



Bedford Place Hotel, London

Planning Fire Safety Strategy

Client: Firmdale Hotels

Date: 03/11/2023



1 Background and document purpose

OFR Consultants have been appointed by Firmdale Hotels to provide fire engineering input and develop a Planning Fire Safety Strategy (PFSS) for the refurbishment works of the existing Bedford Place Hotel located at 21-23 Bedford Place, London.

The project is to redevelop three Georgian townhouses (Grade II listed) that are currently vacant, but had been previously occupied by the Penn Club hotel under Planning Class 1 (hotel) use. The development is now proposed to be converted into a 42-key hotel.

The Bedford Place Hotel is located in the London Borough of Camden and the proposed development is therefore subject to the London Plan 2021; that is the statutory Spatial Development Strategy for Greater London prepared by the Mayor of London (“the Mayor”) in accordance with the Greater London Authority Act 1999 (as amended) (“the GLA Act”) and associated regulations.

The London Plan was published in March 2021. The London Plan is part of the statutory development plan for London, meaning that planning applications for developments in London should be determined in accordance with the policies contained therein, unless material considerations indicate otherwise. In support of the London Plan, Fire Safety London Plan Guidance (LPG) was published in February 2022 (currently as draft under consultation), to set out how applicants should demonstrate their schemes comply with these policies.

The draft Fire Safety LPG reiterates that the fire safety of developments needs to be considered from the outset. The evolution of a fire safety strategy and associated evacuation strategy should be iterative, progressing alongside the detailed design of the development and understanding of how it will be used. The draft guidance confirms that Planning Officers are not experts in fire safety, therefore the onus is on the applicant and the fire safety expert to demonstrate compliance with the London Plan fire safety policies. This draft LPG provides template forms for the applicant to easily provide the required fire safety information and for Planning Officers to check that information has been provided against each relevant policy criteria.

London Plan 2021 Policy D12(A) states “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...”. It is understood that the proposals constitute a non-major application; therefore, this Planning Fire Safety Strategy has been produced to demonstrate that the proposals can achieve the highest standards of fire safety. The contents of this document follow the headings outlined in Policy D12(A) of the London Plan, covering:

- Site address (noted in section 4.2).
- Description of development (noted in section 4.1).
- Name, qualifications, professional memberships and experience of author (noted in section 2).
- Has a Gateway One Statement been submitted? (noted in section 3.2).



- Identifying suitably positioned unobstructed outside space for fire appliances to be positioned on (noted in section 8).
- Identifies suitably positioned unobstructed outside space appropriate for use as an evacuation assembly point (noted in section 5.4).
- 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 (noted in section 6).
- Constructed in an appropriate way to minimise the risk of fire spread (noted in section 7).
- Provides suitable and convenient means of escape, and associated evacuation strategy for all building users (noted in section 5).
- A robust strategy for evacuation which can be periodically updated and published, and which all building users can have confidence in (noted in section 5).
- Suitable access and equipment for firefighting which is appropriate for the size and use of the development (noted in section 8).
- Where a lift core is provided, at least one lift is an evacuation lift (see below).

London Plan 2021 Policy D5(B5) states that ‘development proposal should be designed to incorporate safe and dignified emergency evacuation for all building users. In all developments where lifts are installed, as a minimum at least one lift per core (or more subject to capacity assessments) should be a suitably sized fire evacuation lift suitable to be used to evacuate people who require level access from the building’. The draft Fire Safety LPG provides a supplementary form template, which identifies the following additional points. These have been noted in section 5.3.

- Details of the evacuation lift and shaft.
- Capacity Assessment.
- Evacuation Lift Management Plan.
- Declaration of Compliance by a competent person.

The aim of this document is therefore to demonstrate that the relevant fire safety aspects of the design to date and the approach / methodology that OFR Consultants (OFR) as the fire consultants are adopting with regards to the Building Regulations are appropriate.

This document does not constitute the fire safety strategy developed under the Building Regulations, which will be developed separately within the design process. However, this Planning Fire Safety Strategy (PFSS) evidences the provisions made for the safety of the users of the Bedford Place Hotel, as well as the provision of suitable access and provisions for firefighting in light of the London Plan’s fire safety policy requirements and the rationale for these measures.

The exhaustiveness and definitiveness of the statement is commensurate with the nature of the planning application submitted.



2 Competency and quality assurance record

The London Plan Policy D12 notes that the author of the planning fire safety strategy should have suitable fire safety knowledge, understanding and qualifications, commensurate with the size, scope and complexity of the proposed development.

In meeting Policy D12 of the London Plan, a suitably qualified Chartered Engineer has been involved in the production of this document who has suitable fire safety knowledge for the development proposed. Engineers who have been involved are also registered with the Institute of Fire Engineers with the post nominals AIFireE / MIFireE after their names. The post-nominals CEng (Chartered Engineer) are added after the name of a chartered engineer with the Engineering Council UK.

Author	Reviewed By	Approved By
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3 Design approach and methodology

The design and construction of the Bedford Place Hotel will seek to satisfy the functional requirements of Part B (Fire Safety) of Schedule 1 to the Building Regulations 2010 (as amended), the Construction Design and Management Regulations 2015 (CDM) and the operational fire safety requirements of the Regulatory Reform (Fire Safety) Order 2005 (RRO).

The proposals do not constitute a material change of use. Given that the previous use of the development will be retained, according to Regulation 4, building work shall be carried out so that, after it has been completed, the building complies with the applicable requirements of Schedule 1 or, where it did not comply with any such requirement, is no more unsatisfactory in relation to that requirement than before the work was carried out.

The guidance in Approved Document B – Volume 2, 2019 Edition incorporating 2020 and 2022 amendments (ADB) will be used as the fire safety design basis. The Purpose Group of the building, as defined in ADB, is 2(b) – Residential (other).

3.1 Relevant stakeholders

Relevant stakeholders in the Proposed Development and preparation of fire safety information are:

- Client & Hotel Operator – Firmdale Hotels
- Architects – Sparc
- Heritage architects – The Heritage Practice
- MEP – Meinhardt
- Structures – dda engineers
- Planning Authority – London Borough of Camden
- Building Control – TBC

- Local Fire & Rescue Service – London Fire Brigade

3.2 Planning Gateway 1

The Bedford Place Hotel is not classified as a 'relevant building'. Therefore, a Planning Gateway One Fire Statement has not been submitted.

4 The development's description

4.1 The Bedford Place Hotel

The development was originally constructed as three separate townhouses, which were interconnected later on to be used as a hotel. It consists of 4 storeys above ground level (Levels 0G – 03) and a basement. The three upper floors will comprise of guestrooms only. The ground floor will accommodate six guestrooms and the common public areas such as the Bar, Lounge / Dining area, Reading Room and Reception. Additional guestrooms will be located in the basement, together with some back-of-house (BOH) areas such as the Kitchen, House Keeper and Staff rooms. There will be an accessible room on Level 03 and an ambulant room on Basement level. The existing building does not have any lift provision, and as part of the refurbishment works a new passenger lift will be provided to the premises, serving the basement level and levels 01-03. It is also proposed to create a new small basement area to accommodate two new plant rooms.

It is understood that the development is Grade II listed. The building construction is solid masonry with timber-joist floors, and lath-and-plaster ceilings. The building entrance is located on Bedford Place. The height of the top storey, measured from the upper floor surface of the top floor (i.e., level 03) to ground level immediately adjacent to the building along Bedford Place is 10.995 m. Note that the definition of where the ground level is measured is to be confirmed with Building Control.

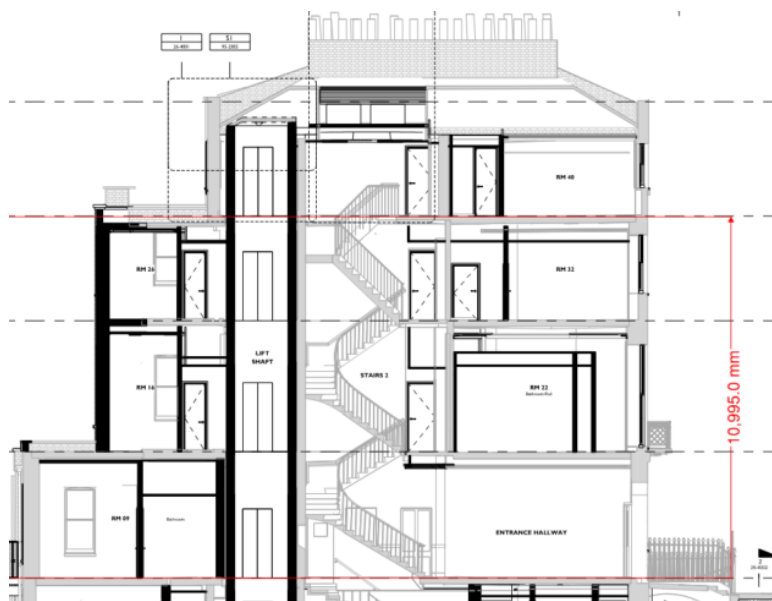


Figure 1: Height of the top storey

4.2 Site Address

The Bedford Place Hotel site address is 21-23 Bedford Place, London, Greater London, WC1B 5JJ. A site plan can be seen in Figure 2.

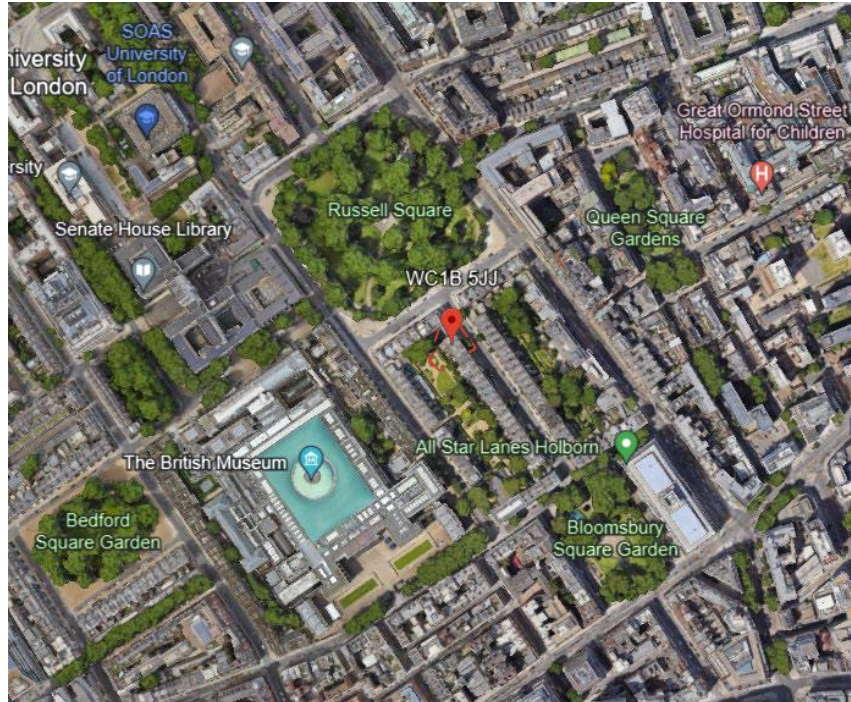


Figure 2: Site plan (from google earth)

5 Evacuation & Means of escape provisions

The Bedford Place Hotel will operate a simultaneous evacuation strategy, whereby the fire alarm will sound throughout the premises in the event of a fire, prompting all occupants to evacuate.

5.1 Horizontal escape

Travel distances will be within the recommended maxima:

- Bedrooms: 9 m;
- Bedroom corridors: 9 m where travel is possible in one direction only, and 35 m in two or more directions; and
- Elsewhere: 18 m where travel is possible in one direction only, and 35 m in two or more directions.

The minimum width of storey / final exits should be 750 mm where they are expected to accommodate 60 persons or less (note that wider doors might be needed to comply with Approved Document M (ADM)), and 850 mm for up to 110 persons. Doors that expected to accommodate an occupancy more than 60 persons will open in the direction of escape.



5.2 Vertical escape

The upper floors (levels 01-03) and basement will be served by three protected escape stairs. These stairs will discharge via a protected corridor to outside at ground floor. The lightwell external stairs will provide access / egress to those existing vaults that are to be used to accommodate plant and stores. A new external stair is proposed to provide access to the new plant rooms that are to be located in the basement.

Generally, all occupants will have access to two or more escape routes. However, due to the reconfiguration of Stair 3 as part of the refurbishment works, part of the building will be served by a single escape stair. This is considered acceptable given that:

- The height of the top storey is not more than 11 m above ground level (refer to section 4.1 for details);
- The anticipated occupancy of each floor will not be more than 60 people;
- The single-direction travel distance will comply with the recommendations in the guidance;
- Protected lobbies / corridors will be provided between the stair and the accommodation on all floors except the top-most floor (i.e., level 03). Where impractical, consideration will be given to the provision of automatic fire and smoke curtains; and
- Current guidance would recommend that the flights and landings of the stair should be constructed of materials achieving class A2-s3, d2 or better, noting that materials achieving class B-s3, d2 or worse may be added to the top horizontal surface. Where this is not complied with by the existing stair construction, it will be risk assessed based on the proposed overall fire safety provisions.

According to the guidance, where multiple stairs serve the upper floors, at least one should end at ground floor level. Other stair may connect with the basement storey if there is a protected lobby or a protected corridor between the stairs and the accommodation at basement level. In addition, an escape stair forming part of the only escape route from an upper storey should not continue down to serve a basement storey.

All existing stairs are physically separated at ground floor level, and it is proposed to retain the existing condition, with the addition of protected lobbies / corridors where necessary. Moreover, as noted in section 8.2, the majority of the basement areas adjoin external areas; therefore, the risk of smoke spreading into the stair at basement level and compromising the means of escape from the upper floors is considered sufficiently mitigated.

The minimum width of escape stairs should be 800 mm where they are expected to serve 50 persons or less (note that wider stairs might be needed to comply with ADM).

5.3 Egress of mobility impaired people (MIP)

It is proposed to design the new lift as an evacuation lift and, as per the guidance, the lift will be appropriately sited (i.e. within a protected corridor on the upper floors) and protected (i.e.



enclosed with 60 minutes fire-resisting construction), and will contain safety features to ensure that it remains usable during a fire (i.e. a secondary power supply). Given that a single lift is proposed, which is considered sufficient for a development of this size, noting that there will only be an accessible room on Level 03 and an ambulant room on Basement level.

Given the existing listed building constraints, it is not practicable to meet all the recommendations for evacuation lifts. The design team have explored the option of providing a fire curtain to create a protected discharge route on the ground floor. However, the fire curtain would have heritage implications in the original lath-and-plaster ceiling, would clash with an existing primary beam and would impose a significant load on the existing structure due to its span.

For this reason, it is proposed that the hotel operator will develop a suitable fire safety management plan (FSMP) for the evacuation of Mobility Impaired Persons (MIP). The FSMP for the MIP evacuation will rely on a combination of management procedures taking into account the full range of people who might use the premises, paying particular attention to the needs of persons with permanent or temporary mobility impairment. The following principles should be followed:

- When it is safe to do so, i.e. depending on the fire location, the evacuation lift will be employed; and
- Should the use of the evacuation lift be hindered, e.g. due to a fire at the Level 0G Reception / Reading Room or MIP not being able to wait for / access the lift, they would wait for assistance in a place of relative safety (i.e. protected staircase or adjoining protected bedroom corridor).

To support the evacuation of MIP, an emergency voice communication (EVC) system will be installed within the three protected escape staircases and next to the lift on the upper floors and basement level.

There is insufficient space to provide refuges within the existing staircases without encroaching on the effective width of the stairs. This is considered acceptable in this particular case given the limited anticipated occupancy (a maximum of 20 persons per floor), the possibility for occupants to choose an alternative escape route, very short travel distances to storey exits, and the possibility of MIP occupants to move away from the fire by escaping horizontally in the first instance and seeking refuge within another protected staircase or adjoining protected corridor.



Figure 3: Typical upper floor (blue and red lines denote 30 & 60 minutes fire resistance, respectively)

It is also noted that the existing access routes to the building at Level 0G are stepped. The hotel operator has confirmed that their general management strategy for wheelchair users entering their sites (which typically are all stepped) is via a temporary ramp. It will need to be ensured that adequate management procedures are also implemented in the event of an evacuation.

5.4 Assembly points

An assembly point will be provided, which will ultimately be decided by the hotel operator / management. This should be large enough to accommodate the expected maximum occupancy of the building being evacuated, located sufficiently far from the building so as to not interfere with the Fire and Rescue Service, not to place occupants at risk from falling debris, and suitably placed so that it can be readily deployed. An assembly point can be accommodated in Russell Square, away from firefighting tender access as described in section 8. The assembly point should be indicated on a publicly displayed diagram at the premises.

6 Active and passive fire protection

6.1 Active fire safety systems

An automatic Category L1 fire detection and alarm system will be provided throughout the building, as per BS 5839-1.

Automatic fire and smoke curtains (30 minutes) are proposed where the provision of protected lobbies to Stair 3 at ground floor level is unpractical (refer to section 5.2 for details).



6.2 Passive fire protection

In a hotel building of this height, current guidance would recommend that all floors should be designed and constructed as compartment floors with 60 minutes fire resistance. It is considered unlikely that the existing floor construction will achieve this; however, it is not required to upgrade the fire resistance of the floors, as it is an existing condition that is not being made worse. Where the existing floors are to be extended, the new floor construction will achieve 60 minutes fire resistance.

The three protected escape stairs, new lift, new service risers and linen chute will be designed and constructed as protected shafts with 60 minutes fire resistance.

Walls common to adjoining buildings should be compartment walls achieving 60 minutes fire resistance. Bedroom corridors and protected stair lobbies will be provided with 30 minutes fire-resistance. Stores (including refuse stores), plant rooms and places of special fire hazard will be enclosed with at least 30 / 60 minutes fire-resisting construction.

6.3 Structural fire resistance

It is considered that the refurbishment works will not make the existing situation worse with regard to the existing structural fire resistance. However, where new elements of structure are introduced (e.g., rear extension on levels 01 and 02), these will be protected in accordance with current guidance, i.e. 60 minutes fire resistance. This does not apply to elements of the structure that support the roof only.

7 External fire spread

The construction of external walls should mitigate the risk of fire spread over the external walls and from one structure to the other so as to not threaten people in or around the building.

For a building with topmost storey height of not greater than 11 m and more than 1 m from the relevant boundary, there are no specific provisions for the external wall construction. However, it is recommended that materials achieving Class A2-s1, d0 are used where new external walls are to be constructed, e.g. rear extensions on levels 01 and 02.

As the design develops, an external fire spread assessment to BR 187 will be carried out to evaluate the risk of external fire spread from the building extensions and conclude whether any fire resistance is required in the new facades.

Any works to the roof will ensure that the roof classification achieves B_{ROOF}(t4).

8 Access and facilities for firefighting

Bedford Place hotel is a small building, i.e. it will have a total floor area (excluding the basement) up to 2000m², with a top storey not more than 11 m above ground level (refer to section 4.1 for details). Therefore, vehicle access for a pump appliance should be provided to

15% of the perimeter or within 45m of every point of the footprint of the building, whichever is less onerous.

The existing Fire and Rescue vehicle access via Bedford Place, which provides access to approximately 50% of the perimeter of the development, will be unaltered.

8.1 Hydrant location

A fire hydrant, designed and installed to BS 9990, should be provided within 90 m of an entry point to the development. The London Fire Brigade (LFB) have confirmed that there are three existing operational hydrants in the proximity of the site, satisfying the commendations.



Figure 4: Existing hydrants around the site

8.2 Venting of heat and smoke from the basement

The existing basement is less than 3 m below the adjacent ground level, but has a floor area greater than 200m². Therefore, current guidance would recommend basement smoke ventilation provisions.

However, all basement accommodation except two existing vaults, the kitchen and two small BOH rooms (which will all be enclosed with fire-resisting construction) will adjoin external areas, i.e. either the lightwells to the front or the external patio to the rear (highlighted in dark blue in Figure 5). The rest of the basement areas will be protected corridors and staircases with no fire load (highlighted in green in Figure 5). Therefore, it is considered that the basement floor does not require dedicated smoke ventilation provisions. It should also be noted that this is an existing condition.

The two new plant rooms will have an aggregated floor area of less than 40 m²; therefore, they do not require smoke ventilation.



Figure 5: Basement level, external areas highlighted in dark blue, spaces adjoining external areas highlighted in light-blue, and protected corridors / staircase highlighted in green

9 Conclusion

This document demonstrates that the Proposed Development addresses the fire safety provisions to meet the London Plan's policy D12(A) requirements.