Report

Project	148-154 High Street Uxbridge
Report Title	London Plan Fire Statement
Our Ref	HL9152

The report is structured into two sections, each addressing a specific building within the development:

- **Report R1**: Focuses specifically on the Hotel building.
- **Report R2**: Focuses specifically on the Co-living building.

Report

Project	148-154 High Street Uxbridge Hotel building
Report Title	London Plan Fire Statement
Our Ref	HL9152/R1 Issue 2

Issue Record

REV	DATE	AUTHOR	REVIEW	APPROVED	SECTION	AMENDMENTS
Issue 1	19/03/2024	AP	BY	NH	-	Draft for comments
Issue 2	27/03/2024	BY	NH	NH	1.1	Savills comments has been incorporated

CONTENTS

1.0 INTRODUCTION

The London Plan Fire Statement has been prepared on behalf of DNA Uxbridge Limited ("the Applicant") to support a full planning application seeking permission regarding the demolition of existing buildings to provide a mixed use development at 148-154 High Street, Uxbridge, UB8 1JY ("the Site").

The proposed development comprises Hotel (Class C1), Co-Living (Class Sui Generis) and replacement Commercial Floorspace (Class E).

1.1 Description of Development

The planning application seeks full planning permission for:

Demolition of the existing buildings and comprehensive redevelopment of the site to provide a mixed use development comprising hotel (Class C1), co-Living (Class Sui Generis) and replacement commercial floorspace (Class E) alongside public realm improvements, including new pocket park, basement parking and associated infrastructure.

The proposal outlines a single C-shaped building with heights ranging from 7 to 9 storeys, including a basement, along with courtyard and footway enhancements. The south-western section facing High Street is designated for retail use at ground and mezzanine levels, with a 162-bed hotel occupying up to the eighth floor.

The north-western wing, facing Belmont Road, features the hotel entrance, retail spaces, ancillary facilities, and communal areas for co-living at ground and mezzanine levels, with co-living apartments spanning up to the seventh floor.

The north-eastern side facing Bakers Road houses co-living communal areas and ancillary spaces at ground level, with co-living apartments extending up to the ninth floor.

The basement area is allocated for a limited number of parking spaces, plant rooms, co-living amenity spaces like a gym and cinema, and cycle storage.

This report specifically focuses on the Hotel building. Another report has been prepared for the co-living building.

The details of the building are summarised in the table below.

LEVEL	ACCOMMODATION
Basement	Plant Room, Ancillary accommodation
GF	Retail Unit Hotel Lobby Bin Stores
Mezzanine	Retail
L01 to L07	bedrooms
L08	Social Hub Kitchen Office

Table 1: Building Overview

The Top floor height of the Hotel building is 29.38m.

Figure 1: Top Floor Height

1.2 Aim of Report

The purpose of a Fire Statement is to demonstrate that fire safety has been considered at the earliest opportunity and that the requirements of Chapter 3, Policies D5 and D12 as detailed in the London Plan 2021 have been addressed.

1.3 Relevant Guidance

The fire strategy has been developed following the guidance of Approved Document B (fire safety) volume 2: *Buildings other than dwellings, 2019 edition incorporating 2020 and 2022 amendments (ADB: V2).*

Where full compliance cannot be achieved alternative solutions may be applied to support the design where appropriate.

1.4 Purpose Group

ADB: V2 uses the concept of purpose group to classify buildings according to the purpose to which it serves.

The hotel will be classed as purpose **group 2(b) Residential (other).**

The Retail unit will be classed as purpose **group 4 - Shop and commercial.**

1.5 Declaration

In accordance with the London Plan, the statement has been prepared and reviewed by fire engineers who are suitably qualified and competent professionals with the demonstrable experience to address the complexity of the design being proposed.

Jensen Hughes are a highly experienced team of specialist fire engineers that have been operating in the UK and Ireland for 30 years (predominantly under the name JGA). The qualifications of the author of this report are given below:

The report written by **Basheer Youssef,** Technical Director of Jensen Hughes, England. Basheer Youssef has 14 years' international experience of fire engineering at the highest levels. He is a member of the Institution of Fire Engineers (MIFireE). As a Technical Director, he possesses wide-ranging experiences in many aspects of fire safety, detection and protection systems and present realistic solutions in line with current national or international regulations and standards such as BS, NFPA and UAE fire code. Basheer has experience with both UK codes and guidance, e.g. Approved Document B, BS 9999, BS 9991, HTM 05-02, PD 7974, BS 5839 part 1 & 6, BS EN 12845, BS 9251and also overseas and international codes, e.g. NFPA and UAE Code. Basheer has developed fire engineering solutions using both standard and advanced techniques such as Computational Fluid Dynamics for residential corridors and warehouses. Basheer is working on a number of projects across the UK and internationally. These include new buildings and refurbishing or reconfiguring existing buildings. Basheer has worked on a range of different buildings including office, warehouses, self-storage, mixed use, leisure, residential, education and healthcare buildings, offices, education buildings, residential, hotel and historic buildings.

The report has been approved by **Nick Harvey**, BEng (Hons), CEng, MIFireE. Nick Harvey is a Chartered Engineer through the Institution of Fire Engineers. Nick is the Managing Director of Jensen Hughes (England) and has over 20 years of experience in developing building Fire Strategies. He has extensive experience in fire strategies for residential buildings ranging from Private residential, Private Rented Sector, co-living, and Student Residential buildings. He has extensive experience in developing fire engineering solutions including fire and smoke and evacuation modelling for all range of building types, including extensively in residential buildings.

As part of Jensen Hughes, Nick can draw from the experience of other fire engineers in the UK and around the world, which will ensure the quality and the robustness of the fire strategy developed for the project.

Report by	Antti Paavola, BEng,
Checked by	Basheer Youssef, BEng, MIFireE
Approved by	Nick Harvey BEng (Hons), CEng, MIFireE

2.0 LONDON PLAN 2021 – FIRE SAFETY STATEMENT

The purpose of a Fire Statement is to show how the requirements of the London Plan have been considered and addressed. In additional 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 tables 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 A1(a)	Identify suitably positioned and unobstructed outside space for positioning of fire appliances	9.0
Policy D12, Subsection A1(b)	Identify suitably positioned and unobstructed outside space appropriate for use as an assembly point	4.4
Policy D12, Subsection A2	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	7.0
Policy D12, Subsection A3	The building must be constructed in an appropriate way to minimize the risk of fire spread	3.3
Policy D12, Subsection A4	Provide suitable and convenient means of escape, and an associated evacuation strategy for all building users	5.0 and 6.0
Policy D12, Subsection A5	Develop a robust strategy for evacuation which can be periodically updated and published, and which all building users can have confidence in.	4.0
Policy D12, Subsection A6	Provide suitable access and equipment for firefighting which is appropriate for the size and use of the development.	9.0

Table 2: Policy D12 Subsection A Requirements

POLICY NUMBER	DESCRIPTION	RELEVANT SECTION IN THE REPORT
Policy D12, Subsection B1	Building's construction: methods, products and materials used, including manufacturers' details.	3.0
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.	5.0 and 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.	7.0
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.	9.0
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.	9.0

Table 3: Policy D12 Subsection B Requirements

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	4.3

Table 4: Policy D5 Subsection B5 Requirements

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

3.1 Construction Materials

As required by the London Plan D12 B1, this section sets out the building's construction method and products and materials used as summarised below.

ELEMENT	DESCRIPTION
Construction Approach / Methodology	The specific detailed design of the building regarding construction methods will be further developed as the scheme progresses.
Building Structural Frame	Reinforced concrete frame, combination of studwork partitions and blockwork for internal walls
External Wall Construction	To be confirmed (Regulation 7.2 compliant)
Roof Construction	Standard roof construction with some accessible uses.

Table 4: Construction Methods & Primary Materials

Building materials will be required to achieve the minimum standard for fire resistance as outlined within this statement for passive fire protection. All internal linings, external wall materials and roof coverings will achieve the minimum requirements of Building Regulation guidance documents, as discussed in Sections 7.0.

Building methodologies will be designed with consideration to fire safety of the neighbouring building and adjacent areas.

3.2 External Wall Construction

The hotel is considered "relevant buildings" in accordance with ADB V2. Therefore, in accordance with Regulation 7(2), all materials forming part of the external wall systems including specified attachments such as balconies will achieve at least a European Classification A2-s1, d0. There are specific exemptions noted in Regulation 7(3) and these will be followed as appropriate.

3.3 External Fire Spread

Building methodologies will be designed with consideration to fire safety of the neighbouring building and adjacent areas.

The extent of unprotected area to the elevations will be determined using guidance and methods given in BR 187 taking into consideration the provision of sprinklers and the building's proximity to the site boundary / surrounding roads.

The boundary that a wall faces is the relevant boundary. It may be one of the following.

- The site boundary.
- Notional boundary between two buildings.
- The centre line of a space where further development is unlikely, such as a road.

Part of the north elevation of the hotel building is connected to the co living building with a fire-rated party wall.

Based on the high degree of internal compartmentation and provision of sprinklers throughout the development; it is not expected for significant areas of the building's façades to require to be fire rated to address external fire spread. However, this will be further considered as the buildings design develops, to maintain compliance with Building Regulation's guidance regarding external fire spread.

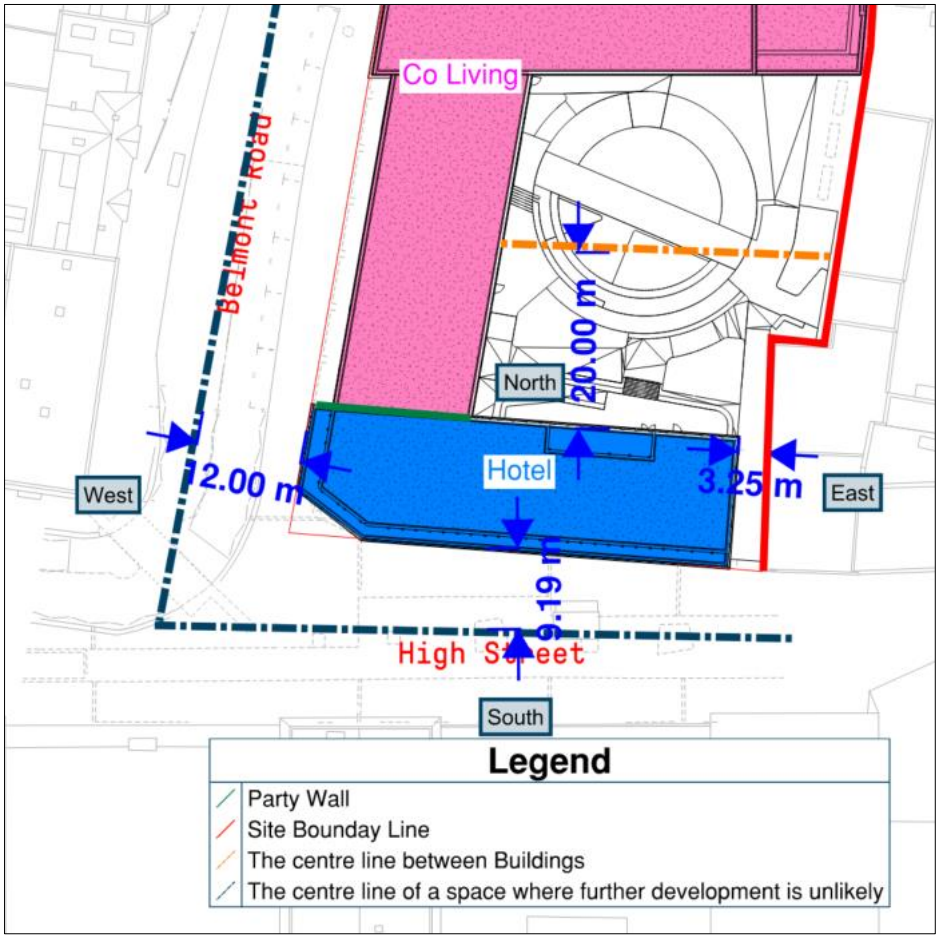

Figure 2: Distances to Site Boundary and Notional Boundary

3.4 Roof Coverings

Roof materials, including the terraces, will achieve B_{roof} (t4) classification where parts of the roof are located within 6m of the relevant boundary to building. This is in line with the ADB vol. 2 recommendation.

4.0 EVACUATION STRATEGY

4.1 Hotel

The hotel will operate under a simultaneous evacuation strategy. This means that, detection of a fire in one area will trigger an evacuation throughout the hotel part of the building including the basement ancillary areas. This strategy is in line with the guidance of ADB Vol. 2.

4.2 Retail Unit

The retail units at ground level will be independent of the rest of the hotel part of the building and will follow their own evacuation strategy. The units will evacuate immediately upon alarm in the unit; a fire alarm activation will not cause the evacuation of the rest of the building and vice versa.

4.3 Disabled Occupants

The London Plan proposes that at least one lift per core should be an evacuation lift i.e. usable for mobility impaired escape.

The firefighting stair will have an evacuation lift in addition to the firefighting lift.

The escape stair will also have an evacuation lift.

The provides two dedicated evacuation lifts in the building, and provides resiliency in the event that one lift is out of operation.

Both cores will be provided with a disabled refuge on every floor above and below ground. Each refuge should be at least 900mm x 1400mm and provided with an Emergency Voice Communication system in accordance with BS5839-9.

The retail unit will be initially set up as a shell and core space, meaning it will have basic infrastructure in place such as walls, floors, and utilities. However, the tenant will need to further develop and implement a specific fire strategy for the fit-out of the space.

A suitable management procedure will be developed as the project progresses.

4.4 Evacuation Assembly Point

A suitable place of assembly will be provided as part of the development. The location of the evacuation assembly points will be confirmed as the design develops but is shown nationally in the figure below.

Figure 3: Proposed Assembly Point

5.0 MEANS OF ESCAPE (HOTEL)

5.1 Occupant Numbers

Floor	Usage	Area /Number	Floor Space Factor (m^2/person)	Occupancy
Basement	Cold Water Storage Tank	100	30	4
	ASHP Plant Room	83	30	3
	Commercial Sprinkler Tank and Pumps	154.9	30	5
	Office/Staff Area	130	6	22
GF	Retail unit	352.2	2	177
Mezzanine	Retail unit	307.3	2	154
1F	Bedrooms	24	2 per room	48
2F	Bedrooms	24	2 per room	48
3F	Bedrooms	24	2 per room	48
4F	Bedrooms	24	2 per room	48
5F	Bedrooms	24	2 per room	48
6F	Bedrooms	24	2 per room	48
7F	Bedrooms	24	2 per room	48
8F	Social Hub	473	-	220*
** - Occupancy on 8 floor will be limited to 220 occupants based on storey exit widths which is 1050mm after discounting the largest exit.*				

Table 1: Building Occupancy

5.2 Horizontal Escape

Each floor has two exits to the protected stairs each with a clear width of at least 1050mm. After discounting one exit in the event of a fire blocking access, the remaining storey exit will be able to accommodate up to 220 in accordance with Table 2.3 of ADB V2.

5.3 Travel Distances

AD B: V2 recommends that travel distances within a hotel do not exceed the following:

Area	One-way Travel	Two-way Travel
Within bedrooms	9m	18m
Bedroom corridors	9m	35m
Elsewhere	18m	45m

Table 5: Travel Distance Requirements

The travel distance within the building will be within the recommended limit.

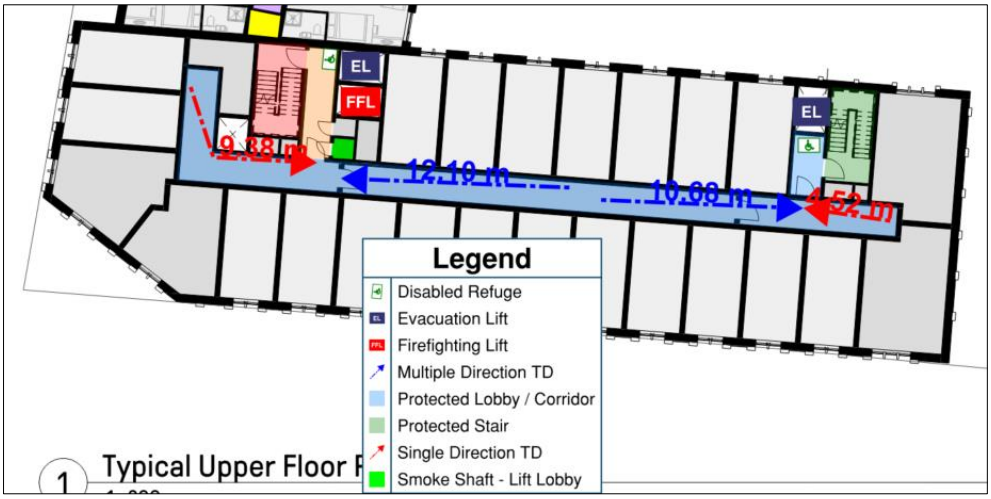

Figure 4: Travel Distances (Bedrooms levels)

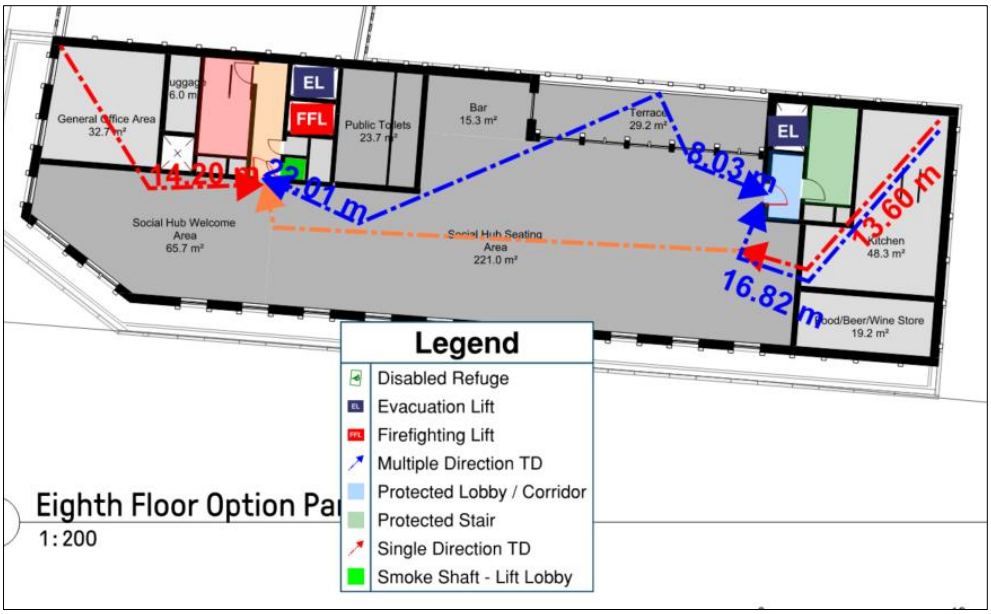

Figure 5: Travel Distances (L08)

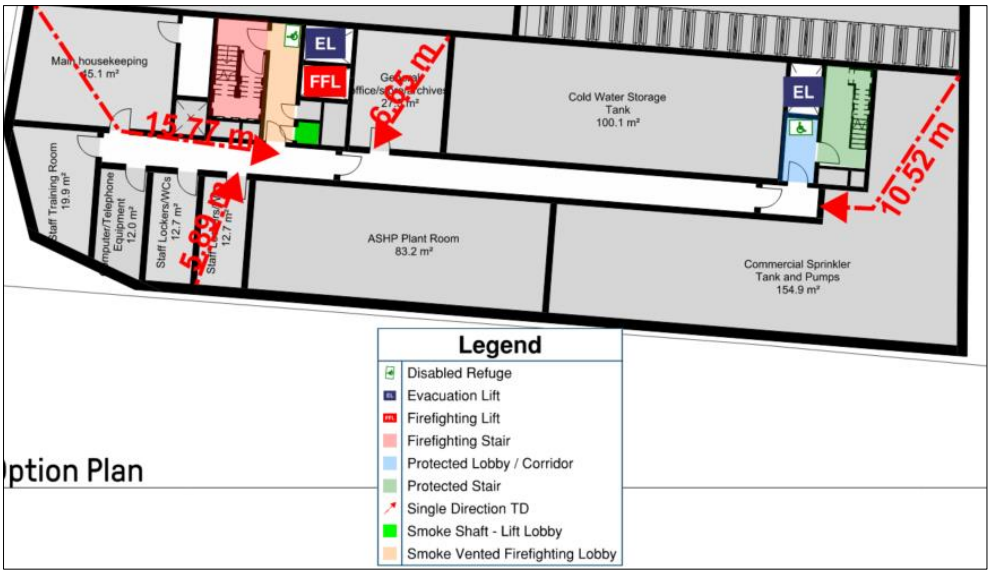

Figure 6: Travel Distances (Basement)

5.1 Vertical Escape

All seven upper levels are served by a 1.05 m wide protected stair and a 1.1 m wide firefighting stair.

All stairs will be accessed via protected lobbies/ corridor due to this; it may be assumed that all stairs will be available for evacuation purposes.

According to Table 3.2 in ADB V2, the two stairs will be able to accommodate 930 people in total. This is well in excess of the maximum calculated occupancy of the building.

ADB V2 recommends the final exit from the stair should discharge directly to outside or via a protected corridor to outside. Any protected exit corridor or stair should have the same standard of fire resistance and lobby protection as the stair it serves.

The stair cores in the hotel will exit direct to outside at ground level or via protected corridors. The goods lift will be separated from the final exit of the firefighting stair by protected lobby.

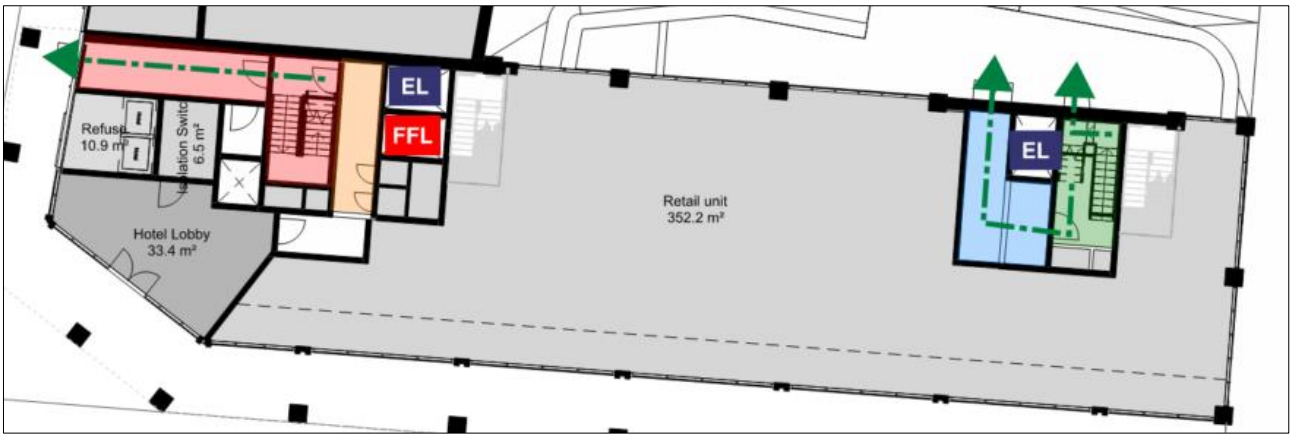

Figure 7: Final Exit from Stairs

5.2 Basement Stairs

One stair will terminate at ground floor, with a separated stair extending to basement level. The second stair will continue to basement level and will be lobbied at basement level. This complies with ADB V2 guidance.

6.0 MEANS OF ESCAPE (RETAIL)

The retail unit will be initially set up as a shell and core space, meaning it will have basic infrastructure in place such as walls, floors, and utilities. There is potential to separate the retail space into more than one retail unit.

Therefore, each tenant will need to further develop and implement a specific fire strategy for the fit-out of their space. This includes considerations such as establishing evacuation routes, installing fire alarm systems, and implementing any other necessary fire safety measures tailored to the specific layout and use of their retail unit.

The travel distances within retail units will comply with the ADB v2 recommendations, which specify 18 m in one direction and 45 m when an alternative escape route is available.

Where a unit is provided with a single escape route the capacity will be limited to 60 occupants. Where the occupancy will exceed 60, multiple escape routes will be provided to meet the requirements of ADB v2. This will be further assessed as the design develops.

7.0 ACTIVE FIRE SAFETY SYSTEMS

7.1 Automatic Sprinkler System

As the height of building from access level to top finished floor level will be less than 30 m, there is no requirement to provide any form of automatic fire suppression within the scheme to meet ADB V2 guidance requirements. However, the building will be provided with a commercial sprinkler system in accordance with BS EN 12845, which exceeds the code guidance requirements and provides a significant improvement on the standard of safety in the building compared with a code compliant building.

7.2 Fire Detection and Alarm System

A minimum Category L2 standard automatic fire detection and alarm system will be designed and installed according to BS 5839-1.

7.3 Emergency Lighting and Signage

Emergency lighting will be provided in accordance with relevant code guidance, including the Approved Document B and BS 5266-1.

Signage will be provided throughout the building and in accordance with the recommendations of relevant code guidance, including the Approved Document B and BS ISO 3864-1.

7.4 Secondary Power Supplies

A secondary source of power will be provided for all life safety systems in line with the ADB Vol. 2 guidance.

7.5 Smoke Control System

The lift lobby adjacent to the firefighting stair will be smoke vented. This will be achieved via a mechanically smoke shaft and automatically openable vents.

Smoke shaft's locations will meet the requirements stated in ADB Vol. 2 guidance.

A mechanical smoke and heat ventilation system will be installed in the basement, achieving a ventilation rate of 10 air changes per hour based on the volume of the largest fire compartment.

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

7.6 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.

8.0 PASSIVE FIRE SAFETY MEASURES

8.1 Structural Fire Resistance

All the load bearing elements of construction will provide 90 minutes of fire resistance to comply with the current ADB Vol.2 guidance.

8.2 Compartmentation and Fire Doors

Fire-resisting walls and floors will be provided in accordance with the following table:

AREA	FIRE RESISTANCE	FIRE DOOR
Compartment Floors	90 minutes	N/A
Protected Stairs	90 minutes	FD60S
Firefighting Stairs / Fire fighting shaft	2 hours	FD60S
Separation within the firefighting shaft	1 hour	FD30S
Fire fighting Stair Final Exit Corridors	2 hours	FD60s
Risers / Lift Shafts	90 minutes	FD60s
Separating Construction to Retail Units	90 minutes	N/A
Life Safety Plant Rooms High Risk Plant Rooms	2 hours	FD60s
Bedrooms corridor	30 minutes	FD30s
Non-Life Safety Plant Room	90 minutes	FD60s
Protected Corridors/Protected lobbies	30 minutes	FD30S
UKPN Substation	4 hours	As required by the power supplier

Table 6: Fire Compartmentation and Fire Doors Requirements

8.3 Cavity Barriers

Cavity barriers will be provided within any external wall cavities or floor voids in accordance with the guidance in Section 9 of the ADB V2.

Openings and similar penetrations will also be provided with appropriate cavity closers, cavity barriers etc to achieve the required fire separation as set out in the ADB V2.

8.4 Fire Stopping

Fire stopping will be provided to maintain the integrity of the fire separating elements in accordance with the recommendations of Sections 10 of the ADB V2.

8.5 Internal Wall & Ceiling Linings

Any internal surface finishes (walls or ceilings) will be provided in line with the table below.

ROOM	PERFORMANCE (EUROPEAN CLASS)
Within circulation spaces	B-s3,d2
Rooms smaller than 4m^2 (residential areas)	D-s3,d2
Rooms smaller than 30m^2 (all other areas)	
Other rooms	C-s3,d2

Table 7: Wall & Ceiling Linings

9.0 ACCESS AND FACILITIES FOR THE FIRE SERVICE

9.1 Fire Vehicle Access

All access roads will be designed to be sufficient in terms of load-bearing capacity and clearance widths and heights for a fire service pump appliance. The recommendations for pumping appliances, turntable ladders/aerial platforms and special large appliances are as follows:

Appliance Type	Min. width of road between kerbs(m)	Min. width of gateways (m)	Min. turning circle between kerbs (m)	Min. turning circle between walls (m)	Min. clearance height (m)	Min. carrying capacity (tonnes)
Pump	3.7	3.1	16.8	19.2	3.7	14.0
High Reach	3.7	3.1	26.0	29.0	4.0	23.0
Special Appliance	4.0	3.1	26.0	29.0	4.27	32.0

Table 6: Typical vehicle access route specification

The fire service access route will be through Belmont Road and Pedestrian Road (High Street), which allow access to the site, as indicated in the figure below. Fire Vehicle access will be provided within 18m of the wet fire main inlet and will be visible from the fire appliance parking position. This is in line with the ADB V2 guidance.

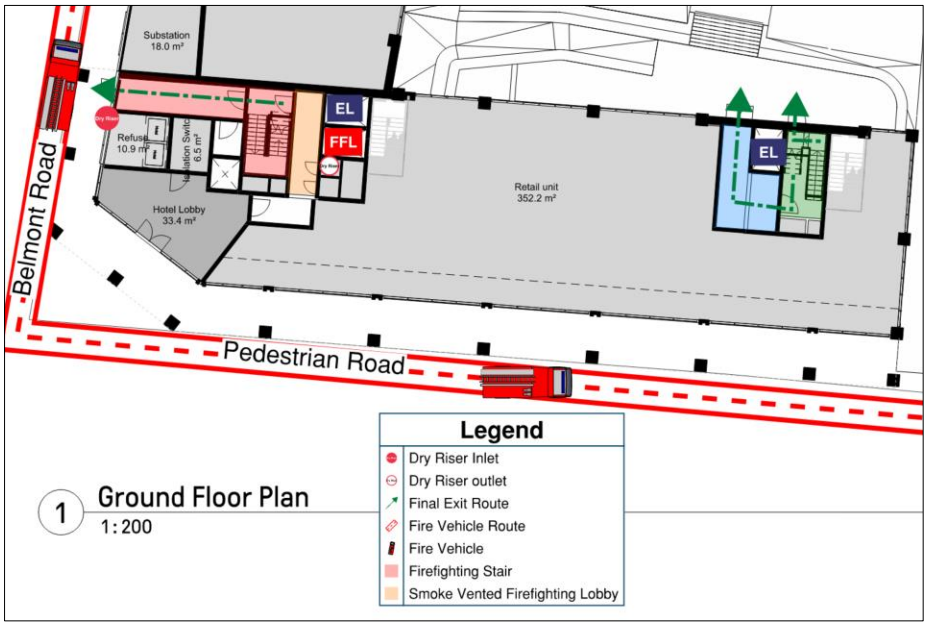

Figure 8: Access and Facilities for The Fire Service

9.2 Firefighting Facilities

9.2.1 Hotel

The hotel has a top floor height exceeding 18 meters and its levels are less than 900 square meters. Therefore, one firefighting shaft is deemed sufficient, and the firefighting core will include the following:

- Firefighting lift.
- Evacuation lift.
- Firefighting stair at least 1.1m wide.
- 2 hours fire resisting enclosure around the stair and the firefighting lift.
- A dry riser.
- 1m^2 automatically opening vent at the head of the firefighting stair.

It is proposed that firefighting shaft will be extended to serve the basement levels in order to improve conditions for firefighting, although not needed to comply with standard Building Regulations guidance. A smoke-vented lobby will be incorporated between the ancillary accommodation and the stair using the smoke control measures provided to the upper floors above.

9.2.2 Retail Unit

This will be achievable via a pedestrian road and there will be a clearly defined fire path, at least 3.7m wide and able to support the weight of a pumping appliance (up to 14.0 tonnes), through the pedestrianised area. This may be indicated by using different coloured concrete or various paving patterns.

No physical obstructions including seating, trees or flower beds will obstruct the fire path and no street furniture e.g., lamp posts, should be allowed which could prevent the use of ladders by firefighters.

The south elevation to which vehicle access is provided should have a door, a minimum of 750mm wide, to give access into the building.

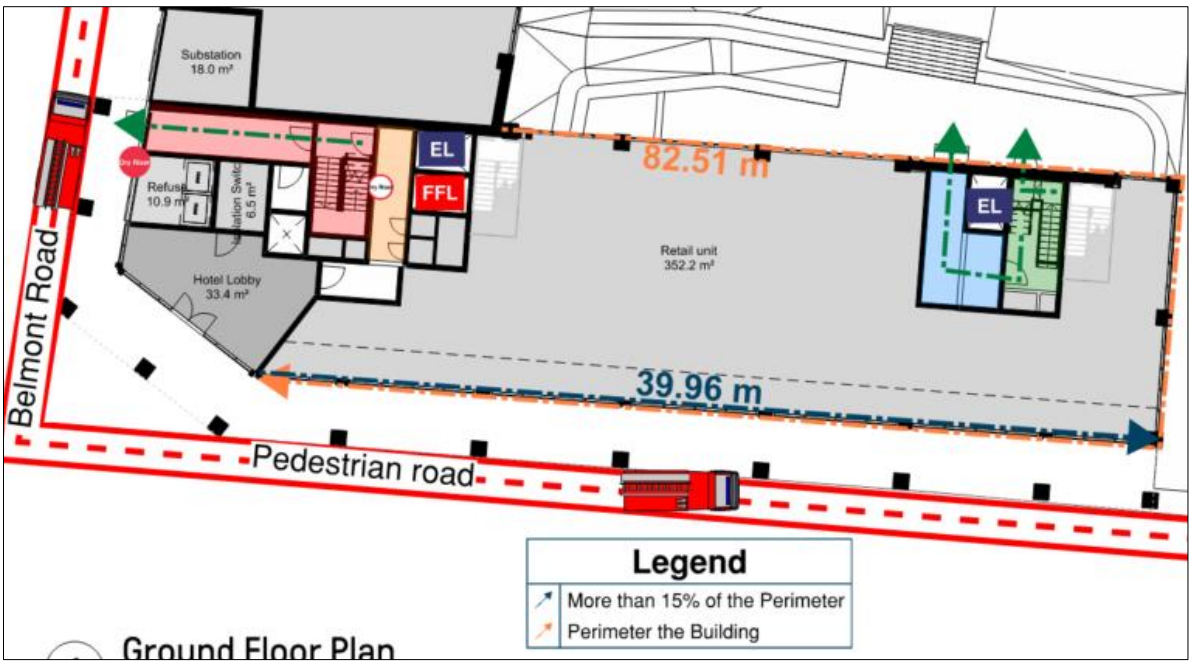

Figure 9: The Fire Service Access – Retail units

9.3 Hose Coverage

Hose cover from the fire main outlet is within the recommended limit of 60m from a firefighting shaft in a sprinklered building.

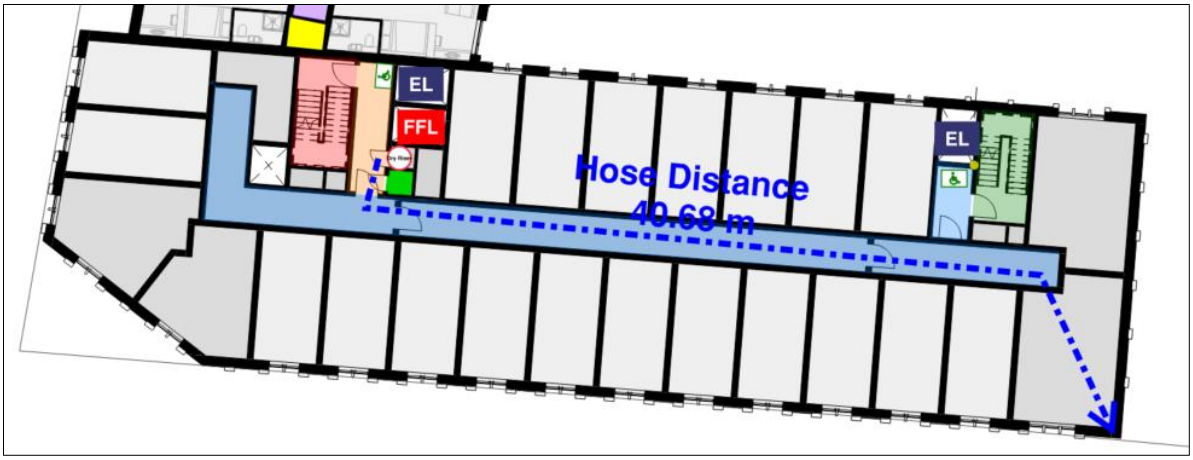

Figure 10: Hose Coverage – Typical floor

9.4 External Water Supply

There is an existing fire hydrant within 100m of the fire main inlets.

Figure 11: Fire Hydrant location

10.0 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 fire mains and provision of safe access routes to and within the buildings. These plans shall be in line with the requirements of the Regulatory Reform (Fire Safety) Order and relevant British Standards for the fire safety equipment.

11.0 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 during the design and construction phases will be provided. 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 relevant information throughout the design, construction and life of the building. This will be an ongoing process as the scheme is developed and built and 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 client.

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, e.g., if further flats were provided in the future.
- 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.

12.0 INFORMATION, LIMITATIONS AND ASSUMPTIONS

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

12.1 Drawings

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

DRAWING NUMBER	DRAWING DESCRIPTION
CGL-ZZ-ZZ-DR-A-SK0104	Basement Plan
CGL-ZZ-ZZ-DR-A-SK0105	Lower Floor Plans
CGL-ZZ-ZZ-DR-A-SK0106	Upper Floor Plans
CGL-ZZ-ZZ-DR-A-SK0108	Top Floor Plans

12.2 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 Insurers' Requirements for Property Protection,* RIBA Publishing 2015.

12.3 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 is 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 DNA Uxbridge Limited 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.

OFFICES AND CONTACT INFORMATION

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JENSEN HUGHES

Report - R2

Project	148-154 High Street Uxbridge Co-Living Building
Report Title	London Plan Fire Statement
Our Ref	HL9152/R2 Issue 3

Issue Record

REV	DATE	AUTHOR	REVIEW	APPROVED	SECTION	AMENDMENTS
Issue 1	19/03/2024	AP	BY	NH	-	Draft for comments
Issue 2	27/03/2024	BY	NH	NH	1.1	Savills comments has been incorporated
Issue 3	30/09/2024	BY	NH	NH	5.4	Clarification regarding the evacuation lift has been included.

CONTENTS

1.0 INTRODUCTION

The London Plan Fire Statement has been prepared on behalf of DNA Uxbridge Limited ("the Applicant") to support a full planning application seeking permission regarding the demolition of existing buildings to provide a mixed use development at 148-154 High Street, Uxbridge, UB8 1JY ("the Site").

The proposed development comprises Hotel (Class C1), Co-Living (Class Sui Generis) and replacement Commercial Floorspace (Class E).

1.1 Description of Development

The planning application seeks full planning permission for:

Demolition of the existing buildings and comprehensive redevelopment of the site to provide a mixed use development comprising hotel (Class C1), co-Living (Class Sui Generis) and replacement commercial floorspace (Class E) alongside public realm improvements, including new pocket park, basement parking and associated infrastructure.

The proposal outlines a single C-shaped building with heights ranging from 7 to 9 storeys, including a basement, along with courtyard and footway enhancements. The south-western section facing High Street is designated for retail use at ground and mezzanine levels, with a 162-bed hotel occupying up to the eighth floor.

The north-western wing, facing Belmont Road, features the hotel entrance, retail spaces, ancillary facilities, and communal areas for co-living at ground and mezzanine levels, with co-living apartments spanning up to the seventh floor.

The north-eastern side facing Bakers Road houses co-living communal areas and ancillary spaces at ground level, with co-living apartments extending up to the ninth floor.

The basement area is allocated for a limited number of parking spaces, plant rooms, co-living amenity spaces like a gym and cinema, and cycle storage.

This report specifically focuses on the co-living building. Another report has been prepared for the hotel building.

The details of the building are summarised in the table below.

LEVEL	ACCOMMODATION
Basement	Plant Rooms, Cycle Stores , Car Park
GF	Retail Unit Co-living Co-working Space Bin Stores Plant Rooms
L01 to L09	Apartments Communal Kitchen

Table 1: Building Overview

The top floor height of the building is 32.64m.

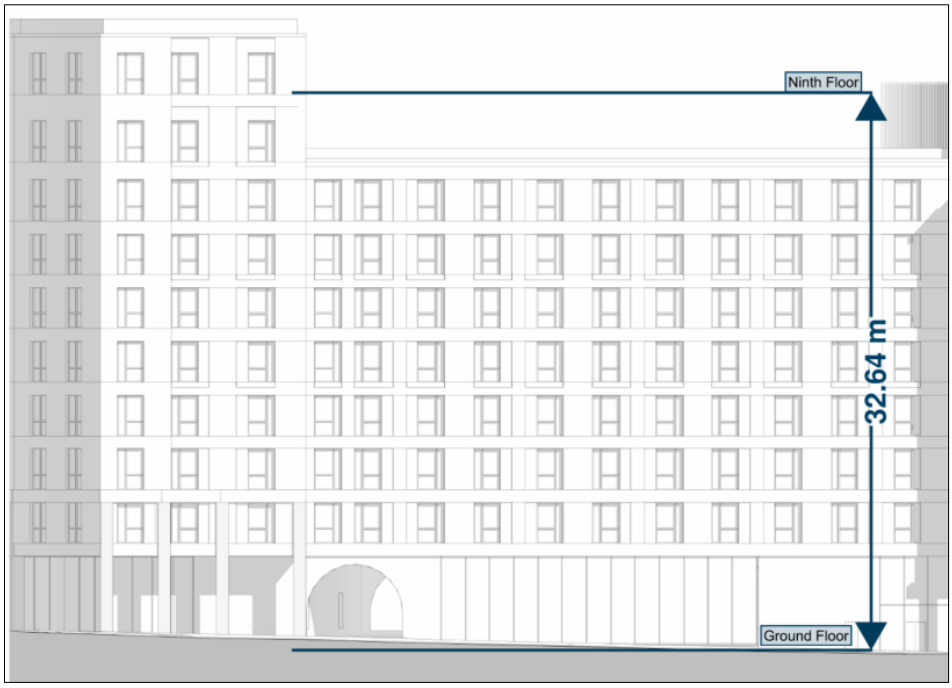

Figure 1: Building Height

1.2 Aim of Report

The purpose of a Fire Statement is to demonstrate that fire safety has been considered at the earliest opportunity and that the requirements of Chapter 3, Policies D5 and D12 as detailed in the London Plan 2021 have been addressed.

1.3 Relevant Guidance

The design has been primarily based on the guidance within:

- BS 9991:2015, *Fire safety in the design, management, and use of residential buildings – Code of practice* (for residential areas and ancillary accommodation).

  BS 9999:2017, *Fire safety in the design, management, and use of buildings. Code of practice* (for the commercial).

1.4 Declaration

In accordance with the London Plan, the statement has been prepared and reviewed by fire engineers who are suitably qualified and competent professionals with the demonstrable experience to address the complexity of the design being proposed.

Jensen Hughes are a highly experienced team of specialist fire engineers that have been operating in the UK and Ireland for 30 years (predominantly under the name JGA). The qualifications of the author of this report are given below:

The report written by **Basheer Youssef,** Technical Director of Jensen Hughes, England. Basheer Youssef has 14 years' international experience of fire engineering at the highest levels. He is a member of the Institution of Fire Engineers (MIFireE). As a Technical Director, he possesses wide-ranging experiences in many aspects of fire safety, detection and protection systems and present realistic solutions in line with current national or international regulations and standards such as BS, NFPA and UAE fire code. Basheer has experience with both UK codes and guidance, e.g. Approved Document B, BS 9999, BS 9991, HTM 05-02, PD 7974, BS 5839 part 1 & 6, BS EN 12845, BS 9251and also overseas and international codes, e.g. NFPA and UAE Code. Basheer has developed fire engineering solutions using both standard and advanced techniques such as Computational Fluid Dynamics for residential corridors and warehouses. Basheer is working on a number of projects across the UK and internationally. These include new buildings and refurbishing or reconfiguring existing buildings. Basheer has worked on a range of different buildings including office, warehouses, self-storage, mixed use, leisure, residential, education and healthcare buildings, offices, education buildings, residential, hotel and historic buildings.

The report has been approved by Nick Harvey, BEng (Hons), CEng, MIFireE. Nick Harvey is a Chartered Engineer through the Institution of Fire Engineers. Nick is the Managing Director of Jensen Hughes (England) and has over 20 years of experience in developing building Fire Strategies. He has extensive experience in fire strategies for residential buildings ranging from Private residential, Private Rented Sector, co-living, and Student Residential buildings. He has extensive experience in developing fire engineering solutions including fire and smoke and evacuation modelling for all range of building types, including extensively in residential buildings.

As part of Jensen Hughes, Nick can draw from the experience of other fire engineers in the UK and around the world, which will ensure the quality and the robustness of the fire strategy developed for the project.

Report by	Antti Paavola, BEng,
Checked by	Basheer Youssef, BEng, MIFireE
Approved by	Nick Harvey BEng (Hons), CEng, MIFireE

2.0 LONDON PLAN 2021 – FIRE SAFETY STATEMENT

The purpose of a Fire Statement is to show how the requirements of the London Plan have been considered and addressed. In additional 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 tables 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 A1(a)	Identify suitably positioned and unobstructed outside space for positioning of fire appliances	9.0
Policy D12, Subsection A1(b)	Identify suitably positioned and unobstructed outside space appropriate for use as an assembly point	6.5
Policy D12, Subsection A2	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	7.0
Policy D12, Subsection A3	The building must be constructed in an appropriate way to minimize the risk of fire spread	4.3
Policy D12, Subsection A4	Provide suitable and convenient means of escape, and an associated evacuation strategy for all building users	5.0 & 6.0
Policy D12, Subsection A5	Develop a robust strategy for evacuation which can be periodically updated and published, and which all building users can have confidence in.	5.0
Policy D12, Subsection A6	Provide suitable access and equipment for firefighting which is appropriate for the size and use of the development.	9.0

Table 2: Policy D12 Subsection A Requirements

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.	7.0
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.	10.0
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.	10.0
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.	11.0

Table 3: Policy D12 Subsection B Requirements

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	6.4 & 7.5

Table 4: Policy D5 Subsection B5 Requirements

3.0 BUILDING SAFETY ACT 2022

The Building Safety Act was granted Royal Assent on 28 May 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). HRBs are buildings > 7 storeys or 18m high containing residential accommodation.

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

The new building control approval framework will require a range of information to be submitted for approval. This includes:

- Plans, details, specifications
- Construction control plan
- Fire and emergency file
- Building regulations compliance document
- Planning statement
- Change control plan
- Competence declaration
- Description of mandatory occurrence reporting system

During construction the BSR will carry out inspections at key milestones. Change control applications will need to be submitted and approved before those changes can be implemented. Upon completion of construction works the BSR will assess the application including as built information, carry out any final inspections and review the documentation given to the building owner (golden thread). On approval the BSR will issue a completion certificate (Gateway 3).

Once the completion certificate is issued the building will need to be registered. It will not be possible to occupy a building until it is registered.

There are additional requirements for the Accountable Person once the building is occupied. The Accountable Person is responsible for the following:

- Assessing and managing safety risks
- Managing the building safety information (golden thread)
- Preparing the safety case report (and keeping it up to date)
- Engaging with residents
- Setting up a complaints procedure and a system of reporting of incidents.

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

4.1 Construction Materials

As required by the London Plan D12 B1, this section sets out the building's construction method and products and materials used as summarised below.

ELEMENT	DESCRIPTION
Construction Approach / Methodology	The specific detailed design of the building regarding construction methods will be further developed as the scheme progresses.
Building Structural Frame	Reinforced concrete frame, combination of studwork partitions and blockwork for internal walls
External Wall Construction	To be confirmed (Regulation 7.2 compliant)
Roof Construction	Standard roof construction with some accessible uses.

Table 5: Construction Methods & Primary Materials

Building materials will be required to achieve the minimum standard for fire resistance as outlined within this statement for passive fire protection. All internal linings, external wall materials and roof coverings will achieve the minimum requirements of Building Regulation guidance documents, as discussed in Sections 8.0.

Building methodologies will be designed with consideration to fire safety of the neighbouring building and adjacent areas.

4.2 External Wall Construction

The co-living residential building is considered "relevant buildings" in accordance with Regulation 7(4). Therefore, in accordance with Regulation 7(2), all materials forming part of the external wall systems including specified attachments such as balconies will achieve at least a European Classification A2-s1, d0. There are specific exemptions noted in Regulation 7(3) and these will be followed as appropriate.

4.3 External Fire Spread

Building methodologies will be designed with consideration to fire safety of the neighbouring building and adjacent areas.

The extent of unprotected area to the elevations will be determined using guidance and methods given in BR 187 taking into consideration the provision of sprinklers and the building's proximity to the site boundary / surrounding roads.

The boundary that a wall faces is the relevant boundary. It may be one of the following.

- The site boundary.
- Notional boundary between two buildings.
- The centre line of a space where further development is unlikely, such as a road.

Part of the south elevation of the co living building is connected to the hotel building with a fire-rated party wall.

The east elevation will be within 1 meter from the site boundary; therefore, it will be fire-rated.

Based on the high degree of internal compartmentation and provision of sprinklers throughout the development; it is not expected for significant areas of the other building's façades to require to be fire rated to address external fire spread. However, this will be further considered as the buildings design develops, to maintain compliance with Building Regulation's guidance regarding external fire spread.

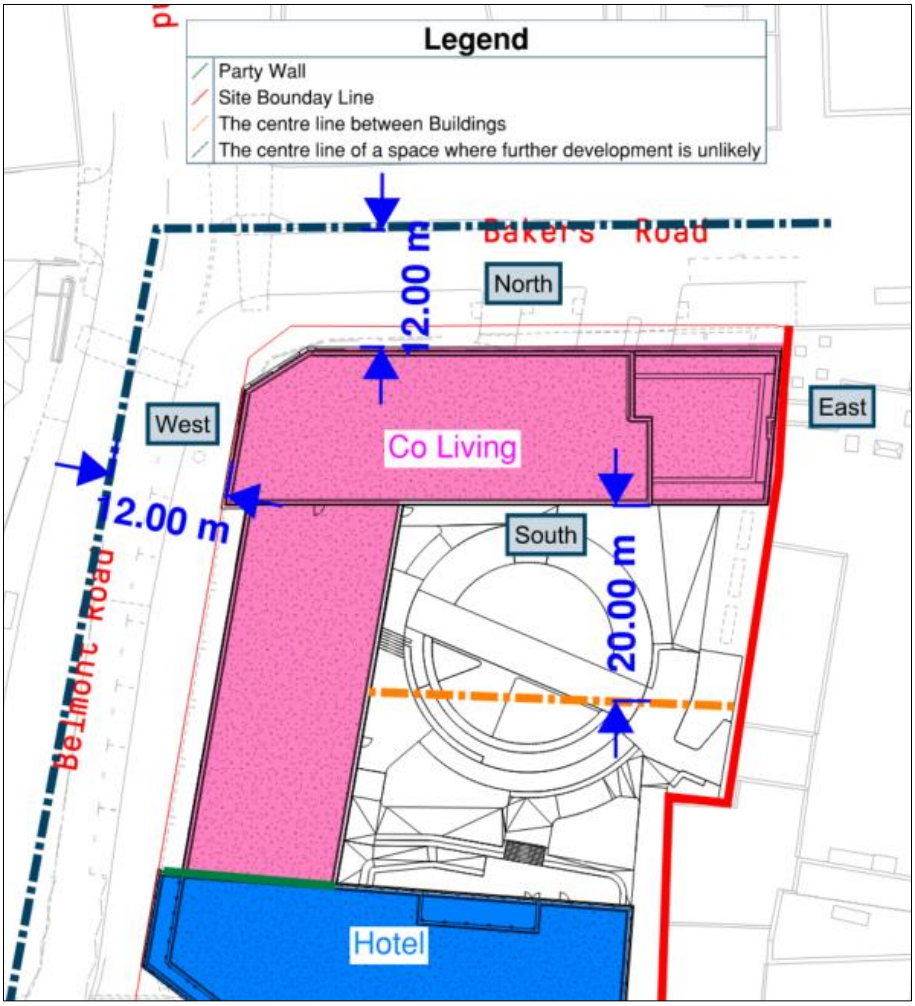

Figure 2: Distances to Site Boundary and Notional Boundary

4.4 Roof Coverings

Roof materials, including the terraces, will achieve B_{roof} (t4) classification where parts of the roof are located within 6m of the relevant boundary to building. This is in line with the BS 9991 recommendation.

5.0 EVACUATION STRATEGY

5.1 Residential Areas

The co-living accommodation areas i.e. sleeping accommodation will operate with a “defend in place” evacuation strategy. This means only the apartment where the alarm originated will evacuate initially, however, subsequent evacuation may occur through fire service notification if necessary. This strategy is in line with the guidance of BS 9991.

An evacuation alert system (EAS) designed to BS 8629 will be provided to the building, which will allow for the progressive evacuation of the co-living residential building if required.

5.2 Communal and Ancillary Areas

The communal areas/ancillary areas listed below will all evacuate upon detection in any of the common areas of the building. This includes evacuation of all common areas, such as:

- Bin/Bike Stores
- Car park
- Plant Rooms
- Co-living amenity spaces

The detection of a fire within the ancillary spaces will not necessarily signal the evacuation of the residential units.

An evacuation alert system (EAS) designed to BS 8629 will be provided to the building. As these areas will be ancillary to the residential floors, the systems will be extended to the areas and will be connected to the residential alarm systems to allow for fire service use and coordination.

5.3 Non-Residential Commercial Areas

The commercial spaces at ground level and ground level mezzanine will be independent of the rest of the building and will follow their own evacuation strategy. The units will evacuate immediately upon alarm in the unit; a fire alarm activation will not cause the evacuation of the rest of the building.

There will be a link from the non-residential area to building management to inform them of a fire alarm activation in the commercial areas.

5.4 Disabled Occupants

Residential buildings follow a stay-put evacuation strategy and for that reason guidance does not make any specific recommendation for the need for additional features to assist mobility impaired occupants from the building. However, the London Plan proposes that at least one lift per lift core should be an evacuation lift i.e. usable for mobility impaired escape; this is applicable to residential and non-residential buildings.

All stair cores will be equipped with an evacuation lift. This will be either an evacuation lift on its own, or in addition to a firefighting lift, or it will be a dual-purpose lift (for both evacuation and firefighting purposes).

the dual-purpose use of lifts for both evacuation and firefighting is appropriate for this development. The building will adopt a "stay put" evacuation policy, allowing occupants to use the lifts for evacuation before the fire service arrives. If the fire service decides to initiate a full evacuation, they will have access to at least three evacuation lifts, in addition to a dedicated firefighting lift. This approach provides a practical and safe solution, ensuring both efficient evacuation and firefighting operations, as it aligns with the recommendations in ADB V2 and BS 9999, the only available guidelines for evacuation lifts.

A detailed management plan will be developed by the building management team to ensure the proper operation of the lifts during emergencies.

These are shown below in Figure 3. The lifts will be accessed through a dedicated smoke-vented lobby.

Figure 3: Evacuation / firefighting lift location.

Occupants of reduced mobility can either independently use the evacuation lift to make their escape, or they can temporarily wait in the protected refuges. The emergency voice communication (EVC) systems will allow residents to communicate with onsite staff who could assist if necessary. These will give residents direct access to the evacuation lifts. The intention is to ensure that the evacuation lift lobbies remain relatively free of smoke during the escape period. This will be reviewed during the detailed design period.

5.5 Evacuation Assembly Point

A suitable place of assembly will be provided as part of the development. The location of the evacuation assembly points will be confirmed as the design develops but is shown nationally in the figure below.

Figure 4: Proposed Assembly Point

6.0 MEANS OF ESCAPE

6.1 Co-Living Accommodation

6.1.1 Studio Apartments

The studio apartments will be designed with an open plan arrangement. To support the design, the following will be provided:

- Studios will be provided with sprinklers and an LD1 automatic fire detection and alarm system.
- Travel distances will be limited to 20m, in line with BS 9991 guidance.
- There are no cooking facilities within the studio apartments.
- The communal kitchen will be enclosed by 1 fire-rated walls with FD30S fire doors.

The layout of the flats is still under development at this stage, but it will adhere to the above requirements.

6.2 Common Corridor/Lifts Lobby

The firefighting stairs will be adjoined by a fire sterile firefighting lobby at each level and protected escape stairs serving upper levels will be adjoined by a protected lift lobby. These lobbies will be provided with a means of smoke venting, designed in line with BS 9991 requirements.

Common corridors will be provided to separate apartments from the stair lobbies. This principle will be followed across the scheme, providing two fire door separation between the apartments and the protected stair lobbies. Corridors approaching the lift lobbies will be provided with a means of smoke venting as well to minimize smoke spread into lift lobbies. All service risers are accessed from the corridors.

The residential levels will in general be arranged so that the escape distances from the apartments to the door to the lift lobby are under 15m where only one escape direction available and under 60m where more than one escape routes available. The maximum single escape distance from the furthest apartment to the protected corridor leading into the lift lobby is 12.86m. This is illustrated below.

Figure 5: Typical Common Corridor/Lifts Lobby Layout

6.3 Residential Stairs and Final Exits

Each level except the L08 and L09 will be provided with access to three stair cores. L08 and L08 floors will be provided with access to two stairs.

Each stair will have a minimum clear width of 1.1m. Each stair will be provided with a 1m^2 automatically opening vent at the head of the stair.

The stair cores in the building will exit direct to outside at ground level or via protected corridors.

The bin store will be separated from the final exit of the firefighting stair by a smoke-vented lobby, which can either have a 0.2 m² permanent ventilation or an appropriate mechanical alternative.

The remaining stairs will not have any ground-floor connections for access. The final exits from the stairs are protected to the same standard as the stair on upper levels as recommended by BS 9991 guidance.

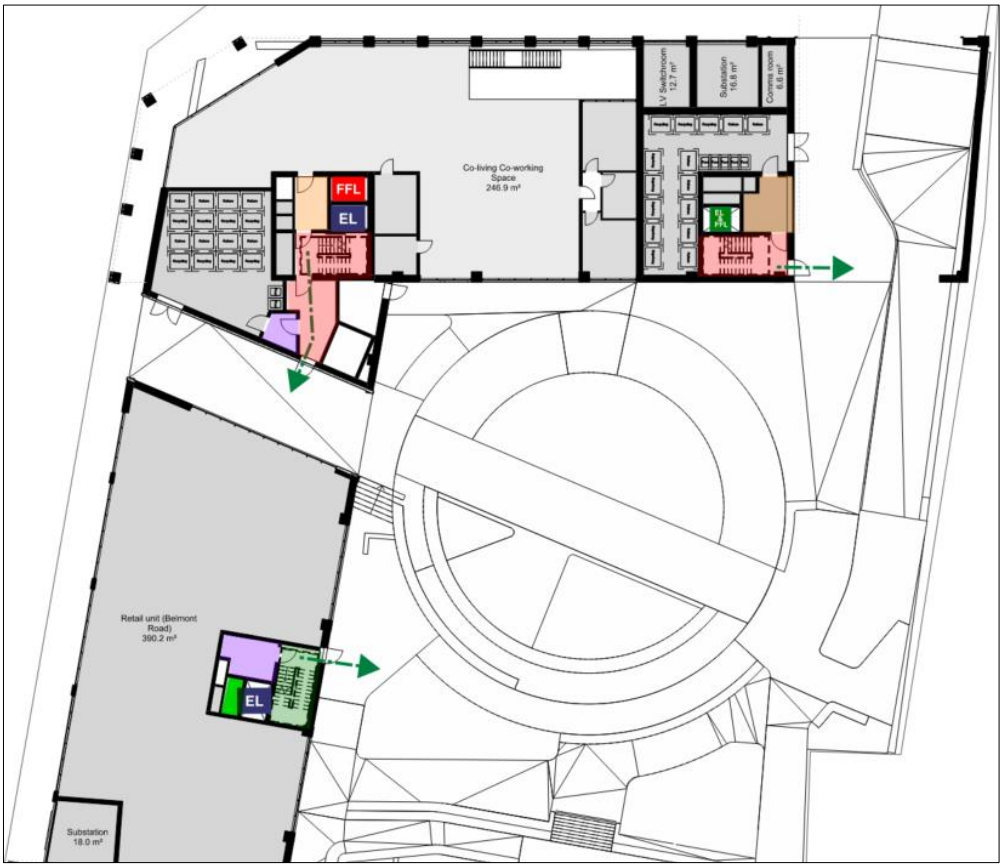

Figure 6: Final Exit from Stairs

6.4 Residential Ancillary Areas

Residential ancillary areas will be provided across the building:

- Basement levels; cycle store, car park, plant rooms
- Ground level: co-working amenity space, refuse store, plant rooms
- Levels 01 - 09; amenity space in each level

From the ancillary areas, sufficient means of egress will be available via the stair cores and exits direct to outside to meet BS9991 guidance.

In line with BS 9991 guidance, travel distances within the amenity areas. Cycle store will be limited to 18m in a single direction and 45m where more than one direction of escape is available.

Within individual plant rooms, travel distances will not exceed 9m in a single direction or 18m overall, when measured to the room exit.

Basement level will be provided with access to one firefighting shaft and to protected escape stair core.

The ground level will be provided with escape routes leading directly to outside and/or via the protected lobbies / corridors.

Basement is provided with two separate cycle stores. Both cycle stores have access to firefighting stair core and to protected escape stair core.

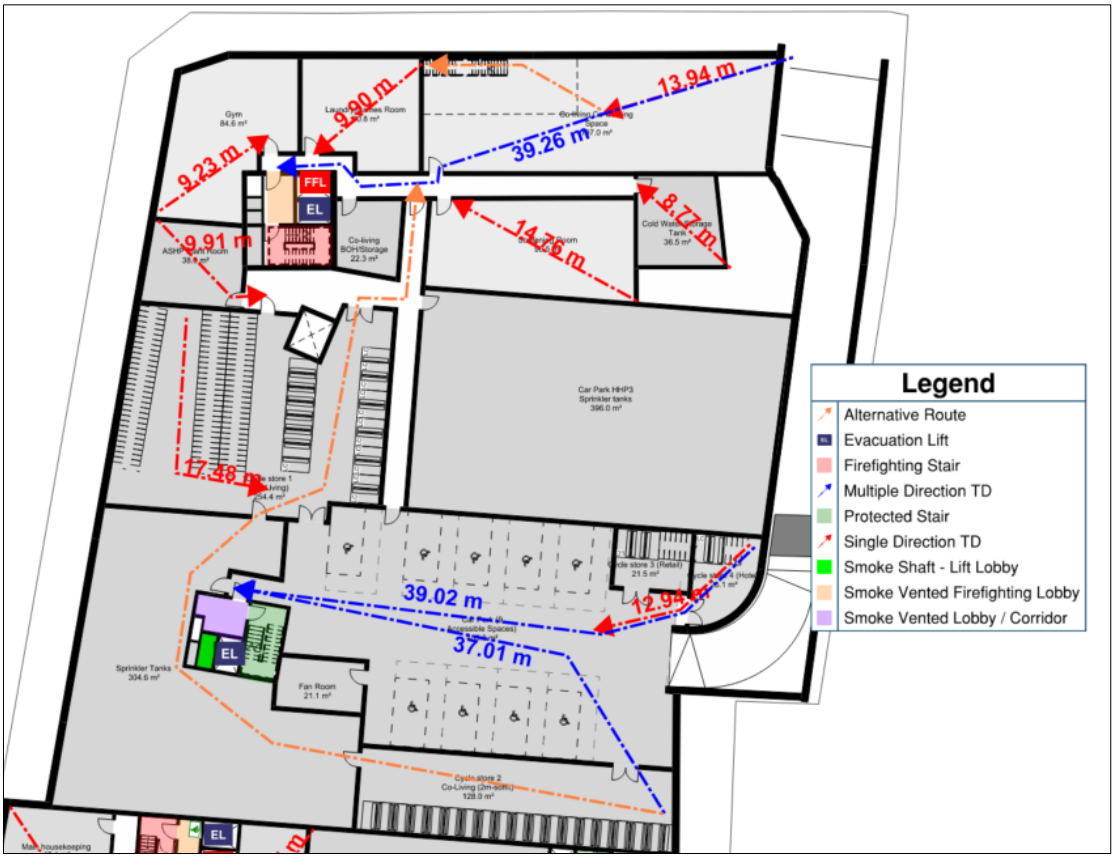

Figure 7: Travel Distance within the Basement

6.5 Commercial Units

The travel distances within commercial units, before fitout, comply with the BS 9999 recommendations, which specify 13 m in one direction and 33 m when an alternative escape route is available.

Where a unit is provided with a single escape route the capacity will be limited to 60 occupants. Where the occupancy will exceed 60, multiple escape routes will be provided to meet the requirements of BS 9999. This will be further assessed as the design develops.

The commercial and residential areas will be completely fire separated from each other with no internal connection.

7.0 ACTIVE FIRE SAFETY SYSTEMS

7.1 Automatic Sprinkler System

The top floor height of the building is greater than 11m above ground floor therefore sprinklers will be provided to meet the Building Regulations guidance.

For the residential units, a residential sprinkler system will be provided and will be designed and installed in accordance with BS 9251. This will be a Category 4 system.

The non-residential ancillary, amenity areas and commercial units will be protected with a sprinkler system. However, where the design of the sprinkler system falls outside the scope of BS 9251, sprinkler coverage will be provided by a commercial sprinkler system designed in accordance with BS EN 12845.

7.2 Fire Detection and Alarm System

A summary of the fire alarm and detection system(s) are shown in Table below.

AREA	CATEGORY	APPLICABLE GUIDANCE
Residential Apartments	LD1	BS 5839-6
Residential Common Corridors	L5	BS 5839-1
Non-residential Ancillary Areas	L2	BS 5839-1
Commercial Units	L2	BS 5839-1

Table 6: Automatic Fire Detection Provisions

7.3 Emergency Lighting and Signage

Emergency lighting will be provided in accordance with relevant code guidance, including the Approved Document B, BS9991 and BS 5266-1.

Signage will be provided throughout the building and in accordance with the recommendations of relevant code guidance, including the Approved Document B, BS 9991 and BS ISO 3864-1.

7.4 Secondary Power Supplies

A secondary source of power will be provided for all life safety systems in line with the BS 9991 guidance.

7.5 Evacuation and Firefighting lifts

All residential levels in the building will be served by firefighting lift and evacuation lifts in line with London Plan guidance D5(B5).

The residential buildings will be designed with a stay put strategy as discussed above. As such, only a small number of persons are expected to need to use an evacuation lift at any one time; an evacuation lift provided to each core (in addition to the firefighting lift in firefighting core) is therefore considered sufficient.

In the unlikely event that the fire brigade felt it necessary to use the evacuation alert system, this could lead to a higher number of flats evacuating simultaneously. The number of persons who might be unable to evacuate using the stairs is not readily predictable; however, the evacuation lifts will be provided with dedicated protected lift lobbies into which no flats or higher fire risk spaces open. This will provide a place of relative safety within which any resident could await an evacuation lift if necessary.

7.6 Evacuation Alert System

An evacuation alert system will be provided in accordance with BS 8629.

7.7 Smoke Control System

The lifts lobbies adjacent to the firefighting stairs, as well as the corridors leading to these lobbies will be smoke vented. This will be achieved via a mechanically smoke shaft.

Smoke shaft's locations will meet the requirements stated in BS 9991 guidance.

The smoke control strategy is shown in the figure below. The detailed design of the smoke ventilation in corridors will be reviewed post planning but the intention is to maintain as far as reasonably practicable the lift lobbies and the stairs as smoke clear environments.

Figure 8: Smoke Ventilation Strategy

7.8 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.

8.0 PASSIVE FIRE SAFETY MEASURES

8.1 Structural Fire Resistance

All the load bearing elements of construction will provide 2 hours of fire resistance to comply with the current BS 9991 guidance. This is applicable to buildings of any height over 30m.

8.2 Compartmentation and Fire Doors

Fire-resisting walls and floors will be provided in accordance with the following table:

Fire-resisting walls and floors will be provided in accordance with the following table:

AREA	FIRE RESISTANCE	FIRE DOOR
Compartment Floors	2 hours	N/A
Stairs	2 hours	FD60S
Stair Final Exit Corridors	2 hours	N/A
Risers / Lift Shafts	2 hours	FD60s
Separating Construction to Commercial Units	2 hours	N/A
Life Safety Plant Rooms High Risk Plant Rooms	2 hours	FD60s
Walls between studios	1 hours	N/A
Walls between studios and common areas	1 hour	FD30s
Non-Life Safety Plant Room	1 hour	FD60s
Refuse Store	1 hour	FD60s
Cycle Store	1 hour	FD60s
Electric bikes Store / Car park	2 hours	FD60s
Amenity/ communal kitchen	1 hour	FD30s
UKPN Substation	4 hours	As required by the power supplier

Table 7: Fire Compartmentation and Fire Doors Requirements

8.3 Cavity Barriers

Cavity barriers will be provided within any external wall cavities or floor voids in accordance with the guidance in Clause 19 of BS 9991.

8.4 Fire Stopping

Fire stopping will be provided to maintain the integrity of the fire separating elements in accordance with the recommendations of Section 24.4 of BS: 9991.

8.5 Internal Wall & Ceiling Linings

Any internal surface finishes (walls or ceilings) will be provided in line with the table below.

ROOM	PERFORMANCE (EUROPEAN CLASS)
Within circulation spaces	B-s3,d2
Rooms smaller than $4m^2$ (residential areas)	D-s3,d2
Rooms smaller than $30m^2$ (all other areas)	
Other rooms	C-s3,d2

Table 8: Wall & Ceiling Linings

9.0 ACCESS AND FACILITIES FOR THE FIRE SERVICE

9.1 Fire Vehicle Access

All access roads will be designed to be sufficient in terms of load-bearing capacity and clearance widths and heights for a fire service pump appliance. The recommendations for pumping appliances, turntable ladders/aerial platforms and special large appliances are as follows:

Appliance Type	Min. width of road between kerbs(m)	Min. width of gateways (m)	Min. turning circle between kerbs (m)	Min. turning circle between walls (m)	Min. clearance height (m)	Min. carrying capacity (tonnes)
Pump	3.7	3.1	16.8	19.2	3.7	14.0
High Reach	3.7	3.1	26.0	29.0	4.0	23.0
Special Appliance	4.0	3.1	26.0	29.0	4.27	32.0

Figure 9: Typical vehicle access route specification

The fire service access route will be through Belmont Road and Bakers Road, which allow access to the site, as indicated in the figure below. Fire Vehicle access will be provided within 18m of the wet fire main inlet and will be visible from the fire appliance parking position. This is in line with the BS 9991 guidance.

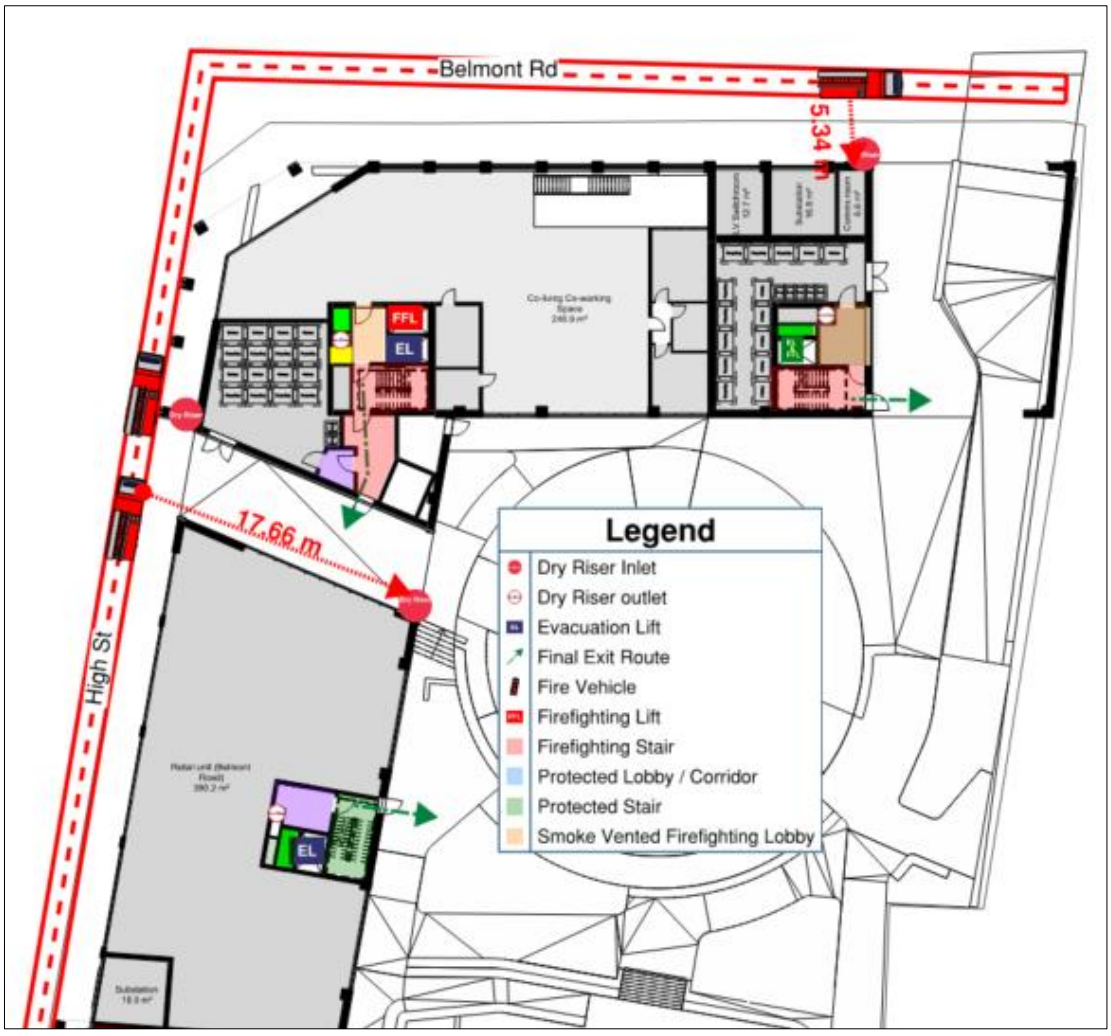

Figure 10: Access and Facilities for The Fire Service

9.2 Firefighting Facilities

The building has a top floor height of more than 18m. The building exceeds 900 sqm on the Levels 01 – 07. Upper levels 08 – 09 are below 900 sqm. Therefore, two firefighting shafts will be provided.

Both firefighting cores will include the following:

- A firefighting lift and evacuation lift in one and a dual-purpose lift (for both evacuation and firefighting purposes) in the other, including backup power supply located within 7.5m of the door to the stair on all floors.
- Firefighting stair at least 1.1m wide.
- 2 hours fire resisting enclosure around the stair and the firefighting lift.
- A dry riser will be provided to the building.
- 1m^2 automatically opening vent at the head of the stairs.

As discussed above, the firefighting lifts within the building will be in addition to the evacuation lift in one firefighting shaft. In the second firefighting shaft, the lift will serve a dual purpose as both a firefighting and evacuation lift.

It is proposed that firefighting shaft will be extended to serve the basement levels in order to improve conditions for firefighting, although not needed to comply with standard Building Regulations guidance. A smoke-vented lobby will be incorporated between the ancillary accommodation and the stair using the smoke control measures provided to the upper floors above.

The escape stair will also be equipped with a dry riser to meet the 60m rule for hose coverage in the basement.

9.3 Hose Coverage

Hose cover from the fire main outlet is within the recommended limit of 60m from a firefighting shaft in a sprinklered building.

Figure 11: Hose Coverage – Typical Floor

Figure 12: Hose Coverage – Basement

Vehicle access is provided within 45m hose cover of all points within the commercial units.

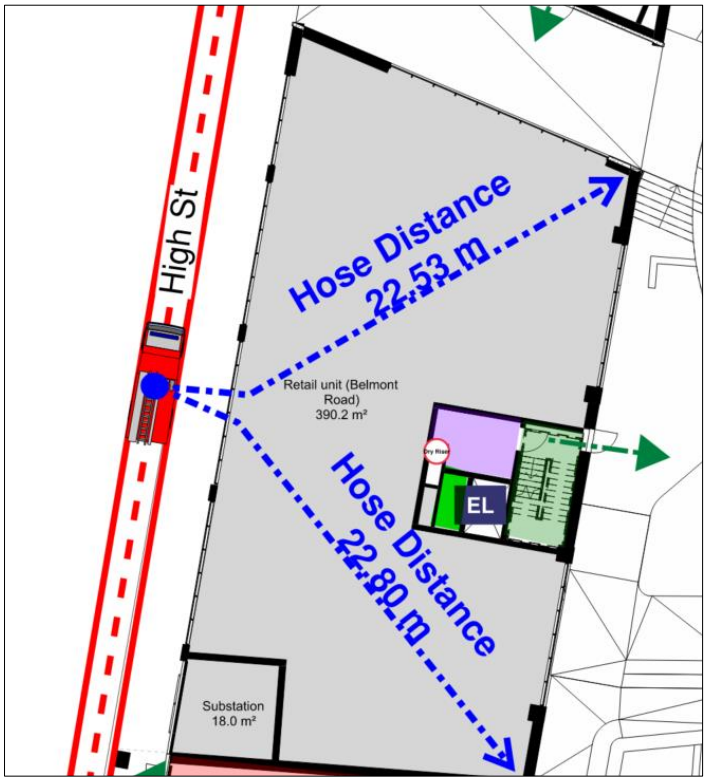

Figure 13: Hose Coverage – Commercial unit

9.4 Firefighting Wayfinding Signage

A Premise Information Box (PIB) will be provided and suitably located for the building. The location of the PIB will be such that it is readily accessible for the fire service on their arrival; this will be confirmed as the design and management strategy develops.

9.5 Basement Smoke Venting

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 9991.

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

9.6 External Water Supply

There is an existing fire hydrant within 100m of each of the fire main inlets.

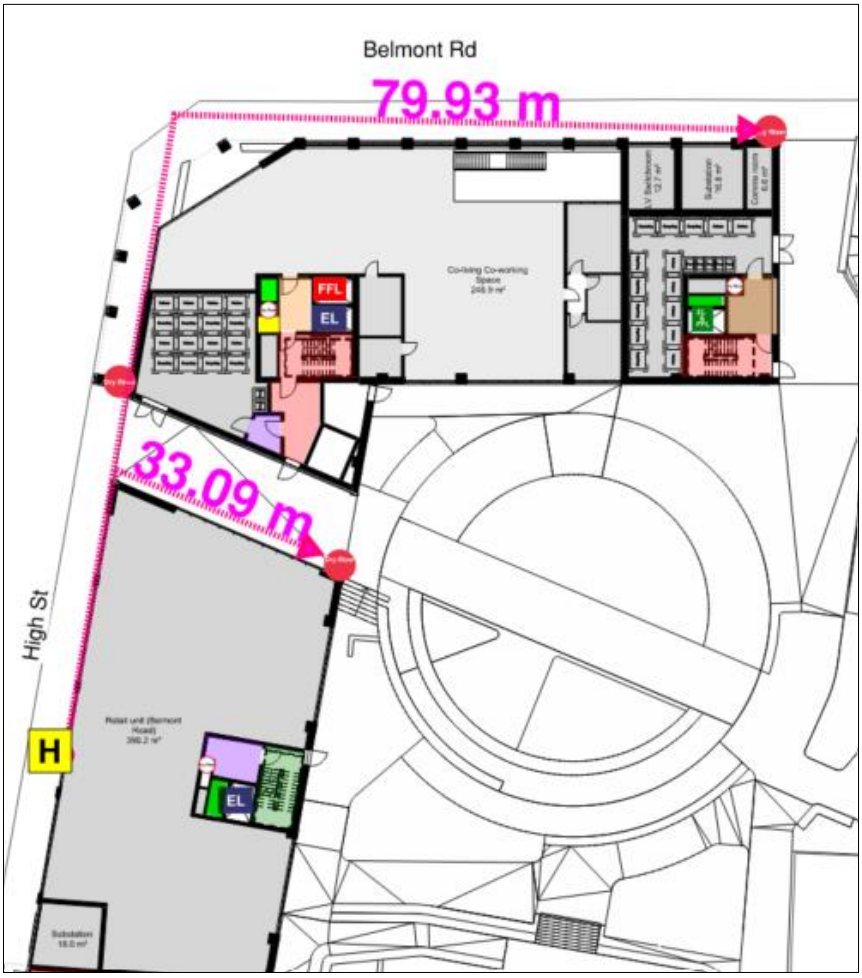

Figure 14: Fire Hydrant location

10.0 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 fire mains and provision of safe access routes to and within the buildings. These plans shall be in line with the requirements of the Regulatory Reform (Fire Safety) Order and relevant British Standards for the fire safety equipment.

11.0 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 during the design and construction phases will be provided. 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 relevant information throughout the design, construction and life of the building. This will be an ongoing process as the scheme is developed and built and 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 client.

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, e.g., if further flats were provided in the future.
- 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.

12.0 INFORMATION, LIMITATIONS AND ASSUMPTIONS

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

12.1 Drawings

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

DRAWING NUMBER	DRAWING DESCRIPTION
CGL-ZZ-ZZ-DR-A-SK0104	Basement Plan
CGL-ZZ-ZZ-DR-A-SK0105	Lower Floor Plans
CGL-ZZ-ZZ-DR-A-SK0106	Upper Floor Plans
CGL-ZZ-ZZ-DR-A-SK0108	Top Floor Plans

12.2 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 Insurers' Requirements for Property Protection,* RIBA Publishing 2015.

12.3 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 is 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 DNA Uxbridge Limited 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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