SUBURBAN RAIL LOOP

Air Quality Monthly Report

Tunnels South

Tunnels North

16 December 2025 – 15 January 2026

SUBURBAN RAIL LOOP AUTHORITY

VICTORIA'S BIG BUILD

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Introduction

This summary report presents the results of the monthly air quality monitoring data for the construction of SRL East. Suburban Connect is delivering the Tunnels South works as Principal Contractor (PC) and Terra Verde is delivering the Tunnels North works as PC. The two delivery partners have individually prepared reports to comply with the Environmental Performance Requirement (EPR) for Air Quality. Laing O'Rourke (LOR) has completed the Early Works (EW) component as Managing Contractor (MC) in December 2025.

SRL East Tunnels South is a fully tunnelled metro corridor between Cheltenham and Glen Waverley. The delivery scope encompasses station boxes and twin segmentally lined bored tunnels with cross passages.

SRL East Tunnels North is a fully tunnelled metro corridor between Glen Waverley and Box Hill. The delivery scope encompasses an Emergency Support Facility Structure, station boxes, and twin segmentally lined bored tunnels with cross passages.

Appendices

Appendix 1 – Tunnels South

Appendix 2 – Tunnels North

Suburban Rail Loop East Tunnels South

Air Quality Monthly Report

16 December 2025 to 15 January 2026

Document Information

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Revision Control

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C	Issued to SRLA	23/02/2026	Final Report

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Key Outcomes

Key outcomes arising from the monthly air quality monitoring program:

- Visual air inspections were undertaken proactively to monitor and confirm there were no dust impacts due to works on site.
- All instances of elevated monitoring results were investigated and confirmed existing mitigation measures were sufficient to manage dust risks onsite.

Purpose of the Report

This report presents the results of the monthly review of the air quality monitoring data for each Suburban Rail Loop (SRL) East main works construction site for the period between 16 December 2025 to 15 January 2026 in accordance with SRL East Environmental Management Framework (EMF) and Environmental Performance Requirements (EPRs) AQ1 and AQ2.

Suburban Connect is implementing an air quality monitoring program on each site that includes both visual observation and instrumental air quality monitoring. The purpose of the air quality monitors is to measure the concentration of small dust particles in the air near the construction site. These particles, known as PM_{10} have the potential to impact human health. PM_{10} refers to particles with an aerodynamic diameter of 10 µm or less.

This report compares the measured concentrations to air quality objectives that are defined in the Environment Reference Standard (ERS) which is a tool under the Environment Protection Act 2017. The ERS sets out the air quality objectives for PM_{10} which are measured over a 24-hour averaging period.

The objectives are risk-based concentrations that are not intended to be compliance levels, but they assist Suburban Connect understand the risk to human health. When the instrumental monitor and/or visual observations identify a change in site conditions this prompts Suburban Connect to take actions on site to reduce dust impacts, and review mitigation measures applied.

Scope of Reporting

Construction works requiring air quality monitoring occurred at the following site/s during this reporting period:

- Train Stabling Facility West
- Clarinda TBM launch site
- Clayton
- Monash

These sites were shutdown between the 20 December 2025 – 4 January 2026 where no construction works occurred during this period.

This report does not include:

- Works delivered as SRL Initial Works. The SRL Initial Works, which include investigative works are not subject to the EMF and EPRs.
- Monitoring related to asbestos containing material removal works, which is monitored and reported separately.

Results

The key findings are summarised in Table 1. An analysis of these findings is provided in Section 3.

Table 1: Summary of air quality monitoring results

Location	Parameter	Averaging Period	Max Concentration (µg/m^3)	Median Concentration (µg/m^3)	Days TARP Triggered in the Month	Days TARP Actions Implemented in the Month
Representative Background Locations						
Dandenong	PM_{10}	24-hour	54.1	22.7	-	-
Train Stabling Facility West						
Linear Reserve North	PM_{10}	24-hour	28.5	19.2	1	0
North	PM_{10}	24-hour	30.8	13.2	0	0
South	PM_{10}	24-hour	40.4	18.8	3	0
Clarinda TBM launch site						
CC01	PM_{10}	24-Hour	49.5	16.4	1	0
CC08	PM_{10}	24-Hour	60.0	28.4	5	0
South Boundary	PM_{10}	24-Hour	58.5	21.8	5	0
Clayton						
Central	PM_{10}	24-hour	22.2	12.1	0	0
East	PM_{10}	24-hour	46.8	27.0	0	0
North West	PM_{10}	24-hour	31.0	17.8	1	0
South	PM_{10}	24-hour	31.9	13.3	1	0
Monash						
LP1 SE Boundary	PM_{10}	24-hour	39.0	19.5	3	0
54 Howleys East Boundary	PM_{10}	24-hour	44.7	19.4	1	0
Monash Site Compound	PM_{10}	24-hour	50.4	21.2	2	0

1 Introduction

1.1 SRL East

Suburban Rail Loop (SRL) will deliver a 90km rail line linking every major train service from the Frankston Line to the Werribee Line via Melbourne Airport and transforming our public transport network.

SRL East from Cheltenham to Box Hill is now in major construction. The new rail line will connect major employment, health, education and retail destinations in Melbourne's east and south east, slashing travel times, reducing congestion and connecting passengers travelling on the Gippsland corridor to destinations across Melbourne.

The SRL East – Tunnels South scope of works include:

- Initial launch of four TBMs from the Clarinda TBM launch site
- Construction of approximately 16km of twin tunnels between Cheltenham and Glen Waverley
- Construction of cross passages between the tunnels
- Construction of the western and eastern decline structures at the train stabling facility
- Protection of the South Eastern Trunk Sewer (SETS)
- Box excavations at Clayton and Monash station locations
- Interface works with the Melbourne Metro Rail Network.

This report does not include works delivered as SRL Initial Works. The SRL Initial Works, which includes investigative works, were subject to a separate approval process under Clause 52.30 of the Victoria Planning Provisions (VPP) and were approved by the Minister for Planning on 19 December 2021. These works are required to comply with Clause 52.30 of the VPP and are not subject to the EMF and EPRs.

1.2 Environmental Management Framework

The EMF for SRL East provides a transparent and integrated framework to manage environmental effects of the Project and includes EPRs that define environmental outcomes that must be achieved during the design, construction, and operation phases of the Project. The EMF is available on the SRL east website at https://bigbuild.vic.gov.au/library/suburban-rail-loop/planning/srl-east-environmental-management-framework.

The development of the EMF has been informed by relevant legislation, policy and guidelines, and the specialist impact assessment studies completed for the SRL East Environment Effects Statement (EES) and the Minister's Assessment, dated 5 August 2022.

The EMF requires the Principal Contractor (PC) to develop and implement an Environmental Air Quality and Dust Management Plan (EAQDMP). As part of implementing this document plan, the PC is required to conduct monitoring of PM_{10} concentrations and measure wind speed and direction at each Early Works construction site and at a representative control site. The EAQDMP also includes a Trigger Action Response Protocol (TARP) which defines a set of triggers that prompt actions on site to reduce dust impacts, and review mitigation measures applied.

The PC regularly reviews the monitoring data at each site, for the purpose of assessing the effectiveness of EAQDMP implementation. The verified results of the PM_{10} monitoring for the applicable monthly period are contained in this report, which will be available to the public, in accordance with the requirements of the EMF.

2 Air Quality Monitoring

2.1 Context

Maintaining air quality is important for public health, the liveability of our cities and our environment. Overall air quality conditions in Melbourne are good, however like all major cities, there are days where the background concentrations of air pollutants are very high on a regional basis. Sometimes these elevated concentrations are due to regional influences such as windblown continental dust, bushfires or hazard reduction burns. Emissions from traffic, home heating, and industrial emissions across Melbourne can also cause high background concentrations, especially when the weather is calm. Environment Protection Authority (EPA) monitoring stations measure these background levels of pollution that already exist in the air within the surrounding area. The EPA monitoring station at Dandenong is used as the representative control site for Suburban Connect work sites.

Without effective management, construction of the Project has the potential to contribute to these background concentrations which may impact public health. Comparison of SRL East monitoring results with publicly available EPA monitoring data is used by the PC to identify when construction-related activities are impacting local air quality, and conversely when the local air quality results may be influenced by background conditions outside of the influence of the construction site.

Meteorological conditions, such as wind direction and speed, can impact on the dispersion of particulates in the air and by monitoring these, the PC can respond when conditions on site change. Having records of wind conditions is also helpful for retrospectively identifying the activity that is causing any elevated dust concentrations.

2.2 Purpose

The purpose of the air quality monitors is to measure the concentration of small dust particles in the air near the construction site. These particles, known as PM_{10} have the potential to impact human health. PM_{10} refers to particles with an aerodynamic diameter of 10 µm or less.

The measured concentrations are compared to air quality objectives that are defined in the Environment Reference Standard (ERS) which is a tool under the Environment Protection Act 2017. The air quality objectives defined in the ERS informed the objectives for air quality for the Project, noting that the ambient air ERS is not a compliance standard that one can pollute up to. The ERS does not provide an indicator or objective for nuisance dust.

The objectives are risk-based concentrations that are not intended to be compliance levels, but they assist the PC to understand the risk to human health. The ERS sets out the air quality objectives for PM_{10} which are measured over a 24-hour averaging period, as reproduced below in Table 2.

Table 2: Ambient air quality objectives for PM_{10}

Indicator	Air Quality Objective (µg/m^3)	Averaging Period
Indicator Particles as PM_{10} (maximum concentration)	50	24-hour

The measured concentrations (which include both existing background concentrations and the Project's incremental contribution over a 24-hour period) are presented in Section 3 and compared against the air quality objective. Monitoring is continuous, even when there are no construction-related activities occurring on the site. Periods of time where there are no site activities are classified as 'out of hours'. The potential for dust

generation from the work sites is much lower when there are no site activities occurring, however dust can still be generated at the work site during 'out of hours' periods due to wind erosion.

2.3 Monitoring Locations

Air quality monitors are located on or adjacent to the construction sites, to represent local air quality conditions and measure the potential impact of works on local sensitive receivers including residents. As activities and site layouts change throughout construction, monitors will be moved to maintain the most optimal location for ongoing monitoring of air quality.

The air quality monitors were installed on the following dates at each of the following locations. The indicative locations of these monitors are shown on maps in Section 3 of this report.

Table 3: Suburban Connect air quality monitoring locations for active works during reporting period.

Monitoring Location	Date Commissioned	Monitoring Parameters	Representative Control Site
Train Stabling Facility West			
North	7 May 2025	PM_{10}	Dandenong EPA monitoring station
South	8 May 2025	PM_{10}	Dandenong EPA monitoring station
Linear Reserve North	15 May 2025	PM_{10}	Dandenong EPA monitoring station
Clarinda TBM Launch Site			
CC01	1 June 2025	PM_{10}	Dandenong EPA monitoring station
CC08	01 Dec 2025	PM_{10}	Dandenong EPA monitoring station
South Boundary	21 Feb 2025	PM_{10}	Dandenong EPA monitoring station
Clayton			
Central	21 May 2025	PM_{10}	Dandenong EPA monitoring station
North West	3 Dec 2024	PM_{10}	Dandenong EPA monitoring station
South	5 Mar 2025	PM_{10}	Dandenong EPA monitoring station
East	4 Jun 2025	PM_{10}	Dandenong EPA monitoring station
Monash			
Compound	2 Jul 2025	PM_{10}	Dandenong EPA monitoring station
54 Howleys East Boundary	2 Jul 2025	PM_{10}	Dandenong EPA monitoring station
LP1 SE Boundary	6 Aug 2025	PM_{10}	Dandenong EPA monitoring station

2.4 Data Limitations and Verification

The following limitations apply to this data:

- Meteorological conditions on site can affect measurements made by monitoring devices. For instance, dust measurements can be impacted by rainfall, fog and/or humidity (with water droplets in the air being mistaken as dust particles). Displaying periods of inclement weather allows reviewers to identify measurements that may have been impacted.
- Breaks in data availability may occur due to sensor outages, instrument errors, technical issues, or removal of sensors during non-working periods to ensure the security of the equipment.
- Proximity of site monitors to public roads, industrial businesses and other factors will impact data recording.

- Monitors may need to be located close to works due to security requirements.
- Monitor locations will change as works progress and construction activity locations change.

Data has been provided in tabular and graphical form in Section 3 to visually present 24-hour averages of PM_{10} over the monthly period. The data included in this report has been verified by the Suburban Connect and relevant subject matter experts.

3 Results

Data has been presented in graphical form below to visually present 24-hour averages of PM_{10} dust concentration over the monthly period for each active construction site.

The indicative air monitoring levels measured by sensors show the levels are generally in the range of 10 µg/m3 and 40 µg/m3, with the exception of the Clarinda TBM Launch Site which includes indicative air monitoring levels higher than 50 µg/m3. The sensor data has been adjusted to closer align with EPA's air quality monitoring station data at Dandenong.

EPA's Dandenong air quality monitoring station is categorised to be generally representative of the area and measured levels ranging from approximately 10 µg/m3 and 40 µg/m3.

The average levels of PM_{10} measured over a 24-hour period is compared to the Environment Reference Standard of 50 µg/m3 to understand air quality impacts.

3.1 Train Stabling Facility West

Figure 1: Train Stabling Facility West site air quality monitoring stations

Table 4: Train Stabling Facility West Site PM_{10} Results

Location	Parameter	Averaging Period	Max Concentration (µg/m³)	Median Concentration (µg/m³)	Days TARP Triggered in the Month	Days TARP Actions Implemented in the Month
Representative Background Locations						
Dandenong	PM_{10}	24-hour	54.1	22.7	-	-
Train Stabling Facility West						
Linear Reserve North	PM_{10}	24-hour	28.5	19.2	1	0
North	PM_{10}	24-hour	30.8	13.2	0	0
South	PM_{10}	24-hour	40.4	18.8	3	0

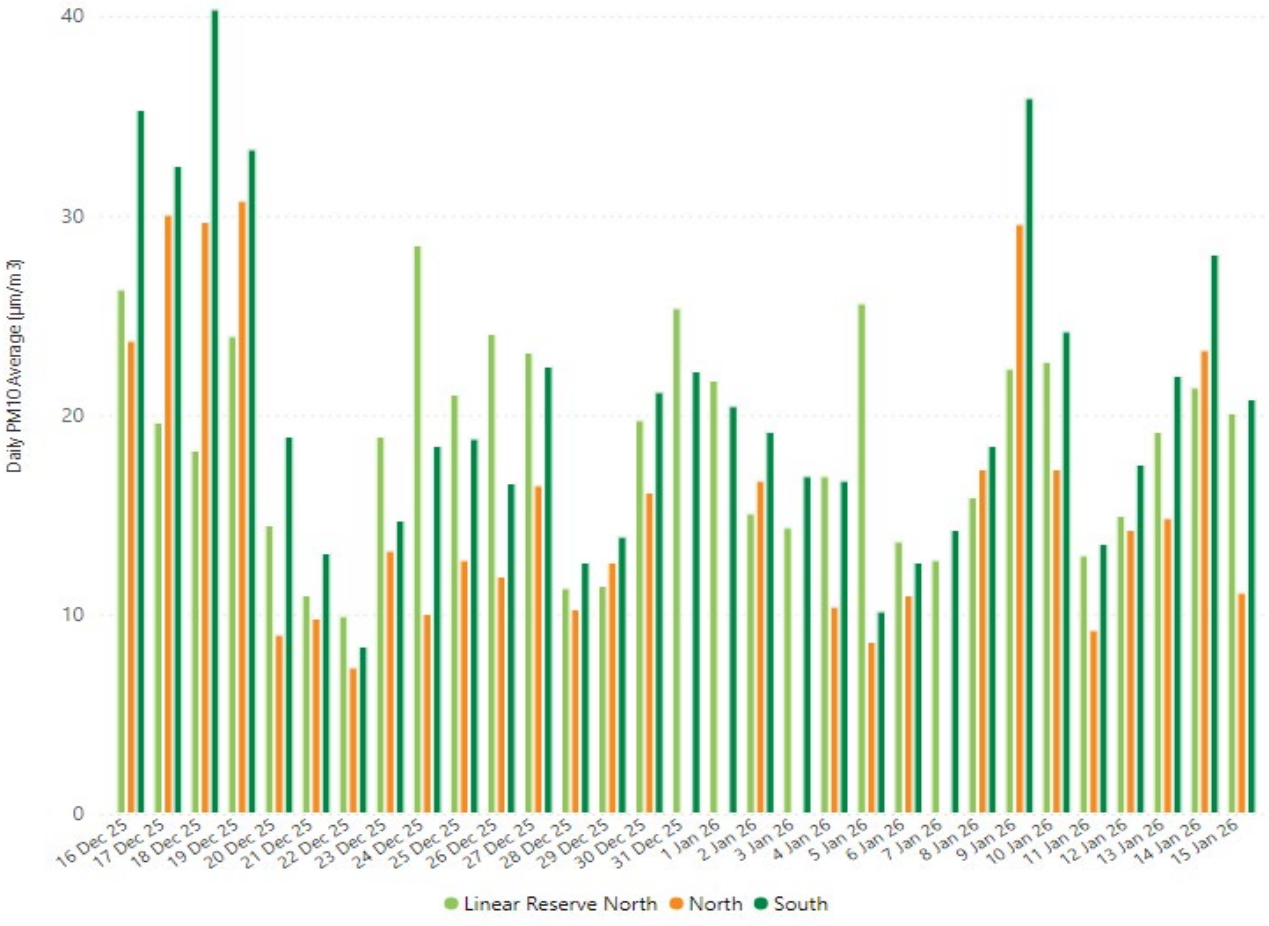

Figure 2: Daily Averages PM_{10} Results at Train Stabling Facility West

3.1.1 Analysis

Measures implemented to proactively manage dust on this site included water carts, wheel wash and street sweepers. In addition, daily observations by supervisors and environmental representatives are performed to respond to areas of concern. Visual air inspections are also undertaken to proactively monitor and confirm there was no off-site dust impacts due to construction activities on site and to mitigate any interruptions to monitoring equipment.

There were no elevated daily average PM_{10} events above 50 µg/m^3 during the reporting period. The TARP was triggered on four days during the period. Dust management measures were confirmed to be active and sufficient for the activities on site, and no further TARP actions were required.

The North monitor was offline for four days during the reporting period due to technical issues. It was operational for the remainder of the reporting period.

3.2 Clarinda TBM launch site

Figure 3: Clarinda TBM launch site air quality monitoring stations

Table 5: Clarinda TBM launch site PM_{10} Results

Location	Parameter	Averaging Period	Max Concentration (µg/m^3)	Median Concentration (µg/m^3)	Days TARP Triggered in the Month	Days TARP Actions Implemented in the Month
Representative Background Locations						
Dandenong	PM_{10}	24-hour	54.1	22.7	-	-

Location	Parameter	Averaging Period	Max Concentration (µg/m^3)	Median Concentration (µg/m^3)	Days TARP Triggered in the Month	Days TARP Actions Implemented in the Month
Clarinda TBM launch site						
CC01	PM_{10}	24-Hour	49.5	16.4	1	0
CC08	PM_{10}	24-Hour	60.0	28.4	5	0
South Boundary	PM_{10}	24-Hour	58.5	21.8	5	0

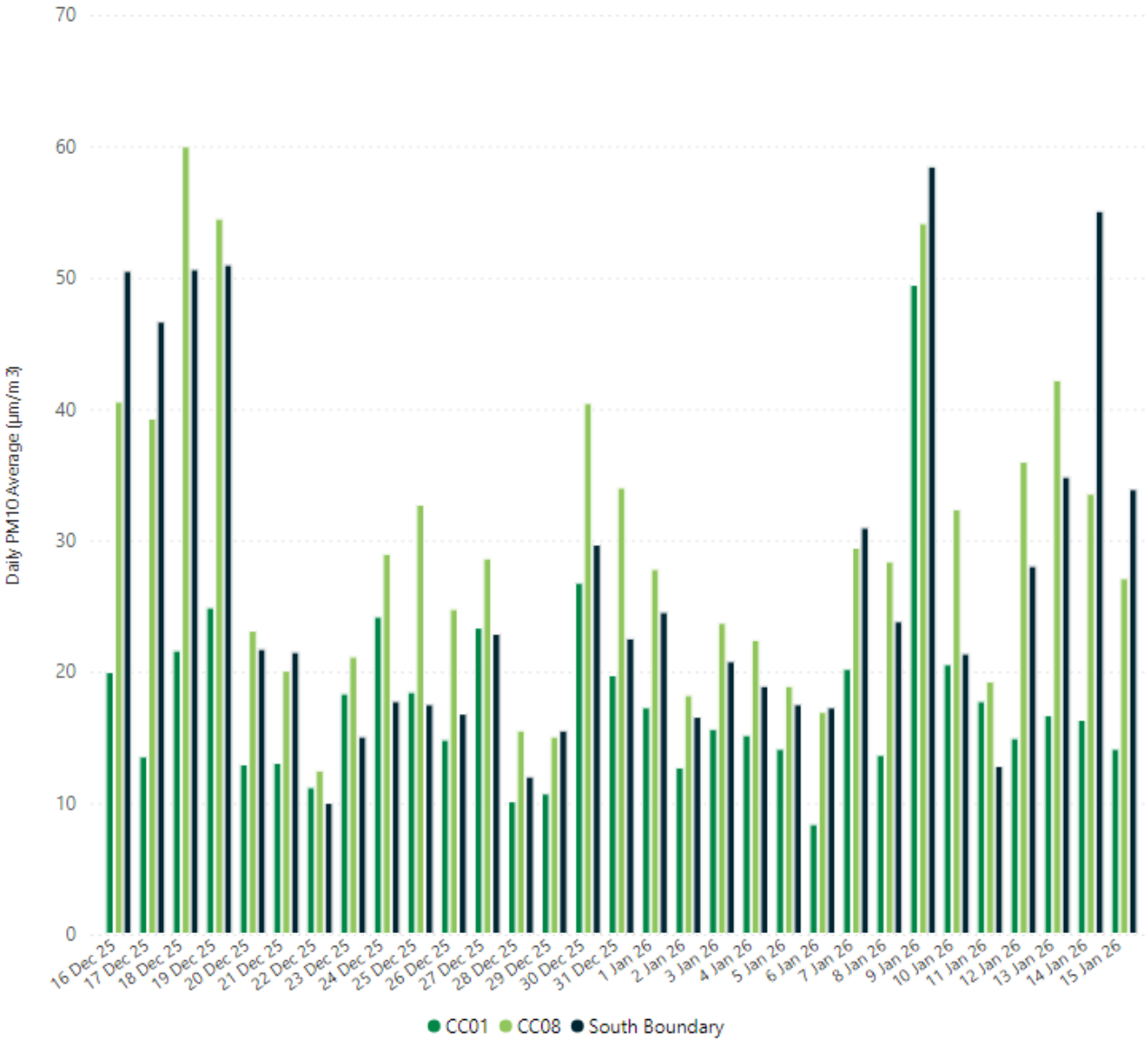

Figure 4: Daily Averages PM_{10} Results at Clarinda TBM Launch Site

3.2.1 Analysis

Measures implemented to proactively manage dust on this site included a boundary sprinkler system, water carts, rumble grids, and street sweepers. In addition, daily observations by supervisors and environmental

representatives are performed to respond to areas of concern. Visual air inspections are also undertaken to proactively monitor and confirm there are no off-site dust impacts due to construction activities on site and to mitigate any interruptions to monitoring equipment.

Five elevated daily average PM_{10} events above 50 µg/m^3 occurred at the South Boundary monitor and three elevated daily average PM_{10} events occurred at CC08 during the reporting period. The TARP was triggered on seven days during the reporting period.

Investigations determined the elevated levels were due to external sources, including extended dry periods, high winds and bushfire smoke, as well as the proximity to traffic on Kingston Road. Site inspections confirmed dust management measures were active and sufficient for the activities on site and no further TARP actions were required.

3.3 Clayton

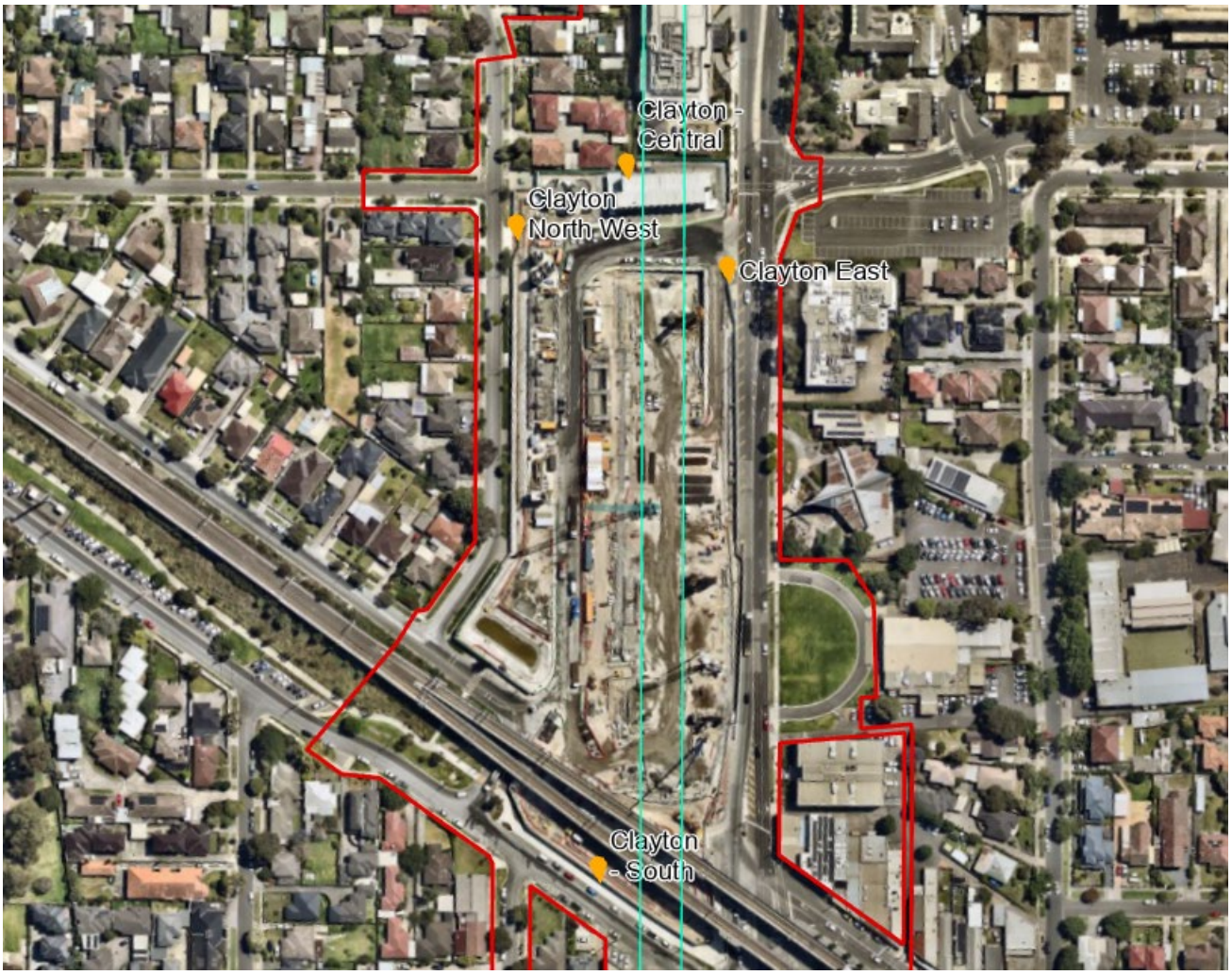

Figure 5: Clayton air quality monitoring stations

Table 6: Clayton PM_{10} Results

Location	Parameter	Averaging Period	Max Concentration (µg/m³)	Median Concentration (µg/m³)	Days TARP Triggered in the Month	Days TARP Actions Implemented in the Month
Representative Background Locations						
Dandenong	PM_{10}	24-hour	54.1	22.7	-	-
Clayton						
Central	PM_{10}	24-hour	22.2	12.1	0	0
East	PM_{10}	24-hour	46.8	27.0	0	0
North West	PM_{10}	24-hour	31.0	17.8	1	0
South	PM_{10}	24-hour	31.9	13.3	1	0

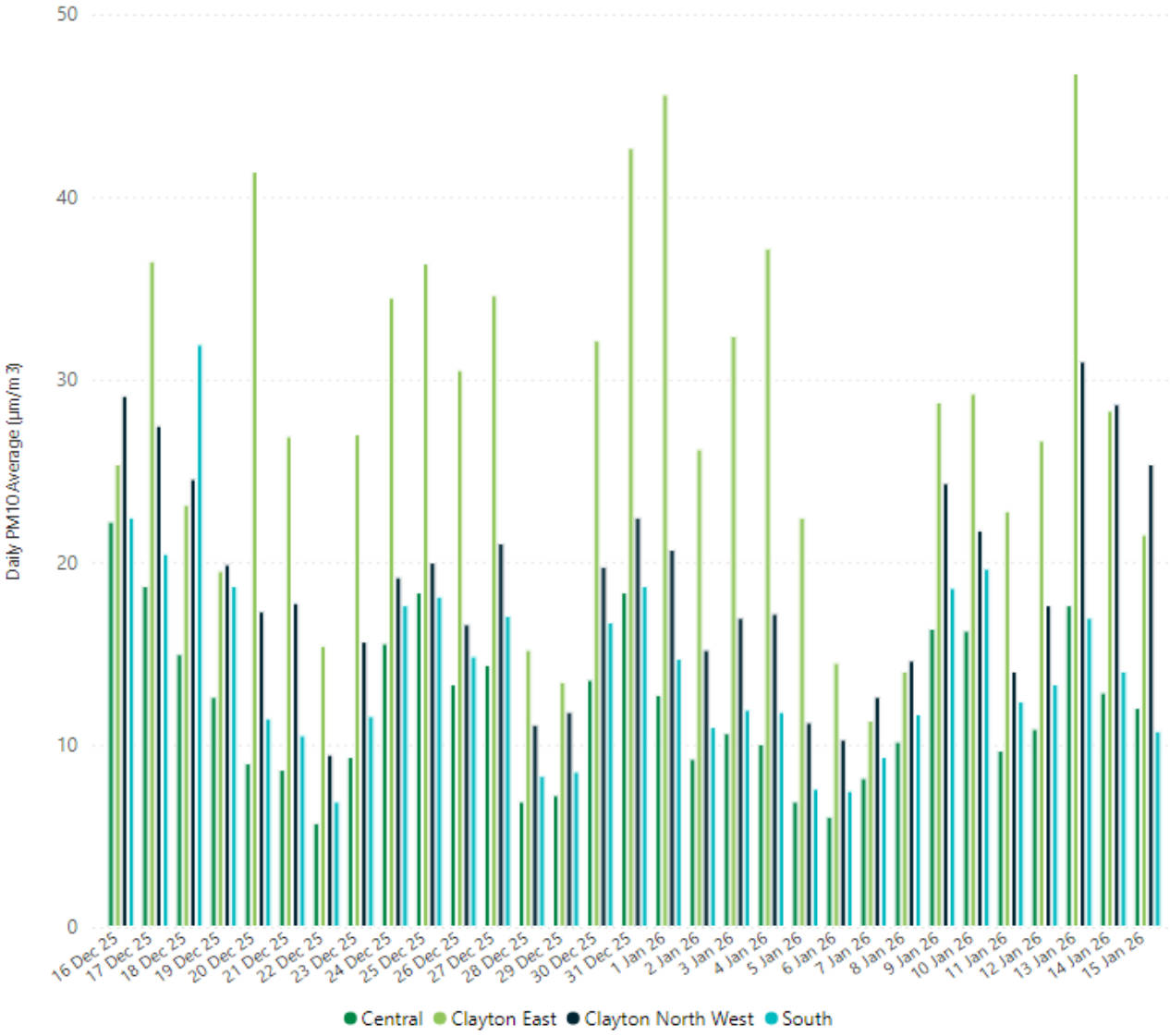

Figure 6: Daily Averages PM_{10} Results at Clayton Site

3.3.1 Analysis

Measures implemented to proactively manage dust on this site include water carts and street sweepers. Sealed surfaces have also contributed to reducing dust on site. In addition, daily observations by supervisors and environmental representatives are performed to respond to areas of concern. Visual air inspections are also undertaken to proactively monitor and confirm there are no off-site dust impacts due to construction activities on site and to mitigate any interruptions to monitoring equipment.

There were no elevated daily average PM_{10} events above 50 µg/m^3 during the reporting period. The TARP was triggered on two days during the reporting period. Dust management measures were confirmed to be active and sufficient for the activities on site and no further TARP actions were required.

3.4 Monash

Figure 7: Monash air quality monitoring stations

Table 7: Monash PM_{10} Results

Location	Parameter	Averaging Period	Max Concentration (µg/m^3)	Median Concentration (µg/m^3)	Days TARP Triggered in the Month	Days TARP Actions Implemented in the Month
Representative Background Locations						

Location	Parameter	Averaging Period	Max Concentration (µg/m³)	Median Concentration (µg/m³)	Days TARP Triggered in the Month	Days TARP Actions Implemented in the Month
Dandenong	PM_{10}	24-hour	54.1	22.7	-	-
Monash						
54 Howleys East Boundary	PM_{10}	24-hour	44.7	19.4	1	0
LP1 SE Boundary	PM_{10}	24-hour	39.0	19.5	3	0
Monash - Site Compound	PM_{10}	24-hour	50.4	21.2	2	0

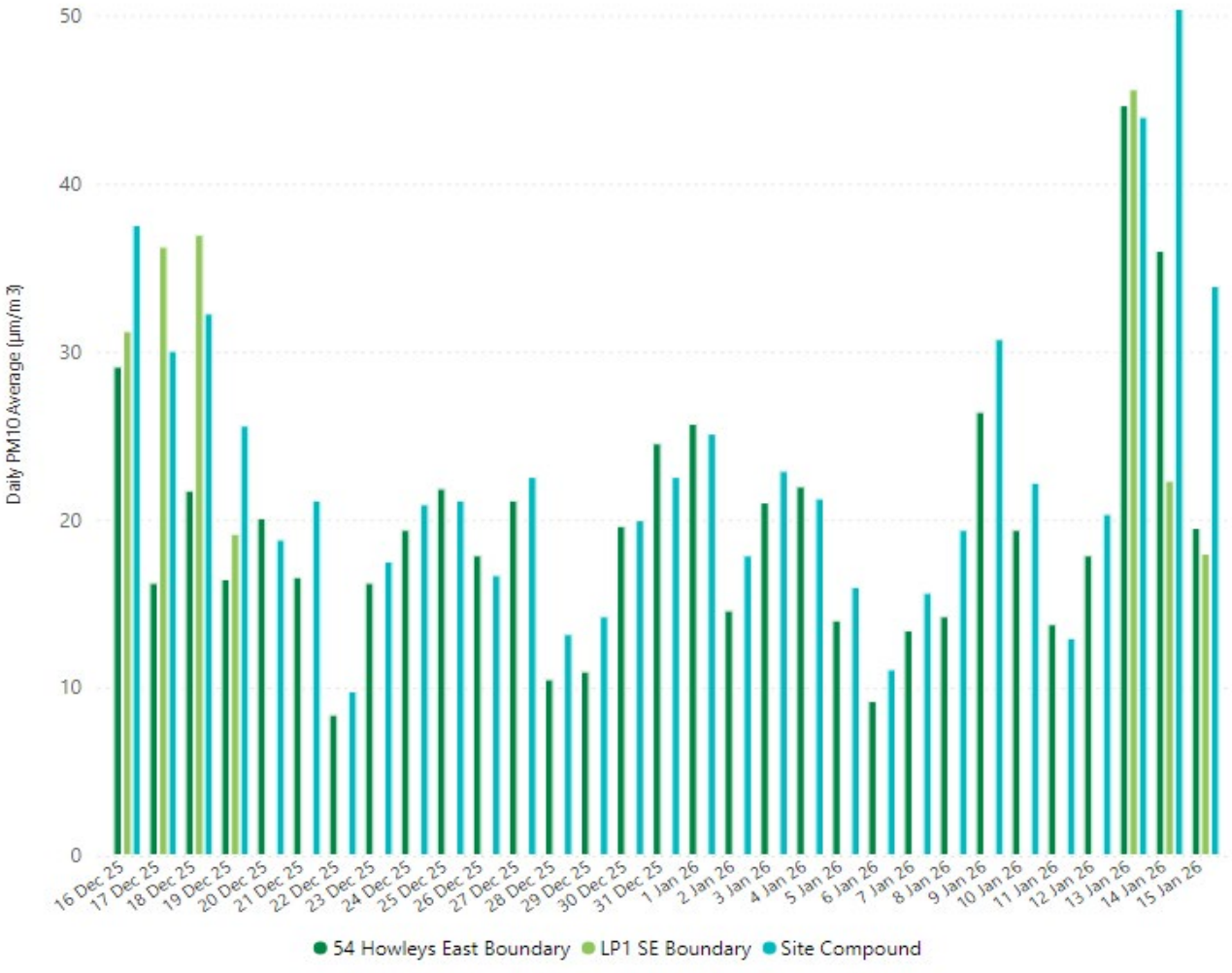

Figure 8: Daily Averages PM_{10} Results at Monash

3.4.1 Analysis

Measures implemented to proactively manage dust on this site include water carts and street sweepers. In addition, daily observations by supervisors and environmental representatives are performed to respond to areas of concern. Visual air inspections are also undertaken to proactively monitor and confirm there were no off-site dust impacts due to construction activities on site and to mitigate any interruptions to monitoring equipment.

There was one elevated daily average PM_{10} event above 50 µg/m^3 at the Site Compound on 14th January. Visual inspection confirmed dust was localised to the centre of site in an area of compacted ground, and attributed to onsite vehicle movements in very dry, windy weather conditions. There were no excavation activities occurring in the area, water carts were active and adequate to prevent any offsite impacts.

The TARP was triggered on five days during the reporting period. Dust management measures were confirmed to be active and sufficient for the activities on site, and no further TARP actions were required.

There was a fault in the LP1 SE Boundary monitor from 20 December 2025 which resulted in false readings, therefore data for these days have been omitted as this was not an accurate representation of the dust levels at the site. The monitor has since been replaced on 13 January 2026.

3.5 Meteorological Conditions

Table 8: Daily weather observations for Moorabbin, Victoria

Statistic	Min Temperature (°C)	Max Temperature (°C)	Maximum Wind Gust Direction	Maximum Wind Gust Speed (km/h)	Relative Humidity @ 9:00 AM (%)
Mean	13.8	25.9	N/A	43	60.8
Lowest	8.7	17.4	SE	28	28
Highest	21.5	44.0	NNW	74	92

Table 9: Daily rain data for Moorabbin, Victoria

Statistic	Rain (mm)
Daily Low	0
Daily High	15.6
Total	19

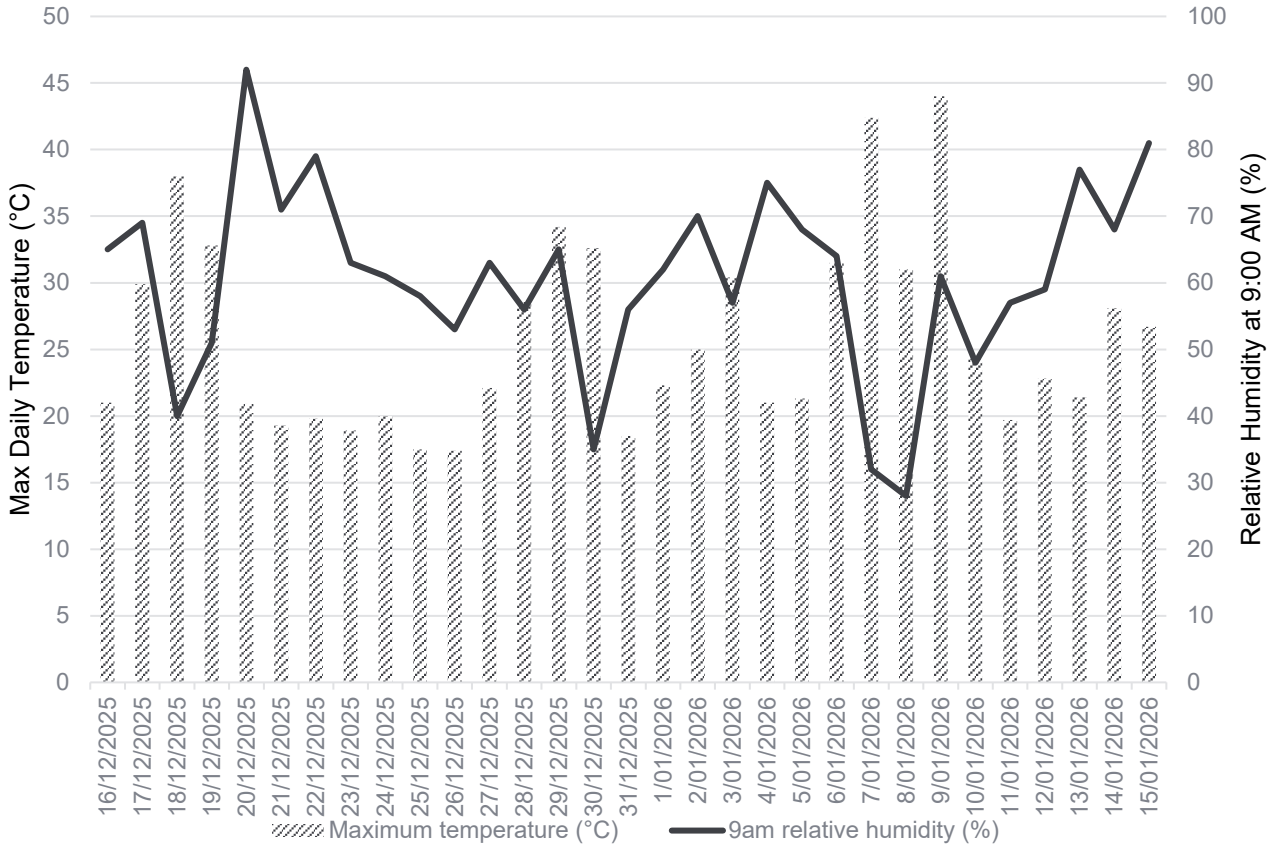

Figure 9: Daily relative humidity and temperature observations for Moorabbin, Victoria

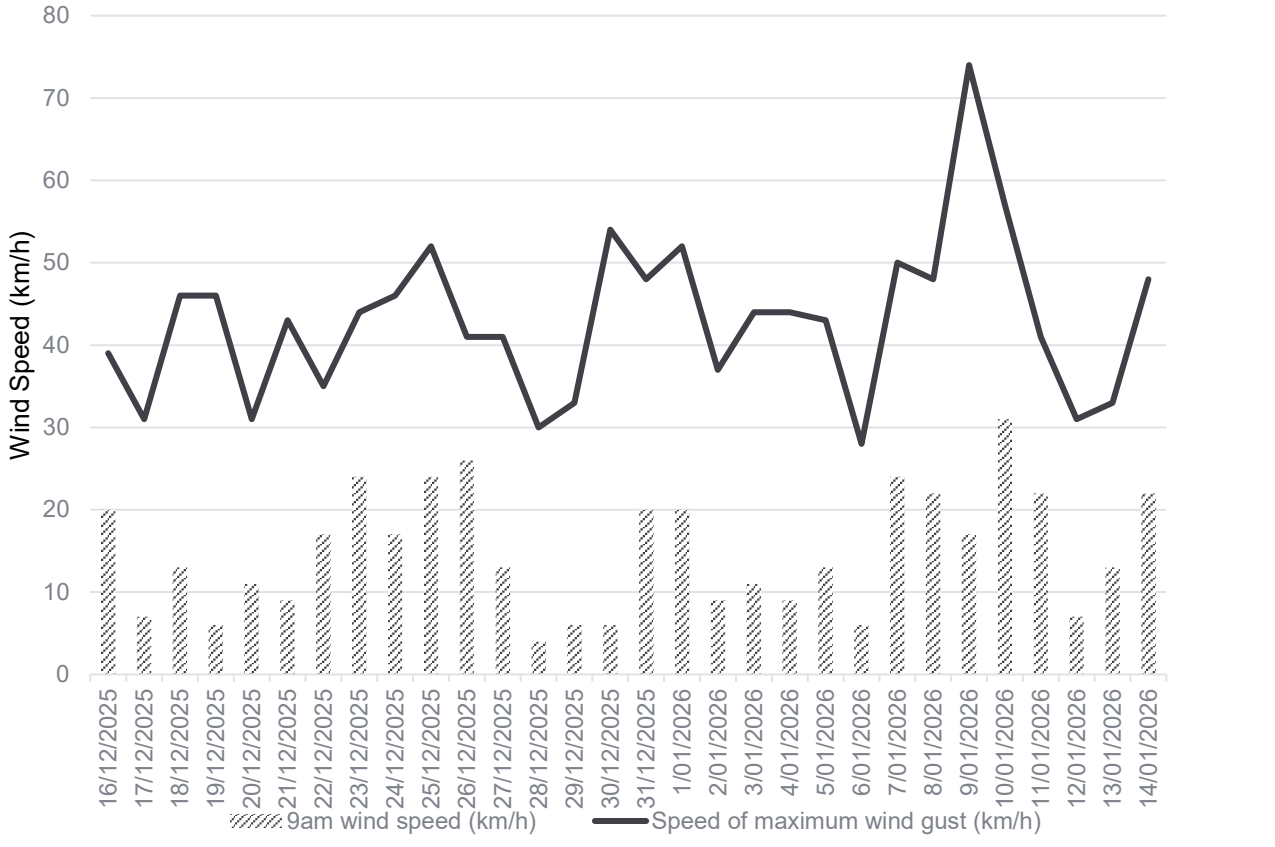

Figure 10: Daily wind speed observations for Moorabbin, Victoria

4 Quality Assurance

4.1 Data Capture

Data capture is defined as the number of valid data periods collected divided by the number of available data periods. Valid data excludes period where the instrument is unavailable due to calibration and maintenance and excludes periods where the data has been rejected due to quality assurance/data validation procedures. Data capture statistics for the reporting period 16 December 2025 to 15 January 2026 are shown below.

Table 10: Daily PM_{10} Air Quality Monitoring Data Capture

Location	Available Periods	Collected Periods	Data Capture	Details
Train Stabling Facility West				
Linear Reserve North	31	31	100%	There were no interruptions to monitoring at this location during the reporting period.
North	31	27	87%	Monitor was offline for four days during the reporting period due to a technical error. There were no interruptions for the remainder of the reporting period.
South	31	31	100%	There were no interruptions to monitoring at this location during the reporting period.
Clarinda TBM launch site				
CC01	31	31	100%	There were no interruptions to monitoring at this location during the reporting period
CC08	31	31	100%	There were no interruptions to monitoring at this location during the reporting period.
South Boundary	31	31	100%	There were no interruptions to monitoring at this location during the reporting period.
Clayton				
Central	31	31	100%	There were no interruptions to monitoring at this location during the reporting period.
East	31	31	100%	There were no interruptions to monitoring at this location during the reporting period.
North West	31	31	100%	There were no interruptions to monitoring at this location during the reporting period.
South	31	31	100%	There were no interruptions to monitoring at this location during the reporting period.
Monash				
54 Howleys East Boundary	31	31	100%	There were no interruptions to monitoring at this location during the reporting period.

Location	Available Periods	Collected Periods	Data Capture	Details
LP1 SE Boundary	31	7	23%	Monitor was faulty for twenty-four days during the reporting period. There were no interruptions for the remainder of the reporting period.
Monash Site Compound	31	31	100%	There were no interruptions to monitoring at this location during the reporting period.

4.2 Data Validation

Data contained in this report has been validated against performance and calibration requirements for each instrument. Data during commissioning, maintenance and calibration periods has been removed from the validated data sets.

Table 11: Monitoring device calibration information

Location	Device Serial Number	Calibration Date	Calibration Due
Train Stabling Facility West			
North	HEX-000418	17 Feb 2025	17 Feb 2027
South	HEX-000498	20 Sep 2024	20 Sep 2026
Linear Reserve North	HEX-000706	19 Feb 2025	19 Feb 2027
Clarinda			
South Boundary	HEX-000348	19 Feb 2025	19 Feb 2027
CC08	HEX-000780	18 Dec 2024	18 Dec 2026
CC01	HEX-000626	19 Feb 2025	19 Feb 2027
Clayton			
Central	HEX-000203	19 Mar 2025	19 Mar 2027
East	HEX-001162	29 Sep 2025	29 Sep 2027
North West	HEX-000623	19 Feb 2025	19 Feb 2027
South	HEX-000782	23 Jul 2025	23 Jul 2027
Monash			

Location	Device Serial Number	Calibration Date	Calibration Due
Site Compound	HEX-000727	14 Nov 2025	14 Nov 2027
LP1 SE Boundary (Faulty)	HEX-000432	13 Nov 2025	13 Nov 2027
LP1 SE Boundary	HEX-000400	08 Dec 2025	08 Dec 2027
54 Howleys East Boundary	HEX-000536	08 Dec 2025	08 Dec 2027

Glossary

Term / Abbreviation	Definition
µg/m^3	micrograms per cubic metre is a unit of measurement used to measure the mass of air pollutants (micrograms) per volume of air (cubic metre) as a concentration.
EAQDMP	The Environmental Air Quality and Dust Management Plan (EAQDMP) is environmental management documentation prepared by the PC to manage and monitor air quality impacts during construction of SRL East. It includes the RMMP and TARP and is verified by the IEA.
EES	Environment Effects Statement (EES) in Victoria, environment assessment of the potential environmental impacts or effects of a proposed development under the Environment Effects Act 1978.
EMF	The Environmental Management Framework (EMF) provides a transparent and integrated framework to manage environmental effects of the SRL East Project during construction and operation to achieve acceptable environmental outcomes.
EPA	Environment Protection Authority (EPA) is the Victorian regulator established under the Environment Protection Act 2017 and which has the statutory objective to protect human health and the environment from the harmful effects of pollution and waste.
EPRs	The Environmental Performance Requirements (EPRs) define the environmental outcomes that must be achieved during the design, construction and operation of SRL East and are included within the EMF.
ERS	The Environmental Reference Standard (ERS) is a tool made under the Environment Protection Act 2017 to identify and assess environmental values, including air quality, in Victoria.
IEA	The Independent Environmental Auditor (IEA) is appointed by the Victorian Government to undertake independent environmental reviews and audits of project activities including assessing compliance with the EMF and EPRs.
PC	Principal Contractor
PM_{10}	Particulate matter with an aerodynamic diameter of 10 micrometres (µm) or less. PM_{10} particles are small enough to have a potential impact on human health.
RMMP	The Risk Management and Monitoring Program (RMMP) plan outlines the approach to air quality monitoring and includes instrumental, visual monitoring, TARP and public reporting processes. The RMMP forms part of the EAQDMP.
TARP	The Trigger Action Response Protocol (TARP) defines a series of adaptive management measures that are implemented to avoid or mitigate impacts from dust emissions for nearby sensitive receptors in response to the results from monitoring. The TARP forms part of the EAQDMP.
TARP Triggered during the reporting month	This refers to the number of days TARP trigger criteria or the Air Quality Objective was exceeded during the reporting month.
TARP actions implemented during the reporting month	This refers to the number of days additional TARP mitigation measures or actions were required to be implemented as a response to project related exceedances. These actions are in addition to existing controls implemented on site.

TERRAVERDE

SUBURBAN RAIL LOOP EAST

Tunnels North

Air Quality Monthly Report 16 Dec – 15 Jan 2026

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Version control and record

Version	Date	Comments
A	04/02/2026	Report Issued to SRLA
B	10/02/2026	To response to SRLA comments
C	19/02/2026	To response to SRLA comments

Contents

Glossary

Term	Definition
µg/m^3	micrograms per cubic metre is a unit of measurement used to measure the mass of air pollutants (micrograms) per volume of air (cubic metre) as a concentration.
BUW	Burwood site compound
EAQDMP	The Environmental Air Quality and Dust Management Plan (EAQDMP) is environmental management documentation prepared by the PC to manage and monitor air quality impacts during construction of SRL East. It includes the RMMP and TARP and is verified by the IEA.
EES	Environment Effects Statement (EES) in Victoria, environment assessment of the potential environmental impacts or effects of a proposed development under the Environment Effects Act 1978.
EMF	The Environmental Management Framework (EMF) provides a transparent and integrated framework to manage environmental effects of the SRL East Project during construction and operation to achieve acceptable environmental outcomes.
EPA	Environment Protection Authority (EPA) is the Victorian regulator established under the Environment Protection Act 2017 and which has the statutory objective to protect human health and the environment from the harmful effects of pollution and waste.
EPRs	The Environmental Performance Requirements (EPRs) define the environmental outcomes that must be achieved during the design, construction and operation of SRL East and are included within the EMF.
ERS	The Environmental Reference Standard (ERS) is a tool made under the Environment Protection Act 2017 to identify and assess environmental values, including air quality, in Victoria.
ESF	Emergency Support Facility
IEA	The Independent Environmental Auditor (IEA) is appointed by the Victorian Government to undertake independent environmental reviews and audits of project activities including assessing compliance with the EMF and EPRs.
PC	Principal Contractor
PM_{10}	Particulate matter with an aerodynamic diameter of 10 micrometres (µm) or less. PM_{10} particles are small enough to have a potential impact on human health.
RMMP	The Risk Management and Monitoring Program (RMMP) plan outlines the approach to air quality monitoring and includes instrumental, visual monitoring, TARP and public reporting processes. The RMMP forms part of the EAQDMP.
SRL	Suburban Rail Loop
TARP	Trigger Action Response Protocol
TARP Triggered during the month	Refers to the number of days TARP trigger criteria or the Air Quality Objective was exceeded during the reporting month.
TARP actions implemented during the reporting month	Refers to the number of days additional TARP mitigation measures or actions were required to be implemented as a response to project related exceedances. These actions are in addition to existing controls implemented on site.
TV	Terra Verde

Executive Summary

Key Outcomes

Key outcomes arising from the monthly air quality monitoring program:

- All instances of elevated PM_{10} levels were investigated and additional controls implemented, where required.
- TARP Levels 1 and 2 were triggered on 14 and 15 January at both sites. Additional dust suppression measures were implemented. Poor air quality was reported by the EPA in Melbourne during the reporting period.
- Proactive response undertaken to confirm there were no offsite dust impacts. During the Christmas shutdown period, a soil stabiliser was applied along the site perimeter to minimise dust generation and wind-blown dust during the shutdown.

Purpose of the Report

This report presents the results of the monthly review of the air quality monitoring data for each Suburban Rail Loop (SRL) East main works construction site for the period between 16 December 2025 – 15 January 2026 in accordance with SRL East EMF and EPRs AQ1 and AQ2.

Tunnels North works for SRL East commenced at the ESF, 601 High Street Road, Mount Waverley, on 30 June 2025, and at the Burwood site, 200 Burwood Highway, on 29 September 2025. Terra Verde (TV) is delivering the Tunnels North works as the Principal Contractor (PC).

The PC implements an air quality monitoring program on each site that includes both visual observation and instrumental air quality monitoring. The purpose of the air quality monitors is to measure the concentration of small dust particles in the air near the construction site. These particles, known as PM_{10} have the potential to impact human health. PM_{10} refers to particles with an aerodynamic diameter of 10 µm or less.

This report compares the measured concentrations to air quality objectives that are defined in the ERS which is a tool under the Environment Protection Act 2017. The ERS sets out the air quality objectives for PM_{10} which are measured over a 24-hour averaging period and are shown in Table 1 below. The objectives are risk-based concentrations that are not intended to be compliance levels, but they assist the PC to understand the risk to human health. When the instrumental monitor and/or visual observations identify a change in site conditions this prompts the PC to take actions on site to reduce dust impacts, and review mitigation measures applied.

Scope of Reporting

Site activities and operations undertaken on the ESF site during the month included:

- Piling platform construction
- Piling works, drill and pour piles
- Excavation works
- General works, unloading delivery materials and housekeeping works
- Temporary shed demobilisation
- Commissioning of permanent crib

Site activities and operations undertaken on the BUW site during the month included:

- STAS works
- TBM assembly & heavy lift beam foundation
- Crib demobilisation
- Installation of new Cribs
- Drainage removal and installation

- Hard and soft piling works
- 650 T and 300 T Crane erection
- Acoustic Shed erection
- Spoil Bay erection

Noted that the Christmas shutdown period occurred from 19 December to 14 January, with no construction works taking place during this period.

Results

The key findings are summarised in Table 1. An analysis of these findings is provided in Section 3.

Table 1: Summary of air quality monitoring results

Location	Parameter	Avg Period	Max Conc. (µg/m^3)	Median Conc. (µg/m^3)	Air Quality Objective (µg/m3)	Days TARP Triggered in the Month	Days TARP Actions Implemented in the Month
Representative Background Locations							
EPA - Alphington	PM_{10}	24-hour	41.3	21.6	NA	N/A	N/A
Mount Waverley - ESF							
ESF Northwest	PM_{10}	24-hour	47.4	21.7	50	1	1
ESF Southwest	PM_{10}	24-hour	59.3	14.9	50	2	2
Burwood- BUW							
BUW East	PM_{10}	24-hour	37.4	14.7	50	2	2
BUW South	PM_{10}	24-hour	29.1	13.7	50	1	1

Notes:

Christmas Shutdown period was undertaken from 19 December to 14 January.

1. Introduction

1.1 SRL East

Suburban Rail Loop (SRL) will deliver a 90km orbital rail line connecting Melbourne's middle suburbs, linking every major train service from the Frankston Line to the Werribee Line via Melbourne Airport and transforming our public transport network.

SRL East from Cheltenham to Box Hill is now in major construction. The new rail line will connect major employment, health, education and retail destinations in Melbourne's east and south east, slashing travel times,

reducing congestion and connecting passengers travelling on the Gippsland corridor to destinations across Melbourne.

Tunnels North works for SRL East commenced at the ESF site (601 High Street Road, Mount Waverley) on 30 June 2025, and at the Burwood site compound (200 Burwood Highway) on 29 September 2025. TV is delivering the Tunnels North works as PC. The works will involve shaft excavation to enable ventilation and other support of tunnelling activity.

1.2 Environmental Management Framework

The EMF for SRL East provides a transparent and integrated framework to manage environmental effects of the Project and includes EPRs that define environmental outcomes that must be achieved during the design, construction, and operation phases of the Project. The EMF is available on the SRL East website at https://bigbuild.vic.gov.au/library/suburban-rail-loop/planning/srl-east-environmental-management-framework.

The development of the EMF has been informed by relevant legislation, policy and guidelines, and the specialist impact assessment studies completed for the SRL EES and the Minister's Assessment, dated 5 August 2022.

The EMF requires the PC to develop and implement an EAQDMP. As part of implementing this document plan, the PC is required to conduct monitoring of PM_{10} concentrations and measure wind speed and direction at each Early Works construction site and at a representative control site. The EAQDMP also includes a TARP which defines a set of proactive and reactive triggers that prompt actions on site to reduce dust impacts, and review mitigation measures applied.

The PC regularly reviews the monitoring data at each site, for the purpose of assessing the effectiveness of EAQDMP implementation. The verified results of the PM10 monitoring for the applicable monthly period are contained in this report, which will be available to the public, in accordance with the requirements of the EMF.

2. Air Quality Monitoring

2.1 Context

Maintaining air quality is important for public health, the liveability of our cities and our environment. Overall air quality conditions in Melbourne are good, however like all major cities, there are days where the background concentrations of air pollutants are very high on a regional basis. Sometimes these elevated concentrations are due to regional influences such as windblown continental dust, bushfires or hazard reduction burns. Emissions from traffic, home heating, and industrial emissions across Melbourne can also cause high background concentrations, especially when the weather is calm. EPA monitoring stations measure these background levels of pollution that already exist in the air within the surrounding area.

The EPA monitoring station at Alphington is used as the representative control site for the ESF and Burwood site.

Without effective management, construction of SRL East has the potential to contribute to these background concentrations which may impact public health. Comparison of SRL East monitoring results with publicly available EPA monitoring data is used by the PC to identify when construction-related activities are impacting local air quality, and conversely when the local air quality results may be influenced by background conditions outside of the influence of the construction site.

Meteorological conditions such as wind direction and speed can impact on the dispersion of particulates in the air and by monitoring these, the PC can respond when conditions on site change. Having records of wind conditions is also helpful for retrospectively identifying the activity that is causing any elevated dust concentrations.

2.2 Purpose

The purpose of the air quality monitors is to measure the concentration of small dust particles in the air near the construction site. These particles, known as PM_{10} have the potential to impact human health. PM_{10} refers to particles with an aerodynamic diameter of 10 µm or less.

The measured concentrations are compared to air quality objectives that are defined in the ERS which is a tool under the Environment Protection Act 2017. The air quality objectives defined in the ERS informed the objectives for air quality for SRL East, noting that the ambient air ERS is not a compliance standard that one can pollute up to. The ERS does not provide an indicator or objective for nuisance dust.

The objectives are risk-based concentrations that are not intended to be compliance levels, but they assist the PC to understand the risk to human health. The ERS sets out the air quality objectives for PM10 which are measured over a 24-hour averaging period, as reproduced below in Table 2.

Table 2: Ambient air quality objectives for PM_{10}

Indicator	Air Quality Objective (µg/m3)	Averaging Period
Indicator Particles as PM_{10} (maximum concentration)	50	24-hour

The measured concentrations (which include both existing background concentrations and SRL East's incremental contribution over a 24-hour period) are presented in Section 3 and compared against the air quality objective. Monitoring is continuous, even when there are no construction-related activities occurring on the site. Periods of time where there are no site activities are classified as 'out of hours'. The potential for dust generation from the work sites is much lower when there are no site activities occurring, however dust can still be generated at the work site during 'out of hours' periods due to wind erosion.

2.3 Monitoring Locations

Air quality monitors are located on or adjacent to the construction sites, to represent local air quality conditions, in positions that enable the PC to adequately measure potential impact of works on local sensitive receivers including residents.

The air quality monitors were installed on the following dates at each of the following locations. The location of these monitors is shown on maps in Section 3 of this Report.

Table 3: Air quality monitoring locations active during reporting period

Monitoring Location	Date Commissioned	Coordinates	Monitoring Parameters	Representative Control Site
Mount Waverley – ESF northwest	30 June 2025	Latitude: -37.87036˚ Longitude: 145.14550 ˚	PM_{10}	Alphington EPA monitoring station
Mount Waverley – ESF southwest	30 June 2025	Latitude: -37.87067 ˚ Longitude: 145.14543 ˚	PM_{10}	Alphington EPA monitoring station
Burwood Site Compound -BUW East	29 September 2025	Latitude: -37.85067˚ Longitude: 145.1122˚	PM_{10}	Alphington EPA monitoring station
Burwood Site Compound -BUW South	2 October 2025	Latitude: -37.85232 ˚ Longitude: 145.11106 ˚	PM_{10}	Alphington EPA monitoring station

2.4 Data Limitations and Verification

The following limitations apply to this data:

- Meteorological conditions on site can affect measurements made by monitoring devices. For instance, dust measurements can be impacted by rainfall, fog and/or humidity (with water droplets in the air being mistaken as dust particles). Displaying periods of inclement weather allows reviewers to identify measurements that may have been impacted.

3. Results

Figure 1 shows the location of the ESF air quality monitoring stations. Data has been provided in tabular and graphical form (see Table 4 and Figure 2) to visually present 24-hour averages of PM10 over the monthly period. The data included in this report has been verified by Terra Verde and relevant subject matter experts.

3.1 ESF

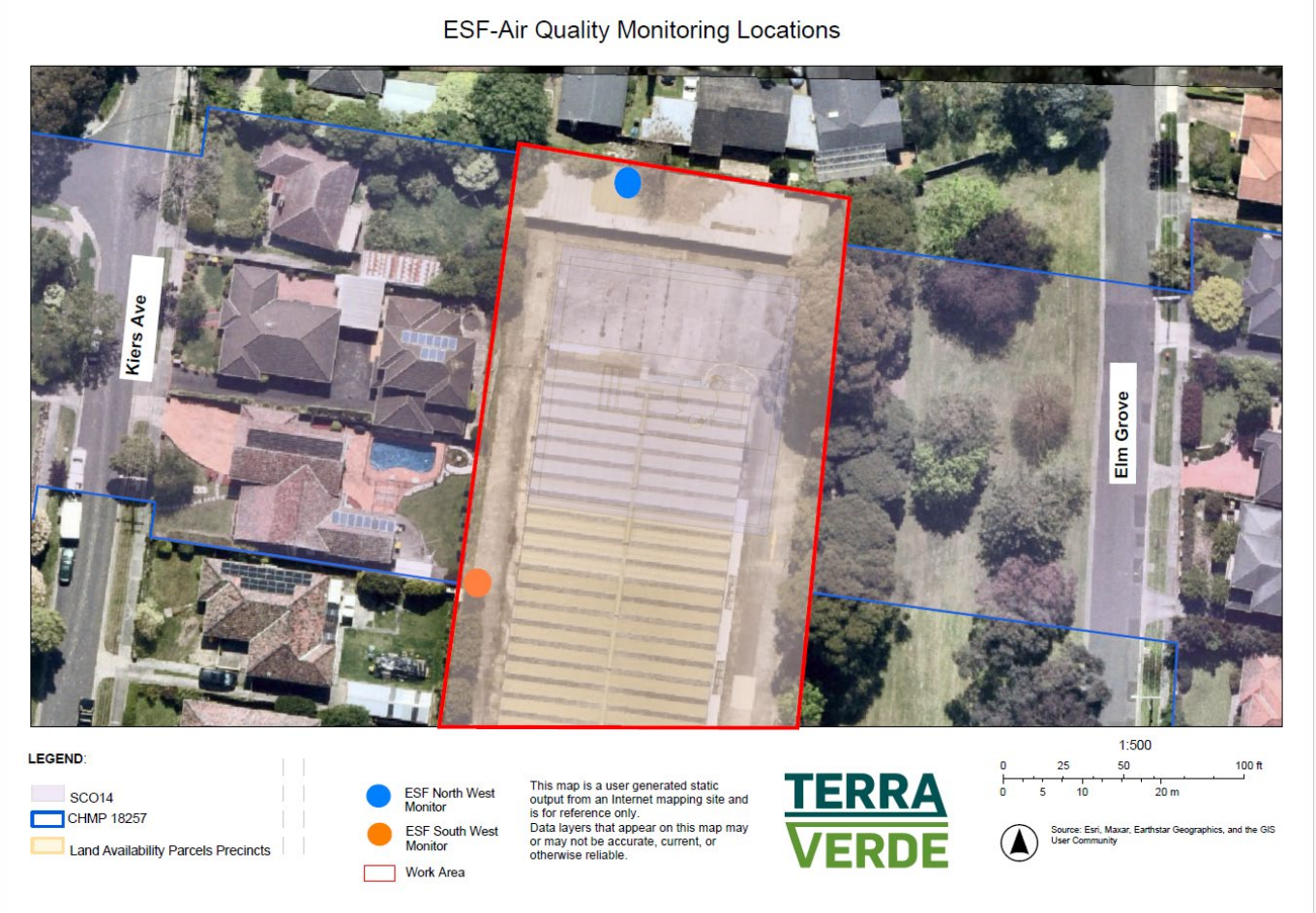

Figure 1: ESF air quality monitoring stations

Monitor Number	Monitoring Location	Max Daily PM_{10} Concentration ($\mu g/m^3$)	Median Daily PM_{10} Concentration ($\mu g/m^3$)	Air Quality Objective (µg/m3)	Days TARP Triggered in the Month	Days TARP Actions Implemented in the Month
-	Representative Background – Alphington EPA monitoring station	41.3	21.6	N/A	N/A	N/A
1	Mount Waverley ESF Northwest	47.4	21.7	50	1	1

Monitor Number	Monitoring Location	Max Daily PM_{10} Concentration ($\mu g/m^3$)	Median Daily PM_{10} Concentration ($\mu g/m^3$)	Air Quality Objective (µg/m3)	Days TARP Triggered in the Month	Days TARP Actions Implemented in the Month
2	Mount Waverley ESF Southwest	59.3	14.9	50	2	2

Table 4: ESF PM_{10} results

Notes:
Christmas Shutdown period was undertaken from 19 December to 14 January.

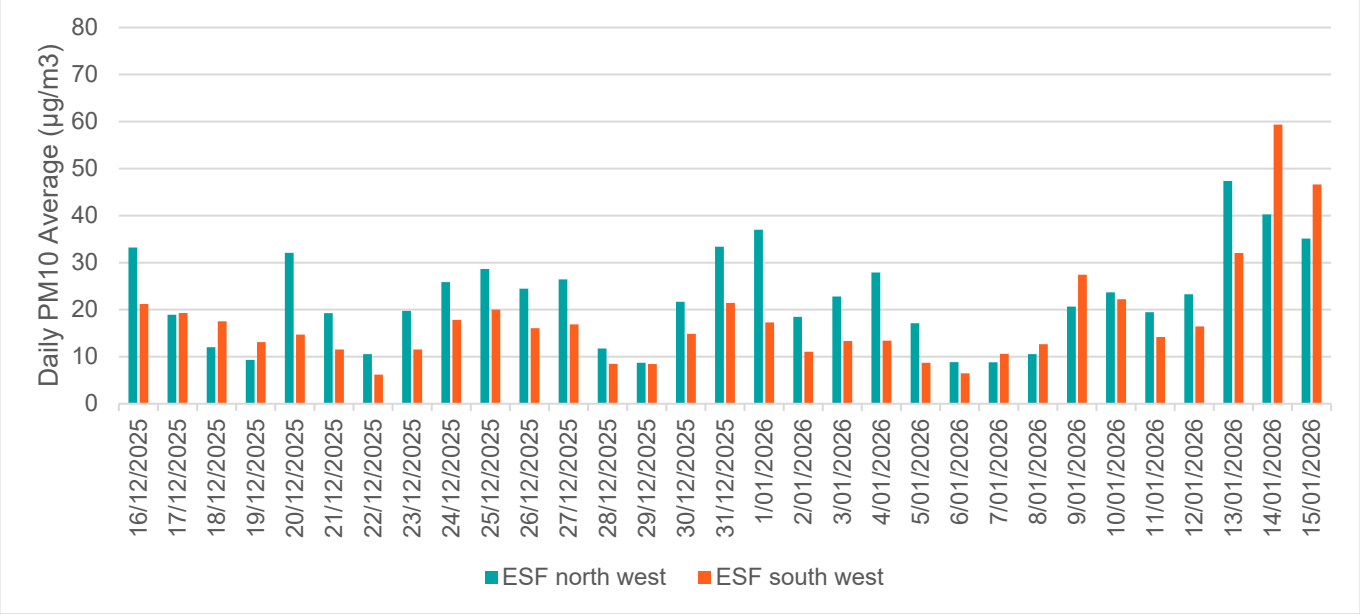

Figure 2: ESF PM_{10} daily averages from 16 December to 15 January

3.1.1 Daily Objective Analysis

A daily average above the daily objective was recorded during the reporting period. The maximum daily average was 59.3 µg/m³ at ESF southwest monitor. A proactive visual inspection was carried out, and no dust was observed leaving the site. Ongoing dust suppression applied to work area.

3.1.2 ESF TARP Analysis

The TARP uses the continuous data from the on-site PM_{10} monitors to enable short-term, proactive and reactive air quality management. Alert values are set at three 'levels' in response to PM_{10} concentrations:

- Level 1 – Preventive Alert Level: investigate and prepare.
- Level 2 – Preventive Action Level: action required.
- Level 3 –Trigger Level: further action and changes to operations required.

TARP Levels 1 and 2 were triggered on two consecutive days (14 and 15 January) at the ESF Southwest monitor, and Level 1 was triggered on 15 January at the Northwest monitor. Due to strong winds and very dry conditions, the work area was inspected, and additional dust suppression measures were implemented via hoses during piling works

It is also noted that during this reporting period, the EPA reported poor air quality in Melbourne due to bushfires. Elevated PM10 levels during this period are consistent with bushfire smoke impacts, as reported by the EPA, indicating that regional air quality conditions likely contributed to the recorded site results.

3.2 BURWOOD

Figure 3. BUW air quality monitoring stations

Monitor Number	Monitoring Location	Max Daily PM_{10} Concentration ($\mu g/m^3$)	Median Daily PM_{10} Concentration ($\mu g/m^3$)	Air Quality Objective (µg/m3)	Days TARP Triggered in the Month	Days TARP Actions Implemented in the Month
-	Representative Background – Alphington EPA monitoring station	41.3	21.6	N/A	N/A	N/A
1	Burwood- BUW East	37.4	14.7	50	2	2

Monitor Number	Monitoring Location	Max Daily PM_{10} Concentration ($\mu g/m^3$)	Median Daily PM_{10} Concentration ($\mu g/m^3$)	Air Quality Objective (µg/m3)	Days TARP Triggered in the Month	Days TARP Actions Implemented in the Month
2	Burwood-BUW South	29.1	13.7	50	1	1

Note:

Christmas Shutdown period was undertaken from 19 December to 14 January.

Figure 4. Burwood PM_{10} daily averages from 16 December to 15 January

3.2.1 Daily Objective Analysis

No daily averages above the daily objective were recorded during the reporting period. The maximum daily average PM_{10} concentration was 37.4 µg/m³ at the BUW East monitoring location during installation of new drainage line along the eastern site boundary. A proactive visual inspection was carried out, and dust controls were in place. Two water carts are operated on site regularly and are called to specific areas as required.

3.2.2 – BUW TARP Analysis

The TARP uses the continuous data from the on-site PM_{10} monitors to enable short-term, proactive and reactive air quality management. Alert values are set at three 'levels' in response to PM_{10} concentrations:

- Level 1 – Preventive Alert Level: investigate and prepare.
- Level 2 – Preventive Action Level: action required.
- Level 3 –Trigger Level: further action and changes to operations required.

At BUW, TARP Levels 1 and 2 were triggered on 13 January at the BUW East monitor and on 15 January at the BUW East and South monitors. Due to excavation works for a new drainage line adjacent to the BUW East monitor, strong winds, and very dry conditions, the work area was inspected, and additional dust suppression measures were implemented. Two water trucks were deployed to wet down the work area until dust levels returned to normal and continued to operate regularly.

It is also noted that during this reporting period, the EPA reported poor air quality in Melbourne due to bushfires. Elevated PM10 levels during this period are consistent with bushfire smoke impacts, as reported by the EPA, indicating that regional air quality conditions likely contributed to the recorded site results.

3.3 Meteorological Conditions

Table 5: Daily weather observations for Melbourne (Olympic Park), Victoria 16/12/2025 – 15/01/2026. Data Source BOM.

Statistic	Min Temperature (°C)	Max Temperature (°C)	Maximum Wind Gust Direction	Maximum Wind Gust Speed (km/h)	Relative Humidity @ 9:00 AM (%)
Mean	14.9	25.7	N/A	36	60.4
Lowest	10.9	17.1	SSW	20	36
Highest	22	42.9	N	67	81

Table 6: Daily rain data for Melbourne (Olympic Park Victoria 16/12/2025 – 15/01/2026. Data Source BOM.)

Statistic	Rain (mm)
Daily Low	0
Daily High	14.2
Total	14.6

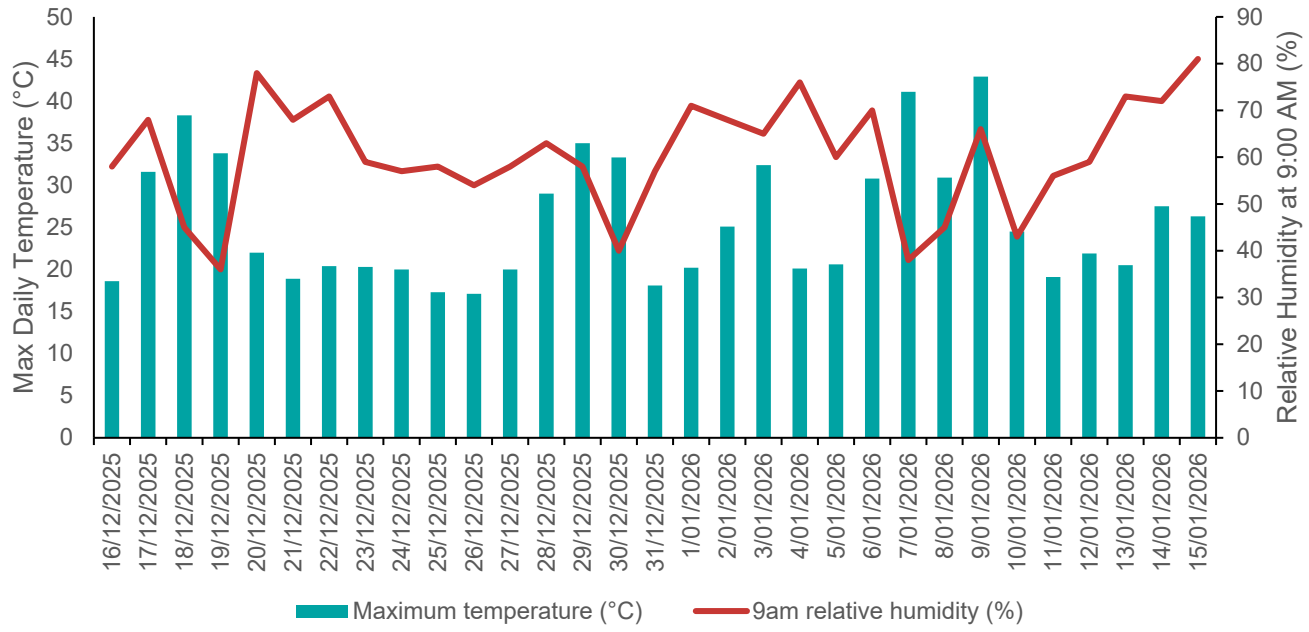

Figure 5: Daily relative humidity and temperature observations for Melbourne (Olympic Park), Victoria 16/12/2025 – 15/01/2026. Data Source BOM.

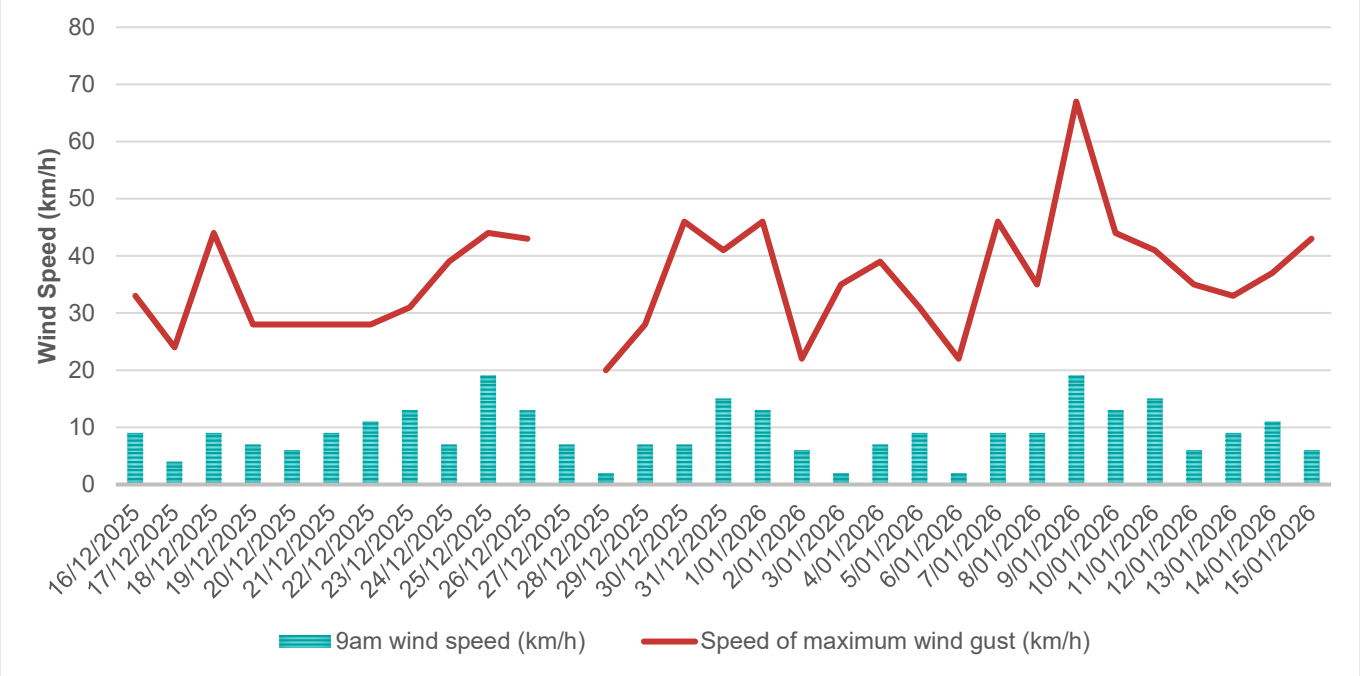

Figure 6. Daily wind speed observations for Melbourne (Olympic Park), Victoria 16/12/2025 – 15/01/2026 Data Source BOM.

4. Quality Assurance

4.1 Data Capture

Data capture is defined as the number of valid data periods collected divided by the number of available data periods. Valid data excludes period where the instrument is unavailable due to calibration and maintenance and excludes periods where the data has been rejected due to quality assurance/data validation procedures.

Data capture statistics for the reporting period 16 December 2025 – 15 January 2026 are shown in Table 7, below.

Table 7: Air quality monitoring, data capture summary

Location	Parameter	Averaging Period	Collected Periods	Available Periods	Data Capture
Mount Waverley – ESF northwest	PM_{10}	24-hours	30	30	100%
Mount Waverley – ESF southwest	PM_{10}	24-hours	30	30	100%
Burwood Site Compound - BUW East	PM_{10}	24-hours	30	30	100%
Burwood Site Compound - BUW South	PM_{10}	24-hours	30	30	100%

4.2 Data Validation

Data contained in this report has been validated against performance and calibration requirements for each instrument. Data during commissioning, maintenance and calibration periods has been removed from the validated data sets.

Table 8: Monitoring device calibration information

Location	Device Serial Number	Calibration Date	Calibration Due
Mount Waverley – ESF northwest	HEX-001065	11/06/2025	11/06/2027
Mount Waverley – ESF southwest	HEX-001185	11/06/2025	11/06/2027
Burwood Site Compound -BUW East	HEX-000635	11/06/2025	11/06/2027
Burwood Site Compound -BUW South	HEX-000707	11/06/2025	11/06/2027