



Report

Project	31-32 and 33-34 Alfred Place
Report Title	Fire Statement – London Plan
Our Ref	FL7743/R1 Issue 5

Issue Record

REV	DATE	AUTHOR	REVIEW	APPROVED	SECTION	AMENDMENTS
1	26/04/2022	BY	BT	BT	-	-
2	28/04/2022	BY	AM	BT	4.7	New Section to address Roof terrace escape.
					4.8	Mobility Impaired Occupants Escape clarified for each building.
					7.2	Fire Fighting to each building clarified.
3	29/04/2022	AM	AM	AM	9.1 9.3	Drawing list updated Client name updated
4	09/05/2022	AM	BT	AM	4.7	Accessible terrace reduced to 31/32 Alfred Place
5	20/05/2022	AM	AM	AM	4.7	Accessible terrace re-extended to 31/32 and 33/34 Alfred Place

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1.0 INTRODUCTION

1.1 Project Description

The project involves the refurbishment of the existing office buildings 31-32 Alfred Place and 33-34 Alfred Place. Both buildings will be refurbished at ground floor and include the provision of roof terrace to the roof of both 31-32 and 33-34 Alfred Place. The works will also include a CAT A refurbishment of the office floors within 31-32 Alfred Place. The office floors of 33-34 Alfred Place will not be affected by the refurbishment.

The top floor of the existing building is at sixth floor level and is 19.44m above ground level. The roof terrace means the top storey height of the building will be at 23m above ground floor level.

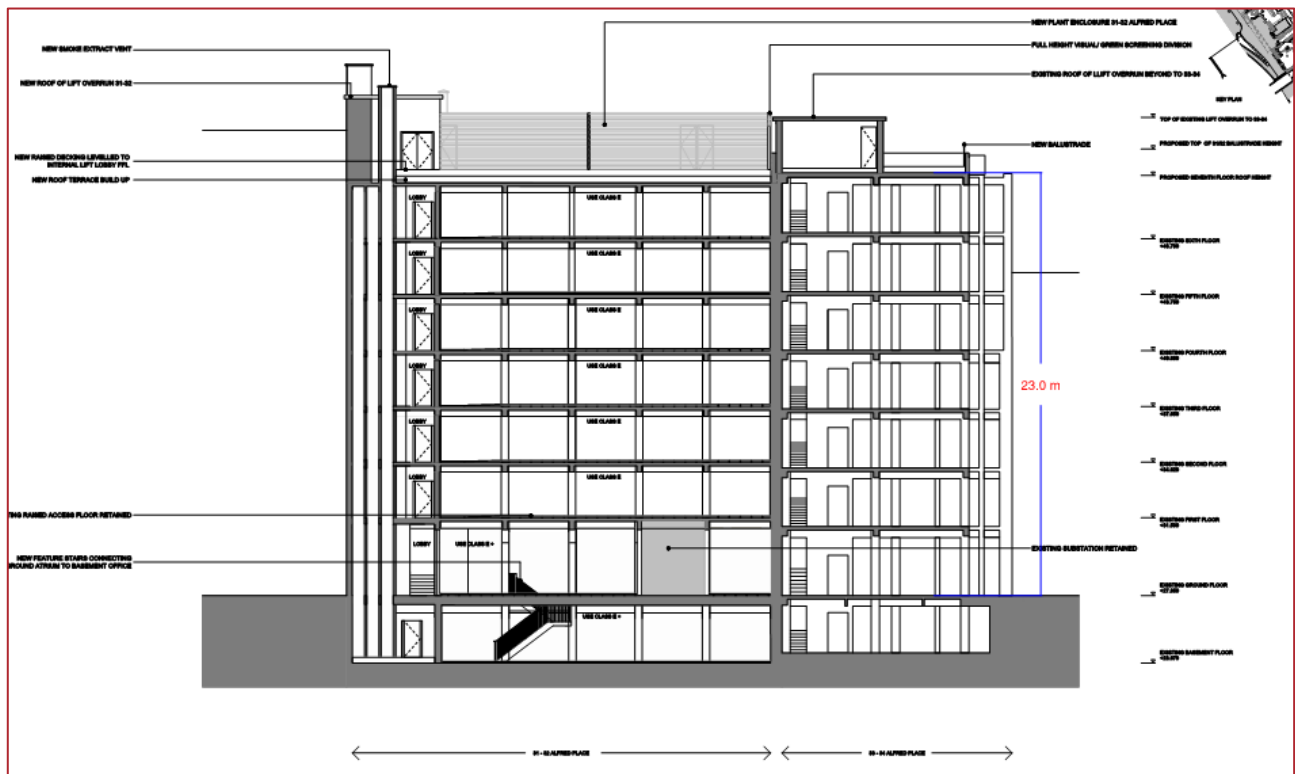


Figure 1: Building Top Storey Height

1.2 Aim of Fire Statement

This document describes how the proposed design will meet with the requirements detailed below. The Fire Statement is based on the drawings and information provided to Jensen Hughes to date by Ben Adams Architects Ltd.

2.0 LEGISLATION AND GUIDANCE NOTES

2.1 London Plan

Policy D12 of the London Plan requires that all development proposals must achieve the highest standards of fire safety and all major development shall be supported by a Fire Statement as per the excerpt below.

Policy D12 Fire safety

- A** In the interests of fire safety and to ensure the safety of all building users, all development proposals must achieve the highest standards of fire safety and ensure that they:
- 1) identify suitably positioned unobstructed outside space:
 - a) for fire appliances to be positioned on
 - b) appropriate for use as an evacuation assembly point
 - 2) are designed to incorporate appropriate features which reduce the risk to life and the risk of serious injury in the event of a fire; including appropriate fire alarm systems and passive and active fire safety measures
 - 3) are constructed in an appropriate way to minimise the risk of fire spread
 - 4) provide suitable and convenient means of escape, and associated evacuation strategy for all building users
 - 5) develop a robust strategy for evacuation which can be periodically updated and published, and which all building users can have confidence in
 - 6) provide suitable access and equipment for firefighting which is appropriate for the size and use of the development.
- B** All major development proposals should be submitted with a Fire Statement, which is an independent fire strategy, produced by a third party, suitably qualified assessor.
- The statement should detail how the development proposal will function in terms of:
- 1) the building's construction: methods, products and materials used, including manufacturers' details
 - 2) the means of escape for all building users: suitably designed stair cores, escape for building users who are disabled or require level access, and associated evacuation strategy approach
 - 3) features which reduce the risk to life: fire alarm systems, passive and active fire safety measures and associated management and maintenance plans
 - 4) access for fire service personnel and equipment: how this will be achieved in an evacuation situation, water supplies, provision and positioning of equipment, firefighting lifts, stairs and lobbies, any fire suppression and smoke ventilation systems proposed, and the ongoing maintenance and monitoring of these
 - 5) how provision will be made within the curtilage of the site to enable fire appliances to gain access to the building
 - 6) ensuring that any potential future modifications to the building will take into account and not compromise the base build fire safety/protection measures.

Figure 2: Extract from London Plan 2021 Policy D12 Fire safety

2.2 Building Regulations

In order to comply with the requirements of Policy D12 and the functional requirements of the Building Regulations 2010 (incorporating the building (Amendment) Regulations 2018), the fire strategy will be developed following the recommendations of BS 9999. Where appropriate, fire engineered solutions will be developed to support deviation from code guidance.

The works undertaken as part of the scope of this project will comply with the requirements of the Building Regulations relevant to fire life safety. Furthermore, the works will need to ensure to not adversely impact on the existing parts of the building by making them any less compliant with the current regulations than they were before commencement of works.

London Plan Policy D5 'Inclusive Design' requires development to incorporate safe and dignified emergency evacuation for all building users, by as independent means as possible. In all developments where lifts are installed, Policy D5 requires as a minimum at least one lift per core to be a suitably sized fire evacuation lift suitable to be used to evacuate people who require level access from the building. The London Plan sets out that refurbishment schemes that require planning permission will be subject to London Plan policy.

2.3 The Authors of This Statement

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 nearly 28 years (predominantly under the name JGA). The qualifications of the author of this report are given below:

Report written by Basheer Youssef Associate of Jensen Hughes, England.

Basheer has 12 years' international experience in high-level fire engineering. He is a member of the Institution of Fire Engineers (MIFireE). As a Fire Engineer 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. He 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 9251 and also overseas and international codes, e.g. NFPA and UAE Code.

Report approved by Boris Tang, MEng (Hons), CEng, MIFireE, MIMechE

As Technical Director Boris is responsible for leading projects and for the development of the fire strategies for a range of complex buildings. With years of experience in the UK, Hong Kong, Macau and overseas, he was involved in various scales of projects and has developed strong technical and modelling skills in support of qualitative justifications of performance-based designs. His experience in a wide range of regulatory environments, and competency in the development of a holistic fire safety strategy qualify him to contribute to projects of various degrees of complexity and issues.

As part of Jensen Hughes, Boris 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

3.0 CONSTRUCTION, PRODUCTS AND MATERIALS

3.1 Construction

Alfred place comprises of two buildings made of brick with concrete columns, beams, concrete floors and a flat roof.

As an existing situation it is not necessary to upgrade the structural fire resistance period. However, any new elements of structure will be required to achieve the minimum standard for fire resistance as outlined in Section 5.0.

3.2 External Walls

The Alfred Place buildings do not fall within the “relevant building” category of the Building Regulations. Therefore, Regulation 7(2) is not applicable to the construction of the external walls.

The works will have no material impact on the risk of external fire spread.

3.3 Roof Covering

Roof coverings to the top of the buildings will need to be in accordance with current BS 9999.

4.0 MEANS OF ESCAPE FOR ALL BUILDING USERS

4.1 Risk Profile

The relevant risk profiles have been designated in accordance with BS 9999 and summarised in the table below.

LOCATION	RISK PROFILE
Office and roof terrace	A2
Plant Room	A3

Table 1: Risk Profiles

4.2 Evacuation strategy

The buildings will operate on a simultaneous evacuation strategy. This means that upon activation of the fire detection and alarm system all occupants will start their evacuation from the buildings.

The evacuation of disabled occupants will be considered with procedures to be developed as part of the evacuation management plan.

4.3 Travel Distances

The travel distances will be within the limits of BS 9999 in all areas within this scheme.

4.4 Horizontal exits

The horizontal exit widths and the number of storeys exits will be within the limits of the current BS 9999 within this scheme.

4.5 Stairs

The buildings served by protected stairs and external stair with 1200mm and 1500mm wide respectively.

4.6 Final Exits

The final escape routes from the protected stairs are still under development to ensure that the escape routes from the stairs are protected to the same standard as the stairs on upper levels as recommended by current BS 9999.

The external stair currently discharges to final exits on the Ground Floor as recommended by current BS 9999.

4.7 Roof Terrace

There is a new roof terrace proposed to the top floor of 31/32 and 33/34 Alfred Place. Escape will be via the two escape stairs, one into each building. The stair into 31-32 Alfred Place will also be a fire fighting shaft, see Section 7.

4.8 Fire Safety Provisions for Disabled Occupants

4.8.1 31-32 Alfred place

Provision will be made for the means of escape of disabled occupants by the inclusion of a lift suitable for evacuation. A management procedure will be developed as the projects progresses.

To meet the requirement of Policy D5 of the London Plan, it is proposed that the lift to stair core 1 will be designed as a firefighting and evacuation lift. This will allow the lift to be used as part of the evacuation strategy prior to the arrival of the fire and rescue service. The lift will be operated under the control of the fire safety manager or by someone trained and authorized in the use of the lift. This approach is in line with BS 9999 guidance.

Disabled refuges are to be provided in protected stairway or lobbies. All refugees are to be provided with Emergency Voice Communication Systems (EVC) installed in accordance with current BS 5839-9.

4.8.2 33-34 Alfred Place

In 33-34 Alfred Place, there are no evacuation lifts or disabled refuge points with emergency voice communication systems. This is an existing situation and will be maintained as existing as the floor of 33-34 Alfred Place will not be affected by the works.

Instead, the tenant will provide a Personal Emergency Evacuation Plan (PEEP) and is responsible for evacuating mobility-impaired occupants from their own demise. The PEEPs will need to be reviewed by the property management team.

4.9 Assembly points

There is a designated fire assembly point located on the corner of Alfred Place and Chenies Street.



Figure 8 – Assembly points locations

5.0 PASSIVE FIRE SAFETY MEASURES

5.1 Structural Fire Resistance

No detailed information was available to determine the fire resistance of the loadbearing elements of structure, but as the buildings are largely constructed of masonry and concrete. The top floor of the existing buildings is more than 18m above ground level and at least 90 minutes fire resistance would be expected to the existing structure.

All new elements of structure will be designed and constructed to achieve a minimum 90-minutes fire resistance as recommended in BS 9999. Any works affecting the existing structure will need to ensure that 90 minutes fire resistance is achieved, and up to 120 minutes for structure relating to the fire fighting shaft.

5.2 Fire Compartments

Any lifts shafts, stairs, and service risers will need to be constructed as protected shafts and achieve the same 90 minutes structural fire resistance period of the buildings.

The firefighting stairs will be enclosed in 120 minutes fire rated construction with self-closing FD60S fire doors.

5.3 Cavity Barriers

Cavity barriers will be provided in concealed ceiling voids, floor voids and external walls in accordance with the recommendations of current BS9999.

5.4 Fire Stopping

Fire stopping will be provided to maintain the integrity of the fire separating elements in accordance with the recommendations of current BS9999.

5.5 Internal linings

Wall and ceiling linings will achieve the following surface spread of flame classifications according to current BS EN 13501-1, in line with standard guidance:

- Within circulation spaces: B-s3, d2
- Rooms smaller than 30 m²: D-s3, d2
- Rooms larger than 30 m²: C-s3, d2

6.0 ACTIVE FIRE SAFETY SYSTEMS

6.1 Fire Detection and Alarm System

An L1 automatic fire detection and alarm system will be provided to each part of the site in accordance with current BS 5839-1.

6.2 Fire Sprinkler System

There is no existing automatic fire sprinkler system installed. The buildings are less than 30m and sprinklers are not needed to comply with code guidance recommendations. Sprinklers are not proposed.

6.3 Emergency Lighting

Emergency lighting will be provided in accordance with current BS 5266-1.

6.4 Escape Signage

Escape signage will be provided in accordance with current BS ISO 3864-1.

6.5 Emergency Power Supply

Life safety systems will be provided with a secondary back-up power supply.

6.6 Smoke Ventilation and Control System

The fire-fighting stairs and lobbies will be provided with a smoke control system in accordance with current BS 9999. This will be provided via mechanically assisted smoke shafts.

The existing provision of the smoke control system within the basement should be retained, and it is not necessary to upgrade the basement smoke venting on the basis that the proposed basement refurbishment does not make the condition any less compliant with the guidance.

The smoke control system will be reviewed further as the scheme develops.

6.7 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.

7.0 ACCESS AND FACILITIES FOR THE FIRE SERVICE

7.1 Fire Service Access

Fire service access routes, which allow access to the site, are indicated in the figure below. The primary access point to the buildings will be via Store Street.

The access road is suitable for a fire service pump appliance with a 3.7m clear width and 3.7m vertical clearance height. The load-bearing capacity to the access roads is a minimum of 14 tonnes.

A tracking analysis will be carried out to confirm there is sufficient space for a fire vehicle to turn around in the Service Yard, although it is not anticipated that this will be an issue given the requirement for other large vehicles to turn, e.g. refuse trucks.

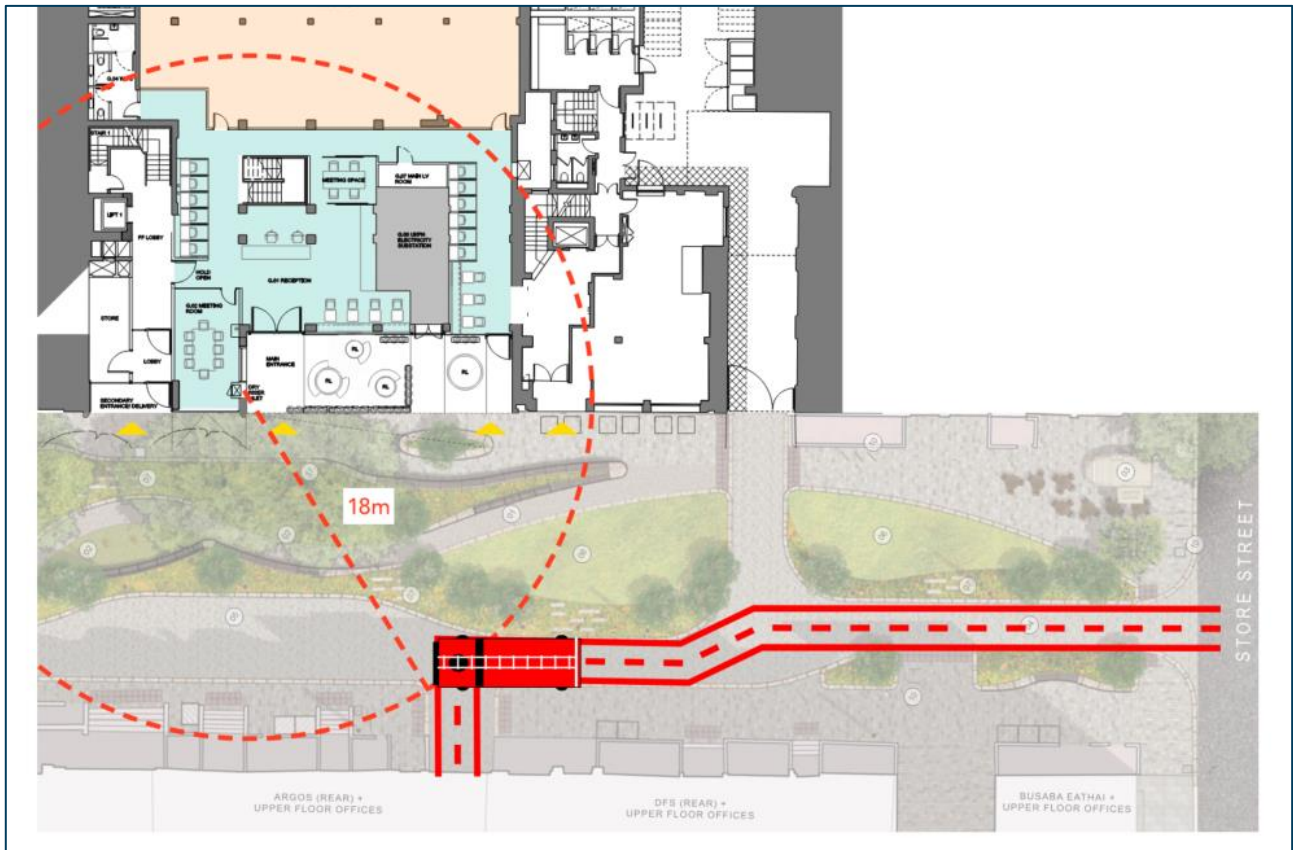


Figure 3: Fire Service Access

7.2 Fire Service Facilities

7.2.1 31-32 Alfred place

The building will be provided with firefighting shaft include the following:

- Firefighting lift including backup power supply.
- 1.1m wide firefighting stair;
- 2 hours fire resisting enclosure around the stair and the firefighting lift;
- Dry fire main with an outlet located within the stair enclosure on all floors and the inlet located externally at Ground Floor will be located within 18m and visible from where a fire appliance vehicle can park;
- 1m² automatically opening vent at the head of the stair;

Each floor will be provided with a maximum hose coverage of 45m from the dry riser inlet provided at each floor level.

7.2.2 33-34 Alfred place

The top floor of this building is more than 18m above ground level. Therefore, if built today, a firefighting shaft including a firefighting lift and dry riser main accessed from a smoke vented lobby would be provided.

The provision of a new external terrace above increases the top floor height. However, given no works are proposed to the lower floors of the building, it would not be readily achievable to upgrade the stair core to a code compliant fire fighting core. This is considered reasonable as there will be two means of escape from the roof terrace, one in each building and the escape into 31-32 Alfred Place will be via the newly upgraded stair 1 to a fire fighting core.

7.3 Fire Hydrants

Fire hydrants are located in opposite corners of Alfred Place and within 100m of an entry point of the buildings.

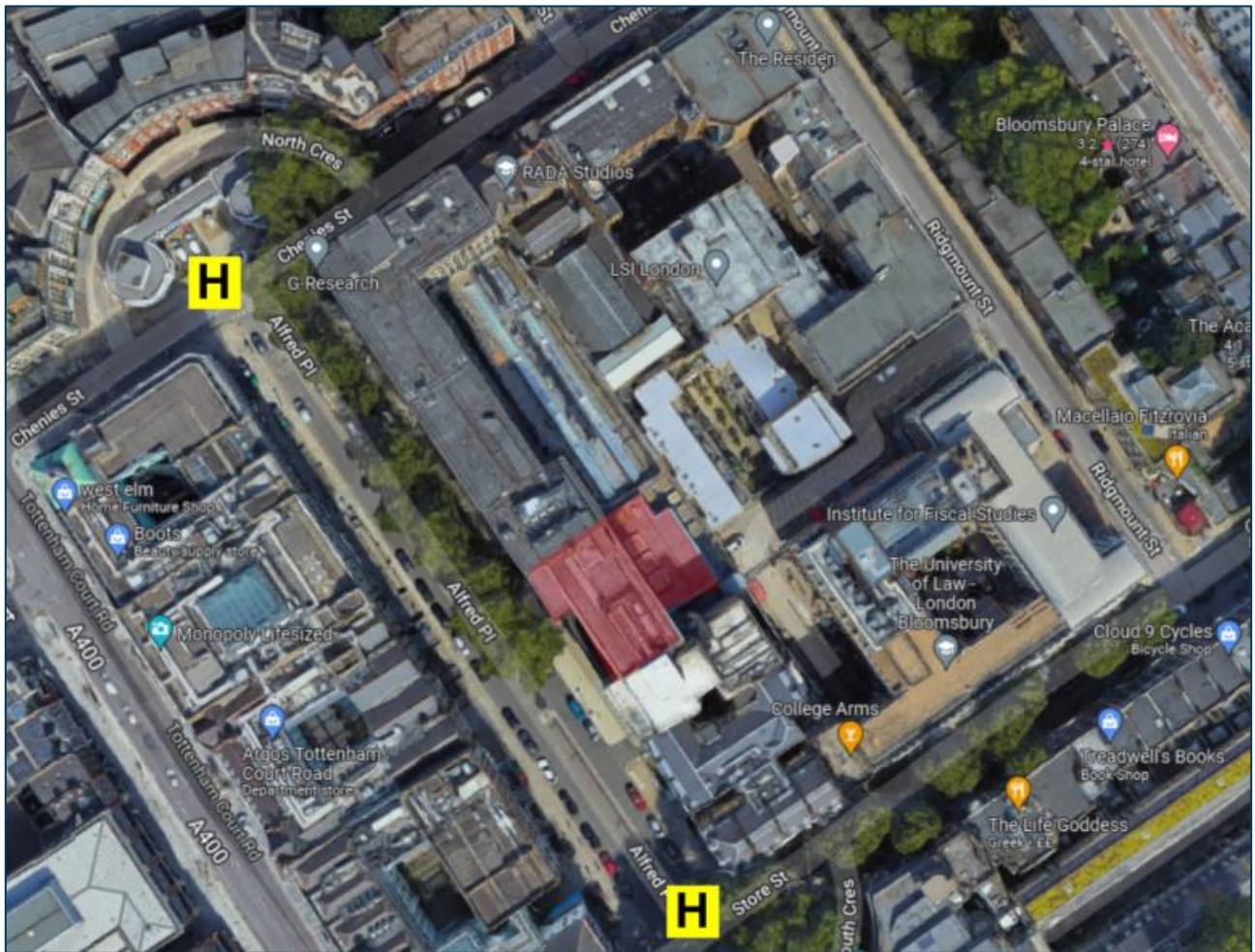


Figure 4: Fire Hydrant Location

8.0 FUTURE PROOFING – GOLDEN THREAD OF INFORMATION

In line with the recommendations for providing a 'golden thread' of information, digital records of the fire safety components during the design and construction phases will be recorded. 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 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
- 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.

9.0 INFORMATION, LIMITATIONS AND ASSUMPTIONS

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

9.1 Drawings

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

- 21-015-P099 Existing Basement Plan
 - 21-015-P100 Existing Ground Floor Plan
 - 21-015-P101 Existing First Floor Plan
 - 21-015-P102 Existing Second Floor Plan
 - 21-015-P103 Existing Third Floor Plan
 - 21-015-P104 Existing Fourth Floor Plan
 - 21-015-P105 Existing Fifth Floor Plan
 - 21-015-P106 Existing Sixth Floor Plan
 - 21-015-P107 Existing Seventh Floor /Roof Plan
-
- 21-015-P199 Proposed Basement
 - 21-015-P200 Proposed Ground Floor Plan
 - 21-015-P201 Proposed First Floor Plan
 - 21-015-P202 Proposed Second Floor Plan
 - 21-015-P203 Proposed Third Floor Plan
 - 21-015-P204 Proposed Fourth Floor Plan
 - 21-015-P205 Proposed Fifth Floor Plan
 - 21-015-P206 Proposed Sixth Floor Plan
 - 21-015-P207 Proposed Seventh Floor /Roof Plan

9.2 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.

9.3 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 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 Great Portland Estates / Knighton Estates 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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