
200 Aldington Road Industrial Estate

Construction Air Quality Management Plan

Prepared for Fife Kemps Creek Pty Ltd
August 2023

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200 Aldington Road Industrial Estate

Construction Air Quality Management Plan

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01 August 2023

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Acronyms and abbreviations

Acronym	Description
AQIA	Air Quality Impact Assessment
BC Act	Biodiversity Conservation Act 2016
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	Environmental Planning and Assessment Act 1979
EPA	Environmental Protection Agency
ER	Environmental Representative
FKC	Fife Kemps Creek Creeks Pty Ltd
GFA	Gross Floor Area
ha	hectare
km	kilometre
LGA	Local Government Area
m	metre
MRP	Mamre Road Precinct
NRAR	Natural Resources Access Regulator
PCC	Penrith City Council
SSD(A)	State Significant Development(Application)

1 Introduction

This Construction Air Quality Management Plan (CAQMP) has been prepared for implementation by Fife Kemps Creeks Pty Ltd (FKC) (a joint venture between Fife Capital and Stockland Managed entities) for the construction of the 106 – 288 Aldington Road Kemps Creek (200 Aldington Road Industrial Estate) Lot 200 DP 1285691. (the Project). The Project is located in Kemps Creek, New South Wales 2178, within the Penrith Local Government Area (LGA).

The site comprises a total area of approximately 72 hectares (ha). The site 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). The site 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 incorporated into this CAQMP:

- Environmental Impact Statement (EIS), prepared by Ethos Urban, dated 11 November 2020
- Response to submissions report (RTS), prepared by Ethos Urban, dated 9 May 2022
- Conditions of Consent – State Significant Development (SSD) SSD-10479, as amended
- Air Quality Impact Assessment (AQIA) Rev C, prepared by Wilkinson Murray, dated 4 February 2021
- Mamre Road Precinct Development Control Plan 2021 (the DCP).

The document has been prepared by David Bone of EMM Consulting, David is a highly experienced environmental scientist with over 30 years experience in the design implementation and management of construction environmental management monitoring systems. David is a certified environmental practitioner (CENvP #137) and has held NATA signatory status for air quality sampling and analysis. David is also an experienced environmental auditor of construction programs and holds a number of DPE approved roles as an independent auditor and environmental representative. A copy of David's CV is included as Attachment A.

1.1 Project overview

An EIS was submitted to the Department of Planning and Environment (DPE) for a Concept State Significant Development Application (SSDA) under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act), on behalf of FKC. Following exhibition of the project, a response to submissions report was prepared and additional information requested by DPE provided. The project was approved with conditions in May 2023.

The amended SSDA seeks approval for the following development:

- 323,530 m² of warehouse gross floor area (GFA)
- 17,010 m² of ancillary office GFA
- 13 individual development lots for warehouse buildings with associated hardstand areas and two lots for drainage infrastructure purposes (each including a bio retention basin)
- roads, including:
 - internal road layouts
 - southern road connection to Aldington Road
 - northern boundary road (half road corridor) connecting to Aldington Road

- road connections to adjoining landholdings to the north and east
- provision for 1,510 car parking spaces
- associated concept site landscaping.

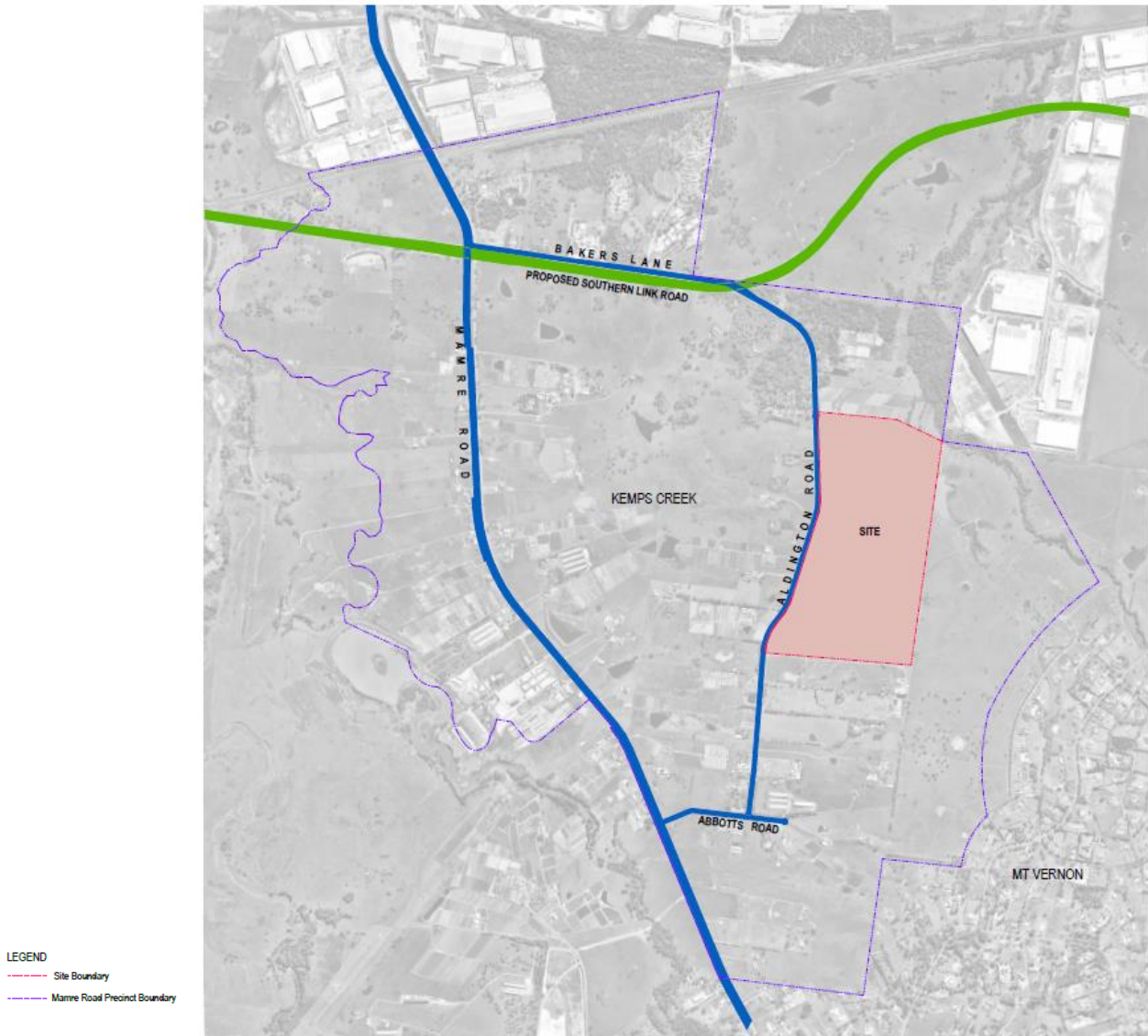


Figure 1.1 Land application map for the Mamre Road Precinct DCP and site location

The CEMP and sub plans have been prepared for the progressive delivery of site preparation, earthworks and infrastructure works for Stage 1 of the development which comprises of the following activities:

- demolition and clearing of all existing built form structures
- drainage and infill of existing farm dams and any ground dewatering
- clearing of existing vegetation
- subdivision of the site into 15 individual lots
- construction of a warehouse building with a total of 50,300 m² of GFA, including:
 - 47,800 m² of warehouse GFA
 - 2,500 m² of ancillary office GFA
 - 222 car parking spaces
- bulk earthworks including 'cut and fill' to create level development platforms for the warehouse buildings, and site stabilisation works (if required)
- roadworks and access infrastructure, including an interim access road and a temporary junction with Aldington Road
- stormwater and drainage work including stormwater basins, diversion of stormwater lines, gross pollutant traps and associated swale works
- sewer and potable water reticulation and
- inter-allotment, road and boundary retaining walls.

1.2 Air Quality Impact Assessment

An AQIA prepared by Wilkinson Murray as part of the EIS submission was revised as the project evolved. The report (Wilkinson Murray 2021) provides an assessment of the Project's predicted impacts upon air quality during the construction and operational phases. Earth works required for Stage 1 of the development will be the longest stage of works and have the most impact on air quality.

The report states that the potential dust impacts from the proposed works is considered to have a **low risk** of both dust soiling and human health impacts for the earthworks and for haulage (trackout) phases. The potential risk for the other stages of construction will be either low or negligible given that the worst case scenario (earthworks and associated haulage) has been considered.

Monitoring recommendations for the project 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.

2 Purpose and objectives

2.1 Purpose

The purpose of this CAQMP is to describe how FKC and its contractors will manage potential air quality and odour impacts during the construction of the Project. This CAQMP has been prepared 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 FKC and its contractors 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; and
- implement relevant legislation and other requirements detailed in Section 3 of this CAQMP.

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, 2014)
- 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)
- Managing Urban Stormwater: Soils and Construction, Volume 1 (Landcom, 2004) and Volume 2 (DECC 2008) (the “Blue Book”).
- 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 (all subplans have been written to comply with CoC E1) and has been prepared in accordance with condition C24 and D62 – D66 of the development consent for SSD 10479. The condition requirements and where they have been addressed in this report are summarised in Table 3.1.

Table 3.1 Conditions of Approval

Condition Reference	Consent Condition	Where addressed
C24	<p>Operation of Plant and Equipment - All plant and equipment used on site, or to monitor the performance of the Stage 1 development, must be:</p> <ul style="list-style-type: none"> (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner. 	Table 6.1 Construction vehicles, traffic and haulage
D62	<p>Dust Minimisation - The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.</p>	Section 6
D63	<p>During construction, the Applicant must ensure that:</p> <ul style="list-style-type: none"> (a) exposed surfaces and stockpiles are suppressed by regular watering; (b) all trucks entering or leaving the site with loads have their loads covered; (c) trucks associated with the Stage 1 development do not track dirt onto the public road network; (d) public roads used by these trucks are kept clean; and (e) land stabilisation works are carried out progressively on site to minimise exposed surfaces. 	Section 6
D64	<p>Prior to the commencement of construction of the Stage 1 development, the Applicant must prepare a Construction Air Quality Management Plan (CAQMP) to the satisfaction of the Planning Secretary. The CAQMP must form part of the CEMP required by condition E2 and must:</p> <ul style="list-style-type: none"> (a) be prepared by a suitably qualified and experienced person(s); (b) be prepared in consultation with owners of nearby residential properties (including those still occupied for residential use in the MRP), include evidence of this consultation, details of any issues raised and how the plan has responded to any issues raised during consultation; (c) detail and rank all emissions from all sources during construction of the development, including particulate emissions; (d) describe a program that is capable of evaluating the performance of the construction and determining compliance with key criteria, including installation of dust deposition gauges at neighbouring existing residences (where agreed with the landowner) or on the site boundary; (e) identify the control measures that will be implemented for each emission source; and (f) nominate the following for each of the proposed controls: <ul style="list-style-type: none"> (i) key performance indicator; (ii) monitoring method; (iii) location, frequency and duration of monitoring; (g) outline procedures that will be implemented in relation to: <ul style="list-style-type: none"> (i) record keeping; (ii) reporting to the Environmental Representative; (iii) complaints register; (iv) response procedures; and (v) compliance monitoring. (h) detail contingency measures to be implemented to reduce any exceedances of relevant performance indicators or criteria and include a timetable for implementation. 	<p>This CAQMP</p> <p>Attachment A</p> <p>Attachment B</p> <p>Section 5.1</p> <p>Section 4</p> <p>Table 6.1</p> <p>Section 4.5</p> <p>Section 4.1</p> <p>Table 4.1</p> <p>Table 4.1</p> <p>Section 6.3</p> <p>Section 6.3</p> <p>CCCHS</p> <p>CCCHS</p> <p>CCCHS</p> <p>Section 4</p> <p>Section 6.3</p>

Table 3.1 Conditions of Approval

Condition Reference	Consent Condition	Where addressed
D65	<p>The Applicant must:(a) not commence construction until the CAQMP required by condition D64 is approved by the Planning Secretary;</p> <p>(b) implement the most recent version of the CAQMP approved by the Planning Secretary for the duration of construction; and</p> <p>(c) offer to enter into an agreement with a neighbouring landowner, that may involve at-property treatment, if a complaint is received from that landowner and a non-compliance is confirmed by dust monitoring. Evidence of any agreement must be provided to the Planning Secretary.</p>	<p>Noted</p> <p>Refer to CCCHS, complaints procedures</p>
D66	<p>Odour Management - The Applicant must ensure the development does not cause or permit the emission of any offensive odour (as defined in the POEO Act).</p>	Section 6

4 Monitoring Program and Reporting

4.1 Monitoring program

All site personnel will be informed (through the site induction) that they must minimize 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.

Stage 1 of the Project will also require the installation of dust deposition gauges on the site boundary. Dust deposition gauges will provide a monthly record of dust at four separate locations around the site. Dust deposition gauges will be installed and monitored a contractor, who will supply a monthly report against the criteria listed in Table 4.4.

Four dust deposition gauges have been installed prior to construction commencement, to ensure that a baseline dataset is established. 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 4.1.

The corresponding activities will occur for the duration of construction, as appropriate.

Table 4.1 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 Supervisor	Monthly
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 Supervisor	Weekly
Erosion Sediment Control Plan – weekly inspections to ensure all mitigation measure are in place.	Weekly inspection record	Site Supervisor	Weekly
Meteorological data including daily rainfall, hourly temperature, relative humidity, wind (direction and speed) and barometric pressure.	Daily rainfall records from closest BoM station	Site Manager (Contractor)	Daily
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 km/h, work may be halted if causing dust concerns. Complaints records	Site Supervisor	Daily
Daily site inspections to ensure dust management controls are being implemented and to record the presence of odour	Daily Inspection Record	Site Engineer	Daily

All concerns raised during the project will be documented and addressed following the CCCHS procedures. All dust concerns on site will be raised with the Site supervisor and then the Health and Safety Representative.

4.2 Monitoring locations

The nearest sensitive receives to the Project have been identified in and Figure 4.2

Table 4.2 Surrounding sensitive receivers and monitoring locations

Receiver ID	Receiver type	Monitoring Location
R1	Residential within IN1 – General Industrial land North, west and south of the site	Monitoring to be located on Northwest of the site. Central west of the site
R2	Residential within RU4 Mt Vernon – to southeast of the site	Southeast corner of the site
R3	Vacant within IN1 – General Industrial land Currently farmland to east of the site	Southeast corner of the site
R4	R4 Industrial within IN1 – General Industrial land Incl. Oakdale East to northeast of the site	Northeast of the site

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

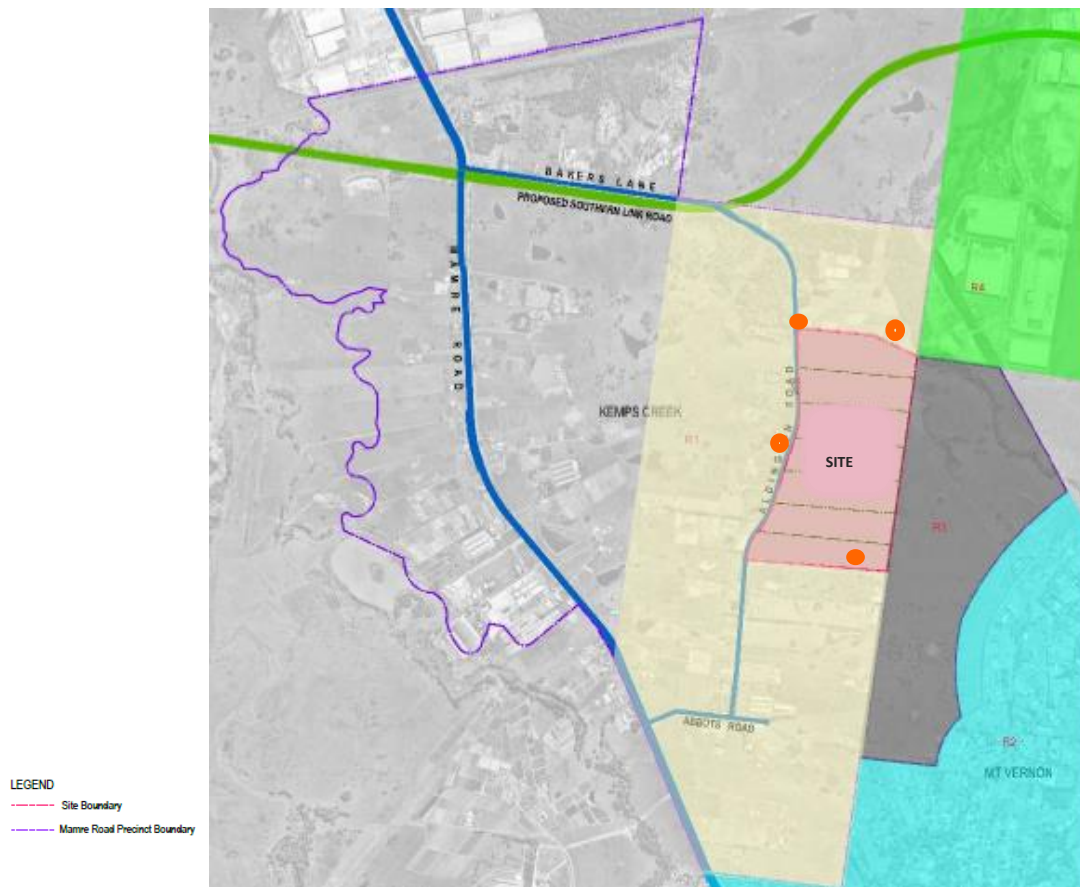


Figure 4.1 Sensitive receiver locations with - dust monitoring sites in orange

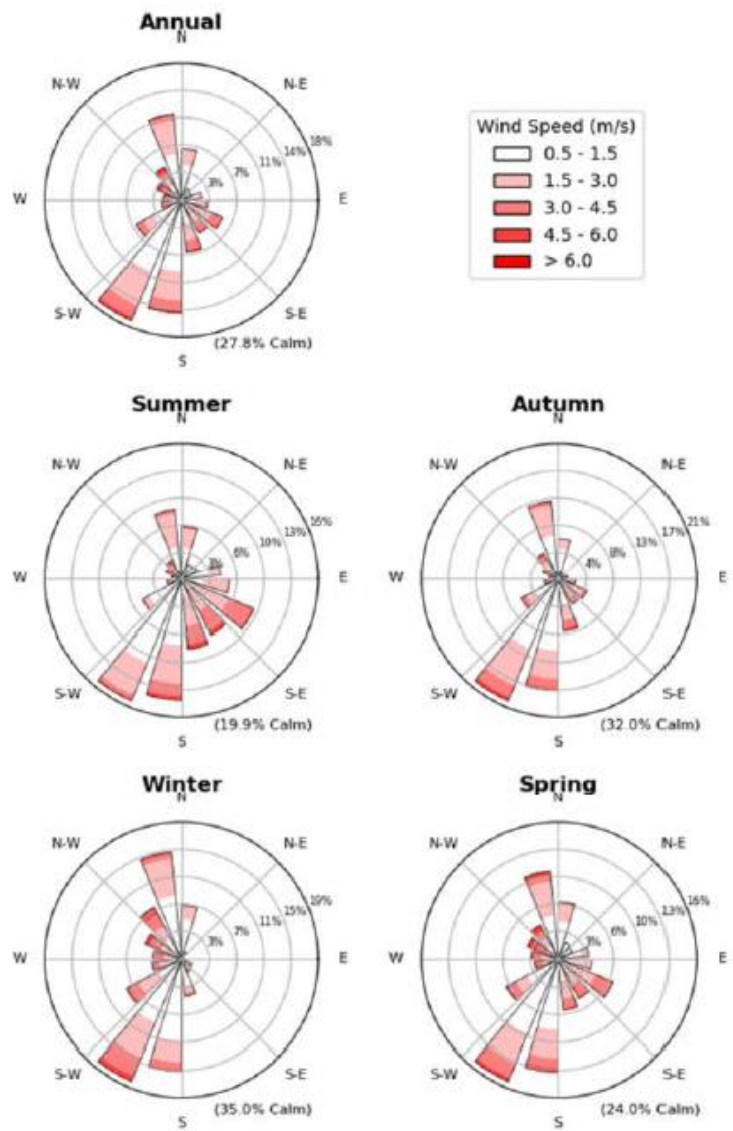
4.3 Existing climate data

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

Observations of wind speed and direction from the Office of Environment and Heritage (OEH) 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 2015 to 2019, winds within the south to south-west and north-west to north are most common in all four seasons. This data has been presented below in the wind rose plots.

Windrose Plot – St Marys OEH AQMS, 2015-2019



(Source Wilkinson Murray 2021)

4.4 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 2017) is consistent with the *National Environment Protection (Ambient Air Quality) Measure* (NEPM) (National Environment Protection Council 2016).

Dust deposition gauges have been placed around the project to obtain baseline air quality data as identified in Figure 4.2. The impact assessment criteria for pollutants that are relevant are summarised in Table 4.4 from the AQIA, (Wilkinson Murray 2021).

Dust will be sampled and reported monthly during construction, any concerns raised with regards to dust levels along with the annual review of the CAQMP will assess if the criteria and the monitoring methods are appropriate to the project. Dust deposition 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 4.3 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 $\mu\text{g}/\text{m}^3$
Particulate matter $\leq 2.5 \mu\text{m}$ (PM _{2.5})	Annual	Total	8 $\mu\text{g}/\text{m}^3$
	24-hour	Total	25 $\mu\text{g}/\text{m}^3$
Deposited dust (DD)	Annual	Total	4 g/m²/month
	Annual	Incremental	2 g/m²/month

The AQIA (Wilkinson Murray 2021) states that the potential dust impacts from the proposed works is considered to have a **low risk** of both dust soiling and human health impacts for earthworks and for haulage (trackout). The AQIA concludes that *'Specific real-time dust monitoring is not necessary for this project'*. However to ensure that the project is maintaining best practice with respect to air quality, dust deposition gauges (DD) have been installed and will be monitored continually during the construction phase.

4.5 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; and
- prompt contingency measure implemented to reduce / investigate any exceedances.

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:

- General earthworks and excavation, particularly during site establishment
- Vegetation clearing and grubbing.
- Demolition of existing structures and pavements
- Topsoil/material handling, including stockpiling, material loading and material haulage.
- 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
- Dam dewatering
- Sealing works / asphalt
- Road line 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 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 AQIA (Wilkinson Murray 2021) 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 6.1 below.

Table 6.1 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	Project Manager	Section 7.1 of the AQIA
Avoid site runoff of water or mud, (addressed in the ESCP)	Construction	Project Manager	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.	Construction	Project Manager	Section 7.1 of the AQIA
Cover, seed, or fence stockpiles to prevent wind erosion. (Further details contained within the ESCP)	Construction	Project Manager	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 and appropriate speed limits enforced to reduce generation of dust.	Construction	Project Manager	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	Project Manager	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	Project Manager	Section 7.1 of the AQIA
Construction vehicles, traffic and haulage			
Ensure all vehicles switch off engines when stationary (no idling vehicles).	Construction	Project Manager	Section 7.1 of the AQIA
Impose and signpost a maximum-speed-limit of 25km/h on surfaced and 15km/h on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided).	Construction	Project Manager	Section 7.1 of the AQIA
Use water-assisted dust sweeper(s) on the access and local roads, as necessary.	Construction	Project Manager	Section 7.1 of the AQIA
Avoid dry sweeping of large areas.	Construction	Project Manager	Section 7.1 of the AQIA
Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.	Construction	Project Manager	Section 7.1 of the AQIA

Table 6.1 Air quality management measures

Control	Timing	Responsibility	Source
Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.	Construction	Project Manager	Section 7.1 of the AQIA
Record all inspections of haul routes and any subsequent action in a site logbook.	Construction	Project Manager	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	Project Manager	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	Project Manager	Section 7.1 of the AQIA
Access gates to be located at least 10m from receptors where possible.	Construction	Project Manager	Section 7.1 of the AQIA
All plant and equipment used on site will be maintained in a proper and efficient condition.	Construction	Project Manager	Condition C24
All plant will be operated in a proper and efficient manner to avoid dust generation	Construction	Project Manager	Condition C24
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	Project Manager	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	Project Manager	Section 7.1 of the AQIA
Make the complaints log available to relevant authorities including the Council, EPA etc.	Construction	Project Manager	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	Project Manager	Section 7.1 of the AQIA
Monitoring			
Undertake daily on-site and off-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 street furniture, cars, and window. Specific real-time dust monitoring is not necessary for this project.	Construction	Project Manager	Section 7.1 of the AQIA
Conduct dust deposition monitoring in accordance with AS 3580.10.1 – 2003 Methods for sampling and analysis of ambient air. Determination of particulate matter – Deposited matter – Gravimetric method. Locations for monitoring are identified in Figure 4.2. Monitoring is to be continued until 70% cover is reached over 80% of the site as determined by the ER.	Construction	Project Manager	Best Practice

6.1 Community consultation and complaints

FKC has developed a Community Consultation and Complaints Handling Strategy (CCCHS) 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, (refer to attachment B). The local community was notified of the up-and-coming 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 Community Communication Strategy (CCCHS). The Complaints Response Handling procedure is clearly outlined the CCCHS found in Appendix I of the CEMP.

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

6.2 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.

6.3 Record keeping and reporting

The site supervisor will maintain daily records of construction activities and the weather conditions that effect work on the site (ie: 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. In accordance with condition of consent D65c, where a complaint has been received by a neighbouring landowner and the dust monitoring confirms that the project is at fault, the Planning Secretary must be notified of any written agreements with the neighbouring landowners.

7 Review and improvement

A review of the CEMP, sub plans and monitoring programs will be undertaken during construction as required. 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; and

A copy of the updated and approved plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure.

In accordance Coc D64 b) the AQOMP, has been prepared in consultation with owners of nearby residential properties (including those still occupied for residential use in the MRP)

7.1 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 Section 2 in 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; and
- make comparisons with objectives and targets.

7.2 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 Major Portals website.

A copy of the updated Program and changes will be distributed to all relevant stakeholders and changes implemented immediately.

References

Australian Government (2021) National Environment Protection (Ambient Air Quality) Measure (AAQNEM). <https://www.legislation.gov.au/Series/F2007B01142>

IAQM 2014, Assessment of dust from demolition and construction, published by the Institute of air quality Management, London, January 2014. <http://iaqm.co.uk/text/guidance/construction-dust-2014.pdf>

NSW EPA (2022). Approved Methods for the Sampling and Analysis of Air Pollutant in NSW. NSW Environment Protection Authority, Parramatta. <https://www.epa.nsw.gov.au/your-environment/air/industrial-emissions/sampling-analysing-air-emissions/approved-methods-sampling-analysing-air-pollutants>

Wilkinson Murray Pty Limited (2021 Version C) 200 Aldington Road Industrial Estate Air Quality Impact Assessment technical report for the RTS.

Attachment A

CV - David Bone – EMM Consulting



David Bone

Technical Leader – Construction
Environmental Management | Sector Leader – Construction
EMM Consulting Pty Limited

Professional Overview

David is an environmental manager and lead environmental auditor with over 30 years' experience. David delivers site based environmental management, regulatory advice, environmental monitoring, and construction environmental advice to clients across a range of sectors. David is an expert in environmental compliance auditing for construction, mining and extractive and commercial development projects. He has completed over 300 environmental due diligence audits of mining, commercial, industrial and manufacturing sites in Australia, New Zealand, Indonesia, Japan and Korea.

David is highly skilled in the design and implementation of environmental compliance documentation and monitoring programs for infrastructure projects and is an extensively experienced Environmental Management Representative (ER/EMR) approved by NSW Dept. of Planning across all infrastructure sectors over the last 20 years.

Qualifications and licences

Associate Diploma in Applied Science (Resource Management), Northern Rivers CAE, 1986

Lead Environmental Auditor, University of NSW, 2002

Soils and Construction, Morse McVey and Associates, 2005

Member NSW Environment Institute, Chair of Post Approvals Committee

Certified Environmental Practitioner CENvP #137

Specialisation

Construction environmental management

Design and implementation of environmental compliance documentation and monitoring

Environmental Management Representative

Environmental compliance auditing

Representative experience

NSW Department of Planning independent audits

- One Sydney Harbour Audit program 2022-2024 (Lendlease)
- John Hunter Health Innovation Precinct Audit Program 2022-2026 (Multiplex)
- M8 Motorway Operational Audit 2021 (FHEOM)
- Grafton Bridge Operational Audit 2021 (TfNSW)
- Tomago Aluminium Smelter Independent Environmental Audit 2020 (TAC)
- Newcastle Inner City Bypass Stage 2 IEA 2020 (TfNSW)
- Bango Wind Farm IEA 2019, (CWP Renewables)
- Karuah Quarry IEA, 2019 (Hunter Quarries)
- M4 West Motorway Operational Audit, 2018 (Sydney Motorways Corporation)
- Nundah Bank Rail Upgrade 2006, (UHVA Alliance)

VIC Planning independent audits

- Mortlake South Wind Farm, 2018 (Acciona Energy Australia)
- Mt Gellibrand Wind Farm, 2019 (Acciona Energy Australia)

Independent Environmental Representative

- Inland Rail Narromine to Narrabri (N2N)
- NSW Pacific Highway Upgrade projects – Warrell Creek to Nambucca Heads, Nambucca Heads to Urunga, Karuah to

Bulahdelah, Bulahdelah Bypass, Cooperook to Herons Creek, Glenugie, Devils Pulpit, Woolgoolga to Ballina Alternate ER, NSW, (Roads and Maritime)

- Rail transport upgrades for Sydney and Hunter Networks projects – Newcastle Light Rail, NSW, (Transport for NSW); New Intercity Fleet Maintenance Facility, NSW, (Transport for NSW); Minimbah Bank Coal Main Upgrades, NSW, (ARTC); Maitland to Minimbah 3rd Coal Main, NSW, (ARTC); Greta Train Support Facility, NSW (Pacific National); Hexham Coal Main Relief Roads, NSW, (ARTC); Kingsgrove to Revesby Rail Quadrification, NSW, (Transport for NSW)
- Water and Wastewater Infrastructure major projects – Belmont Desalination Plant; Chichester Trunk Gravity Main Tarro to Duckenfield and Seaham to Osterly, NSW, (Hunter Water), Central Coast Inter Regional Transfer main, NSW, (Hunter Water), Maitland 14 Gravity Sewer, NSW, (Hunter Water)
- Renewable Energy – Crookwell II Wind Farm (Global Power Generation)

Infrastructure construction environmental management

- Environmental Specialist coordinating preparation of Construction Environmental Management Plans and sub plans for construction of the Sydney Gateway Project (John Holland/Seymour Whyte JV)
- Environmental Specialist coordinating preparation of Construction Environmental Management Plan and sub plans for construction of the Northern Road Stage 5 and 6 (CPB Contractors)
- Environmental Specialist coordinating preparation of Construction Environmental Management Plan, sub plans and specialist approvals (Ecology, Traffic, Noise and Vibration) to be fed into the REF under preparation by TfNSW, in preparation for construction of the New Intercity Fleet Blue Mountains Route Clearance and Overhead Wire Renewal Project. (Continuum Alliance)
- Environmental Specialist providing training for the workforce on environmental aspects of road construction in the remote Anangu Pitjantjatjara Yankunytjatjara Lands (APY Lands) Aboriginal Lands in South Australia. Aspects covered included: Soil Conservation, Flora and Fauna, Heritage and culture, waste management and air quality.
- Environmental Specialist coordinating preparation of tender documentation, costings, and project design reviews for

Sydney Gateway Stage 1 and 3. (CPB Contractors)

- Environmental Specialist providing pre-construction services and advice on ancillary facility approvals, licensing and management plan development for upgrade of Moorebank Avenue as part of the Moorebank Intermodal Facility Development (BMD Constructions)
- Soil Conservationist providing independent review of the site plans and controls, site inspections and reporting, M1 Freeway Upgrade Kariong to Somersby, NSW, (Fulton Hogan)
- Environmental Specialist providing services and advice on pre-construction assessments, noise, contaminated areas, soil testing and classification, Inland Rail Project – Parkes to Narromine, NSW, (Inlink JV)
- Environmental Specialist providing services and advice on ancillary facility approvals, licensing, management plan development, ecology, weed mapping, air, noise and vibration monitoring and assessment, Bringelly Road Upgrade Stage 1, NSW, (BMD Constructions)
- Environmental Manager responsible for all management plans and licenses for the project, daily management of environmental aspects of the project, client and NSW government agency liaison, community consultation, site rehabilitation, reporting and monitoring, Tourle Street Bridge and Cormorant Road Duplication, Kooragang Island NSW, (WBHO/McIlwain JV)
- Environmental Specialist providing services and advice on ancillary facility approvals, licensing, management plan development, ecology, weed mapping, air, monitoring and assessment, Camden Valley Way Stages 1,2 3, NSW, (BMD Constructions)
- Environmental Manager responsible for development and approval of all management plans and licenses for the project, daily management of environmental aspects of the project, client and NSW government agency liaison, reporting and monitoring, Cronulla Rail Duplication, NSW, (John Holland); Sandgate Rail Grade Separation, NSW, (John Holland)
- Environmental Manager responsible for development and approval of all management plans and licenses for the project, daily management of environmental aspects of the project, client and NSW government agency liaison, reporting and monitoring, Gosford Rail Passing Loops, NSW, (Downer Group)
- Environmental Manager responsible for all management plans and licenses for the project, daily management of environmental aspects of the project, client and NSW government agency liaison, reporting and monitoring Scone Rail Upgrade, NSW, (Downer Group)
- Environmental Manager responsible for all management plans and licenses for the project, daily management of environmental aspects of the project including Newcastle Harbour dredging, wharf construction, rail construction and coal stockpile construction, client and NSW government agency liaison, community consultation, reporting and monitoring, Newcastle Coal Infrastructure Group Coal Loader Stage 1, Kooragang Island NSW, (Aurecon-Hatch)
- Environmental Manager responsible for all management plans and licenses for the project, daily management of environmental aspects of the project, client and NSW government agency liaison, community consultation, site rehabilitation, reporting and monitoring, North West Growth

Centre water services packages 1 and 2, NW Sydney NSW, (John Holland and Reed Constructions)

- Environmental Management Representative responsible for development and approval of all management plans and licenses for the project, daily management of environmental aspects of the project, reporting and monitoring, Transgrid 330kV transmission line upgrade, Tuggerah to Sterland, NSW, (Transgrid)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, Tomago to Tomaree 132kV powerline upgrade, NSW, (Ausgrid)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, liaison with NSW Department of Planning, Bruxner Highway Alstonville Bypass, NSW, (Reed Group)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, assessment and approval of works outside of standard hours, Newcastle Transport Interchange, NSW, (Transport for NSW)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, site inspection of controls and reporting, Elernmore Vale Flow Control Facility Upgrade, NSW, (Hunter Water)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, site inspection of controls and reporting, Anna Bay R4 Sewerage Emergency Storage Tank Upgrade, NSW, (Hunter Water)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, site inspection of controls and reporting, Tomago High Voltage Upgrade Project, NSW, (Hunter Water)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, site inspection of controls and reporting, Waratah West Waste Water Pumping Station Upgrade Project, NSW, (Hunter Water)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, site inspection of controls and reporting, Swansea Channel Watermain Tunnel Crossing, NSW, (Hunter Water)
- Environmental Management Representative responsible for approval of all management plans for the project, review and certification of compliance with the project approvals, site inspection of controls and reporting, Boulder Bay Waste Water Pumping Station and Emergency Storage Tank Upgrades, Port Stephens NSW, (Hunter Water)
- Environmental Advisor providing advice to the project team on ecology, erosion control and weeds, Southern Sydney Freightline, NSW, (Arenco/ARTC)

- Environmental Monitoring Specialist providing air quality and noise monitoring for the project, Bulahdelah to Coolongolook Pacific Highway Upgrade, NSW, (Thiess Contractors)
- Environmental Specialist Advisor providing advice to the project team on ecology, erosion control and weeds, Liverpool Rail Turnback, NSW, (John Holland)
- Environmental Specialist Advisor providing services and advice on ancillary facility approvals, licensing, erosion and sediment controls, ecology, weed mapping, air, noise and vibration monitoring and assessment, Lisarow to Ourimbah Pacific Highway Upgrade Stage 2, (Construction Mining Civil Pty Ltd)
- Soil Conservationist providing erosion and sediment control services, plan development, rehabilitation advice and site inspections for the development on a former Lead Smelter site in Lake Macquarie, Weemala Subdivision Stage 1 (Hunter Development Brokerage/Simmons Civil Contractors)
- Environmental Specialist providing services and advice on ancillary facility approvals, licensing, erosion and sediment controls, ecology, weed mapping, air, noise and vibration monitoring and assessment, Wyong Rd upgrade, Tumby Umbi NSW (Construction Mining Civil Pty Ltd)

Extractive industries environmental management

- Environmental Advisor 2004-2018 period providing advice to the project team on ecology, weeds, rehabilitation, water monitoring, compliance and site environmental management, Maroota and Hearses Road Quarries, Maroota NSW, (Dixon Sands)
- Environmental Advisor since 2004 providing advice to the project team on ecology, weeds and rehabilitation, Austen Quarry, Hartley NSW (Hytec Quarries/ Adelaide Brighton Cement)

Environmental Sampling and Analysis

- Responsible for design, implementation, analysis and reporting for a wide range of air quality sampling techniques as a NATA signatory between 1987 to 1996. Techniques included, dust deposition, high volume air sampling (TSP, PM10, PM2.5), metals in dust, fluoride, asbestos, SMF and air toxic monitoring (formaldehyde, benzene compounds, explosive atmospheres).

Attachment B

Consultation Records

B.1 Consultation Records

Record of Consultation SSD 10479 200 Aldington Road Estate

Date	Timing	Location	Name	Details	Outcome
22/05/2023	Prior to commencement of construction	53 Aldington Rd, (Lot 38) Kemps Creek (north west of site)	[REDACTED]	Met with the Owner & occupant of 53 Ald to notify them we are starting works in the next month. Provided them with contact details for any enquiries.	No concerns/ No unresolved issues. Will notify if issues arise during construction
22/05/2023	Prior to commencement of construction	129 Aldington Road, Kemps Creek (west of site)	[REDACTED]	Met with occupant and notified we will be commencing earthworks on site in the following weeks.	No concerns/ No unresolved issues. Will notify if issues arise during construction
22/05/2023	Prior to commencement of construction	141 Aldington Road, Kemps Creek (west of site)	[REDACTED]	Met with owner, notified them of commencement of works on 200A and provided contact details.	No concerns/ No unresolved issues. Will notify if issues arise during construction
22/05/2023	Prior to commencement of construction	Oakdale East (to north east of site) – freight company	Representative	Notified representative of owner on commencement of earthworks in following weeks. Provided contact details to man occupying front desk.	No concerns/ No unresolved issues. Will notify if issues arise during construction
23/05/2023 and prior	Prior to commencement of construction	Lot 18 BAPS Temple (southern boundary)	[REDACTED] (Owners Rep)	Met with occupant and notified we will be commencing earthworks on site in the following weeks.	No concerns/ No unresolved issues. Will notify if issues arise during construction
31/5/23 and prior	Prior to commencement of construction	Capital Hill Estate (farmland to east of site)	Capital hill estate/JWP (engr)	Discussed by phone with [REDACTED] (consultant) and [REDACTED] (owner)	No concerns, but if any issues with dust or otherwise will advise.