

# Nestles Avenue Development. Fire safety statement for planning.

Rev.	Date	Description of change / purpose of issue	Prepared	Reviewed	Authorised
00	06/03/2024	First issue for planning	SA	AC	MH
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## 1. Introduction.

The intention of this fire safety statement is to address the main fire safety principles for the changes proposed under this application that concern the inclusion of additional stair cores in the blocks within the scheme to meet the requirements of the London Plan and upcoming amendments to Part B guidance of the Building Regulations 2010. This statement will provide an overview of the requirements and recommendations that the development will meet and address the London Plan (March 2021) Policy D5 (Inclusive Design) and Policy D12 (Fire Safety).

## 2. Proposed development.

The Nestles Avenue development consists of four blocks – Block A, B, C and D.

Block A and B have a height of 31.4m with car parking, residential ancillary and commercial spaces at Ground and First Floor. The Second floor contains a residential podium level. Block A and B is served by two stairs on the upper floors.

Blocks C and D have a height of 28.1m with car parking, residential ancillary and commercial spaces at Ground and First Floor. On the lower floors the blocks (Levels 01-03) are served by multiple stairs (i.e. four stairs each). On the upper floors (Levels 04-07) the building steps back to reduce the number of apartment and is served by three stairs, with the top most floors (Levels 08 and 09) are only served by two stairs.

A site plan of the development is shown in Figure 1.



Figure 1: Site plan of the Nestles Avenue Development.

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

The London Plan Policy D12 states that, in the interest of fire safety and to ensure the safety of all building users, development proposals must achieve the highest standard 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.

These items are detailed in the following sections and further outlined in the Planning Outline report for the Nestles Avenue development.

## 4. Competency assessment.

All Hoare Lea design projects are headed by chartered engineers with proven experience on a wide range of fire safety consultancy projects. All work produced at Hoare Lea has been reviewed and approved by a senior chartered fire engineer.

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.

- Miller Hannah BEng (Hons), CEng, MIFireE – Partner
- Sangeerth Anantharaja MEng, AIFireE – Fire Engineer

## 5. Fire safety overview.

### 5.1 Building construction

- The building will have a steel-framed structure.
- To limit the spread of fire within the buildings, all wall and ceiling linings will satisfy the appropriate classifications stated within BS 9991:2017.
- A space separation analysis has been undertaken to assess fire spread between buildings and across relevant boundaries. The space separation analysis has established areas of the facades which can be fully unprotected or areas requiring fire resistant protection and, therefore, the design will be provided with an adequate degree of fire resisting construction in the external wall as per the external fire spread analysis.

At this stage, with the above provisions in place, there is not considered to be significant risk of fire spread between buildings due to the provision of sprinkler protection, a high level of compartmentation, distances between buildings and protection to building façades.

- In accordance with Regulation 7(2), for each block that has a storey height in excess of 18m above the lowest adjacent external ground level, the external wall construction, and specified attachments including balconies, solar shading or solar panels, will achieve European Classification A2-s1, d0 or Class A1.

### 5.1.1 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 2015), 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 have taken into account the general principles of prevention in the preparation of this report and where reasonably practicable, have eliminated, minimised and/or controlled foreseeable hazards associated with the design. Where elimination has not been reasonably practicable, Hoare Lea is required to provide 'pre-construction' information in respect of any significant and/or unusual project-specific hazards that remain.

### 5.2 Means escape provisions

- All residential buildings will operate a 'stay put' evacuation strategy. Upon activation of the fire detection and alarm system, only occupants within the apartment of fire origin will evacuate in the event of a fire. The occupants in neighbouring flats will remain in place, protected from the fire by a high level of fire compartmentation, unless otherwise advised by the fire service. The residential ancillary, community, workspaces and retail spaces will adopt an independent simultaneous evacuation strategy.
- The apartments will be designed either with protected entrance halls or designed as open plan apartments in line with the recommendations of BS 9991. Where required, for open plan apartments exceeding the maximum dimensions noted in this document, it will be supported by a fire engineering justification.
- Ancillary accommodation to the residential areas located internally will be designed in line with the recommendations of BS 9991 and where required, supported by a fire engineering justification.
- The residential common corridor smoke ventilation systems will be as follows:
  - All the residential blocks are served by more than one stair.
  - Most stairs are approached via a dedicated lift lobby, although one stair in block A, C and D is not approached via a lift lobby area.
  - Smoke ventilation is to be provided to the lift lobby, either a single 0.6-0.8sqm mechanical ventilation system or a 1.5sqm natural vent should be provided.
  - A smoke ventilation system is to also be provided in the common corridors; the type of smoke ventilation system depends on the travel distance in the corridor. The smoke ventilation system will be further influenced by the provision of sprinklers in the blocks. The following principles will determine the type of some ventilation to be used:
  - Where the single direction travel distance to the lift lobby door or stair door is less than 7.5m, no smoke ventilation is required.
  - Where the corridor single direction travel distance to the lift lobby/stair door is between 7.5m and 15m, and the building is provided with sprinklers. A single 0.6-0.8sqm mechanical vent or a 1.5sqm natural vent is to be provided from these corridors.
  - For the corridors with apartments that are afforded with alternative routes of travel, a smoke ventilation system is not required for corridor travel distances up to 30m, subject to the corridor sections in front of the stairs being provided with smoke ventilation system.
  - Where the travel distances in a single direction is up to 30m with the provision of residential sprinklers the smoke ventilation system in the common corridor will be a Double Reversible Mechanical Extract (DRME) system i.e. two 0.6-0.8 m<sup>2</sup> free area mechanical shaft located on opposing corridor ends.
- The stairs will be provided with a 1.0m<sup>2</sup> free area AOV at the head of the stair enclosure to smoke ventilate the stair.
- Furthermore, one lift per block will be provided as an enhanced feature lift for evacuation purposes, the evacuation of mobility impaired occupants to meet the recommendations of Policy D5 (inclusive design) of

the London Plan. A suitable management procedure of the evacuation lifts will be developed during the design stage.

- The fire safety strategy for the commercial and workspaces will be based on the guidance of BS 9999.
- The layouts for the commercial and workspaces will be designed to fall within the maximum permissible travel distances permitted within BS 9999 based on the use of the spaces.
- Refuges for people who require assistance to evacuate will be provided at each storey exit and there will be management on-site which will be able to assist occupants requiring assistance to escape. Emergency voice communication (EVC) systems will be provided at each refuge area.

### **5.3 Features incorporated to reduce the risk to life**

- Residential sprinklers will be provided to the residential accommodation in accordance with BS 9251:2014.
- All residential premises will be provided with either a Category LD1 fire detection and alarm system for open plan apartments or a LD2 fire detection and alarm system for protected entrance hall apartments, designed and installed in accordance with BS 5839-6:2019.
- The non-residential units will be provided with a commercial sprinkler protection system in accordance with BS EN 12845:2015 and a Category L2 fire detection and alarm system in accordance with BS 5839-1:2017.
- The common access corridors and stair/lift lobby in the residential blocks will be provided with a smoke ventilation system depending on the travel distance from the furthest apartment to the escape stair door. These systems will clear smoke from the common corridor in order to maintain tenable conditions for means of escape.
- The residential units will be separated from each other and from the common corridor by 60 minute fire resisting compartment walls.
- Areas of residential ancillary accommodation within the development will be enclosed in fire resisting construction in accordance with Table 15 of BS 9991.
- All non-residential spaces will be separated from the residential premises achieving the same period of fire resistance as the elements of structure of the building i.e. 120 minutes for the non-residential spaces in Blocks A and B and 60 minutes for the non-residential spaces in Blocks C and D.

### **5.1 Fire-fighting access within the building**

- Access for the Fire Service will be provided at Ground directly into the firefighting shafts of each block.
- The residential blocks will be provided with a single firefighting shaft which is comprised of a firefighting stair, a firefighting lift, a smoke-ventilated firefighting lobby, an AOV at the head of the stair, and a fire main.
- All points in the blocks will be within 60m of a fire main outlet in a firefighting shaft, measured along a suitable hose laying route or within 45m of a fire main outlet in a means of escape stair.
- Every covered car park storey will be provided with smoke and heat ventilation in accordance with BS 7346-7 to clear smoke during a fire scenario. No EV charging spaces are currently proposed in the scheme.

### **5.2 Fire-fighting access to the building**

- Fire tender vehicle access will be provided to each core serving each building. The access road will be designed in accordance with the relevant fire safety guidance, such that it is suitable for pumping fire appliance access. A suitable management strategy will be implemented to ensure maintenance of the access road.
- Fire vehicle access will be provided to within 18m from a dry riser fire main inlet, placed at the ground floor façade of each block near the entry point.
- Hydrants will be provided within 90m of the fire main inlet points serving the site.

### 5.3 Measures to protect the base build fire safety strategy

- Any future modifications to the scheme will be subject to Building Regulations approval and should consider the base build fire strategy, such that fire safety measures are not compromised within the development.

## 6. Conclusion.

This fire safety statement has been prepared to outline the approach and provision relating to fire safety for the Nestle Avenue development, for compliance with the London Plan Policy D5 and Policy D12.

This statement demonstrates that the design 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 safety 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, taking due cognisance of the guidance provided in BS 9999:2017 and the requirements of Policy D5 and Policy D12 of the London Plan.

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 the 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.



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