

300-306 West Green Road
Fire Safety Planning Statement

B-FIRST
FIRE
SAFETY

Written Record

Revision	Description	Date	Author	Checked by	Authorised by
00	Issue for Comment	08.11.2021	LD	LD	LD
01	Updated following comments	15.11.2021	LD	LD	LD
02	Evacuation lift omitted as requested by Building Control	30.06.2023			
03					
04					

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This document is confidential and for the exclusive benefit of the client. This strategy report may be used by the end user of the building in the development of any fire safety management procedures and plans considered necessary to fulfil their responsibilities under the Regulatory Reform (Fire Safety) Order 2005 (FSO) and any other applicable fire safety legislation.

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1. Introduction

- 1.1.1. B-First Fire Safety has been appointed by Bellis Architects to provide fire safety engineering advice for the proposed development at 300-306 West Green Road.
- 1.1.2. The main objectives of this report are to:
- Provide a response to the received planning condition;
 - Provide fire safety engineering advice using the guidance given in BS 9991:2015^[1] and other supporting documentation;
 - Highlight areas of the design that deviate from the guidance given in these documents; and
 - Propose any alternative approaches to be adopted to satisfy the requirements of the Building Regulations 2010^[2].
- 1.1.3. The basis of design described herein sets out the package of measures that propose a high quality and practical solution to fire safety throughout the proposed development.
- 1.1.4. It is important to note that the full fire strategy for the building should be provided in a separate document.
- 1.1.5. The finalised fire safety strategy for the overall development will be updated to comply with the Building Regulations and enable the building, in the necessary parts, to also comply with the Regulatory Reform (Fire Safety) Order 2005^[3].
- 1.1.6. This statement should be read in conjunction with the general arrangement drawings prepared by Bellis Architects, and other supporting information provided by the design team.

2. Project Description

2.1. Overall Development

- 2.1.1. This statement address the proposed development at 300-306 West Green Road.
- 2.1.2. The proposed development will consist of a basement for the sole use of the retail space at ground floor, a retail unit with storage at ground floor level and three upper levels of residential accommodation.
- 2.1.3. Measuring from the drawings the height of the building to the top most occupied floor is approximately 13.2m
- 2.1.4. Apartments on the upper levels of are accessed by a protected stair on the Ground floor and provided with ventilation via a 1.5m² natural shaft.
- 2.1.5. All apartments on the upper levels will be provided with protected entrance halls.
- 2.1.6. The building is greater than 11m in height and thus is recommended that is it protected throughout with automatic suppression as follows:
 - The residential demises to be protected with a residential sprinkler system designed and installed in accordance with BS 9251:2021.
 - The commercial demise to be protected with a commercial sprinkler system designed and installed in accordance with BS EN 12845:2015.

3. Fire Safety Design Approach

3.1. Design Guidance

- 3.1.1. The design is required to comply with the functional requirements relating to fire safety in Part B of the Building Regulations 2010. In order to achieve this, the fire strategy for this building has been developed using the guidance given in BS 9991: 2015 for the residential areas and BS 9999: 2017 for the non-residential areas. The guidance within these documents reflects with greater accuracy the varying physical and human factors associated with individual building designs in a way that other more traditional design documents, such as Approved Document B^[4], do not. In doing so, the British Standards will generally permit greater design freedoms.
- 3.1.2. Whilst the frameworks in BS 9991 and BS 9999 permit trade-offs in active and passive fire safety measures, they are not perfect tools, meaning significant levels of redundancy in design may still arise when their techniques are used. In these cases, the alternative fire safety engineering techniques detailed in BS 7974^[5] can be used. This mixing of design approaches is permitted in BS 9991, provided the engineer has a thorough understanding of the fire safety issues and takes sufficient care when developing such an integrated approach.

3.2. Planning Policy – The London Plan (2021)

- 3.2.1. Policy GC6 seeks to help London become a more efficient and resilient city, by requiring those involved in planning and development to ‘Create a safe and secure environment which is resilient against the impact of emergencies including fire and terrorism’.
- 3.2.2. Policy D5 requires developments to be designed to ‘incorporate safe and dignified emergency evacuation for all building users’ including (in all developments that include lifts) at least one lift per core that is a fire evacuation lift suitable to be used to evacuate people who require level access from the building. ~~Therefore, it is proposed that an evacuation lift will be provided within this development.~~
- 3.2.3. Policy D12 requires that the proposed development achieves the highest standards of fire safety and that all major developments proposals are submitted with a Fire Statement. This report is considered to act as the fire statement for this project.
- 3.2.4. As per paragraph 4.16.4 of the London Plan, a management plan should also be produced by others and submitted with the planning application. Besides information related to other matters, the plan should contain detailed information on the fire safety procedures.

3.3. Fire Safety Management

- 3.3.1. This report is primarily concerned with Building Regulations compliance and, as such, fire safety management is not explicitly addressed. However, the measures detailed rely on a suitable level of maintenance and fire safety management being maintained during the life of the building, in accordance with the Regulatory Reform (Fire Safety) Order 2005. Further details on what constitutes a reasonable level of fire safety management and how it can be achieved are provided in BS 9997^[6], and the detailed government guidance provided on the Ministry of Housing, Communities and Local Government’s Website^[7].

4. Summary of Fire Safety Measures

4.1. Introduction

- 4.1.1. The Fire Strategy for the residential parts of the buildings will be developed using the guidance given in BS 9991, and non-residential part of the buildings will be developed using the guidance given in BS 9999.
- 4.1.2. An outline of the fire safety measures to be considered is given in this section.
- 4.1.3. The current proposals follow the recommendations of the aforementioned guidance, with the detailed design of all systems to follow in the next design stages.

4.2. Means of Warning and Escape Residential

- 4.2.1. All residential areas should operate a "defend in place" evacuation strategy.
- 4.2.2. In accordance with the recommendations of BS 9991 travel distances in a single direction will not exceed 15m as all apartments are sprinkler protected.
- 4.2.3. The common corridor smoke ventilation system will follow the recommendations of Figure 6(a) of BS 9991 where travel in a single direction will be within a unventilated section of corridor up to 7.5m in length before entering a ventilated corridor.
- 4.2.4. The ventilated corridor on each level will be provided with a 1.5m² natural shaft which will serve all floors.
- 4.2.5. All apartments in should be provided with a Category Grade D LD2 fire alarm and detection system as per BS 5839-6^[8]
- ~~4.2.6. An evacuation lift will be provided from the residential floors.~~
- 4.2.7. Emergency lighting should be provided in the building, as per BS 5266-1^[10] and emergency signage should be provided in the building, as per BS ISO 3864-1^[11].

4.3. Means of Warning and Escape Non Residential

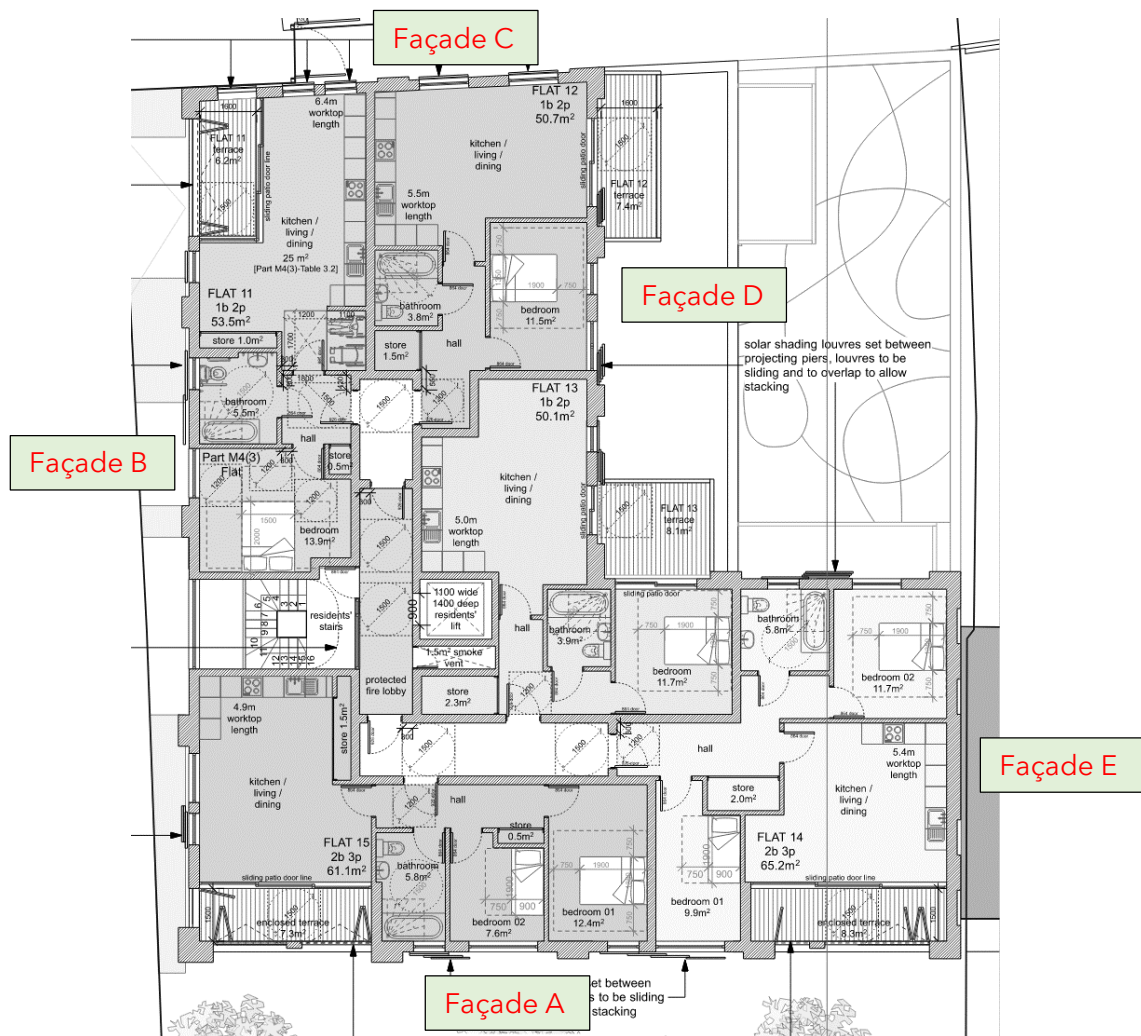
- 4.3.1. Non-residential areas should operate a simultaneous evacuation strategy, where upon the fire detection and alarm system being activated, all occupants within the building will leave at the same time.
- 4.3.2. Non-residential areas of should be provided with a minimum of a Category L2 fire detection and alarm system as per BS 5839-1^[9].
- 4.3.3. The risk profile of the retail space is considered to be B3 (occupants who are awake and unfamiliar with the layout and with a fast fire growth).
- 4.3.4. The risk profile for the stock room and the basement is A3 (occupants who are awake and familiar with the layout and with a fast fire growth)
- 4.3.5. In accordance with the recommendations of BS 9999 the maximum single direction of travel should not exceed 16m and maximum travel distance in an alternative direction should not exceed 40m.
- 4.3.6. The limits on travel with the stock room and basement should not exceed 18m in a single direction and 45m in an alternative direction.
- 4.3.7. The drawings indicate that the retail unit is only provided with one exit and therefore the maximum occupancy for retail unit at any one time should not exceed 60 persons.

4.4. Internal Fire Spread (Linings and Structure)

- 4.4.1. All wall and ceiling linings should meet the relevant classifications given in Table 33 of BS 9999.
- 4.4.2. Load-bearing elements of construction should achieve at least:
- 60-minutes fire resistance if they are supporting the overall building structure; and
 - At least the period of fire resistance of the fire compartmentation element they provide support to.
- 4.4.3. Every floor in all buildings should be designed as a fire compartment floor achieving 60-minutes fire resistance.
- 4.4.4. All non-residential areas should be separated from the residential parts of the buildings by construction achieving at least 60-minutes fire resistance.
- 4.4.5. Fire resisting construction should be provided in the buildings as per Table 3 and Table 4 of BS 9991 for the residential areas.
- 4.4.6. The building is greater than 11m in height and therefore a residential automatic suppression should be provided to all residential apartments in accordance with BS 9251^[12].
- 4.4.7. In accordance with the recommendations of the guidance documents where a building is provided with a sprinkler system the whole building should be protected, therefore the retail space, stock room and basement will also require sprinkler protection. However, as the floor area of these spaces are greater than 100m² a commercial sprinkler system in accordance with BS EN 12845:2015 should be provided.
- 4.4.8. Cavity barriers should be provided to external walls around openings and along lines of compartmentation and all services passing through lines of compartmentation should be suitably fire stopped.

4.5. External Fire Spread

- 4.5.1. Upon review of the external elevations of the buildings, all external walls of the building require the following distances to the boundary to have 100% unprotected area.
- Façade A - 11m required to notional boundary
 - Façade B - 4m required to notional boundary
 - Façade C - 4m required to notional boundary
 - Façade D - 3.5m required to notional boundary
 - Façade E - Boundary line so no unprotected area permitted



- 4.5.2. The external walls of the building should achieve a surface spread of flame classification of:
- Up to 18m height and greater than 1m from the relevant boundary – No provision in respect of the boundaries indicated.
- 4.5.3. The cavity barrier requirements detailed in Section 4.3 of this report are applicable to any cavities in the external wall construction.
- 4.5.4. As the site boundaries are within 6m of the building the performance specification of the roof should achieve Broof(t4).

4.6. Fire-fighting Provisions

- 4.6.1. The Fire Service Appliance should be able to park within 18m of the entrance to the apartment block.
- 4.6.2. A dry riser will be provided as the most remote part of the building is greater than 45m from the fire tender.
- 4.6.3. From a site investigation a fire hydrant is located adjacent to the site and thus no new additional fire hydrants will be required.
- 4.6.4. The basement will require smoke ventilation, this can be achieved either naturally or mechanically.
- 4.6.5. Where a natural system is provided vents equal to 1/40 of the floor area should be provided with at least 50% of the required vent area located on opposite walls.
- 4.6.6. Where a mechanical system is provided the system will be rated to 300°C for up to one hour and provide at least 10 air changes per hour.