

65206819 – Shurgard House, Uxbridge Road, Hayes UB4 0HD

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London Plan Fire Safety Report

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## Status / Revisions

Rev.	Date	Reason for issue	Prepared	Approved
01	17.06.22	Initial	RS	PL
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## 1 Introduction

Sweco Fire Safety have been appointed to provide a fire safety report to enable compliance with Policy D12 of the London Plan (2021).

This statement should be used for planning permission purposes only and is not a detailed fire strategy document.

The project relates to the proposed partial demolition and extension of the Shurgard self-storage facility at Shurgard House, Uxbridge Road, Hayes UB4 0HD.

Shurgard requires additional storage to what is an already successful but under provided storage facility. This proposal meets the brief to provide a development of sufficient scale for Shurgard's expansion requirements, whilst seeking to enhance the surrounding area.

It is proposed to demolish the centralized single storey direct access units to facilitate the new extension as well as the single storey element which is attached to the southern side of the main building.

The Proposed Development Involves:

Partial demolition and extension to existing building to provide additional self-storage floorspace (Use Class B8) with associated new car and cycle parking, refuse storage, landscaping, and other associated works ancillary to the development.

The existing access directly off Uxbridge Road and existing visitor parking and paving for public access are retained.

The provision of new cycle parking both outside of and within secure fence line.

Retention of the existing shop / front of house amenities directly off the access road.

A total of 3,078sqm GIA is proposed at ground, first and third floors. An additional 2,052sqm can be provided at second and fourth floor levels via demountable mezzanines

The extension includes the construction of a new internal protected stairwell and lift serving all floors, new openings through to the existing building towards existing escapes.

A new entrance to the southern elevation of the extension, and an emergency exit at ground floor level to the south-west corner, will be provided.

## 2 Name of Person Completing Statement

Peter Louis, chartered member of RICS. 15+ years of relevant experience within the building control and fire safety sector. Technical Director at Sweco – Building Safety Unit.

## 3 London Policy D12 (A) Compliance Statement

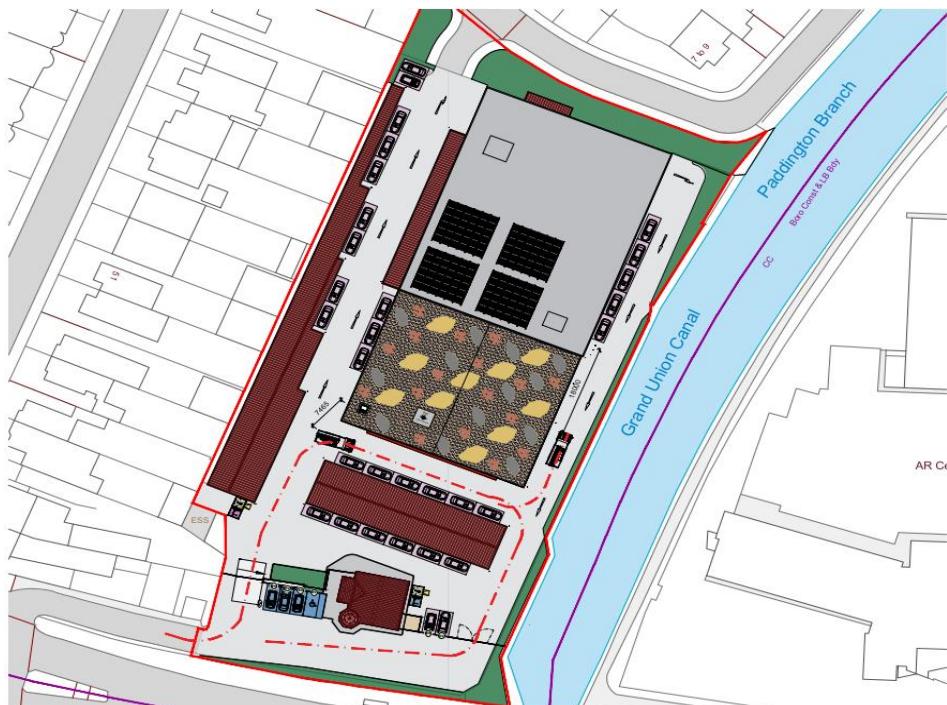
To demonstrate developments have met the highest standards of fire safety, proportionate to the development, the following information should be addressed:

- A. Identify suitably positioned unobstructed outside space for:
  - i. fire appliances to be positioned on.  
*Sweco – yes, subject to comments below. See section B5 (site plan provided for clarification)*
  - ii. appropriate for use as an evacuation assembly point  
*Sweco – yes, the building users have access to external parking and hard standing areas.*
- B. Are designed to incorporate appropriate features which reduce the risk to life and the risk of serious injury in the event of a fire, including appropriate fire alarm systems and passive and active fire safety measures.  
*Sweco- Yes. See Section 6 Fire Safety Comments below.*
- C. Are constructed in an appropriate way to minimise the risk of fire spread.  
*Sweco- yes see section Fire Safety Comments.*
- D. Provide suitable and convenient means of escape, and associated evacuation strategy for all building users  
*Sweco- yes see subject to our comments below.*
- E. Develop a robust strategy for evacuation which can be periodically updated and published, and which all building users can have confidence in.  
*Sweco- A RRO Fire Risk Assessment containing the evacuation strategy will be provided and intermittently updated as required.*
- F. Provide suitable access and equipment for firefighting which is appropriate for the size and use of the development  
*Sweco- yes, subject to comments below. See section B5.*

## 4 The Site

This report relates to a Shurgard self-storage buildings at Uxbridge Road, Hayes, UB4 0XD.

The site hosts a number of self-storage buildings which all form part of the Shurgard business. The principal building is to the north of the site and is four storey and approximately 16m high. There after the buildings which are on the south and west boundaries are all single storey buildings comprising direct access self-storage units. These include a front of house/shop with lighthouse on the southern boundary and a series of direct access units which customers can access through the secure gate. The site has 15 visitor car parking spaces located off Uxbridge Road, and beyond the secure gate the access routes around the buildings are wide enough for cars to pull up and utilize either the direct access units, or the principal building entrances without inhibiting traffic flow around the site. The main access route within the site is two way, and then all other access routes follow a one way system.



*Existing Site Plan*

## 4.1 Plans



*Proposed Ground Floor*

**Ground Floor (Extension only)– GIA 1026m<sup>2</sup> (total GIA 2700m<sup>2</sup>)**

The ground floor comprises an exit from the protected/firefighting escape stairs, entrance lobby, a lift to all floors, 35 internal storage units and 22 storage units accessed externally. Three escape routes from the storage facility.

Horizontal escape distances and clear escape widths comply with tables 1 and 2.



*Proposed First Floor*

#### First Floor – GIA 1026m<sup>2</sup> (total GIA 2700m<sup>2</sup>)

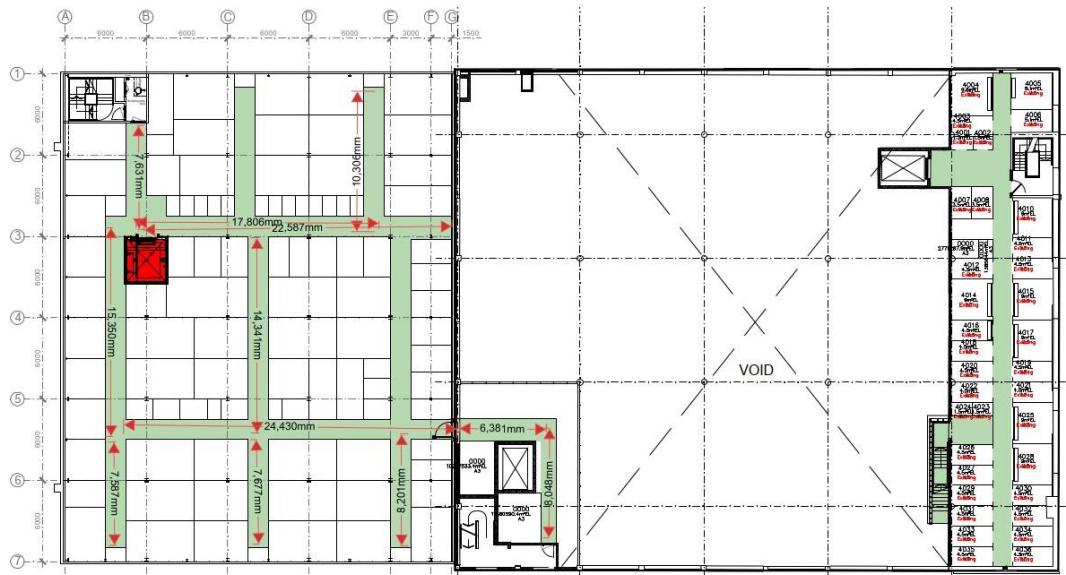
The First floor comprises 97 self-storage units spread across the floor with walkways between storage unit clusters. There are four available escape routes; one to a protected/firefighting escape stair and refuge. Two further escape routes are available, these connect back into the existing building. The third available escape route is via the evacuation lift. Escape stair widths are 1100mm and meet requirements found in ADB1. Horizontal escape distances and clear escape widths comply with tables 1 and 2.



## Proposed Second Floor

### Second Floor GIA – N/A

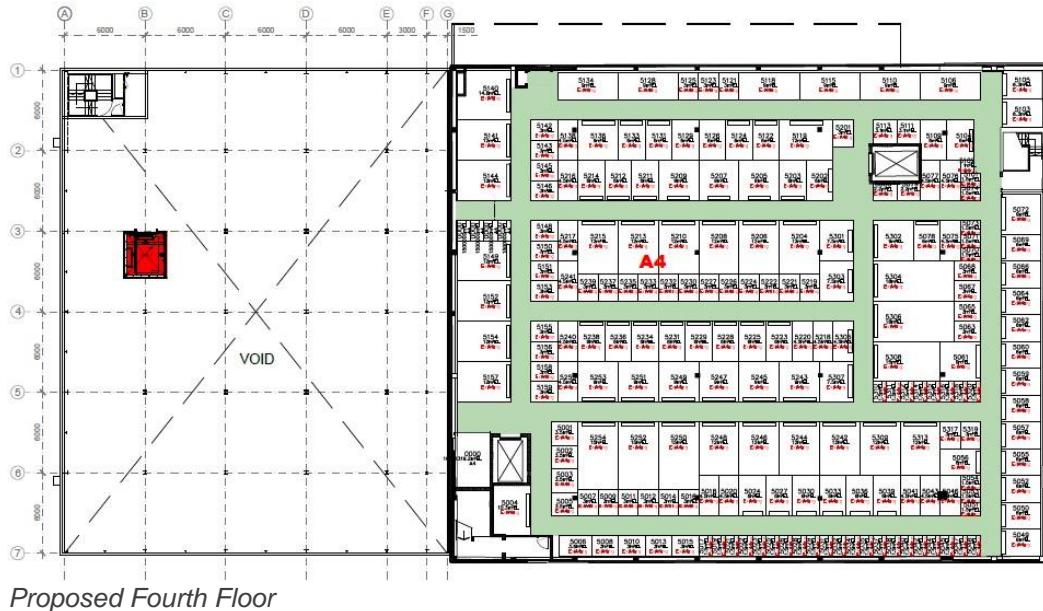
The 'second floor' is a void area over the entire first floor.



## Proposed Third Floor

### Third Floor - GIA 1026m<sup>2</sup>

The Third floor comprises 100 self-storage units spread across the floor with walkways between storage unit clusters. There are three available escape routes; one to a protected/firefighting escape stair and refuge. The second escape route connects back into the existing building. The third available escape route is via the evacuation lift. Escape stair widths are 1100mm and meet requirements found in ADB1. Horizontal escape distances and clear escape widths comply with tables 1 and 2.



## Fourth Floor GIA – N/A

The 'Fourth floor' is a void area over the entire third floor

## 5 Consultations Undertaken at this Stage

None

## **6 Fire Safety Comments**

## 6.1 Horizontal Means of Escape - ADB vol2

The building is considered storage and other non-residential, Purposed group 4 (normal hazard).

The proposal provides 2 x escape routes from each floor via protected lobby/waiting areas, with two exit doors to the front of the unit 'entrance'. The route outside the building to a place of safety is via the building main entrance doors and escape doors to the surrounding parking and access roads.

The widths of exit doors, escape routes and number of exits have been assessed based on the proposed number of occupants range and capacity factors. These are outlined in the table 1 and 2 below:

Purpose Group	Single Direction Escape	More than One Direction of Escape
PG 4 Shop and Commercial	18m	45m

Table 1- Travel distances

Location	Number of occupants	Number of exits	Minimum required exit width (per exit)
Ground Floor (internal)	35	3	850mm
First Floor		3	850mm
Second Floor (void)	0	N/A	N/A
Third Floor		2	850mm
Fourth Floor (Void)	0	N/A	N/A

Table 2- Escape widths

## 7 Means of Warning and Escape

The premises will incorporate a fire alarm and smoke detection system to BS5839-1:2017, to provide early warning to occupants in the event of a fire and to cover any hazard areas, with an audible alarm system and visual beacons in toilet/remote areas for hearing impaired and other disabled people to be incorporated.

where a fire could break out in an unoccupied part of the premises (e.g. a storage area or a part of the building that is not visited on a regular basis) and prejudice the means of escape from occupied part(s) of the premises.

An automatic fire detection and alarm system will be provided in the circulation spaces of the premises. The fire detection and alarm system will be installed in accordance with the relevant recommendations of BS 5839-1. Either an L1 or L2 system.

All fire rated cabling and fire alarm cabling must be enhanced fire rated cabling as defined in BS5839. This is to be installed on tray basket, clipped direct or in galvanised steel trunking or conduit. If clips are used as the only means of support, they must be metal clips as defined in BS5839. MICC light duty 500v grade with LSF sheath (Red) or soft skin cables are both acceptable.

## 8 Vertical Means of Escape

The proposed floor plans received indicate the provision of one new protected REI 60 escape / evacuation lift within the proposed extension. Accessible from the first and third floors to a protected final exit at ground floor. There is currently no fire rated lobby (min REI 30) formed in front of the lifts which will need to be considered on all floors going forward as part of the proposals. The route from the lift to outside would also need to be 30 minutes fire rated.

The First floor is served by one new protected escape stair with a firefighting lobby and refuge, an evacuation lift is also provided. Escape is also possible through the existing building via two fire doors which has two internal escape stairs, two escape/evacuation lifts and one external escape stair. The proposed stairs have a clear width of 1150mm which provide capacity for 600 occupants and is therefore satisfactory for the proposed occupancy of maximum 232 people.

'Second Floor' – N/A – double height void area over first floor.

The Third floor is served by one new protected escape stair with firefighting lobby and refuge, an evacuation lift is also provided. Escape is also possible through the existing building via a fire door which has two escape stairs and two escape/evacuation lifts. The proposed stairs have a clear width of 1150mm which provide capacity for 600 occupants and is therefore satisfactory for the proposed occupancy of maximum 232 people.

'Fourth Floor' – N/A – double height void area over third floor.

## 9 Emergency Lighting

To facilitate normal working, the lighting levels throughout the building will be excellent. In the event of a fire within the building, it is very unlikely that the power to the normal lighting circuit would be lost in the early stages while the occupants are escaping. This is based upon the fact that the electric supply to the light fittings would initially be away from a fire and would continue to operate.

However, assuming a power failure, emergency lighting is provided as a secondary backup, complying with the requirements of BS 5266-1. This includes coverage as per following:

- All common escape routes
- Areas directly outside the final exits
- Toilets with a floor area over 8m<sup>2</sup>
- Switch gear/battery room for the emergency lighting system

The lighting comprises luminaires in all identified areas, with the type of fitting appropriate to the space they serve.

## 10 Wheelchair refuges and evacuation lifts Policy D5(B5)

The London plan policy D5(B5) requires fire evacuation lifts to be provided as part of all new developments where lifts are installed.

This building will be provided with a new evacuation lift. Although, please note our comments above where 30-minute rated lobbies need to be formed in front of the lifts at all floors for use as an evacuation lift. The design of the lift must be in accordance with BS EN 81-20 and BS EN 81-70. The primary power supply and in the event of failure, a secondary power supply must be to meet in accordance with G.2.2 of BS999.

Provisions for wheelchair bound persons has been included within the new escape stair Fire refuges with electronic voice communication EVC's will be included on first and third floors.

## 11 Internal Fire Spread (Linings)

- Wall and ceiling linings are required to comply with the below table(s):

Internal linings

Location	National Class*	European Class #
Small Rooms of area <4m <sup>2</sup>	3	D-s3, d2
Other Rooms b. 30m <sup>2</sup> in non-residential accommodation	1	C-s3, d2
Circulation spaces	0	B-s3, d2

Note: \* = National Classifications are based on tests in BS 476 Part 4, 6 and 7.

# = The European classifications are described in BS EN 13501-1:2000.

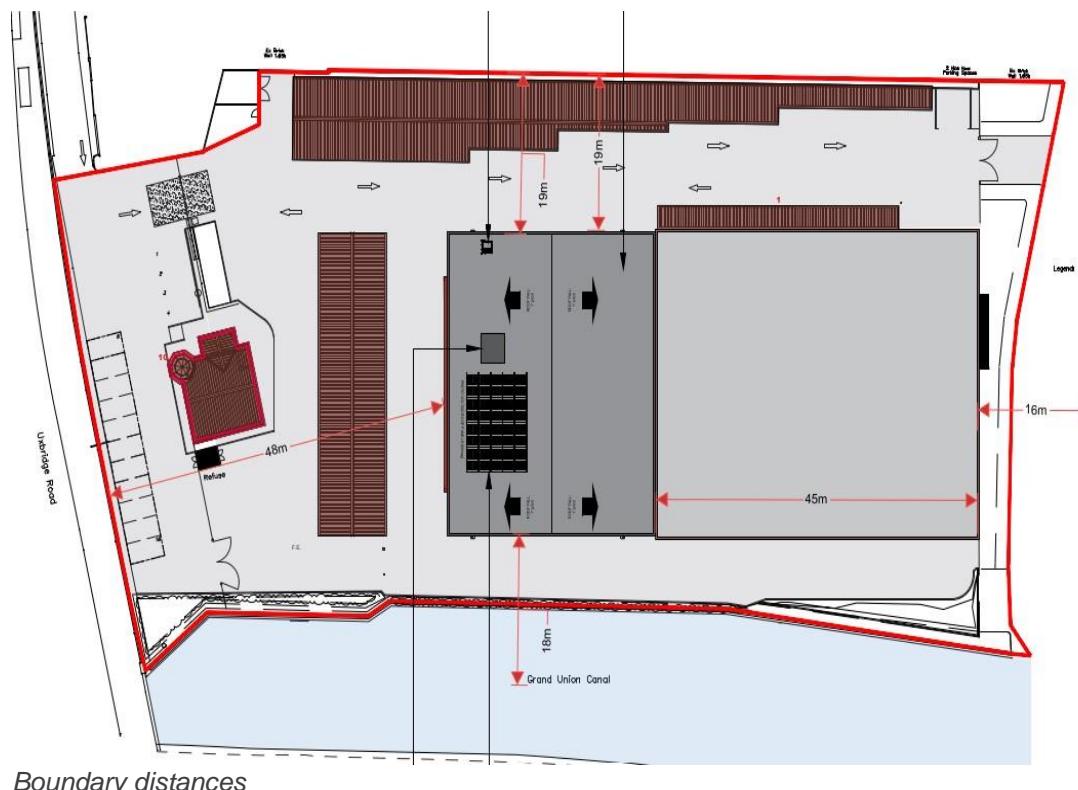
Wallcoverings which conform to BS EN 15102, achieving at least class C-s3, d2 and bonded to a class A2-s3, d2 substrate, will also be acceptable.

## 12 B3 – Internal Fire Spread (Structure)

- Therefore, all elements of structure are required to be provided with a minimum of 60-minutes fire resistance. Elements of structure will include:
  - Frame, Beams or Columns,
  - Loadbearing walls,
  - Floors,
  - External walls, if structural (from the inside of the building).
- The fire resistance requirement is increased to 60-minutes for compartment walls separating buildings, i.e., the wall between the existing building and extension.
- Floors will need to be 60 minute compartment floors to keep inside the maximum 2000m<sup>2</sup> compartment floor areas where sprinklers are not being provided.
- For amended cavity walls and new cavity walls, cavity barriers and fire-stopping will have to be provided fully in accordance with Approved Document B requirements and depending on the form of construction.

## 13 B4 – External Fire Spread

- The unprotected areas to the external walls of the rear extension in relation to the boundary distances to the front and rear will need to be checked at the next stage to confirm boundaries are within permitted limits.
- Where the external walls are more than 1m from the relevant boundary, there are no provisions required for the reaction to the fire performance of external surface of walls. The height of the building is approximately 16m.
- The external walls should be designed to adequately stop fire spread. As this development is below 18m the guidance in regulation 7 is not applicable. However we would still recommend that any cladding or insulation product provided to the walls has a fire classification of A1 or A2-s1, d0 (classified in accordance with BS EN 13501-1:2007).
- The new roof approximately 16m high is at least 12m from a boundary, and therefore the roof coverings are required to achieve a fire performance of BROOF(t4) or CROOF (t4) in order to resist the spread fire over the roof coverings. Details of the roof covering designation will need to be submitted to and approved by the Building Control body.



## 14 B5 – Access and Facilities for the Fire Service

- Total building floor area is now 9824m<sup>2</sup> so 50% of access to the perimeter is required. Due to dead ends and maximum 20m reverse limitations the through road and gate to the top right of the site needs to provide a route through for an appliance plus a door along this elevation.

**Table 15.1 Fire and rescue service vehicle access to buildings not fitted with fire mains**

Total floor area <sup>(1)</sup> of building (m <sup>2</sup> )	Height of floor of top storey above ground (m) <sup>(2)</sup>	Provide vehicle access to:	Type of appliance
Up to 2000	Up to 11	See paragraph 15.1 15% of perimeter	Pump High reach
	Over 11		
2000–8000	Up to 11	15% of perimeter 50% of perimeter	Pump High reach
	Over 11		
8000–16,000	Up to 11	50% of perimeter 50% of perimeter	Pump High reach
	Over 11		
16,000–24,000	Up to 11	75% of perimeter 75% of perimeter	Pump High reach
	Over 11		
Over 24,000	Up to 11	100% of perimeter 100% of perimeter	Pump High reach
	Over 11		

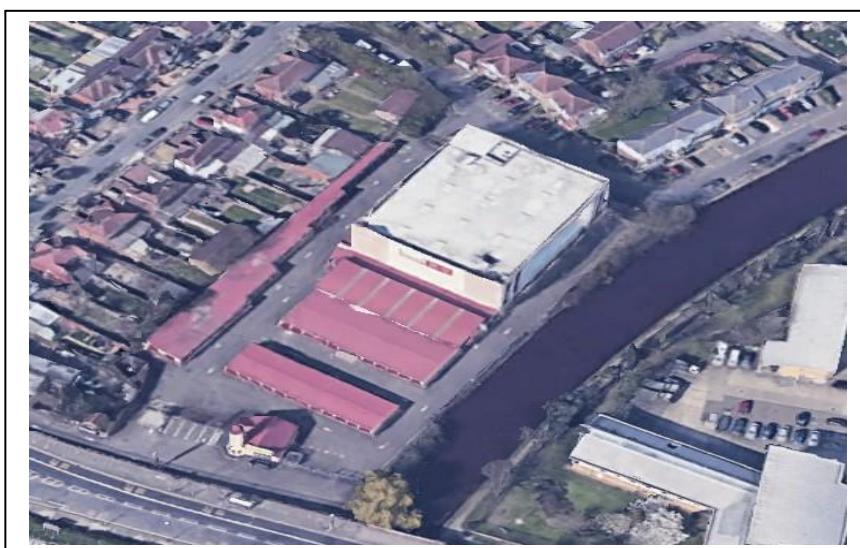
**NOTES:**

- The sum of the area of all storeys in the building (excluding basements).
- For storage buildings (purpose group 7(a)), measure height to mean roof level (see Appendix D).

*Table 15.1 ADB vol2*

- The proposed building perimeter measures 223m, 50% of this is 111m. Due to dead ends and maximum 20m reverse limitations the site needs to provide a through route for a fire appliance in order to meet 50% perimeter access. If the through road and gate to Tollgate Drive to the top right of the building could be utilised in the event of a fire, then the fire brigade could access up to 130m or 52% of the perimeter of the building.
- Every elevation to which vehicle access is provided should have a door, a minimum of 750mm wide, to give access into the building. The maximum distance between doors, or between a door and the end of the elevation, is 60m (e.g. a 150m elevation would need a minimum of two doors). The western elevation will require an additional door 60m from the door proposed in the new extension.
- As the extension compartment is more than 900m<sup>2</sup>, over 7.5m high but less than 18m it does not require a firefighting lift, but requires 2No. fire-fighting stairs, with smoke ventilated lobbies and dry riser. The shaft needs to be enclosed in a minimum of 2 hours fire rated construction.
- As the building is being extended and requires fire-fighting stairs, the dry riser outlet to all parts of floors must be within 45m of the dry riser outlet and may also mean having to retrospectively fit dry risers in existing stairs to meet this requirement unless already in place.
- The dry riser inlets must be within 18m of where a fire pump appliance can park.

- The unit is surrounded by access roads/hard standing, if the gate to Tollgate road can be used the site is considered to be suitable to meet the requirements for fire service access.
- We assume hydrant locations are acceptable due to the building's urban location.



*Aerial view of the premises (existing).*



*Aerial view of the premises (proposed).*

## 15 Limitations

- In the production of this report we were limited to the information provided below.

## 16 Information Provided

- This document is based on the drawings and supporting information issued to Sweco by Three Sixty Architecture. All dimensions were taken from this information.

Drawing title	Drawing number	Revision	Date
21065_Site 2 Report	Report	Rev A	Dec'21
Ground Floor	21065GA-SK-020	pre-App	Dec'21
First Floor	21065GA-SK-021	Pre-App	Dec'21
Second Floor	21065GA-SK-022	Pre-App	Dec'21
Third Floor	21065GA-SK-023	Pre-App	Dec'21
Fourth Floor	21065GA-SK-024	Pre-App	Dec'21
Roof Plan	21065GA-SK-025	Pre-App	Dec'21

Table: Drawings/report used to produce fire safety report

## 17 Summary

This Fire Statement has been produced to support the planning application for Shurgard House, Uxbridge Road, Hayes UB4 0HD. It is outlined as required by the Policy D12, which requires development proposals to achieve the highest standards of fire safety, embedding these at the earliest possible stage.

This Fire Statement is a standalone document which defines the fire safety objectives and performance requirements of the Shurgard House development, and the methods by which these objectives will be satisfied.

The Fire Statement has evidenced the provisions made for the safety of occupants and protection of property as well as the provision of suitable access and equipment for firefighting in line with the London Plan fire safety policy requirements and the validation for these measures as described above.

This Fire Safety statement supports the golden thread of fire safety information and will be developed to inform the overall fire strategy for the development.

Sweco confirms this fire statement meets the requirements of the London Plan Policy D12.