



Construction Air Quality Management Sub-Plan

**Warehouse and Distribution Centre –
Compass 2**

**Lot 1 Eastern Creek Drive, Eastern Creek, NSW
SSD-30923027**

DOCUMENT TRACKING

Version No.	Document Number	Detail	Prepared By	Approved By	Date
Rev 1	J1863220130.T1	Draft issued to client for review	J. Jenkins	M. Williams	30/01/2022
Rev 2	J1863220208.T1	Final issued to client	J. Jenkins	M. Williams	08/02/2022
Rev 3	J1863221128.T1	Revised to include the approved SSD conditions of consent	N. Yousefi	M. Williams	28/11/2022

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1 Introduction

This Construction Air Quality Management Sub-Plan (CAQMP) has been prepared by Aspect Environmental Pty Ltd (Aspect), on behalf of Qanstruct Limited (Qanstruct) for Charter Hall Holdings Pty Limited (Charter Hall), for the construction and operation of the Compass 2 Warehouse and Distribution Centre (the Project).

This CAQMP is a Sub-Plan of the Construction Environmental Management Plan (CEMP) and has been prepared with reference to the Environmental Impact Statement (Willowtree Planning, December 2021) and relevant SSD 30923027 conditions of consent (CoC).

The Project comprises earthworks, construction and operation of warehouse facility at Lot 1 Eastern Creek Drive, Eastern Creek, NSW (Lot 1 DP 1274322) and associated infrastructure and includes access to Honeycomb Drive via 31 Honeycomb Drive, Eastern Creek (Lot 271 DP 1198561).

The location of the Project site is indicated by the red outline on **Figure 1-1**.



Figure 1-1: Site context - Source: EIS, Willowtree Planning, December 2021

2 Existing Environment

2.1 Meteorological Conditions

Meteorological conditions can have a large impact on air quality. In periods of high wind and dry weather, there is a greater potential for dust and volatiles to be generated and transported offsite.

2.1.1 Wind

Wind data obtained from nearby Penrith Lakes AWS show similar patterns of wind speed and wind direction over a 5-year period, with south-westerly winds prevailing (**Figure 2-1**).

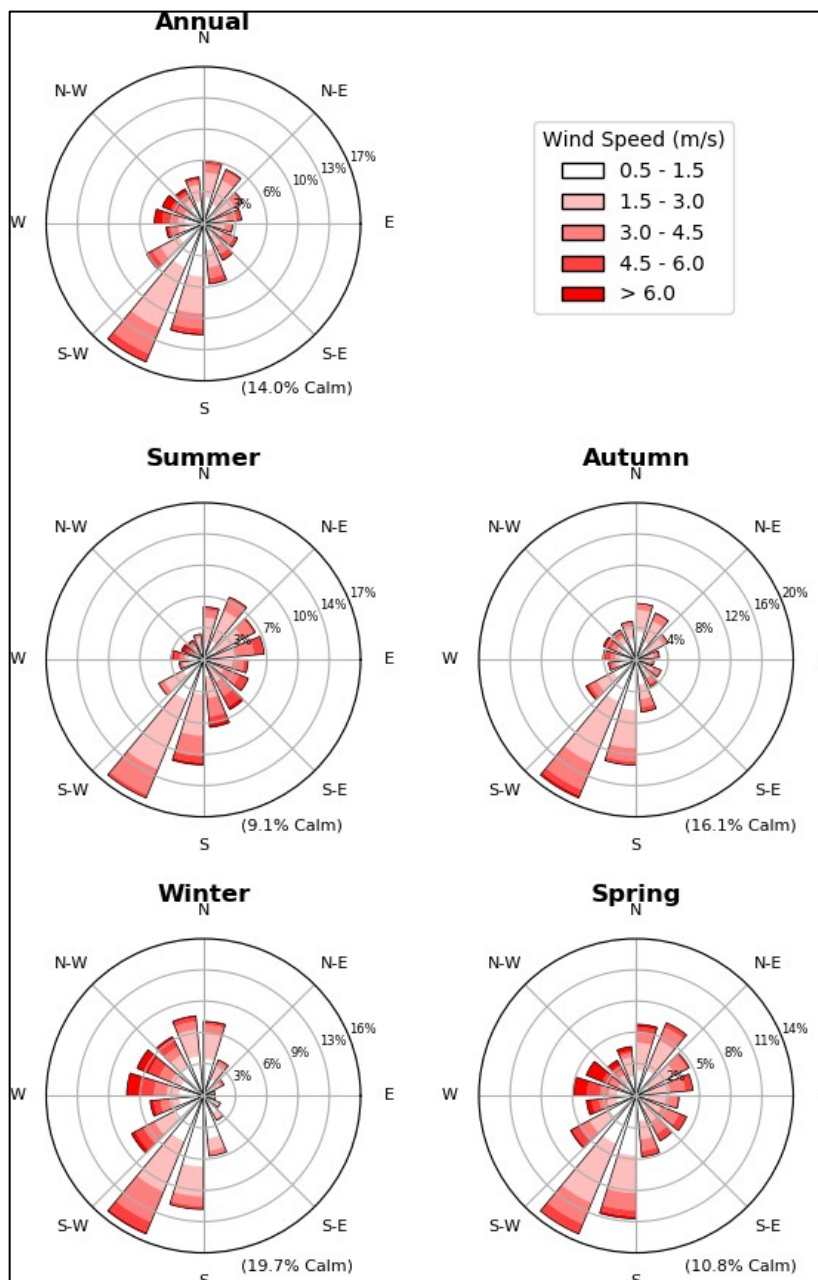


Figure 2-1: Penrith Lakes AWS Wind Roses, 2015-2019 (Source: RWDI, 2021)

2.1.2 Local Ambient Air Quality

Air quality monitoring is conducted at the nearby St Marys Air Quality Monitoring Station (AQMS). The St Marys AQMS is operated by the NSW Department of Planning and Environment (DPE) and is located approximately 7.6 kms northwest from the Project. A summary of air quality monitoring data for 2018 against the NSW Environmental Protection Agency (EPA) air quality criteria is provided in Table 2-1 for total suspended particulates (TSP) and PM₁₀ particulate matter. The results indicate local ambient air quality is below the relevant NSW EPA air quality criteria.

Table 2-1: Ambient air quality monitoring concentrations in proximity to the Project

Pollutant	Averaging Period	Concentration (µg/m ³)	NSW EPA Air Quality Criteria (µg/m ³)
Total Suspended Particulates	Annual	48.5	90
Particulate Matter ≤10µm (PM ₁₀)	Annual	19.4	25
	24-hour	47.6	50

2.2 Sensitive Receivers

The Project is located within an industrial and commercial precinct with the nearest residential receivers located approximately 1.5 km to the north and 2.4 km to the west (Figure 2-2). Further, the nearest childcare facility (Little Graces Childcare Centre) is located 600 m southeast from the Project. A risk assessment of potential dust impacts to nearby receivers was undertaken as part of the Air Quality Assessment (RWDI, 2021). Due to the significant distance between the Project and sensitive receivers, an assessment of air quality impacts was not considered necessary.

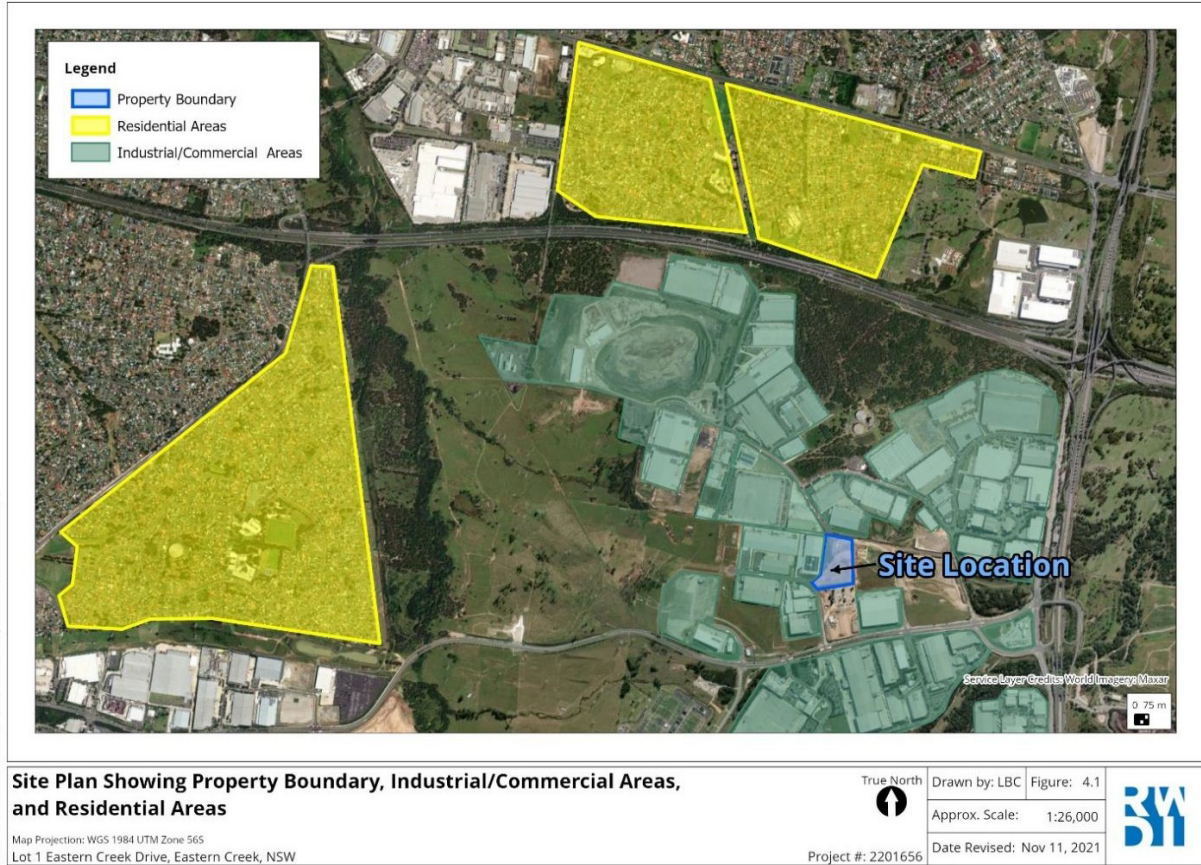


Figure 2-2: Closest residential receivers to the Project (Source: RWDI, 2021)

3 Environmental Aspects and Impacts

3.1 Air Emissions

3.1.1 Air Emissions Sources

Section 6.1.10.1 of the EIS (Willowtree, December 2021) identifies likely sources of air emissions during construction of the Project. The activities which have the potential to have the greatest impact on air quality are identified in **Table 3-1**.

Table 3-1: Potential sources of air emissions

Activity	Air Emission Cause	Potential Impact
Site clearing and enabling works	<ul style="list-style-type: none"> - Establishment of environmental controls - Removal of any existing vegetation and stripping of topsoil - Stockpiling activities 	<ul style="list-style-type: none"> - Dust generation - Vehicle emissions
Earthworks and retaining wall construction	<ul style="list-style-type: none"> - Bulk earthworks and civil works, including piling 	<ul style="list-style-type: none"> - Dust generation - Vehicle emissions
Construction of internal road network	<ul style="list-style-type: none"> - Concrete and asphalt paving works 	<ul style="list-style-type: none"> - Vehicle emissions

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

3.1.2 Air Emission Types

The particle size distributions considered for management, based on the location, scale, nature and extent of construction activities are:

- 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 and
- Deposited dust particles – for assessment of dust nuisance.

3.2 Risk Assessment

As identified in Section 6.1.10 of the EIS (Willowtree, December 2021), assessment of potential dust impacts concludes that the Project has a low risk of both dust deposition and human health impacts from construction activities if dust mitigation measures are implemented. Air quality mitigation measures are identified in Section 4.

4 Mitigation Measures

The air quality mitigation measures to be implemented for the Project are identified in **Table 4-1**.

Table 4-1: Air quality mitigation measures

ID	Mitigation Measure	Timing	Responsibility
AQ 1	A shaker grid and wheel wash bay to be implemented onsite and a water cart to be used during excavation works to minimise and manage generation of dust.	During construction	Site Manager/ QHSE Manager
AQ 2	Remove, suppress, stabilise or cover materials that have a potential to produce dust to minimise exposed surfaces as soon as possible, unless being used onsite.	When required	Site Manager/ QHSE Manager
AQ 3	During periods of unsuitable weather (high winds and high temperatures), avoid or minimise dust generating activities where possible, or increase frequency of dust suppression activities.	When required	Site Manager/ QHSE Manager
AQ 4	Avoid unnecessary idling and switch off engines when in periods of inactivity.	During construction	Site Manager/ QHSE Manager
AQ 5	Trucks and plant used onsite to be regularly serviced/ maintained to minimise exhaust emissions.	When required	All personnel
AQ 6	Monitor weather conditions and stop works if dust generation is excessive.	Daily	Site Manager/ QHSE Manager
AQ 7	Use water-assisted dust sweeper(s) on the access and local roads, as necessary.	When required	Site Manager/ QHSE Manager
AQ 8	Vehicles and trucks entering and exiting site are to be covered to prevent escape of materials during transport.	During construction	All personnel
AQ 9	Suppress exposed surfaces and stockpiles by regular watering or other alternative suppression method.	During construction	Site Manager/ QHSE Manager
AQ 10	All plant and equipment used on-site is to be maintained and operated in proper and efficient manner, and in accordance with relevant Australian Standards.	During construction	Site Manager/ QHSE Manager