

Planning Submission Fire Statement
Gateway 1

For

PBSA Britannia Street, London

Reference: FSE2332

Issue No: 02

16th January, 2025

Revision History

Issue Number:	01 – Fire Statement	Issue Date:	20/12/2024
First Issue of the Fire Statement			
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Client Details

Client	Curlew Developments London Ltd
Client Address	Gateway House Tollgate Chandlers Ford Eastleigh SO53 3TG
Project	PBSA Britannia

Validity

This report is produced on the basis of the information and experience available at the time of preparation. It is applicable to the above-mentioned project only in accordance with the client's instructions. It is only valid provided no other modifications are made other than those for which a formal opinion has been sought from and given by Helios Fire & Construction Consultancy UK.

The report outlines the principal opinion of Helios Fire & Construction Consultancy and is prepared based on information issued by other parties, this report should not be viewed as an approval of that information and no liability is accepted for its accuracy.

All legislation quoted is primarily concerned with life safety and property protection is not specifically considered although the fire protection provisions to be provided for the building will offer some degree of property protection.

Furthermore, other issues such as insurers' requirements, cultural heritage, environmental, or continuity issues have not been specifically addressed or included within the development of the fire safety strategy.

Transmission and receipt of Information used in the preparation of the Fire Safety Strategy is agreed on the basis outlined in the fee proposal as issued by Helios Fire & Construction Consultancy. Should a web-based document management system be used, information that is specifically to be assessed and reviewed by Helios Fire & Construction Consultancy should be issued directly to the representative of Helios Fire & Construction Consultancy. The acceptance of access onto any web-based system by Helios Fire & Construction Consultancy does not constitute an acknowledgement that all information on the specific portal will have been assessed and reviewed.

1 Introduction


This report presents the Gateway 1 Planning Submission Fire Statement for the PBSA Britannia Street Development. The primary guidance for the development will be BS9991:2024.

The development is a high-rise Purpose-Built Student Accommodation (including ancillary areas) residential development. The plot comprises a standalone 8 storey building, bound by Britannia Street to the North, Wicklow Street to the South, housing to the East and railway lines to the West. The proposed building's use is for Purpose Built Student Accommodation.

The building comprises ancillary accommodation at ground floor level, including plant rooms, bin stores, cycle stores and internal amenity spaces. There is no sleeping accommodation on the ground floor. The upper floors all consist of residential accommodation. The top floor has a rooftop terrace and amenity room but no sleeping accommodation. The residential accommodation is accessed via two staircases with a firefighting shaft incorporating a firefighting stair and firefighting lift to the North of the building and an evacuation lift in both the North and South cores. The building GIA is circa 5,021m² in area and provides circa 121bedrooms and associated ancillary and amenity areas.

2 Application Information

Site Address Line 1	Britannia Street
Site Address Line 2	
Town	London
County	
Site Postcode (optional)	
Description of Development	The development is a high-rise Purpose-Built Student Accommodation (including ancillary areas) residential development. The plot comprises a standalone 8 storey building, bound by Britannia Street to the North, Wicklow Street to the South, housing to the East and railway lines to the West. The proposed building's use is for Purpose Built Student Accommodation.
Further Information	Please see Helios fire strategy markups. <i>SK Helios Fire Safety Markups Britannia PBSA 16.01.25</i>
Details of consultations undertaken relating to the fire safety of the development.	Currently consultation with Building Control and the Fire and Rescue service has not been undertaken.

Author's Details:	<p>Richard Jones - BA (Hons), Grad.Dip, AIFireE.</p> <p>Richard is an Associate with the Institution of Fire Engineers with over 15 years experience in building control and three working in fire consultancy.</p> <p>Richard has had significant previous experience in Building Control having worked within multiple sectors, including residential (including HRRB), commercial, industrial, educational, retail, MOJ, MOD and medical facilities at all design/construction stages from feasibility through to handover.</p> <p>Since switching to fire consultancy work in 2022 he has provided consultancy advice for compliance with HRRBs, Gateway 1 reports, risk assessments, fire strategy mark-ups and reports for various sectors.</p>
Signature:	
Date:	16/01/2025
Reviewer's Details	<p>Paul Currie BEng, PhD, CEng, MIFireE</p> <p>Chartered Engineer (CEng registrant via Institution of Fire Engineers - IFE) and Member of the IFE, with over 26 years postgraduate experience in the field of fire safety engineering, encompassing; design consultancy, risk assessment, structural and fire testing, CFD modelling, research and lecturing.</p> <p>Consultancy projects have included a number of private, public and commercial buildings including educational developments, healthcare facilities, residential developments, offices, warehouses, shopping centres, sports grounds, and car parks.</p> <p>Lecturing experience includes teaching fire safety and fire engineering topics at the University of Central Lancashire and the School of Continuing and Professional Education (SCOPE) at the City University of Hong Kong.</p>

The Principles, Concepts and Approach Relating to Fire Safety That Have Been Applied to the Development

Site Layout Plan With Block Numbering as Per Building Schedule Referred to Below.

[Plan to be consistent with other plans, drawings submitted in connection with the application]

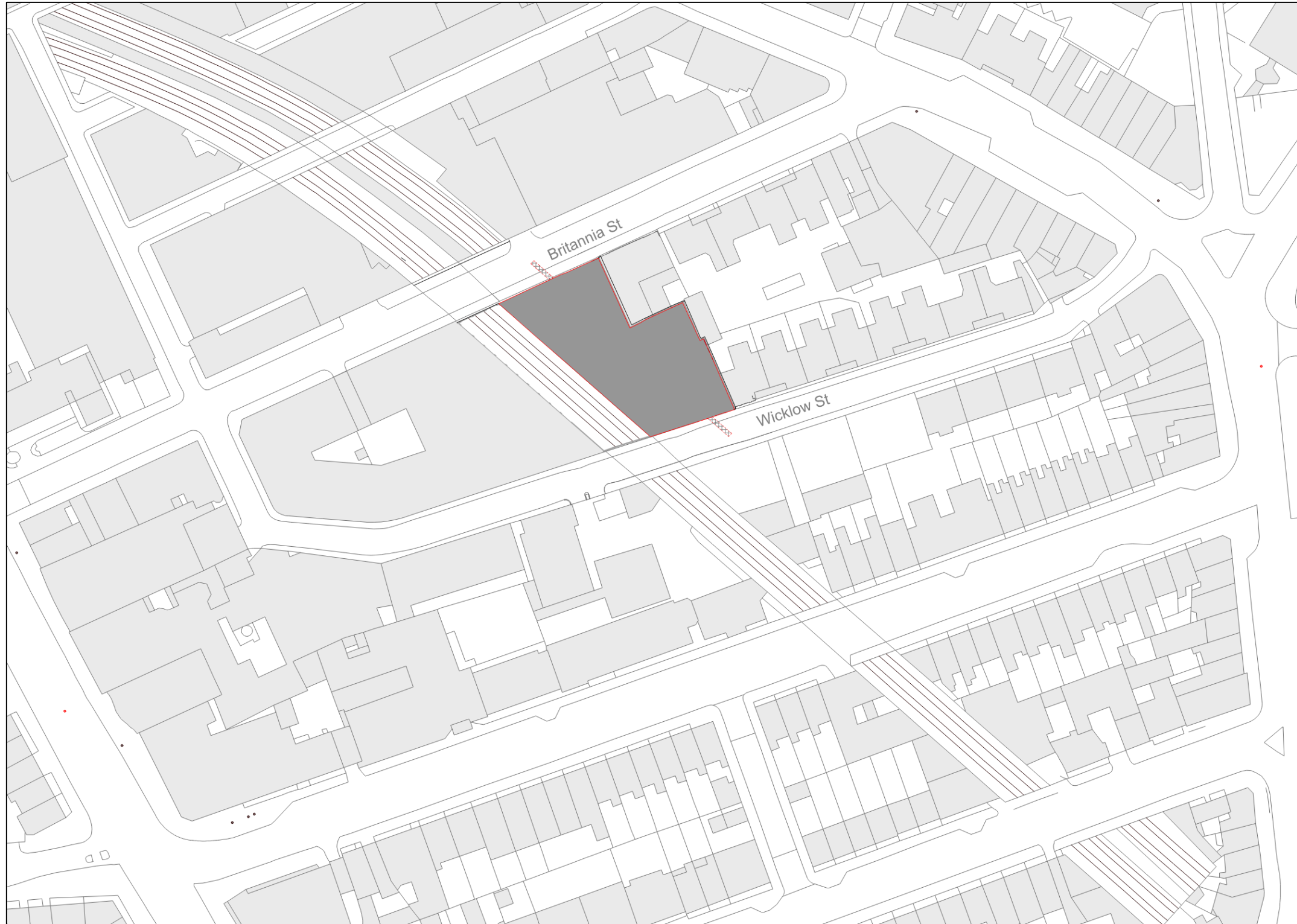


Figure 1: Site Layout

3 The Principles, Concepts and Approach Relating to Fire Safety That Have Been Applied to the Development

Building Schedule									
Site Information				Building Information			Resident Safety Information		
Block Number	Block Height (m) No. Storeys Above Ground No. of storeys including below ground level	Proposed Use	Location of Separate uses Within Block	Standards Relating to Fire Strategy	Balconies	External Wall Systems	Evacuation Approach	Automatic Water Fire Suppression System (AWFSS)	Accessible Housing Provided
Block A.	Circa 23.7m (Roof Terrace). Ground plus seven above ground storeys.	Purpose Built Student Accommodation (including amenity and ancillary areas).	Amenity and ancillary to ground floor. Residential Accommodation levels first floor to sixth floor. Rooftop terrace and amenity to seventh floor.	BS9991: 2024 BS9999 2017 for ancillary areas.	Roof terrace. A2-s1, d0 or better.	Regulation 7 applies to the building. The external wall systems to the proposed building will need to achieve a minimum European Classification A2-s1, d0 or better.	Residential – Stay Put Policy. Further evacuation alert system for the fire service proposed. Evacuation lifts – one per stair core. Social amenity spaces within residential areas will operate simultaneous evacuation strategy (for each amenity space) all other areas to remain in place. Ancillary accommodation, common amenity on ground floor, plant areas and bike shed to operate simultaneous evacuation.	AWFSS is required to all parts of the building. Full Residential system to BS9251 2021 Cat 4 to student accommodation. Amenity / social spaces / ancillary compartments under 100m ² to allow the use of a residential system.	M4 [1] & M4[2]

Specific Technical Complexities & Issues Which Might Affect the Fire Safety of the Development

The base code compliant evacuation process is a 'Stay Put Strategy'. This means that the only occupants who evacuate are the occupants who are directly affected by the effects of fire. The remaining occupants remain within their apartments unless asked to evacuate by the fire service.

To support a 'Stay Put' fire strategy BS9991 recommends a BS5839-6 system to be provided to individual flats and a BS5839-1 system (Category L5) to the common corridors only to activate smoke control and not to raise alarm. However, as an enhancement over the minimum standards, it is proposed to provide a Category L1 fire detection and alarm system designed and installed in accordance with BS5839-1:2017. This allows the system to be fully addressable and to provide the building manager or remote monitoring centre to a potential fire in any flat or common area.

In addition, a separate Evacuation Alert System in accordance with BS8629 will be provided for use by the fire service.

The building is over 18m and will be provided with a firefighting shaft (firefighting stair, firefighting lift, and dry riser) and a protected escape stair. The firefighting core has two lifts one of which will be firefighting lift and one that will be a dedicated evacuation lift as per the requirements of the London Plan. The alternative protected escape stair will be provided with an evacuation lift accessed from within the stair.

All floors are provided with two means of escape including the roof terrace. The evacuation lifts are situated in the ventilated firefighting lobby and within the escape stair with adjacent corridors affording (as a minimum) the same smoke ventilation protection as the stair.

Smoke control will be provided by 1.5m² natural smoke shafts to the firefighting lobby and residential corridors. Where necessary, ancillary areas will be accessed via ventilated lobbies/corridors with 0.4m² or 1.0m² permanent ventilation dependant on the hazard category. The stairs will be served at the head by an AOV with a minimum aerodynamic free area of 0.7m².

The evacuation lift provision including ventilation requirements is in line with the new BS9991:2024 guidance.

The building will be provided with a sprinkler system in accordance with BS9251 2021 to Cat 4. As noted in the British Standard where a residential BS9251 system is to be used in the social, ancillary and commercial areas, these areas will need to be split into compartments with a floor area not greater than 100m².

Studios contain cookers located at the remote end of the studio. Category B Protective Devices to BSEN 50615 [Category B - Device for preventive power cut-off of the appliance] will be provided to all cooking facilities within the student accommodation.

External wall construction will be Class A2-s1, d0 or better.

Specific Technical Complexities & Issues Which Might Affect the Fire Safety of the Development

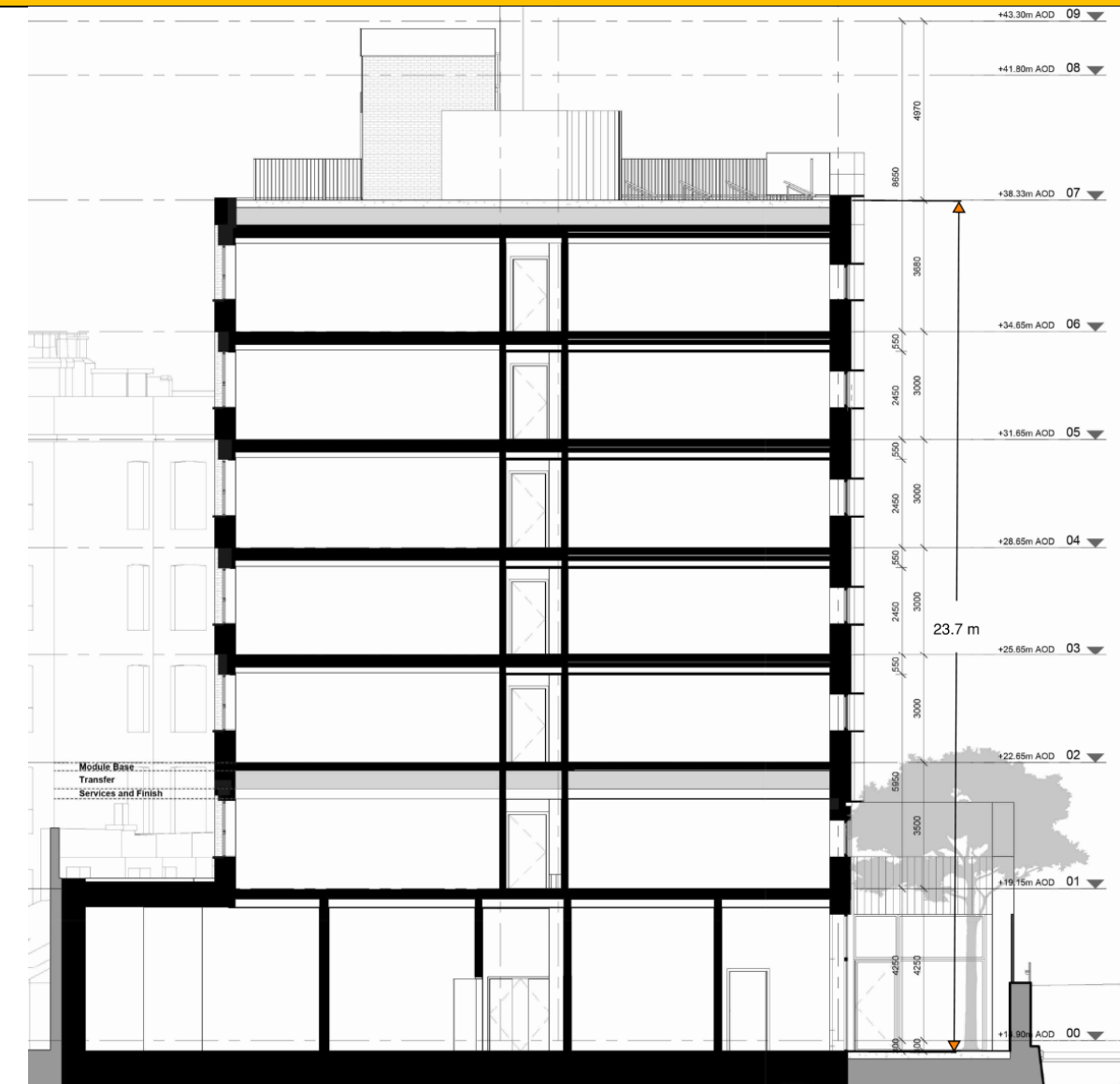


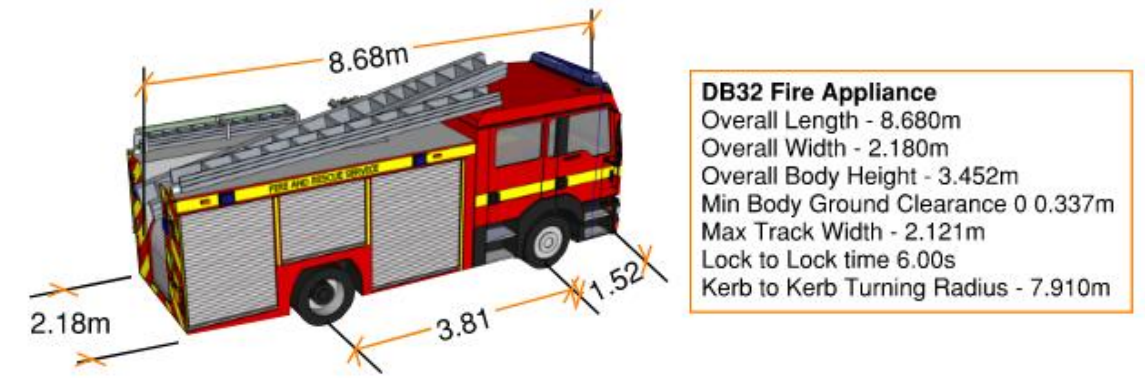
Figure 2: Top Storey Height


Local Development Plan Policies Relating to Fire Safety

London Plan – Evacuation Lifts are required in line with London Plan Policy D5 and D12.

The building is over 18m and will be provided with two independent cores; each core will be provided with a staircase and an evacuation lift with the firefighting core also provided with a separate firefighting lift.

4 Emergency Road Vehicle Access and Water Supplies for Firefighting Purposes

Fire Service Site Plan, Emergency Road Vehicle Access and Siting of Fire Appliances						
<p>Access to the development is via Britannia Street to the North and Wicklow Street to the South. Britannia Street will provide the primary access to the Firefighting shaft. Indicative fire service access arrangements are shown in the Fire Service Site Plan Section below.</p> <p>The access will be based on the facilities required in BS9991. This includes the provision of a firefighting lift and the inclusion of a dry riser to the firefighting stair. This will provide suitable access and sufficient firefighting water supplies.</p>						
<p>Table 1: Fire Service Vehicle Access Requirements</p>						
 <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>DB32 Fire Appliance Overall Length - 8.680m Overall Width - 2.180m Overall Body Height - 3.452m Min Body Ground Clearance 0.0337m Max Track Width - 2.121m Lock to Lock time 6.00s Kerb to Kerb Turning Radius - 7.910m</p> </div> <p><small>Source: 3d Warehouse. Sketchup Image</small></p>						
Appliance	Width of Road between Kerbs	Gateway Width	Clearance Height	Carrying Capacity	Turning Circle	
					Kerb to Kerb	Wall to Wall
Pump	3.7m	3.1m	3.7m	12.5 – 15 tonnes	16.8m	19.2m
Combined Aerial Platform	3.7m	3.1 - 6m	4.0m	17 – 26 tonnes	26.0m	29.0m
Is the emergency vehicle tracking route within the site to the siting points for appliances clear and unobstructed?				Yes	No	

Suitability of Water Supply for the Scale of Development Proposed			
Nature of Water Supply:	Open Water - Limited	Open Water - Unlimited	Tanked Supply – sprinkler system.
	Hydrant – Public	Hydrant - Private	
Does the proposed development rely on existing hydrants?	Yes		No
If so, are they currently usable / operable?	Yes	No	Don't know
Additional Comments:	<p>The hydrant location on Britannia Street is noted below and is in close proximity to the entrance to the firefighting shaft.</p> 		

Fire Service Site Plan

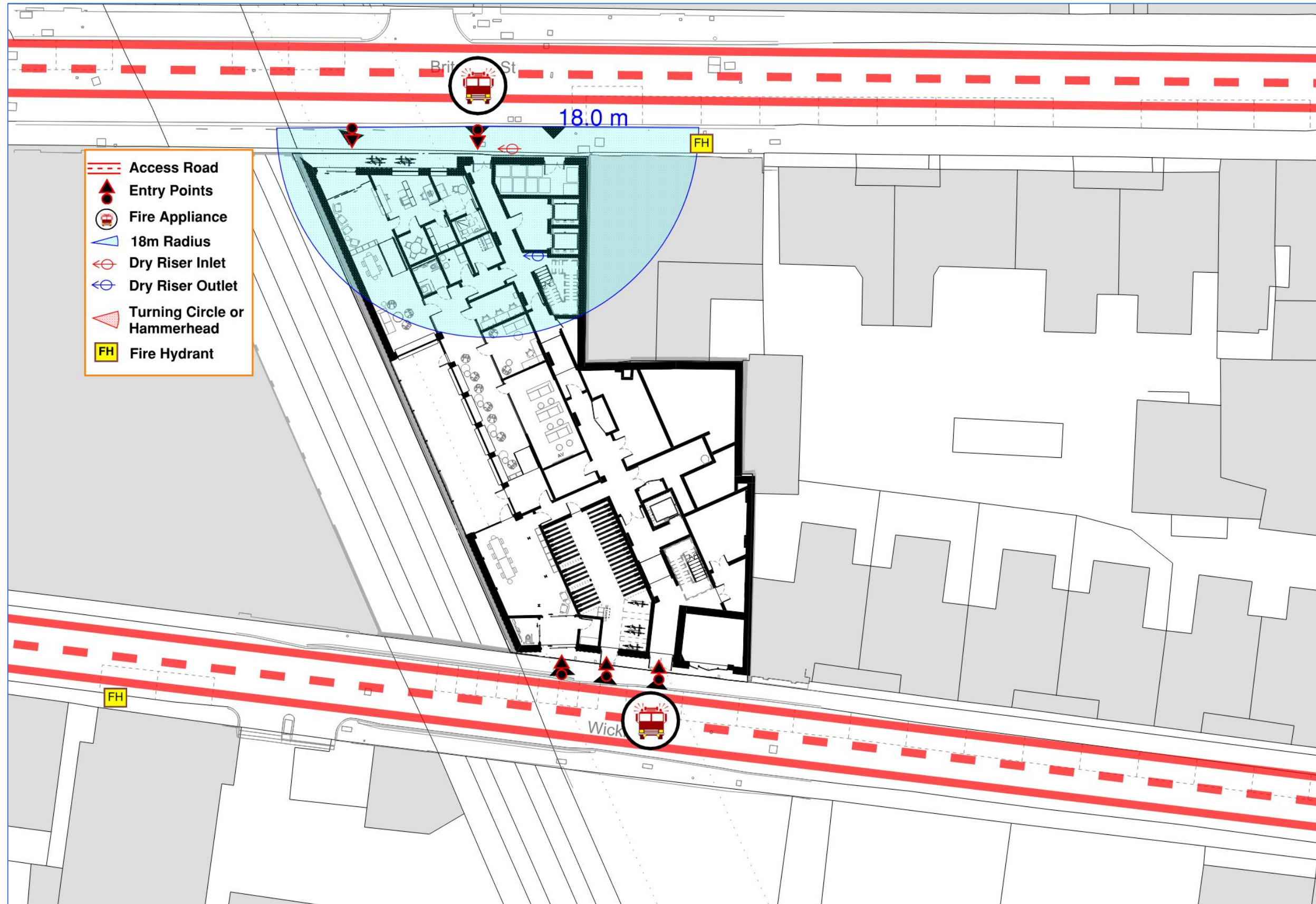


Figure 3: Fire Service Site Plan