SLR Consulting Australia Pty Ltd
202 Submarine School, Sub Base Platypus, High Street
North Sydney NSW 2060, Australia

11 June 2025

SLR Ref No.: 630.032444 -L01-v1.1-20250611

Attention: Chee Hui Chan
Mirvac Projects Pty Ltd
L 28, 200 George Street
Sydney NSW 2000

SLR Project No.: 630.032444.00001

Client Reference No.: AU.100640

RE: Aspect Industrial Estate
Warehouse 2 Air Quality Impact Assessment Update

SLR prepared an Air Quality Impact Assessment (AQIA) in 2023 for the proposed development of a warehouse building on Lot 2 of the Aspect Industrial Estate, referred to hereafter as the 2023 AQIA (SLR, 2023). In that assessment, the proposed warehouse was assumed to be used as a general 'warehouse and distribution centre.'

It is now understood that the future tenant of the warehouse will be Transwin Logistics (TWL), a logistics company that partners with major food brands. As a result, the operational requirements for the facility differ from the original assumptions in the 2023 AQIA.

Specifically, the warehouse will incorporate the following tenant-specific features:

- A temperature-controlled room including two Packaged Air Conditioner (PAC) units
- Automation systems, including lift cranes and racking
- Three rapid roller shutter doors for the temperature-controlled area
- Five on-grade roller shutter doors
- One truck movement approximately every 15 minutes, resulting in around 96 movements per day under continuous operation

The warehouse operations will primarily involve supply chain management services such as import, labelling, and repackaging of goods—predominantly food supplies requiring temperature control.

The information attached to this letter provides a review of the implications of these operational changes on the conclusions drawn in the 2023 AQIA for Warehouse 2.

1.0 Introduction

1.1 Background

As shown in Figure 1, Warehouse 2 is situated on Lot 2, located in the northern section of the Aspect Industrial Estate (AIE).

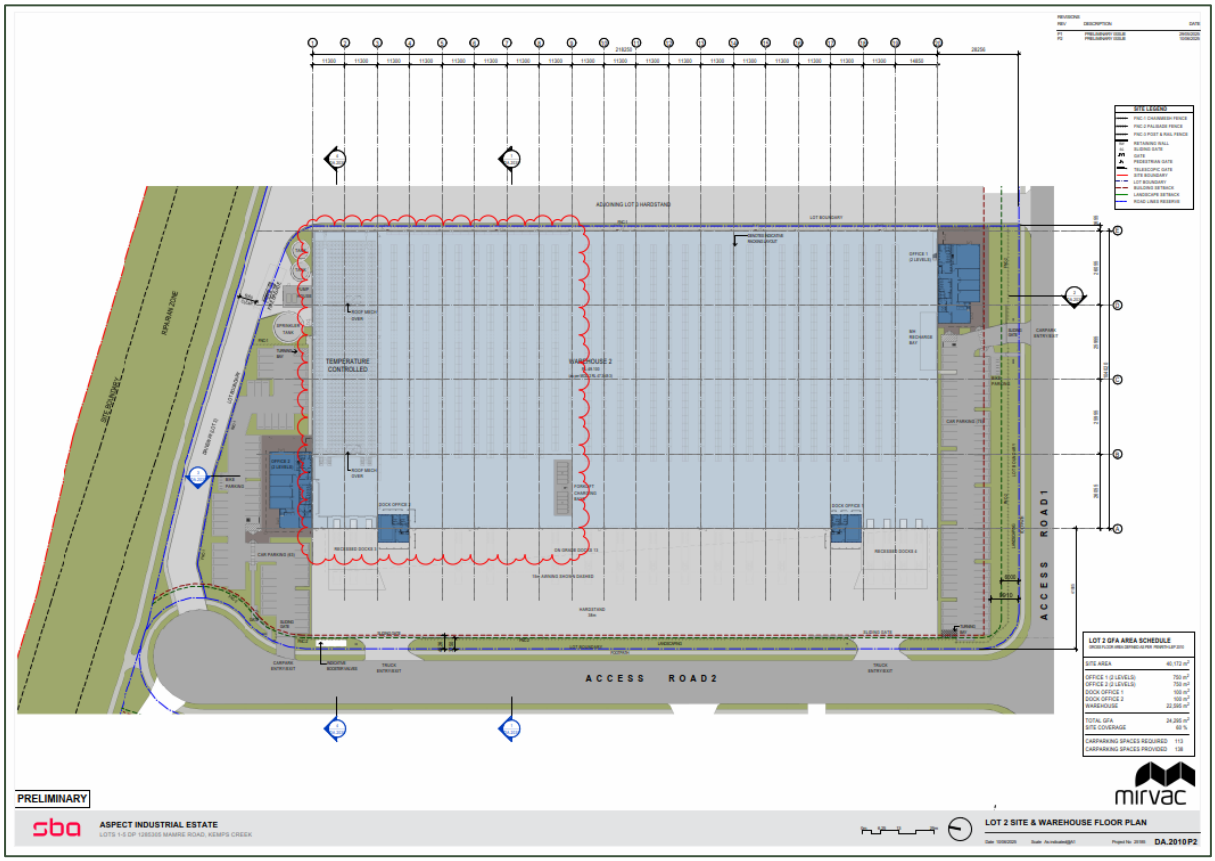
The proposed development on Lot 2 generally comprises minor earthworks, installation of on-lot infrastructure, and the construction of a warehouse facility, including associated landscaping, hardstand areas, and car parking.

As outlined and assumed in the 2023 AQIA, Warehouse 2 was proposed to operate as a warehouse and distribution facility, functioning 24 hours a day, 7 days a week. The design included a 22,595 m^2 warehouse space, a 1,500 m^2 office area, a 200 m^2 dock office, and provision for 138 car parking spaces (refer Figure 2).

Figure 1 Aspect Industrial Estate Concept Masterplan

Source: SBA Architects, 2022

Figure 2 Warehouse 2 Masterplan



Source: SBA Architects, 2025

1.2 2023 AQIA Findings

The potential for off-site air quality impacts associated with Warehouse 2 during both the construction and operational phases is summarised as follows:

- Construction Phase: Off-site impacts from dust deposition and suspended particulates resulting from demolition, earthworks, building construction, and track-out activities are anticipated to be negligible, provided that appropriate dust control measures are implemented in accordance with established industry best practices.
- Operational Phase: Assuming the site is used solely for warehousing activities; i.e., storage and distribution, the potential for off-site air quality impacts during operations is assessed to be neutral.

2.0 Updated Operational Context and Air Quality Assessment Implications

2.1 Revised Operational Profile of the Proposed Warehouse

Since the preparation of the 2023 AQIA, additional information has become available regarding the intended tenant and specific operational requirements for Warehouse 2, which will include the import, labelling, and repackaging of food products.

As a result, the operational profile of the warehouse will include several tenant-specific features not previously considered. These include:

- Inclusion of a temperature-controlled space for food storage (2,300 m^2).
    - Utilisation of automated racking with a crane shuttle system.
    - Increased roofline at the northern portion of the site to accommodate additional insulation; and
    - Installation of two rooftop plant locations at the northern end of the Warehouse 2 roof, to facilitate temperature control within the warehouse.
- Amendment to the location of the forklift charging stations on the warehouse floor; and
- Deletion of stairs from the mezzanine office to the warehouse floor which will be converted to the temperature-controlled area as these are no longer required.

Despite these modifications to the operational use, the overall design footprint of the warehouse remains unchanged from that presented in the 2023 AQIA. The development still comprises:

- 22,595 m² of warehouse space
- 1,500 m² of office space
- 200 m² dock office
- 138 car parking spaces

These updates reflect a more defined operational intent, but do not represent a significant departure from the land use or scale assessed in the original AQIA.

2.2 Assessment Implications of Updated Operational Details

2.2.1 Qualitative Assessment of Operational Changes

The updated operational profile of Warehouse 2, based on the confirmed tenancy of Transwin Logistics (TWL), does not materially alter the conclusions of the 2023 AQIA. TWL's operations will primarily involve logistics-related activities such as storage, distribution, import, labelling, and repackaging of food products. These activities are not associated with significant emissions of air pollutants (including odour) and remain consistent with the general warehousing and distribution usage originally assessed.

The inclusion of a temperature-controlled room with two PAC units introduces a small, additional energy consumption and refrigerant use. However, such systems are standard in commercial facilities and are not expected to result in significantly greater off-site air quality impacts. Similarly, the proposed automation systems—comprising lift cranes and racking—are electrically powered and housed within the building and therefore do not contribute to local air emissions.

The revised design also includes three, rapid roller shutter doors to the temperature-controlled area and five on-grade roller doors. While these may slightly increase vehicle movement and door cycling, the potential impact on air quality remains negligible, particularly as traffic volumes are expected to be consistent with those assessed in 2023 AQIA.

2.2.2 Semi-Quantitative Assessment of Operational Vehicle Emissions

Based on the revised operational activities associated with Warehouse 2, a total of approximately 96 truck movements per day are expected as part of routine operations. To provide a first-pass indication of potential off-site air quality impacts from these vehicle

emissions, a screening-level assessment was undertaken using the Roadside Air Quality Screening Tool (RAQST), developed by Transport for New South Wales.

The assessment adopted a conservative approach by assuming all truck movements occur at a low travel speed of 10 km/h—representative of slow-moving conditions within or near the site boundary—and applying the 2023 vehicle fleet profile to capture potential implications from the presence of electric and lower-emission vehicles in the fleet mix.

The predicted incremental concentrations at a distance of 10 metres from the kerbside, attributable solely to the additional truck movements, i.e., excluding background concentrations, were found to be as presented in Table 1 for key pollutants and relevant averaging periods:

Table 1 Truck Movements Contributions to Pollutant Concentrations

Pollutant	Averaging Period	Relevant Criteria (µg/m^3)[1]	Trucks Contribution (µg/m^3)	%Criteria
NO_2	Annual	31.0	0.3	<1.0%
PM_{10}	Annual	25.0	< 0.1	< 0.4%
	24-hour	50.0	0.1	0.2%
$PM_{2.5}$	Annual	8.0	< 0.1	< 2.0%
	24-hour	25.0	0.1	0.4%
[1] Source: (NSW EPA, 2022)				

These results demonstrate that the potential contribution of operational truck movements to local air pollutant concentrations is negligible, particularly when considering the conservative assumptions used in RAQST.

Accordingly, SLR concludes that the updated vehicle activity associated with Warehouse 2 is not expected to result in any material change to the original conclusions of the 2023 AQIA. The predicted impacts are well within relevant air quality criteria and do not warrant additional mitigation nor further detailed assessment.

2.2.3 Summary

Overall, the updated operational details do not introduce any new or intensified emission sources. As such, the air quality impacts during the operational phase are expected to remain neutral, and the conclusions of the 2023 AQIA remain valid. No additional mitigation measures are considered necessary for the revised tenancy.

3.0 Conclusion

SLR was commissioned by Mirvac to assess the implications of proposed operational changes resulting from the confirmation of the future tenant for Warehouse 2 within the AIE. Following a review of the updated operational details, SLR does not anticipate any material change to the conclusions presented in the original Air Quality Impact Assessment (SLR, 2023), as summarised below:

- The updated operational activities including food product handling, temperature-controlled storage, and automated systems, remain aligned with the original warehousing and distribution use assessed in the 2023 AQIA and do not introduce new significant emission sources.

- A semi-quantitative assessment using RAQST, based on 96 truck movements per day at low speed, indicated pollutant contributions well below 2% of relevant air quality criteria, confirming that the operational traffic has negligible impact on local air quality.

4.0 References

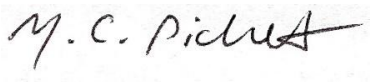
NSW EPA. (2022). Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales.

SLR. (2023). Aspect Industrial Estate Warehouse 2 SSDA.

Closure

Regards,

SLR Consulting Australia Pty Ltd



Sahar Bagheri, MEng, CAQP
Associate Consultant – Air Quality
Sahar.bagheri@slrconsulting.com

Matthew Pickett, PhD BSc(Hons), CAQP
Principal Consultant – Air Quality
matthew.pickett@slrconsulting.com