

Fire safety statement for planning. 14 Blackburn Road, London.

1. Introduction.

This fire safety statement has been prepared by Hoare Lea on behalf of Stace to support a planning application for the proposed works at 14 Blackburn Street in London and address The London Plan (March 2021) Policy D5 (Inclusive Design) and D12 (Fire Safety).

The intention of this fire safety statement is to address the main fire safety principles and provide an overview of the requirements and recommendations that the scheme will meet.

2. Building description and proposed works.

The proposed works consist of the redevelopment of 14 Blackburn Road, London, to include the construction of a new mixed-use building consisting of a warehouse across lower ground and upper ground floor, a showroom across first floor, and office units across second through to fifth floor. In addition, the development will consist of a number of four-storey townhouses (across upper ground to third floor) located above car parking space at lower ground floor level. The development is bound by Blackburn Road to the north and railway tracks and West Hamstead London Underground Station to the south. There is a small path to the west and a footbridge to the east.

The building will measure 19.6m to the top occupied storey (fifth floor) above lowest ground (lower ground floor) and approximately 25.5m to the roof parapet above lower ground.

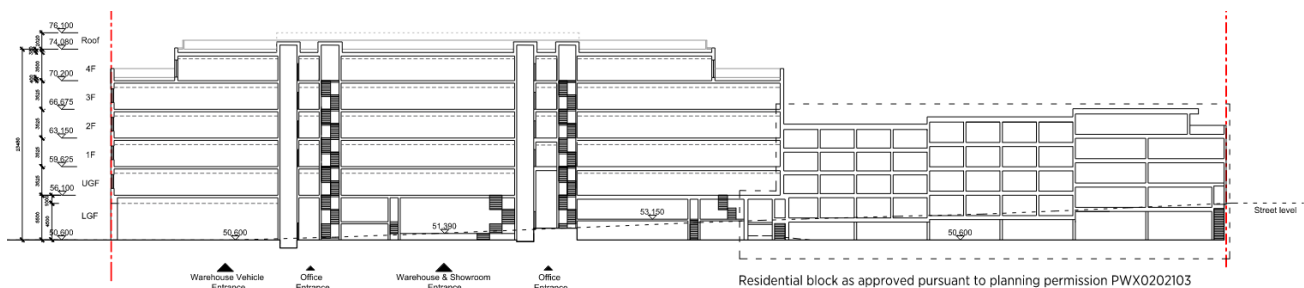


Figure 1: Proposed section

The guidance used will be Approved Document B Volume 1:2019 incorporating 2020 and 2022 amendments (ADB1) for the townhouses and Approved Document B Volume 2:2019 incorporating 2020 and 2022 amendments (ADB2) elsewhere, in demonstrating compliance with the functional requirements of Part B (Fire Safety) of Schedule 1 to the Building Regulations 2010 (plus amendments).

The four-storey townhouses are proposed to be provided with an automatic sprinkler system, designed and installed in accordance with the latest BS 9251.

3. The London Plan – Policy D12 (Fire Safety).

The London Plan – Policy D12 states that 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, which all building users can have confidence in; and
6. Provide suitable access and equipment for firefighting which is appropriate for the size and use of the development.

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 the 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 site to enable fire appliances to gain access to the building; and
6. Ensuring that any potential future modifications to the building will take into account and not compromise the base build fire safety/protection measures.

A major development is defined by reference to Part 1 of the Town and Country Planning Order 2015 as having ten or more dwellings or occupying an area of 0.5ha or more. For non-residential sites the definition is based on a minimum area of 1000m² (1 ha). The 14 Blackburn Road development will be classified as a major development as the non-residential areas amounts to more than 1000m².

4. The London Plan – Policy D5 (Inclusive Design).

The London Plan – Policy D5 states that in the interests of inclusive design that boroughs, in preparing their Development Plans, should support the creation of inclusive neighbourhoods by embedding inclusive design, and collaborating with local communities in the development of planning policies that affect them. The development proposal should achieve the highest standards of accessible and inclusive design. They should:

1. Be designed taking into account London's diverse population;
2. Provide high quality people focused spaces that are designed to facilitate social interaction and inclusion;
3. Be convenient and welcoming with no disabling barriers, providing independent access without additional undue effort, separation or special treatment;

4. Be able to be entered, used and exited safely, easily and with dignity for all;
5. 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 to be used to evacuate people who require level access from the building. The above items are addressed in the Fire Safety Overview section within this statement below. Design and Access Statements, submitted as part of development proposals, should include an inclusive design statement.

5. Competency statement.

All Hoare Lea design projects are headed by highly trained engineers, supported by a team of chartered engineers across the UK, with proven experience on a wide range of fire safety consultancy projects.

Our staff have appropriate expertise and experience of fire safety design on a wide range of complex buildings, not only in the UK, but also world-wide. Whilst most of our work is conducted to satisfy safety regulations within the UK (e.g. Building Regulations and associated legislation), our staff have been responsible for developing fire safety strategies based on the NFPA standards and other international codes.

This statement has been produced, reviewed and approved by the following key individuals. The design and development of the fire safety strategy will be undertaken by the same individuals.

- Miller Hannah BEng (Hons), CEng, MIFireE – Partner
- Angela Sansom MSc, BSc (Hons), AIFireE – Associate

6. Fire safety overview.

6.1 Building construction

To limit the spread of fire within the building, all wall and ceiling linings will satisfy the appropriate classifications stated in ADB1 Table 4.1 and ADB2 Table 6.1.

As the building will have a top storey above 18m but less than 30m (above lowest ground), in accordance with ADB2 Table B4, loadbearing elements of structure will be provided with 90 minutes fire resistance, except that the townhouses only require 60 minutes to loadbearing elements of structure provided they do not provide support to structure requiring the higher rating.

The fire safety strategy will include a space separation analysis to establish external walls requiring fire rating. It should be noted that compartment floors and a new automatic fire sprinkler system are proposed. The development is bound by Blackburn Road to the north and railway tracks and West Hamstead London Underground Station to the south. There is a small path to the west and a footbridge to the east. Notional boundaries will be set to the mid-point of these locations.

In accordance with ADB, external wall surfaces will have the following classifications:

- Townhouses: Class A2-s1, d0 or better;
- Elsewhere, where less than 1m to the boundary: Class B-s3, d2 or better;
- Elsewhere, where 1m or more to the boundary:
 - From ground level to 18m: Class C-s3, d2 or better;
 - From 18m in height and above: Class B-s3, d2 or better.

It should be noted that the townhouses are considered independent to the other half of the development that is over 18m in height, based on there being no communication between the townhouses and adjacent areas, that the townhouses will be fire separated, and that the townhouses do not rely on the adjacent areas for structural support.

6.1.1 Construction, Design and Management Regulations

Design projects undertaken in the UK are subject to the requirements of the Construction (Design and Management) Regulations 2015 (CDM Regulations), the objective of which is to ensure that health and safety issues are properly considered during a project's design and development so that the risk of harm to those who have to construct, use and maintain the building is reduced.

As a designer, in accordance with Regulation 9 of the CDM regulations, Hoare Lea will take into account the general principles of prevention in the preparation of this report and where reasonably practicable, eliminate, minimise and/or control foreseeable hazards associated with the design. Where elimination is not reasonably practicable, Hoare Lea will be required to provide "pre-construction" information in respect of any significant and/or unusual project-specific hazards that remain.

6.2 Means of escape provisions

It is proposed that the warehouse, showroom and office units adopt a simultaneous evacuation strategy whereby activation of the alarm system in any of those areas will initiate simultaneous evacuation of all of those areas. Adjacent (but not linked) areas such as the lower ground floor car park and townhouses above will not evacuate unless the alarm system is activated in that particular area, or occupants are directed to evacuate by the attending fire service, or occupants choose to evacuate.

The car park will adopt a simultaneous evacuation strategy in that activation of the alarm in the car park (and associated areas such as storage and plant) will initiate full evacuation of the lower ground floor car park and associated areas only.

Each townhouse will adopt an independent evacuation to one another (i.e. activation of the alarm system in one townhouse does not sound the alarm in adjacent areas).

All escape provisions are within guidance limits set out in ADB2, which include but are not limited to:

- Each office storey will have at least two means of escape where more than 11m above exit level;
- Travel distances will be within ADB2 limits;
- Escape widths will be in accordance with ADB2 Tables 2.3, 3.1 and 3.2.

In meeting London Planning Policy D5, it is proposed that Core 1 and Core 2 will be provided with an evacuation lift, designed and installed to the latest BS EN 81-20 and BS EN 81-70. It should be noted that these cores are firefighting shafts and will also therefore contain a separate firefighting lift.

Following BS 9999:2017 Annex G guidance (as referenced in ADB2 section 5.32), a refuge point, sized 0.9m x 1.4m, will be provided in the protected lobby/corridor near to the evacuation lift, not impinging means of escape or firefighting operations (i.e. not blocking access to the firefighting lift, fire mains outlet or smoke ventilation systems) and provided with an EVC device linked to a main reception/site security office (to be detailed as the design progresses). In addition, a refuge will be provided to escape stairs/stair lobbies on every floor where there is no level access to outside (except where serving plant only).

The building management will need to develop a policy and procedure for the safe evacuation of occupiers with additional needs in the building that does not rely upon assistance from the fire service. This management procedure should cover how to assist a person waiting within a refuge to the outside of the building.

Accessible entry will be in accordance with BS 8300:2018.

6.3 Features incorporated to reduce the risk to life

The entire building, excluding the townhouses, is proposed to be provided with a Category L2 automatic fire detection and alarm system, designed and installed in accordance with the latest BS 5839-1.

The townhouses are required to be provided with a Grade D Category LD2 automatic fire detection and alarm system as a minimum, designed and installed in accordance with the latest BS 5839-6.

Loadbearing elements of structure will be provided with 90 minutes fire resistance (except that for the townhouses the rating will be 60 minutes). In addition, all floors will be designed as compartment floors achieving the same fire resistance as the elements of structure.

All risers passing through the compartment floors will be vertically or horizontally protected with 60 minutes fire resistance.

As noted above, an automatic sprinkler system will be installed throughout the townhouses, designed and installed in accordance with the latest BS 9251.

6.4 Firefighting access to the building

As the building will have a storey over 18m above firefighting access level, firefighting shaft(s) are required. Both Core 1 and Core 2 are required to be a firefighting shaft, consisting of a firefighting stair no less than 1.1m wide, a firefighting lift and ventilated firefighting lobby containing a dry fire main. As the firefighting lobby at access level is shared with persons escaping the building, the firefighting lobbies at firefighting access level are required to be 500mm wider than that required for escape and firefighting lobbies should have a minimum area of 5m² clear of escape routes.

Each dry fire main is required to be designed and installed in accordance with the latest BS 9990. The inlets should be provided on the façade near to the firefighting entry point to the building and easily visible and within 18m of the fire appliance parking point. Outlets are required to be provided on every floor including lower ground and ground. The hose distance, measured from the outlet to all areas of the floorplate on a route suitable for laying hose, should be no greater than 45m.

The fire and rescue service vehicle access route specifications should be suitable for pump or high reach appliance access and comply with ADB1 Table 13.1 (ADB2 Table 15.2), as reproduced in Table 1. It is noted that fire service vehicle access will be via Blackburn Road, which is an existing public road and expected to meet the below hard standing requirements.

Table 1: Typical fire and rescue service vehicle access route specification

| Appliance type | Minimum width of road between kerbs (m) | Minimum width of gateways (m) | Minimum turning circle between kerbs (m) | Minimum turning circle between walls (m) | Minimum clearance height (m) | Minimum carrying capacity (tonnes) |
|----------------|---|-------------------------------|--|--|------------------------------|------------------------------------|
| Pump | 3.7 | 3.1 | 16.8 | 19.2 | 3.7 | 12.5 ^{Note1} |
| High reach | 3.7 | 3.1 | 26.0 | 29.0 | 4.0 | 17.0 ^{Note1} |

Note:
Note 1: The minimum carrying capacity should be checked with the local fire brigade as it may be higher than ADB guidance.

The existing fire hydrant(s) on site are required to be checked to be within 100m of the fire main inlet, and retained and maintained to the latest BS 9990, else new private fire hydrant(s) should be installed within 90m of the fire main inlet(s), design and installed in accordance with the latest BS 9990.

Each hydrant should be clearly indicated by a plate, affixed nearby in a visible position, in accordance with the latest BS 3251.

7. Conclusion.

This fire safety statement has been prepared to outline the approach and provisions relating to fire safety for the proposed works at 14 Blackburn Road in London for compliance with The London Plan Policy D5 and D12.

This statement demonstrates that the proposals have considered fire safety at the earliest stage, and the further development of the fire strategy will be based upon these principles. The fire strategy will be further developed for submission to the Approving Authority at the appropriate time and will meet the functional requirements of the Building Regulations 2010 (as amended), taking recommendations from Approved Document B Volume 1:2019 incorporating 2020 and 2022 amendments (ADB1) for the townhouses and Approved Document B Volume 2:2019 incorporating 2020 and 2022 amendments (ADB2).

Regulation 38 of the Building Regulations requires that fire safety information be given to the person responsible for the occupied building. Therefore, copies of the fire safety strategy, once agreed with the Approving Authority, and other relevant fire safety information should be issued to the responsible person. This will ensure publication of the proposed evacuation strategy and assist in evacuation of all building users.

Any future modifications to the scheme will be subject to Building Regulations approval and should consider the base build fire strategy.



Miller Hannah BEng (Hons), CEng, MIFireE