the plan was updated with additional details. |
| EPA | The EPA raised a number of issues regarding the level of detail provided in the stand-alone Monitoring Program. The EPA requested more justification regarding selection of monitoring methods and locations, the relevance of standards, and compliance with CoAs. | This Monitoring Program was updated in response to the EPA's comments to provide further clarity on the purpose of the program and to provide additional detail on monitoring methods and procedures. A meeting was held with the EPA on 24/09/2021 to close out the comments. |
| NSW Health | Due to current pandemic conditions, NSW Health was unable to provide resources for consultation at this time. | CGU commits to consulting with NSW Health (and updating the monitoring program if required) when resources become available. |

This Monitoring Program has been updated to address the matters raised during consultation.

Community feedback and complaints relating to air quality will be managed in accordance with the Air Quality and Odour CEMP Sub-Plan and Communications Strategy.

2. Air quality

2.1. Existing environment

An assessment of the air quality environment was undertaken as part of the Environmental Impact Statement (EIS) which characterised the existing environment based on the following key criteria:

- **Particulate matter:**
 - ▶ **PM₁₀:** background concentrations of PM₁₀ (as an annual average) were below the current air quality guidelines. However, there were exceedances of the 24-hour average criterion, most notably in warm and dry periods;
 - ▶ **PM_{2.5}:** Long term measurement of PM_{2.5} concentrations has only occurred at three OEH stations (Chullora, Earlwood and Liverpool). There were a number of exceedances noted of the 24-hour average criterion of 25 micrograms per cubic metre;
- **Carbon monoxide:** background concentrations of carbon monoxide in air (as one-hour and eight-hour averages) were below the current air quality guidelines;
- **Nitrogen dioxide:** background concentrations of nitrogen dioxide in air (as one-hour and annual averages) were below the current air quality guidelines at background and roadside monitoring stations; and
- **Air toxics:** Several measurement campaigns have been undertaken to determine the levels of air toxics around Sydney. All campaigns have found the concentrations of air toxics remain low and under the respective Air Toxic NEPM investigation levels.

The EIS identified that the main air quality risks during construction would be annoyance due to dust soiling, an increase in exposure to particulate matter for the nearest sensitive receivers, and harm to ecological receptors from particulate matter. The EIS stated that construction dust (i.e. particulate matter) is unlikely to present a serious ongoing problem and identified that any predicted effects would be temporary and relatively short-lived. Nearby sensitive receivers that have potential to be impacted by construction of the Project are shown in Figure 1. This Monitoring Program has been developed to collect real time measurements related to the identified risk (particulate matter impacting nearby and adjacent sensitive receivers), to enable proactive and reactive management responses to the identified risks.

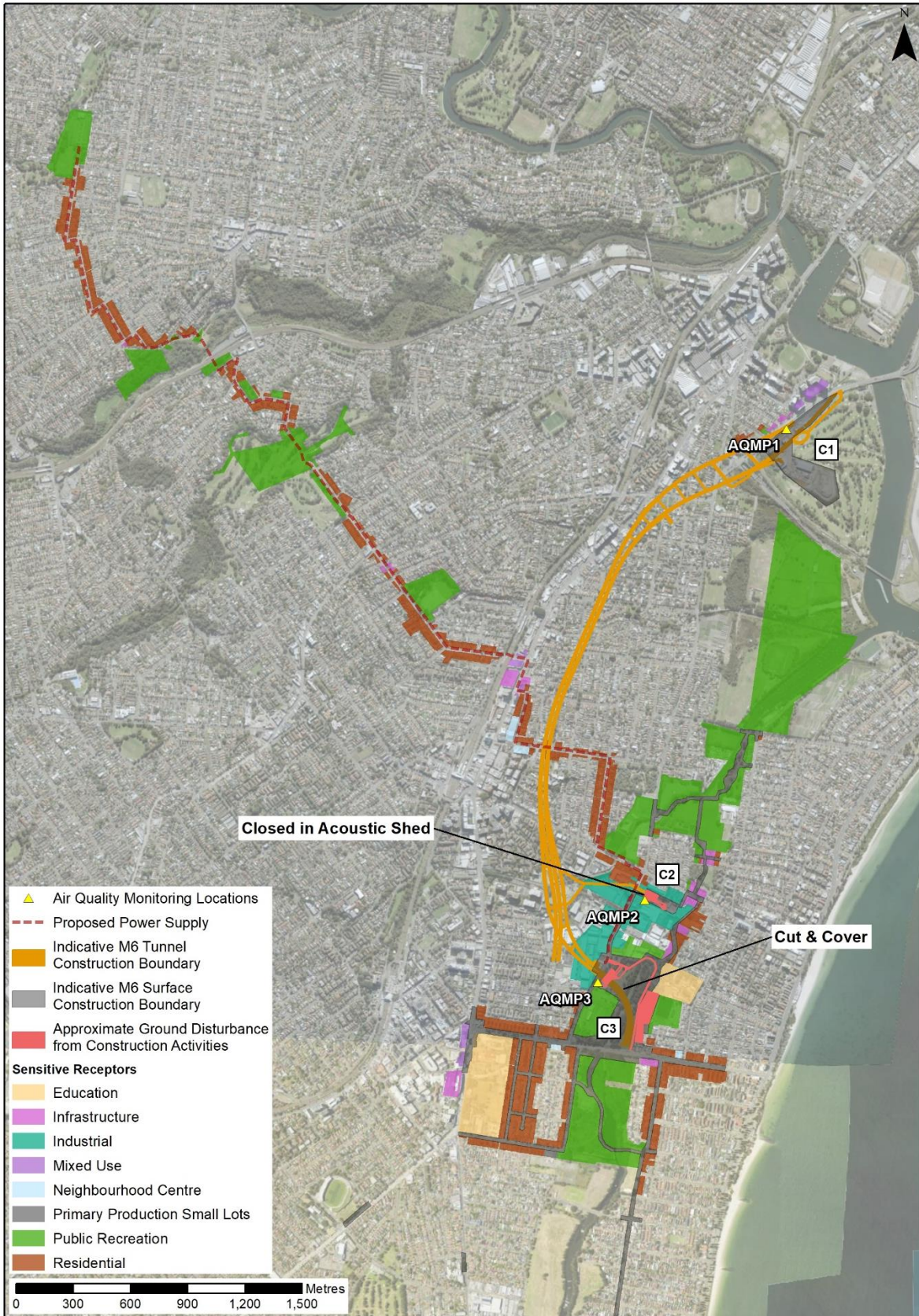


Figure 1: Nearby sensitive receivers

2.2. Monitoring and Inspections

Table 9-2 of the Air Quality Technical Report (Appendix E to the EIS) identifies that to monitor air quality impacts from construction, regular site inspections would be required to assess construction activities and assess potential air quality issues (e.g. dust and odour) as they arise. In addition, dust monitoring should be implemented to detect potential impacts to nearby sensitive receivers.

An environmental inspection regime has been developed and is described in the Air Quality and Odour CEMP Sub-plan (Section 7.3). Inspections will include daily site inspections by Site Supervisors, and weekly site inspection by environmental personnel during construction as a minimum. The frequency of these inspections may be increased to reflect the risk associated with potential impacts during adverse weather conditions or during specific construction activities. Inspections items that are specific to identifying potential air quality issues include:

- Visible sources of dust;
- Visible dust emissions;
- Implementation and effectiveness of all dust controls;
- No continuous visible vehicle/plant/equipment emissions for longer than 10 seconds as per the POEO Clean Air Regulation;
- Haul road integrity (clean, no potholes etc)
- No mud tracking off-site; check main exit/entry points and material on public roads;
- No detectable offensive odours or gases (e.g. inspection of potential odour sources including freshly disturbed areas, open stockpiles, water treatment plants, waste skips, etc); and
- That installed air quality monitoring devices are un-damaged and appear operational.

Environmental inspections will be managed in accordance with the CEMP, noting that the detection of any general construction related odours will be managed by implementing the TARP in this Monitoring Program (Section 3.2.1).

This Monitoring Program has been developed primarily to describe the monitoring of particulate matter in the immediate vicinity of construction sites. This program describes the monitoring required to assess the potential impacts to air quality during construction of the Project. The Monitoring Program is targeted to detect the emission of dust and particulate matter (PM₁₀ and PM_{2.5}) that can impact the adjacent sensitive receivers including ecological receptors.

3. Monitoring Methods

3.1. Fixed location monitoring

Particulate matter (PM₁₀ and/or PM_{2.5}) will be monitored continuously at fixed locations at the boundary of the main construction ancillary facilities C1, C2 and C3. Data will be collected using a single-channel, light-scattering laser photometer used in real-time for aerosol mass readings (e.g. SiteHive or similar). The monitoring device will use a sheath air system that isolates the aerosol in the optics chamber to keep the optics clean for reliability.

A fourth semi-mobile monitoring station will be allocated for minor construction ancillary facilities including C4, C5 and C6. This station will also be used along the roads and active transport corridor as works progress. Indicative locations of all monitoring points are mapped in Appendix A and coordinates are included in Table 2.

Table 2: Indicative coordinates of fixed monitoring stations

| Fixed monitoring location ID | Easting | Northing |
|------------------------------|---|----------|
| Fixed Monitor C1 | 329552 | 6243384 |
| Fixed Monitor C2 | 328912 | 6240907 |
| Fixed Monitor C3 | 328786 | 6240196 |
| Semi-mobile Monitor C4 – C6 | To be deployed along road and ATC alignment | |

The indicative locations of these fixed monitoring devices were selected based on the risk of construction dust impacts as assessed during the EIS. Locations for the measurement of particulate matter were selected at the boundary of the construction ancillary facilities and focused at specific points that would be more likely to be associated with air quality risks (e.g. near haul roads where vehicle movements can raise particulate matter) and/or adjacent to where sensitive receivers listed with a medium or high sensitivity are located close to the construction boundary.

Where possible, monitoring devices would be sited in consideration of the factors described in AS/NZS 3580.1.1 (Methods for sampling and analysis of ambient air – guide to siting air monitoring equipment. Other constraints (security, access to power/communications and proximity to structure including trees) may also impact actual location. As such, the actual location for the monitoring devices may vary from the indicative locations (+/- 50metres) due to these additional considerations for installation.

3.2. Activities-based monitoring

In addition to the fixed location monitoring at construction boundaries, activities-based monitoring of air quality will also be undertaken at sensitive receivers and/or designated locations. Particulate matter (PM₁₀ and/or PM_{2.5}) will be monitored using a hand-held device. Data will be collected using a light-scattering laser photometer used in real-time for aerosol mass readings (e.g. using a TSI DustTrak 8532 or similar). The mobile device will be used for regular, attended monitoring of PM₁₀ (or PM_{2.5}) over a fixed period (e.g. 15-minutes). Activity-based monitoring will generally be conducted at the nearest downwind sensitive receiver on a monthly basis, during applicable works (construction works with potential air quality impacts).

This type of monitoring enables flexible and responsive monitoring options to assess risks and impacts on both a regular basis (e.g. monthly at nearest downwind sensitive receiver) and in response to events (e.g. adverse weather, a complaint or detection of exceedances at fixed locations). By assessing the same parameter as the fixed location monitoring devices using a comparable technique, direct data comparison will be possible and may aide in data analysis and risk assessment. Monitoring will also be undertaken at least once per month in close proximity to fixed monitoring devices to confirm consistency of data. Maps of monitoring locations are included in Appendix B and coordinates of each location are included in Table 3.

Table 3: Activities Based Monitoring Locations

| Activities based monitoring location ID | Activity | Location Description and Receiver Type | Easting | Northing |
|---|--|--|---------|----------|
| ARC01_A | C1 Entry and exit to compound | Marsh Street Residential Receiver | 329473 | 6243396 |
| ARC04_A | C4&C5 ATC works | McIntyre Avenue Residential Receiver | 329371 | 6241596 |
| ARC05_A | C4&C5, ATC works | Bruce Street Residential Receiver | 329050 | 6241169 |
| ARC07_A | C2 Entry and exit | West Botany Road Residential Receiver | 328767 | 6240969 |
| ARC07_B | C4&C5 ATC works | Bay Street Residential Receiver | 329082 | 6240938 |
| ARC08_A | C3 Haul road, C4&C5 ATC works | End of Kings Road Residential Receiver | 328964 | 6240603 |
| ARC09_A | C3 Haul road stockpile area C4&C5 ATC works | Brighton-le-Sands Public School Other Sensitive Receiver | 328897 | 6240415 |
| ARC11_A | C3 Bulk excavation from surface and spoil haulage | French Street Residential Receiver | 328486 | 6240417 |
| ARC12_A | C6 Princes Highway intersection works | Gladstone Street Residential Receiver | 327861 | 6240305 |
| ARC14_A | C3 President Avenue roadworks | President Avenue Residential Receiver | 328180 | 6240174 |
| ARC15_A | C4&C5 ATC works | Annette Avenue Residential Receiver | 328409 | 6239950 |
| ARC16_A | C3 Cut and cover haul road & stockpile area, C4&C5 ATC works | O'Neill Street Residential Receiver | 328777 | 6240078 |
| ARC17_A | C3 President Avenue road works C4&C5 ATC works | Colson Crescent Residential Receiver | 328757 | 6239902 |

3.3. Odour monitoring

Odour surveys are an effective tool for evaluating odour risk and the effectiveness of mitigation and management. Inspections and assessment of odour sources are described in the Air Quality and Odour CEMP Sub-plan (Section 7.3). If odours are detected from general construction activities at the site boundary during inspections, management actions will be implemented in accordance with the Trigger Action Response Plan (Section 3.2.1). It is noted that several plans and monitoring programs interface with odour management and while odour related to general construction activities will be addressed in accordance with this Monitoring Program, it is noted that:

- Odour arising from remediation would be managed in accordance with the applicable Remediation Action Plan/s
- Odour arising from bulk excavation of acid sulfate soils would be managed in accordance with the Acid Sulfate Soil Management Plan
- Odour arising from excavation at Bicentennial Park would be managed in accordance with the Leachate and Landfill Gas CEMP Sub-plan and Monitoring Program

3.4. Air Quality Goals

Project air quality goals for fixed monitoring locations and activities-based monitoring were adopted from the 24-hour National Environment Protection Council (NEPC) standards. This provides a conservative approach and adherence to these goals over shorter periods of measurement will accomplish compliance with these standards. The recommended air quality standards for PM₁₀ and PM_{2.5} are 50 µg/m³ and 25 µg/m³ respectively over a 24-hour exposure period and these have been adopted for use over shorter averaging periods (Table 4).

Table 4: Air quality goals for monitoring program

| Monitoring type | PM ₁₀ µm diameter | PM _{2.5} µm diameter | Averaging Period |
|--|------------------------------|-------------------------------|------------------|
| Fixed location monitoring | 50 µg/m ³ | 25 µg/m ³ | 1 hour |
| Activities based monitoring | 50 µg/m ³ | 25 µg/m ³ | 15 minute |
| Monitoring conducted in response to complaints or as directed by EPA | 50 µg/m ³ | 25 µg/m ³ | 15 minute |

If an exceedance is identified, a management response will be triggered. Details of management responses are detailed in Section 4.2. It is noted that criteria for PM₁₀ and PM_{2.5} will likely be exceeded when there is no impact from construction (based on the existing environment described in the EIS). The PM_{2.5} criteria is particularly sensitive to temporal fluctuations and will likely be exceeded frequently. An emphasis will be placed on the management of PM₁₀ exceedances and criteria will be reviewed at 6-monthly intervals with details of reviews provided in each monitoring report (Section 4.4). As the proposed monitoring method uses established air quality goals, a separate baseline data collection period is not required to establish triggers.

3.5. Monitoring frequency and data collection

Monitoring data from fixed location and semi-mobile monitoring devices will be collected and logged in real-time and supplemented with rolling and cumulative averages. Graphical reporting along with visual representation of trigger/response values, with automated alarm process will enable efficient and effective data interrogation (including trend analysis) and enable timely proactive and reactive management to occur.

Monitoring data from activities-based monitoring devices will be recorded for the monitoring period and analysed immediately in the field, prior to upload to the monitoring register (also noting meteorological parameters such as up-wind/down-wind). Activities-based monitoring will be undertaken at the commencement of new activities, then monthly in air receiver catchments at the closest accessible down-wind sensitive receiver. Monitoring will only take place during activities which are identified as having the potential to impact air quality (e.g. earthworks). These activities are outlined in Section 5.1 of the Air Quality and Odour CEMP Sub-plan. Activities-based monitoring for the Permanent Power Supply and Active Transport Corridor will occur at the nearest accessible down-wind sensitive receiver along the alignment once per month during earthworks.

Table 5: Monitoring frequency and method

| Type of monitoring | Frequency | Equipment ³ |
|-----------------------------|---|---|
| Fixed location monitoring | Continuous | Fixed location device (e.g. SiteHive Hexanode) |
| Activities based monitoring | Monthly | Handheld / mobile device (e.g. TSI DustTrak 8532) |
| Other monitoring | As required in response to adverse weather events, other detections, complaints or as directed by EPA | Handheld / mobile device (e.g. TSI DustTrak 8532) |

¹Fixed location monitoring will be located at C1, C2 and C3. A semi-mobile “fixed location” monitoring device will be deployed along the C4, C5 and C6 work areas as required.

²All monitoring will be completed in accordance with the instructions provided for a particular device as per the Original Equipment Manufacturer (OEM).

3.6. Quality assurance and documentation

The use of fixed location, real time monitoring systems supplemented with activities-based monitoring provides accurate data appropriate for construction air quality monitoring purposes. The systems will be operated in compliance with the manufacturer’s manual, including siting, use, maintenance and calibration. The Environmental and Sustainability Manager will be responsible for procuring appropriate equipment, maintenance and calibration services. All personnel participating in measurement, data analysis or field maintenance activities will be trained in the use of equipment and appropriate data handling techniques.

QA/QC maintenance and calibration will be undertaken in accordance with manufacturers guidelines. As a minimum, equipment will be maintained at calibrated by approved facilities at least annually. Field maintenance will be performed by trained project personnel and at minimum will include zero calibration of handheld devices before each use. Trained personnel will also schedule and complete monthly comparative checks with each fixed unit (i.e. using a handheld monitor in proximity to fixed devices) to assess data. All monitoring devices will be subject to quality assurance protocols as per OEM and calibration records will be maintained in accordance with the appropriate standards.

4. Compliance management

4.1. Roles, responsibility and training

The CGU Project team's organisational structure and overall roles and responsibilities are outlined in Section 3.4 of the CEMP. Specific responsibilities for the implementation of environmental controls for Air Quality are detailed in the Air Quality and Odour CEMP Sub-plan.

All personnel working on site will undergo site induction and targeted training relating to air quality management issues, detailed in the AQOMP. All personnel involved in the implementation of this Monitoring Program will receive training in the correct use of the equipment, including field maintenance, use, storage and data analysis. The Environmental and Sustainability Manager is responsible for training and keeping records of trained staff.

4.2. Data analysis and management response

Results obtained during the Monitoring Program will be compared against the values listed in Table 4. If an exceedance is identified, a management review and response will be triggered.

The review will assess:

- Data related to the exceedance, monitoring location and other project data (trending, rolling averages, nearby monitoring locations);
- Regional air quality data (from BoM and EPA air quality stations nearby)
- Additional air quality data where available (e.g. M8 Ambient Air Monitoring Stations)
- Recent meteorological data;
- Project activities including works and Environmental Management Controls (Table 10 of Air Quality and Odour CEMP Sub-plan) in place at the time.
- Other (non-project) activities that may influence monitoring results (unrelated works or events such as fires)

If the exceedance is determined to be attributable to Project works, the event will be treated as an environmental incident and managed in accordance with the requirements of the CEMP (section 3.8 and Appendix A7), and corrective and preventative actions will be identified and implemented.

4.2.1. Trigger Action Response Plan

A Trigger Action Response Plan (TARP) has been developed for implementation with this Monitoring Program and is detailed in Table 6. If any monitoring criteria are exceeded, the Environmental and Sustainability Manager will be informed and supervise the implementation of the TARP.

Table 6 Trigger Action Response Plan

| | Category | Level | Actions |
|----------|-------------------|--|--|
| Triggers | PM _{2.5} | Within goal of 25 µg/m ³ | Inspections and monitoring to continue as scheduled |
| | | Exceeds 25 µg/m ³ | <p>Immediately conduct PM₁₀ monitoring at the location and confirm exceedance.</p> <p>If PM₁₀ monitoring is compliant, note exceedance of PM_{2.5} and schedule additional monitoring within 1 week.</p> <p>If PM₁₀ monitoring exceeds goals, complete data analysis and review and identify possible contributing factors by:</p> <ul style="list-style-type: none"> ▪ Targeted inspection of construction activities that are potentially responsible ▪ Increased monitoring (e.g. supplement data with additional activities-based or mobile monitoring). ▪ Review implementation of management control measures <p>If the exceedance is likely to be attributable to Project Activities, report and manage the exceedance as an incident or non-conformance as per CEMP Section 3.8, including notifications and appropriate response management.</p> |
| | PM ₁₀ | Within goal of 50 µg/m ³ | Inspections and monitoring to continue as scheduled |
| | | Exceeds 50 µg/m ³ | <p>Complete data analysis and review and identify possible contributing factors by:</p> <ul style="list-style-type: none"> ▪ Targeted inspection of construction activities that are potentially responsible ▪ Increase monitoring (e.g. supplement data with additional activities based or mobile monitoring). ▪ Review implementation of management measures <p>If the exceedance is likely to be attributable to Project Activities, report and manage the exceedance as an incident or non-conformance as per CEMP Section 3.8, including notifications and appropriate response management.</p> |
| | Odour | Odour detection at site boundary during inspection | <p>Identify possible source.</p> <p>Establish if odour is related to construction activities:</p> <ul style="list-style-type: none"> ▪ Refer to Leachate and Landfill Gas Monitoring Program where applicable. ▪ Refer to Remediation Action Plans where applicable. ▪ Refer to the Acid Sulfate Soil Management Plan (Appendix C of Soil and Surface Water CEMP Sub-plan) where applicable. <p>Review mitigation measures in place and assess implementation.</p> <p>Assess further controls that can be implemented, this may include:</p> <ul style="list-style-type: none"> ▪ Use of deodorisers ▪ Remove and/or cover odorous materials <p>If an offensive odour is present and is likely to be attributable to Project Activities, report and manage the exceedance as an incident or non-conformance as per CEMP Section 3.8, including notifications and appropriate response management.</p> |

4.3. Compliance and Auditing

Auditing of this Monitoring Program (both internal and external) will be undertaken to assess the effectiveness of the Monitoring Program including implementation, management responses to exceedances and reporting. Compliance and auditing requirements are detailed in the CEMP (Section 3.9). If a non-compliance and/or a non-conformance is identified, the process outlined in Section 3.10 of the CEMP will be followed.

4.4. Reporting

During construction, air quality monitoring data will be collected and assessed against the criterion identified in Table 4. An Air Quality Monitoring Report will be submitted to DPIE within 60 days of the end of the reporting period unless otherwise agreed with DPIE and will be made publicly available. Reporting of construction air quality data will also be completed in accordance with the requirements of the EPL.

Reporting requirements associated with the Program for the construction phase of the Project are presented in Table 7.

Table 7: Construction Air Quality Reporting Requirements

| Report | Frequency | Content | When | Reporting Authority |
|-------------------------------|-------------|--|---|---------------------|
| Air Quality Monitoring Report | Six monthly | <ul style="list-style-type: none"> ▪ Data summary tables from monitoring undertaken in reporting period ▪ Exceedances ▪ Management responses to any exceedances which may have occurred during reporting period | Within 60 days of end of reporting period | DPIE |
| Pollution monitoring data | Monthly | <ul style="list-style-type: none"> ▪ Monitoring data that is required to be collected by an EPL condition | Published monthly | EPA |

5. Review and improvement

5.1. Continual improvement

The implementation of this Monitoring Program will be audited and reviewed throughout the construction period for the purposes of continual improvement. Section 3.2.2 of the CEMP describes the process for the continual improvement of Project documents.

Continual improvement of this Program will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets and Project performance outcomes of the EIS.

The continual improvement process is intended to:

- Identify areas of opportunity for improvement of environmental management and performance;
- Determine the cause or causes of non-conformances and deficiencies;
- Develop and implement a Program of corrective and preventative action to address any non-conformances and deficiencies (refer to Section 3.10 of the CEMP);
- Verify the effectiveness of the corrective and preventative actions;
- Document any changes in procedures resulting from process improvement; and
- Make comparisons with objectives and targets.

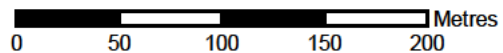
6. References

- National Environment Protection Councils (NEPC) – National Environment Protection Measure (NEPM) for Ambient Air Quality Guidelines
- AS 3580.1.1-2007 Methods of Sampling Analysis of Ambient Air. Part 1.1 Guide to Siting Air Monitoring Equipment
- AS 3580.10.1-2003 Methods of Sampling Analysis of Ambient Air. Determination of Particulate Matter – Deposited Matter - Gravimetric Method

Appendix A Map of Fixed Monitoring Stations



▲ Air Quality Monitoring Station

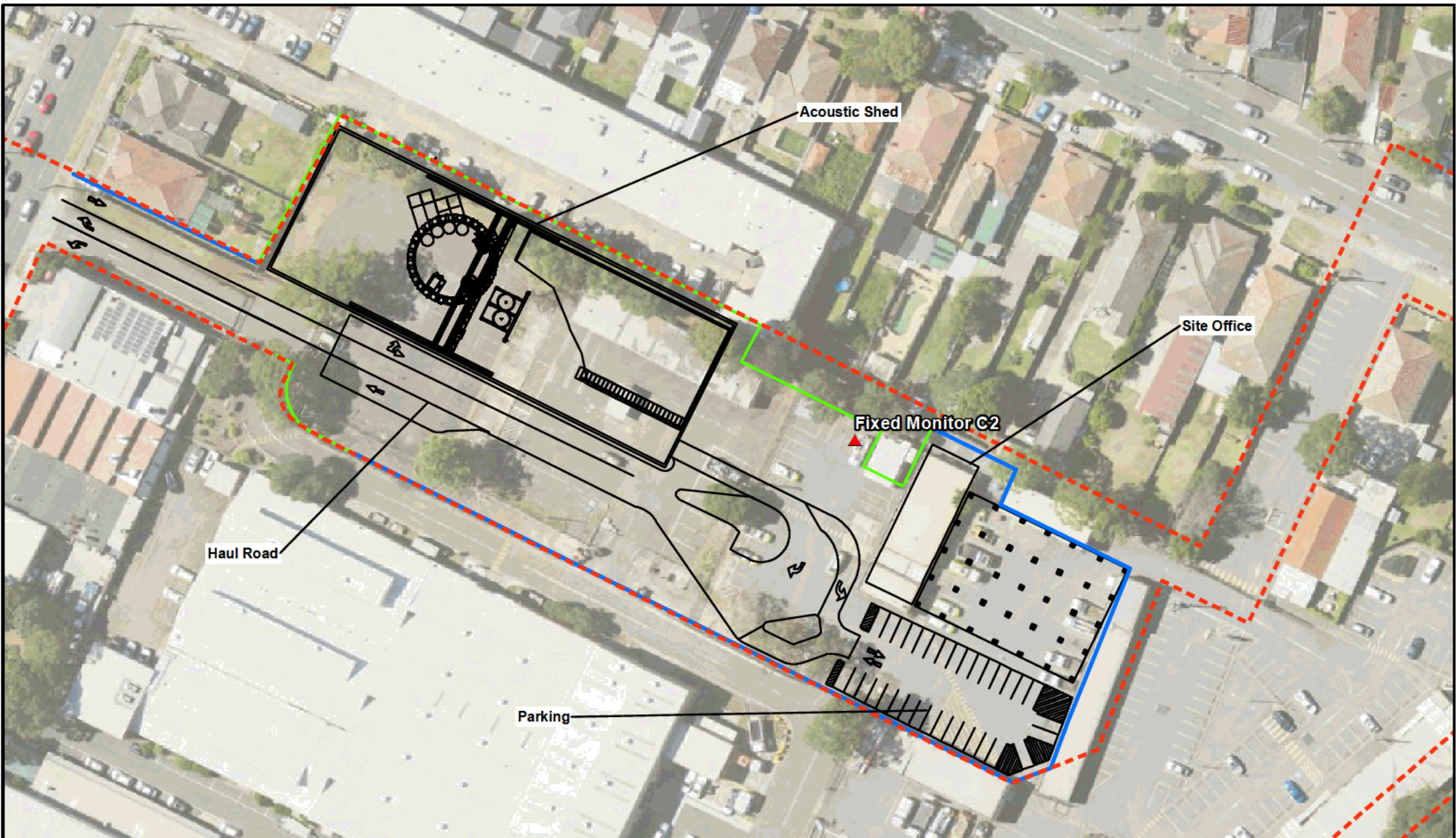


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| Height Datum | AHD | Date Printed | 7/07/2021 |
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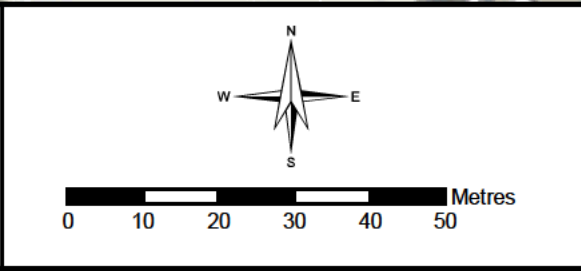
Fixed Air Quality Monitoring Station

Arncliffe

Project Number



- ▲ Air Quality Monitoring Station
- - - Construction Boundary
- Hoarding - 3m
- Noise Wall - 5m

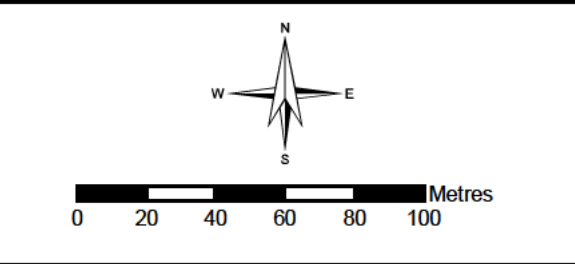


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- ▲ Air Quality Monitoring Station
- Construction Boundary
- C&C
- Open




| | | | | | |
|-------------------|--|--------------|-----------|--|--|
| | | | | | |
| Original Size | A4 | Drawn | GIS | | |
| Coordinate System | MGA Zone 56 | Designed | MM | | |
| Height Datum | AHD | Date Printed | 4/08/2021 | | |
| Filename | Air Quality Monitoring - Biccennial Park mxd | | | | |

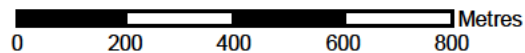
Air Quality Monitoring

Biccennial Park

Project Number



 ATC Boundary




| | | | |
|-------------------|----------------------------------|--------------|-----------|
| Original Size | A4 | Drawn | GIS |
| Coordinate System | MGA Zone 56 | Designed | MM |
| Height Datum | AHD | Date Printed | 7/07/2021 |
| Filename | Air Quality Monitoring - ATC.mxd | | |

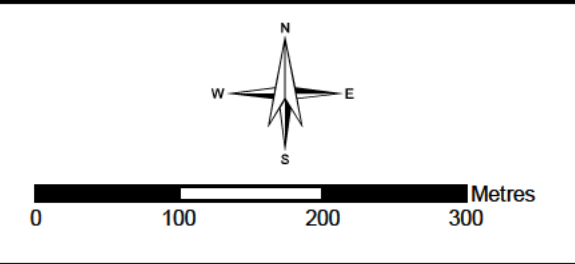
Semi Mobile Air Quality Monitoring Station




Active Transport Corridor

Project Number



 Princes Hwy / Presidents Ave / Local Roads Boundary



| | | | |
|---|---|--------------|-----------|
|    | | | |
| Original Size | A4 | Drawn | GIS |
| Coordinate System | MGA Zone 56 | Designed | MM |
| Height Datum | AHD | Date Printed | 7/07/2021 |
| Filename | Air Quality Monitoring - Presidents Ave.mxd | | |

Semi Mobile Air Quality Monitoring Station
Princes Hwy / Presidents Ave / Local Roads
 Project Number

Appendix B Map of Activities Based Monitoring Locations

