125 Shaftesbury Avenue

Fire Statement

Prepared by TFS

Submitted on behalf of VREF Shaftesbury SCS

November 2024

PLANNING FIRE STATEMENT

Project:	125 Shaftesbury Avenue	**Subject:**	Fire Statement
Project No.:	P24-005		
Document Ref.:	241127DN0F4	**Date:**	27/11/2024
Author:	Marshall Nyamuchiwa	**Reviewer:**	Andrew Nicholson

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1 INTRODUCTION

1.1 Project Description

This Fire Statement has been prepared by The Fire Surgery on behalf of VREF Shaftsbury SCS ('the Applicant') in support of the application for full planning permission for the redevelopment of 125 Shaftesbury Avenue, London, WC2H 8AD (herein referred to as 'the Site').

125 Shaftesbury Avenue is an existing building within the borough of Camden. The proposal aims to retain and extend the existing frame to create flexible commercial space and active ground floors. In addition to this, the proposal seeks to improve the public realm. The previous Planning Permission was Consented in 2026 (2016/5202/P) and has since lapsed.

1.2 Planning application description

Full detailed planning permission is sought for (the 'Proposed Development'):

''Remodelling, refurbishment and extension of the existing building to provide Use Class E commercial and retail space, amenity terraces, a new public route, relocated entrances, cycle parking, servicing and rooftop plant along with associated highway, landscaping and public realm improvements and other associated work''.

1.3 London Plan Policy D12

London Plan Policy D12 requires development proposals to achieve the highest standards of fire safety, embedding these at the earliest possible stage. Policy D5 also requires specific consideration of the requirements for evacuation lifts, which form part of the fire safety features of the project.

Therefore, all major development proposals should be submitted with a Fire Statement.

A Fire Statement is a standalone document which defines the fire safety objectives and performance requirements of a development, and the methods by which these objectives will be provided/ satisfied. This is based on the Draft Fire Safety Guidance provided by the GLA for the London Plan Policy D12B with regards to fire safety.

The Fire Statement is to evidence 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 light of the London Plan fire safety policy requirements and the justification for these measures.

The Fire Surgery Ltd are the Fire Consultant for the proposed redevelopment of 125 Shaftesbury Avenue in London. The building includes:

- One level of basement housing cycle facilities housing and plant equipment.
- Ground floor providing a reception lobby, loading bay, refuse store, plant room and five independent retail units. There is to be a new pedestrian passageway (Caxton Walk) connecting Charing Cross Road to Stacey Street across the building (underpass) on the ground floor.

- First floor to twelfth floors providing commercial accommodation and rooms housing plant equipment.
- Roof level provided with a green roof and photovoltaic panels.

The main entrance to the building is to be through the reception lobby on the ground floor, accessed from Charing Cross Road. Final exits from upper floors are to be provided from ground floor. Fire service access to firefighting shafts is to be provided mainly along Charing Cross Road and Stacey Street. The building has a maximum footprint of ca. 3230m^2 on the basement floor (2690m^2 on the ground floor), and the building massing decreases progressively on the upper floors with the provision of external terrace areas. The building height is to be increased to 44.2m to the top occupied twelfth floor.

The Fire Surgery Ltd confirm that the fire safety of the proposed development and the fire safety information satisfies the requirements of London Plan Policy D12B as laid out below:

Policy D12 Fire Safety:		
A	*In the interests of fire safety and to ensure the safety of all building users, all development proposals must achieve the highest standards of fire safety and ensure that they:*	Section reference of this report.
	1. identify suitably positioned unobstructed outside space:	
	a. for fire appliances to be positioned on	10
	b. appropriate for use as an evacuation assembly point	8.7
	2. 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.	9
	3. are constructed in an appropriate way to minimise the risk of fire spread	7
	4. provide suitable and convenient means of escape, and associated evacuation strategy for all building users	8
	5. develop a robust strategy for evacuation which can be periodically updated and published, and which all building users can have confidence in	8
	6. provide suitable access and equipment for firefighting which is appropriate for the size and use of the development	10
B	*All major development proposals should be submitted with a Fire Statement, which is an independent fire strategy, produced by a third party, suitably qualified assessor.*	
	The statement should detail how the development proposal will function in terms of:	
	1. the building's construction: methods, products and materials used, including manufacturers' details	7
	2. the means of escape for all building users: suitably designed stair cores, escape for building users who are disabled or require level access, and associated evacuation strategy approach	8
	3. features which reduce the risk to life: fire alarm systems, passive and active fire safety measures and associated management and maintenance plans	9
	4. access for fire service personnel and equipment: how this will be achieved in an evacuation situation, water supplies, provision and positioning of equipment, firefighting lifts, stairs and lobbies, any fire suppression and smoke ventilation systems proposed, and the ongoing maintenance and monitoring of these	10
	5. how provision will be made within the curtilage of the site to enable fire appliances to gain access to the building	11

THE FIRE SURGERY

	6. ensuring that any potential future modifications to the building will take into account and not compromise the base build fire safety/protection measures	12
Policy D5 Inclusive Design		
B	*5. be designed to incorporate safe and dignified emergency evacuation for all building users. In all developments where lifts are installed, as a minimum at least one lift per core (or more subject to capacity assessments) should be a suitably sized fire evacuation lift suitable to be used to evacuate people who require level access from the building.*	8.6

1.4 Declaration

In accordance with the draft London Plan Guidance – Fire Safety, consultation version, February 2022, The Fire Surgery hereby confirm that the technical content produced for the planning application complies with all relevant legislation and requirements of London Plan Policy D12B and D5(B5). The Fire Surgery hereby also declare that the that the design, number, size and operation of the evacuation lifts comply with the relevant regulations and standards.

THE FIRE SURGERY

2 LONDON PLAN GUIDANCE FORM 1

Form 1 – Fire Statement template (London Plan Policy D12B) for major development	
Site address	125 Shaftesbury Avenue, London, WC2H 8AD
Description of development	Full detailed planning permission is sought for (the 'Proposed Development'): 'Remodelling, refurbishment and extension of the existing building to provide Use Class E commercial and retail space, amenity terraces, a new public route, relocated entrances, cycle parking, servicing and rooftop plant along with associated highway, landscaping and public realm improvements and other associated work'.
Name, qualifications, professional memberships and experience of author	**Andrew Nicholson**, BEng, MSc (Cantab), CEng, MIFireE **Marshall Nyamuchiwa**, Meng (Hons), AIFireE Section 4.1 of the Fire Statement.
Has a Gateway One Statement been submitted?	No (this is not applicable for this development).
Policy considerations (D12B)	**Fire Statement section cross reference**
The buildings construction: methods, products and materials used	Section 7 of the Fire Statement.
Means of escape for all building users and the evacuation strategy	Section 8.3 of the Fire Statement.
Passive and active fire safety measures	Section 9 of the Fire Statement.
Access and facilities for the fire and rescue service	Section 10 of the Fire Statement.
Site access for the fire and rescue service	Section 11 of the Fire Statement.

Form 1 – Fire Statement template (London Plan Policy D12B) for major development	
Modifications to the development and the 'golden thread' of information	Section 12 of the Fire Statement.
Where a lift core is provided, at least one lift is an evacuation lift	Section 8.6 of the Fire Statement.
Declaration of Compliance by a competent person	Section 1.4 of the Fire Statement.

3 LONDON PLAN GUIDANCE FORM 3

Form 3 – Provision of evacuation lift (Policy D5(B5))	
Site address	125 Shaftesbury Avenue, London, WC2H 8AD.
Description of development	Full detailed planning permission is sought for (the 'Proposed Development'): 'Remodelling, refurbishment and extension of the existing building to provide Use Class E commercial and retail space, amenity terraces, a new public route, relocated entrances, cycle parking, servicing and rooftop plant along with associated highway, landscaping and public realm improvements and other associated work'.
Name, qualifications and/ or experience of author	**Andrew Nicholson**, BEng, MSc (Cantab), CEng, MIFireE **Marshall Nyamuchiwa**, Meng (Hons), AIFireE Section 4.1 of the Fire Statement.
Policy considerations Policy D5(B5)	
Section 8.6 of the Fire Statement.	
Details of the evacuation lift and shaft	
Section 8.6.1 of the Fire Statement.	
Capacity Assessment	
Section 8.6.2 of the Fire Statement.	
Evacuation Strategy	
Section 8.6.3 of the Fire Statement.	
Evacuation Lift Management Plan	
Section 8.6.4 of the Fire Statement.	
Declaration of Compliance by a competent person	
Section 8.6.5 of the Fire Statement.	

4 COMPETENCY STATEMENT

Paragraph 3.12.9 of Policy D12 explains that Fire Statements should be produced by someone who is: "third-party independent and suitably-qualified". The Fire Surgery competence along with the fire engineers working on the scheme is provided below.

The Fire Surgery is an award-winning independent Fire Engineering design consultancy based in London. The company is a proud member of the Fire Engineering Council for the Fire Industry Association by virtue of the Chartered Engineering status of its engineers and also its ISO 9001 accreditation for Quality Management.

The specialist fire and risk consultancy team come from a varied background including chartered engineers, physicists and management consultants who specialise in business continuity. Members of the Fire Surgery team also contribute regularly to the development and writing of fire safety standards and industry best practice guidance, including *BS7974; Application of fire safety engineering principles to the design of buildings – Code of practice (2019)*, in which competency plays a fundamental part.

The Fire Surgery specialises in the development of fire strategies for innovative buildings, particularly commercial and entertainment venues in London. The Fire Surgery has a proven track record for securing Building Regulations approvals on a number of high-profile projects in London, and having a strong working relationship with Local Authority Building Control and London Fire Brigade Fire Engineering Team.

4.1 The Fire Engineers

Marshall Nyamuchiwa Meng (Hons), AIFireE, graduated from the University of Birmingham (2017) with a master's degree in chemical engineering and immediately started his career in the fire safety sector. He is registered as an Associate with the Institution of Fire Engineers (IFE) and is working towards Chartership status. Marshall has a wide range of experience within the fire safety industry consisting of developing holistic fire strategies, supporting design fire strategy principles during construction, and conducting computational fluid dynamic (CFD) fire and smoke modelling to support fire engineered solutions. As a Fire Engineer at The Fire Surgery, Marshall has developed and supported fire strategies for a variety of projects, including new and refurbished commercial developments in London, places of assembly and recreation, places of education and heritage buildings.

Andrew Nicholson BEng, MSc (Cantab), CEng, MIFireE, is the founder and Director of The Fire Surgery. He is a Chartered Fire Engineer with 25+ years' experience with Fire Engineering design. He has a specialist fire engineering degree from the University of Leeds and a Master's degree from the University of Cambridge. Andrew was a principal author of BS 9999 for means of escape (the advanced approach to fire safety design in the U.K.) which allows him to confidently challenge traditional escape strategies for buildings. Andrew has a track record of developing fire strategies for all types of buildings. He has successfully delivered some of the most high-profile projects in the UK including; the original Millennium Dome project 1999, The British Museum Great Court 2000, The BBC Media Village 2002, The O2 Arena 2006, The Natural History Museum's Darwin Centre 2009, Wimbledon

Centre Court redevelopment 2009 and The London 2012 Olympic Stadium. Some of the large commercial projects completed include R7 Kings Cross (2017) and 4 Kingdom Street (2017).

5 BUILDING DESCRIPTION

The building is sited at 125 Shaftesbury, WC2H 8AD, London. It is located between Shaftesbury Avenue (south-east elevation), Phoenix Street (north-west elevation), Stacey Street (north-east) and Charing Cross Road (south-west elevation). The building has a single storey height underpass (Caxton Walk) along the middle section on the building on the ground floor, providing a pedestrian route connecting Charing Cross Road and Stacey Street.

The building is proposed to consist of basement, ground and twelve upper floors. There are to be three main escape stairs:

- Stair 1 is to extend from basement to twelfth floor and provided within a firefighting shaft.
- Stair 2 is to extend from basement to twelfth floor and provided within a firefighting shaft.
- Stair 3 is an existing stair that extends from basement to sixth floor.

There are to be thirteen lift installations consisting of two firefighters' lifts, three evacuation lifts (with one provided as combined goods lift and one as combined passenger lift), six passenger lifts, one shuttle lift and one cycle lift.

- The two firefighters' lifts are to extend from basement to the top occupied twelfth floor.
- One combined passenger/ evacuation dual entry lift to extend from basement to the top occupied twelfth floor.
- One combined goods/ evacuation lift to extend from basement to the top occupied twelfth floor.
- One evacuation lift to extend from basement to sixth floor.
- One passenger lift to extend from basement to twelfth floor.
- One goods lift to extend from basement to eleventh floor.
- Two passenger lifts to extend from ground to tenth floor.
- Two passenger lifts to extend from ground to sixth floor.
- One shuttle lift is to extend from basement to first floor.
- One cycle lift is to extend from basement to ground floor.

The building height is to be increased from the existing 36.8m to 44.2m to the top occupied twelfth floor. The maximum footprint of the building was measured to be ca. 3230m^2 in area on the basement floor, and 2690m^2 on the first floor. The massing of the building will cut back on the upper floors with the provision of external terrace areas.

The main entrance to the building is to be through the reception lobby accessed from Charing Cross Road. Final exits from upper floors are to be provided from ground floor onto Caxton Walk (firefighting stair 1), Stacey Street (firefighting stair 2) and Shaftesbury Avenue (escape stair 3). Fire service access to firefighting shafts is to be provided mainly along Charing Cross Road and Stacey Street.

Figure 1: Escape stair and lift provisions (ground floor shown)

The building is proposed to incorporate staggered openings that connects the basement to the upper floors up to the sixth floor. As these openings will penetrate through compartment floors, this design will follow BS 9999 guidance recommendations for atria.

The proposed usage of the building is shown in Table 1 below.

Table 1: Building use

Floor	Use
Basement floor	Cycle and end of trip facilities, and plant rooms (including a sprinkler tank room).
Ground floor	Reception lobby, loading bay, refuse store, plant room, affordable workspace and three independent retail units.
First to fourth floor	Commercial accommodation, plant rooms, and WCs.
Fifth to twelfth floor	Commercial accommodation, plant rooms, WCs and an external terrace area.

Floor	Use
Roof	Green roofs and photovoltaic panels.

6 GUIDANCE DOCUMENTS AND BUILDING REGULATIONS APPROVAL

BS 9999: 2017 has been applied as the principal fire safety design guidance benchmark for this project. This is supplemented by Greater London Authority (GLA) London Plan Policy 2021 and Draft Supplementary Planning Guidance 2017.

7 THE BUILDING'S CONSTRUCTION METHOD AND PRODUCTS AND MATERIALS USED

7.1 Materials for structural elements

Existing structural elements for the building consist of a reinforced concrete frame. There will be vertical (two upper storeys) extensions, lateral extensions to the north elevation and atrium infills. The new superstructure will consist of a structural steel frame with concrete slab infills cast on profile metal decks.

Elements of structure will not consist of combustible materials.

According to BS 9999 guidance, elements of structure are recommended to be protected to a period of 120 minutes fire resistance. This can be reduced to a period of 75 minutes fire resistance if there are adequate ventilation conditions available from the building external walls.

The fire resistance period provided to existing structural elements is unknown and to be determined from a structural survey during RIBA Stages 3. Depending on the outcome of the structural survey, the existing structural elements were deemed to provide a maximum period of 90-minute fire resistance. All new elements of structure will be provided with a minimum load bearing fire resistance of 90 minutes (based on the existing period of structural fire resistance provided) in accordance with BS 9999 guidance, to BS EN 13501-2 and/or BS 476. This arrangement is to be supported by a demonstration of adequate ventilation conditions through the building external walls in accordance with BS 9999 guidance recommendations.

7.2 External wall materials

External wall surfaces are to be provided to meet European class B-s3, d2 to BS EN 13501-1. This provision meets BS 9999 guidance recommendations.

As the building is to be over 18m in height, any insulation product or filler material used in the external wall construction will be provided to meet European class A2-s3, d2 or better to BS EN 13501-1, and will not contain any combustible materials, in accordance with BS 9999 guidance.

7.3 Roof materials

The roofs are within 6m of the relevant boundaries. All roof coverings are to be provided to meet European class B_{ROOF}(t4) to BS EN 13501-5 in accordance with BS 9999 guidance.

External terrace guardings within 3m of extensive vertical façades are to be constructed from materials that meet European class A1, or A2-s1, d0 in accordance with BS EN 13501-1. This provision meets BS 8579 guidance recommendations.

As the roof is to support photovoltaic panels, roof materials in this area are to be provided to meet European class A1/ A2-s1, d0 to BS EN 13501-1. This provision meets the guidance of *RC62, Recommendations for fire safety with PV panel installations*: 2023.

The green roofs are to be provided to meet recommendations of *Department for Communities and Local Government (DCLG), Fire Performance of Green Roofs and Walls guide*: 2013. This will consist of the following considerations.

- The growing layer will be a minimum of 80mm, and the organic content will not exceed 50%.
- Fire breaks (paving slabs or non-vegetated strips of pebbles with diameter between 20-50mm, depth of 75mm and width of 500mm) are to be used around all openings and vertical elements.
- The structural base of the roof where the green roof is to be incorporated will be provided to meet European class B_{ROOF}(t4) to BS EN 13501-5.

8 MEANS OF ESCAPE FOR ALL BUILDING USERS AND EVACUATION STRATEGY

8.1 Occupant characteristics

The commercial and affordable workspaces will be occupied by occupants who will be awake and familiar with the building. These occupants will receive an induction where they will be familiarised with the evacuation routes and procedures from the building.

The retail units will be occupied by tenant staff members who will be awake and familiar with the building, and patrons/ visitors who will be awake and unfamiliar with the building. Retail tenants will ensure that any occupants in their demise will be assisted to evacuate the building in a fire emergency according to the evacuation procedure for the building.

Maintenance personnel will report to the building reception where building management will become aware of their location and operations in the building. The operation of maintenance personnel in the building will be in accordance with work permit procedures to be developed for the building. These work permit procedures will include a site induction where these personnel will be familiarised with evacuation routes and procedures for the building.

Any people with mobility impairments will be identified, through PEEPs, by the individual tenants for occupants in their demise and building management for visitors. Their evacuation procedures will also be outlined in the PEEPs.

8.2 Occupant loading

The building occupant loading was estimated from floor space factors outlined in BS 9999 as shown below.

Table 2: Occupant loading

Level	Net internal area (m^2)	Floor space factor (m^2 per person)	No. of seats/ people
Basement (cycle facilities)	-	-	60
Basement (plant areas)	1701	30	57
Ground (retail)	862	2	431
Ground (affordable workspace)	464	6	77
Ground (reception lobby)	363	6	61
First	2076	6	346
Second	2301	6	384
Third	2354	6	392
Fourth	2333	6	389
Fifth	2294	6	382
Sixth	2234	6	372
Seventh	2173	6	362
Eighth	1772	6	295
Ninth	1576	6	263
Tenth	1275	6	213
Eleventh	1222	6	204
Twelfth (commercial)	198	6	33
Twelfth (plantroom)	739	30	25
Total occupant loading for the upper floors			**3659**
Total occupant loading for the building			**4345**

8.3 Evacuation strategy

The building is to be designed on a zoned evacuation strategy, with a two-stage fire alarm regime.

As there is to be an atrium that is open to accommodation on the ground to sixth floor, the ground to second floors are to be evacuated simultaneously in a single phase. The seventh to twelfth floors will also be evacuated in a single phase. In case of fire in either zone, the basement floor will be evacuated in the first phase.

A senior fire marshal will be appointed with overall responsibility for fire safety in the building during the period of evacuation. A deputy senior fire marshal/ fire warden should also be appointed. The fire marshals/ wardens will be responsible for maintaining calm and discipline in an emergency evacuation event.

8.3.1 *Periodic review of the evacuation strategy*

The Fire Surgery are appointed to develop the base build fire strategy for the building. The base build fire strategy report will outline aspects of the fire strategy that will need to be considered by individual tenants. Individual tenants are to develop their own fit-out fire strategy (by appointing a competent fire engineer) based upon the principles of the base build fire strategy. Incoming tenants will therefore be familiarised with the evacuation strategy of the building as they initially occupy the building.

Post completion and occupation, the evacuation strategy will be reviewed on a yearly basis by an appointed competent fire risk assessor as part of the responsible person's duties under the Regulatory Reform (Fire Safety) Order. Additionally, building management will regularly conduct fire drills, twice a year, where the evacuation strategy can be continuously monitored throughout the life cycle of the building.

Post completion and occupation, any alterations to the base build elements of the building and the evacuation strategy will be supported by an appointed competent fire engineer. Any alterations to the evacuation strategy will consider the established arrangements for tenants in the building and develop any mitigation measures if these alterations will adversely affect the established evacuation strategy.

8.4 Horizontal means of escape

Storey exits are to provide minimum clear widths adequate to allow an exit capacity of the estimated occupant loading. Exit width factors of 2.81, 3.06 and 3.49mm per person are to be applied for areas with risk profiles of A1, A2/ B1 and B2, respectively, in accordance with BS 9999 guidance.

Exits are to be provided to have a minimum clear width of 850mm to allow for the unassisted egress for people with mobility impairments.

Provision of storey exits is to be such that travel distances will be limited according to risk profile as outlined in Table 3 below. Where the internal layout is not indicated, direct distance limits (3rd of the actual prescribed limit) are used.

Table 3: Travel distance limits

	One direction of escape		More than one direction of escape	
Risk profile	**Direct (m)**	**Actual (m)**	**Direct (m)**	**Actual (m)**
A1	19.9	29.9	49.8	74.8
B1	18.4	27.6	46.0	69.0
A2	16.9	25.3	42.2	63.3
B2	15.3	23.0	38.3	57.5
External plant	40	60	133	200

8.5 Vertical means of escape

The building is to be provided with three escape stairs as detailed below.

- Stair 1 is to extend from basement to twelfth floor. This stair is to provide a clear width of at least 1600mm.
- Stair 2 is to extend from basement to twelfth floor. This stair is to be provided with a clear width of at least 1400mm.
- Stair 3 is an existing stair that extends from basement to sixth floor. This stair is provided with a clear width of 1300mm.

8.5.1 *Vertical exit capacity*

All escape stairs are to be provided with lobby protection on all floors, hence there is no requirement to discount any stair when evaluating the vertical escape capacity.

Table 4 below outlines a high-level escape stair capacity assessment with the building adopting a zoned evacuation strategy.

Table 4: Vertical escape assessment

Level	**Stair width (mm)**	**Floors served**	**Stair width factor (mm per person)**	**Stair capacity**
Firefighting stair 1	1600	6	1.7	941
Firefighting stair 2	1400	6	1.7	823
Escape stair 4	1300	6	1.7	764
Combined stair capacity for six floors (first to sixth floor)				**2265**

Level	Stair width (mm)	Floors served	Stair width factor (mm per person)	Stair capacity
Estimated maximum occupant loading for the first to sixth floors				**2528**
Combined stair capacity for six floors (seventh to twelfth floor)				**1765**
Estimated maximum occupant loading for the seventh to twelfth floors				**1395**

The provision of three escape stairs with a zoned evacuation strategy (simultaneous evacuation of first to sixth floors, then seventh to twelfth floors) is shown to be adequate to provide egress capacity for the estimated occupant loading.

8.5.2 *Escape stair 3 use*

Under the Building Safety Act (2023) Part 4 Section 65, a high-risk building is defined as a building that is at least 18m in height or has at least 7 storeys and contains at least 2 residential units. The existing escape stair 3 is to be retained to maintain the legal arrangement for shared escape from an adjacent residential building. Correspondence with Sweco Building Control confirmed that since there will be no residential units within 125 Shaftesbury Avenue, and with only a shared escape route through the existing stair, the building will not be classified as a high-risk building.

8.6 Evacuation for people with disabilities and the use of evacuation lifts

Policy D5 of the London Plan requires the highest standards of accessible and inclusive design to be met.

Policy D5(B5) asks that development proposals to be designed to incorporate safe and dignified emergency evacuation for all building users. In all developments where lifts are installed, as a minimum at least one lift per core (or more subject to capacity assessments) should be a suitably sized fire evacuation lift suitable to be used to evacuate people who require level access from the building. The policy also requires for the provision of evacuation lifts to be independent of firefighters' lifts.

The building is to be provided with refuge points in the lobbies of all escape stairs. Refuge points are to measure at least 900mm by 1400mm to allow wheelchair users to manoeuvre into position. Each refuge point is to be provided with an emergency voice communication (EVC) system to BS 5839-9 to allow mobility impaired occupants to call for assistance.

8.6.1 *Details of the evacuation lifts and shafts*

Each escape stair is to be associated with an evacuation lift as shown in Figure 2 below.

- Evacuation lift 1: This evacuation lift shaft is to be within the protected enclosure of firefighting shaft 1, and will serve refuge points provided in stair 1 lobbies. This evacuation lift installation will extend to all floors in the building.

- Evacuation lift 2: This evacuation lift shaft is to be within the protected enclosure of firefighting shaft 2, and will serve refuge points provided in stair 2 lobbies. This evacuation lift installation will extend to all floors in the building.
- Evacuation lift 3: This evacuation lift shaft is to be within the protected enclosure of escape core 3, and will serve refuge points provided in stair 3 lobbies. This evacuation lift installation will extend from basement to the sixth floor.

Figure 2: Evacuation lift provisions (ground floor shown)

Each evacuation lift is to be provided in accordance with recommendations of BS 9999, BS EN 81-20 and BS EN 81-70.

Each lift installation is to be of the Type 2 according to BS EN 81-70, consisting of a car width of 1000mm, depth of 1400mm, carrying capacity of 630kg and minimum door opening width of 900mm. This type of car allows for one wheelchair user and an accompanying person.

The cause and effect of the evacuation lifts will allow staff to take control of the lift cars to facilitate the escape of those with mobility impairments.

8.6.2 *Capacity assessment*

A capacity assessment is outlined in below in line with requirements of the London Plan Policy D5(B5). This assessment is based on the following conservative assumptions.

- A typical passenger lift is researched to operate as at an average speed range of 1 - 3 m/s. The evacuation lifts are assumed to operate at an average speed of 1 m/s.

- The time for accompanied occupants to board and aboard an evacuation lift is estimated to be 10 seconds for each process.
- The building is estimated to have an occupant loading of ca. 3700 people on the basement, and floors above ground. The number of people with mobility impairments is estimated as 1% of this building occupancy, therefore a total of ca. 37 people. These occupants are distributed according to floor area and floor use such that it is assumed there will be 2 occupants on the basement floor, 3 occupants on the first to eleventh floor, and 2 occupants on the twelfth floor.
- The number of people with mobility impairments on each floor are assumed to use all the evacuation lifts available, such that the seventh to eleventh floors (where there are two evacuation lifts) will have two occupants using one of the evacuation lifts provided.

Table 5: Evacuation lift capacity assessment

Level	Height from ground	Upward travel time	Boarding time	Downward travel time	Aboarding time	Evacuation time
Basement	3.8 m	3.8 s	10 s	3.8 s	10 s	28 s
First	5.4 m	5.4 s	10 s	5.4 s	10 s	31 s
Second	8.9 m	8.9 s	10 s	8.9 s	10 s	38 s
Third	12.5 m	12.5 s	10 s	12.5 s	10 s	45 s
Fourth	16.0 m	16.0 s	10 s	16.0 s	10 s	52 s
Fifth	19.5 m	19.5 s	10 s	19.5 s	10 s	59 s
Sixth	23.1 m	23.1 s	10 s	23.1 s	10 s	66 s
Seventh	26.6 m	2 x 26.6 s	2 x 10 s	2 x 26.6 s	2 x 10 s	146 s
Eighth	30.0 m	2 x 30.0 s	2 x 10 s	2 x 30.0 s	2 x 10 s	160 s
Ninth	33.6 m	2 x 33.6 s	2 x 10 s	2 x 33.6 s	2 x 10 s	174 s
Tenth	37.1 m	2 x 37.1 s	2 x 10 s	2 x 37.1 s	2 x 10 s	188 s
Eleventh	40.7 m	2 x 40.7 s	2 x 10 s	2 x 40.7 s	2 x 10 s	203 s
Twelfth	44.2 m	44.2 s	10 s	44.2 s	10 s	108 s
Total evacuation time						**1299 s**

From the evacuation assessment outlined in Table 4 above, the use of three evacuation lifts (with two extending from seventh to twelfth floor where there are two escape cores) will facilitate the complete evacuation of 37 occupants with mobility impairments from the building within a period of 23 minutes.

Occupants with mobility impairments are to wait for assistance in the protected enclosures of stair lobbies with a period of at least 30 minutes (120 minutes for escape cores 1 and 2) fire resistance from the accommodation. As the period of fire resistance exceeds the estimated evacuation period, occupants with mobility impairments are considered to be adequately protected from adverse effects of fire and smoke and the provision of three evacuation lifts is acceptable. Additionally, the provision of three evacuation lifts (with two extending from seventh to twelfth floor where there are two escape cores) is compliant with London Plan Policy D5(B5).

8.6.3 *Evacuation strategy*

The building is to be designed to adopt a zoned evacuation strategy as outlined in section 8.3. Upon confirmed fire detection from a fire zone, the evacuation of the zone will be initiated. People with mobility impairments will wait in the refuge points allowed for in the stair lobbies; these refuge points are provided such that they do not adversely affect the escape clear width for ambulant people.

The refuge points will be readily identifiable from emergency signage and provided with EVCs that will allow for people with mobility impairments to call for assistance. The EVC master station are to be provided in a location that is manned; the reception area and fire control centre. As people with mobility impairments can be confident that their presence is known and that assistance will be provided, this will allow them to remain in the refuge point without distress.

The building is also provided with two firefighter's lifts that can also be used for evacuation purposes prior to the arrival of the fire service. As a contingent measure in case of an evacuation lift being unavailable, the two firefighter's lifts can be used to assist with evacuation prior to the arrival of the fire service, and one firefighter's lift could continuously be used for evacuation post fire service arrival.

8.6.4 *Evacuation lift management plan*

Upon a confirmed fire, all lifts including evacuation lifts will park travel and park on the ground floor with doors open. The evacuation (and firefighter's) lifts will be provided with controls that allow the operator to take control of the car and travel to any specified floor.

Building management and security personnel will receive the calls from refuge points and will be trained to operate the evacuation lifts hence they will assist people with mobility impairments to evacuate the building. Individual tenants will also produce PEEPs to ensure that there will be procedures in place for them to evacuate people with mobility impairments from within their demise.

8.6.5 *Declaration of compliance with Policy D5(B5)*

The Fire Surgery hereby confirm that the provision of three evacuation lifts , one associated with each escape core, complies with all relevant requirements of London Plan Policy D5(B5). The Fire Surgery hereby also declare that the that the design, number, size and operation of the evacuation lifts comply with the relevant regulations and standards.

8.7 Evacuation assembly point

A suitably sized evacuation assembly point will be identified in an area that can accommodate the building's occupancy. Open public spaces in the area can be used, such as the broad pedestrian pavement areas along Charing Cross Road, Stacey Street and Shaftesbury Avenue. An assembly point

location will be chosen in coordination with the management and security requirements for the building, so that a safe, efficient method can be developed to manage a full-scale evacuation. This will form part of the Fire Safety Management procedures for the building and an Emergency Evacuation Plan will be developed with the building management team and responsible person as defined under the Regulatory Reform (Fire Safety) Order.

9 PASSIVE AND ACTIVE FIRE SAFETY MEASURES

The fire safety strategy for 125 Shaftesbury Avenue relies on a combination of active and passive measures. These are recommended by the guidance documents, with additional measures included as part of a package of fire engineered solutions where necessary or determined as part of the QDR process.

9.1 Passive fire safety systems

The following outlines the principal passive fire safety provisions to be imbedded in the design of the proposed development:

- Escape signage provided to escape routes in line with BS 5499-4: 2013.
- Protected escape/ firefighting stairs to be enclosed in 120-minute fire resisting construction to BS EN 13501-2: 2023 and provided with protected and ventilated lobbies.
- Loadbearing elements of structure protected to a minimum period of 90 minutes fire resistance to BS EN 13501-2: 2023.
- All floors to be provided as 90-minute compartment floors to BS EN 13501-2: 2023.
- Fire resisting construction to be provided throughout the building to enclose significant fire risks, protect means of escape and prevent unseen fire spread to BS 9999 guidance.
- All external wall surfaces to meet European class B-s3, d2 to BS EN 13501-1: 2018.
- Any insulation product or filler material used in the external wall construction to meet European class A2-s3, d2 or better to BS EN 13501-1: 2018.
- All roof coverings to meet European class B_{ROOF}(t4) to BS EN 13501-5: 2016.
- Roof materials in areas supporting PV panels to meet European class A2-s1, d0 or better to BS EN 13501-1: 2018.
- Green roof to meet recommendations of the *Department for Communities and Local Government (DCLG), Fire Performance of Green Roofs and Walls guide*: 2013.

9.2 Active fire safety systems

The following outlines the principal active fire safety provisions to be imbedded in the design of the proposed development:

- Category L1 fire detection and alarm system to BS 5839-1: 2017. This is to be supplemented with a voice alarm system to BS 5839-8: 2023.
- Emergency lighting system to BS 5266-1: 2016.
- Emergency voice communication systems for disabled refuges to BS 5839-9: 2021.

- Firefighters' lifts to BS 9999: 2017, BS EN 81-20: 2020 and BS EN 81-72: 2020.
- Evacuation lifts to BS 9999: 2017, BS EN 81-20: 2020 and BS EN 81-70: 2021+A1: 2022.
- Sprinkler system coverage throughout the building to BS EN 12845: 2015+A1: 2019.
- Natural smoke vents, at ground floor and sixth floor, for the enclosed atrium, with each providing a geometric free area of 9m^2 to BS EN 12101-2: 2017.
- Two firefighting shafts consisting of:
    - Firefighting stair including minimum 1.0m^2 automatic opening vent at the head of the stair to BS EN 12101-2: 2017.
    - Firefighters' lift to BS EN 81-20: 2020, BS EN 81-72: 2020 and BS9999: 2017.
    - Firefighting lobbies provided with mechanical smoke ventilation system to BS 7346-8: 2013.
    - Dry rising fire main to BS9990: 2015.
- One 120-minute fire and smoke curtain to protect the dual entry evacuation lift (on the twelfth floor) to BS 8524-1: 2015 and BS 8524-2: 2015.
- One 90-minute fire and smoke curtain to protect the passenger lift that opens directly onto accommodation (on the twelfth floor) to BS 8524-1: 2015 and BS 8524-2: 2015.
- Basement ventilation from a mechanical smoke ventilation system operating at 10 air changes per hour.
- A system to provide smoke ventilation to the loading bay to the SCA guide 2010.
- Fire telephone system to firefighting shafts to BS 5839-9: 2021.
- Secondary back up power supply for life safety systems.
- Portable fire extinguishers installed in accordance with BS 5306-3: 2017.

10 ACCESS AND FACILITIES FOR THE FIRE AND RESCUE SERVICE

Appropriate firefighting provisions and means of access to and within the proposed building for firefighting personnel will be provided.

Good perimeter access is available along Charing Cross Road and Stacey Road with access available to firefighting shafts from these access routes on the ground floor.

The building is to be provided with two firefighting shafts that will extend to all floors. Firefighting shafts are to be provided such that all areas of the floor plan will be within 60m (45m direct distance) of a dry fire main outlet. These provisions are compliant with BS 9999 guidance.

The primary means of internal firefighting will be using the firefighting stairs. Dry rising fire mains will be provided within firefighting stairs 1 and 2, with landing valves provided within the firefighting lobbies at each floor. Hose laying to all areas will be achievable to within 45m of the landing vales on each floor. Dry riser inlet connections will be provided in the façades adjacent to entrances to the firefighting stairs. These inlet connections will be within 18m of the fire appliance parking locations along Stacey Street.

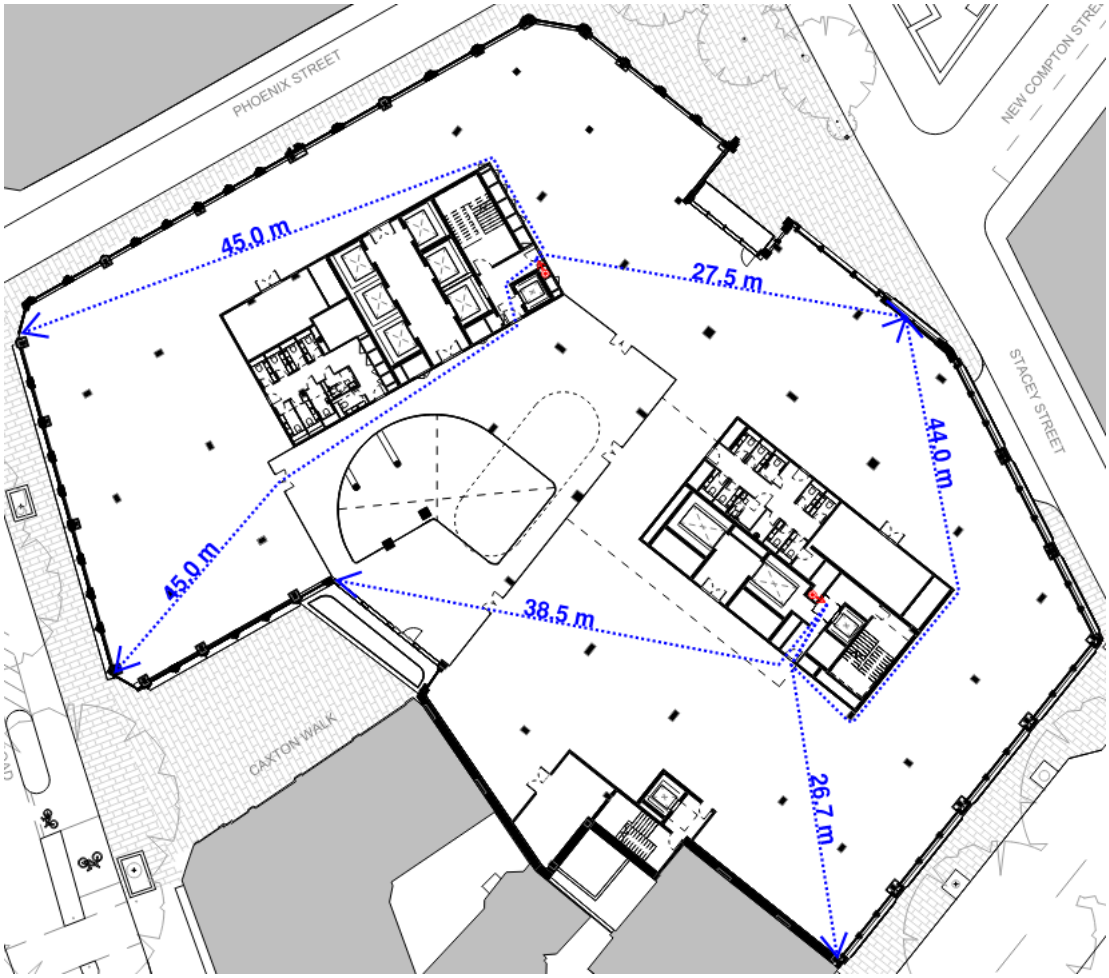

Figure 3: Hose coverage (Level 2 shown)

11 SITE ACCESS FOR THE FIRE AND RESCUE SERVICE

Vehicle appliance access is provided on all elevations surround the building. Firefighting access to firefighting shafts will be provided on the east elevation along Stacey Street (see Figure 4 below).

The site is well provided for by existing street hydrants located on the surrounding road network, with the closest existing hydrant located adjacent to 125 Shaftesbury Avenue along Stacey Street.

Soho Fire Station is the nearest fire station to 125 Shaftesbury Avenue, located approximately 0.1 miles away.

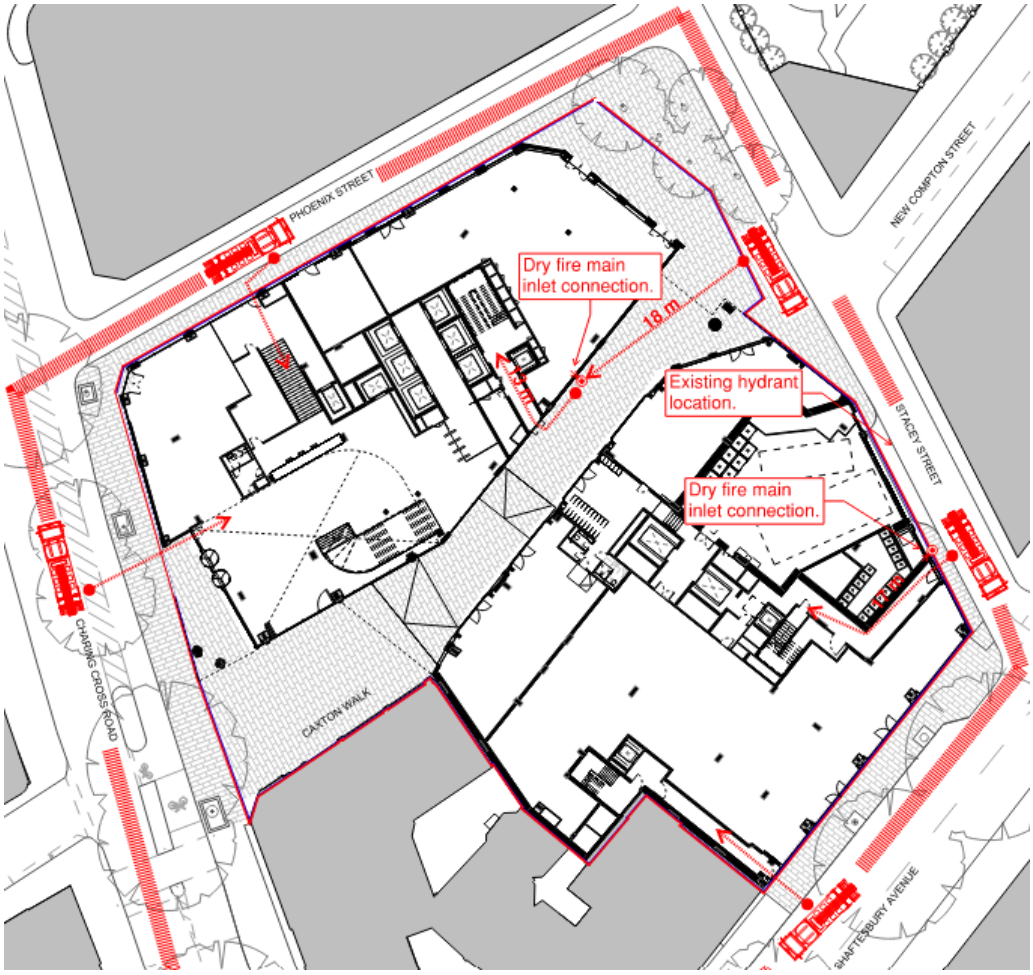

Figure 4: Fire Service access into the building (ground floor)

12 FUTURE DEVELOPMENT OF THE ASSET AND THE 'GOLDEN THREAD' OF INFORMATION

The Independent Review of Building Regulations and Fire Safety was commissioned by government following the Grenfell Tower fire to make recommendations on the future regulatory system. The report, chaired by Dame Judith Hackitt, is entitled *Building a Safer Future (2019)* and provides recommendations in section 5 on the competency of those operating within the fire safety framework and requires overall consistency in fire safety from initial design through to occupation and future management. This is commonly referred to as the "Golden Thread".

Whilst this report is primarily written in the context of high rise residential and complex buildings, there are common recommendations which are applicable throughout the fire safety and construction industries.

The following information outlines how The Fire Surgery will consider the Golden Thread in the context of fire safety for 125 Shaftesbury Avenue.

12.1 RIBA design stages

The Fire Surgery were appointed at RIBA Stage 1 to provide fire safety input into the concept design and develop an outline fire strategy to highlight the main concerns and coordinate the design with the design team. During RIBA Stage 1, this design was developed to a level that can be used to inform the ongoing design.

The scheme is currently in RIBA Stage 2 and The Fire Surgery are appointed to develop the fire strategy. The Fire Surgery have a continued appointment through to RIBA 4 to further develop and maintain the agreed principles of the fire strategy. If the project is successful through planning, The Fire Surgery are likely to be retained for the remainder of RIBA Stages 3 and 4 to complete the fire strategy design, building upon the RIBA Stage 2 fire strategy principles.

12.2 Construction Monitoring & Practical Completion

For fire safety design in buildings, it is important to monitor the procurement and construction of the fire strategy to ensure that the approved fire strategy is designed and actually constructed as intended.

The detailed design of active fire systems will be important, including the commissioning and testing of the systems.

Locations of passive fire protection and the active system specifications sometimes change. Therefore, having the project fire engineer appointed during the tender, contractor lead designs and construction can ensure a smoother route to practical completion. The contractor has an obligation under Regulation 38 of the Building Regulations 2010 to hand over all fire related information for the project to the client, in order to allow them to manage the building successfully under the Regulatory Reform (Fire Safety) Order 2005.

This will require an as built fire strategy report that reflects the actual building constructed. It will be necessary for the contractor to update the design fire strategy as this stage.

The Fire Surgery is expected to undertake a monitoring role on behalf of the applicant during the construction period and will work with the contractor to ensure any changes to the design comply with the established fire strategy principles.

12.3 Modifications to the proposed development

The active and passive fire safety systems outlined in section 9 were developed by The Fire Surgery at RIBA stage 2. Any alterations to any of these active and passive fire safety systems during the design stages will alter the proposed fire strategy. The Fire Surgery are likely to be appointed at RIBA stages 3 to 6 and will ensure that any alteration to these fire safety systems will be coherent with the building fire strategy to ensure a safe design; in close collaboration with the principal designer, the design team, contractors and the responsible person.

At RIBA Stage 6: Handover, a 'Final Issue' fire strategy report is to be issued to the responsible person to detail the active and passive fire safety systems provided in the constructed building to meet the statutory requirements of Regulation 38 of The Building Regulations 2010. Post completion and occupation, the 'Final Issu' fire strategy report will specify for any alteration to the building fire safety systems is to be supported and validated by a competent fire engineer.

12.4 Fire Safety Management

Management procedures will play a critical function in both the prevention and associated containment of fires and the evacuation of occupants in an emergency situation. The fire safety strategy has been developed on the assumption that the building will be properly managed. This includes pre-planning, training, maintenance and ongoing risk assessment in order to meet the requirements of the Regulatory Reform (Fire Safety) Order 2005.

Managing fire safety is a process that lasts throughout the life of a building, starting with the initial design, which is intended both to minimize the incidence of fire and to ensure that if a fire does occur, appropriate fire safety systems (including active, passive and procedural systems) are in place and are fully functional.

Effective management of fire safety can contribute to the protection of the building occupants in many ways:

- By working to prevent fires occurring in the first place,
- By monitoring the fire risk on an on-going basis and taking appropriate action to eliminate or reduce risk,
- By being aware of the types of people in the building (such as disabled people, elderly people, children, pregnant women, etc.) and any special risks or needs associated with particular events,
- By ensuring that all the fire safety measures in the building are kept in working order and that the means of escape are always available,
- By training staff and organizing the evacuation plan, to ensure that occupants leave quickly if a fire occurs,
- By taking command in the event of a fire until the Fire Service arrives.

Upon completion, the building owners or managers (including tenants) will need to undertake fire risk assessments as required under the Regulatory Reform (Fire Safety) Order 2005, and have these available for inspection by the Fire Service at any time. This should typically be undertaken annually by a competent person or when there are significant changes in the building and is carried out to ensure that the fire strategy is upheld throughout the life of the building and that the risk of fire is kept low.

For this specific building, management areas that are of particular importance for the longevity of the proposed fire safety design solution include:

- The staffing level provided is to be appropriate to the building, the nature of the occupants, the management systems in place, and the active and passive systems provided.
- Staff should be trained in the implementation of emergency procedures, with those having particular responsibilities for assisting with evacuation receiving special training for these duties. A sufficient number of trained staff should be available to provide full coverage of the building, with provision for contingencies, sickness or holiday absences.
- The fire strategy assumes that the fire safety manager will be sufficiently empowered to ensure that the legislative requirements are met, initiate testing, maintenance or repair, and where necessary have direct control of staff responsible for these tasks. Such powers are to be supported by the necessary resources including funding.
- Disabled person evacuation procedures. The management procedures for assisting in their egress should include a means of identifying, prioritising and then assisting mobility impaired persons in effecting their escape to the final place of safety, using the refuge communication systems and firefighters' lifts.
- Allocation of appropriate assembly points and management of occupants leaving the building during an evacuation, including navigating busy roads.
- Management, monitoring, and maintenance of all fire safety systems, and in particular the automatic fire detection and alarm systems, active fire and smoke curtains, and the firefighting systems.
- Provision of appropriate premises information box for the fire service.

  Co-operation and co-ordination between the responsible persons for the building (landlord/ tenants) in regard to fire safety matters relevant to the building, including ensuring that emergency plans are co-ordinated and consistent with one another.

13 SUMMARY

This fire statement has been produced to support the planning application for 125 Shaftesbury Avenue. The information outlined in this fire statement is to demonstrate how the development meets the requirements of London Plan Policy D12B, 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 development, and the methods by which these objectives will be provided/ satisfied.

This 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 light of London Plan fire safety policy requirements and the justification for these measures as described below:

- The fire statement and subsequent fire strategy for 125 Shaftesbury Avenue has been developed by competent and experienced fire engineers, including an engineer Chartered with The Institution of Fire Engineers.

- The key fire safety objective of satisfying the Building Regulations performance requirements has been determined.
- The principal fire safety guidance document used has been identified, which will be BS 9999: 2017 for this development.
- The building materials have been identified which include a precast concrete frame for the existing construction and steel elements with metal decks for the two-storey extension. Elements of structure will not consist of combustible materials.
- The safe means of escape has been documented. Sufficient stair capacity is available for all occupants to escape via the available escape routes according to a zoned evacuation strategy.
- The means of escape for mobility impaired occupants will be available through the use of evacuation lifts (one for each escape core). These provisions are compliant with Policy D5(B5) of the London Plan.
- Passive and active systems have been identified for the building, including compartmentation to separate fire risks and protect escape routes, sprinkler protection throughout, and systems to support means of escape and firefighting.
- The access and facilities for the fire service has been established including vehicle access to the building and access directly into firefighting shafts from outside. Existing fire hydrants are available on the surrounding streets, including the nearest hydrant adjacent to the building along Stacey Street. Dry fire mains to be provided serve all levels of the building, providing adequate hose coverage to all areas of the floor plan.
- The consistency in fire safety has been demonstrated to meet the Golden thread by virtue of The Fire Surgery's involvement in the development of the fire strategy and the expected future appointments through construction to support regulation 38 of the building regulations and allow the users of the building to execute their responsibilities for fire safety under the Regulatory Reform (Fire Safety) Order 2005 which is the legislation for fire safety in occupied buildings.

The Fire Surgery believe this fire statement meets the requirements of the London Plan Policy D12B.

14 SCHEDULE OF RELEVANT DRAWINGS

A list of the relevant plan titles and reference numbers used in the production of this Fire Statement is provided in the schedule below.

Drawing No.	Title	Date	Revision No.
125SA-DSD-ZZ-B1-DR-A-20099	Proposed Level B1 GA Plan	24 Oct 2024	P03
125SA-DSD-ZZ-00-DR-A-20100	Proposed Level 00 GA Plan	24 Oct 2024	P03
125SA-DSD-ZZ-01-DR-A-20101	Proposed Level 01 GA Plan	24 Oct 2024	P03
125SA-DSD-ZZ-02-DR-A-20102	Proposed Level 02 GA Plan	24 Oct 2024	P03
125SA-DSD-ZZ-03-DR-A-20103	Proposed Level 03 GA Plan	24 Oct 2024	P03
125SA-DSD-ZZ-04-DR-A-20104	Proposed Level 04 GA Plan	24 Oct 2024	P03
125SA-DSD-ZZ-05-DR-A-20105	Proposed Level 05 GA Plan	24 Oct 2024	P03
125SA-DSD-ZZ-06-DR-A-20106	Proposed Level 06 GA Plan	24 Oct 2024	P03
125SA-DSD-ZZ-07-DR-A-20107	Proposed Level 07 GA Plan	24 Oct 2024	P03
125SA-DSD-ZZ-08-DR-A-20108	Proposed Level 08 GA Plan	24 Oct 2024	P03
125SA-DSD-ZZ-09-DR-A-20109	Proposed Level 09 GA Plan	24 Oct 2024	P03
125SA-DSD-ZZ-10-DR-A-20110	Proposed Level 10 GA Plan	24 Oct 2024	P03
125SA-DSD-ZZ-11-DR-A-20111	Proposed Level 11 GA Plan	24 Oct 2024	P03
125SA-DSD-ZZ-12-DR-A-20112	Proposed Level 12 GA Plan	24 Oct 2024	P03
125SA-DSD-ZZ-ZZ-DR-A-20113	Proposed Roof Plan	24 Oct 2024	P03
125SA-DSD-ZZ-ZZ-DR-A-23101	Proposed Section AA	24 Oct 2024	P03
125SA-DSD-ZZ-ZZ-DR-A-24101	Proposed Charing Cross Road Elevation	24 Oct 2024	P03
125SA-DSD-ZZ-ZZ-DR-A-24102	Proposed Shaftesbury Avenue Elevation	24 Oct 2024	P03
125SA-DSD-ZZ-ZZ-DR-A-24103	Proposed Stacey Street Elevation	24 Oct 2024	P03
125SA-DSD-ZZ-ZZ-DR-A-24104	Proposed Phoenix Street Elevation	24 Oct 2024	P03