

Project: 12 Carsons Lane**Project No:** 301350676**To:** Michael Ferraro**Date:** 21st October 2022**From:** Samuel Dust**Rev:** 002**RE:** Carpark Intake and Exhaust

Note: The purpose of this memo is to highlight the considerations within the design for the locations of the carpark intake and exhaust.

Executive Summary

Stantec and the design team have considered options for locations for carpark intake and exhaust for the development at 12 Carsons Lane, St Marys. The following was considered:

- The Australian Standard for mechanical ventilation systems AS 1668.2-2012 dictates that the exhaust point must be 6m away from the boundary of the site and any intakes or natural ventilation devices and
- The Australian Standard for mechanical ventilation systems AS 1668.2-2012 dictates that the exhaust point must be 3 m above finished floor level.
- In order to work with the car park design and not remove significant numbers of car spaces and disrupt car and pedestrian trafficable routes with required ducting, the exhaust and intake must be located to the North and the South of the car park roughly at gridlines 1 and 14 respectively.
- Rising through the buildings was considered, however this significantly impacts tenant amenity by taking out a large chunk of the buildings through to the roof to reach an appropriate exhaust point.
- Stantec have designed the carpark intake and exhausts with the appropriate separation distances and heights meeting the Australian Standards to ensure that air quality will not be an issue. Louvres have also been sized to ensure that the velocity over them is low enough to not create a noise issue.

Based on the considerations above, Stantec believe that the current locations of the carpark intake and exhaust locations as documented on architectural drawing GA PLAN – GROUND dated 19/10/2022 is the best ventilation strategy for the site.

Stantec note that a well-ventilated carpark and the appropriate system to achieve this is essential to ensure carbon monoxide is not allowed to build up to unacceptable levels within the carpark.

Yours sincerely

Stantec Australia Pty Ltd



Samuel Dust
Project Engineer