



London Plan Fire Statement Victoria Road, Romford

18 June 2024

Victoria Road Romford Limited
13495BC-01-E

BB7

Revision History

Version	Date	Author	Comments
01	25/03/2022	Ed Darlington	First Issue
A	01/04/2022	Ed Darlington	Client details updated and drawing revision numbers added. Clarification added to the number of storeys at the building and the number of apartments per storey updated.
B	4/04/2022	Ed Darlington	Building description updated regarding the number of storeys.
C	03/03/2023	Ed Darlington	Statement updated to reflect new layout and drawing package.
D	16/03/2023	Ed Darlington	Updated to reflect changes to design following Issue C (adding sprinklers to houses)
E	07/05/2024	Alex Manford-Walley	Updated to reflect changes to design following Issue D (layout change to terrace housing)
F	18/06/2024	Vishwarajsinh Gohil	Statement updated to reflect new layout and drawing package.

Document reference
13495BC-01-F

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1. Introduction

- 1.1.1 Under the legislation establishing the Greater London Authority (GLA), the Mayor of London is required to publish a Spatial Development Strategy (SDS) and keep it under review. The SDS is known as the London Plan, the latest of which was published in March 2021. As the overall strategic plan for London, it sets out an integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years.
- 1.1.2 As stated within the document, all development plan documents, and neighbourhood plans have to be 'in general conformity' with the London Plan and the policies within the London Plan must be taken into account when planning decisions are taken in any part of Greater London. The proposed Victoria Road development falls within the Greater London jurisdiction and therefore falls within the scope of *The London Plan 2021*, published in March 2021.
- 1.1.3 Policy D12 (B) of the London Plan 2021 requires that all "major development" proposals should be submitted for planning permission alongside a Fire Statement, produced by a third party, suitably qualified assessor.
- 1.1.4 "Major developments" are defined as any development involving any one or more of the following:
- the provision of dwellinghouses where—
 - the number of dwellinghouses to be provided is 10 or more; or
 - the development is to be carried out on a site having an area of 0.5 hectares or more;
 - the provision of a building or buildings where the floor space to be created by the development is 1,000 square metres or more;
 - development carried out on a site having an area of 1 hectare or more;
 - the winning and working of minerals or the use of land for mineral-working deposits;
 - waste development.
- 1.1.5 Victoria Road development does not qualify as a major development as there are 9 dwellings and the floor area is just below 1000m². However is considered reasonable to submit London Plan Fire Statement alongside the application for planning permission given the number of dwellings present in the scheme.
- 1.1.6 This report constitutes the London Plan Fire Statement and provides an overview of the Victoria Road development in London with a view to demonstrating how the proposed development is considered to comply with The London Plan 2021 Policy D12 Fire Safety and Policy D5 Inclusive Design (B5), as well as the relevant draft London Plan Guidance document, issued in February 2022.

1.2 Author competency statement

- 1.2.1 Alex Manford-Walley is a Graduate Fire Engineer, who has worked full-time at BB7 since September 2022 as a Graduate Fire Engineer. He is also an Associate Grade Member of the Institution of Fire Engineers (IFE). He understands the various tools available in the fire engineering sector and where they are applicable. This allows an open approach to building design which incorporate fire engineering solutions where a non-compliance is present and may not otherwise be within the constraints of the design standards. Alex has an understanding of fire engineering principles and has worked on a number of projects, including, residential and office buildings.
- 1.2.2 Phevos Giorgallidis is an Associate Fire Engineer having over 8 years' of experience working on a wide range of projects and specialising in complex retail/commercial and residential developments. Phevos has a broad range of skills in the fire safety engineering field developing performance-based solutions for complex projects achieving the client's objectives and gaining approval from the relevant authorities. Phevos has worked in large residential schemes comprising of multiple blocks from concept design to construction

stage. Phevos has worked on a number of London Plan and Gateway 1 fire statements the past year either as author or reviewer.

- 1.2.3 Phevos is in a possession of MSc in Fire and Explosion Engineering with first class honours and a BSc in Civil and environmental engineering. Also an Associate Member of the IFE and is in the process of applying for Chartered Engineer status (application submitted awaiting approval.)

1.3 Consultation

- 1.3.1 This report (Revision C) has been updated following the refusal of the initial application for Victoria Road. The design of the buildings has now been altered. The consultation of both an Approved Inspector and the Fire and rescue Service (London Fire Brigade) will be sought throughout the design phase.

1.4 Design codes / standards

- 1.4.1 The fire safety design of the development will be primarily based on prescriptive guidance within BS 9991: 2015 - Fire safety in the design, management and use of residential buildings –Code of practice for residential areas of the development and Approved Document Vol 1 2019 edition (including 2022 amendments).

1.5 Drawing References

- 1.5.1 This Fire Statement is based on the following drawings provided by DCSK:

Table 1.1 Drawing references

Drawing Number	Description	Revision
A 100	Ground Floor Plan	P 03
A 101	First Floor Plan	P 03
A 102	Second Floor Plan	P 03
A 103	Roof Plan	P 03

2. Description of the Development

Site address line 1	67-71, Victoria Road
Site address line 2	Romford
Town	London
County	Greater London
Site postcode (optional)	RM1 2LT

2.1.1 The site of the development is bounded by Railway Lines to the North, Corbridge Mews and Jane Court housing estate to the East, Victoria Road to the South and Mercury Gardens to the West as indicated in the figures below. With the site boundary shown in red.



Figure 2.1 Site Plan

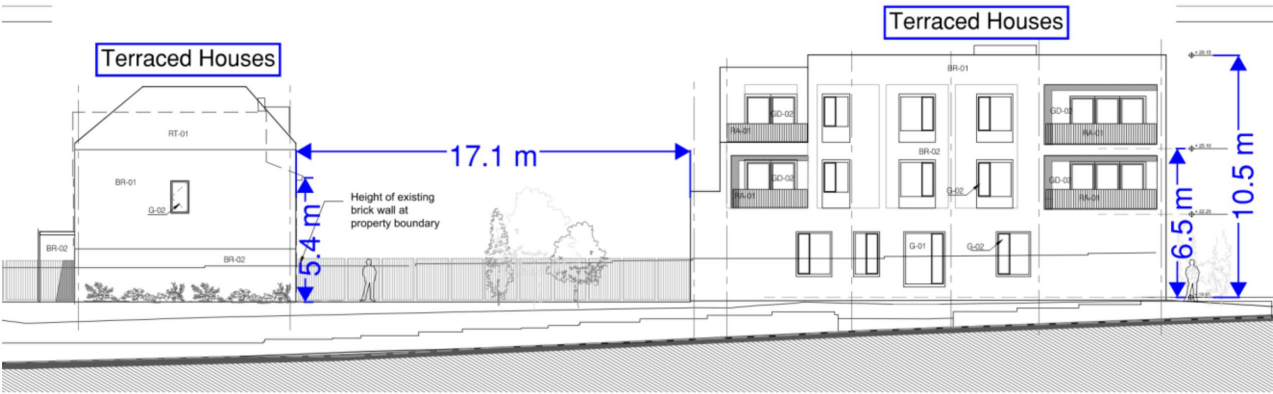


Figure 2.2 Proposed elevations

2.2 Description of the Development

- 2.2.1 The planned development has now deviated from the original plan. It is now proposed for the construction of a single apartment block and 3 terraced houses, following the demolition of the existing site.
- 2.2.2 The apartment block comprises 6 two-bedroom apartments, with a top floor level of 6.5m, measured from the lowest side of the ground floor to the finished floor level of the uppermost level.
- 2.2.3 3 terraced houses are to be constructed, each with 3 storeys and 3 bedrooms with the finished floor level of the top floor being above 5.4m from the lowest point at ground level.

3. Requirements of London Plan Policy D12 Fire Safety

3.1.1 Policy D12 Fire Safety of The London Plan 2021 outlines six main aspects that need to be considered and addressed at the planning application stage of the development. Each of these aspects is expanded upon in the following subsections.

3.2 Policy D12 B1 – Building construction methods

This section details how the development proposal will function in terms of the building's construction: methods, products and materials used, including manufacturers' details.

3.2.1 The superstructure of the building it is assumed to be at this stage a reinforced concrete frame. The structural design will likely consist of in-situ reinforced concrete columns, vertical concrete shear walls and flat concrete slabs. Reinforced concrete is a non-combustible material with a relatively low thermal conductivity, which has been shown to perform well in a fire.

3.2.2 No part of the development qualifies as a 'relevant building' under Building Regulation 7(4).

3.2.3 There is no minimum provision imposed on the outermost materials which compose the external walls of the building.

3.3 Policy D12 B2 – Means of Escape

This section details how means of escape for all building users: suitably designed stair cores, escape for building users who are disabled or require level access, and associated evacuation strategy approach.

Terraced Houses

3.3.1 The terraced houses will have an Individual evacuation strategy. Houses are to be separated by 60 minutes fire resisting construction along the party walls and will be fitted with standalone alarm systems.

3.3.2 Upon activation of the fire detection and alarm system in a house, an alarm will be sounded to initiate the evacuation of occupants of that house only. The other houses/apartments will stay put in the relative safety of their house/apartment.

3.3.3 All 3 of the terraced houses have a protected stairway (minimum REI 30) which extend to a final exit.

3.3.4 All 3 of terraced houses will be provided with sprinkler system in accordance with BS 9251:2021 due to fire fighting access constraints.

3.3.5 As the top floors are above 4.5m from ground level, the internal stair should be constructed as a protected stair achieving a minimum of REI 30, leading directly to outside or two separate escape routes leading to alternative final exits.

Apartment Block

3.3.6 As with typical residential apartment buildings, the evacuation approach proposed revolves around the "Stay Put" evacuation strategy, whereby each flat will be constructed as its own fire compartment and will be provided with fire detection and alarm systems, which are standalone systems. At activation of the fire detection and alarm system in an apartment, an alarm will be sounded to initiate the evacuation of occupants of that apartment only. All other apartments and areas of the building, will stay put in the relative safety of their apartments/compartments.

3.3.7 The apartment block will be served by a single stair which will measure a clear width of 1,200mm, thereby exceeding the minimum prescriptive requirements. The stairs will discharge via a sterile residential entrance lobby.

3.3.8 The lift provided will be designed as an evacuation lift and therefore, should they require it, mobility impaired people could use it to make their escape to lower levels. Refer to Section 4 for further details. All other escape routes will be suitably designed to be level or, where provided, have ramps that do not have a

gradient that exceeds 1:12, or protected disabled refuges areas, where occupants can await for evacuation assistance.

- 3.3.9 Travel distances within the common corridor to the stair are below 4.5m and therefore smoke ventilation is required in the stairwell only.
- 3.3.10 The stairwell will be ventilated either by a 1m² openable vent at each storey or a single 1m² AOV located at the head of the stair.

3.4 Policy D12 B3 - Fire Safety Features

This section details how features which reduce the risk to life: fire alarm systems, passive and active fire safety measures and associated management and maintenance plans

- 3.4.1 The following table outlines all key active and passive fire safety features that will be provided in the development.

Fire safety	Description	
	Apartment Block	Terraced Houses
Fire detection & alarm	<u>Apartments</u> BS 5839-6 Category LD2 Grade D1 system <u>Communal residential corridors</u> BS 5839-1 Category L5 system	BS 5839-6 Category LD2 Grade D1
Sprinkler protection	Not required	BS 9251:2021
Smoke ventilation (Stair)	Either: – 1m² Automatic Opening Vent provided at head of stair – 1m² Openable vent at each level of the stair	Not required
Smoke Ventilation (Common residential corridors)	Not required	Not Required
Evacuation lift	The single lift is to be an Evacuation lift and as such will comply with BS 9999 Annex G and should be designed and installed in accordance BS EN 81-20 and BS EN 81-70	Not required
Exit signage & emergency lighting	Exit signage to all exits leading to escape routes in accordance with BS ISO 3864-1 and BS 5499-4 BS 5266-1: 2016 Emergency lighting to all escape routes and normal lighting to be maintained in fire-fighting shaft	Not required
Emergency power supply	All life safety systems – Electrical Engineer to confirm method at RIBA Stage 3	All life safety systems – Electrical Engineer to confirm method at RIBA Stage 3
Structural fire protection	60 Minutes	60 Minutes

Fire safety	Description	
	Apartment Block	Terraced Houses
Compartmentation	Floors: 60 minutes Apartments: 60 minute compartments Communal corridors: 60 minutes Escape Stair: 60 minutes Lift / riser shafts: 60 minutes	Party walls – 60 Minutes A Protected stair (minimum REI 30) is to be provided
Access and provisions for the fire service.	AOV's – Either at each floor or one at the head of the stair. Access for fire service vehicle provided within 45m hose laying distance to farthest part of the uppermost storey.	Access for fire service vehicle provided within 75m hose laying distance to farthest part of the uppermost storey.

- 3.4.2 A management plan will be required for the building that will ensure that the fire safety systems are adequately maintained in accordance with the appropriate design guidance. This will be monitored and reviewed as a part of their obligations under the Regulatory Reform (Fire Safety) Order 2005.

3.5 Policy D12 B4 – Fire Service personnel access and equipment

This section details how 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.

- 3.5.1 The following provisions are made in order to assist Fire Service personnel:

Building	Description
Apartment Block	Hose coverage within 45m to all areas from fire appliance vehicle access zone. Either: – 1m² AOV at the top of stairwell. or – Openable vent at each floor level with 1m² minimum free area
Terraced Houses	Hose coverage within 75m to all areas from fire appliance vehicle access zone. Sprinkler protection designed and installed to BS 9251:2021

- 3.5.2 Figure 3.1 illustrate the key Fire Service Provisions.

- 3.5.3 Water supplies for firefighting purposes will be provided by local fire hydrants, provided such that they will

be within 90m to an entry point to all buildings in the development.

3.6 Policy D12 B5 – Fire appliance access

This section details how provision will be made within the curtilage of the site to enable fire appliances to gain access to the building.

- 3.6.1 Vehicular access to the new building will be provided via existing infrastructure, Victoria Road. From here, firefighters and their hoses will be able to reach the farthest points of the second floor apartments within the 45m hose laying distance. As such risers are not a requirement for the apartment building.
- 3.6.2 Firefighters will be able to reach the uppermost parts of the terraced houses within 75m, which is permitted due to the provision of sprinklers designed and installed in accordance with BS 9251:2021.
- 3.6.3 As both the terraced houses and the apartment block are accessed from Victoria Road, a turning circle is not required as the fire appliance will be able to progress in the direction of travel from which it came.
- 3.6.4 These proposals do not adversely impact on neighbouring sites utilising the existing highway infrastructure.

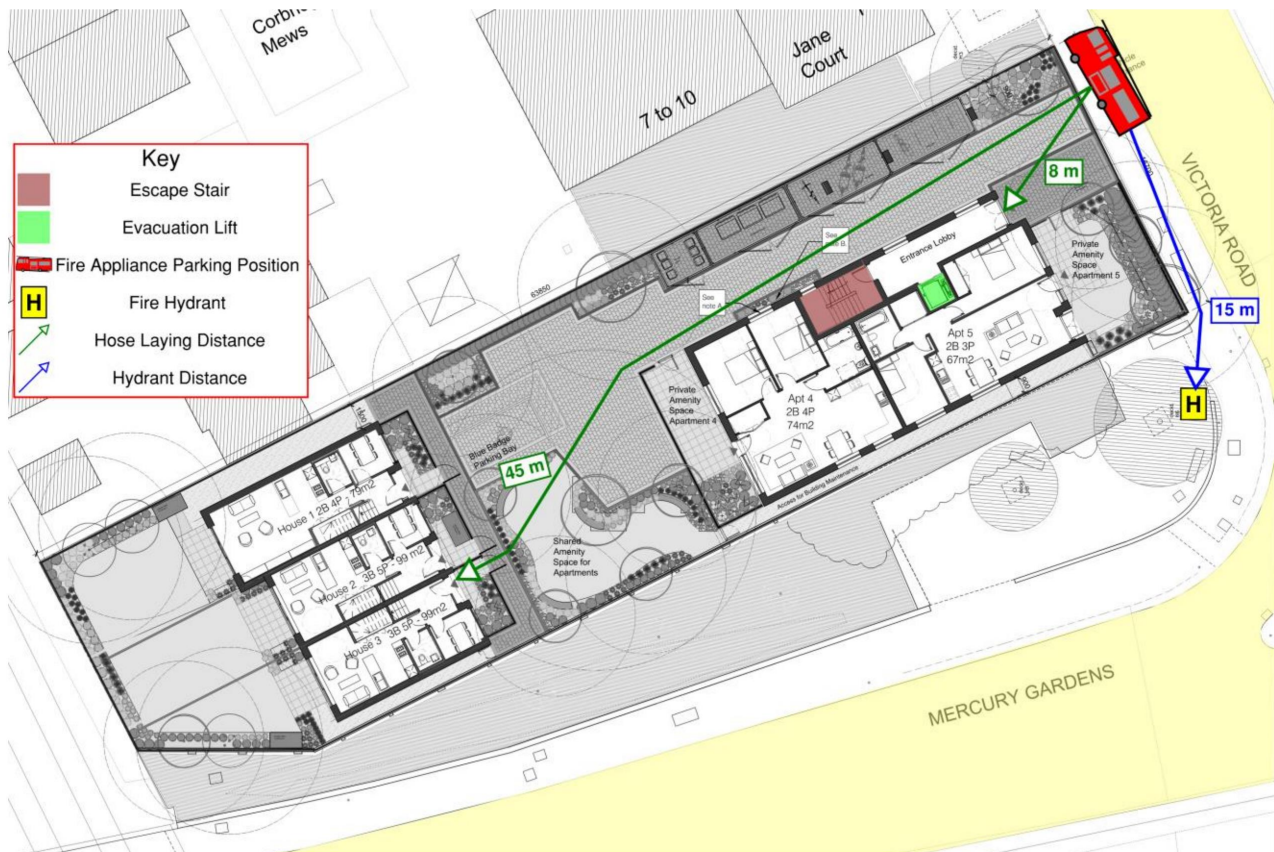


Figure 3.1 Fire appliance access, hydrant location, hose laying distances to apartment and terraced housing entrances.

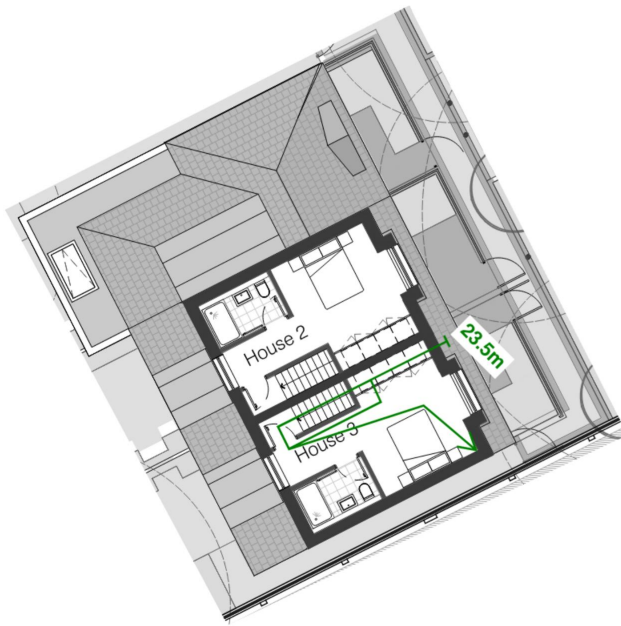


Figure 3.2 Hose laying distances from the entrance to the furthest point of the uppermost floors – Terraced Houses

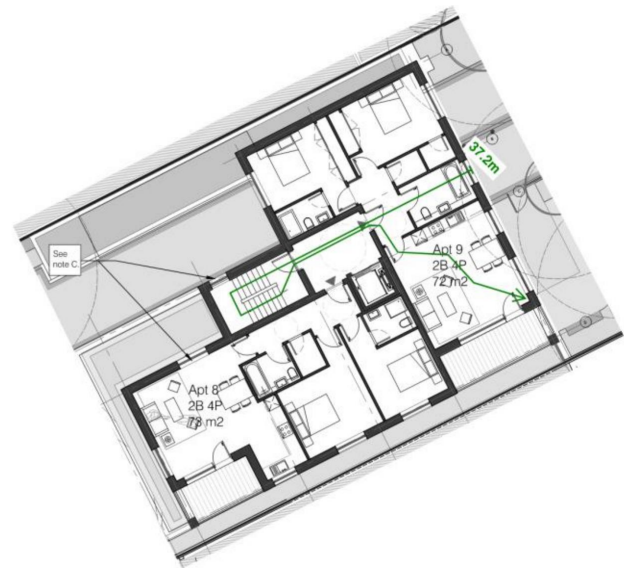


Figure 3.3 Hose laying distances to the furthest point of the uppermost floors – Apartment Block

3.7 Policy D12 B6 – Future Modifications

This section details how ensuring that any potential future modifications to the building will take into account and not compromise the base build fire safety/protection measures.

- 3.7.1 A requirement of the Building Regulations 2010 (Regulation 38) is that the fire safety information is compiled and handed over to the building user upon completion. This would include the fire safety strategy reports and Operations & Maintenance manuals for the fire safety systems in the buildings. It is anticipated that the relevant principal contractor will take on the task of collecting and compiling all the information from all the relevant consultants and subcontractors and arrange for the handover process of passing all the compiled information to the development owner and any relevant development management team at practical completion. The information should be presented in a categorised, intuitive manner and be stored in appropriate digital copies for future storage and reference. The owner and management team should ensure that this information remains available and accessible on site throughout the lifetime of the development.
- 3.7.2 Further to this, the Regulatory Reform (Fire Safety) Order 2005 will be applicable when the building is occupied and a requirement of this legislation is the management of fire risks and the requirement to document a fire risk assessment for the premises. The duties under this order extend to the maintenance of fire safety equipment.
- 3.7.3 Any future development within the site that proposed to make material changes to the use of the building, or any life safety measure or provisions should consider the complete package of fire protection measures prior to doing so. The fire strategy needs to be considered holistically and alterations to any aspect of the design requires careful validation by a suitably qualified fire engineer.

4. Requirements of London Plan Policy D5 Inclusive Design (B5)

- 4.1.1 Policy D5 Inclusive Design states that the “development proposal should achieve the highest standards of accessible and inclusive design”. Amongst others, this is defined in D5 (B5) as:

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.

- 4.1.2 The apartment block is provided with a single lift. In accordance with London Plan Policy D5 (B5) an evacuation lift should be provided.
- 4.1.3 The evacuation lift will be provided with the measures required by the London Plan Policy D5 (B5), as noted in the London Plan Guidance sheet D5 (B5) Evacuation lifts document. All evacuation lift installations will generally comply with the recommendations of BS 9999 Annex G and should be designed and installed in accordance with the relevant provisions in BS EN 81-20 and BS EN 81-70.
- 4.1.4 These include resilience measures, such as suitable back-up power supply (via generator or second separate utility supply), fire protection of lift equipment (60 min enclosure) and power/control cabling in accordance with BS 8519, as well as the cause and effect interface between the lift control system and the fire detection and alarm system. The evacuation lifts should discharge directly to outside via a protected space such as the residential entrance lobbies. In the unlikely scenario where smoke is detected in the evacuation lift final exit, the evacuation lift should return to an alternative level .
- 4.1.5 The terraced houses are not designed for use by mobility impaired persons. i.e. no lift is to be provided.

4.2 Building Management Plan

- 4.2.1 With the apartment block being a residential development, there is not expected to be suitably competent persons on site at all times to manage the evacuation using evacuation lifts, as is typically required. This building will utilise the newly developed “remote assisted evacuation” technology that is being developed by the industry to address this issue in residential buildings. Whilst it is recognised that currently the technology is in its infancy and only appears in the draft British Standards (such as BS 81-76), the development is anticipated to be able to adopt the recommendations before the building is operational.
- 4.2.2 Emergency intercoms / communication system should be provided between the refuges (i.e. common residential corridors) and the remote assistance operator. On the operation of the “Evacuation Lift” switch, or on a signal from the fire detection system, the evacuation lift should isolate all car and landing call controls and return to the final exit level and park with its doors open. Once at the final exit level and once the “Evacuation Lift” switch has been operated, the remote assisted controls should be enabled; the evacuation lift should then operate only in response to the remote assisted controls and the communication system provided should be in operation.

4.3 Capacity

- 4.3.1 With the apartment block operating a “stay put” evacuation strategy there will only be a requirement for the occupants in the apartment of fire origin to evacuate. Therefore, it is considered that a single evacuation lift will be sufficient for this evacuation.

5. Declaration of compliance

- 5.1.1 Given the content of this Fire Statement, it is our professional opinion that the scheme proposals meet or exceed the minimum requirements of the London Plan Policies D12 and D5 (B5) and the Part B (B1 – B5) Requirements of the Building Regulations.
- 5.1.2 This Fire Statement demonstrates that the requirements of the London Plan Policy D12 and D5 (B5) have been considered and addressed as an integral part of the proposals.
- 5.1.3 This Fire Statement should be included in the suite of documents that will be submitted as part of the development's full planning application.
- 5.1.4 If there are any changes to the scheme which require subsequent Section 96a or Section 73 applications, this Fire Statement will need to be reviewed and amended, as required, and the revised Fire Statement will need to be submitted as part of the revised application. This is necessary in order to ensure that the proposed scheme amendments are appropriately captured and the content of the Fire Statement always remains consistent with the latest scheme proposals.

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Fire Engineer

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