

200 Aldington Road Industrial Estate

Lot K - SSD-80264236 Construction Air Quality Management Plan

Prepared for Stockland Fife Kemps Creek Pty Ltd

December 2025

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Stockland Fife Kemps Creek Pty Ltd

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Version	Date	Prepared by	Reviewed by	Comments
V1	17 October 2025	Amie Gilbert	Francine Manansala	Draft
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Approved by



Daniel Keegan

Senior Associate Environmental Engineer

17 December 2025

Level 10 201 Pacific Highway

St Leonards NSW 2065

ABN: 28 141 736 558

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Abbreviations

Acronym	Description
AQIA	Air Quality Impact Assessment
BC Act	<i>Biodiversity Conservation Act 2016</i>
CAQMP	Construction Air Quality Management Plan
CM	Construction Manager
CEMP	Construction Environmental Management Plan
CCCHS	Community Consultation and Complaints Handling Strategy
CNVMP	Construction Noise and Vibration Management Plan
CTMP	Construction Traffic Management Plan
DCP	Mamre Road Precinct Development Control Plan 2021
EIS	Environmental Impact Statement
ESCP	Erosion and Sediment Control Plan
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPA	Environmental Protection Agency
ER	Environmental Representative
GFA	Gross Floor Area
ha	hectare
km	kilometres
LGA	Local Government Area
m	metre
MRP	Mamre Road Precinct
NRAR	Natural Resources Access Regulator
PCC	Penrith City Council
SFKC	Stockland Fife Kemps Creek Pty Ltd
SSD	State significant development

1 Introduction

This Construction Air Quality Management Plan (CAQMP) has been prepared for implementation by Stockland Fife Kemps Creek Pty Ltd (SFKC) for the construction of Lot K, which forms part of the 200 Aldington Road Industrial Estate (also known as Kemps Creek Industrial Estate, located at Lot 200 DP 1285691).

Approval for the Project as State Significant Development (SSD) was received 11 December 2025. For the purposes of this CAQMP, 200 Aldington Road Industrial Estate is referred to as 'the Estate' and Lot K itself (the subject of this CAQMP) is referred to as 'the Project'. This CAQMP is a sub-plan to the Construction Environmental Management Plan (CEMP) for the site.

The Estate is located in Kemps Creek, New South Wales 2178, within the Penrith Local Government Area (LGA). The Estate comprises a total area of approximately 72 hectares (ha). The Estate is located approximately 5 kilometres (km) north-west of the future Western Sydney (Nancy-Bird Walton) Airport, 13 km south-east of the Penrith CBD and 40 km west of the Sydney CBD (refer Figure 1.1). It is located within the Mamre Road Precinct (MRP) as identified by the State Environmental Planning Policy (Industry and Employment) 2021.

The following documents have been reviewed and relevant information has been incorporated into this CAQMP:

- Kemps Creek Industrial Estate Lot K Warehouse Development and Modification of SSD-10479 Environmental Impact Statement (EIS) (including technical reports), prepared by EMM Consulting Pty Ltd, dated 17 June 2025.
- Lot K Industrial Estate Submissions Report, prepared by EMM Consulting Pty Ltd, dated 3 September 2025.
- SSD-80264236 approval dated 11 December 2025.
- Mamre Road Precinct Development Control Plan 2021 (the DCP).
- SSD-80264236 Lot K Air Quality Impact Assessment (AQIA), prepared by RWDI, dated 17 May 2025.
- SSD 10479 Air Quality Impact Assessment (AQIA) Rev C, prepared by Wilkinson Murray, dated 4 February 2021 for Stage 1 Development.
- SSD 10479 Modification 1 Air Quality Impact Assessment (AQIA) Review, prepared by RWDI, dated 31 August 2023.
- SSD 10479 Modification 2 Air Quality Impact Assessment (AQIA) Review, prepared by RWDI, dated 19 December 2023.

The document has been prepared by Amie Gilbert of EMM Consulting Pty Limited (EMM). Amie has over 3 years of environmental consulting experience and specialises in air quality. A copy of Amie's CV is included as Attachment A.

The document has been reviewed by Francine Manansala of EMM. Francine has over 17 years of environmental consulting experience specialising in air quality. Her areas of expertise include emission and dispersion modelling. Francine has been responsible for the detailed technical work on air quality assessments for various sectors and industries, including road transport, mining and odour. Francine has also led various air quality and/or odour assessment projects for industrial activities, greenhouse gas assessments, air quality monitoring, air quality management plans, NPI reporting, auditing, and risk-based construction works. Francine is a Certified Air Quality Professional (CAQP) with the Clean Air Society of Australia and New Zealand (CASANZ). A copy of Francine's CV is included in Attachment A.

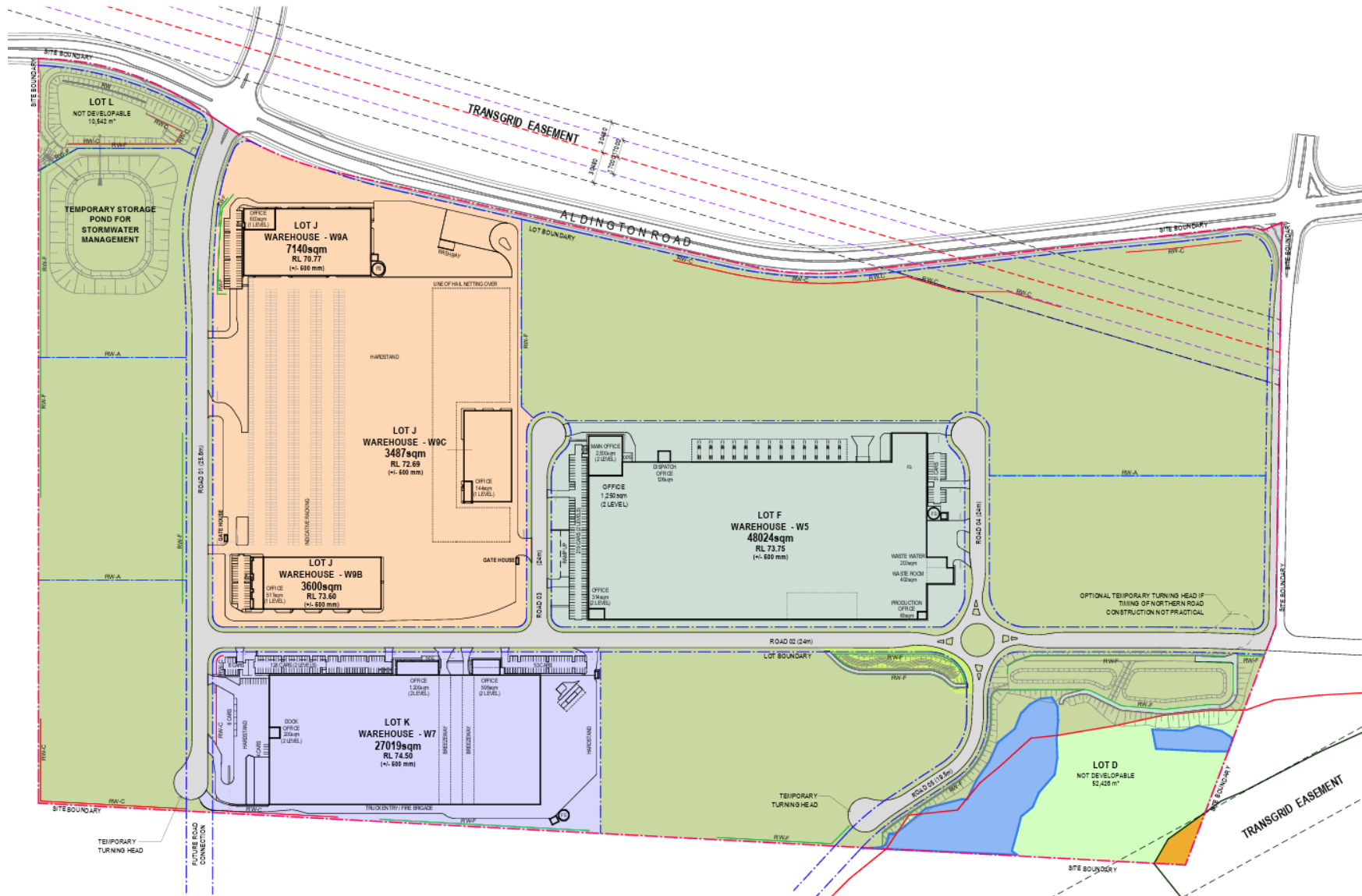


Figure 1.1 Lot K within the context of the wider 200 Aldington Road Industrial Estate

1.1 Project overview

Stockland Fife Kemps Creek (SFKC) obtained a development consent (SSD-10479) from the Department of Planning Housing and Infrastructure (DPHI) for the Kemps Creek Industrial Estate, located at 200 Aldington Road, Kemps Creek. Approval was sought under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act), for a Concept Master Plan for the Estate, Estate civil and subdivision works and development of Lot specific works on one of the Estate lots known as Lot F, or Stage 1 works.

The SSD-10479 consent (Condition A4) requires that, in accordance with Section 4.22 of the EP&A Act, each subsequent stage of the development is to be subject to further development applications. Lot K is one of the lots within the approved subdivision of Lot 200 DP 1285691, and thus required its own development consent.

An Environmental Impact Statement (EIS) was submitted to DPHI to support a SSD application (SSDA) for construction of a warehouse and distribution centre at Lot K, being Stage 3 of works on the Estate. The EIS was also accompanied by Modification 5 to SSD-10479, referred to as MOD 5. MOD 5 allows for the modification of the Concept Master Plan for SSD-10479 in two fundamental ways:

1. Design refinements to the general arrangement of the lot for a building, access, carparking, hardstand and landscaping to meet tenant requirements.
2. Change the boundary between Lot K and Lot G (adjoining Lot K to the north). The current lot boundary will be moved 11 metres (m) northwards, thereby increasing the area of Lot K by 1,929 m²; and reducing the area of Lot G by the same amount.

The SSD - 80264236 was approved on 11 December 2025 for the development of a warehouse and associated facilities within Lot K of Estate. MOD 5 was also approved on 11 December 2025, which permitted the modifications to the design of Lot K as described above.

The warehouse and distribution centre is to be operated by a national freight and logistics company.

The Project has been approved for Stage 3 of the 200 Aldington Road Industrial Estate including the construction and operation of a warehouse and distribution centre. The operations for this specific facility include supply chain management; express delivery between markets on Australia's eastern seaboard; specialised vehicles and storage for moving high value, fragile or other sensitive items; and third-party logistics (3PL) for storing or shipping items.

The principal building is a warehouse comprising a gross floor area of 26,870 m². The warehouse includes loading docks, waste room, and accessways (breezeways) to enable trucks to transit through the warehouse. Three offices (including a dock office) will be constructed and are to be attached to the warehouse building and which comprise, in addition to the 26,870 m² warehouse, a gross floor area of 1,995 m². The facility also includes minor infrastructure, including a gatehouse, car parking and utilities, typical of a warehouse and distribution facility.

The Lot K development works have been listed in Table 1.1.

Table 1.1 Lot K Infrastructure

Lot K Infrastructure		
One warehouse building with two ancillary offices and a dock office	One gate house	Waste room
Landscaping and signage	Hardstand for storage and distribution of goods and materials	Car parking, internal access roads and an access way ('breezeways')
Services, including stormwater infrastructure		

1.2 Air quality impact assessment

An AQIA was prepared by Wilkinson Murray (now RDWI) as part of the EIS submission for the Estate. The report (Wilkinson Murray 2021) provides an assessment of the predicted impacts upon air quality during the construction and operational phases of Stage 1 Development. Earthworks required for Stage 1 of the development were assessed to have the longest stage of works and to have the most impact on air quality.

The report states that the potential dust impacts from the construction works are considered to have a low risk of both dust soiling and human health impacts for the earthworks and for haulage (track-out) phases. The risk for the other stages of construction, including construction of individual lots, will be either low or negligible given that the worst-case scenario (stage 1 bulk earthworks and associated haulage) has been assessed.

Monitoring recommendations for the Stage 1 development in the report were:

- daily on-site and off-site inspections, where receptors are nearby, to monitor dust
- records of inspection results made available to relevant authorities
- regular dust soiling checks of surfaces such as street furniture, cars and window
- specific real-time dust monitoring is not necessary for this project.

In August 2023 RDWI prepared a letter addressing potential air quality impacts as a result of SSDA 10479 – MOD1. Modification 1 related to changes to the concept layout and civil works. The letter concluded that the modification was not likely to result in material changes to potential air quality impacts identified in the EIS and that air quality emissions could be managed through appropriate dust controls.

In December 2023 RDWI prepared a letter addressing potential air quality impacts associated with SSDA 10479 – MOD2. Modification 2 related to a revised concept layout and other changes to accommodate tenant requirements. The conclusion of this letter reflected the same outcome of the letter developed in August 2023 for SSDA 10479 – MOD1 in that there was no material change in air quality risk associated with the modification.

For the Lot K SSD Application, RDWI prepared an AQIA for construction and operation of the site (May 2025). The AQIA for Lot K (RDWI 2025) concluded that air quality impacts associated with Lot K works would be low to negligible, consistent with the SSD-10479 Air Quality Impact Assessment (Wilkinson Murray 2021). The AQIA for Lot K (RDWI 2025) found that without dust mitigation measures, potential air emissions from the proposed construction works would pose a low risk of both dust soiling and human health impacts during earthworks and haulage (track-out) activities. It was anticipated that any change in dust impacts associated with the Project would be considered insignificant, consistent with findings from previous assessments.

2 Purpose and objectives

2.1 Purpose

The purpose of this CAQMP is to describe how SFKC will manage potential air quality and odour impacts during the construction of the Project. This CAQMP has been prepared in accordance with Condition B43 of SSD 80264236 to address the applicable statutory requirements and aims to ensure that the commitments in the planning approval are met with regard to air quality and odour control.

2.2 Objectives

The main objective of the CAQMP is to ensure that air quality and odour impacts from the construction of the Project, are minimised. This requires that all mitigation and management measures relevant to air quality and odour impacts are properly implemented.

To achieve the objectives SFKC will:

- Ensure that appropriate controls and procedures are implemented during construction activities to address air quality and odour impacts from the Project.
- Ensure that appropriate measures are implemented to address the relevant conditions outlined in Table 3.1.
- Implement relevant legislation and other requirements detailed in Chapter 3 of this CAQMP.
- Monitor and mitigate cumulative air quality impacts from construction works at Lot K, Lot J and the Stage 1 Estate.
- Work collaboratively with other developers within the Mamre Road Precinct to mitigate cumulative air quality impacts across the wider area.

2.3 Targets

The following targets have been established for the management of air quality and odour impacts during the Project:

- Ensure compliance with the relevant legislative requirements.
- Ensure that air quality complaints from the community and stakeholders are managed in accordance with the Complaints Management System, as detailed within the Community Consultation and Complaints Handling Strategy (CCCHS).
- Ensure that training on best practice air quality management is provided to all construction personnel through site inductions.
- Provide effective management of dust, odour and other emissions during construction to minimise risks to human health and the environment.

3 Environmental requirements

3.1 Legislation

Legislation and regulatory requirements relevant to air quality and odour for this Project include:

- *Environmental Planning and Assessment Act 1979* (EP&A Act)
- *Protection of the Environment Operations Act 1997* (POEO Act)
- Protection of the Environment Operations (Clean Air) Regulation 2010 (POEO Clean Air Regulation).

3.2 Guidelines and standards

The main guidelines, specifications and policy documents relevant to this plan include:

- *Guidance on the assessment of dust from demolition and construction* (IAQM, 2024)
- AS 3580.1.1:2016 Methods for sampling and analysis of ambient air. Part 1.1: Guide to siting air monitoring equipment
- AS 3580.10.1-2003 Methods for sampling and analysis of ambient air. Determination of particulate matter – Deposited matter – Gravimetric method
- *Approved methods for the sampling and analysis of air pollutants in NSW* (NSW EPA, 2022)
- National Environment Protection Council (NEPC), National Environment Protection (Ambient Air Quality) Measure, 2003b.

3.3 Conditions of consent

This CAQMP forms part of the CEMP and has been prepared in accordance with condition B41 to B44 of the development consent for SSD 80264236. The condition requirements and where they have been addressed in this report are summarised in Table 3.1.

Table 3.1 Conditions of consent

Conditions reference	Consent condition	Section addressed in this report
B41	The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.	Noted
B42	During construction of the development, the Applicant must ensure that	This CAQMP
	a) exposed surfaces and stockpiles are suppressed by regular watering or other alternative suppression method	Chapter 7
	b) all trucks entering or leaving the site with loads have their loads covered	Chapter 7
	c) trucks associated with the development do not track dirt onto the public road network	Chapter 7
	d) public roads used by these trucks are kept clean	Chapter 7
	e) land stabilisation works are carried out progressively on site to minimise exposed surfaces.	Chapter 7

Conditions reference	Consent condition	Section addressed in this report
B43	Prior to the commencement of construction, the Applicant must prepare a Construction Air Quality Management Plan (CAQMP) for the development, to the satisfaction of the Planning Secretary. The CAQMP must form part of the CEMP required by condition C2. The CAQMP must:	This CAQMP
	a) be prepared by a suitably qualified and experienced person(s)	Chapter 1
	b) detail and rank all emissions from all sources of the development, including particulate emissions	Chapter 5
	c) describe a program that is capable of evaluating the performance of the operation and determining compliance with key performance indicators;	Chapter 5
	d) identify the control measures that will be implemented for each emission source	Chapter 7
	e) nominate the following for each of the proposed controls:	Chapter 5 and Chapter 7
	i) key performance indicator	
B44	ii) monitoring method	
	iii) location, frequency and duration of monitoring	
	iv) record keeping	
	v) complaints register	
	vi) response procedures	
	vii) compliance monitoring.	
B44	The Applicant must:	-
	a) not commence construction until the CAQMP required by condition B43 is approved by the Planning Secretary	Chapter 8
	b) implement the most recent version of the CAQMP approved by the Planning Secretary for the duration of the development.	Section 8.2

3.4 Construction Environmental Management Plan

This CAQMP is a sub-plan to the CEMP and is to be implemented with consideration to the measures outlined in the CEMP. The CEMP outlines the following aspects that are relevant to the implementation of the CAQMP:

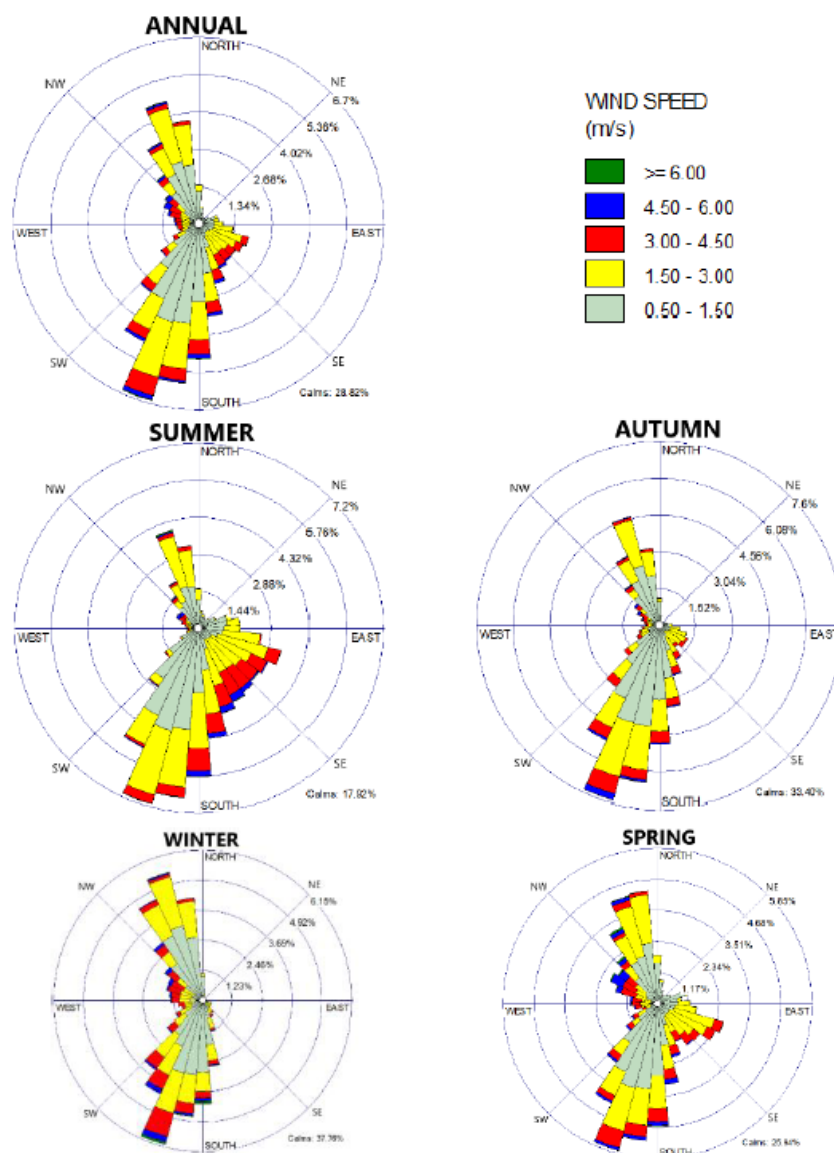
- construction phasing
- plant and equipment
- key construction contact details
- roles and responsibilities
- incident and non-compliance management
- environmental monitoring, auditing and inspections
- reporting requirements.

4 Existing climate data

Meteorological conditions strongly influence air quality. Most significantly, with respect to dust and particulate matter (PM), wind speed and wind direction affect the dispersion of air pollutants.

Observations of wind speed and direction from the Department of Climate Change, Energy, the Environment and Water (DCCEE) air quality monitoring station (AQMS) at St Marys have been selected to represent typical wind patterns in the area surrounding the site. The St Marys AQMS is located approximately 6.2 km north-west from the centre of the site.

The AQMS is located on a residential property approximately 160 m from Mamre Road, Kemps Creek. Based on the representative data averaged for the period 2019 to 2023, winds within the south to south-west and north-west to north are most common in all four seasons. These data have been presented below in the wind rose plots.



Source: RWDI 2025

Figure 4.1 Windrose Plot – DCCEE St Marys AQMS, 2019–2023

5 Environmental aspects and impacts

5.1 Construction activities

5.1.1 Air quality

The main Project construction activities that could result in the generation of dust and particulate matter (PM) include:

- Detailed minor earthworks and excavation.
- Spoil/material handling, including stockpiling, material loading and material haulage.
- Pile breaking for pile cap installation.
- Wind erosion of exposed areas and temporary stockpiles.
- Vehicle movements over unpaved surfaces (including unsealed access roads).
- Tracking of dirt from construction vehicles onto public roads.

Other sources of air pollutants during construction include diesel exhaust from construction vehicles and equipment, and the handling and/or storage of fuel and other chemicals.

It is worth noting, however, that emissions to the atmosphere during construction are expected to be temporary and relatively short-lived.

5.1.2 Odour

Project construction activities that could result in odour emissions (or gases more generally) include:

- Excavations of organic or contaminated materials.
- Sealing works/asphalt.
- Road line/parking bay marking.

5.2 Factors affecting emissions and impacts

The potential for impacts of construction on air quality and odour will depend primarily on:

- The existing air quality environment and location of the receivers.
- The nature, extent, and magnitude of the construction activities (and emissions).

Several environment factors also have the potential to affect the likelihood of dust emissions during construction.

These include:

- Wind direction – determines whether dust and PM are transported in the direction of receivers.
- Wind speed – governs the potential suspension and dispersion of dust and particulate matter.
- Soil type – more erodible soil types have a higher dust emission potential.
- Soil moisture – increased soil moisture reduces soil or dust erosion potential.

- Rainfall or dew – rainfall or heavy dew that wets the surface of the soil and reduces the risk of dust generation.
- Evaporation – dries out the surface of the soil and leads to increased risk of dust generation.
- Exposed surfaces – during construction non-vegetated surfaces will be exposed prior to revegetation, which is a key factor influencing dust emissions.

6 Monitoring program and reporting

All site personnel will be informed (through the site induction) that they must minimise dust on site for the health and safety of themselves and the surrounding community. Visual dust monitoring will be the responsibility of all site personnel, works creating dust plumes should be brought to the attention of the site supervisor, who will implement mitigation measures to avoid further dust plumes.

There are currently four dust deposition gauges installed on the boundaries of the Stage 1 Estate site. These are shown indicatively as numbered orange circles (1 to 4) within Figure 6.1. Dust deposition gauges have been installed around the Estate site and are monitored by a contractor, who supplies a monthly report against the criteria listed in Table 6.4.

Four SiteHive real-time particulate matter monitors are installed on the site boundary. Lot F also has one SiteHive monitor installed, and Lot J has two monitors installed. These are shown indicatively as blue squares within Figure 6.1 (E1 to E4, F1 and J1 to J2). SiteHive monitors offer comprehensive real-time dust monitoring for particulate matter (PM_{2.5} and PM₁₀). SiteHive provides instant feedback through a real-time dashboard and alert system. Site managers can be alerted to any exceedance to air quality criteria and act immediately to manage any dust event.

In addition to the dust gauges and SiteHives already on the site, up to two SiteHives will also be installed at the Lot K boundary. These monitors will be used to collect continuous PM₁₀ and PM_{2.5} monitoring data. These are shown indicatively as purple squares within Figure 6.1 (K1 and K2).

All monitoring will be undertaken in accordance with the Approved Methods for the Sampling and Analysis of Air Pollutant in NSW (NSW EPA 2022).

The monitoring and inspection requirements for the Project are outlined in Table 6.1. The corresponding activities will occur for the duration of construction, as appropriate.

Table 6.1 Monitoring and inspection method

Project monitoring method	Record	Responsibility	Frequency
Dust deposition monitoring at boundary of construction footprint at four locations.	Monthly dust deposition rates.	Site Manager	Monthly
Real-time dust monitors.	Real-time particulate matter (PM ₁₀ , PM _{2.5}) concentrations.	Site Manager	Continuous
Weekly site inspections to ascertain the effectiveness of implemented controls, including any observed dust plumes originating from the work site and/or activities observed outside of the Project that may impact on dust levels near sensitive receivers.	Weekly inspection record.	Site Manager	Weekly
Erosion Sediment Control Plan – weekly inspections to ensure all mitigation measures are in place.	Weekly inspection record.	Site Manager	Weekly
Meteorological data including daily rainfall, hourly temperature, relative humidity, wind (direction and speed) and barometric pressure.	Daily rainfall records from SiteHive (or equivalent). If the SiteHives are not functioning the project may rely on daily rainfall records from closest BoM station until they are fixed.	Site Manager	Daily

Project monitoring method	Record	Responsibility	Frequency
Visual observations during daily site surveillance to ascertain the effectiveness of implemented dust and air quality controls, including any observed dust plumes originating from the work site and/or activities observed outside of the Project that may impact on dust levels.	Work Records, recording daily activities and Strong winds - where wind in excess of 40 kilometres per hour (km/h), work may be halted if causing dust concerns. Complaints records.	Site Manager	Daily
Daily site inspections to ensure dust management controls are being implemented and to record the presence of odour.	Daily inspection record.	Site Manager	Daily

6.1.1 Real-time monitoring with SiteHive

The 2021 Wilkinson Murray AQIA report for the site noted that specific real-time dust monitoring was not necessary. It has since been established by an independent audit conducted on behalf of DPHI, that real-time monitoring would be beneficial for ongoing emission management and incident determination for the Project. Prime and SFKC has proposed to install up to two SiteHive monitors for the Lot K site (see Section 6.2) to be used for ongoing emission management and incident determination. These will be in addition to the SiteHive monitors located on the Stage 1 Estate boundary, within Lot F and Lot J.

The SiteHives will be positioned in a manner that will allow Prime and SFKC to assess potential sources of dust (e.g. a particular activity on part of the site) and cumulative impacts from Lot K and other site work, including future stages that may occur concurrently.

A trigger action response plan (TARP) will be prepared to assist with the management of operational air pollution emissions. The real-time air quality monitoring data will be used in combination with real-time meteorological conditions to inform operational emission management actions at the Project site. An email and SMS alert system to support appropriate responses will be implemented.

Monitoring data and alerts would be available to key people involved in Lot K and other site works (including those involved in future work stages), such as the SFKC Development Manager, SFKC Project Manager, Prime Senior Project Manager and Prime Site Manager.

Location-specific TARP trigger levels will be determined with the input of the appointed air quality consultant and Environmental Representative (ER) following the commissioning of the monitors.

6.1.2 Air quality TARP

To ensure that air quality is managed in accordance with this plan the following actions will be taken:

- Two SiteHives will be placed in the prevailing wind direction on Lot K to provide insight into inter-lot dust generation.
- A three-level action and response program for PM₁₀ has been developed and is provided in Table 6.2.
- Where regional air quality data is shown to be in the Extremely Poor category as per NSW EPA (which can be found at <https://www.airquality.nsw.gov.au/air-quality-in-my-area>) for the region, cease all dust generating works. As Bringelly is the closest to the site, its monitoring station and data will be used to determine this. The website provides pollutant concentrations levels by categorising air quality into:
 - Good
 - Fair

- Poor
- Very poor
- Extremely poor levels.

Table 6.2 Air quality TARP levels, actions and responses for PM₁₀

Alarm level	Action required	Response
Level 1 Limit – 50 µg/m ³ – Based on a <u>rolling</u> 1 hour average PM₁₀ (i.e. consecutive 5 minute concentrations). – Triggered when reading exceeds the limit consecutively for a period of 2 hours. – Alarm <u>does not repeat</u> during sustained exceedance.	Prime to coordinate a desktop-based review of wind speed and direction conditions, real-time PM ₁₀ concentrations at the seven monitors to determine upwind-downward concentration and review current site operations to identify potential source of concentrations.	Should the desktop review identify that the construction works are contributing to source of concentrations, the Contractor's Environment Manager will organise increased dust control practices specific to contributing sources.
Level 2 Limit – 80 µg/m ³ – Based on a <u>rolling</u> 1 hour average PM₁₀. – Triggered when reading exceeds the limit consecutively for a period of 2 hours. – Alarm <u>does not repeat</u> during sustained exceedance.	Following completion of Level 1 actions, the Prime or delegate to undertake an in-person inspection of likely contributing source of concentrations.	If site investigations identify that the facility is the contributing source of concentrations, implement additional controls, relocate or cease dust emitting activities.
Level 3 Limit – 200 µg/m ³ – Based on a <u>rolling</u> 1 hour average PM₁₀. – Triggered when reading exceeds the limit consecutively for a period of 30 minutes. – Alarm <u>does not repeat</u> every 30 minutes during sustained exceedance.	Following completion of Level 1 and 2 actions, the Prime or delegate to undertake an in-person inspection of likely contributing source of concentrations.	If site investigations identify that the construction works are source of concentration, ceases those activities immediately (as practicable to do so). Determine and implement additional controls and/or relocate activities prior to recommencement.

6.2 Monitoring locations

Figure 6.1 presents the surrounding sensitive receiver locations to the Estate in relation to the existing dust deposition gauges and have been used to determine appropriate locations for the real-time monitors.

To support Lot K works, an additional two SiteHives will be located at the locations indicated (blue circles) on Figure 6.1. These are in addition to the dust gauges and SiteHives already in place for the Stage 1 Estate works, Lot F and Lot J works. The SiteHive locations take into account the dominant wind patterns described in Chapter 4 and the closest surrounding sensitive receptors.

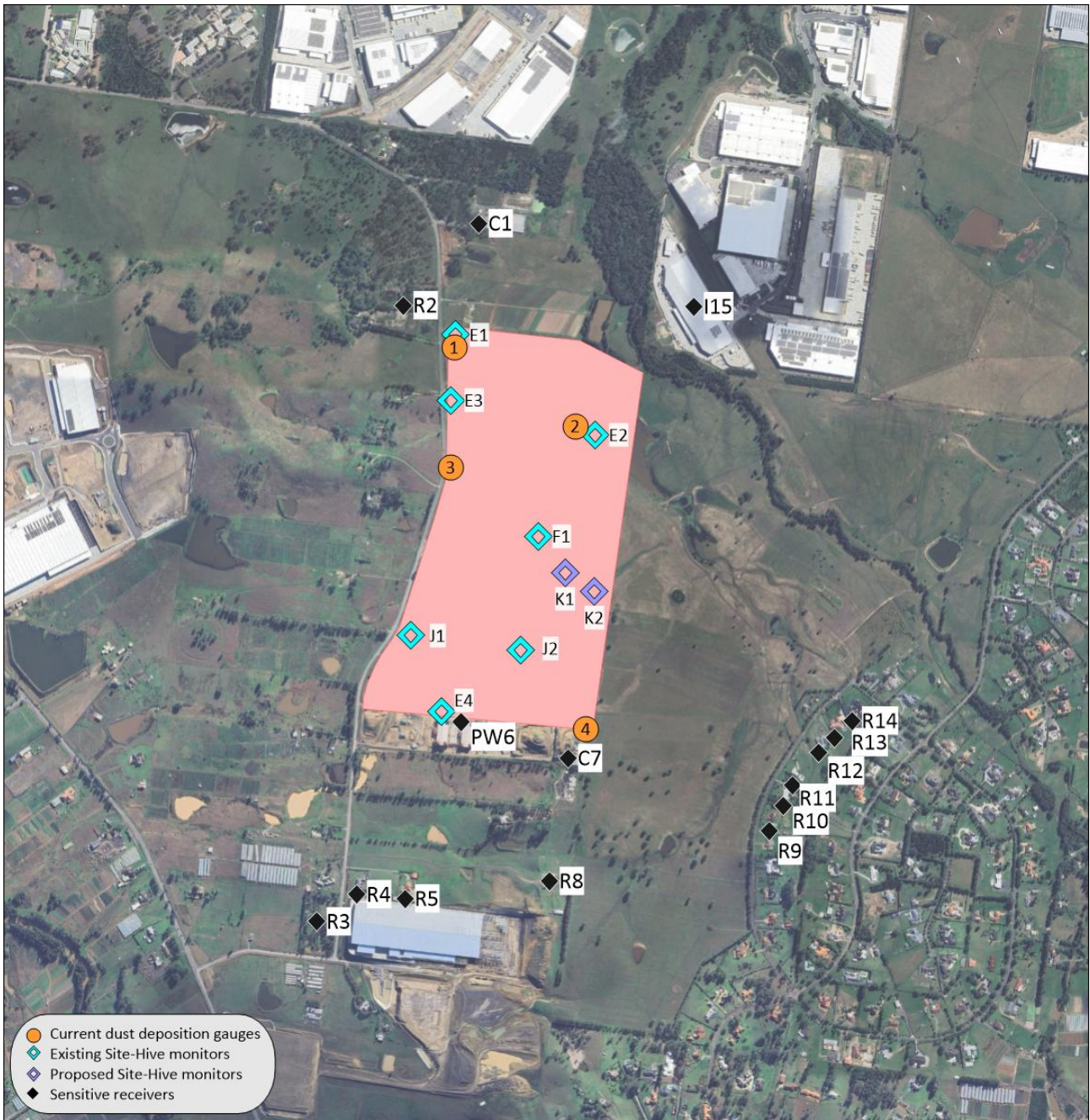


Figure 6.1 Sensitive receiver locations and indicative dust gauge and SiteHive locations

Table 6.3 provides surrounding sensitive receivers and monitoring locations in detail.

Table 6.3 Surrounding sensitive receivers and monitoring locations

Receiver ID	Receiver type	Monitoring location
R2	Residential North-west of the site	- Dust deposition gauge 1 located to the south-east of R2. - SiteHive adjacent to dust deposition gauge 1. - SiteHive monitors at Lot K, Lot J and Lot F.
I15	Industrial North-east of the site	- Dust deposition gauge 2 located to the north-east of the site. - SiteHive adjacent to dust deposition gauge 2. - SiteHives at Lot K, Lot J and Lot F. - Downwind of dominant south-westerly winds (see Chapter 4).
R3-R6	Residential South-west of the site	- Dust deposition gauge 3 located to the west of the site. - Dust deposition gauge 4 located to the west of the site. - SiteHive to the south of the site. - SiteHives at Lot K, Lot J and Lot F. - Upwind of dominant south-westerly winds (see Chapter 4).
Mt Vernon residential R9-R14 and proposed place of worship (PW6)	Residential (Mt Vernon) South-east of the site	- Dust deposition gauge 4 located to the south-east of the site. - SiteHive to the south of the site at a central location on the southern boundary. - SiteHives at Lot K, Lot J and Lot F.

Notes 1: Monitoring locations can be altered during construction if specific concerns are identified by a stakeholder and the locations do not measure that site.

2: Sensitive receiver prefixes – C = commercial, R = residential, PW = place of worship, I = industrial.

6.3 Impact assessment criteria

Air quality impact assessment criteria are benchmarks set to protect the general health and amenity of the community in relation to air quality. The criteria presented in *Approved Methods for the Modelling and Assessment of Air Pollutants* in NSW (EPA 2022) is consistent with the *National Environment Protection (Ambient Air Quality) Measure* (NEPM) (National Environment Protection Council 2016).

Dust deposition gauges and SiteHives are located around the Project boundary (see Figure 6.1). The impact assessment criteria for pollutants that are relevant are summarised in Table 3.1 from the Lot K AQIA (RWDI 2025).

Dust will be sampled and reported during construction. Concerns raised with regards to dust levels, along with the annual review of the CAQMP, will be used to assess if the criteria and the monitoring methods are appropriate for the Project. Dust deposition and continuous particulate matter monitoring will continue until at least 70% ground cover is achieved across 80% of the disturbed footprint, (to be assessed by the ER).

Twelve months from the commencement of operation of the first lot developed, a review of the dust monitoring requirements will be undertaken to assess any ongoing monitoring.

Table 6.4 Impact assessment criteria

Pollutant	Averaging period	Impact	Criteria
Particulate matter $\leq 10 \mu\text{m}$ (PM ₁₀)	Annual	Total	25 $\mu\text{g}/\text{m}^3$
	24 – hour	Total	50 $\mu\text{g}/\text{m}^3$
	Annual	Total	8 $\mu\text{g}/\text{m}^3$

Pollutant	Averaging period	Impact	Criteria
Particulate matter $\leq 2.5 \mu\text{m}$ (PM _{2.5})	24 – hour	Total	25 $\mu\text{g}/\text{m}^3$
Deposited dust (DD)	Annual	Total	4 $\text{g}/\text{m}^2/\text{month}$
	24 – hour	Incremental	2 $\text{g}/\text{m}^2/\text{month}$

The 2025 RWDI AQIA (RWDI 2025) states that the potential dust impacts from the proposed works is considered to have a negligible risk for demolition activity and a low risk for all other activities (earthworks, construction and track-out). The AQIA does not recommend additional monitoring but states that existing continuous real-time dust monitoring will be continued during the construction of the project (e.g. at neighbouring lots). However, to ensure that the project is maintaining best practice with respect to air quality, additional real-time monitors specific to Lot K will be implemented during the construction phase. Dust deposition will continue to be monitored throughout the Estate.

6.4 Key performance indicators

Key performance indicators include:

- Visible dust limited on site.
- Reduce the amount of dust complaints received.
- All complaints from the community and stakeholders are managed in a timely manner (as detailed within the Community Consultation and Complaints Handling Strategy (CCCHS)).
- Site personnel are educated (via tool box talks) on best practice to avoid dust being generated from the site.
- Monthly dust results are under the monitoring criteria.
- Prompt contingency measure implemented to reduce/investigate any exceedances.

7 Management measures

Construction associated with the Project has the potential to impact air quality in areas within, and adjacent to, the construction footprint. To avoid, mitigate and/or minimise these potential impacts, a range of control measures can be implemented. This section outlines the management measures provided in the Lot K AQIA (RWDI 2025) to mitigate impacts to air quality during the construction phase of the Project.

The Project site is located within the Mamre Road Precinct (MRP), and therefore the relevant controls of the DCP have been considered in this CAQMP and must be applied to the construction phase of the Project. The applicable controls provided in the DCP have been summarised in Table 7.1.

In addition to the mitigation measures outlined within Table 7.1, SKFC have installed a wheel-wash to service heavy vehicles leaving the site. Vehicles enter the wheel-wash from a paved surface, undergo wheel cleaning, and the exit the site through another sealed surface. This ensures mud tracking is minimised.

SKFC also have a number of security cameras across the site. These may also be used to review dust events, where possible.

Table 7.1 **Air quality management measures**

Control	Timing	Responsibility	Source
General			
Plan site layout so that machining and dust generating activities are minimised and located away from receptors, as far as possible.	Pre-construction	Prime	Section 7.1 of the AQIA
Avoid site run-off of water or mud, and apply geofabric to drains where practicable (addressed in the Erosion Control Sediment Plan).	Construction	Prime	Section 7.1 of the AQIA
Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If being re-used, keep materials covered or contained in a way which prevents dust (e.g. dust suppression).	Construction	Prime	Section 7.1 of the AQIA
Cover, seed, or fence stockpiles to prevent wind erosion. (Further details contained within the ESCP).	Construction	Prime	Section 7.1 of the AQIA
Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible.	Construction	Prime	Section 7.1 of the AQIA
Impose and signpost a maximum speed limit of 24 km/h on surfaced haul roads and 15 km/h on unsurfaced haul roads and work areas.	Construction	Prime	Section 7.1 of the AQIA
Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.	Construction	Prime	Section 7.1 of the AQIA
Progressively stabilise earthworks on completion of work areas to limit exposed loose materials in accordance with the ESCP.	Construction	Prime	Section 7.1 of the AQIA
At least one water cart would be located on the wider Stage 1 Estate site and would be available for use on Lot K as required. Additional water carts would be made available where construction activities and/or weather conditions elevate the risk of dust generation.	Construction	Prime	Best Practice
Weather forecasts would be monitored for dust generation risk factors (such as high windspeed, hot and dry conditions) and construction activities would be planned accordingly.	Construction	Prime	Best Practice
Construction activities with a higher potential to cause dust, including those that require large numbers of heavy vehicle movements such as concrete pours, would occur at times of day when dust generation risk is low. This includes early morning works when wind speed is often low and soil moisture is high. Where approved, these works would commence prior to the standard construction hours identified in Condition B19.	Construction	Prime	Best Practice

Control	Timing	Responsibility	Source
During periods where the site will be unattended for longer than 24 hours Prime will compact any exposed surfaces, to the extent practicable, to provide a seal to the surface.	Construction	Prime	Best practice
During shutdown periods of greater than 72 hours Prime will: • Compact exposed surfaces, to the extent practicable, to provide a seal to the surface. • Review the need for a surface sealant, such as a polymer binding agent.	Construction	Prime	Best practice
Construction vehicles, traffic and haulage			
Ensure all vehicles switch off engines when stationary (no idling vehicles).	Construction	Prime	Section 7.1 of the AQIA
Impose and signpost a maximum-speed-limit of 15 km/h on unpaved haul roads and work areas.	Construction	Prime	Section 7.1 of the AQIA
Use water-assisted dust sweeper(s) on the access and local roads, as necessary.	Construction	Prime	Section 7.1 of the AQIA
Avoid dry sweeping of large areas.	Construction	Prime	Section 7.1 of the AQIA
Trucks associated with the development must not track dirt onto the public road network.	Construction	Prime	Section 7.1 of the AQIA
Public roads being use by trucks are to be kept clean.	Construction	Prime	Section 7.1 of the AQIA
Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.	Construction	Prime	Section 7.1 of the AQIA
Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.	Construction	Prime	Section 7.1 of the AQIA
Record all inspections of haul routes and any subsequent action in a site logbook.	Construction	Prime	Section 7.1 of the AQIA
Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).	Construction	Prime	Section 7.1 of the AQIA
Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.	Construction	Prime	Section 7.1 of the AQIA
Access gates to be located at least 10 m from receptors where possible.	Construction	Prime	Section 7.1 of the AQIA
All plant and equipment used on site will be maintained in a proper and efficient condition.	Construction	Prime	Best Practice
All plant will be operated in a proper and efficient manner to avoid dust generation.	Construction	Prime	Best Practice
Where vehicles are to travel over exposed surfaces, those surfaces would be wet prior to mitigate dust generation.	Construction	Prime	Best Practice

Control	Timing	Responsibility	Source
Communications			
Develop and implement a stakeholder communications plan that includes community engagement before work commences on site; and - displays the name and contact details of the Responsible Person accountable for air quality and dust issues on the site boundary. Displays the head or regional office contact information.	Pre-construction	Prime	Section 7.1 of the AQIA
Mamre Road Precinct Working Group - Hold regular meetings with any other high-risk construction sites within 500 m of the site boundary to ensure plans are coordinated.	Construction	Community Liaison	Section 7.1 of the AQIA
Complaints and incident management			
Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.	Construction	Prime	Section 7.1 of the AQIA
Make the complaints log available to relevant authorities including the Council, EPA etc.	Construction	Prime	Section 7.1 of the AQIA
Record any exceptional incidents that cause dust and/or air emissions (including odour), either on or off site, and the action taken to resolve the situation in the logbook.	Construction	Prime	Section 7.1 of the AQIA
Monitoring			
Undertake daily on-site inspection, where receptors are nearby, to monitor dust. Record inspection results and make available to relevant authorities. This should include regular dust soiling checks of surfaces such as cars, and window.	Construction	Prime	Section 7.1 of the AQIA
Conduct dust deposition monitoring in accordance with AS 3580.10.1 – 2003 <i>Methods for sampling and analysis of ambient air</i> . Determination of particulate matter – Deposited matter – Gravimetric method. Conduct continuous real-time particulate matter monitoring utilising SiteHives. Locations for monitoring are identified in Figure 6.1. Monitoring is to be continued until 70% cover is reached over 80% of the site as determined by the ER. Monitoring data will be analysed and reviewed on a regular basis for ongoing emission management and incident determination. Measured concentrations will be compared against the impact assessment criteria outlined in Table 6.4 and the TARP and key performance indicators discussed in Section 6.4. Monitoring with SiteHives will continue when the site is unattended, including during shutdown periods. Where monitoring indicates dust emissions are being generated by the project, the Site Manager (or delegate) will implement appropriate mitigation measures to control the dust.	Construction	Prime	Best practice

7.1 Collaboration through participation in the Mamre Road Precinct Working Group

SKFC is a member of the Mamre Road Precinct Working Group (MRPWG), as required under Condition A40 of the Development Consent.

Cumulative air quality impacts may occur across the wider area with a number of developers undertaking earthworks and other dust generating activities simultaneously. SKFC will work proactively and collaboratively with other members of the MRPWG to mitigate dust impacts to local receivers, including those from the Lot J works and Stage 1 Estate works. SKFC will:

- Collaborate on cross-verification of data taken from multiple sources across multiple sites.
- Collaborate to provide comprehensive coverage across the wider area by installing an appropriate amount of monitoring devices on SKFC project sites.
- Share resources and air quality data.
- Collaborate with others to identify emerging trends in the data, to problem solve any precinct wide or cumulative air quality issues and to plan activities in a coordinated manner to reduce the likelihood of dust generation.

7.2 Community consultation and complaints

SKFC has developed a Community Consultation and Complaints Handling Strategy (CCCHS) as part of the CEMP which outlines key stakeholders and the engagement strategies to be adopted prior to and during construction works. Consultation with the surrounding community was undertaken in May 2023 as part of Stage 1 Development application. The local community was notified of the upcoming works and provided with contact details to raise any concerns they may have with the Project team. At the time of the consultation no further concerns were raised. Community feedback and complaints relating to local air quality will be dealt with in accordance with the Project CCCHS. The Complaints Response Handling procedure is clearly outlined the CCCHS found in Appendix E of the CEMP.

Prime will undertake consultation activities in accordance with the processes outlined in the CCCHS.

7.3 Training

All employees, contractors and utility staff working on site will undergo site induction training that would include air quality and odour impact management issues. The induction training will address elements related to air quality and odour management including:

- Typical construction activities that may impact air quality and odour.
- Air quality and odour mitigation and management measures.
- Incident response, management and reporting.
- Community complaints response and reporting.
- Specific responsibilities to minimise air quality impacts on sensitive receivers.

Further details regarding staff induction and training are outlined in the CEMP.

7.4 Record keeping and reporting

The site supervisor will maintain daily records of construction activities and the weather conditions that effect work on the site (i.e. extreme weather events/ bushfires). Weekly environmental site inspections (refer to the CEMP) will monitor visual and deposited dust generated from work on the Project, the locations of stockpiles in relation to sensitive receivers, the monitoring of dust generating activities and ensuring that the dust deposition gauges are in place and operating.

A monthly report summarising the dust deposition gauge results against the criteria listed above will be provided to the Environmental Representative. In the event of an exceedance further investigation will be required and provided within the monthly report. Wind direction, work records and weather data will be obtained and used to determine if the dust was generated from the project site. Further investigation should be undertaken to determine if the results were affected by external factors outside of the projects control (e.g. bushfire, dust storm or dust plume created from works on adjoining land). Monthly reporting will be provided to the Environmental Representative.

Community dust complaints will be recorded as part of the CCCHS, site supervisor will be notified of the complaint and investigate that cause of the dust concerns as soon as possible. Mitigation measures will be implemented to prevent further concerns. Results from dust deposition gauges can assist in determining the cause of dust concerns.

8 Review and improvement

A review of the CEMP, sub-plans and monitoring programs will be undertaken during construction as required and in accordance with Condition C41 of SSD 80264236. These reviews will be completed to determine the efficiency of the monitoring program and any required changes necessary to ensure compliance. This Program will be further developed and revised to address changes in the environmental management process. Circumstances which may trigger updating of the Program may include:

- Changes to design, construction, work methods, legislation, or policy.
- Incidents, complaints or non-compliance.
- Changes identified by continuous improvement.
- Changes to key management plans that are relevant.
- Where additional monitoring measures are identified.

8.1 Continuous improvement

Monitoring data will be reviewed throughout the construction period, to assess the number of sampling locations and/or the information that it provides. The data will be reviewed for appropriateness following 12 months of construction monitoring.

Continuous improvement of this Program will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives and targets (refer to Chapter 2 of the CAQMP).

The continuous improvement process will be designed 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 plan of corrective and preventative action to address any non-conformances.
- Verify the effectiveness of the corrective and preventative actions.
- Document any changes in procedures resulting from process improvement.
- Make comparisons with objectives and targets.

This CAQMP will be revised and improved as per requirements identified in Chapter 6 of the CEMP.

8.2 Update and amendment

Updates and amendments to this CAQMP must first be approved by Environmental Representative and then may require to be submitted to the Planning Secretary for approval via the Planning Portal website. A copy of the updated Program and changes will be distributed to all relevant stakeholders and changes implemented immediately.

Attachment A

Curriculum vitae



Amie Gilbert

Air Quality and Climate Consultant
EMM Consulting Pty Limited

Professional Overview

Amie has over 3 years of environmental consulting experience and specialises in air quality and climate consultant at EMM. She is experienced in air quality assessments for a range of industries including extraction, concrete batching and energy. She is skilled in developing emissions inventories, dispersion modelling and completing construction risk assessments. Amie is skilled in analysing large air quality and meteorological datasets and interpreting the results for assessment reporting.

Qualifications and licences

Statement of Attainment in Bush Regeneration, TAFE NSW, Sydney 2021

Bachelor of Science, Major in Climate Science, Minor in Mathematics & Physics, Macquarie University, 2019

Specialisation

Air quality impact assessments, modelling and monitoring

Air quality and meteorological data processing and analysis

Greenhouse gas assessments

NPI reporting

Risk based construction works

Representative experience

Mixed industrial

- CWS Waste Transfer Station, air quality review, Cardiff, NSW (Central Waste Plant)
- Enfield Concrete Batching Plant, air quality impact assessment, Enfield, NSW (Boral Resources, NSW)
- Moss Vale Concrete Batching Plant, air quality impact assessment, Moss Vale, NSW (Gunlake)
- Reinforced Concrete Pipes Australia (RCPA) Batching plant Thornton, air quality impact assessment, Thornton, NSW (RCPA, NSW)
- Alspec Industrial Warehouse, air quality impact assessment, Orchard Hills, NSW (HB+B Properties Pty Ltd)
- Mayfield West Recycling Facility – Crushing operations, air quality monitoring program, Mayfield West, NSW (Benedict Recycling Pty Ltd)
- CWS Kurri Kurri Integrated Resource Recovery Centre, air quality and greenhouse gas assessment, Kurri Kurri, NSW (Central Waste Station Pty Ltd)
- Greenacre Waste Facility, air quality impact assessment, Greenacre, NSW (Aussie Recycling)
- AIBP Storage and Distribution Warehouse, air quality impact assessment, Orchard Hills, NSW (HB+B Properties Pty Ltd)
- Enfield Asphalt Plant, dust management study, Greenacre, NSW (Bitupave, a subsidiary of Boral Limited)
- Boral Bringelly Concrete Batch Plant, air quality audit, Bringelly NSW (Boral Concrete Pty Ltd)
- Silverwater Concrete Batch Plant (MOD 1), air quality impact assessment, Silverwater, NSW (Gunlake concrete Pty)

Mining and extractive

- Annual air quality monitoring reports for Luddenham Quarry, Luddenham, NSW (Luddenham Operations)
- Golden Mile Project, Air Quality and Meteorology Baseline analysis, Cloncurry, QLD (Ausmex Mining Group (Cloncurry))
- Quarterly air quality monitoring reports for Russell Vale Colliery, NSW (Wollongong Resources Pty Ltd)
- Wyndham Quarry, air quality impact assessment, NSW (Mopoke Portfolio Pty Limited)
- Seaham Quarry SSD, air quality and greenhouse gas impact assessment, Raymond Terrace, NSW (Boral Resources, NSW)
- Tahmoor South Longwall S7A MOD3, greenhouse gas assessment, Tahmoor, NSW (Tahmoor Coal Pty Ltd)
- Campaign air quality monitoring report for Menangle Quarry, Menangle, NSW (Menangle Sand and Soil)
- Boggabri Coal Mine, air quality management plan, Boggabri, NSW (Boggabri Coal Pty Ltd)
- Allandale Quarry NPI emissions reporting, Keinbah, NSW (Quarry Products (Newcastle) Pty Ltd)
- North Queensland Resource Recovery Project – Site Selection Due Diligence, air quality assessment, North-west Queensland (Evolution Mining Pty Ltd)
- Eva Copper Mine Project – Amendment, air quality impact assessment, North-west Queensland (Eva Copper Mine Pty Ltd)

Infrastructure and energy

- Olefines Plant Replacement Cooling Tower Project, construction air quality impact assessment, Botany, NSW (Qenos Pty Ltd, NSW)
- Alspec Industrial Business Park bulk earthworks, construction air quality impact assessment, Orchard Hills, NSW (HB+B Properties Pty Ltd)
- Sandy Creek Solar Farm, construction air quality impact assessment, Dunedoo, NSW (Lightsource bp)
- Snowy Hydro Laverton North Power Station, air quality impact assessment, Laverton North, VIC (Snowy Hydro limited)
- Botany Road Planning Proposal, air quality review, Phillip, ACT (Intellectual Property Group)
- Burrah Park SSD construction and earthworks, air quality impact assessment, Badgerys Creek, NSW (HB+B Properties Pty Ltd)

- Borumba Pumped Hydro – Exploratory works, air quality impact assessment, Lake Borumba, QLD (Queensland Hydro)
- Lake Lyell Pumped Hydro, air quality and greenhouse gas assessment, Lake Lyell, NSW (EnergyAustralia Pty Ltd)
- ISPT Summit Kemps Creek, air quality impact assessment, Kemps Creek, NSW (Aliro Group Pty Ltd)
- Hunter Transmission Project, air quality and greenhouse gas assessment, Hunter region NSW (EnergyCo)
- Muswellbrook Pumped Hydro Project, air quality impact assessment and climate change risk assessment, Muswellbrook, NSW (Muswellbrook Pumped Hydro Pty Ltd)
- Gladstone SDA Energy Hub, air quality impact assessment, Gladstone, QLD (Private Energy Partners)
- Western Sydney Airport Business Park, air quality impact assessment, Luddenham, NSW (Western Sydney Business Park Trust)

Odour assessment

- Orica Gate 3 industries, odour risk assessment, Deer Park, VIC (HB+B properties Pty Ltd)

Transport

- Traffic calming: effects on emissions and air quality – literature review, NZ (Emissions Impossible)
- Huntly Residential Care Facility, TRAQ (Tool for Roadside Air Quality) screening assessment, Hunter Valley, NSW (Knowles Group)
- Westmead South Planning Proposal, TRAQ (Tool for Roadside Air Quality) screening assessment, Sydney, NSW (Hatch Roberts Day)
- Downfall Creek – road upgrade, construction air quality impact assessment & RAQST (The Roadside Air Quality Screening Tool) screening assessment, Brisbane, QLD (Department of Transport and Main Roads)



Francine Manansala

Senior Associate and Team Leader - Air Quality and Climate
EMM Consulting Pty Limited

Professional Overview

Francine has over 17 years of environmental consulting experience specialising in air quality. Her areas of expertise include emission and dispersion modelling.

Francine has been responsible for the detailed technical work on air quality management plans and assessments for various sectors and industries, including road transport, mining and odour. She has undertaken the modelling work for several major road infrastructure projects, including the three stages of WestConnex and associated projects, as well as several large open-cut coal mines in the Gunnedah and Hunter regions.

Francine has also led various air quality and/or odour assessment projects for industrial activities, greenhouse gas assessments, air quality monitoring, air quality management plans, NPI reporting, auditing, and risk-based construction works. She has recently led Climate Change Risk Assessments (CCRA) and has experience in providing clients with advice on the Safeguard Mechanism.

Qualifications and licences

Bachelor of Arts in Resource and Environmental Management,
Macquarie University, 2008

CASANZ Certified Air Quality Professional (CAQP)

President of the Clean Air Society Australia & New Zealand
(CASANZ)

Specialisation

Air quality management plans

Emission and dispersion modelling

Greenhouse gas assessments

Air quality monitoring

NPI reporting

Risk based construction works

Climate change risk assessment

Representative experience

Air quality management plans

- 200 Aldington Road Industrial Estate Lot F construction air quality management plan (Stockland Fife Kemps Creek Pty Ltd)
- Suburban Rail Loop East Package D environmental air quality and dust management plan (TerreVerde on behalf of Suburban Rail Loop Authority)
- Boral Geelong Clinker and Slag Grinding Facility, air quality management plan (Boral Cement Ltd)
- Dubbo Quarry air quality and greenhouse gas management plan (Holcim Pty Ltd)
- Vopak Port Botany Project: Site B Expansion Stage B4A, air quality management plan (Vopak)

Air quality impact assessments

- Western Harbour Tunnel and Beaches Link, air quality assessments, Sydney NSW (Jacobs)
- Sydney Gateway project, air quality assessment, Sydney NSW (WSP/GHD)
- F6 Extension – Stage 1, air quality assessment, Sydney NSW (AECOM)
- WestConnex - M4 East, New M5 and M4-M5 Link, air quality assessments, Sydney NSW (Sydney Motorway Corporation)

- Dartbrook Open Cut Project, air quality assessment, Dartbrook NSW (Australian Pacific Coal Limited)
- Shenhua Watermark coal project, air quality impact assessment, Breeza NSW (Shenhua Watermark)

Technical air quality guidance

- Good Practice Guide for the Assessment and Management of Air Pollution from Road Transport Projects (CASANZ)
- Optimisation of the application of GRAL in the Australian context, Sydney NSW (Roads and Maritime Services)
- GRAL model guidance for Brisbane City Council (BCC)

Transport and infrastructure

- CPB Contractors, BAM, Ghella and UGL Joint Venture - Cross River Rail Southern Portal worksite - emissions and dispersion modeling of activities at the Southern Portal and Woolloongaba Cross River Rail construction sites, QLD
- Model comparison study, Sydney NSW (Roads and Maritime Services)
- Iron Cove Link portal study, Sydney NSW (Roads and Maritime Services)
- Lane Cove Tunnel ventilation investigation, Sydney NSW (Roads and Maritime Services)
- Review and quality checking of TRAQ (Tool for Roadside Air Quality), Sydney NSW (Roads and Maritime Services)
- Lane Cove Tunnel: a comparison of monitoring data before and after construction of the tunnel and an assessment of impacts, Sydney NSW (Roads and Maritime Services)
- Sydney Airport air quality master plan, Sydney NSW (Sydney Airport Corporation Limited)
- Port Macquarie Airport Parallel Taxiway air quality impact assessment, Port Macquarie NSW (King & Campbell Pty Ltd)
- Construction Dust Assessment for the Olympic Dam South and Roxby Downs West Accommodation Villages, Adelaide SA (BHP Billiton Olympic Dam Corporation Pty Ltd)

Mining and extractive

- Eva Copper Mine Pty Ltd - Eva Copper Project - AQIA for the proposed Eva Copper Project, northwest QLD

- Queensland Pacific Metals - Townsville Energy Chemicals Hub – AQIA and GHG assessments completed for a proposed laterite ore refinery south of Townsville
- QPM Pacific Metals Pty Ltd - Proposed new interim storage facility at Port of Townsville - prediction of air quality impacts from the new storage facility at the Port of Townsville, QLD
- Upper Hunter regional primary particle model, NSW (NSW Environment Protection Authority)
- ACARP Project C26024: Coal mine particulate emission factor validation, Sydney NSW (ACARP)
- Mount Owen Continued Operations, air quality impact assessment, Upper Hunter Valley NSW (Glencore)
- Boggabri, Tarrawonga, Maules Creek Emissions Estimation, Upper Hunter Valley NSW (Idemitsu Australia Resources and Whitehaven Coal Limited)
- Rocky Hill Coal Project, air quality impact assessment, Rocky Hill NSW (RW Corkery)
- Stratford Coal Mine extension, air quality impact assessment, Stratford NSW (Gloucester Coal & Resources Strategies)
- South Keswick Quarry, air quality impact assessment, South Keswick NSW (Regional Hardrock Pty Ltd)
- Bylong Coal Project, air quality impact assessment, Bylong NSW (KEPCO Bylong Australia Pty Ltd)

Industrial emissions

- Perilya North Mine stacks modelling, Perilya NSW (Leuhr Filter)
- Allied Mills food ingredient site upgrade, air quality assessment, Tamworth NSW (Allied Mills Pty Ltd)
- Wollert brickworks, air quality assessment, Wollert VIC (Austral Bricks)
- Orica Kooragang Island release incident, air quality assessment, Kooragang Island NSW (Orica Limited)

Odour assessment

- Wilsonton retail development, odour impact assessment (FKG Group)
- Box Hill, Schofields and West Schofields Precinct Planning, odour impact assessments, Box Hill/Schofields NSW (Department of Planning and Environment)
- Proposed East Tahmoor residential rezoning, odour impact assessment, East Tahmoor NSW (Wollondilly Shire Council)
- Several residential development projects in Tahmoor, odour impact assessments, Tahmoor NSW (Wollondilly Shire Council)
- Several residential development projects in Leppington/Austral, odour impact assessments, Leppington and Austral NSW (Cardno, Liverpool Council and private developers)
- Four Lanterns Estate, odour impact assessment, Leppington NSW (Aspen Group)
- Leppington Childcare Centre, odour impact assessment, Leppington NSW (The Great Indoors)
- KFC Manly, odour impact assessment, Manly NSW (Cardno)

Publications

Over 100 technical reports and papers. Details are available on request. Selected publications:

- Manansala, F, Boulter, P, Barnett, J & Kurz, C 2017, Optimisation of the application of GRAL in the Australian context. Report AQU-NW-012-21062: http://www.chiefscientist.nsw.gov.au/__data/assets/pdf_file/0011/125030/ACTAQ-GRAL-optimisation-MAIN.pdf
- Boulter, P & Manansala, F 2014, Lane Cove Tunnel ventilation investigation, report prepared for NSW Roads and Maritime Services, September 2014. Pacific Environment, North Sydney.
- Manansala, F, Boulter, P & Barnett, J 2014–2018, WestConnex M4 East, New M5 and M4-M5 Link – Environmental Impact Statements. Technical Working Paper: Air Quality. NSW Roads and Maritime Services.
- Manansala, F, Boulter, P, Barnett, J & Kurz, C 2017, Performance of the GRAMM-GRAL model system in the vicinity of an urban arterial road. Paper presented at the *23rd International Clean Air and Environment Conference*, Brisbane, Queensland, 15-18 October 2017.
- Barnett, J, Manansala, F 2013, 'The NSW EPA 'Dust Stop: Pollution reduction program' for coal mines – an overview and analysis', paper presented at the CASANZ Conference, Sydney, NSW, September 2013
- Manansala, F, Holmes, K 2011, Review of the air quality monitoring and modelling predictions before and after the opening of the Lane Cove Tunnel, Sydney, paper presented at the *CASANZ Conference*, Auckland, New Zealand, August 2011.

Australia

SYDNEY

Level 10 201 Pacific Highway
St Leonards NSW 2065
T 02 9493 9500

NEWCASTLE

Level 3 175 Scott Street
Newcastle NSW 2300
T 02 4907 4800

BRISBANE

Level 1 87 Wickham Terrace
Spring Hill QLD 4000
T 07 3648 1200

CANBERRA

Suite 2.04 Level 2
15 London Circuit
Canberra City ACT 2601

ADELAIDE

Level 4 74 Pirie Street
Adelaide SA 5000
T 08 8232 2253

MELBOURNE

Suite 9.01 Level 9
454 Collins Street
Melbourne VIC 3000
T 03 9993 1900

PERTH

Suite 3.03
111 St Georges Terrace
Perth WA 6000
T 08 6430 4800

Canada

TORONTO

2345 Yonge Street Suite 300
Toronto ON M4P 2E5
T 647 467 1605

VANCOUVER

2015 Main Street
Vancouver BC V5T 3C2
T 604 999 8297

CALGARY

700 2nd Street SW Floor 19
Calgary AB T2P 2W2



[linkedin.com/company/emm-consulting-pty-limited](https://www.linkedin.com/company/emm-consulting-pty-limited)



emmconsulting.com.au