19 August 2022

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Mirvac Projects Pty Ltd
L 28, 200 George Street
Sydney NSW 2000

Attention: Chee Hui Chan

Dear Chee

Aspect Industrial Estate
MOD 3 SSD (SSD-10448) and Warehouse 9 SSD (SSD-46516461)

SLR prepared an Air Quality Impact Assessment (AQIA) for the proposed Aspect Industrial estate (AIE) (SLR, 2020) to be developed at Lots 1 to 5 of DP 1285305 Kemps Creek, NSW in October 2020.

The AQIA for the whole AIE concluded that:

- Off-site impacts associated with dust deposition and suspended particulate during the construction phase (including remediation) are anticipated to be low.
- Based on the anticipated warehousing activities (storage and distribution) at the AIE Site, the potential for offsite air impacts from the operations is concluded to be neutral.

A number of modifications are now proposed to the layout and area of Warehouses 6, 7, 8, 9, 10 and 11 and Access Road 4, located at the southwestern portion of the AIE, as set out in the Concept Plan SSD-10448 9 within the AIE. As part of the staged development of Aspect Industrial Estate, Mirvac is seeking approval for modification of the Concept Proposal and Stage 1 Development under SSD-10448 (MOD 3) and a new DA (SSD-46516461) for the Stage 2 Development of 'Warehouse 9'.

The review of the implications of these proposed modifications on the original conclusions from the 2020 AQIA indicated that no significant changes in construction activities are expected due to the modified layout and area of Warehouses 6, 7, 8, 9, 10 and 11 and Access Road 4 and thus, the dust emission magnitudes for each phase of the construction works remain the same as that assessed in the original AQIA.

Furthermore, given the main operational activity expected to be performed at the AIE Site are warehousing activities (ie storage and distribution), and since the proposed modifications relate to the layout and area of Warehouses 6, 7, 8, 9, 10 and 11 and shortening of the Access Road 4, no significant changes in the location or distance travelled are anticipated that would be expected to change the risk of air emissions from the operational phase.

Yours sincerely

SAHAR BAGHERI
Senior Air Quality Consultant

Checked/
Authorised by: GS

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1 Introduction

SLR prepared an Air Quality Impact Assessment (AQIA) for a proposed industrial estate (SLR, 2020) to be developed at Lots 1 to 5 of DP 1285305 Kemps Creek, NSW (the Development Site) in October 2020.

In November 2020, a state significant development application was lodged with the DPIE (SSD-10448), which is currently under assessment, seeking consent for:

- A Concept Masterplan for the Aspect Industrial Estate (AIE).
- Detailed Stage 1 Development of the AIE, which includes pre-commencement works, subdivision construction works, building works, subdivision of Stage 1, and signage.

Modifications are now proposed to the layout and area of Warehouses 6, 7, 8, 9, 10 and 11 and Access Road 4 within the AIE. The information attached to this letter presents a review of the implications of these proposed modifications on the original conclusions from the 2020 AQIA prepared by SLR for the AIE.

2 Background

The AQIA was prepared to inform development application SSD-10448 for a Concept Masterplan comprising 11 industrial (warehouse) buildings, internal road network, car parking, concept landscaping, setbacks and built form parameters. The original Concept Masterplan for the AIE is shown in **Figure 1**.

Figure 1 Original Concept Masterplan of the Aspect Industrial Estate

Source: SBA Architects 2019

2.1 AQIA Methodology

Impacts from the AIE Site during both construction and operation phases were assessed using a risk-based methodology, as described below.

2.1.1 Assessment of Impacts from Construction

To assess dust emissions during construction, the *IAQM Guidance on the Assessment of Dust from Demolition and Construction* developed in the United Kingdom by the Institute of Air Quality Management ([IAQM], Holman *et al* 2014) was used to provide a qualitative assessment method. The IAQM method uses a four-step process for assessing dust impacts from construction activities:

- **Step 1**: Screening based on distance to the nearest sensitive receptor; whereby the sensitivity to dust deposition and human health impacts of the identified sensitive receptors is determined.
- **Step 2**: Assess risk of dust effects from activities based on:
  - the scale and nature of the works, which determines the potential dust emission magnitude; and
  - the sensitivity of the area surrounding dust-generating activities.
- **Step 3**: Determine site-specific mitigation for remaining activities with greater than negligible effects.
- **Step 4**: Assess significance of remaining activities after management measures have been considered.

2.1.2 Assessment of Impacts from Warehouse Operations

To assess the risk of air emissions from the AIE Site impacting on surrounding sensitive receptors during the operational phase, the following "risk based" approach was adopted.

The risk-based assessment takes account of a range of impact descriptors, including the following:

- **Nature of Impact**: does the impact result in an adverse, neutral or beneficial environment?
- **Receptor Sensitivity**: how sensitive is the receiving environment to the anticipated impacts?
- **Magnitude**: what is the anticipated scale of the impact?

2.2 AQIA Findings

2.2.1 Impacts During Construction

Step 1: Since a number of 'human receptors' were identified as being located within 350 m of the boundary of the site, and within 500 m of the site entrance, further assessment was concluded to be required based on the IAQM screening criteria.

Step 2: Based on the proposed scale of works at the AIE Site, the dust emission magnitudes for each phase of the construction works were categorised as follows:

- Demolition Medium
- Earthworks Large
- Construction Large
- Trackout Large

Based on IAQM definitions, the sensitivity of the residential receptors surrounding the AIE Site was concluded to be *high* for both health impacts and dust soiling. The sensitivity of the area to both dust soiling and health effects, however, was be classified as *low* given the separation distance between the site and the residential receptors. Given the low sensitivity of the general area for dust soiling and health effects, and the dust emission magnitudes for the various construction phase activities, the resulting risk of air quality impacts was as presented in **Table 1**.

Table 1 Preliminary Risk of Air Quality Impacts from Construction Activities (Uncontrolled)

Impact	Sensitivity of Area	Dust Emission Magnitude				Preliminary Risk			
		Demolition	Earthworks	Construction	Trackout	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Low	Medium	Large	Large	Large	Low Risk	Low Risk	Low Risk	Low Risk
Human Health	Low					Low Risk	Low Risk	Low Risk	Low Risk

Source: SLR 2020

Step 3: **Table 2** reproduces the relevant mitigation measures identified in the AQIA as being recommended by the IAQM methodology for a development shown to have a high risk of adverse impacts. Not all these measures would be practical or relevant to the proposed AIE Site, therefore the AQIA recommended a detailed review of the measures be performed, with the most appropriate measures to be adopted.

Table 2 Site-Specific Management Measures Recommended by the IAQM

	Activity	
1	**Communications**	
1.1	Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.	H
1.2	Display the head or regional office contact information.	H
1.3	Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority.	D
2	**Site Management**	
2.1	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.	H
2.2	Make the complaints log available to the local authority when asked.	H
2.3	Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book.	H
3	**Monitoring**	
3.1	Perform daily on-site and off-site inspections where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100 m of site boundary.	D
3.2	Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority, when asked.	H
3.3	Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.	H

	Activity	
4	**Preparing and Maintaining the Site**	
4.1	Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.	H
4.2	Erect solid screens or barriers around dusty activities or the site boundary that is at least as high as any stockpiles on site.	H
4.3	Keep site fencing, barriers and scaffolding clean using wet methods.	D
4.4	Cover, seed or fence stockpiles to prevent wind erosion	D
5	**Operating Vehicle/Machinery and Sustainable Travel**	
5.1	Ensure all on-road vehicles comply with relevant vehicle emission standards, where applicable	H
5.2	Ensure all vehicles switch off engines when stationary - no idling vehicles	H
5.3	Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable	H
6	**Operations**	
6.1	Ensure an adequate water supply on the site for effective dust/particulate matter suppression/ mitigation, using non-potable water where possible and appropriate	H
6.2	Use enclosed chutes and conveyors and covered skips	H
6.3	Minimise drop heights from loading shovels and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate	H
7	**Waste Management**	
7.1	Avoid bonfires and burning of waste materials.	H
8	**Construction**	
8.1	Avoid scabbling (roughening of concrete surfaces) if possible	D
8.2	Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.	D
9	**Trackout**	
9.1	Use water-assisted dust sweeper(s) on the access and local roads to remove, as necessary, any material tracked out of the site.	D
9.2	Avoid dry sweeping of large areas.	D
9.3	Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.	D
9.4	Record all inspections of haul routes and any subsequent action in a site log book.	D
9.5	Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).	D

H = Highly recommended; D = Desirable

Source: SLR 2020

Step 4: A reassessment of the predicted uncontrolled air quality impacts on surrounding sensitive receptors was presented in the AQIA to demonstrate the opportunity for minimising risks associated with the use of mitigation strategies. These are termed 'residual impacts'. As presented in **Table 3**, the mitigated dust deposition and human health impacts for all construction activities were anticipated to be *negligible*.

Table 3 Residual Risk of Air Quality Impacts from Construction

Impact	Sensitivity of Area	Residual Risk			
		Demolition	Earthworks	Construction	Trackout
Dust Soiling	Low	Negligible Risk	Negligible Risk	Negligible Risk	Negligible Risk
Human Health	Low	Negligible Risk	Negligible Risk	Negligible Risk	Negligible Risk

Source: SLR 2020

2.2.2 Impacts During Operations

The only operational activities identified as having potential to impact on air quality during the operational phase were traffic emissions from light and heavy vehicles accessing and moving around the AIE. The operational phase impacts were assessed using a risk-based assessment method considering the following impact descriptors:

- **Nature of Impact**: The nature of impact was anticipated to be *adverse* to the environment.
- **Receptor Sensitivity**: The nearest sensitive receptors to the AIE Site include residences within 100 m of the boundary. In terms of the methodology, the sensitivity of the surrounding residential areas to emissions from the AIE Site was considered to be *high*.
- **Magnitude**: Based on the relatively small amount of traffic movements projected to occur on site, the magnitude of these emissions was considered to be *negligible*.

Given the above considerations, and the scale of operations, the potential impact of the AIE Site operations on air quality at the nearest sensitive receptors was concluded to be ***neutral*** for all receptors (see **Table 4**).

Table 4 Impact Significance

Sensitivity \ Magnitude	Substantial Magnitude	Moderate Magnitude	Slight Magnitude	Negligible Magnitude
Very High Sensitivity	Major Significance	Major/ Intermediate Significance	Intermediate Significance	Neutral Significance
High Sensitivity	Major/ Intermediate Significance	Intermediate Significance	Intermediate/Minor Significance	Neutral Significance
Medium Sensitivity	Intermediate Significance	Intermediate/Minor Significance	Minor Significance	Neutral Significance
Low Sensitivity	Intermediate/Minor Significance	Minor Significance	Minor/Neutral Significance	Neutral Significance

Source: SLR 2020

3 MOD 3 SSD (SSD-10448)

MOD3 seeks to modify the Concept and Stage 1 consent according to **Figure 2**. The proposed works relating to Warehouse/Lot 6, 7, 8, 9, 10 and 11 area and Access Road 4, located at the southwestern portion of the AIE as set out in the Concept Plan SSD-10448 are as follows:

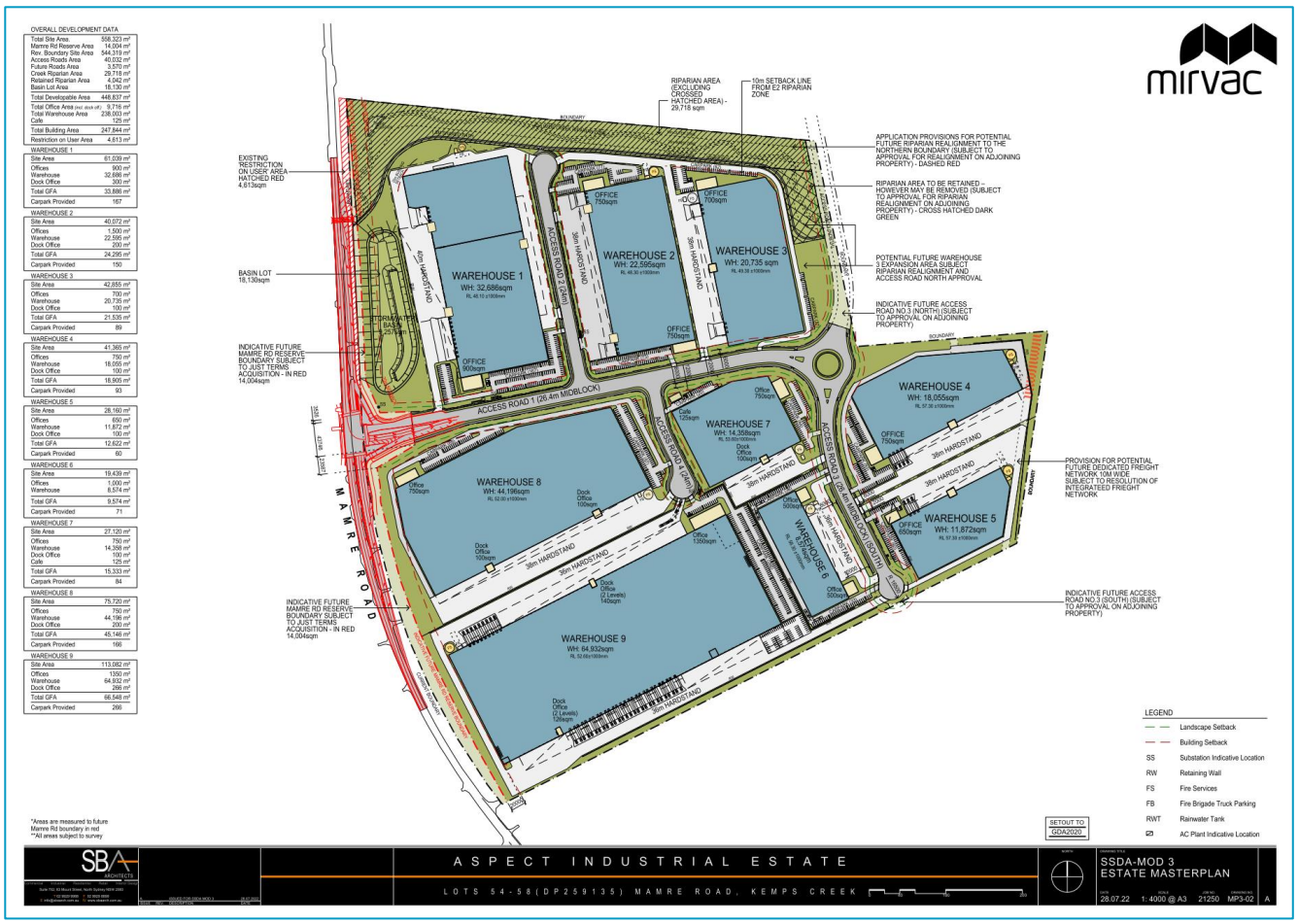
Concept Modification

- Reconfiguration of the Estate layout south of Access Road 1 and west of Access Road 3 including:
  - Reduction in overall lot numbers across AIE from 11 to 9.
  - Relocation and shortening of Access Road 4.
  - Reconfiguration of warehouse lots 6-11 into lots 6-9.
  - New warehouse footprints including GFA of warehousing and office areas, car parking, estate landscaping.

Stage 1 Modification

- Modification of the Stage 1 consent to provide for the following in respect of Access Road 4
  - updated road subdivision plan to provide for subdivision of Access Road 4
  - updated civil works package to facilitate construction of Access Road 4,
  - provision of landscaping works within road reserve of Access Road 4.

Figure 2 MOD3 Concept Masterplan of the Aspect Industrial Estate



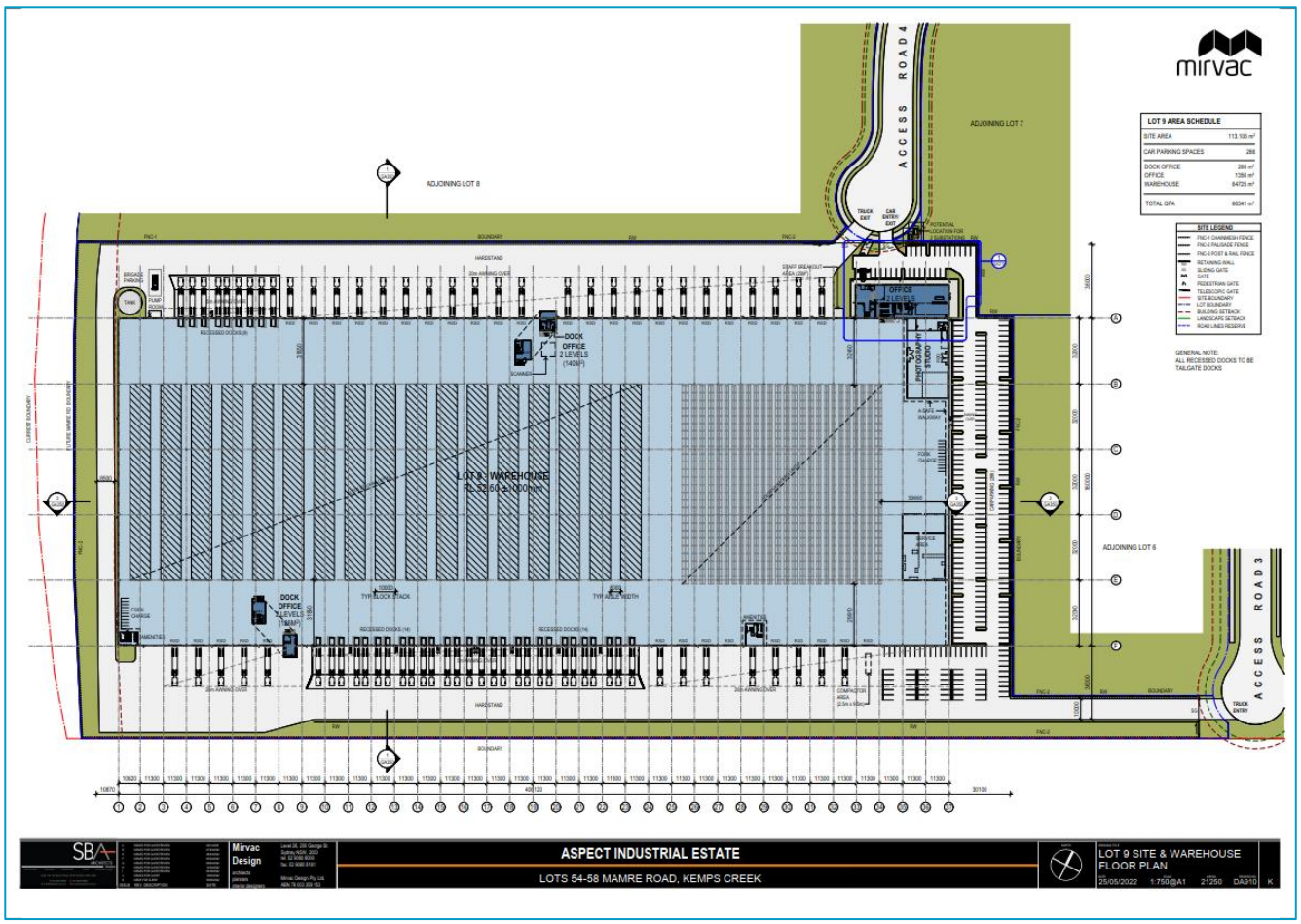
Source: SBA Architects, 2022

4 Warehouse 9 SSD (SSD-46516461)

The proposed modifications to layout and area of Warehouse 9 are based on **Figure 3**. The detailed development application will seek consent for earthworks and the construction, fit out and operation of the warehouse and logistic facility with associated car parking for Warehouse 9. Specifically, the SSDA will seek consent for:

- Construction of 'Warehouse 9' including:
  - Civil works including cut/fill and benching to set the Lot 9 pad levels.
  - Construction of new 66,341sqm building for use as 'warehouse and distribution' to be built to a ridge height of 14.6m. This will comprise:
    - 64,725sqm Warehouse.
    - 140sqm Dock Office at the north elevation.
    - 126sqm Dock Office at the south elevation.
    - 1,350sqm Main Office at the eastern elevation.
    - 266 parking spaces across the lot's north and eastern frontages and hardstand areas.
    - Internal truck access roads with access from Access Road 3 to the east and egress to Access Road 4 to the north.
    - Loading dock areas at the north and south elevations.
  - Fit out of the warehouse for the proposed use.
  - Construction of vehicular crossovers to Access Road 4 (egress) and Access Road 3 (ingress).
  - On lot landscaping.
  - On lot stormwater management.
  - Operation of the warehouse and distribution facility 24 hours a day, 7 days a week.

Figure 3 Modified Warehouse 9 Layout



Source: SBA Architects, 2022

5 Implications of the Proposed Modifications on the AQIA Conclusions

The main air quality issue associated with construction works relate to emissions of fugitive dust. The potential for dust to be emitted during the construction works will be directly influenced by the nature of the activities being performed at any given time. No significant changes in construction activities are expected due to the modified layout and area of Warehouses 6, 7, 8, 9, 10 and 11 and Access Road 4. Therefore, the dust emission magnitudes for each phase of the construction works remain the same as that presented in the AQIA and **Section 2.2.1** of this letter. Furthermore, no changes in the mitigation strategies would be recommended as a result of the proposed modifications.

SLR understands that the main operational activity expected to be performed at the AIE Site is warehousing activities (storage and distribution). Therefore, during the operational phase, the main source of air emissions would be emissions of products of fuel combustion and particulate matter (from brake and tyre wear as well as re-entrainment of road dust) associated with the trucks and other vehicles entering and leaving the AIE Site or idling at the site during loading/unloading operations. Since the proposed modifications relate to the layout and area of Warehouses 6, 7, 8, 9, 10 and 11 and shortening Access Road 4, no significant changes in the location or distance travelled are anticipated that would be expected to change the risk of air emissions from the operational phase.

Given the proposed modifications and the risk-based assessment method, it is concluded that the proposed modifications do not cause any major change in the original conclusions of the AQIA.

6 Conclusion

SLR was commissioned by Mirvac to investigate the implications of modifications in layout and area of Warehouses 6, 7, 8, 9, 10 and 11 and Access Road 4 within AIE on the AQIA undertaken for the AIE located at 880-890 Mamre Road, Kemps Creek, New South Wales (NSW). Based on a review of the revised concept plan of the Development Site, SLR does not envisage any major change in the conclusions of the original AQIA (19 October 2020) due to the proposed modifications. The risk of off-site air quality impacts from the revised concept plan of the AIE Site during the construction and operation phases is concluded to be as follows:

- Off-site impacts associated with dust deposition and suspended particulate during the construction phase are anticipated to be *negligible* for demolition, earthworks, building construction and trackout activities if dust control measures are implemented in line with good industry practice.
- Based on warehousing (storage and distribution) activities only being undertaken at the AIE Site, the potential for offsite air impacts from the operations is concluded to be *neutral*.

7 References

- Holman *et al* 2014, *IAQM Guidance on the assessment of dust from demolition and construction,* Institute of Air Quality Management, London. http://www.iaqm.co.uk/text/guidance/construction-dust-2014.pdf.
- SLR. (2020). *Aspect Industrial Estate – Air Quality and Odour Impact Assessment* (610.19127-R01-v1.4).
- SBA Architects. (2019). *Aspect Industrial Estate – SSDA Masterplan* (Drawing No. MP 02).
- SBA Architects. (2022). *Aspect Industrial Estate – SSDA MOD 3 Estate Masterplan* (Drawing No. MP3-02).
- SBA Architects. (2022). *Aspect Industrial Estate – Lot9 Site & Warehouse Floor plan* (Drawing No. DA910).