

COMPASS 2 WAREHOUSE & DISTRIBUTION CENTRE

LOT 1 DP1274322 WITHIN BLACKTOWN

AIR QUALITY ASSESSMENT

RWDI # 2201656

9 February 2022

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GLOSSARY OF AIR QUALITY TERMS

Air Pollution – The presence of contaminants or pollutant substances in the air that interfere with human health or welfare or produce other harmful environmental effects.

Air Quality Standards – The level of pollutants prescribed by regulations that are not to be exceeded during a given time in a defined area.

Air Toxics – Any air pollutant for which a national ambient air quality standard (NAAQS) does not exist (i.e. excluding ozone, carbon monoxide, PM-10, sulphur dioxide, nitrogen oxide) that may reasonably be anticipated to cause cancer; respiratory, cardiovascular, or developmental effects; reproductive dysfunctions, neurological disorders, heritable gene mutations, or other serious or irreversible chronic or acute health effects in humans.

Airborne Particulates – Total suspended particulate matter found in the atmosphere as solid particles or liquid droplets. Chemical composition of particulates varies widely, depending on location and time of year. Sources of airborne particulates include dust, emissions from industrial processes, combustion products from the burning of wood and coal, combustion products associated with motor vehicle or non-road engine exhausts, and reactions to gases in the atmosphere.

Area Source – Any source of air pollution that is released over a relatively small area, but which cannot be classified as a point source. Such sources may include vehicles and other small engines, small businesses and household activities, or biogenic sources, such as a forest that releases hydrocarbons, may be referred to as nonpoint source.

Concentration – The relative amount of a substance mixed with another substance. Examples are 5 ppm of carbon monoxide in air and 1 mg/l of iron in water.

Emission – Release of pollutants into the air from a source. We say sources emit pollutants.

Emission Factor – The relationship between the amount of pollution produced and the amount of raw material processed. For example, an emission factor for a blast furnace making iron would be the number of pounds of particulates per ton of raw materials.

Emission Inventory – A listing, by source, of the amount of air pollutants discharged into the atmosphere of a community; used to establish emission standards.

Flow Rate – The rate, expressed in gallons -or litres-per-hour, at which a fluid escapes from a hole or fissure in a tank. Such measurements are also made of liquid waste, effluent, and surface water movement.

Fugitive Emissions – Emissions not caught by a capture system.

Hydrocarbons (HC) – Chemical compounds that consist entirely of carbon and hydrogen.

Hydrogen Sulphide (H₂S) – Gas emitted during organic decomposition. Also, a by-product of oil refining and burning. Smells like rotten eggs and, in heavy concentration, can kill or cause illness.

Inhalable Particles – All dust capable of entering the human respiratory tract.



Nitric Oxide (NO) – A gas formed by combustion under high temperature and high pressure in an internal combustion engine. NO is converted by sunlight and photochemical processes in ambient air to nitrogen oxide. NO is a precursor of ground-level ozone pollution, or smog.

Nitrogen Dioxide (NO₂) – The result of nitric oxide combining with oxygen in the atmosphere; major component of photochemical smog.

Nitrogen Oxides (NO_x) – A criteria air pollutant. Nitrogen oxides are produced from burning fuels, including gasoline and coal. Nitrogen oxides are smog formers, which react with volatile organic compounds to form smog. Nitrogen oxides are also major components of acid rain.

Mobile Sources – Moving objects that release pollution; mobile sources include cars, trucks, buses, planes, trains, motorcycles and gasoline-powered lawn mowers.

Particulates – Particulate matter includes dust, soot and other tiny bits of solid materials that are released into and move around in the air. Particulates are produced by many sources, including burning of diesel fuels by trucks and buses, incineration of garbage, mixing and application of fertilizers and pesticides, road construction, industrial processes such as steel making, mining operations, agricultural burning (field and slash burning), and operation of fireplaces and woodstoves. Particulate pollution can cause eye, nose and throat irritation and other health problems.

Parts Per Billion (ppb)/Parts Per Million (ppm) – Units commonly used to express contamination ratios, as in establishing the maximum permissible amount of a contaminant in water, land, or air.

PM₁₀/PM_{2.5} – PM₁₀ is measure of particles in the atmosphere with a diameter of less than 10 or equal to a nominal 10 micrometers. PM_{2.5} is a measure of smaller particles in the air.

Point Source – A stationary location or fixed facility from which pollutants are discharged; any single identifiable source of pollution; e.g. a pipe, ditch, ship, ore pit, factory smokestack.

Scrubber – An air pollution device that uses a spray of water or reactant or a dry process to trap pollutants in emissions.

Source – Any place or object from which pollutants are released.

Stack – A chimney, smokestack, or vertical pipe that discharges used air.

Stationary Source – A place or object from which pollutants are released and which does not move around. Stationary sources include power plants, gas stations, incinerators, houses etc.

Temperature Inversion – One of the weather conditions that are often associated with serious smog episodes in some portions of the country. In a temperature inversion, air does not rise because it is trapped near the ground by a layer of warmer air above it. Pollutants, especially smog and smog-forming chemicals, including volatile organic compounds, are trapped close to the ground. As people continue driving and sources other than motor vehicles continue to release smog-forming pollutants into the air, the smog level keeps getting worse



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1 INTRODUCTION

RWDI Pty Limited has been commissioned by the Charter Hall to conduct an air quality assessment for the Compass 2 Warehouse & Distribution Centre (the Project) to be located at Lot 1 Eastern Creek Drive, Eastern Creek, NSW (the site).

This assessment has been carried out based on the concept drawings "Site and Ground Floor Plan" prepared by Watch this Space Design Ltd, Draft SSDA issue and dated 3 February 2022.

It is understood that the Project is deemed State Significant (SSD-30923027) under the EP&A Act 1979 and the following assessment requirement is taken from the industry specific Secretary's Environmental Assessment Requirements (SEARs) for Warehouses and distribution centres.

| Key Issue No. & Description | Issue & Assessment Requirements | How It Is Addressed | Section of This Report |
|-----------------------------|--|--|------------------------|
| 10. Air Quality | Identify significant air emission sources at the proposed development (during construction and operation), assess their potential to cause adverse off-site impacts, and detail proposed management and mitigation measures that would be implemented. Where air emissions during operation have the potential to cause adverse off-site impacts, provide a quantitative air quality impact assessment prepared in accordance with the relevant NSW Environment Protection Authority (EPA) guidelines. | This air quality report has identified the significant air emission sources and assessed their potential impacts | Sections 4-7 |

2 PROJECT DESCRIPTION

2.1 Site Location

The site is located within the Blacktown City LGA, approximately 35km west of the Sydney CBA. The site is located at Lot 1 Eastern Creek Drive, Eastern Creek as shown in **Figure 2-1**.

The site is approximately 5 hectares in size and located within the Greater Western Sydney region. It is located west of the Prospect Reservoir and the area is occupied mainly by industrial developments. Eastern Creek Waste and Recycling Centre is also located in the region, north-west to the Proposal site.

The site is currently an unoccupied lot, and it is bound to the south-west by Eastern Creek Drive, and to the north by Honeycomb Drive. The site is surrounded by similar industrial and warehouse developments to the north, south, east, and west.

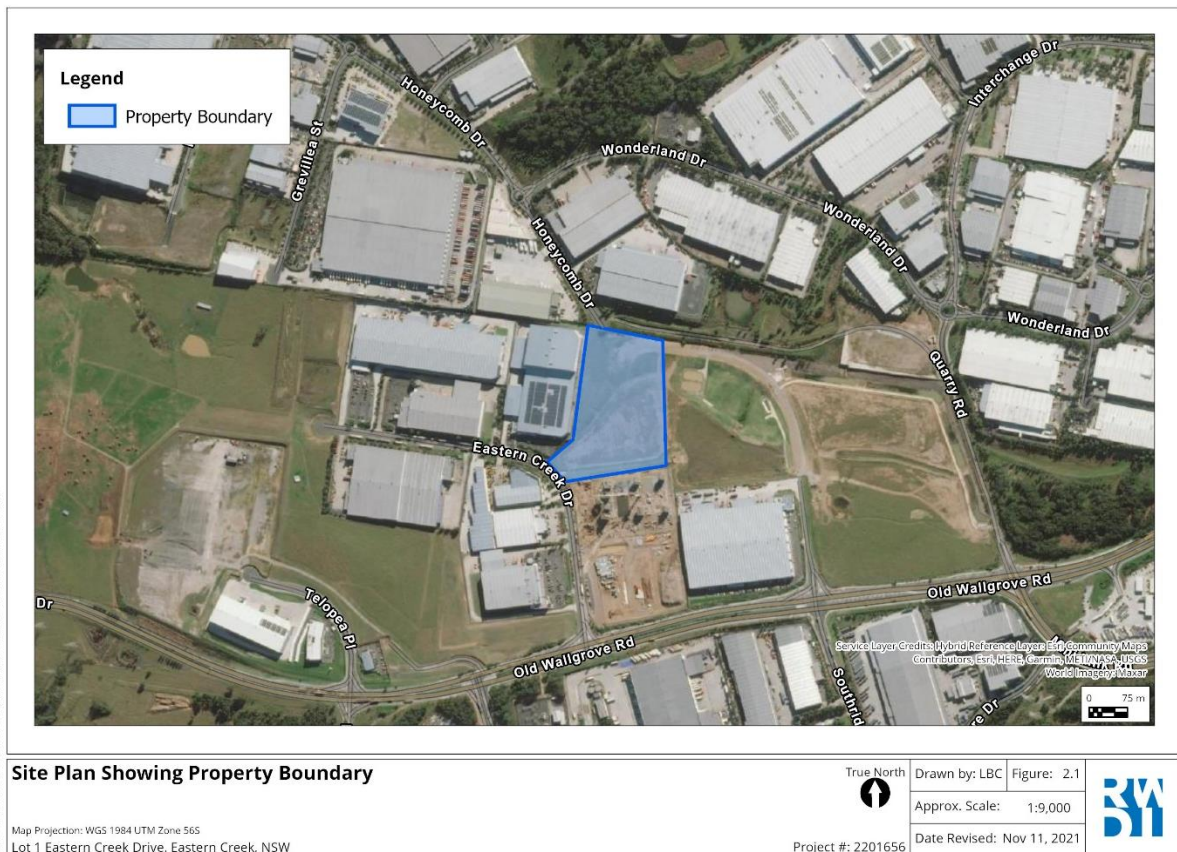


Figure 2-1: Site Location

2.2 Proposal

The proposal includes construction and 24/7 operation of a warehouse and distribution centre at Lot 1 Eastern Creek Drive, Eastern Creek, comprising:

- Minor earthworks involving cut and fill works;
- Site preparation works and servicing;
- Warehouse, main office, ancillary office, dock office, loading docks, carparking, forklift charging room;
- External hardstands and landscaping.

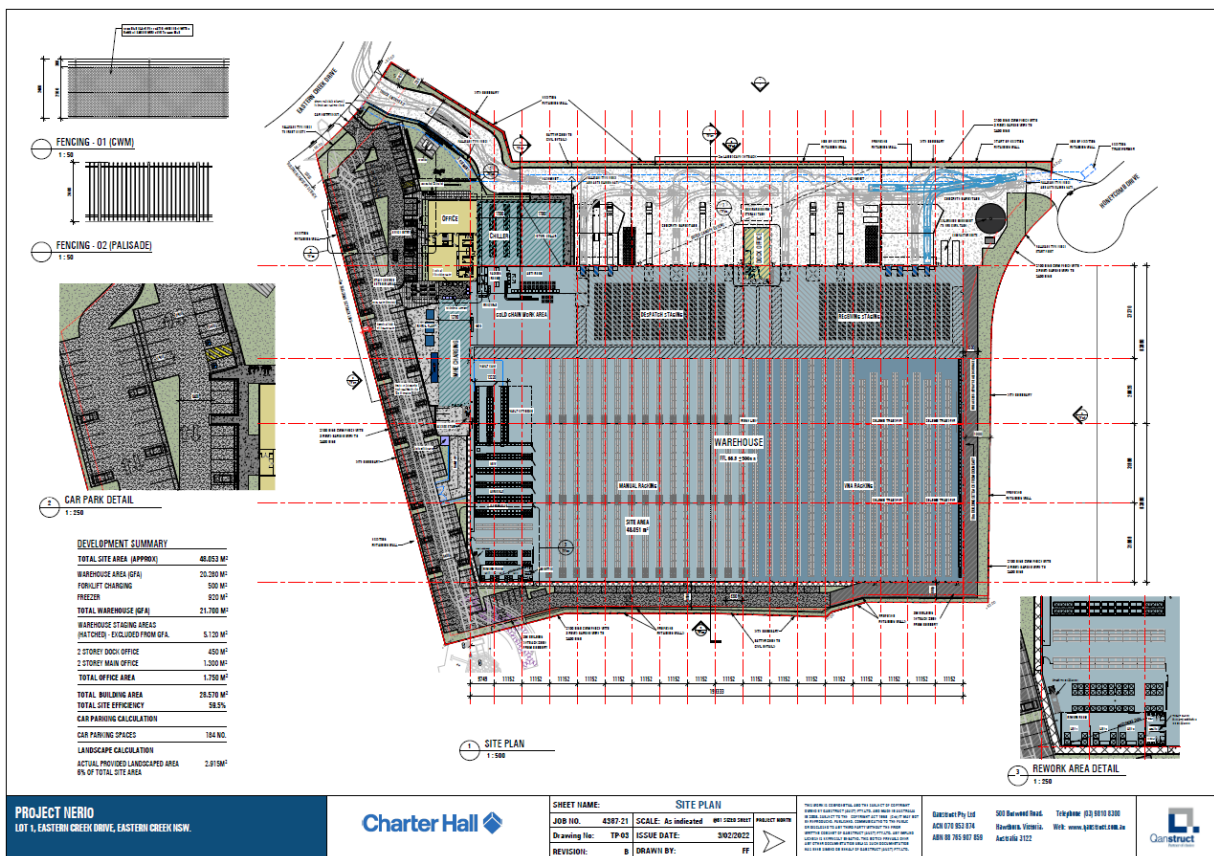


Figure 2-2: Proposed Site Layout

2.3 Potential Sources of Air Emissions Associated with the Development

Air emissions are likely during the construction of the development and operations of the warehouses. The most likely sources are summarised in the following sections.

2.3.1 Construction phase

At the time of preparing this assessment a detailed construction programme was not developed, however the following stages and typical activities can be expected from this project:

Site clearing and enabling works:

- Likely to be the shortest and of least impact.
- Small number of structures to be removed using trucks, excavators and hand tools.
- Clearing works

Earthworks and retaining wall construction:

- Likely to be the longest stage of works and of most impact.
- Significant earthworks required that will involve a large number of trucks, excavators, dozers and associated equipment.

Construction of internal road network:

- Typical plant operating being concrete trucks, asphalt pavers, vibratory rollers, and graders.

During the earthwork activities, which includes moving of material and truck movements along haul roads (wheel generated dust), there is likely to be short-term periods of elevated dust levels.

Dust or airborne particles present in the air at elevated levels can be hazardous to human health or cause a nuisance. Potential health effects of airborne particles are closely related to particle size.

The most common particle size distributions considered in air quality studies are:

- PM_{2.5} (particles less than 2.5 micrometres in diameter) – for assessment against health-based criteria
- PM₁₀ (particles less than 10 micrometres in diameter) – for assessment against health-based criteria
- TSP (total suspended particles, generally up to 100 micrometres in diameter) – for assessment against predominantly nuisance-based criteria
- deposited dust particles – for assessment of dust nuisance.

PM₁₀ and PM_{2.5} particles are typically invisible to the naked eye. Larger particulates are typically visible to the naked eye.

2.3.2 Operational phase

During the operational phase, the typical activities expected from this project are vehicles idling and vehicles moving on the site. Those activities emit Particles (PM₁₀ and PM_{2.5}) and NO_x from vehicles idling at the warehouse bays.

3 EXISTING ENVIRONMENT

3.1 Local Meteorology

Meteorological conditions strongly influence air quality. Most significantly, wind speed, wind direction, temperature, relative humidity, and rainfall affect the dispersion of air pollutants. The following sub-section identify a representative set of meteorological data for use in the qualitative assessment.

3.1.1 Wind

Wind data was obtained from Penrith Lakes AWS.

Figure 3-1 to **Figure 3-6** present annual and seasonal “wind rose” plots for the Penrith Lakes AWS for the period 2015 to 2019, inclusive. The plots show similar patterns of wind speed and wind direction over the five-year period, with south-westerly winds being prevalent throughout the year.

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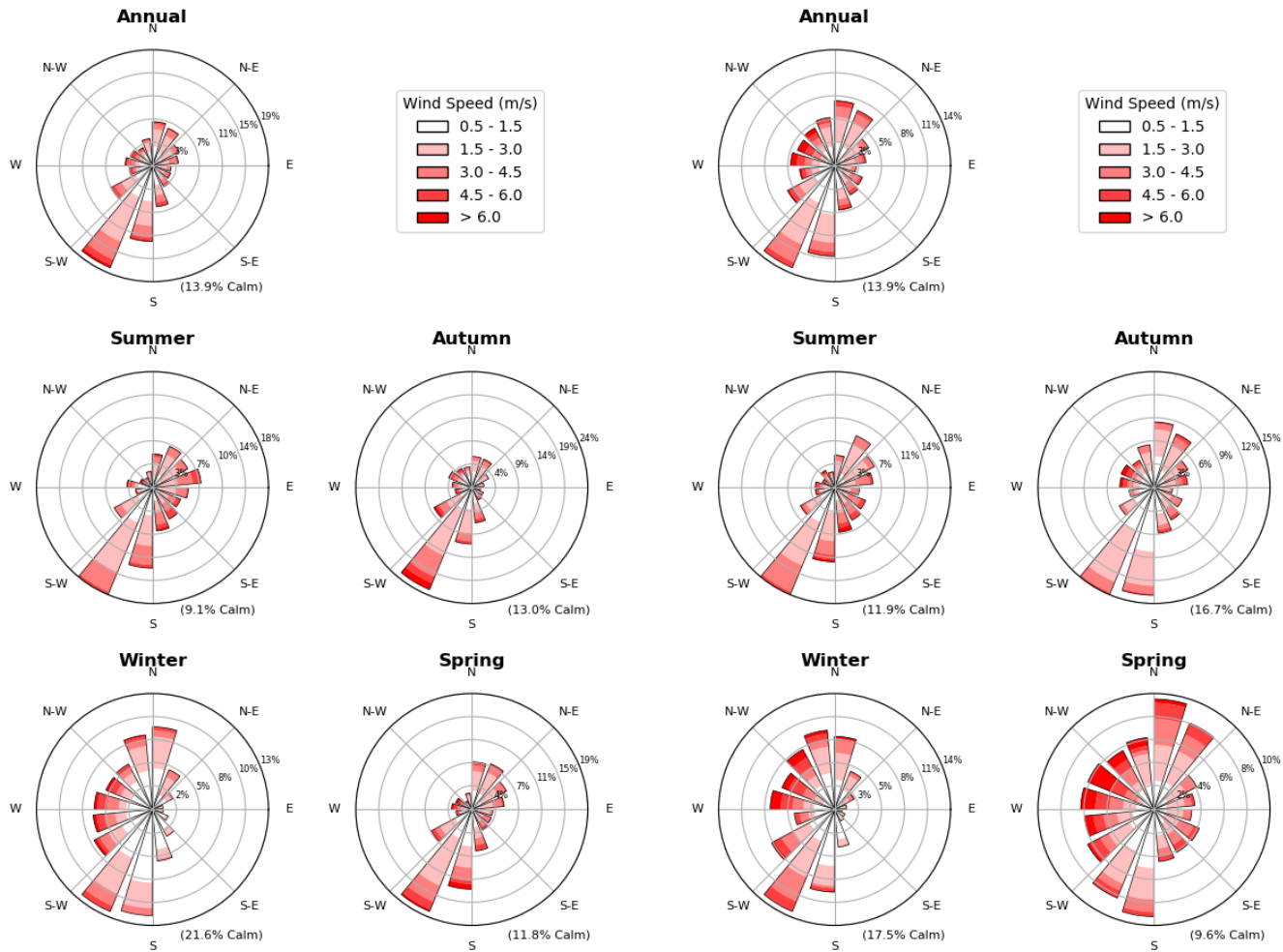


Figure 3-1: Penrith Lakes AWS Wind Roses, 2015

Figure 3-2: Penrith Lakes AWS Wind Roses, 2016

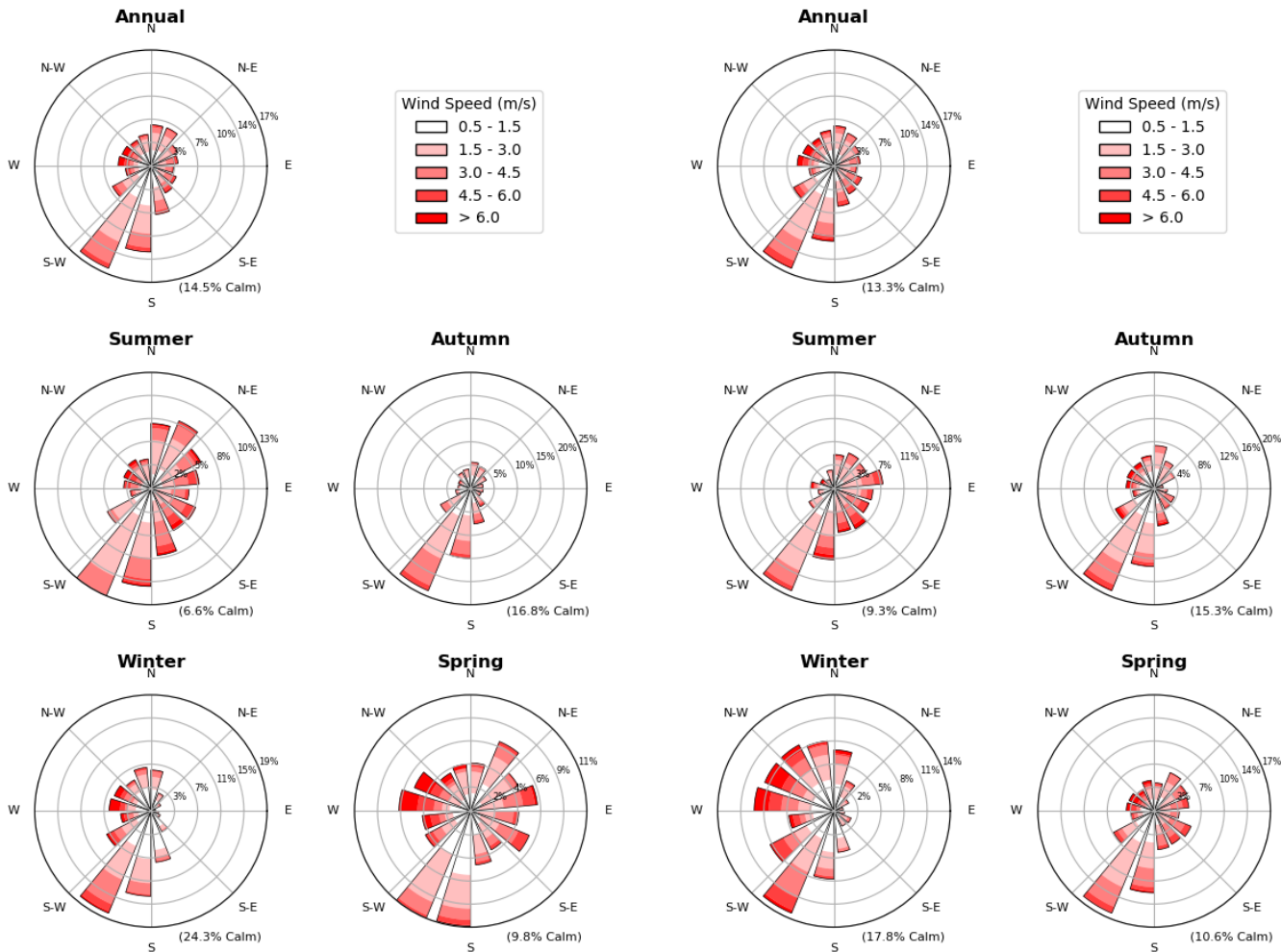


Figure 3-3: Penrith Lakes AWS Wind Roses, 2017

Figure 3-4: Penrith Lakes AWS Wind Roses, 2018

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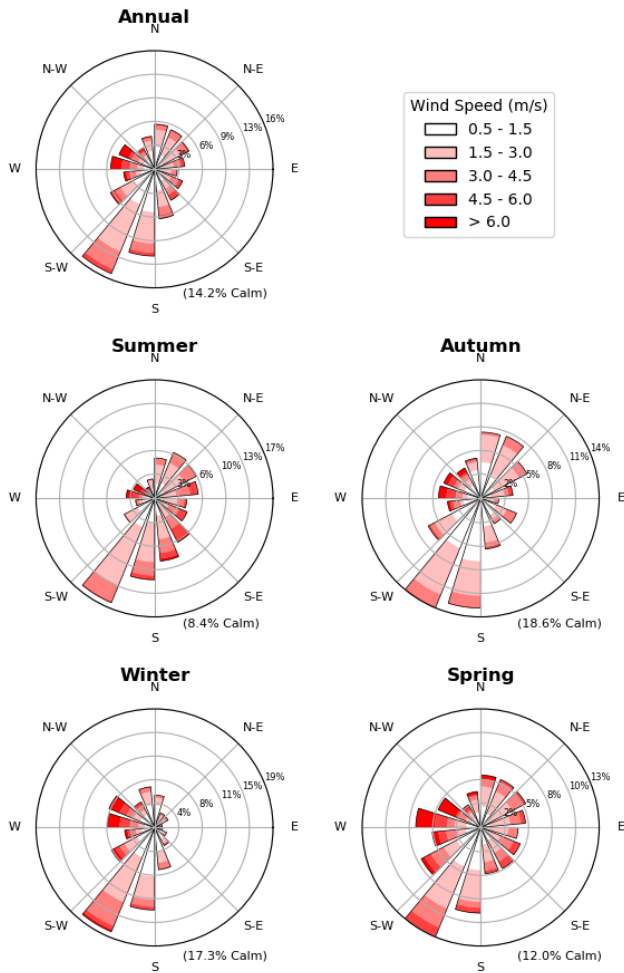


Figure 3-5: Penrith Lakes AWS Wind Roses, 2019

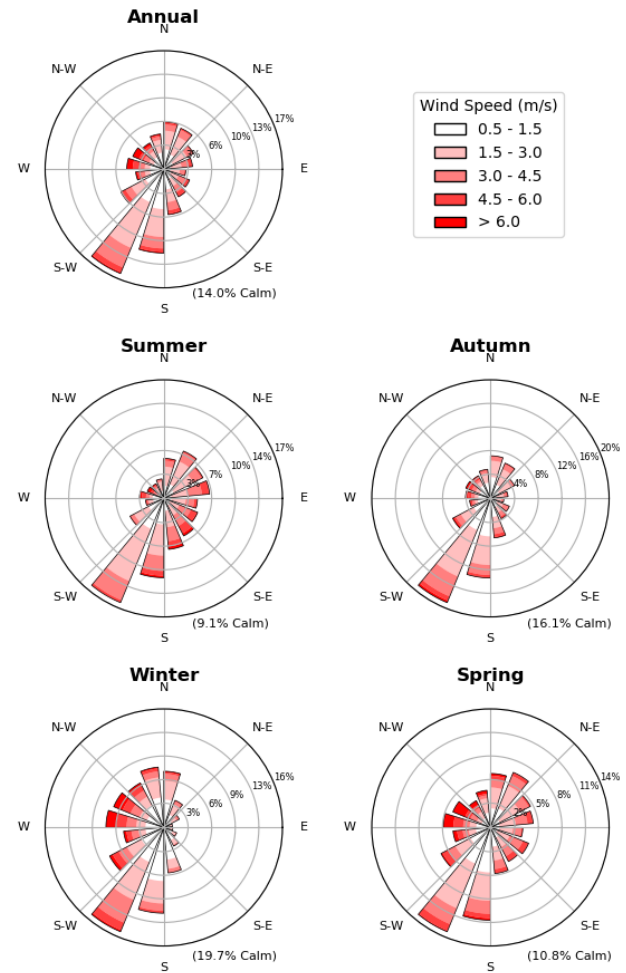


Figure 3-6: Penrith Lakes AWS Wind Roses, 2015-2019

3.2 Local Ambient Air Quality

No site-specific data are available to determine the existing concentrations of air pollutants at sensitive receptors near the Proposal. The NSW Department of Planning Industry and Environment (DPIE) operates a network of air quality monitoring stations (AQMS) across NSW. The nearest DPIE AQMS measuring the selected pollutants are located approximately 7.6 kilometres northwest of the Proposal site, at St Marys.

A summary of the ambient air quality monitoring data collected for year 2018 at the St Marys AQMS is presented in Table 3-1. The TSP background concentrations were determined based on a relationship between measured PM₁₀ concentrations.

Table 3-1 also presents the applicable air quality criteria for each pollutant of interest. Air quality criteria are benchmarks set to protect the general health and amenity of the community in relation to air quality. From the table below, it is possible to conclude that the monitoring data in the proximity to the Proposal site are lower than the air quality criteria.

Table 3-1: Ambient air quality monitoring concentrations in proximity to the proposal site

| Pollutant | Averaging Period | Concentration (µg/m ³) | NSW EPA AQ Criteria (µg/m ³) |
|--|------------------|------------------------------------|--|
| Total suspended particulates (TSP) | Annual | 48.5 | 90 |
| Particulate matter ≤10 µm (PM₁₀) | Annual | 19.4 | 25 |
| | 24-hour | 47.6 | 50 |

4 CONSTRUCTION DUST ASSESSMENT

4.1 Assessment Methodology

The EPA does not at this stage have specific guidelines to consider dust from construction sites in terms of a risk assessment and management approach. It has developed a guideline entitled 'Approved Methods for the Modelling and Assessment of Air Pollutants in NSW' (2017), however, this guideline considers detailed modelling approaches and is not specifically relevant to construction dust impacts. A detailed modelling approach is not necessary for short term construction impacts that can be managed.

A risk-based approach has however been developed in the United Kingdom by the Institute of Air Quality Management (IAQM). The guideline is entitled "IAQM Guidance on the Assessment of Dust from Demolition and Construction" (IAQM, 2014).

This approach has been widely used for performing qualitative assessments of dust emissions from construction sites and has been used in NSW by RWDI and other consultants.

Furthermore, it has been accepted as a suitable approach in the absence of any guidance by Australian regulatory authorities.

This section presents a qualitative assessment of potential air quality impacts associated with the proposed works and has been conducted in general accordance with the methodology described in the previously mentioned IAQM Guideline.

This approach presents the risk of dust soiling and human health impacts associated with four types of activities that occur on construction sites (demolition, earthworks, construction and trackout) and involves the following steps:

- Step 1: Screen the need for a detailed assessment;
- Step 2: Assess the risk of dust impacts arising, based on:
 - The potential magnitude of dust emissions from the works; and
 - The sensitivity of the surrounding area.
- Step 3: Identify site-specific mitigation; and
- Step 4: Consider the significance of residual impacts, after the implementation of mitigation measures.

For this project, the process outlined above will be applied to the worst-case on-site and off-site activities that are likely to result in the highest generation of dust. This approach will result in a conservative assessment of the potential risks for human health and dust soiling impacts.

For this project, the earthworks phase (and associated trackout) is considered to have the greatest potential to generate short-term high levels of dust. This report has focused on the assessment of this worst-case scenario.

4.2 Risk Assessment of Dust Impacts from Proposed Construction Works

The following qualitative risk assessment of potential dust impacts has been conducted for the proposed construction works.

4.2.1 Step 1 – Screen the Need for a Detailed Assessment

The IAQM guidance recommends that a risk assessment of potential dust impacts from construction activities be undertaken when human receptors are located within:

- 350m of the boundary of the site; or,
- 50m of the route(s) used by construction vehicles on public roads up to 500m from the site entrance(s).

As can be seen in **Figure 4-1**, the nearest residential receivers to the east are located further than 350m of the Proposal site, approximately 1.5km to the north and 2.4km to the west. Moreover, the nearest childcare facility, Little Graces Childcare Centre, is located approximately 600m south-east of the Proposal site. Therefore, an assessment of dust impacts is not considered necessary under the guideline. Moreover, industrial and commercial areas are located in the vicinity of the Proposal site with some buildings being adjacent to the Proposal site.

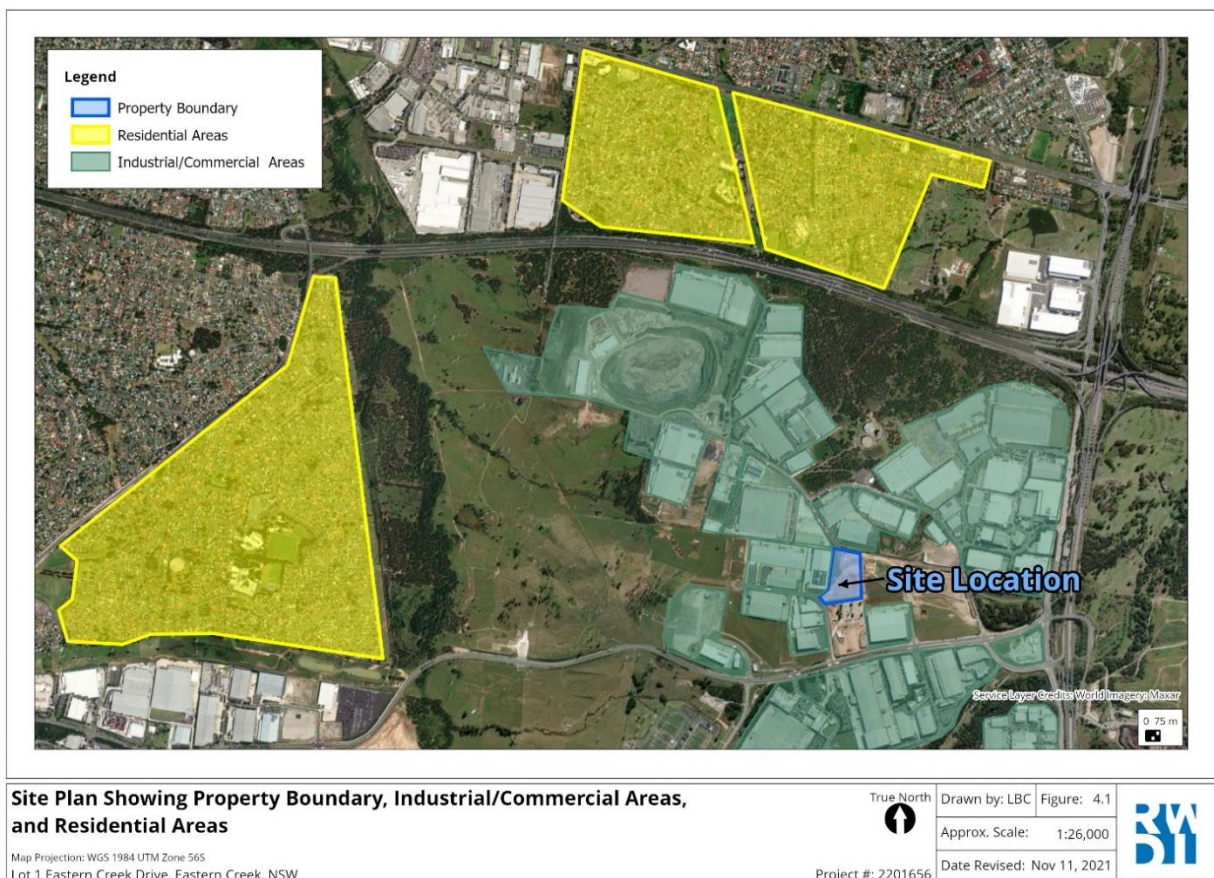


Figure 4-1 Locations of Identified Residential and Industrial/Commercial Areas

4.2.2 Step 2A – Potential Dust Emission Magnitude

In accordance with the IAQM guidance (Section 7, Step 2: Assess the Risk of Dust Impacts), dust emission magnitudes from earthworks may be defined as:

- Large: total site area >10,000 sqm, potentially dusty soil type (e.g. clay), >10 heavy earth moving vehicles active at any one time, formation of bunds >8m in height, total material moved >100,000 tonnes;
- Medium: total site area 2,500 sqm – 10,000 sqm, moderately dusty soil type (e.g. silt), 5 – 10 heavy earth moving vehicles active at any one time, formation of bunds 4m – 8m in height, total material moved 20,000 tonnes – 100,000 tonnes; and,
- Small: total site area <2,500 sqm, soil type with large grain (e.g. sand), <5 heavy earth moving vehicles active at any one time, formation of bunds <4m in height, total material moved <20,000 tonnes.

The total area of the Proposal site is estimated to be larger than 10,000 sqm.

Regarding dust “trackout” associated with haulage activities, dust emission magnitudes may be defined as:

- Large: >50 heavy vehicle outward movements per day, potentially dusty surface material, unpaved road length >100m;
- Medium: 10 – 50 heavy vehicle outward movements per day, moderately dusty surface material, unpaved road length 50m – 100m; and,
- Small: <10 heavy vehicle outward movements per day, surface material with low potential for dust release, unpaved road length <50m

Earthworks will result in the highest number of heavy vehicle movements, expected to be up to 60 heavy vehicles movements per day leaving the site. However, this number reduces to up to 25 heavy vehicle movements per day for the remaining of the construction activities, and all on-site haulage would include unpaved sections of road larger than 100m long.

For conservative purposes (worst-case scenario), this assessment assumed that 60 heavy vehicles movements per day will be expected during the entirety of construction and demolition operations.

The dust emission magnitude is therefore:

- **Large** for earthworks.
- **Large** for trackout.

4.2.3 Step 2B – Sensitivity of Surrounding Area

The sensitivity of the surrounding area to dust impacts considers a number of factors, including:

- Specific receptor sensitivities;
- The number of receptors and their proximity to the works;
- Existing background dust concentrations; and,
- Site-specific factors that may reduce impacts, such as trees that may reduce wind-blown dust.

In accordance with the IAQM guideline, the following receptor sensitivity has been determined:

4.2.3.1 *Industrial Receivers*

- **Medium** sensitivity to dust soiling.
- **Medium** sensitivity to human health.

4.2.3.2 *Residential Receivers*

- **High** sensitivity to dust soiling.
- **High** sensitivity to human health.

Considering the above receptor sensitivities, **Table 4-1** and

Table 4-2 have been reproduced from the IAQM (showing the “high” and “medium” receptor sensitivity applicable to this project) so that the sensitivity of the area can be determined.

For human health impacts, the mean background PM₁₀ concentration of below 24 µg/m³ has been used given the local ambient air quality measured (Table 3-1).

Table 4-1: Area Sensitivity Decision Matrix – Dust Soiling

| Receptor Sensitivity | Number of Receptors | Distance from the Source (m) | | | |
|----------------------|---------------------|------------------------------|--------|--------|------|
| | | <20 | <50 | <100 | <350 |
| High | >100 | High | High | Medium | Low |
| | 10-100 | High | Medium | Low | Low |
| | 1-10 | Medium | Low | Low | Low |
| Medium | > 1 | Medium | Low | Low | Low |

Table 4-2: Area Sensitivity Decision Matrix – Human Health

| Receptor Sensitivity | Annual Mean PM ₁₀ concentration | No. of Receptors | Distance from the Source (m) | | | | |
|----------------------|--|------------------|------------------------------|--------|--------|--------|------|
| | | | <20 | <50 | <100 | <200 | <350 |
| High | > 32 µg/m ³ | >100 | High | High | High | Medium | Low |
| | | 10-100 | High | High | Low | Low | Low |
| | | 1-10 | High | Medium | Low | Low | Low |
| | 28-32 µg/m ³ | >100 | High | High | Medium | Low | Low |
| | | 10-100 | High | Medium | Low | Low | Low |
| | | 1-10 | High | Medium | Low | Low | Low |

| Receptor Sensitivity | Annual Mean PM ₁₀ concentration | No. of Receptors | Distance from the Source (m) | | | | |
|----------------------|--|------------------|------------------------------|--------|------|------|------|
| | | | <20 | <50 | <100 | <200 | <350 |
| | 24-28 µg/m ³ | >100 | High | Medium | Low | Low | Low |
| | | 10-100 | High | Medium | Low | Low | Low |
| | | 1-10 | Medium | Low | Low | Low | Low |
| | < 24 µg/m ³ | >100 | Medium | Low | Low | Low | Low |
| | | 10-100 | Low | Low | Low | Low | Low |
| | | 1-10 | Low | Low | Low | Low | Low |
| Medium | > 32 µg/m ³ | > 10 | High | Medium | Low | Low | Low |
| | | 1-10 | Medium | Low | Low | Low | Low |
| | 28-32 µg/m ³ | > 10 | Medium | Low | Low | Low | Low |
| | | 1-10 | Low | Low | Low | Low | Low |
| | 24-28 µg/m ³ | > 10 | Low | Low | Low | Low | Low |
| | | 1-10 | Low | Low | Low | Low | Low |
| | < 24 µg/m ³ | > 10 | Low | Low | Low | Low | Low |
| | | 1-10 | Low | Low | Low | Low | Low |

Residential

Industrial

The sensitivity of the surrounding area (both residential and industrial receivers) has been determined to be:

- For earthworks:
 - Low sensitivity to dust soiling.
 - Low sensitivity to health impacts.
- For trackout:
 - Low sensitivity to dust soiling.
 - Low sensitivity to health impacts.

4.2.4 Step 2C – Define the Risk of Impacts

To define the risk of impacts, the dust emission magnitude (“large” for this site) is combined with the sensitivity of the area, as per **Table 4-3** and **Table 4-4** for earthworks and trackout, respectively.

Table 4-3: Risk of Dust Impacts – Earthworks

| 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 |

Table 4-4: Risk of Dust Impacts – Trackout

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

In accordance with **Table 4-3**, the proposed earthworks are considered to have a low risk of both dust soiling and human health impacts. In accordance with **Table 4-4**, the haulage activities are considered to have a low risk of both dust soiling and human health impacts.

It is important to note that the above risks assume that dust mitigation measures are not implemented.

4.2.5 Step 3 – Site-Specific Mitigation

The IAQM guidance document identifies a range of appropriate dust mitigation measures that should be implemented as a function of the risk of impacts. These measures are presented in Section 5.

4.2.6 Step 4 – Significance of Residual Impacts

In accordance with the IAQM guidance document, the final step in the assessment is to determine the significance of any residual impacts, following the implementation of mitigation measures. To this end, the guidance states:

For almost all construction activity, the aim should be to prevent significant effects on receptors through the use of effective mitigation. Experience shows that this is normally possible. Hence the residual effect will normally be “not significant”.

Based on the proposed works, and the advice in the IAQM guidance document, it is considered unlikely that these works would result in unacceptable air quality impacts, subject to the implementation of the mitigation measures outlined in Section 5.

5 DUST MITIGATION MEASURES

The assessment of potential dust impacts from the proposed works indicate that the proposed project will have a **low risk** of both dust soiling and human health impacts from earthworks haulage (trackout) activities if dust mitigation measures are not implemented. 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.

To ensure best practice management, the following mitigation measures are recommended so that construction dust impacts are minimised and remain low risk.

5.1.1 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.
- Develop and implement a Dust Management Plan (DMP) that considers, as a minimum, the measures identified herein.

5.1.2 Site 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.
- Make the complaints log available to relevant authorities (Council, EPA, etc).
- Record any exceptional incidents that cause dust and/or air emissions, either on or off site, and the action taken to resolve the situation in the logbook.

5.1.3 Monitoring

- Undertake daily on-site and off-site inspections, 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.

5.1.4 Preparing & Maintaining the Site

- Plan site layout so that dust generating activities are located away from receptors, as far as possible.
- Avoid site runoff of water or mud.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If being re-used, keep materials covered or contained in a way which prevents dust, for example dust suppression.
- Cover, seed or fence stockpiles to prevent wind erosion.

5.1.5 Construction Vehicles and Sustainable Travel

- Ensure all vehicles switch off engines when stationary – no idling vehicles.

- 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).

5.1.6 Measures for General Construction Activities

- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
- 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.

5.1.7 Measures Specific to Haulage

- Use water-assisted dust sweeper(s) on the access and local roads, as necessary.
- Avoid dry sweeping of large areas.
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).
- Access gates to be located at least 10m from receptors where possible.

6 OPERATION PHASE ASSESSMENT

The Proposal site will operate a warehouse and distribution centre located in a largely industrial area. During operation, the site is expected to generate traffic volumes of approximately 51 vehicle trips per peak hour (two-way movements). Moreover, occupancy levels of the Proposal site are estimated to be of 166 employees, including warehouse and office.

The closest residential receivers are located approximately 1.5km to the north of the site boundary and the closest industrial/commercial receivers are adjacent to the site boundary as shown in Figure 4.1. Moreover, as shown in Section 3.1.1, south-westerly winds are prevalent throughout the year.

Although south-westerly winds would be able to carry emissions downwind of the site towards the industrial/commercial areas located to the north-east of the site, it is not anticipated that these will have a large significant impact when compared to the existing industries in the surrounding area.

As regard to the residential receivers, operations at the site are not expected to significantly impact the receivers to the north of the site. Moreover, the Bingo Eastern Creek Recycling Ecology Park & Landfill is in a much closer location to the residential receivers than the Proposal site which operational impacts are more significant than the Proposal site. Hence, it is anticipated that the impacts from the Proposal site are likely not to be significant.

7 CONCLUSION

RWDI was engaged by the Charter Hall to conduct an air quality assessment for the proposed earthworks and operational phase of the proposed warehouse and distribution centre to be located at Lot 1 DP 1274322 Eastern Creek Drive, Eastern Creek.

The air quality assessment concludes that the construction phases can be adequately managed so that the short-term and temporary dust related impacts will remain to be low risk.

A qualitative assessment of the operational phase was carried out and it was concluded that the impacts of the operation, at residential and industrial/commercial receivers, are likely not to be significant.



STATEMENT OF LIMITATIONS

This report entitled Industrial Warehouse Facility – Air Quality Assessment, 9 February, 2022, was prepared by RWDI Australia Pty Ltd (“RWDI”) for Charter Hall (“Client”). The findings and conclusions presented in this report have been prepared for the Client and are specific to the project described herein (“Project”). The conclusions and recommendations contained in this report are based on the information available to RWDI when this report was prepared. Because the contents of this report may not reflect the final design of the Project or subsequent changes made after the date of this report, RWDI recommends that it be retained by Client during the final stages of the project to verify that the results and recommendations provided in this report have been correctly interpreted in the final design of the Project.

The conclusions and recommendations contained in this report have also been made for the specific purpose(s) set out herein. Should the Client or any other third party utilize the report and/or implement the conclusions and recommendations contained therein for any other purpose or project without the involvement of RWDI, the Client or such third party assumes any and all risk of any and all consequences arising from such use and RWDI accepts no responsibility for any liability, loss, or damage of any kind suffered by Client or any other third party arising therefrom.

Finally, it is imperative that the Client and/or any party relying on the conclusions and recommendations in this report carefully review the stated assumptions contained herein and to understand the different factors which may impact the conclusions and recommendations provided.