



Dust and Air Quality Management Plan SYD091 Sydney Data Centre, 43-61 Turner Rd, Gregory Hills

FDC Construction (NSW) Pty Ltd

Report

69307 | 174,291 (Rev 1)

25 March 2026





We acknowledge the Traditional Custodians of Country throughout Australia and their connection to land, sea and community.

We pay our respect to Elders past, present and emerging and in the spirit of reconciliation we commit to working together for our shared future where every person is respected, valued and has strong sense of belonging.

Caring for Country The Journey of JBS&G
Artist: Patrick Caruso, Eastern Arrernte

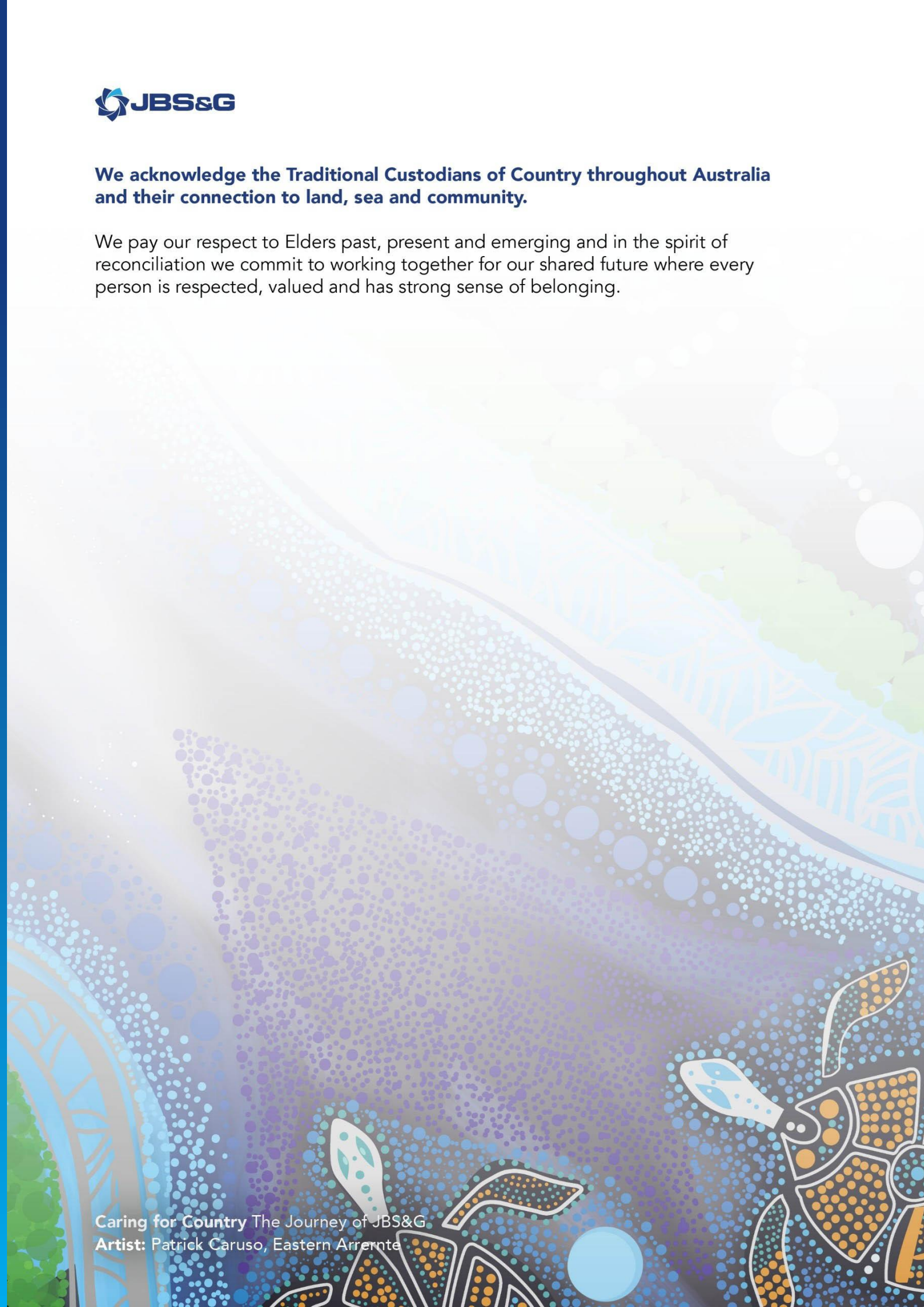


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Abbreviations

Term	Definition
Ambient air	The external air environment, it does not include the air environment inside buildings or structures.
cDMP	Construction Air Quality and Dust Management Plan
Dust	The generic term used to describe solid airborne particles generated and dispersed into the air by processes such as handling, crushing and grinding of organic or inorganic materials such as rock, ore, metal, coal, wood or grain and stockpiling of materials and windblown dust.
Dust event	The occurrence of visible fugitive dust from a source or activity at the site that exits a boundary of the site for a duration of greater than one minute.
EPA	NSW Environmental Protection Authority.
FDC	FDC Construction (NSW) Pty Ltd
IAQM	UK Institute of Air Quality Management
µm	micrometres
NEPM	<i>National Environmental Protection (Ambient Air Quality) Measure 2021</i>
PM ₁₀	Dust particles/particulate matter with an equivalent aerodynamic diameter of up to 10 micrometres.
PM _{2.5}	Dust particles/particulate matter with an equivalent aerodynamic diameter of up to 2.5 micrometres.
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Site	43-61 Turner Road, Gregory Hills, NSW
Total suspended particles (TSP)	All particles entrained/suspended in the atmosphere and includes the fine, respirable particles (PM ₁₀ and PM _{2.5}) and larger size particles that may settle out of the air causing nuisance impacts, usually measured as those particles having an equivalent aerodynamic diameter of 50 micrometres or less.

1. Introduction and background information

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by FDC Construction (NSW) Pty Ltd (FDC) to prepare a Construction Dust and Air Quality Management Plan (cDMP) for a proposed data centre building located at 43-61 Turner Road, Gregory Hills, NSW (the site). The site covers an area of 9.74 ha, and the location and site layout are presented on **Figure 1-4** and **Figure 1-3**, respectively.

The construction of the two-storey data centre building, including two data halls and back-up generators, ancillary office space and guard house, diesel storage, car parking and electrical substation, is expected to occur over an 18-month period. At commencement of the construction phase, the subgrade, which will be compacted and shaped during early works, will be exposed.

This cDMP has been prepared with consideration to Condition B13 of the Development Approval (Ref No: SSD-68013714) obtained under Section 4.38 of the *Environmental Planning and Assessment Act 1979*. The cDMP will form part of the Construction Environmental Management Plan (CEMP) for the development of the site.

1.2 Project Description

JBS&G Australia Pty Ltd (JBS&G) was engaged by FDC Construction (NSW) Pty Ltd (FDC) to prepare a cDMP in accordance with the State Significant Development Application (SSDA) Consent SSD-680137154 for the construction of the proposed SYD091 Main Works project, located at 43-61 Turner Road, Gregory Hills, NSW (the site). This cDMP has been prepared for incorporation with the CEMP developed for the site by FDC. The Consent enables the following works to occur:

- Construction of 12 data halls;
- A high voltage substation;
- Emergency back-up generators;
- Cooling plant, diesel and lithium-ion battery storage; and
- Associated infrastructure, landscaping and earthworks.

FDC are currently delivering the SYD091 Early Works under a Camden Council Development Application (DA) Consent (DA/2024/616/1.). This approval enables delivery of:

- The demolition and clearance of existing structures and vegetation;
- Completion of bulk earthworks and installation of retaining walls; and
- Public Domain works which includes provision of HV power, stormwater installation and pavement build ups with a new access road.

In its existing state, the development has undergone dam decommissioning, site clearance, bulk earthworks, and sediment erosion and control measures have been implemented. Site access will be via Central Hills Drive with predominant neighbouring properties located on this side of site. There are industrial neighbouring properties to White Cliffs Avenue, opposite side of Turner Road and residential area along Pioneer Street. There is a Riparian Zone located east of 61 Turner Road which will be fenced off to deter any access into this area.



Figure 1-1: Site Aerial (source: Nearmaps)

The SSDA approved Main Works SSD-680137154 will occur concurrently with the Early Works DA/2024/616/1. This cDMP has been prepared in accordance with the consent conditions outlined in **Section 1.7**.

Effective implementation of the CEMP and its Sub-Plans will enable the Project to comply with the Consent Conditions, the mitigation measures (identified in the consent, SSD-680137154), and all relevant Acts, Regulations, Standards, and Government Policies.

This plan applies to all staff, workers, and sub-contractors involved in the construction project.

1.3 Staging

This development will be delivered in a single stage with the Early Works and Main Works delivered concurrently under the two development approvals previously discussed:

DA/2024/616/1 – Early Works

- Early Works – Bulk Earthworks, Retaining Walls and Public Domain Works

SSD-680137154 – Main Works

- Construction Certificate 1 – Bulk Excavation and Substructure Works;
- Construction Certificate 2 – Remaining Structure, Façade, Fit out of ROMP 1 & 2 and landscaping; and
- Main HV Substation Works are delivered prior to occupation by an accredited contractor in accordance with the utility provider.

Refer to **Figure 1-2** for Early Works extent and **Figure 1-3** for Main Works extent.

The overall Early Works site plan is shown on **Figure 1-2** below. The Early Works includes decommissioning of pre-existing dams, demolition of dwellings, bulk earthworks, as well as the delivery of surrounding roads.

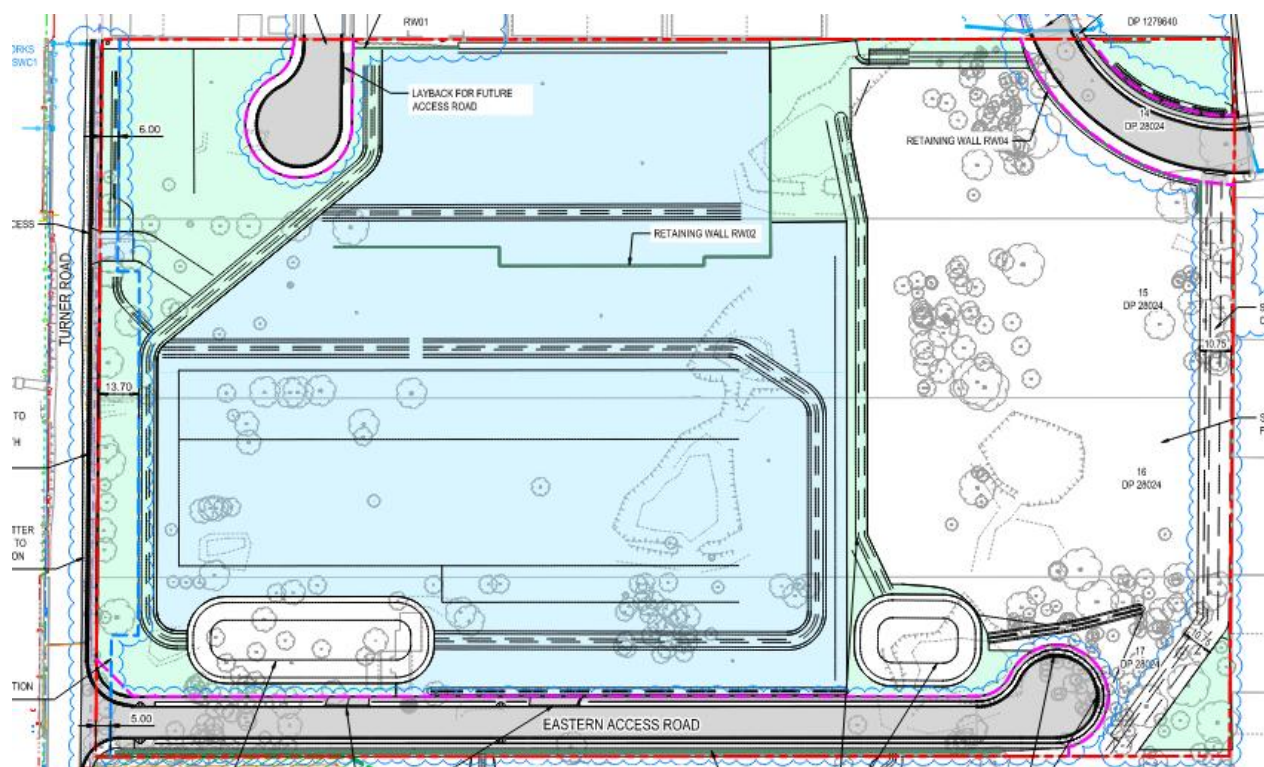


Figure 1-2: Early Works Site Diagram

The overall site plan for the Main Works is shown on **Figure 1-3** below. The 12 Hall Data Centre is split among two levels and is surrounded by landscaped areas, pavements and ancillary buildings.

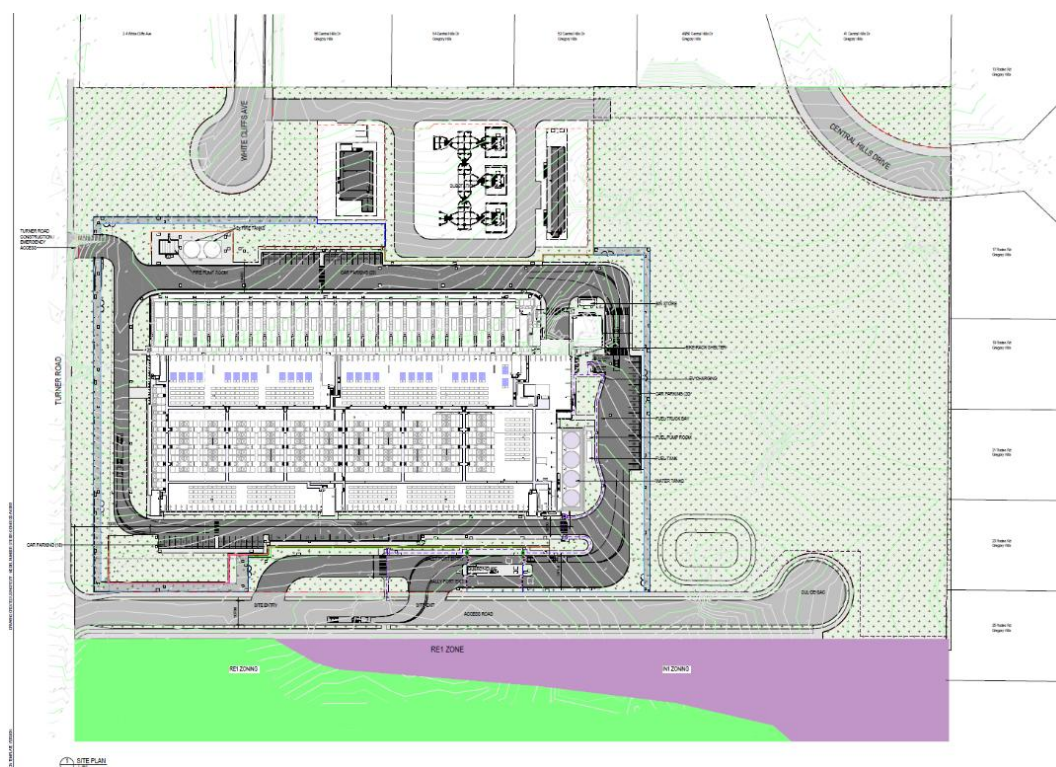
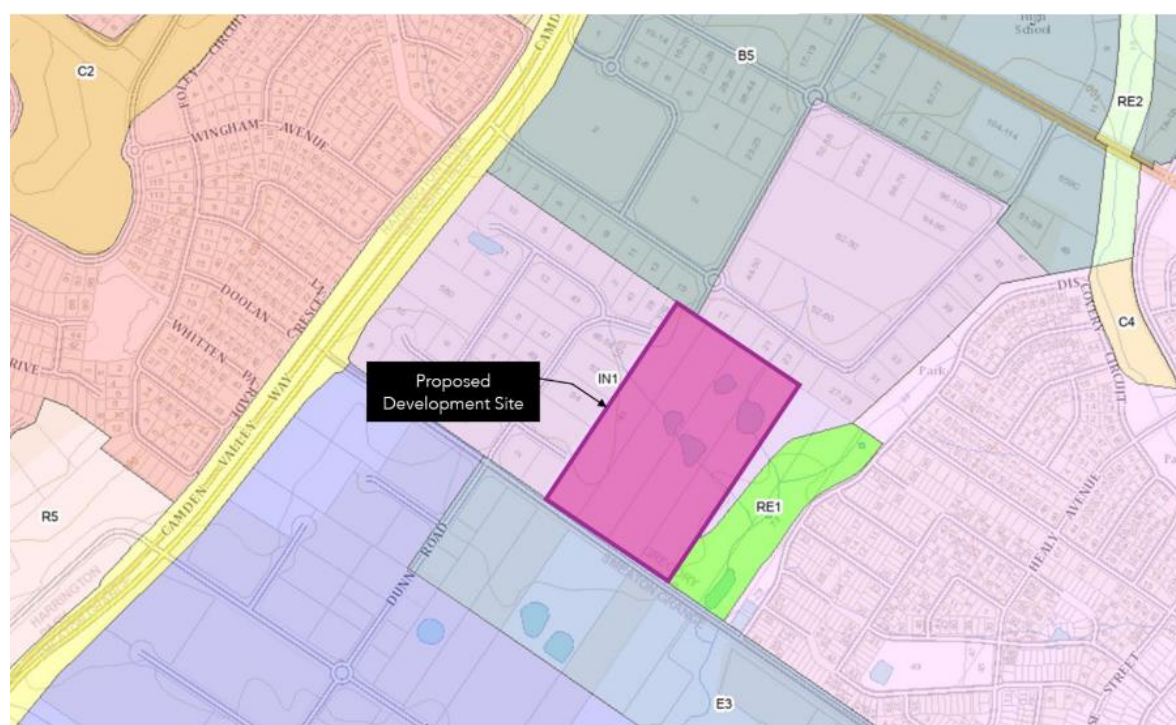


Figure 1-3: Main Works Site Diagram

1.4 Project Location

Refer to **Figure 1-4** below for the Site Location. The site is located at Lot 14, 15, 16 and 17, DP 2802, 43-61 Turner Road, Gregory Hills, NSW, 2557, within the Camden Local Government Area (LGA) and is governed by the Turner Road Precinct Development Control Plan (DCP) 2018. The Project is bound by Turner Road to the south, and Rodeo Drive to the north. On the east side of the project, there is an existing nature reserve, and the west contains several existing industrial developments.

Refer to **Figure 1-5** for Site Overlay. The site is approximately 9.74 hectares (ha) and situated within a General Industrial (IN1) zone, with adjacent land uses including IN1 and Business Development (B5) to the north, a mix of Public Recreation (RE1) and IN1 to the east, Productivity Support (E3) to the south, and IN1 to the west.



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1.5 Project Program

The overall Project Program is as follows:

Early Works Approved Via <i>DA/2024/616/1</i>	
Early Works	October 2025 to November 2028
Main Works Approved Via <i>SSD-680137154</i>	
Earthworks	July 2026 to October 2026
Structure and Building Envelope	August 2026 to June 2028
Internal Fit Out	January 2027 to October 2028
Commissioning	April 2028 to November 2028

1.6 Objectives

The purpose of this cDMP is to provide a description of the measures to be implemented during construction works to mitigate dust and other potential emissions to air from the site.

The objectives of the cDMP, once implemented, are to:

- apply targeted management measures for the construction works to ensure that risks associated with air emissions, in particular nuisance dust, to the surrounding environment remain negligible; and
- Monitor (visual inspection) dust generation, respond to complaints and adapt dust controls to ensure off-site dust impacts are mitigated.

1.7 SSDA Conditions and Compliance Requirements Relevant to this cDMP

Table 1.1 provides a summary of the relevant consent conditions from the main construction development relevant consent conditions (SSD-680137414.) The summary details the consent requirements which are addressed in this cDMP, and where the relevant procedures and/or information can be found. .

Table 1.1: Applicable development approval SSD-68013714 conditions

Condition	Relevant cDMP section
<i>B9. The Applicant must take all reasonable steps to minimise dust generated during all works authorised by this consent.</i>	3.1
<i>B10. During construction, the Applicant must ensure that:</i>	
<i>(a) exposed surfaces and stockpiles are suppressed by regular watering or other alternative suppression method;</i>	3.1.3
<i>(b) all trucks entering or leaving the site with loads have their loads covered;</i>	3.1.1
<i>(c) trucks associated with the development do not track dirt onto the public road network; and</i>	3.1.2
<i>(d) land stabilisation works are carried out progressively on site to minimise exposed surfaces</i>	3.1.3

Furthermore, the administrative conditions include terms of consent prescribe:

A2 The development may only be carried out in compliance with:

the management and mitigation measures in Appendix 2 of this consent.

Appendix 2 includes the management and mitigation measures relevant to air quality during construction reproduced in Table 1.2.

Table 1.2: Management and mitigation measures in SSD-68013714 Appendix 2

Air quality					Relevant cDMP section
Ref	Impact	Environmental management measure	Responsibility	Timing	
AQ01	Risks to air quality during construction from fugitive dust	A Dust and Air Quality Management Plan will be prepared and implemented as part of the Proposal's CEMP. The Plan will: Identify potential sources of air pollution during construction, such as dust, vehicles, odour transporting waste, plant and equipment.	Contractor	Pre-construction/ construction	2

Air quality					Relevant cDMP section
Ref	Impact	Environmental management measure	Responsibility	Timing	
		• Include mitigation and suppression measures, such as, but not limited to: ○ Spraying or covering exposed surfaces ○ Provision of vehicle clean down areas ○ Covering of loads ○ Street cleaning ○ Use of dust screens • Maintenance of plant in accordance with manufacturer's instructions and specifications Pre-start vehicle and equipment checklists to make sure they are maintained and in good working order. • Methods to manage works during strong winds or other adverse weather conditions • A progressive rehabilitation strategy for exposed surfaces • When the air quality, suppression and management measures need to be applied, who is responsible, and how effectiveness will be assessed. • Community notification and complaint handling procedures, as required. • Air quality management objectives will be consistent with any relevant published EPA Guidelines.			3.1.3 3.1.2 3.1.1 3.1.2 3.1.1 3.2 3.1.1 3.1.3 6 7 1.2 and 1.4.4

1.8 Applicable guidance

1.8.1 Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) provides the overarching framework for management of impacts to the environment from pollution (NSW Government 2025). Of relevance to the construction activities is Part 5.4 Air Pollution and Section 128 (2), which advises that:

(2) The occupier of any premises must carry on any activity, or operate any plant, in or on the premises by such practicable means as may be necessary to prevent or minimise air pollution if—
(b) the emissions are not point source emissions.

This means that appropriate practical controls must be applied to the activities to minimise air pollution, which predominately will be fugitive dust emissions.

1.8.2 National Environmental Protection (Ambient Air Quality) Measure

Air quality criteria for gaseous and dust emissions are derived from the National Environmental Protection (Ambient Air Quality) Measure 2021 (NEPM) (NEPC 2021). The NEPM provides air quality standards

applicable to urban airsheds, including standards for particulate emissions of 50 µg/m³ (24-hour average) and 25 µg/m³ (annual average) for PM₁₀, and 25 µg/m³ 24-hour average) and 8 µg/m³ (annual average) for PM_{2.5}. The NEPM also includes the goals for PM_{2.5} of 25 µg/m³ 24-hour average) and 8 µg/m³ (annual average) from 2025.

The NEPM also includes standards for combustion products carbon monoxide (9ppm 8 hour average), nitrogen dioxide (0.08 ppm 1hour and 0.013 ppm annual) and sulphur dioxide (0.1 ppm 1 hour, 0.02 ppm 1 day).

The NEPM is acknowledged as the overarching framework for setting ambient air quality criteria. However, it is referenced for context only and is not directly applied in the cDMP.

1.8.3 NSW Environmental Protection Authority guidelines

The NSW Environmental Protection Authority (EPA) aims to ensure NSW air quality meets or is better than national ambient air quality standards¹.

The NSW EPA has published methodology for modelling and impact assessment of air pollutants, which includes ambient air quality concentration limits for combustion products and total suspended particulates (TSP), PM₁₀ and PM_{2.5} (EPA 2022). The NSW guidance on modelling and impact assessment is acknowledged as relevant for quantitative assessment; however, it is not directly applicable as a practical on-site dust management guide and is referenced for context only.

1.8.4 NSW EPA Local Government Air Quality Toolkit

The NSW EPA has published a series of guidelines (known as the Air Quality Toolkit) to assist Local Government (Councils) to manage air quality matters in local government areas.² The Toolkit comprises of a series of modules, a Resource Pack and Guidance Notes, with the following of relevance to the management of dust emissions from excavation activities:

Resource Pack

- Dust generating activity inspection checklist³
- Fallout (dust deposition) or other complaint checklist⁴
- Dust event diary⁵

Guidance Notes and Visual Guides

- Construction sites guidance note (EPA 2024a)
- Dust from construction sites visual guide (EPA 2024b).

Section 4.16 of Module 3 (Air Pollution Control Techniques) describes the basic principles of dust suppression, which reference the Guidance Notes for construction sites (EPA 2024c).

These documents have been considered in the preparation of this cDMP.

¹ <https://www.epa.nsw.gov.au/Your-environment/Air/air-nsw-overview/managing-air-quality>

² See <https://www.epa.nsw.gov.au/Your-environment/Air/Local-government-air-quality-toolkit>

³ See <https://www.epa.nsw.gov.au/sites/default/files/localgovernmentairqualitytoolkitresourcepackfalloutdustdepositionorothercomplaintchecklist.pdf>

⁴ See <https://www.epa.nsw.gov.au/sites/default/files/localgovernmentairqualitytoolkitresourcepackfalloutdustdepositionorothercomplaintchecklist.pdf>

⁵ See <https://www.epa.nsw.gov.au/sites/default/files/local-government-air-quality-toolkit-resource-pack-dust-event-diary.pdf>

1.8.5 IAQM Risk Assessment

The NSW EPA does not provide specific guidelines or methodology to conduct environmental risk assessment, albeit that assessments of risk underpin the controls detailed in the Construction Sites Guidance Note.

A risk assessment of the activities has been carried out using the UK Institute of Air Quality Management (IAQM) *Guidance on the assessment of dust from demolition and construction* (IAQM 2024). This guidance has been utilised by some major project assessments that include earthworks, including the M1 Pacific Motorway extension ⁶ and Transgrid Energy Connect (Eastern Section) EIS.⁷ As such, the IAQM methodology is suitable for the assessment of dust emission risks for the site.

1.9 Environmental setting

1.9.1 Surrounding land use and receptors

Industrial land uses, including warehousing and industrial complexes, extend from the south-southeast round to the north-northeast of the site. Directly adjoining the southeastern boundary of the site is a vegetated riparian corridor bound by a roadway and a residential area beyond.

The riparian area is mapped as high biodiversity values by the Biodiversity Values (BV) map with the criteria 'Threatened species or communities with potential for serious and irreversible impacts.' (Niche 2024). This area aligns with PCT 3320 and the Threatened Ecological Community Cumberland Plain Woodland in the Sydney Basin Bioregion, which is listed as critically endangered under the *NSW Biodiversity Conservation Act 2016*; and Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest listed as critically endangered under the *Environment Protection and Biodiversity Conservation Act 1999*.

The closest sensitive receptors (residences) are approximately 140 m from the site boundary to the southeast while commercial and industrial receptors directly border the north east and north western boundary. The sensitive receptors are illustrated in Figure 1-6.

⁶ <https://media.caapp.com.au/pdf/jcg41f/cf33775c-a9b4-4f7b-96e0-2299d575e53d/Chapter%2018%20-%20Air%20quality.pdf>

⁷ <https://www.transgrid.com.au/media/korddi1g/technical-paper-9-air-quality-impact-assessment.pdf>

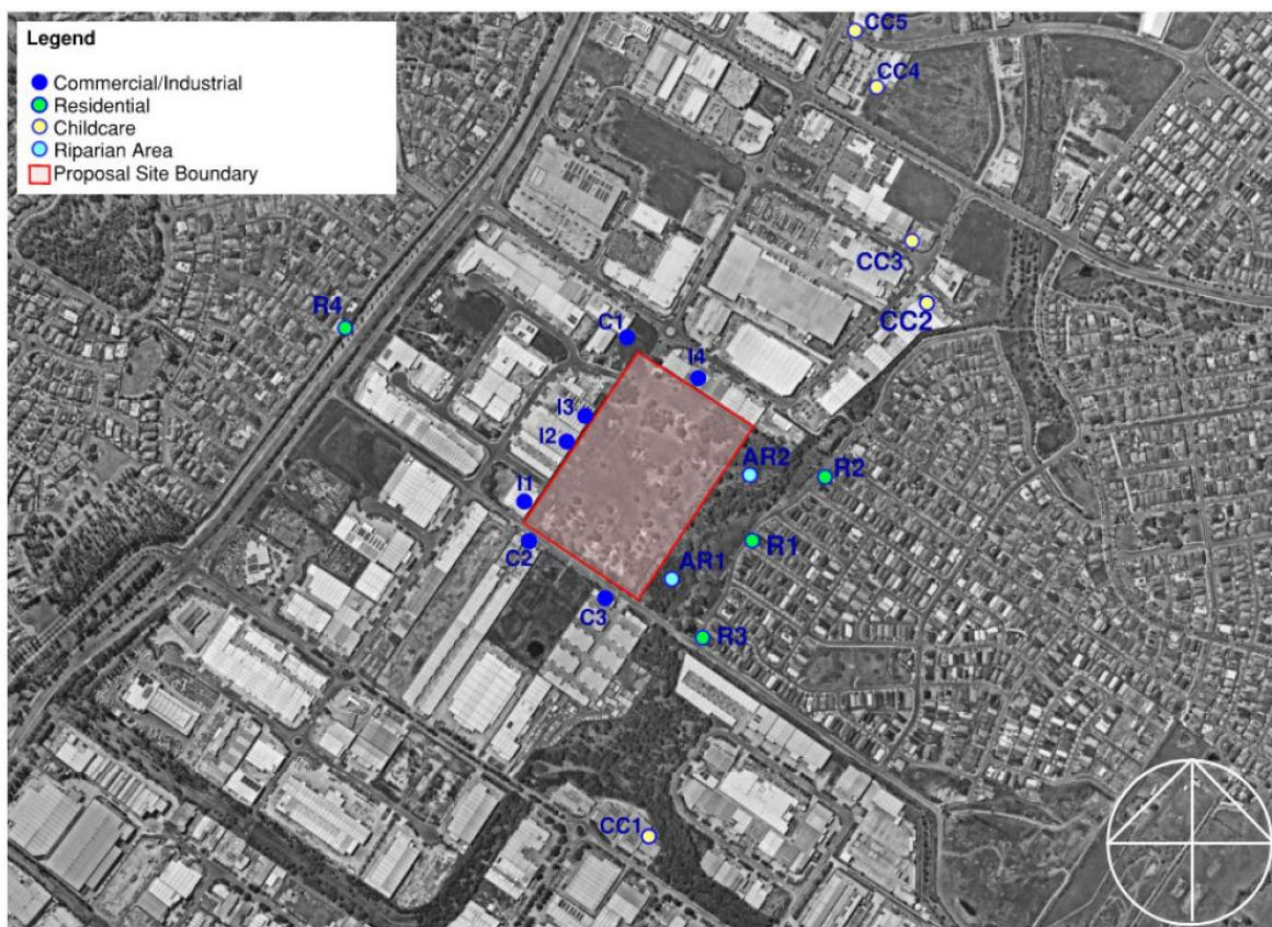


Figure 1-6: Sensitive receptor locations (ARUP 2024)

1.9.2 Topography

The site is generally sloping from the northwest corner at about 104 metres Australian Height Datum (mAHD) down to the southeast corner (~ 91 mAHD).

1.9.3 Climate

The Sydney area experiences a temperate climate with mild winters and warm, humid summers and rainfall throughout the year. Mean rainfall and temperature from the Bureau of Meteorology (BoM) climate station at Campbell Town Swimming Centre (BOM station 068081) located approximately 7.8 km from the site) are shown in Figure 1-7.

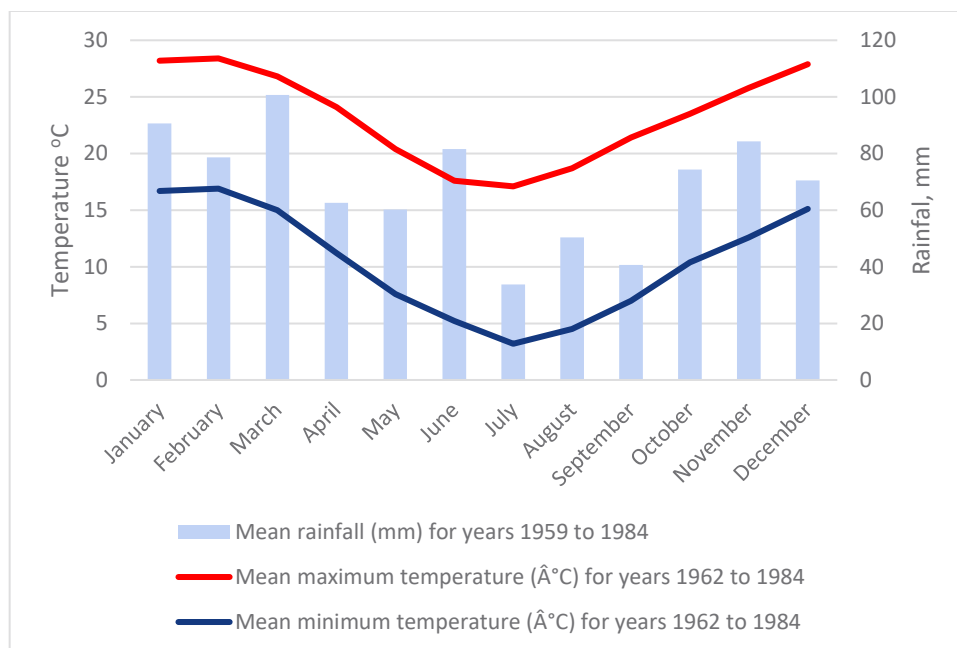


Figure 1-7: Mean monthly ambient temperatures and rainfall recorded at Campbelltown Centre for years 1962 to 1984

Annual winds, exemplified by a wind rose for 2022 (Figure 1-8), show prevailing winds from the southwest and the northeast. Winds are typically light with winds up to 3.6 m/s occurring for over 60% of the duration while winds above 5.6 m/s (moderate strength and above) make up only 15%.

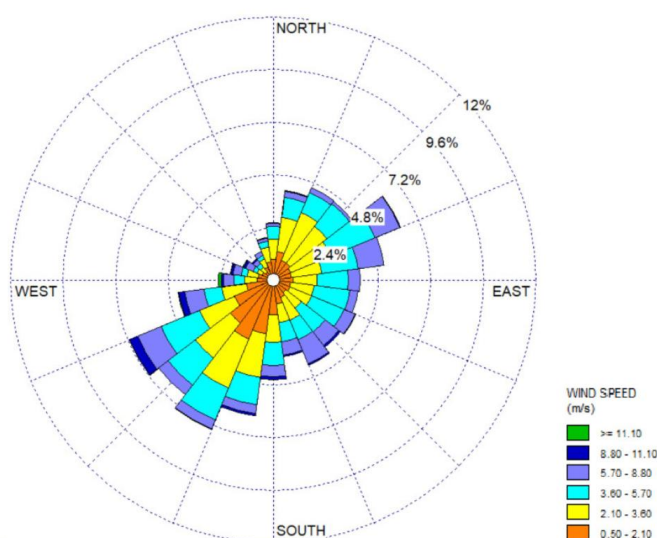


Figure 1-8: Annual Wind Rose for 2022 (ACAP 2024)

1.10 Site activities

Key construction activities identified to have the potential to generate dust, exhaust emissions and/or odours are:

- Site establishment, including detailed earthwork activities, handling and placement of fill and sub-base materials, compaction, grading and rolling, to reach the required design levels;
- Stockpiling of materials (e.g., fill, aggregate sand, soil, etc);

- Trenching for below ground infrastructure (electrical, hydraulic, stormwater, communications etc.);
- Piling;
- Landscaping activities;
- General site activities (e.g., deliveries, light and heavy vehicle movements, washdown, etc.); and
- Sediment ponds (odour).

Further discussion of relevant activities as sources of air emissions is provided in Section 2.

1.10.1 Exclusions

Activities excluded from the cDMP, as they are covered in the early works construction for industrial development of the land (DA/2024/616/1), are:

- demolition of existing structures;
- clearing of vegetation;
- bulk earthworks including establishment of building pads and grading;
- remediation of land;
- dewatering of dams;
- provision of services;
- drainage and stormwater construction;
- eastern access road construction; and
- all associated site works for the aforementioned activities.

Commissioning of the backup generators is also excluded.

1.11 Potential impacts

1.11.1 Parameters of Interest

The primary potential emission to air from construction activities is nuisance dust. Dust nuisances occur from deposition on surfaces and airborne dust can affect visibility. Nuisance dust includes:

- Total suspended particulates (TSP) - particles each having an equivalent aerodynamic diameter of up to nominal 50 micrometres (μm) with potential impacts on amenity from visible dust and deposition onto surfaces.
- PM_{10} - particulate matter of 10 μm or less in diameter, which is the fine particle fraction of TSP. PM_{10} includes inhalable particles small enough to penetrate the thoracic region of the lungs, where they can have a direct physical (inflammatory) effect and/or be absorbed into the blood stream. All people are continuously exposed to PM_{10} from naturally occurring and anthropogenic dust emissions in urban and industrial areas. Health impacts are influenced by the chemical composition of PM_{10} .
- $\text{PM}_{2.5}$, particulate matter of 2.5 μm or less in diameter, is the finest particle fraction of TSP. While less associated with nuisance dust and impacts to amenity, $\text{PM}_{2.5}$ can penetrate further into the deeper parts of the lungs. Ambient $\text{PM}_{2.5}$ sources are typically internal combustion engine emissions. Where these are prevalent (such as large cities) $\text{PM}_{2.5}$ can be dominated by carbonaceous materials, some of which are carcinogenic. As such $\text{PM}_{2.5}$ is generally considered a greater risk to human health than PM_{10} and lower limits are prescribed by the NEPM as a consequence.

The control measures discussed in this cDMP are effective for TSP and the two subfractions described above.

Other potential emissions from construction activities that could impact air quality in the air shed are:

- Combustion products (carbon monoxide (CO), nitrogen dioxide (NO₂) and volatile organic compounds), which have potential impacts to health; and
- odour emissions with potential impacts to amenity and, in extreme cases, health.

1.11.2 Contamination status

Asbestos contamination was detected on the ground surface and within stockpiled material at the site. This localised asbestos contamination was confirmed during the site investigation. This was to be remediated under the Remediation Action Plan (Arcadis, 2024) during the early works program such that the potential for contaminated material to leave site via the air (i.e., in dust) during construction and operation is considered negligible.

2. Sources of emissions to air

Construction activities have the potential to generate fugitive dust emissions particularly during drier conditions. Emissions of fugitive dust from construction activities will comprise of mostly coarse particle size fractions in the TSP and PM₁₀. Fine particulates (i.e. PM_{2.5} and less) are typically derived from combustion sources such as diesel-powered plant and equipment.

The key dust generation activities associated with the construction phase have been identified in Table 2.1.

Table 2.1: Potential dust sources and dust-generating mechanisms

Activity	Dust generation mechanisms
Site establishment	Physical handling of materials (e.g., soils and aggregate) using heavy equipment such as excavators and front end loaders ⁸ , and surface preparation activities such as compaction, rolling and grading.
Stockpiling	Unloading trucks to stockpiles can generate dust from either material or receiving surface if not wet/stabilised. Stockpile surfaces exposed to potential wind erosion
Loading trucks with excavators/front end loaders	Dropping of material into the truck dump body.
Piling	Piling into dry soil and dried out spoil.
Trenching	Possible dust generation during backfill if materials dry out.
Movement of vehicles and plant on unsealed areas.	Vehicle movements on unpaved areas could suspend fine particles into the air (wheel generated dust).
Landscaping	Preparation of surfaces, importation and placement of soils.
Exposed surfaces	Wind erosion causing dust lift off
Compaction and backfill	Compaction may give rise to dust emissions if the soil is dry. Backfill may be required using front end loaders, dust emissions may be generated if stockpiled material or ground surface has dried out
Truck movements to and from site	Potential for loss of dust from the truck dump body during transit. Vehicles tracking material out onto the public road.

⁸ Dozers or skid steer loaders

Dust emissions from construction activities would be limited to work hours permitted by the development consent. Working hours are proposed between 7:00am and 6:00pm Monday to Friday, between 8:00am and 1:00pm on Saturday and no works on Sundays or public holidays.

Dust lift off via wind erosion of exposed surfaces could occur outside these times but would be limited to periods of moderate to strong winds (wind speeds greater than $\sim 5 \text{ m/s}$ ⁹) depending on the material properties (i.e. moisture content and threshold friction velocity). Furthermore, dust emissions are unlikely to occur outside operational times due to passive controls, in particular the inherent moisture in the soils and the wetting of stockpiles and access roads at completion of works during hot and dry weather conditions.

Combustion emissions, primarily CO, NO₂ and SO₂ will also occur from vehicles and diesel powered plant and equipment (e.g., diesel generator) on the site but are anticipated not to be discernible from existing background levels.

Potential sources of detectable off-site odours are the sediment ponds and any use of collected stormwater for dust suppression, should stagnant or anoxic conditions occur, and bitumen laying.

⁹ Threshold wind speeds for initiation of wind erosion from industrial stockpiles have been shown to exceed approximately 5 m/s at 0.15 m above the surface (equivalent to about 10 m/s at 7 m height), based on US EPA AP-42 Section 13.2.5 field wind-tunnel tests on coal piles and similar exposed materials (US EPA, 2006, AP-42, Section 13.2.5 Industrial Wind Erosion).

3. Air quality management and emissions mitigation measures

Sources of air emissions and management measures are detailed in the following sections (Section 3.1 to Section 3.3). The following air quality control measures will be implemented at the site to mitigate dust, combustion emissions and odour generation. The control measures aim to achieve a residual level of risk emissions that is as low as reasonably practicable. The measures listed are consistent with EPA Construction Site guidelines (EPA 2024a) and Module 3 of the Local Government Air Quality Toolkit (Air Pollution Control Techniques (EPA 2024b)).

All management measures are to be implemented for the duration of the construction period unless otherwise specified or deemed no longer relevant by the primary contractor's site manager.

3.1 Dust management and mitigation measures

3.1.1 General

- The name and contact details of the person(s) responsible for air quality and dust issues (e.g., principal contractor site manager and site supervisor) will be clearly displayed at the site boundary.
- Site access will be via three designated access points (**Appendix A**).
- Street frontage on Turner Road will be screened to 1.8 m for the duration of construction.
- Erosion control structures will be maintained clear to avoid sediment buildup with potential to become dust sources.
- Where weather forecasts predict adverse conditions (e.g. high winds and/or dry conditions), the frequency and duration of dust control measures should be increased, or where required, the cessation of relevant works where dust control measures may not work as intended under the conditions.
- In conjunction with increased controls, increased site inspections by the site supervisor are to be conducted during adverse conditions.
- Trucks entering or exiting the site must have covered loads.
- Concrete will be premixed with no on-site concrete batching to occur.

3.1.2 Vehicular/wheel generated dust

- All vehicles on site shall adhere to an enforced maximum speed limit of 10 km/h.
- High traffic areas will be prioritised for ongoing regular dust control measures (water cart).
- A minimum of one water cart will be kept on site at all times and used for wetting down of exposed areas and unsealed roads.
- The main site access point will be equipped with a wheel wash facility to remove excess dirt from truck/plant wheels. This will be used by vehicles trafficking surfaces where material may adhere to them.
- In the event of dirt being tracked onto pavements, the road will be cleaned prior to the material drying out and becoming a dust source.

3.1.3 Wind erosion

- Land rehabilitation will be carried out progressively to minimise exposed surfaces.

- Dust suppression on exposed surfaces, including ground and stockpile surfaces, will be carried out using sprinklers or dust suppressant where required.
- For large, unsealed areas of the site (or stages) where works, or rehabilitation, are not occurring or are not planned to occur for a lengthy period (e.g., one month), the need for dust suppressant will be considered.

3.1.4 Materials handling

- During site establishment, the surface being worked will be maintained moist using water carts or sprays.
- Material movements/handling will be minimised where possible (e.g., stockpiling avoided by loading directly into a truck for off-site disposal or direct emplacement rather than excavation, stockpiling and then load out).
- Drop heights will be minimised as far as practicable.
- When dust cannot be effectively controlled using application of a water, consideration will be given to modifying the works and limiting the use of significant dust generating equipment (e.g., front end loaders) during dry periods and high winds.
- During piling keep material and spoil damp; promptly remove spoil to managed stockpile or off-site.

3.1.5 Contingency measures

In the event of excessive on-site dust generation, visible emissions nearing or crossing (a dust event) the site boundary or a dust complaint, the dust generating activity is to be ceased immediately and dust controls reviewed. The activity may recommence following implementation of effective control measures mitigating dust emissions from leaving the site.

Modification of the dust management controls could include increased frequency of water application via use of the water cart or sprays and/or consideration of use of additives to water prior to application, particularly on trafficable areas or areas to be exposed for extended durations, to improve dust suppression.

3.2 Vehicle exhaust emissions management and mitigation measures

- Trucks and construction plant entering the site will be maintained in accordance with the manufacturer's specifications to comply with relevant regulations. Vehicles which are identified to be or considered to be defective (i.e., high exhaust emissions) should be stood down for maintenance.
- On-site equipment will be subject to prestart checks to ensure they are maintained in good working order.
- Unnecessary idling for delivery and on-site vehicles and plant will be avoided with engines turned off during periods of inactivity.
- Delivery of materials will be planned and coordinated to avoid congestion and excessive truck queuing/idling.

3.3 Odour emissions management and mitigation measures

- Sediment ponds and banks will be maintained with any excess sludge or sediment removed to facilitate function according to hydraulic design and avoid stagnant and anaerobic conditions.
- Odour emissions from bitumen laying will be managed through good work practices e.g., temperatures within recommended range, avoiding overheating, and minimising hot asphalt exposure through efficient paving practices, prompt compaction and no reheating or prolonged stockpiling.

4. Monitoring

Visual monitoring of dust generation and potential for dust to leave site (dust event) will be carried out by on-site personnel at all times.

Effectiveness of management measures will be assessed by the absence of visible airborne dust and the absence of complaints.

Continuous instrumental monitoring of emissions, including dust, is not expected to be necessary since implementation of the measures in the cDMP is expected to mitigate off-site impacts.

The potential of any odour generating activities on-site to have off-site impact will also be monitored by on-site personnel. This includes the monitoring of sediment ponds for adequate function and odours, and for odour associated with any use of stormwater from the ponds used for dust suppression.

5. Dust risk assessment

In accordance with the IAQM guidance applicable to dust assessment from construction, a dust risk assessment has been conducted for earthworks, including excavating material, haulage, tipping and stockpiling, construction and track out as sensitive receptors occur within the 250 m of the boundary of the site (screening criteria).

The potential unmitigated dust emissions magnitude, allocated based on the IAQM example definitions, are presented in Table 5.1.

Table 5.1: Potential unmitigated dust emissions magnitude

Activity	Potential unmitigated dust emission magnitude and reasoning
Earthworks	Medium – while site is large the bulk earthworks will be carried out in the early works program. Detailed earthworks to be carried out during construction will employ < 5 heavy earth moving vehicles active at any one time.
Construction	Large ¹⁰ - Total building volume >75,000 m ³ (Main building ~305,900 m ³ [~23m H ~190 L ~70m W]).
Track out factor	Large - potential unpaved road length > 100 m

Conservatively, the nearest potential dust source to sensitive receptors could occur from earth works and landscaping to the site boundary. The closest high sensitivity receptors (residences to the east) are >100 m from the nearest potential dust source. These are, therefore, considered low sensitivity to dust soiling. However, commercial neighbours directly adjacent to the western and northern boundaries are medium sensitivity receptors; sensitivity to dust soiling effects is thus considered medium according to the following matrix (Figure 5-1

¹⁰ Not this may be overly conservative based on no proposed high dust emitting construction activities, such as concrete batching or sandblasting activities, onsite but is assigned due to the large building size.

Receptor Sensitivity	Number of Receptors	Distance from the Source (m) ^c			
		<20	<50	<100	<250
High	>100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

).

Receptor Sensitivity	Number of Receptors	Distance from the Source (m) ^c			
		<20	<50	<100	<250
High	>100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

Figure 5-1: Sensitivity of area to dust soiling effects on people and property (IAQM 2024 Table 2)

Background air quality is measured at six sites in the southwest Sydney area. The annual average PM₁₀ was reported as below 20 µg/m³ at all sites for five years to 2025¹¹. According to the IAQP guidance (Table 3) low sensitivity is applicable as the background air quality is in the lowest mean concentration bracket and high sensitivity receptors are more than 100 m away.

Ecological sensitivity of the riparian zone is assigned medium due to it being identified as high biodiversity value. The sensitivity to dust is not known however dust incursion was identified as a potential indirect impact during the ecological audit (Niche 2024).

The outcome of the assessment of the sensitivity of the area, which remains consistent for all three activities, is summarised in Table 5.2.

Table 5.2: Area sensitivity assessment summary

Potential impact	Sensitivity of surrounding area
Dust soiling	Medium
Human Health	Low
Ecological	Medium

¹¹ <https://www.environment.nsw.gov.au/topics/air/nsw-air-quality-statements/nsw-annual-air-quality-statement-2025/particles>
<https://www.environment.nsw.gov.au/topics/air/nsw-air-quality-statements/annual-air-quality-statement-2024/particles#pm10-particles>
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<https://www.environment.nsw.gov.au/topics/air/nsw-air-quality-statements/annual-air-quality-statement-2021/pm10#annual-average-pm10-levels>

The risk, according to the matrix in Figure 5-2, assigned by combining the assigned unmitigated dust emission magnitude and area sensitivity, is detailed in Table 5.3.

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Figure 5-2: Risk matrix for earthworks, construction and trackout dust impacts (IAQM 2024)

Table 5.3: Risk assessment of impacts from unmitigated and mitigated dust emissions

Activity	Unmitigated dust magnitude	Sensitivity	Risk from unmitigated emissions	Key mitigation measures	Dust magnitude with mitigation	Risk from mitigated emissions
Earthworks	Medium	Medium	Medium	Use of water sprays on worked surface, stockpiles and materials being handled Minimisation of drop heights On-site speeds limited to 10 km/h Progressive land rehabilitation to minimise exposed surfaces Dust suppression on exposed surfaces Additional dust controls to be applied during strong winds or adverse weather conditions Plant and equipment will be well maintained	Small	Low
Construction	Large	Medium	High	On-site speeds limited to 10 km/h Trucks entering or exiting the site must have covered loads Watercart used for wetting down of exposed areas and unsealed trafficable surfaces Site will be screened along Turner Road for the duration of the construction period	Small	Low
Track out	Large	Medium	High	Wheel wash facility at main site access Prompt cleaning of material tracked onto paved areas.	Small	Low

6. Application and responsibilities

The period of implementation of the cDMP is from the commencement of construction works until the cessation of works and hand over by the Principal Construction Contractor.

Construction works at the site will be undertaken under the guidance of the Principal Construction Contactor. The Principal Construction Contactor's site manager will be responsible for the implementation of the procedures provided in this cDMP.

Prior to commencement of tasks, an assessment will be made regarding whether those works have the potential to generate dust/odour emissions from the site and if adequate controls are in place.

Roles and responsibilities with respect to management of fugitive dust emissions are outlined in Table 6.1.

Table 6.1: Roles and responsibilities

Role	Responsibilities
All personnel	Monitor and report instances of fugitive dust by raising an incident report as required.
Site Manager	Allocate resources to ensure fugitive dust emission risk is as low as reasonably practicable. Conduct fugitive dust inspections. Ensure any approvals compliance obligations are met i.e., this cDMP is implemented. Investigate and document complaints as required. Consultation with neighbouring properties regarding air quality impacts, including dust and odour.
Site Supervisor	Incorporate appropriate controls into planning and execution of site operations, including guidance and coaching of personnel and allocation of dust suppression activities. Monitor wind conditions and operational activities throughout the day. Intervene in and modify/stop operations in response to any dust events. Investigate complaints as required. Monitor odour from activities, including the sediment ponds and any use of stormwater for dust suppression, for potential to have offsite impact.
Site Administrator	Maintain site dust event register and complaints register.
Site Operators	Adjust operations accordingly to minimise dust emission risk. Modify/stop own activities in response to notification of any dust event. Deploy dust controls as appropriate and necessary.
Contractors	Comply with all on-site dust management requirements as set out in the cDMP. Monitor dust generation within own areas and prevailing and forecast weather conditions to adapt activities to minimise the generation of dust. Modify or cease activities to prevent dust events.

7. Stakeholder engagement

7.1 Community notification

Where emissions have potential to impact off-site receptors, for example extensive bitumisation that may emit odour detectable off-site across consecutive days, the users of neighbouring properties, including the nearest residential neighbours to the east, will be notified.

7.2 Complaints

All complaints related to air emissions, including dust and odour, will be logged in the site incident management system. The following information will be recorded:

- Complainants name and contact details (if provided);
- Date and time of complaint;
- Date, time and duration of air quality event/incident the complaint relates to;
- Details of any corrective actions taken to investigate and the response to the complainant; and
- Assessment of corrective actions effectiveness to prevent recurrence.

A sign will be maintained on the outside of the fence with contact details of the person(s) responsible for air quality and dust issues (as per general provisions).

8. Review

This cDMP will be reviewed as necessary during the construction and should dust events from the site occur impacting nearby sensitive premises.

Reviews may also occur:

- As a corrective action resulting from an investigation into dust events;
- Prior to any significant change to site activities and operations; and
- On publication of any new or updated dust emission guidelines by NSW EPA.

9. Limitations

Scope of services

This report (“the report”) has been prepared by JBS&G in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and JBS&G. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

Reliance on data

In preparing the report, JBS&G has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report (“the data”). Except as otherwise expressly stated in the report, JBS&G has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report (“conclusions”) are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. JBS&G has also not attempted to determine whether any material matter has been omitted from the data. JBS&G will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to JBS&G. The making of any assumption does not imply that JBS&G has made any enquiry to verify the correctness of that assumption.

The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. JBS&G disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law as at the date of this report.

Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made, including to any third parties, and no liability will be accepted for use or interpretation of this report by any third party.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

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Appendix A Site Layout showing washdown



Legend

- Approximate Site Boundary
- NSW Cadastre
- Hydro Line

Site Features

- Construction Site Access Points
- Wash Down Bay
- Site Compound
- Stockpile Area
- Waste Area

Job No: 69307

Client: FDC Construction

Version: R07_8 Rev A	Date 20/03/2026
Drawn By: RF	Checked By: ER

Scale 1:3,000

Coord. Sys. GDA2020 MGA Zone 56

43, 49, 55, 61 and 67 Turner Rd
Gregory Hills, NSW

SITE LAYOUT

FIGURE 1

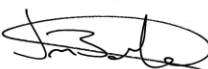
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Document Status

Rev No.	Author	Reviewer Name	Approved for Issue Name	Signature	Date
A	C.Ingram	J.Bailes	J.Bailes	Draft	05/03/2026
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Adelaide

Kaurna Country | 100 Hutt Street,
Adelaide, SA 5000
T: 08 8431 7113

Brisbane

Turrbal/Yuggera Country | Level 37,
123 Eagle Street, Brisbane, QLD 4000
T: 07 3211 5350

Bunbury

Wardandi Country | 177 Spencer Street,
Bunbury, WA 6230
T: 08 9792 4797

Byron Bay

Bundjalung Country | Unit 3C,
18 Centennial Circuit, Byron Bay NSW 2481
T: 07 3211 5350

Gold Coast

Yugambah Country | Level 2,
14 Edgewater Court, Robina, QLD 4226
T: 07 3211 5350

Hobart

Muwinina Country | Level 2,
137 Liverpool Street, Hobart, TAS 7000
T: 03 6208 3700

Melbourne

Wurundjeri Country | Level 19,
31 Queen Street, Melbourne, VIC 3000
T: 03 9642 0599

Perth

Whadjuk Country | Allendale Square,
Level 9, 77 St Georges Terrace, WA 6000
T: 08 9380 3100

Sydney

Gadigal Country | Level 8,
179 Elizabeth Street, Sydney, NSW 2000
T: 02 8245 0300

Wollongong

Dharawal Country | Suite 406, Level 4,
43 Burelli Street, Wollongong, NSW 2500
T: 02 4225 2647