
Accendo Fire Safety
Services

11-17 Victoria Road,
Ruislip

London Plan Fire
Statement for the
Addition of Upper
Residential Storeys.

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1.0 AUTHOR QUALIFICATIONS

This report has been compiled by John Lewis MSc BSc (Hons) MIFireE MRICS MCIOB.

John is the founder and director of Accendo Fire Safety Services. He has over twenty years' experience of applying and assessing Part B of the Building Regulations. This has been obtained on a range of residential and non-residential buildings up to twenty-five storeys.

John is member of the Institution of Fire Engineers and holds Chartered Building Engineer status.

Professional Associations and Education

- MSc Fire and Explosion Engineering, University of Leeds (2013)
- BSc (Hons) Construction Management, South Bank University, London (1993)
- Successfully passed the RICS EWS Competency Training Scheme (2021)
- Application for Chartered Engineer (Higher Risk Buildings) via CABE in progress
- Member of the Institution of Fire Engineers (1999)
- Member of the Chartered Association of Building Engineers (CBuildE, MCABE)
- Member of the Royal Institute of Chartered Surveyors (2000)
- Member of the Chartered Institute of Building (1999)

Committee Membership

John sits upon the following committees:

- FSH/021/0-/18 *Development of BS9414*
- FSH/021/0-/19 *Review of BS8414-1 and BS8414-2*
- FSH/021/0-/14 *Fire Precautions in Buildings (BS9991 and BS9999 suite of documents)*
- MHCLG Project on fire performance of cladding materials research (member of the Steering Group)
- Smoke Control Association *Guidance on Smoke Control to Common Escape Routes in Apartment Buildings (flats and Maisonettes)*
- Smoke Control Association *SCA guidance on the design, installation and maintenance of smoke control systems in single staircase office buildings exceeding 11m in height.*

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- Single Building Assessment Task & Finish Group – Scottish Government Cladding Remediation Directorate.
- Home Builders Federation Tall Buildings Group.

Selected Publications

- Principal Author of Building Control Alliance Guidance Note 18 *Use of Combustible Cladding Materials on Buildings Exceeding 18m in Height*. Cited across the industry, BCA GN18 became the benchmark for assessing compliance of combustible cladding systems on high rise buildings.

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2.0 INTRODUCTION

This report provides a Fire Safety Statement to support the application for the:

“Erection of ground floor rear extension, and three-storey extension (with top floor set-in) above existing commercial parade to provide 7 residential units (2 x 1 bed, 2 person units, 4 x 2 bed, 3 person units and 1 x 3 bed, 5 person unit)”

The application has been submitted to Hillingdon Council by the applicant, ‘Perl Equity (Ruislip) 4 Ltd’ (hereafter referred to as ‘the applicant’) for the development at 11 – 17 Victoria Road, Ruislip (hereafter referred to as ‘the site’).

This report should be read in conjunction with other supporting documents submitted with the planning application, including the Planning Note and the Design and Access Statement which explain the Proposed Development in more detail and relate it to the surrounding context and planning policy framework for the Site.

It has been developed to satisfy the requirements of the London Plan [March 2021] Policy D12 (A and B). BS9991: 2015 and BS9999:2017 have been used to demonstrate compliance with the Part B (Fire Safety) functional requirements of the Building Regulations 2010 (as amended).

This Fire Safety Statement is not intended to provide a full fire strategy report for building regulation purposes however it is intended to be developed and built upon as further detailed design work progresses. During the course of the detailed design stage, a different fire safety guidance document may be substituted for the ones cited above.

This fire safety statement details how, at this stage of design, the development proposal is intended to 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 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 how this will be achieved in an evacuation situation, water supplies, provision and positioning of equipment,

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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 curtilage of the site to enable fire appliances to gain access to the building

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

The following documents have been used in. preparation of this report:

Drawing Name	Number	Rev
Proposed First Floor Plan (Entrance Level)	1117VR-PP1-03	-
Proposed Second Floor Plan	1117VR-PP1-04	-
Proposed Third Floor Plan	1117VR-PP1-05	-
Proposed Roof Floor Plan	1117VR-PP1-06	-
Proposed Elevations, Proposed Ground Floor Plan	1117VR-PP1-07	-
Proposed Side Elevation, Proposed Section	1117VR-PP1-08	-
Proposed Site Plan	1117VR-PP1-250331	-

3.0 SITE DESCRIPTION

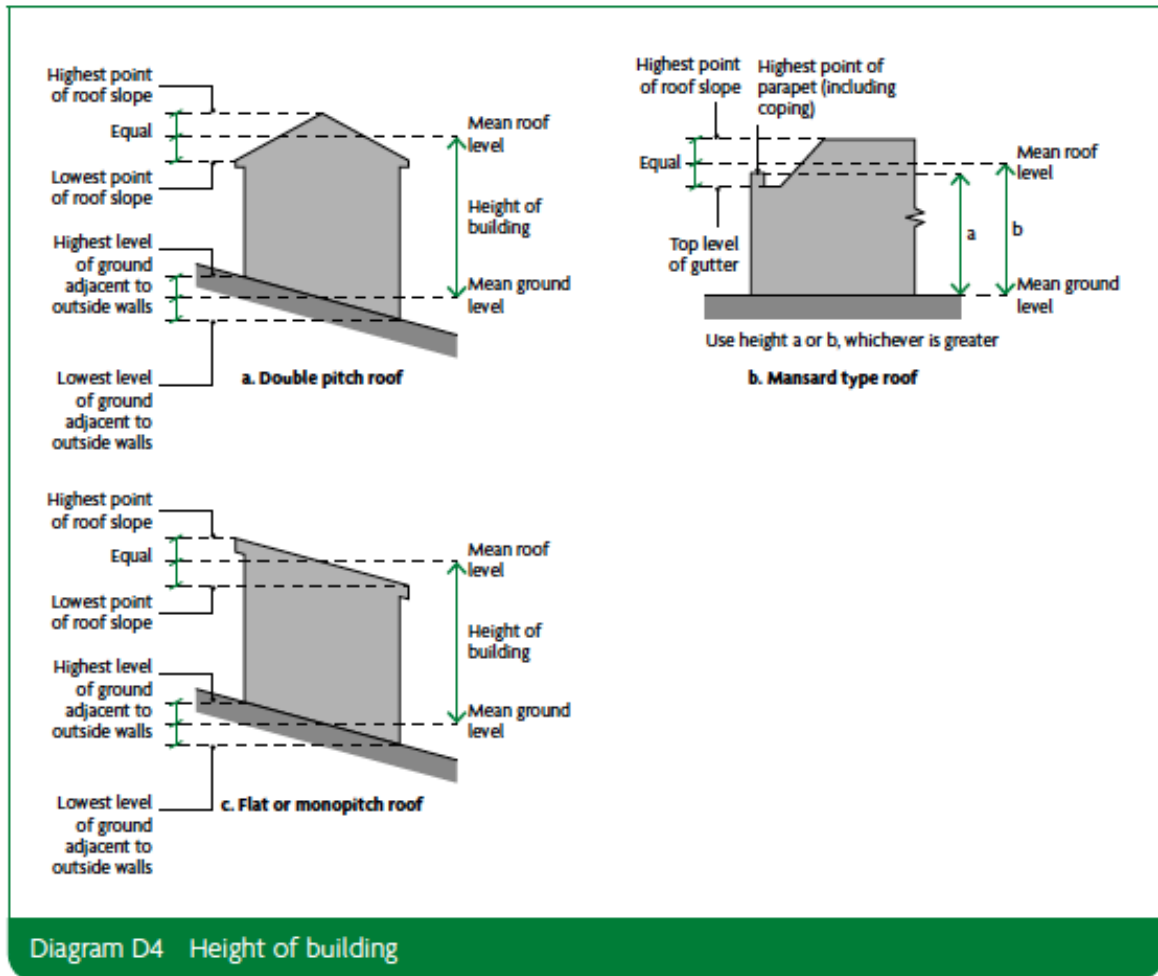
The planning application refers to:

Erection of ground floor rear extension, and three-storey extension (with top floor set-in) above existing commercial parade to provide 7 residential units (2 x 1 bed, 2 person units, 4 x 2 bed, 3 person units and 1 x 3 bed, 5 person unit)

Building height has been measured in accordance with Approved Document B Volume 2 2020 Diagram D4:

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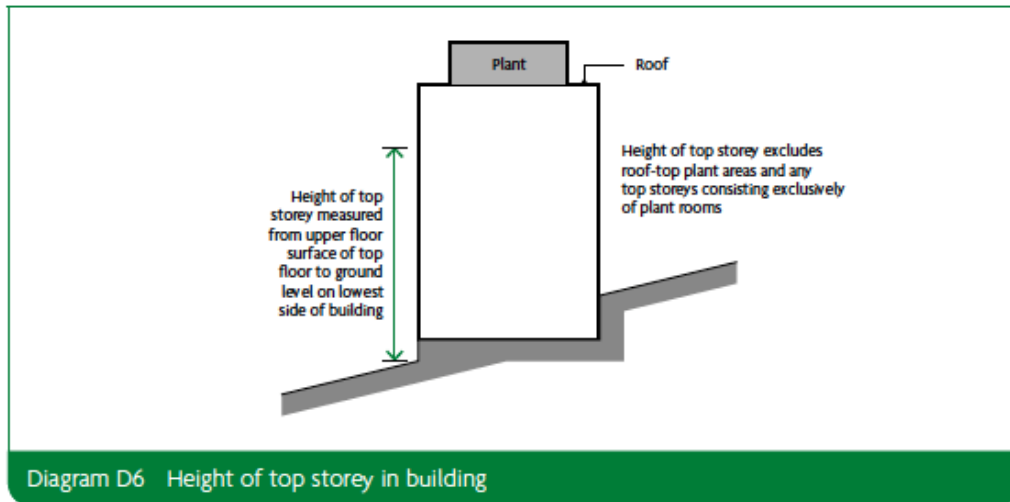


In accordance with this diagram, the maximum building height is around 15.00m.

The height to the finished surface of the top storey (the amenity of the building has been measured in line with Diagram D6:

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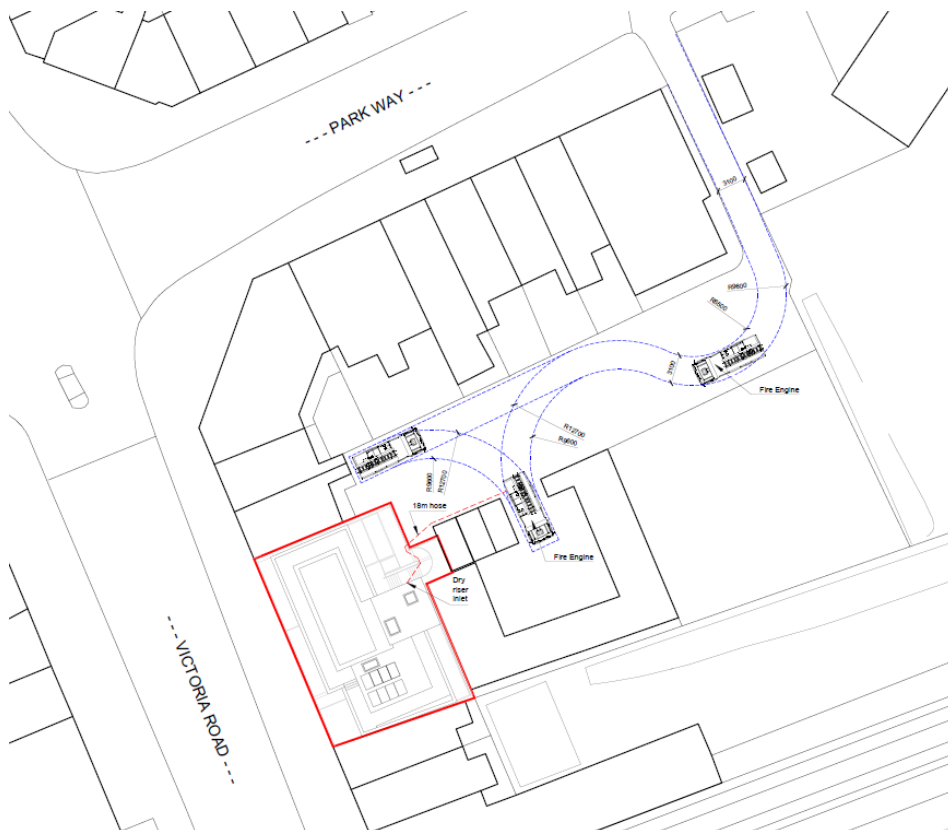
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In accordance with this diagram, the top storey height is around 11.60m.

The location plan of the building is shown below in Figure 1

Figure 1 – Location Plan



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Upon completion of the development, the floor uses will be

- Ground Floor – Existing Retail Units and ancillary accommodation associated with the upper residential floors.
- First Floor to Third Floor – Residential Flats

4.0 MEANS OF ESCAPE

With regards to forming a suitable means of escape strategy for the building, the policy requirements of The London Plan are indicated below:

Policy Reference	Policy Requirement
Policy D12 – Clause A1	<i>[Development proposals must ensure that they] identify suitably positioned and unobstructed outside space:</i> <ul style="list-style-type: none"> • For fire appliances to be positioned on; and • Appropriate for use as an evacuation assembly point.
Policy D12 – Clause A4	<i>[Development proposals must ensure that they] provide suitable and convenient means of escape, and associated evacuation strategy for all building users.</i>
Policy D12 – Clause A5	<i>[Development proposals must ensure that they] develop a robust strategy for evacuation which can be periodically updated and published, and which all building users can have confidence.</i>
Policy D12 – Clause B2	<i>[The Fire Statement should detail how the development proposal will function in terms of] the 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.</i>
Policy D12 – Clause 3.12.5	<i>Developments, their floor layouts and cores need to be planned around issues of fire safety and a robust strategy for evacuation from the outset, embedding and integrating a suitable strategy and relevant design features at the earliest possible stage, rather than features or products being applied to pre-determined developments which could result in less successful schemes which fail to achieve the highest standards of fire safety.</i>
Policy D12 – Clause 3.12.7	<i>The provision of stair cores which are suitably sized, provided in sufficient numbers and designed with appropriate features to allow simultaneous evacuation should also be explored at an early stage and provided wherever possible.</i>
Policy D5 – Clause B5	<i>[Development proposals should] 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 suitable to be used to evacuate people who require level access from the building.</i>

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Evacuation Strategy - Residential areas

These areas will feature a 'stay put' evacuation strategy where only the occupants of the fire flat will escape initially.

Provision for Disabled Occupants

The top floor of the building is at a height exceeding 11m. A lift is proposed to serve all residential floors and this will be designed for use as an evacuation lift. The following British Standards will be used:

- BS EN 81 20 – design provisions for passenger lifts
- BS EN 81 72 – design provisions for fire-fighting lifts

The lift will be served by both a primary and secondary electrical supply in order to remain functional during a fire.

Horizontal Means of Escape

Residential areas - travel distances, routes and smoke control provision will be in accordance with Paragraph 7 of BS9991. Smoke ventilation will be via a wall mounted automatic smoke vents or vertical smoke shafts. A smoke detection system complying with BS5839-1 will be installed within the common parts to activate the smoke control system.

Internal Escape Within the Flats

Design of the flats will be in line with Paragraph 8 of BS9991. This will include the provision of smoke detection to BS5839-6.

Vertical Escape

Residential Stairs: The stairwell will be a minimum width of 1100mm and will discharge directly to external air at ground floor level.

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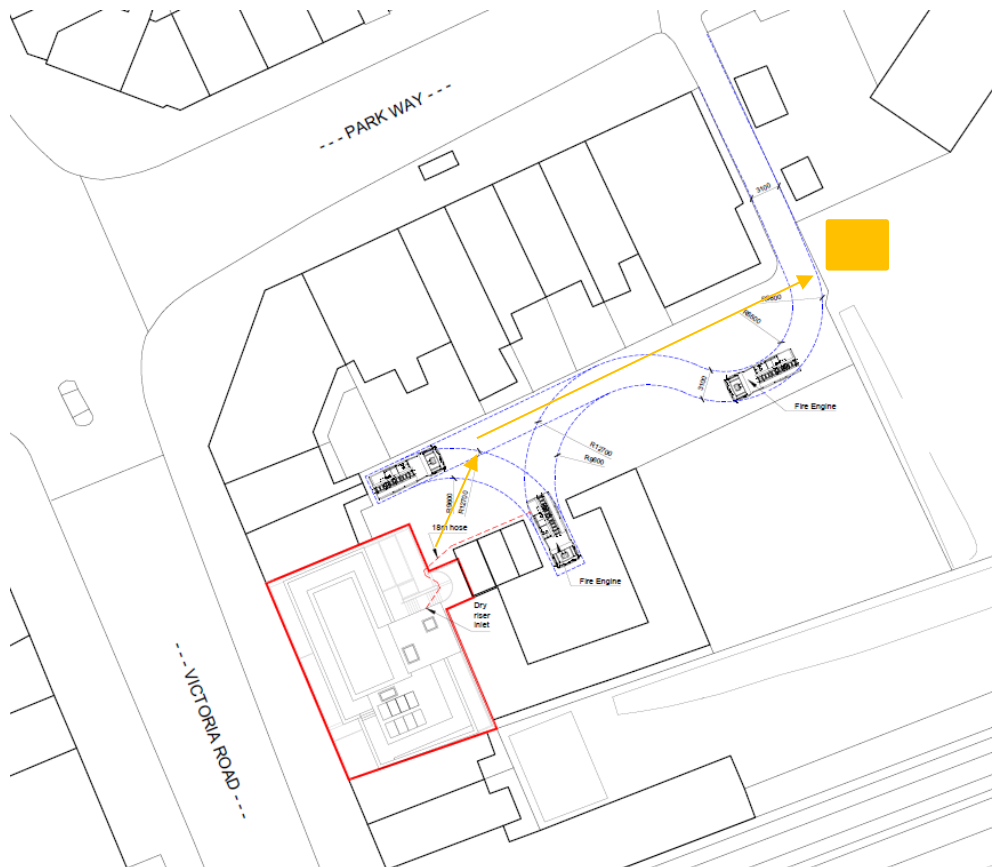
No ancillary accommodation will connect directly with the stairwell.

Ancillary accommodation at ground floor level will fire protected to maintain a safe exit route from the stairwell.

Evacuation Assembly Points:

The entrance to the building is from the rear courtyard accessed from Parkway. Assembly in this courtyard at a safe distance from the building (orange squares on the image below), is possible:

Note that the residential floors are designed on a 'stay put' basis and so it is not envisaged that a managed evacuation will be undertaken for these floors. However, should such an evacuation be needed, numerous areas away from the building exist for residents to assemble.



5.0 ACTIVE FIRE SAFETY MEASURES

With regards to active fire safety measures within the building, the policy requirements of The London Plan are indicated below:

Policy Reference	Policy Requirement
Policy D12 – Clause A2	<i>[Development proposals must ensure that they] 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.</i>
Policy D12 – Clause B3	<i>[The Fire Statement should detail how the development proposal will function in terms of] features which reduce the risk to life: fire alarm systems, passive and active fire safety measures and associated management and maintenance plans.</i>

Fire Detection and Alarm Systems – Residential Floors

All apartments are to be provided with a Category LD1 fire detection and alarm system designed, installed, and commissioned in accordance with BS5839-6:2019. The Category LD1 system is specified to provide detection coverage in all areas of the apartment, except for bathrooms.

As the residential units are to be provided for rental usage, it is proposed to install a Grade D1 system within all apartments. In accordance with Clause C.6 of BS5839-6:2019, Grade D1 systems consist of one or more mains-powered smoke and/or heat alarms, each with a sealed-in standby supply consisting of a battery or batteries.

It is proposed to provide an L5 fire detection system within the common residential areas (i.e. residential common corridors, stairs, etc.). The purpose of this system is only to activate the relevant smoke ventilation systems in a fire scenario; therefore, no sounders are to be provided in these areas. The fire detection and alarm system is to be designed and installed in accordance with BS5839-1:2017.

Smoke Control System – Residential Floors

The residential corridors will be protected with natural smoke vents located in the portions of corridor which link to each stairwell. Make-up air will come from 1.0m² automatic opening vents located on the top storey of each staircase. The system will be designed in accordance with Appendix A of BS 9991 and Smoke Control, Association publication 'Guidance on Smoke Control to Common Escape Routes in Apartment Buildings'

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Sprinklers

As the building will have a residential floor at a height exceeding 11m, a sprinkler system will be fitted throughout, including the existing retail units.

Emergency Lighting and Signage

Emergency lighting to BS5266-1: 2016 will be installed within non-residential areas and common parts of the residential floors.

Escape route signage to BS5499-9 will be provided to all common escape routes.

Consideration will be given to providing an evacuation alert system to BS8629:2019 to the residential flats. This will be situated in the ground floor entrance area (final positioning to be agreed later).

6.0 PASSIVE FIRE SAFETY AND CONSTRUCTION DETAILS

With regards to passive fire safety measures and construction details within the building, the policy requirements of The London Plan are indicated below:

Policy Reference	Policy Requirement
Policy D12 – Clause A2	<i>[Development proposals must ensure that they] 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.</i>
Policy D12 – Clause A3	<i>[Development proposals must ensure that they] are constructed in an appropriate way to minimise the risk of fire spread.</i>
Policy D12 – Clause B1	<i>[The Fire Statement should detail how the development proposal will function in terms of] the building's construction: methods, products and materials used, including manufacturers' details.</i>
Policy D12 – Clause B3	<i>[The Fire Statement should detail how the development proposal will function in terms of] features which reduce the risk to life: fire alarm systems, passive and active fire safety measures and associated management and maintenance plans.</i>

Elements of Structure

The top floor of the building is at a height exceeding 11m. Therefore, in line with BS9991 Section 16, existing elements of structure will be assessed and, where necessary, upgraded to achieve a 60 minutes standard of fire resistance. New elements of structure will meet this provision.

Compartmentation

Key fire resistance provisions within the development can be summarised as follows:

- All floors within the development are to be designed as compartment floors achieving the same level of fire resistance as required for the elements of structure.
- All protected shafts which pass through compartment floors are to achieve the same level of fire resistance as required for the elements of structure.
- All residential units are to be separated from all other areas of the building by at least 60-minute fire rated construction (FD30S fire doors onto internal common corridors).

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- All non-residential areas will be separated from the common parts with the same level of fire resistance as required for the elements of structure

Ancillary accommodation is to be enclosed in fire rated construction, in accordance with the requirements of Table 15 of BS9991:2015.

Fire Doors

Fire doors are to meet the requirements outlined within BS9991:2015 and BS 9999:2017.

Internal Wall and Ceiling Linings

Wall and ceiling linings will meet the requirements outlined within BS9991:2015.

Fire Stopping and Cavity Barriers

The appropriate fire barrier provisions will be provided in line with the guidance within BS9991. Fire stops will be of the required fire resistance for the height of building. Cavity barriers will be of a minimum fire resistance of 30 minutes.

External Wall Construction

The principal components of the existing external walls will be assessed and remediated in line with Building Regulation requirements.

Any new external walling will be composed of materials which achieve either a A1 or A2,s1-d0 combustibility classification in line with BS EN 13501-1.

Space Separation and External Areas

Detailed external fire spread analysis will be undertaken based on the enclosing rectangle method as described in BR187:2014. On an initial review of space separation, the building benefits from high levels of compartmentation and the provision of sprinklers throughout; therefore, the required boundary distances from each elevation will be low.

Roof Coverings

Roof coverings will achieve B_{ROOF}(t4) classification.

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7.0 ACCESS AND FACILITIES FOR THE FIRE AND RESCUE SERVICE

With regards to access and facilities for the fire and rescue service, the policy requirements of The London Plan are indicated below:

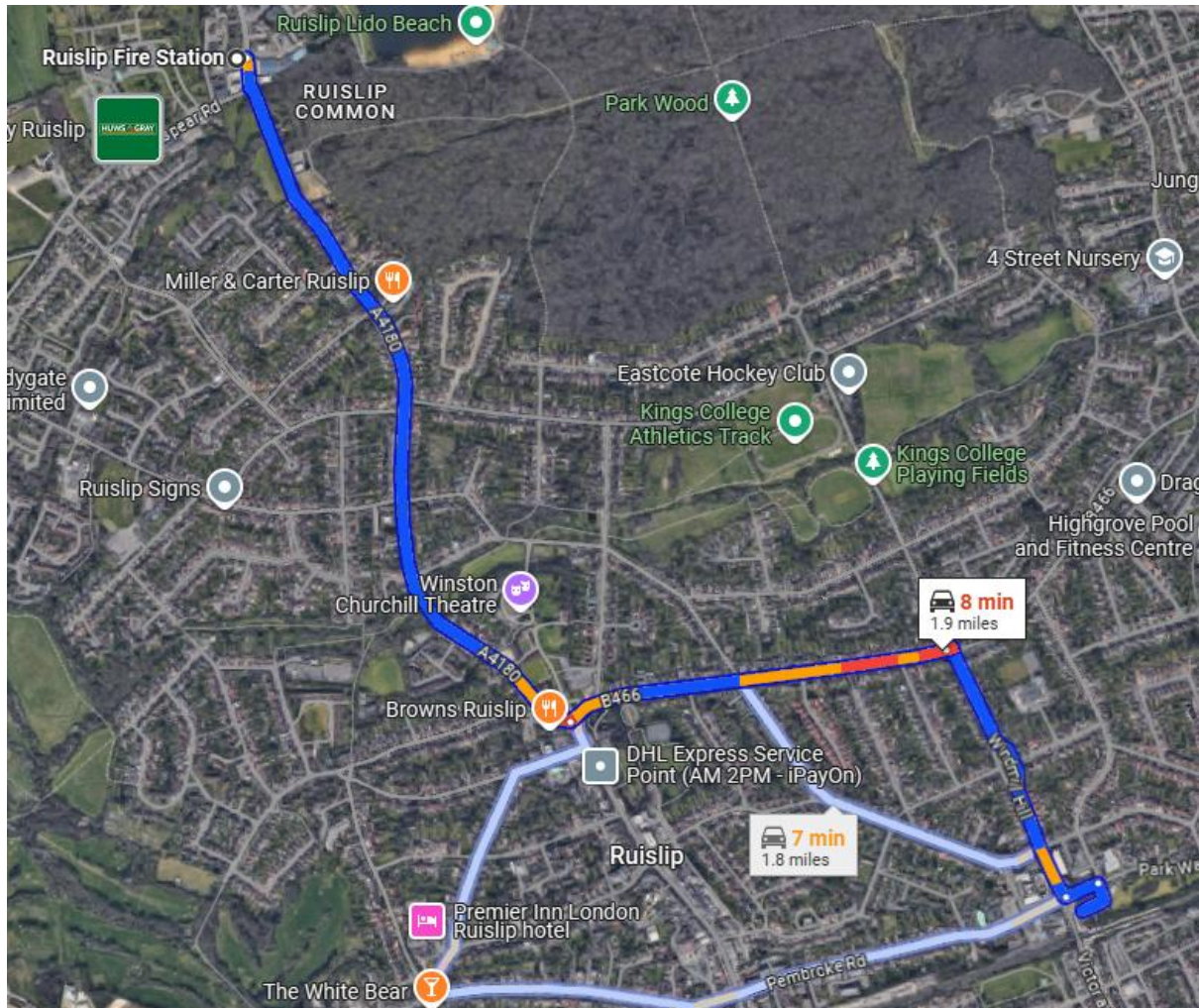
Policy Reference	Policy Requirement
Policy D12 – Clause A6	<i>[Development proposals must ensure that they] provide suitable access and equipment for firefighting which is appropriate for the size and use of the development.</i>
Policy D12 – Clause B4	<i>[The Fire Statement should detail how the development proposal will function in terms of] 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.</i>
Policy D12 – Clause B5	<i>[The Fire Statement should detail how the development proposal will function in terms of] how provision will be made within the curtilage of the site to enable fire appliances to gain access to the building.</i>

Site Accessibility

The nearest fire station is Ruslip Fire Station. From analysis of Google Streetview, it can be seen the fire station is around an eight-minute drive from the main entrance of the building.

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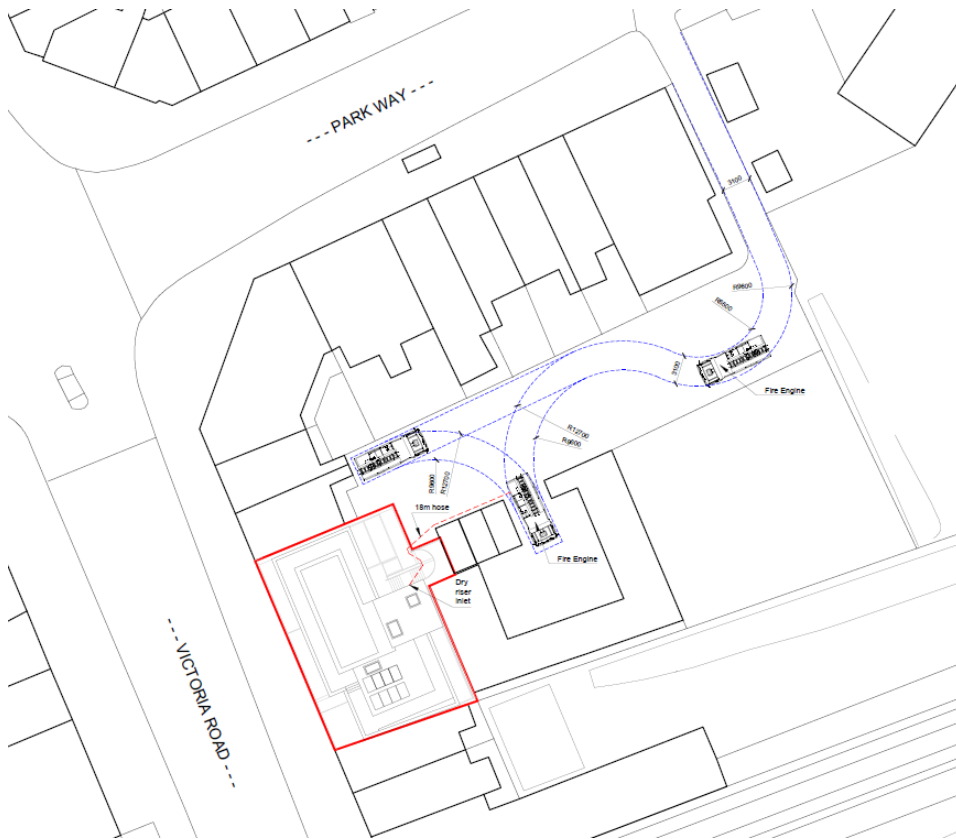
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The primary approach to the building will via the rear courtyard off Parkway. This road provides suitable access width for fire service vehicles and parking directly in front of building. A turning head will be provided within this area:

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Fire-Fighting Access and Facilities

Residential Floors: Due to the height and mixed use nature of the building, the following measures will be provided.

- A dry rising main will serve the new residential floors.
- Parking for the fire brigade pump can be made outside the building.
- Hose lengths are within 18m measured from the position of the parked appliance to the dry riser inlet

Fire Hydrants

In accordance with the requirements set out in BS9991:2015, fire hydrants should be located within 90m of the dry rising main inlet locations. The location of the closest fire hydrant will be investigated but is expected to be on Parkway.

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If no suitable hydrant can be located within 90m an additional hydrant will be installed.

8.0 FIRE SAFETY MANAGEMENT AND FUTURE DEVELOPMENT

This section of the Fire Statement is aimed at providing information in regard to the management of future fire safety within the building.

In accordance with the London Plan, the proposed fire safety management plan satisfies the following policy references.

Policy Reference	Policy Requirement
Policy D12 – Clause B4	<i>[The Fire Statement should detail how the development proposal will function in terms of] 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.</i>
Policy D12 – Clause B6	<i>[The Fire Statement should detail how the development proposal will function in terms of] ensuring that any potential future modifications to the building will take into account and not compromise the base build fire safety/protection measures.</i>

BS9991 provides guidance on ongoing management and maintenance of the building once occupied.

The Regulatory Reform (Fire Safety) Order 2005

The RRFSO will apply to the completed building and a suitable ‘Responsible Person’ will be appointed to undertake and constantly review a suitable fire risk assessment.

Regulation 38

Upon completion of the building works, all relevant details relating to fire safety will be handed to the Responsible Person in order for them to undertake a suitable fire risk assessment.

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9.0 REFERENCES

1. The Building Regulations 2010 (as amended 2013); Communities and Local Government.
2. Approved Document B Volume 2; HM Government. 2020
3. BS9991 'Fire Safety in the Design, Construction and Use of Buildings – Code of Practice for Residential Buildings'. BSi. 2015
4. BS9999 'Fire Safety in the Design, Construction and Use of Buildings – Code of Practice for Non-Residential Buildings'. BSi. 2017
5. BS EN 13501 Part 1 'Fire Classification of Construction Products and Elements: Classification using Data from Reaction to Fire Tests