

# THE RATCLIFFE GROVES PARTNERSHIP

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## FIRE SAFETY STATEMENT

**CLIENT: GLOBE EXHIBITION LTD**

**PROJECT: ISLAND SITE, ESKDALE ROAD, UXBRIDGE, UB8 2RT**

**JOB NO: 11565**

**DATE: 11 OCTOBER 2024**



## FIRE SAFETY STATEMENT

### Fire Safety Statement

The following provides a summary of the key fire safety features of the building. This is based on compliance with Approved Document B (fire safety) volume 2: Buildings other than dwellings, 2019 edition incorporating 2020 and 2022 amendments and incorporates additional amendments not yet in use typically 2025 & 2026 amendments to volume 2.

**Workmanship:** All works will meet the relevant workmanship requirements of Approved Document 7 (AD7)

**Fire Statement Overview:** The fire statement put forward for the 'Erection of an industrial building with double pitch portal frame, sub-divided into 2 no. equal units with full height masonry separating wall' at Island Site, Uxbridge will meet the guidance within the London Plan policy D12 covering the building's functionality in terms of Part B (Fire Safety) and include:

1. Building's construction and materials used, etc.
2. Means of escape including persons who are disabled
3. Evacuation assembly points
4. Proposed fire alarm and emergency lighting
5. Fire Brigade access for both personnel and appliances including water supplies

In addition, the internal layout, travel distances, final exits, external fire and internal fire spread have all been considered at this early stage to ensure the strategy develops at minimum design risk while optimizing safety.

#### Building Regulations Purpose Group

As per Table D1 of Approved Document B Vol 2, the ground floor warehouse space is considered Industrial (6), and first floor office space is considered Office (3).

#### Key Fire Safety Building Information

Building Regulations	Compliance Note
Height	<11m from external ground to roof (mean) level
Each Unit Area	GF Industrial: Approximately 1092m <sup>2</sup> not including stairs and sanitary accommodation FF Office unit: 119m <sup>2</sup> not including stairs and sanitary accommodation.
Occupancy / floor space factors (when actual design figures not known)	Industrial unit @ 30 m <sup>2</sup> /person = maximum 37 persons Office unit @ 6 m <sup>2</sup> /person = max. 20 persons

## FIRE SAFETY STATEMENT

### Fire Safety Design Summary:

The following summarizes the key requirements of B1 to B5 of the Building Regulations. This includes the means of escape for all building users including those who may be disabled.

Building Regulations	Compliance Note				
Means of escape	Final Exit calculations	Maximum number of persons from fire safety info table above	Minimum final clear exit width (mm) to meet both Part B, and Part M (Accessibility)	Actual Final clear exit width (mm)	Compliance with Part B
Office stair capacity	i)Main stair leading to main entrance/exit	20	800	1718	√
	ii)Alternative stair	20	800	881	√
	<b>Total capacity of stairs when discounting largest stair (i) = 20 persons</b>				√
	(Check)Final exits as wide as the stair they serve				√

## FIRE SAFETY STATEMENT

Building Regulations	Compliance Note (Industrial)				
Means of escape	Final Exit calculations	Maximum number of persons from fire safety info table above	Minimum final clear exit width (mm) to meet both Part B, and Part M (Accessibility)	Actual Final clear exit width (mm)	Compliance with Part B
Escape via the storey exit leading to the main entrance/exit is not considered in these calculations as sufficient other Exits are available)					
	i)Final exit 1	37	800	881	√
	ii)Final exit 2	37	800	881	√
	iii)Exit via storey exit of escape stair	37	800	881	√
	<b>Total capacity of exits when discounting largest exit (i) = 538 persons</b>				√
	No issues with Merging Flows as 2 further exits are available from the warehouse. Low occupation numbers are anticipated.				

## FIRE SAFETY STATEMENT

### B1- Means of escape

Building Regulations:	Compliance Note - Office (1st floor)			
Final Exit calculations	Maximum Occupancy from fire safety info table above	Minimum final clear exit width (mm) to meet both Part B, and Part M (Accessibility)	Actual Final clear exit width (mm)	Compliance with Part B
Storey exit leading to main entrance/exit	20	800mm	1718mm	√
Final exit via alternative escape stair	20	800mm	881mm	√
<b>Total capacity of exits when discounting largest exit (i)= 110 persons</b>				√

#### ITEM 1 Travel distance

*Note: Travel distances are assessed using these figures where the internal layout the building are known. Where the layouts are not detailed direct travel distance equivalent to 2/3rds of the figures listed are used.*

Purpose Group	Single Direction	More than One Direction
6 - Normal Hazard	25	45
6 - Higher Hazard	12	25
3	18	45

**Travel distances are satisfactory as highlighted on attached plans 11565-P-107 & 108**

#### ITEM 2

All final exit door and doors leading to them to be easily and immediately operable by persons making good their escape without the use of a key at all times.

**All fire exit doors will have emergency escape hardware and doors leading to them will be easily operable hardware and all mag securing will be linked to the fire alarm system.**

#### ITEM 3

All escape routes to lead to a place of safety and are adequately lit internally and externally and maintained free of obstructions and trip hazards.

#### Compliant

## FIRE SAFETY STATEMENT

### ITEM 4

The proposed final exits should not present an obstacle to wheelchair users. Any level exit thresholds installed should have a gradient no greater than 1:20, or a ramp provided.

**Compliant**

### ITEM 5

30 minutes protected staircases including FD30s doors off the stairs to be provided to both stairs.

**60 minutes protected staircases provided including FD30s doors.**

## B2 Internal Linings

Surface finish classification requirements

Plastic rooflights, if the limitations in Table 6.3 and 14.2 (Approved Document B Vol 2) are observed, should be a min class D-s3, d2 rating, otherwise will have to accord with the Table below.

**Rooflights to be SAA Class 1, these are only present within the warehouse area and are not present within circulation spaces.**

**Table 6.1 Classification of linings**

Location	Classification
Small rooms of maximum internal floor area: a. 4m <sup>2</sup> in residential accommodation b. 30m <sup>2</sup> in non-residential accommodation	D-s3, d2
Other rooms (including garages)	C-s3, d2
Other circulation spaces	B-s3, d2 <sup>(1)</sup>
<b>NOTE:</b> 1. Wallcoverings which conform to <b>BS EN 15102</b> , achieving at least class C-s3, d2 and bonded to a class A2-s3, d2 substrate, will also be acceptable.	

## B3 Part B3 – Internal Fire Spread (Structure)

### ITEM 1

Assuming the office area is considered ancillary to warehouse, and as the office is not greater than 1/5 of total floor area, no additional compartmentation measures are required between the occupancies. If not considered ancillary, 60 minutes REI fire resistance will be required.

Office is considered as ancillary however REI 60 min. fire resistance will be installed to compartments.

### ITEM 2

As the building is not more than 18m to the first floor storey and an overall floor area of less than 7000m<sup>2</sup>, although recommended, there is no requirement to install a sprinkler system to meet B3.

**Compliant**

### ITEM 3

A minimum of 30 minutes fire resistance will be required between ground and first floor offices

**Compartment floor to be 60 min. fire resistant**

## FIRE SAFETY STATEMENT

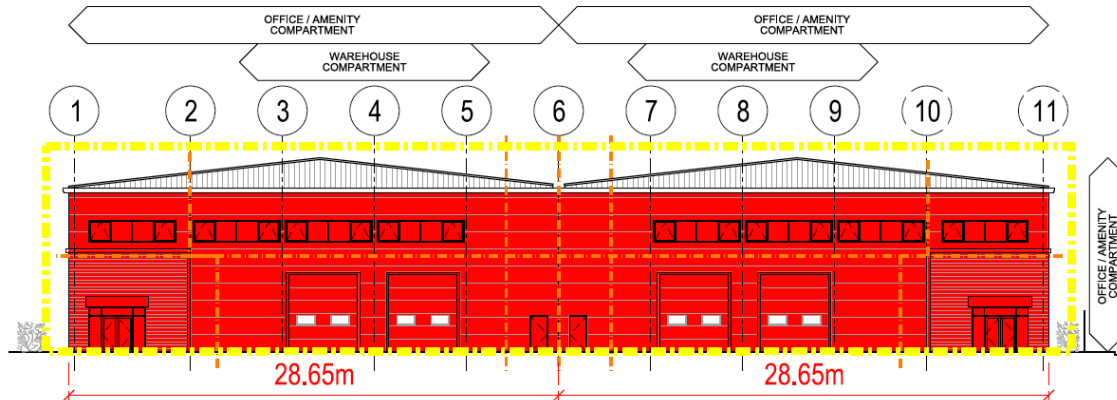
### Part B4 – External Fire Spread

#### ITEM 1

##### South-east elevation

Please refer to drawing 11565-P-106

Unprotected areas distance based on BR187 (External fire spread – 2nd edition 2014)



##### SOUTH EAST ELEVATION (NTS)

Distance to notional boundary Gridline 1 - 37.6m - Gridline 11 - 37.5m

Unprotected area of elevation 532.8 sqm (100%)

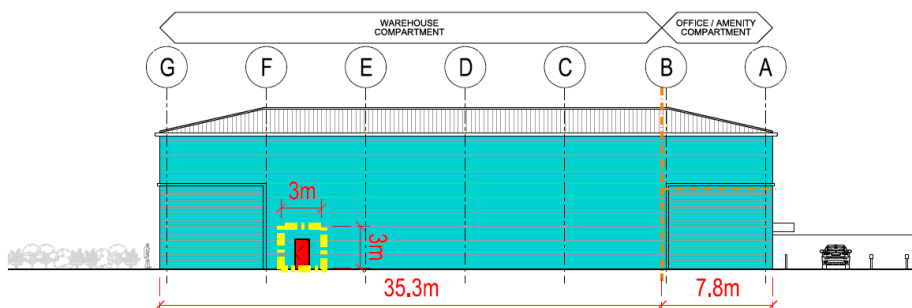
Unprotected area of 532.8m<sup>2</sup> of enclosing rectangle 12m high x 60m width equals 74%. 80% of rectangle 12m high x 60m wide states the boundary needs to be more than 21.5m away. Grid line A is minimum of 37.5m from the boundary.

#### ITEM 2

##### South-west elevation

Please refer to drawing 11565-P-106

Unprotected areas distance based on BR187 (External fire spread – 2<sup>nd</sup> edition 2014)



##### SOUTH WEST ELEVATION (NTS)

Distance to notional boundary Gridline A - 8.4m - Gridline G - 7.9m

Unprotected area of elevation 2.3 sqm (0.3%)

BRE Report 187 states that unprotected areas less than 20% should be rounded up to 20% and consider unprotected area as local concentration of exposure hazard.

Unprotected area of 2.1m<sup>2</sup> equates 23.3% of an enclosing rectangle table 3m high x 3m. Using the 30% figure requires minimum distance of 1.5m from boundary. Gridline 1 is minimum 7.9m to the boundary.



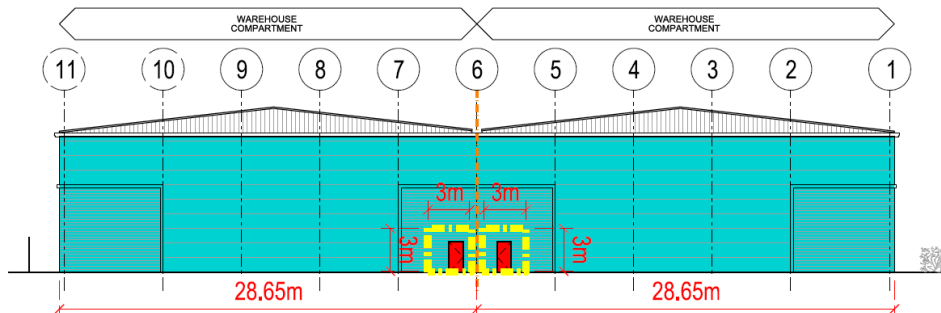
## FIRE SAFETY STATEMENT

### ITEM 3

#### North-west elevation

Please refer to drawing 11565-P-106

Unprotected areas distance based on BR187 (External fire spread – 2nd edition 2014)



#### NORTH WEST ELEVATION (NTS)

Distance to notional boundary Gridline 1 - 16.7m-      Gridline D - 17.1m

Unprotected area of elevation 4.4 sqm (0.8%)

BRE Report 187 states that unprotected areas less than 20% should be rounded up to 20% and consider unprotected area as local concentration of exposure hazard.

1) Unprotected area of 2.1m<sup>2</sup> equates 23.3% of an enclosing rectangle table 3m high x 3m. Using the 30% figure requires minimum distance of 1.5m from boundary. Gridline G is minimum 16.7m to the boundary.

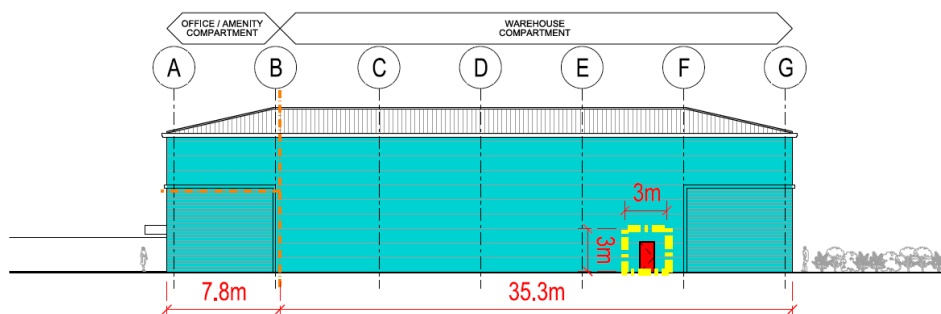
2) Unprotected area of 2.1m<sup>2</sup> equates 23.3% of an enclosing rectangle table 3m high x 3m. Using the 30% figure requires minimum distance of 1.5m from boundary. Gridline G is minimum 16.7m to the boundary.

### ITEM 4

#### North-east elevation

Please refer to drawing 11565-P-106

Unprotected areas distance based on BR187 (External fire spread – 2nd edition 2014)



#### NORTH EAST ELEVATION (NTS)

Distance to notional boundary Gridline A - 7.2m -      Gridline G - 6.5m

Unprotected area of elevation 2.1 sqm (0.5%)

BRE Report 187 states that unprotected areas less than 20% should be rounded up to 20% and consider unprotected area as local concentration of exposure hazard.

Unprotected area of 2.1m<sup>2</sup> equates 23.3% of an enclosing rectangle table 3m high x 3m. Using the 30% figure requires minimum distance of 1.5m from boundary. Gridline G is minimum 16.7m to the boundary.

As the proposed external walls are within the parameters relevant boundaries that are assessed as part of Part B4, all internal walls will require 60 minutes fire resistance.



## FIRE SAFETY STATEMENT

### ITEM 5

When assessing external wall surfaces, Table 12.1 below applies.

In this instance, no classification applies to buildings 1000mm or more from the relevant boundary.

**Compliant, with no provisions**

Table 12.1 Reaction to fire performance of external surface of walls			
Building type	Building height	Less than 1000mm from the relevant boundary	1000mm or more from the relevant boundary
Any other building	More than 18m	Class B-s3, d2 <sup>(2)</sup> or better	From ground level to 18m: class C-s3, d2 <sup>(3)</sup> or better From 18m in height and above: class B-s3, d2 <sup>(2)</sup> or better
	18m or less	Class B-s3, d2 <sup>(2)</sup> or better	No provisions

### ITEM 6

Roof coverings in close proximity to a boundary, should give adequate protection against the spread of fire over them. As the closest boundary is more than 6m away Croof(t4) would demonstrate compliance with Table 14.1.

**The roof will have a classification of Broof (t4).**

Table 14.1 Limitations on roof coverings				
Designation <sup>(1)</sup> of covering of roof or part of roof	Distance from any point on relevant boundary			
	Less than 6m	At least 6m	At least 12m	At least 20m
B <sub>ROOF</sub> (t4)	●	●	●	●
C <sub>ROOF</sub> (t4)	○	●	●	●
D <sub>ROOF</sub> (t4)	○	● <sup>(2)(3)</sup>	● <sup>(2)</sup>	●
E <sub>ROOF</sub> (t4)	○	● <sup>(2)(3)</sup>	● <sup>(2)</sup>	● <sup>(2)</sup>
F <sub>ROOF</sub> (t4)	○	○	○	● <sup>(2)(3)</sup>

● Acceptable. ○ Not acceptable.

**NOTES:**

Separation distances do not apply to enclosed/covered walkways. However, see Diagram 8.2 if the roof passes over the top of a compartment wall.

Polycarbonate and uPVC rooflights that achieve a class C-s3, d2 rating by test may be regarded as having a B<sub>ROOF</sub>(t4) classification.

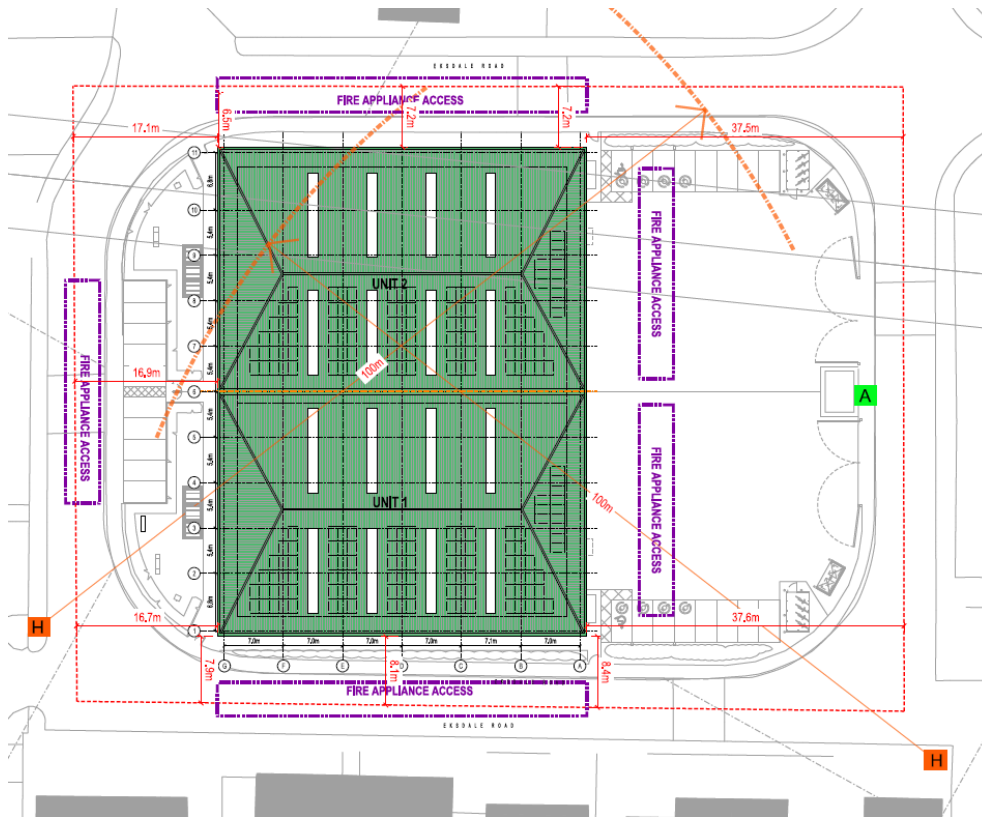
- The designation of external roof surfaces is explained in Appendix B
- Not acceptable on any of the following buildings.
  - Industrial, storage or other non-residential purpose group (purpose groups 6 and 7) buildings of any size.
  - Any other buildings with a cubic capacity of more than 1500m<sup>3</sup>.
- Acceptable on buildings not listed in (1) if both of the following apply.
  - Part of the roof has a maximum area of 3m<sup>2</sup> and is a minimum of 1500mm from any similar part.
  - The roof between the parts is covered with a material rated class A2-s3, d2 or better.

## FIRE SAFETY STATEMENT

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

#### ITEM 1

Vehicle access for a pumped appliance is required to 15% of the perimeter or within 45m of every point on the projected plan area for both units and almost 50% of accessible which meets B5. Access is from Eskdale Road. - Refer to drawing 11565-P-106.



#### ITEM 2

The minimum carrying capacity to meet Part B for a pump fire appliance is currently 12.5 tonnes. As some fire appliances are not standardised, these may be of greater weight or different sizes and at consultation with the Fire and Rescue Service, the Building Control body may adopt other dimensions.

#### ITEM3

As the building has a compartment of 280m<sup>2</sup> or more in area, if erected more than 100m from an existing fire-hydrant, additional hydrants should be provided within 90m of an entry point to the building and not more than 90m apart.

**Compliant, 2 no. hydrants within 100m both positioned on Eskdale Road.**

#### ITEM4

Assembly point- This should be located preferably outside of the building curtilage in an area that staff can easily reach such as outside the fence line and by the substation. See **A** on image above.

### Fire Safety Information Regulation 38:

The person carrying out the work shall give fire safety information to the responsible person not later than the date of completion of the work, or the date of occupation of the building, whichever is earlier.

Fire safety information means information relating to the design and construction of the building, and the services, fittings and equipment provided in or connection with the building which will assist the responsible person to operate and maintain the building with reasonable safety.

## FIRE SAFETY STATEMENT

### Specification Summary:

The following details the building's construction and other specific items in relation to fire safety.

Item	Specification	Additional Notes
Fire Alarm System	<b>BS 5839: Part 1: 2017</b> <i>'Fire detection and fire alarm systems for buildings. Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises'</i> ,	
Emergency Lighting	<b>BS 5266.Part 1; 2016</b> <i>'Code of practice for the emergency lighting of premises'</i>	
Exit Signage	<b>BS 5499-4: 2013 Safety signs CoP for escape route signing</b>	<i>Health and Safety (Safety signs and signals) Regulations 1996 and containing symbols or pictograms</i>
Fire hydrants	<b>BS 3251 1976:</b> <i>Indicator plates for fire hydrants and emergency water supplies</i>	
Fire Extinguishers	Post-handover/ client provision.	
Cladding system	Microrib and Curvewall composite wall cladding and Trapezoidal profiled roof cladding are proposed.	All to meet requirements raised in B3 and B4 above

### Author – Planning Policy D12 Fire Safety B

Daryl Stallabrass is a Chartered Architectural Technologist. He has a BSc Hons in Architectural Technology from Northampton University and is a member of the Institute of Chartered Architectural Technologists (CIAT).

Daryl has 23 years of experience in Building Control within the built environment in both the private and public sectors and is responsible for administering the Building Regulations to assure that regulatory standards of health, safety, welfare, conservation of fuel and power and accessibility are met. He has also dealt with fire safety in many projects including industrial buildings.