



JENSEN HUGHES

## Report

**Project** 151 Shaftesbury Avenue

**Report Title** Fire Statement Report

**Our Ref** GL8282/R1 Issue 1

## Issue Record

REV	DATE	AUTHOR	REVIEW	APPROVED	SECTION	AMENDMENTS
Issue 1	31/05/2024	JL	BY	BT	-	-

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## 1.0 INTRODUCTION

### 1.1 Description of Building

The property is located on the northwestern side of Shaftesbury Avenue in the London Borough of Camden. It is bound by:

- Shaftesbury Avenue to the southeast
- St Giles Passage to the southwest
- New Compton Street to the northeast
- An adjacent 8 storey building to the northwest.

The property consists of :

- Residential building is present to the eastern side of New Compton Street.
- Office building rising to 8 storeys above ground plus a circular pavilion and plant at roof level. A full basement and part sub-basement is present beneath these storeys. There is a retail unit at ground, with the remainder being commercial offices.

A series of residential flats are present within the northeast corner of the building. The four levels of the residential do not match those of the commercial space; 5no residential units are provided within the same massing as 4no office floors.

The office and residential sections are viewed as separate entities, with no interconnection between them.

The height of the top occupied office floor is approximately 31 meters above ground level.



Figure 1: Top Floor Height

## 1.2 Aim of Report

Since there are no major modifications planned for the residential building, except for changing the facade and providing a new sprinkler system, this report will concentrate solely on the office building. However, when pertinent, it will also address any modifications related to the residential flats, such as those involving the sprinkler system and external wall sections.

This report describes the key fire strategy principles for the office building and is intended to identify the main fire safety features, firefighting access facilities and fire strategy principles in accordance with Policy D12(B) of the London Plan and is intended to accompany the Planning Application for the building.

This statement has been produced by Jensen Hughes as an independent third party and is submitted in support of the planning application for the Proposed Development at 151 Shaftesbury Avenue.

This report addresses life safety, not property protection.

## 1.3 Design Basis

The design has been primarily based on the guidance within BS9999:2017, Fire safety in the design, management, and use of buildings – Code of practice.

Additionally, Approved Document B: Volume 2 2019 (incorporating 2020 and 2022 amendments) has been used where appropriate to supplement BS 9999 and incorporate revised guidance and changes in regulations.

The design, specification and construction of each fire safety measure will be in accordance with the relevant British Standards and other applicable design codes of practice.

## 1.4 Declaration

Provided that the design complies with the fire safety strategy and provisions mentioned in this statement, the fire safety of the proposed development and the fire safety information will satisfy the requirements of London Plan policies D5 and D12 and the functional requirements of the Building Regulations.

Report by Jack Lalor MEng (Hons)

Checked by Basheer Youssef, BEng, MIFireE

Approved By Boris Tang, MEng (Hons), CEng, MIFireE, MIMechE,

## 2.0 THE LONDON PLAN 2021

The purpose of a Fire Statement is to show how the requirements of the London Plan have been considered and addressed. In addition, to the London Plan itself, development of the design and the Fire Statement has considered the guidance in the GLA document, London Plan Guidance, Fire Safety, February 2022. The table below illustrates where the requirements of the relevant London Plan policies are specifically addressed:

Policy Number	Description	Relevant Section in the Report
Policy D12, Subsection B1	Building's construction: methods, products and materials used, including manufacturers' details.	4.0
Policy D12, Subsection B2	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.	6.0
Policy D12, Subsection B3	Features which reduce the risk to life: fire alarm systems, passive /active fire safety measures and associated management and maintenance plans.	5.0
Policy D12, Subsection B4	Access for fire service personnel and equipment: how this will be achieved in an evacuation situation, water supplies, provision and position of equipment, firefighting lifts, stairs and lobbies, any fire suppression and smoke ventilation systems proposed, and the ongoing maintenance and monitoring of these.	8.0
Policy D12, Subsection B5	How provision will be made within the curtilage of the site to enable fire appliances to gain access to the building.	8.0
Policy D12, Subsection B6	Ensure that any potential future modifications to the building will take into account and not compromise the base build fire safety/ protection measures.	All
Policy Number	Description	Relevant section in the Report
Policy D5, Subsection B5	In all developments where lifts are installed, a minimum one lift per core (or more subject to capacity assessments) should be a suitably sized fire evacuation lift	6.8

*Table 1: London Plan Policy Summary*

### 3.0 BUILDING SAFETY ACT 2022

The Building Safety Act was granted Royal Assent on 28 April 2022. This sets out a new regulatory framework which will cover the planning, design, construction and occupation of buildings. Compliance will be monitored by the new Building Safety Regulator (BSR), who is the new Building Control Authority for higher risk residential buildings (HRBs).

BSR became the new Building Control Authority for HRBs on 1 October 2023. It is now necessary for works relating to HRBs to submit for a building control approval application (Gateway 2). Approval will need to be granted before work can commence on site.

This property will have two structural components, which are as follows:

- Office building with a top floor height of more than 18m and independent access. The proposed development comprises of the existing building and the addition of a single storey and recreational roof area.
- Residential building with a top story height of less than 18 metres and independent access with no work except for providing sprinkler and new façade.

We understand that 151 Shaftesbury Avenue (the office building) and 19 Compton Street (the residential building) have been placed on the HRB Register. As confirmed by the landlord, the buildings were "registered" as a precautionary measure by the landlord. However, on review by the landlord's consultant team it is now understood that neither the office or residential building (nor both buildings together) meet the criteria for being HRB on the basis that:

- 151 Shaftesbury Avenue and 19 Compton Street are 'independent sections' as defined in the Higher-Risk Buildings (Descriptions and Supplementary Provisions) Regulations 2023, and therefore treated as independent buildings. There is no access between the two independent sections, and each independent section has its own independent access for persons to enter and exit;
- 151 Shaftesbury Avenue is an independent section (building) which contains no residential units; and
- 19 Compton Street is an independent section (building) which contains residential units but, when measured in accordance with the legislation, the top of the floor surface of the top storey of the independent section (building) does not meet the height threshold of 18 metres or 7 storeys.

Accordingly, it is anticipated that an application is likely to be made to the BSR to remove 151 Shaftesbury Avenue and 19 Compton Street from the HRB Register by the landlord prior to commencement of this project.

## 4.0 THE BUILDING'S CONSTRUCTION METHOD AND PRODUCTS AND MATERIALS USED

### 4.1 Construction Materials

The existing structure above ground is composed of a steel frame and a composite deck floor slab. The structure of the existing basement consists of an RC box. Existing beams and columns will require strengthening where necessary.

The proposed horizontal extensions will be in the form of a timber joist floor and within-depth steel beams for the rear extension. CLT planks on down stand beams form the new floor and roof. The CLT floor to be assessed in fire via computational burnout analysis by specialists.

The existing stairs are made of concrete; however, it is proposing steel frame stairs for the new floors.

Building materials will be required to achieve the minimum standard for fire resistance as outlined in Section 7 for passive fire protection. All internal lining, external wall materials and roof coverings will achieve the minimum requirements of Building Regulation guidance documents.

Building methodologies will be developed with consideration given to the fire safety of the neighbouring buildings.

### 4.2 External Wall Construction

The external enclosing walls above ground level will be brick and GRC Cladding panels/lintels.

As the top floor height of the office building exceeds 18m above ground floor:

- The external surfaces (i.e., outermost external material) of external walls will comply with the provisions in Table 12.1. (From ground level to 18m will achieve class C-s3, d2 or better and from 18m in height and above will achieve class B-s3, d2 or better)
- Any insulation product, filler material (such as the core materials of metal composite panels, sandwich panels and window spandrel panels but not including gaskets, sealants and similar) etc. used in the construction of all external wall forming the envelope of the building will achieve Class A2-s3, d2.

However, as this building will be attached to the existing residential building, it is proposed that products forming part of the external wall construction achieve European Class A2-s1, d0 or Class A1, there are specific exemptions noted in Regulation 7(3) and these will be followed as appropriate.

### 4.3 External Fire Spread

Calculations of the permitted unprotected areas on the building's elevations have not been carried out at this stage but are not expected to be particularly restrictive given the building is surrounded by public roads, sprinklered, and provided with compartment floors. However, this will be assessed in more detail as the design progresses to ensure the elevations are designed to limit the risk of fire spread to / from nearby buildings, in line with Building Regulations guidance.



## 5.0 ACTIVE FIRE SAFETY SYSTEMS

### 5.1 Fire Suppression

Sprinklers will be provided throughout the office and associated amenity areas. The sprinkler system will be designed in accordance with guidance in BS EN 12845:2015 *Fixed firefighting systems – Automatic sprinkler systems – Design, installation and maintenance*.

For the residential units, a residential sprinkler system will be provided and will be designed and installed in accordance with BS 9251.

### 5.2 Fire Detection and Alarm

An automatic fire detection and alarm system achieving at least an L3 standard will be provided. This will be designed in accordance with BS 5839-1: 2017.

A means of alarm and warning will be provided to all of the external terrace spaces to alert occupants in these areas to the presence of a fire within the building.

### 5.3 Fire Curtains

Fire curtains will be provided to protect Stair A and the lift cores at ground floor.

### 5.4 Emergency Lighting

Emergency Lighting will be provided in accordance with the recommendations of BS 5266-1.

### 5.5 Back-up Power

All life safety systems within the building will be provided with back-up power in line with the recommendations of BS 9999.

### 5.6 Smoke Venting

#### 5.6.1 Firefighting Lobbies

The lobby in the firefighting shaft will be provided with a mechanical smoke extract system. This is discussed in more detail in Section 8.2.

#### 5.6.2 Lower Ground floor and Basement

A mechanical smoke and heat ventilation system will be installed in the basement, achieving a ventilation rate of 10 air changes per hour. This complies with the guidance outlined in BS 9999.

The system will be further developed to within these principles as the design progresses.

### 5.7 Routine Inspection and maintenance of fire safety installations

Fire safety installations shall be maintained in accordance with the relevant British or European standards. An Inspection, maintenance and repair manual shall be part of the fire safety manual and incorporated in the building management plan.

## 6.0 MEANS OF ESCAPE FOR ALL BUILDING USERS AND EVACUATION STRATEGY

### 6.1 Evacuation Strategy

All areas of the office building will evacuate simultaneously on confirmation of a fire anywhere in the office building only.

Any fire in the office building will not trigger the evacuation of the residential building and vice versa.

The opportunity for a staged alarm system to minimise the potential for false alarms will be determined as the scheme progresses.

### 6.2 Risk Profiles

BS 9999 categorises buildings in terms of a risk profile, combining the awareness and familiarity of occupants with the potential fire load. The following risk profiles have been used in assessing escape from different parts of the building, accounting for the provision of sprinklers:

Area	Risk profile
Office Changing Room Cycle storage room	A1
Bin Stores Mechanical Plant Room	A2
Retail units	B2
Plant and back-of-house Bin stores	A3

Table 2: Risk profiles

### 6.3 Occupancy

The occupancy of the building has been assessed using a floor space factor of 6m<sup>2</sup>/person within office areas and 2m<sup>2</sup>/person within retail areas. The occupancy of the building is summarised in the following table:

The pavilion would be occupied by occupants from the office floors so would not increase the overall occupancy of the building.

Floor	Area (m <sup>2</sup> )	Occupancy
Ground	394 (retail) 98 (reception)	214
First	518	87
Second	576	96
Third	576	96
Fourth	576	96
Fifth	655	110
Sixth	621	104
Seventh	582	97
Eighth	395	66
<b>Total (above ground floor)</b>		<b>752</b>

Table 3: Occupancy

### 6.4 Storey Exits

Each office floor has two storey exits. Each exit will be at least 850mm wide. After discounting one exit, this will provide capacity for 151 occupants per floor. This is adequate for the occupancy at any one floor.

### 6.5 Roof

The roof will have direct access to Stair A. Access to Stair B will also be possible via a demarcated clear path through the plant areas.

### 6.6 Travel Distances

The maximum applicable travel distance in accordance with BS 9999:2017 is shown in the table below.

AREA/ZONE	RISK PROFILE	ONE WAY TRAVEL DISTANCE (m)	TWO WAY TRAVEL DISTANCE (m)
Office Changing Room Cycle storage room	A1	26 (17)	65 (44)
Bin Stores Mechanical Plant Room	A2	22 (15)	55 (37)
Plant Room	A3	18 (12)	45 (30)

Table 4: Travel Distance Requirements

As proposed, travel distances are within direct limits for office areas and majority of the basement level, this provides good flexibility for fitout.

### 6.7 Stair Capacity

The upper floors will be served by two 1200mm-wide stairs.

Across 9 floors, this provides capacity for 800 occupants per stair (i.e., 1600 total). Given the connection between Stair A and the main reception (see Figure 2) it must be assumed that this stair could be discounted by a fire in reception. This is sufficient for maximum occupancy on the upper floors, which is 752 occupants.

The final exit from each stair will be the same width as the stair, i.e. 1200mm.

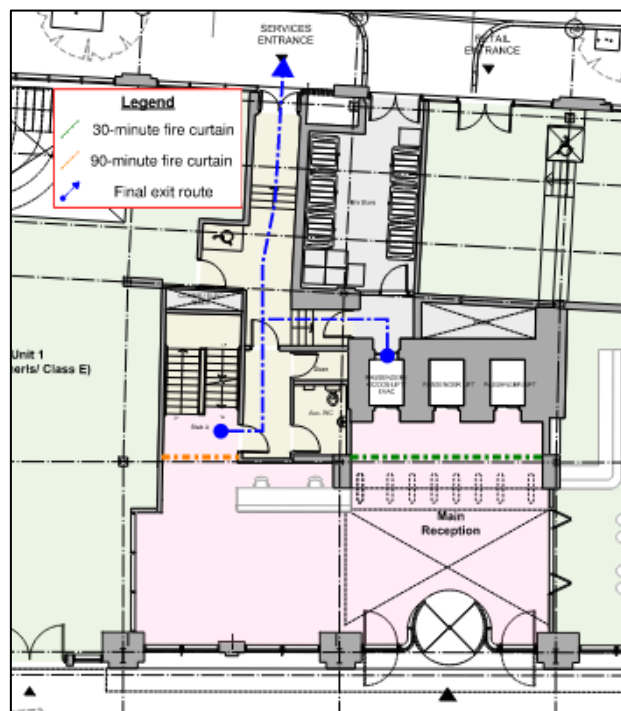


Figure 2: Final exit from Stair A

## 6.8 Mobility-Impaired Occupants and Evacuation Lifts

The upper levels will be provided with three lifts serving up to eighth Floor, one of them will be an evacuation lift that would serve ninth floor as well. Refuges will be provided in the lift lobbies at each level. The evacuation lift will also act as goods lifts serving the office areas. This is proposed based on the following:

- The lifts will primarily be used for transporting day-to-day office supplies and refuse. They will also only be used by office staff who are familiar with the procedures and restrictions on using the lifts. This represents a relatively low fire risk compared to a retail goods lift, which could be heavily used by unfamiliar staff to transport any goods in large quantities.
- The use of the goods lifts will be strictly monitored by office tenants and building management to ensure goods are not left in the lifts or in any access / egress routes serving the lifts, that could present a fire risk or an obstruction during escape.
- Any more substantial work or specific events that require the goods lifts to be used for anything other than day-to-day office supplies will be subject to a specific assessment and management procedures. This could include temporary use of the firefighting lift as a primary evacuation lift.
- The firefighting lift will also be designed to be suitable for use as an evacuation lift. Therefore, in the primary evacuation lift is unavailable, this lift can also be used for evacuation prior to Fire Brigade arrival.

Both evacuation lifts have a clear, protected route to outside at ground. From the firefighting lift this will be a level route to Shaftesbury Avenue. The route from the evacuation lift in the main lift bank involves a short flight of steps (see Figure 2) to gain access to New Compton Street exit which will be supported by a management strategy to provide assistance to those who need it.

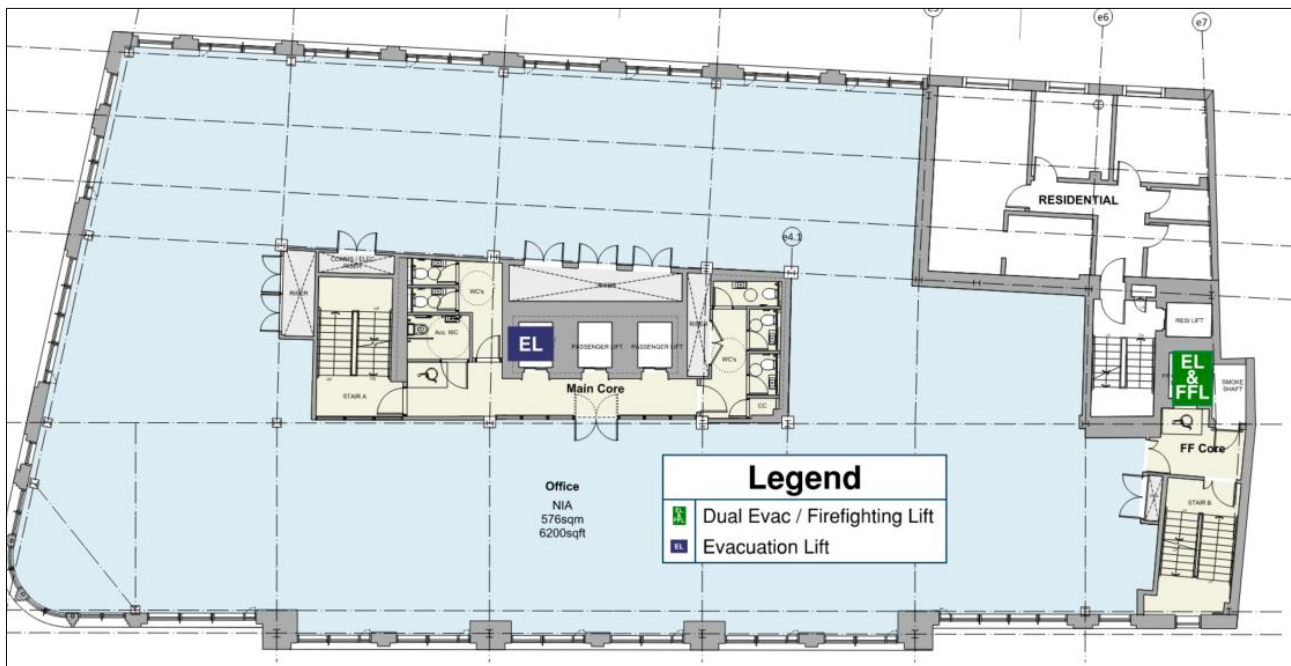


Figure 3: Evacuation Lift (upper floor)

Only the evacuation lift in the main lift bank will extend to the pavilion.

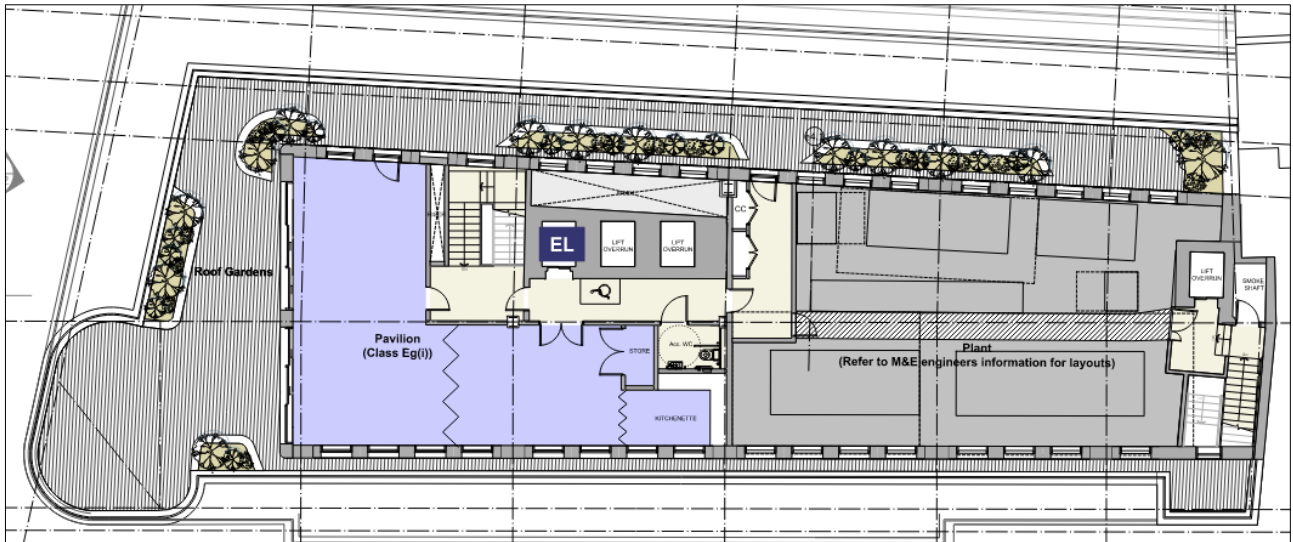


Figure 4: Evacuation Lift (Roof)

There will be an evacuation lift serving the lower ground floor.

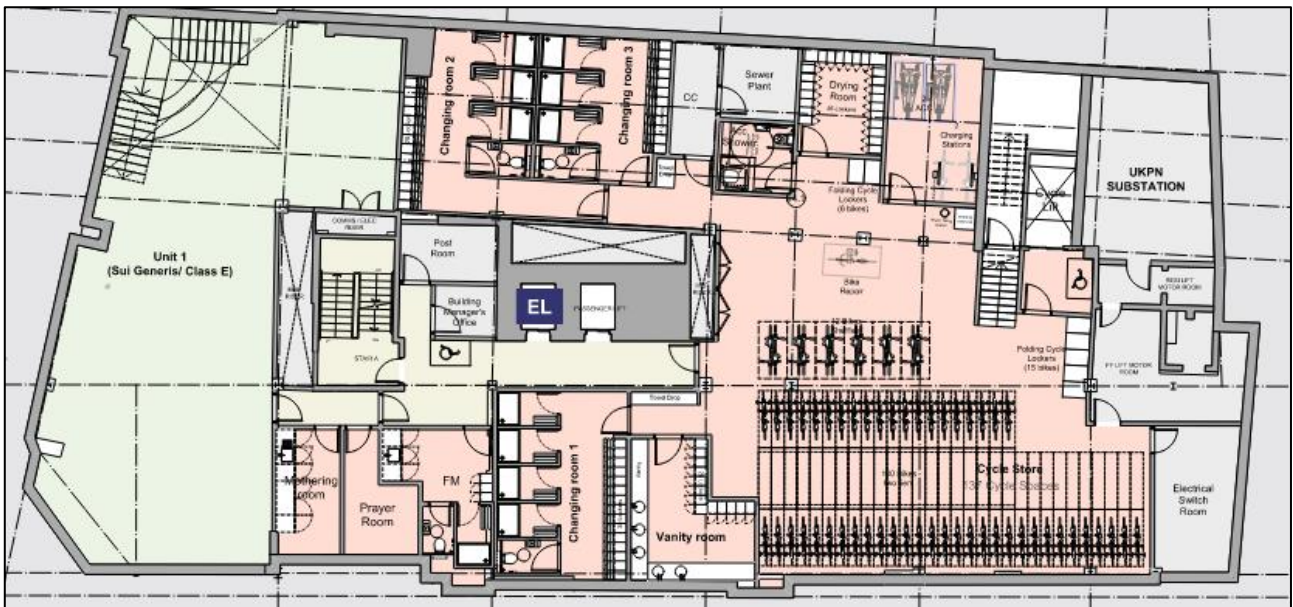


Figure 5: Evacuation Lift (Lower ground floor)

## 6.9 Ground and Lower Ground

The design of the retail units at ground and lower ground will be reviewed as the scheme develops. However, they will be assessed based on the principles outlined in BS 9999 for a B2 risk profile:

- Single direction travel distances up to 20m after fitout
- Escape distances up to 50m where there is a choice of escape routes.
- Escape width of 4.1mm / person
- Units with a single escape route limited to 60 occupants.

Unit 1 at lower ground has an open stair leading to ground as well as access to Stair A. Although the open stair could only be used for escape by able-bodied occupants, travel distances to the protected lobby to Stair A are within the limit stated above, as shown in Figure 6.

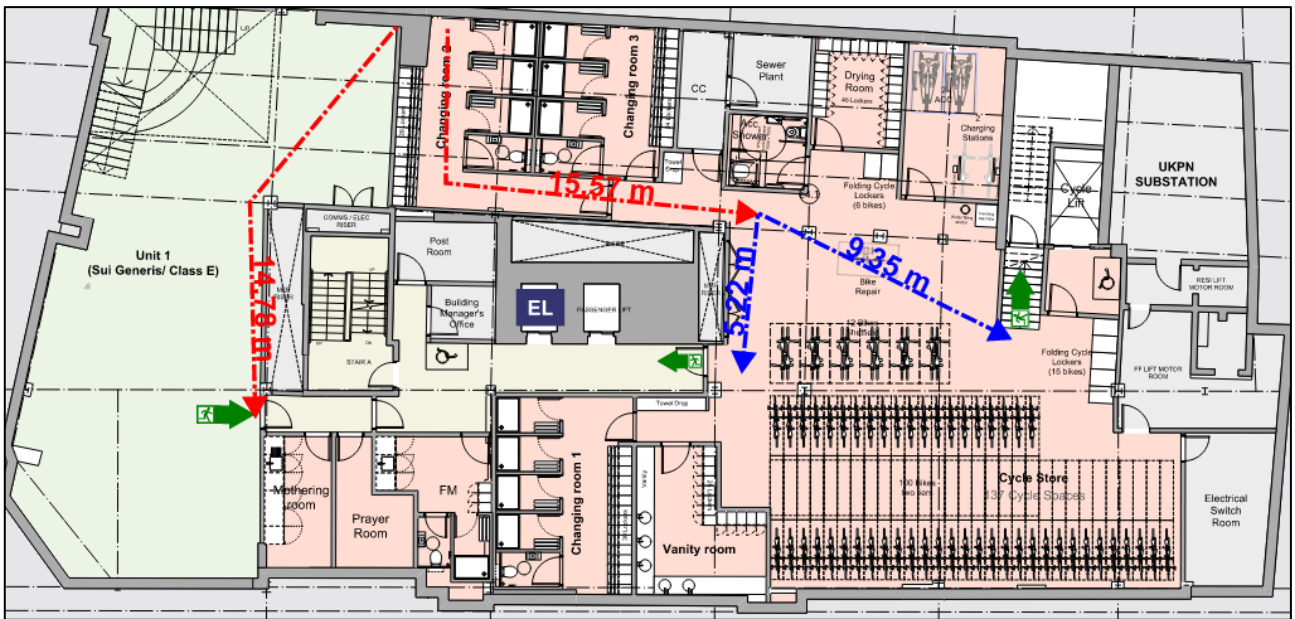


Figure 6: Lower Ground escape routes

### 6.10 Basement

The basement contains plant and it has access to Stair A, which is adequate to serve the plant rooms at that level.

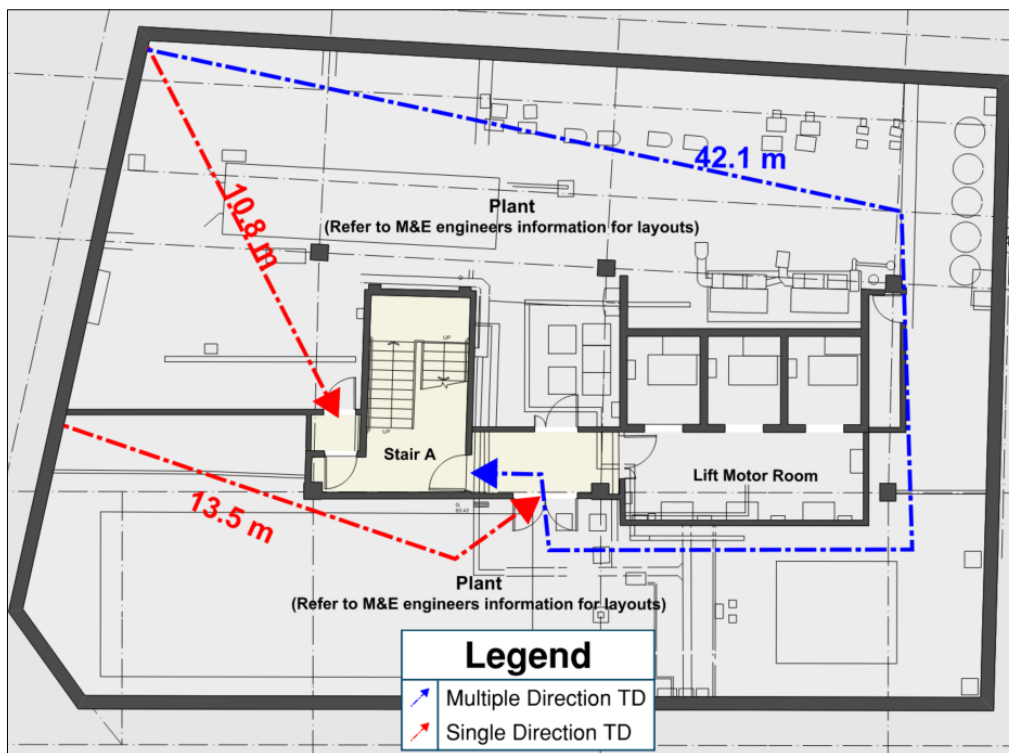


Figure 7: Basement escape routes

## 7.0 PASSIVE FIRE SAFETY MEASURES

### 7.1 Structure

The building is more than 30m in height, so guidance recommends a structural fire resistance of 120 minutes. However, BS 9999 allows this to be reduced subject to meeting ventilation requirements in Table 25. On this basis:

- On the upper floor, If the ventilation requirements on the upper floors can be fulfilled according to the specifications outlined in Table 25 of BS 9999, no further justification is necessary to lower the structural fire resistance to 90min.

Table 25 Ventilation conditions for application of Table 24

Occupancy characteristic <sup>A)</sup>	Use	Ventilation parameter as percentage of floor area %	Height of opening <sup>B)</sup> as percentage of storey height (i.e. from floor to ceiling) %
A	Office	5	30 to 90
A	Industrial	2.5	30 to 80
B	Retail	5	50 to 100
B	Assembly and recreation	2.5	30 to 80
Ci	Individual residential	10	30 to 90
Cii and Ciii	Other residential	10	40 to 90

*NOTE 1 The ventilation describes the type of building and is a reflection of the geometry and not its contents, and therefore independent of the risk within the specific category.*

*NOTE 2 The potential area of ventilation refers to any construction where it is reasonably expected to fall during a post flashover fire, e.g. non-fire-resisting glazing is the prime example. It does not imply that the designer has to assess what area of glazing will fall in the fire process.*

<sup>A)</sup> As defined in Table 2.

<sup>B)</sup> This is the weighted mean height (by ventilation area) of the potential openings, such as non-fire-resisting windows and other areas that are liable to fall. If a storey has openings each with an area of  $A_1, A_2, A_3, \dots, A_n$  and heights of  $h_1, h_2, h_3, \dots, h_n$ , then the total area of the openings  $A = A_1 + A_2 + A_3 + \dots + A_n$ , and the weighted mean height,  $h$ , is given by:

$$h = \frac{A_1 h_1 + A_2 h_2 + A_3 h_3 + \dots + A_n h_n}{A}$$

*NOTE In the calculation of the weighted mean height it is also acceptable to selectively consider only the height(s) of the openings that achieve the minimum ventilation area.*

If  $h$  is the weighted mean height of all the openings and  $H$  is the height of the storey then  $h/H$  should be between the values given in the end column.

- The structure at basement level will achieve 120-minute fire resistance as sufficient ventilation at that level is not possible.

The ventilation assessment will be completed at a later stage. Should the building not meet ventilation requirements the entire structure will be designed to achieve 120 minutes fire resistance.

### 7.2 Compartmentation

All floors will be constructed as compartment floors achieving 90 minutes fire resistance.

To maintain compartmentation between ground and first, the double height reception space will be separated from the first floor by construction achieving 90 minutes fire resistance.

One unit at ground will have an open connection to lower ground. This unit will be designed as its own compartment so this will not compromise the compartmentation strategy in the rest of the building.

Work affecting the party walls between residential and non-residential areas will also achieve 90 minutes fire resistance.

Penetrations between floor levels (riser shafts, lift shafts, protected stairs etc.) will be designed as protected shafts achieving 90 minutes fire resistance.

Non-life safety plant rooms will be designed as 60-minute compartments. Life safety plant rooms will be designed as 2-hour compartments.

### 7.3 Internal Linings

The internal wall and ceiling linings will achieve the classifications described Table 33 of BS 9999:2017. These are shown below.

Location	European Class
Rooms no larger than 30m <sup>2</sup>	D-s3, d2
Other rooms	C-s3, d2
Other circulation spaces	B-s3, d2

*Table 5: Wall and ceiling linings*

## 7.4 Cavity Barriers

Cavity barriers will be provided in concealed ceiling voids and floor voids, in accordance with the recommendations of Section 33 of BS 9999: 2017.

This includes the provision of cavity barriers:

- At junctions between external cavity walls and every compartment wall and compartment floor;
- At junctions between internal cavity walls and every compartment wall and compartment floor, door or assemblies which form a fire resisting barrier.

Cavity barriers will be installed above cross-corridor doors.

Cavity barriers will also be provided to divide large undivided spaces within ceiling and floor voids.

## 7.5 Fire Stopping

Fire stopping will be provided to maintain the integrity of the fire separating elements in accordance with the recommendations of BS 9991. It will be provided where cables, conduits or pipes pass through cavity barriers or other fire-resistant construction. Joints between elements that serve as a barrier to the passage of fire and any openings breaching compartment walls or floors will be:

- Kept as few in number as possible.
- Kept as small as possible.
- Fire stopped.
- In the case of a flue or duct, they will either be fire resisting and serve no other compartment or fire dampers will be provided where they pass through a compartment wall or floor. Ducts which pass through protected escape routes will be provided with smoke operated fire and smoke dampers where they serve more than one compartment and will be positioned on the line where ducts pass through fire separating elements.

## 7.6 Roof Materials

Roof materials, including the terraces, will achieve B<sub>roof</sub> (t4) classification where parts of the roof are located within 6m of the relevant boundary to each block. This is in line with the BS 9999 recommendation.



## 8.0 ACCESS AND FACILITIES FOR THE FIRE AND RESCUE SERVICE

### 8.1 Fire Vehicle Access

Fire vehicles will be able to park on Shaftesbury Avenue or New Compton Street and within 18m of dry riser inlets to the building and inlets will be visible from the parking position.

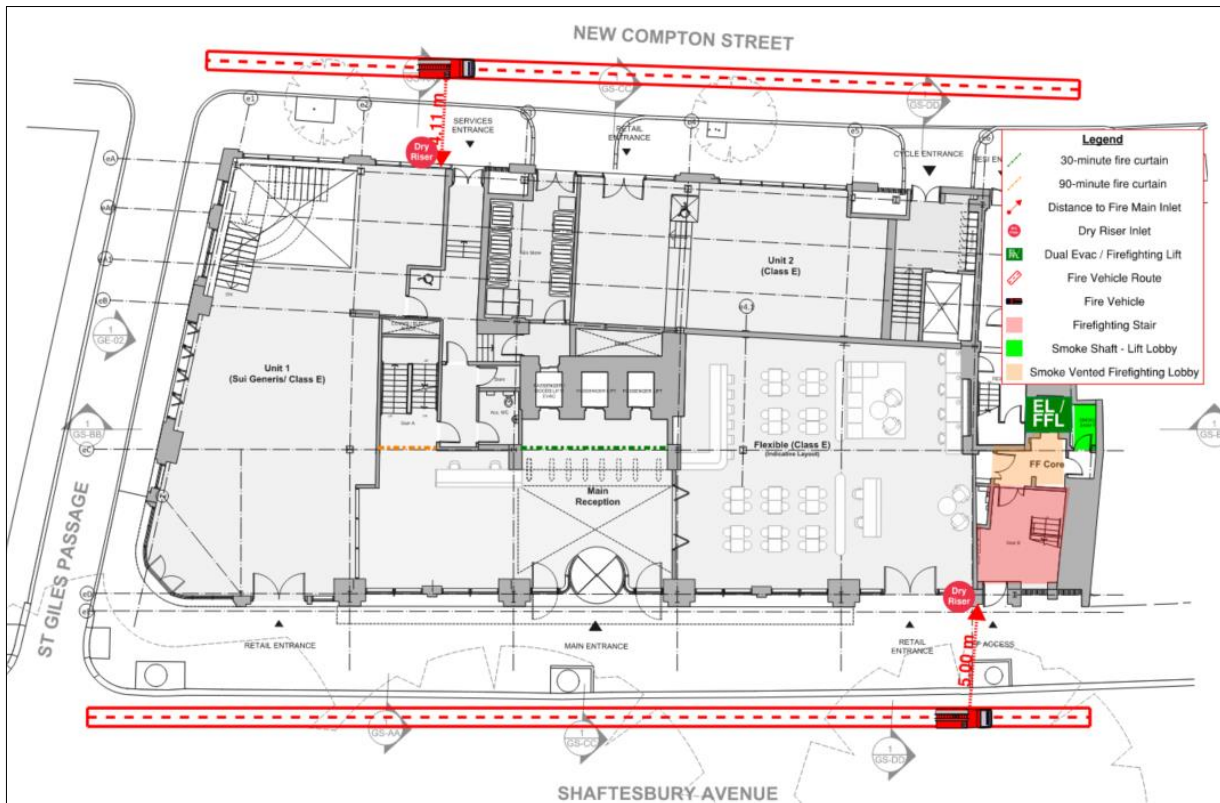


Figure 8: Access and Facilities for Fire Service

### 8.2 Firefighting Shafts

The top floor height of the office building is greater than 18m above ground, so a firefighting shaft will be provided.

The firefighting shaft will include:

- 1.2m-wide firefighting stair;
- Firefighting lift
- 2-hour fire resisting enclosure to the firefighting stair, lift lobby and access route to the firefighting shaft at ground floor;
- 1-hour fire resistance between areas within the firefighting shaft;
- Mechanical smoke extract shaft. To be confirmed by specialist supplier, but typically 0.6-0.8m<sup>2</sup> internal area with an extract rate of 3-5m<sup>3</sup>/s;
- Dry riser with an outlet located in the lobby on all floors;
- 1m<sup>2</sup> automatically opening vent at the head of the stair.
- Only services associated with the fire-fighting shaft will pass through or be contained within the fire-fighting shaft. A fire-fighting shaft will not contain any cupboards or provide access to service shafts serving the remainder of the building.

The firefighting shaft will not extend to serve the lower ground floor basement. Instead, to enhance the existing fire service provision to the lower ground floor and basement levels, it is proposed to install a dry riser in stair A. This dry riser will serve both the basement and lower ground floors.

### 8.3 Hose Cover to Office Levels

Hose cover throughout the office floors is within the 60m limit for sprinklered buildings. The fitout design will be considered to make sure it does not result in excessive hose distances.

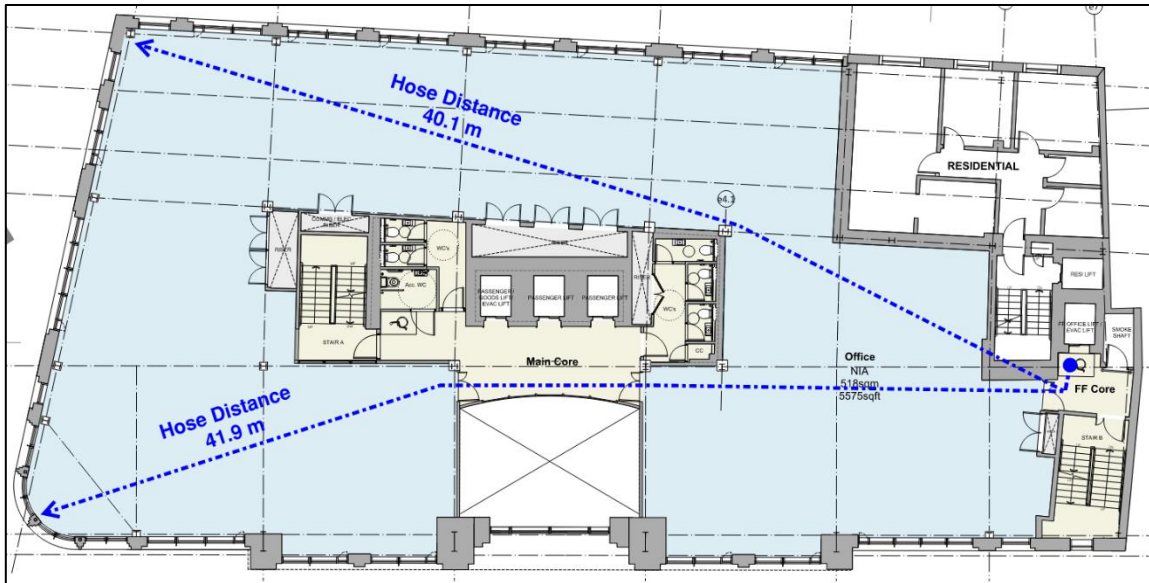


Figure 9: Hose cover

### 8.4 Retail Units

BS 9999 guidance recommends hose cover should be possible to within 45m of all areas from a vehicle parking position. Hose cover is extended to 60m from a vehicle parking position based on the provision of sprinklers.

### 8.5 Water Supply

There is an existing fire hydrant on Shaftesbury Avenue, immediately opposite the entrance to the firefighting shaft.

## 9.0 MANAGEMENT

Management procedures have not been developed at this stage of the project. However, any areas requiring a level of management and a management strategy will be provided as necessary. This will be developed at a later stage.

The building fire strategy document will form part of the building regulations application. This will also be used to inform any future alterations to the building to ensure that the fire safety measures, and strategy is not compromised.

The building owners will be responsible for implementing a management plan for the ongoing maintenance of the wet fire mains and provision of safe access routes to and within the buildings. These plans shall be in line with the requirements of the Fire Strategy.

## 10.0 FUTURE DEVELOPMENT OF THE ASSET AND THE 'GOLDEN THREAD' OF INFORMATION

In line with the recommendations for providing a 'golden thread' of information, digital records of core fire safety components will be compiled during the design and construction phases. Records will be initiated by the relevant duty holders during the design and construction phase, on completion of work the records will be handed over to the building owners to maintain for the life of the building.

A Fire and Emergency File (FEF) will be established for this development to record prevalent information throughout the design, construction, and life of the building. The FEF will include this fire statement and subsequent fire strategies as outlines of the key fire safety design provisions of the building, including assumptions of fire loads, occupant characteristics, evacuation strategies, passive fire safety measures, active fire safety systems, fire safety equipment, key fire properties of building materials, access for fire and rescue services. As the design develops relevant documents shall be recorded including technical specifications and product datasheets, detailing specific information on the building materials, safety systems and equipment. On completion of construction the commissioning documents and the operation and maintenance manuals shall be recorded. Throughout the life of the building regular inspections and maintenance are required to ensure the fire strategy is upheld and fire safety systems are operational. Records of inspections, fire risk assessments and maintenance work shall be recorded.

The details of the information retention systems will be determined by the applicant as the scheme progresses.

Modification of the following elements of the building may adversely affect the original fire safety strategy:

- Fire detection and alarm systems
- Fire suppression systems
- Smoke clearance and control systems
- Increasing population
- Changing the use of the areas
- Escape routes
- Number and dimension of escape stairs
- Refuge areas
- Wall and ceiling linings
- Fire protection of the building structures
- Changing fire and smoke doors
- Changing, penetrating fire compartments, cavity barriers
- Increasing fire load in certain areas
- Creating, changing openings on the external envelope
- Changes in the external envelope of the building
- Changes in the environment of the building related to the fire service access points and parking.

## 11.0 INFORMATION, LIMITATIONS AND ASSUMPTIONS

The information limitations and assumptions used in the preparation of this report are noted below: -

### Drawings

This report is based on drawings issued to us. Dimensions have been taken from these drawings. The following drawings were used:

- 1232\_PL-GA-B1-P1
- 1232\_PL-GA-LG-P1
- 1232\_PL-GA-00-P1
- 1232\_PL-GA-01-P1
- 1232\_PL-GA-02-P1
- 1232\_PL-GA-03-P1
- 1232\_PL-GA-04-P1
- 1232\_PL-GA-05-P1
- 1232\_PL-GA-06-P1
- 1232\_PL-GA-07-P1
- 1232\_PL-GA-08-P1
- 1232\_PL-GA-09-P1
- 1232\_PL-GA-RF-P1

### Building Regulations

This report considers building regulations, which deal with life safety. Property protection and insurance issues are not addressed in this report. Guidance on property protection and insurance requirements can be found in the document *Approved Document B: Fire Safety (Volume 2) – Buildings other than dwellinghouses Incorporating Insurer's Requirements for Property Protection*, RIBA Publishing 2008.

### Other Limitations

Complying with the recommendations of this report will not guarantee that a fire will not occur.

Unless otherwise described in this report, the fire strategy assumes that the building design, the mechanical and electrical systems, construction methods and materials specifications will comply with current Building Regulations guidance, and relevant British Standards and Codes of Practice. The design of mechanical and electrical systems such as fire alarm and sprinklers are a specialist area. Fire Strategy recommendations are given in this report; however, the design and specifications need to be developed at the appropriate stage in consultation with the specialist designers of these systems.

This report has been prepared for the sole benefit, use and information of Royal London Mutual Insurance Society Ltd and the liability of Jeremy Gardner Associates Limited, its directors and employees in respect of the information contained in the report will not extend to any third party.

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