

FIRE STATEMENT

85 Ivydale Road, London, SE15 3DS

Introduction

This document provides information on the fire safety strategy in support of the planning application at 85 Ivydale Road for the erection of a single storey rear extension.

The primary objective of this statement is to provide high level advice at this early stage on how an acceptable level of fire safety may be achieved commensurate with the functional requirements of the Building Regulations 2010 for means of egress (B1), internal fire spread structure (B3), external fire spread (B4) and firefighting access (B5).

Primary Legislation

The Building Regulations 2010 are the Statutory Instrument which seek to ensure that the policies set out in the Act are implemented. The functional requirements of the Building Regulations 2010 may be met in one of two ways; compliance with an accepted design guidance (i.e. British Standards or Approved Documents), or through a fire engineered approach. In this instance the primary design guidance used has been BS 9991 (residential).

Where deviations from the prescriptive recommendations are proposed these have been identified these will be assessed as part of a fire engineered approach. All fire engineered solutions will be justified by following the general methodology proposed within BS 7974.

Site and surroundings

The site currently exists as mid terrace Victorian style dwelling within a residential area of Nunhead. The site is situated some 4m away from the public highway with a small front garden area to the front. The site has easy unobscured access from two roads.

Architectural Review

The proposed development is for a single storey rear extension. To the front would be a small front garden area with direct access to Ivydale Road. To the rear would be a self contained private garden.

Building Heights.

Characteristic	Overview
Number of stories	2.5 stories (two storey dwelling with roof space).
	Height of top most storey - 5.182m
	Maximum height of building - 7.953m
	Firefighting access height - 5.182m

Note:

1. The height of the top-most storey has been defined by BS 9991 as the height measured from the lowest ground level adjacent to the building to upper floor surface of top floor. This measurement is used for structural fire resistance and combustibility.
2. The total building height, which is measured from mean ground level to mean roof level. This measurement is used for surface spread of the flame.
3. Firefighting access height, which is measured from fire-fighting access level to the height of the top-most storey. This measurement is used for firefighting access.

Means of access

Section A 4) and B 2) of the Planning Policy D12 requires that suitable means of escape is provided for all building users. The following sections detail the active systems which will be in place to achieve this:

- Two egress routes are planned for the ground floor due, one at the front of the property and one to the rear of the property.
- Travel distances from the furthest habitable room to the main entrance or doors would be limited to 10m.
- At least one means of escape window (openable area that at least 0.33 m²) would be provided on the first floor. All bedroom windows on the first floor meet this.

Active Fire Safety Systems

Overview Sections A 2) and B 3) of the Planning Policy D12 requires that appropriate active fire safety systems are in place to reduce the risk to life. The following sections detail the active systems which will be in place to achieve this:

Fire Alarm and Detection Systems shall be provided as follows:

- All open plan ground floor areas are recommended to have a BS 5839-6 Grade D1 Category LD1 fire detection and alarm system.
- Advanced detection system would be deployed consisting of interconnected heat and smoke alarms in all habitable rooms and hallways

Automatic Fire Suppression System (AFSS) - All residential dwellings are to be provided with a Category 2 automatic suppression system designed and installed in accordance with BS 9251.

Passive Fire Safety Systems

Overview Section A 2) of the Planning Policy D12 requires all buildings are designed to reduce the risk to life safety including appropriate passive fire safety systems. The following sections detail the passive systems which will be in place to achieve this:

- Internal Linings - All internal linings and ceilings will be formed from materials with limited combustibility, predominantly comprising of gypsum-based plasterboard products over metal stud walls.
- Fire Resistance - All elements of structure each house shall achieve no less than 60 mins fire resistance.

- Compartmentation - Party walls to achieve a minimum fire resistance of 60 mins. All internal protected stair cores to achieve a minimum fire resistance of 60 mins. All floors above ground are required to be compartment floors achieving a minimum fire resistance of 60 mins. Fire doors (FD30) are in place into all function rooms (bedrooms, living, kitchen, dining)

External Fire Spread

Section A 3) of the Planning Policy D12 requires that the buildings are constructed in a way to minimise the risk of fire spread. The following sections detail how this is to be achieved. Fire Spread between Buildings / Boundaries - For the purposes of this assessment, fire spread from the most onerous compartments have been identified as party walls and roofs.

- All external walls and party walls to be constructed out of non-combustible materials (masonry) with a minimum 60 min fire resistance.
- All external openings and cavities would employ fire break barriers with minimum 60 mins fire stop resistance
- Non-combustible thermal cavity and roof insulation
- Non-combustible roofing materials

External Wall Construction (Surface Spread of Flame) - All external surfaces of walls of all areas of the building are to achieve a European Class A2-s3, d2 or better for surface spread of flame.

Combustibility The construction materials used in the external wall construction will achieve a Class A2-s1 d0 or better.

Cavity Barriers (External Walls) Cavity barriers should be provided to close the edge of cavities including around openings (inclusive of windows, doors, service or any other penetration). Cavity barriers should also be provided at the junction between an external cavity wall and every compartment wall/floor. Cavity barriers should achieve a minimum 30 min rating and should not be confused with fire stopping which may require a higher fire rating. Cavity barriers must also be provided to subdivide any extensive cavities as follows:

- So that the cavity has no dimension (not diagonal) exceeding 20m where the cavity has internal surfaces which achieve a Class C-s3, d2 or better surface spread of flames.
Or,
- So that the cavity has no dimension (not diagonal) exceeding 10m.

Current design proposal of external wall

The external wall build-up will be formed of a brick cavity wall construction, the inner leaf being formed from concrete blockwork, Tarmac Hemelite solid blocks or similar. All cavity trays will, therefore, be set between two leaves of masonry. All insulation used will be the non-combustible mineral wool-based product. Cavity barriers will be installed around all openings and spaces out throughout the façade. Windows and doors are all proposed to be formed from PVC frames, but where fire requirements dictate, there may be a requirement these be formed from steel.

Access and facilities for the fire service

Vehicle Access Sections A 1) and B 5) of the Planning Policy D12 requires that suitable outside space and access routes are provided for the fire service. This is demonstrated as being achieved as follows:

The application site and proposed new dwelling would be a street facing property, with a distance of less than 4 metres between the highway in which a fire appliance would need to park and access the dwelling.

Conclusion

The proposed development has carefully considered the requirements of London Plan Policy D12 and will ensure full compliance with the safety of future residents and neighbouring residents as a key priority. The primary objective of this statement was to provide high level advice at this early stage of design, this document needs to be expanded further during construction phase by consulting Building Control and the local Fire Service.

The ongoing management and maintenance of the building shall fall under the control of the Regulatory Reform (Fire Safety) Order 2005 and JSP 426. So as to allow for any future fire safety management to be co-ordinated with design of the building this section is provided to identify:

- The minimal standard of Fire Safety Management upon which this Fire Strategy has been developed; and
- Specific Fire Safety Management requirements which are made as part of the Fire Strategy which must be adopted as part of the Fire Safety Management Plan to maintain the building in a condition consistent with the Fire Strategy.