

Planning Fire Safety Statement

36b Rosedale Road

Richmond, London TW9 2SX



Client: Timberlake Planning Limited, 2B Blake Mews, Kew Gardens TW9 3GA

Revision	Date	Description
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Design stage:

RIBA Stage 2: Concept Design

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The London Plan 2021

Mu.Studio (UK) Ltd have been commissioned to provide fire safety consultancy services for the amendment of an existing commercial building at 36b Rosedale Road in the London Borough of Richmond upon Thames.

The resulting building will feature a total floor area of circa 118 m². As such, this is considered a 'minor development' under the London Plan 2021 [1], where featuring both less than ten residential dwellings and non-residential areas being no greater than 1,000 m² in total. A Planning Fire Safety Strategy report is therefore provided both to fulfil the expectations of the London Plan, as well as to support the client and design teams with developing their project information into detailed and technical design.

Summary Tables 1, 2 & 3 provide completed Form 2 and Form 3 pro-formas as provided within the Greater London Authority document "London Plan Guidance – Fire Safety" (February 2022 version, draft for consultation). The remainder of the document provides more detailed information to substantiate the completed pro-forma and to assist the client with the further development of the scheme.

Summary Table 1 – General information

Item	Description
Site address	36b Rosedale Road, Richmond, London TW9 2SX
Description of development	Replacement of part of existing front slate roof to office building with patent glazing, additional rooflight to flat roof, replacement of external refuse door, and internal alterations including relocation of stair and creation of lightwell to basement.
Name, qualifications, professional memberships, and experience of author	Mr Andrew O.M. Ballantyne <small>BArch MEng CEng MIFireE PMSFPE</small> , Director of Mu.Studio (UK) Ltd. Andy is a Chartered Engineer registered with the Engineering Council by the Institute of Fire Engineers, and Full Member of the Institute of Fire Engineers with membership no. 00056660. Andy graduated from the University of Edinburgh with the First-Class Master's degree in Structural and Fire Safety Engineering. Prior to this, Andy also received a Bachelor's degree in Architectural Design from the University of Dundee. Following graduation, Andy has worked in fire safety engineering for over 10 years, based primarily in the London area and undertaken numerous commercial, residential, and governmental projects of varying scale and complexity.
Has a Gateway One Statement been submitted?	Not applicable, where proposal is not a 'Relevant Building' as defined in Regulation 7(4) of the Building Regulations.

Summary Table 3 – Form 3: Provision of an evacuation lift (London Plan Policy D5(B5))

Item	Detail
Details of the evacuation lift and shaft	The development will not feature a lift. As such, no evacuation lift is expected where no new lifts are proposed.
Capacity assessment	Not applicable
Evacuation strategy	Not applicable
Evacuation lift management plan	Not applicable
Declaration of compliance by a competent person	The technical content produced for this planning application is considered to suitably comply with the relevant legislation and requirements of London Plan Policy D5(B5), where applicable, subject to suitable development and implementation during the Building Regulations process and construction. Signed:

Summary Table 2 – Form 2: Planning Fire Safety Strategy (London Plan Policy D12A)

Item	Detail	See also:
Identifies suitably positioned unobstructed outside space for fire appliances to be positioned on	Fire appliances will be able to use Rosedale Road to access a hardstanding area at the front of the building. This is a public road that are accessed from the wider road network. Access to the building will feature an extended dead-end condition to reach the hardstanding area, though this is the current condition at the site that will not be worsened by the intended alternations to the building.	Section 6
Identifies suitably positioned unobstructed outside space appropriate for use as an evacuation assembly point	Assembly areas are to be identified by building management. Sufficient safe waiting space would be available on the pavements adjacent to Rosedale Road or Spring Mews.	Section 3.5
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	The building will include fire safety and means of escape measures based on the expectations of Approved Document B Volume 2, though utilising improvement of an existing non-compliant internal stair arrangement. A fire detection and alarm system is to be provided to support safe of means of escape from the space.	Section 3
Constructed in an appropriate way to minimise the risk of fire spread	Internal lining specifications and fire-resisting construction are to be provided to meet the expectations of Approved Document B Vol 2, assisting to limit fire growth and provide separation to adjacent plots. The external wall and roof elements will be of materials that meet contemporary fire safety guidance in Approved Document B Volume 2.	Section 4 & Section 5
Provides suitable and convenient means of escape, and associated evacuation strategy for all building users	Means of escape is based on Approved Document B Volume 2 and improvement of the existing arrangement of the building. The building features steps at the main entrance, such that all users of the premises are expected to be able to utilise stairs unaided in the event of an evacuation. As no lifts are proposed, the scheme is not expected to include additional features to support disabled users (i.e., evacuation lifts) under the expectations of Policy D5(B5) of the London Plan.	Section 3
A robust strategy for evacuation which can be periodically updated and published, and which all building users can have confidence in	Information regarding the means of escape and fire safety equipment is to be retained in accordance with the principles of the Golden Thread, and to be provided to building management in accordance with relevant fire safety legislation to support their ongoing management of fire safety and maintenance of fire safety systems.	Section 7
Suitable access and equipment for firefighting which is appropriate for the size and use of the development	Firefighting access will be available to the building from the external hardstanding area based on the expectations of Approved Document B Volume 2 and LFB Guidance Note 29. The existing condition at the site features an extended dead-end distance, though this will be maintained as no worse than in the existing condition following the proposed works.	Section 6
Where a lift core is provided, at least one lift is an evacuation lift	No lifts are to be provided at the development. As such, no evacuation lift is expected or proposed.	Summary Table 3 & Section 3.6

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1. Introduction

1.1 General

- 1.1.1 Mu.Studio (UK) Ltd have been commissioned to provide fire safety consultancy services in support of the proposed alteration of an existing commercial building at 36b Rosedale Road in the London Borough of Richmond upon Thames, as illustrated in Figure 1.
- 1.1.2 This report may be used in support further detailed design development. It is not intended to portray detailed design information for fire safety systems or construction specifications and should be read in conjunction with the wider project documentation.
- 1.1.3 Any alternative design solutions suggested within this report are subject to agreement and eventual approval by the relevant authorities having jurisdiction (AHJs).



Figure 1 – Site arrangement

1.2 Legislation and basis of design

- 1.2.1 This report is developed in cognisance of the fire safety design expectations of the Building Regulations 2010 (as amended), including:
 - Schedule 1, Part B1 – Means of warning and escape
 - Schedule 1, Part B2 – Internal fire spread (linings)
 - Schedule 1, Part B3 – Internal fire spread (structure)
 - Schedule 1, Part B4 – External fire spread
 - Schedule 1, Part B5 – Access and facilities for the fire and rescue service
- 1.2.2 The fire safety strategy has not been developed to include additional property protection enhancements or to meet the expectations of insurer requirements. However, fire safety provisions as required by the Building Regulations will, to some extent, assist with the protection of property in the event of fire.

- 1.2.3 This fire safety strategy does not address site fire safety during construction. The Health and Safety Executive (HSE) [2] and Fire Protection Association (FPA) [3] issue guidance on identifying and managing fire precautions on construction sites, which should be consulted by the Principal Contractor for the scheme.
- 1.2.4 The building is designed in accordance with the recommendations of Approved Document B Volume 2 (ADB) [4]. Unless otherwise stated, fire safety provisions are to be in accordance with ADB guidance as appropriate.
- 1.2.5 Fire engineering principles are employed to support alternative solutions where strict adherence to design guidance would conflict with the wider aspirations for the scheme. In accordance with the fire safety engineering principles detailed in the PD 7974 codes of practice [5], it is considered appropriate that all fire precautions are determined based on there being one seat of fire (i.e., accidental fires).

1.3 Reference information

- 1.3.1 This strategy is based on information provided as listed in Table 1. Additional contradictory information or subsequent design variations to the information supplied may render the findings and recommendations of this report invalid.
- 1.3.2 External references utilised in the generation of this report are summarised in Section 8.

Table 1 – Project design documentation

Description	Author	Document	Rev.
Location Plan	Trevor Horne Architects	23227/P.01	-
Existing Floor Plans		23227/P.03	-
Existing Elevations		23227/P.04	-
Proposed Floor Plans		23227/P.05	-
Proposed Sections		23227/P.06	-
Proposed Elevations and Section		23227/P.07	-

2. Development summary

2.1 Description of proposal

2.1.1 The development is for the amendment to an existing office building at 36b Rosedale Road, amending the location of the internal stair in support of improved lightwells through the space. The building will not be extended by the works and will continue to be set over three floors (B, G + M) as summarised in Table 2.

2.1.2 Figure 2 to Figure 4 provides an overview of the internal arrangement of the proposed building, with full fire safety mark-ups also included within Appendix A.

Table 2 – Summary of building accommodation

Floor	Approx. floor height (m)	Use
Mezzanine	2.5	Office
Ground	0.0	Reception, office
Basement	-2.8	Office, meeting room

2.2 Occupancy

2.2.1 The building is a commercial building occupied under Purpose Group 3 (Offices) in accordance with Table 0.1 in ADB.

2.2.2 With the building being set over Basement, Ground, and Mezzanine only, and each floor having an area of no greater than 280 m², this is considered as a 'small premises' that may be designed in accordance with Section 4 in ADB2.

2.2.3 The design of small premises does not require consideration of the maximum occupancy of the space, where inherently limited by the small area of the space. Nevertheless, it would be recommended that a maximum occupancy of 60 people should not be exceeded, where the entrance to the unit featuring an inward swinging door as visible in Figure 3.

2.2.4 Disabled access is not provided to the building, which features a stepped entrance and where no lift is currently provided or proposed.

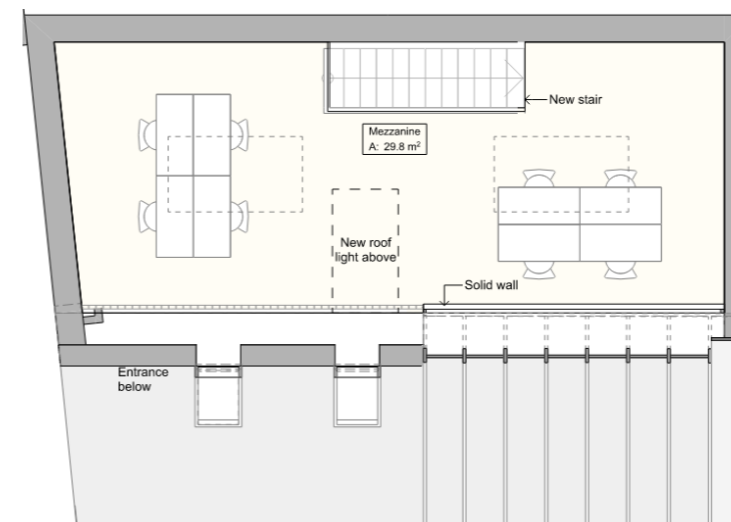


Figure 2 – Proposed Mezzanine floor

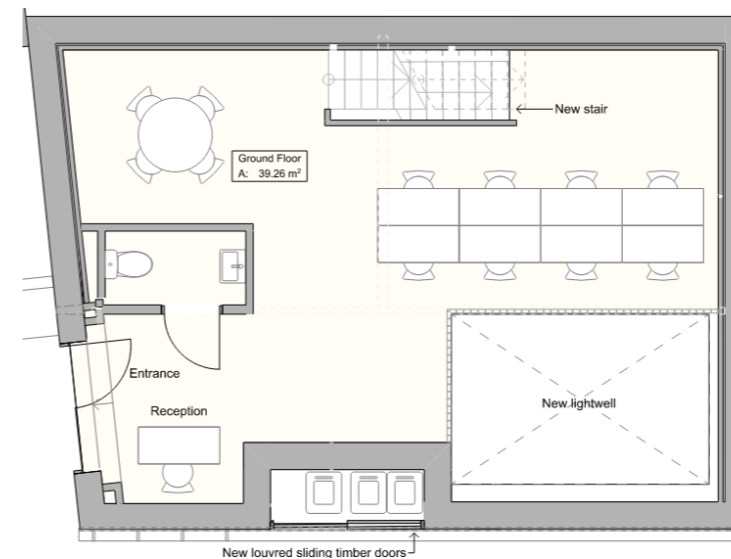


Figure 3 – Proposed Ground floor

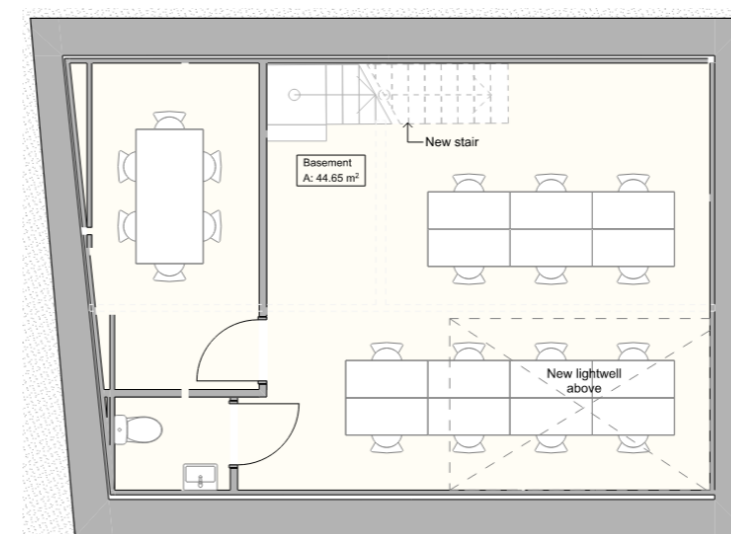


Figure 4 – Proposed Basement

3. Means of warning and escape

3.1 Evacuation philosophy

- 3.1.1 The building shall utilise a simultaneous evacuation philosophy. All areas of the building will be evacuated upon confirmation of a fire anywhere within the building.
- 3.1.2 An automatic fire detection and alarm system will be provided in support this evacuation philosophy.

3.2 Means of detection and alarm

- 3.2.1 A fire detection and alarm system to be provided in the building in accordance with BS 5839-1 [6]. As a minimum to meet Section 1 in ADB, a manual system with call points at storey exits and final exits such that all areas of the building are within 45 m of the nearest manual call point is expected.
- 3.2.2 With the basement and mezzanine being inner rooms to the Ground floor, automatic fire detection is recommended to be included. It is recommended that the building features a fire detection and alarm system meeting a Category L5 standard to BS 5839-1, with automatic smoke detection to be provided throughout the open-plan office areas at Basement, Ground, and Mezzanine levels.
- 3.2.3 Where new manual call points are to be provided, these should include transparent hinged covers, to reduce the instances of casual or malicious operation and be provided adjacent to all storey exits and final exits in accordance with BS 54-11 [7]. Operation of this two-action manual call point then involves lifting the cover and operating the manual call point in the normal manner.
- 3.2.4 The fire alarm control panel is recommended to be located at the main entrance to the building. This would facilitate day-to-day monitoring by staff and ease of access for the attending fire and rescue service.

3.3 Horizontal means of escape

- 3.3.1 To meet the recommendations in Table 4.1 in ADB2, the maximum permitted travel distance for the various areas to either a point of choice (for single directional travel) or a storey / final exit are to be in accordance with the limits summarised in Table 4. This will be achieved where each floor is limited in size such that travel distances will not exceed 18 m in a single direction.
- 3.3.2 The maximum capacity of exits is determined using guidance in Table 2.3 in ADB2, as summarised in Table 5. With a single, inward swinging exit being provided for the office, the maximum occupancy of the space premises is recommended as not exceeding 60 people.
- 3.3.3 An inner room is present at the premises, being the meeting room at basement level. It is recommended that the meeting room is provided with vision panels of at least 0.1 m² to give clear view should a fire start within the adjacent area. The fire detection and alarm system will also support the inner room arrangement of the space, as discussed in Section 3.2.

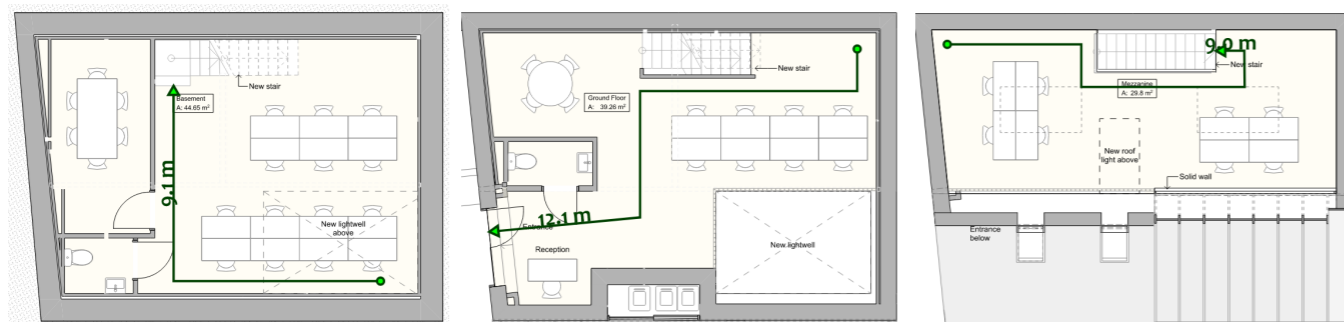


Figure 5 – Horizontal escape distances

Table 3 – Travel distance limitations

Area	Recommended maximum travel distance	
	Single direction (m)	Multi-direction (m)
Basement / First floor (to foot or head of stair)	18	
Ground floor	27	
Places of special fire hazard (i.e., plant room)	9	18

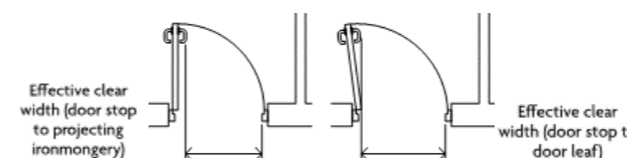
Note: These figures are for actual travel distances, including consideration for furnishings, and must be respected by the fit-out and furnishing arrangements of the spaces when occupied.

Table 4 – Exit width capacities

Exit width (mm)	Maximum number of people served
750 to 849	60
850 to 949	110
1,050 to 1,099	220
1,100 and greater	Door width (in mm) / 5

Notes:

Exit widths are for clear widths measured in accordance with Diagram D1 in ADB as per below:



Where an area has an occupancy of greater than 60 people, at least two exits are to be provided. The largest exit provided is to be discounted when calculating the required width for the remaining exits.

Doors hung to swing against the flow of escaping occupants are to serve a maximum of 60 people, irrespective of the available clear exit width.

Only exits provided with suitable door fastening hardware may be included in escape capacity calculations.

3.4 Vertical means of escape

3.4.1 The existing arrangement of the unit does not meet the expectations of Section 4 of ADB2, where both the basement and mezzanine stairs are open to the Ground floor area and where there is a distance greater than 3 m from the head / foot of the stair at Ground floor to the final exit.

3.4.2 In the proposed works, the stairs will be relocated to facilitate improved natural light into the office. Due to the constraints of the site, the amended design would continue not to follow contemporary guidance in ADB2. However, the works would be an improvement upon the existing condition where:

- The distance from the head of the basement stair to the final exit will be reduced from 9.6 m to 9.3 m.
- The distance from the foot of the mezzanine stair to the final exit will be reduced from 7.1 m to 6.8 m.

Escape distance in the existing and proposed arrangements are shown in Figure 6.

3.4.3 The stairs are to each have a clear width of at least 800 mm, to meet the expectations of Table 3.1 in ADB2.

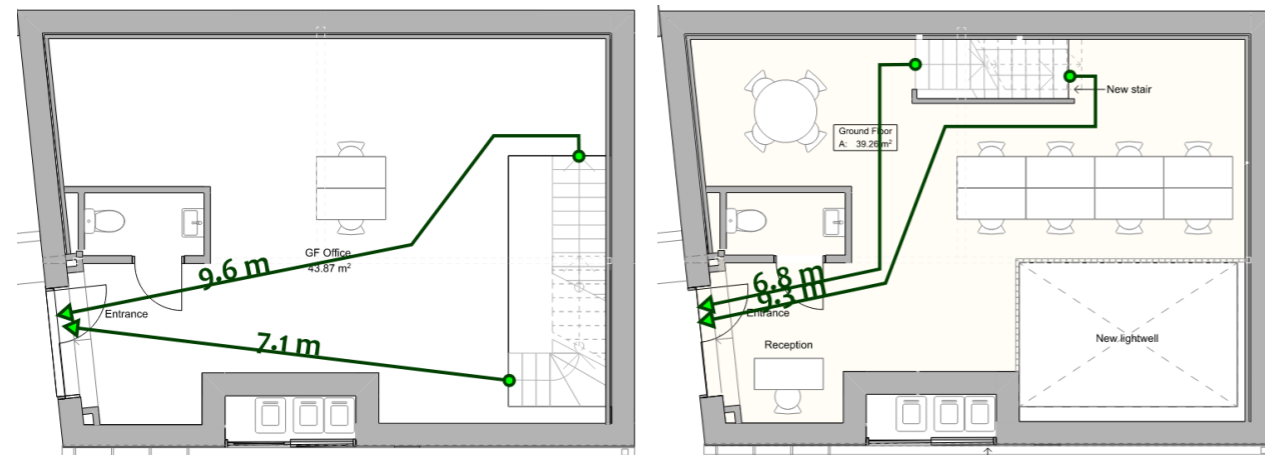


Figure 6 – Distances from stair at existing (left) and proposed (right) Ground floor arrangements

3.5 Final exits and onward escape

3.5.1 The final exit from the building is recommended to have a clear width of at least 750 mm. Where serving less than 60 people, it is considered that the final exit may be hung either with or against the direction of escape.

3.5.2 Travel beyond the building final exits is available either in multiple directions or away from the building, leading to an ultimate place of safety a surrounding public pavement.

3.5.3 Assembly areas should be identified by building management and located such that they are remote from access routes for the fire and rescue service, and so evacuation from the building can be achieved without exposure to a hazard from a building fire.

3.6 Means of escape for disabled persons

3.6.1 The building features steps at the main entrance, such that level is access in not available to any part of the demise. As such, it is expected that all occupants of the demise would be able to negotiate escape stairs unaided as is required for access to the space.

3.6.2 The building will not feature any passenger or platform lift, and as such, no evacuation lift is expected or proposed at the building.

3.6.3 It should be noted that under the Regulatory Reform (Fire Safety) Order 2005, it is the duty of the responsible person along with their appointed fire safety assistants to assist everyone to a place of relative or ultimate safety outside in the event of an emergency.

3.6.4 Any disabled member of staff should have a Personal Emergency Evacuation Plan (PEEP) and the procedures be practiced. A Generic Emergency Evacuation Plan (GEEP) should be written for guests or members of the public who would need assistance to escape. Further information can be found in BS 8300-2 [8] and the publication "Fire Safety Risk Assessment Supplementary Guide – Means of Escape for Disabled People" [9].

3.7 Doors on escape routes

3.7.1 All doors on escape routes in common areas will either not be provided with a securing device or be provided with a securing device that is easily openable without the use of a key and without having to manipulate more than one mechanism.

3.7.2 Any doors fitted with an electronic latch (e.g., operated by a swipe card reader) on the un-secure side should have door latches operated by a handle on the secure side (so people inside the room will always be able to escape without the need for a key in an emergency).

3.7.3 Doors on escape routes will generally be hung to open in the direction of exit, apart from certain instances where the doors will serve less than 60 people, will open not less than 90° and have a swing which is clear of any change in level, other than a threshold or single step on the line of a doorway.

3.8 Emergency lighting

3.8.1 Emergency lighting will illuminate all normally occupied areas, common evacuation routes (internal and external as necessary), and essential areas including plant areas. It will illuminate a safe exit route including fire exits, changes in level or direction, and firefighting equipment.

3.8.2 Emergency lighting will be installed in accordance with the recommendations of BS 5266 [10], BS EN 1838 [11], and BS EN 60598-2-22 [12]. Lighting to escape stairs should be on a separate circuit from that supplying any other part of the escape route. Primary and emergency lighting will also be required for any external escape routes that will not be lit by surrounding street lighting.

3.8.3 An exterior discharge lighting installation or an interior discharge lighting installation operating unattended, operating at a voltage exceeding low voltage (as defined in Statutory Instrument number 1018, part of the Building Regulations), should be controlled by a firefighter's emergency switch.

3.9 Fire safety signage

3.9.1 Fire safety signs will be installed where necessary to provide clear identification of fire precautions, fire equipment and means of escape in a fire. All parts of the development will be fitted with appropriate fire safety signage to comply with The Health and Safety (Signs and Signals) Regulations 1996, i.e., signage to be specified in according to BS ISO 3864-1 [13], BS 5499-4 [14] and BS 5499-10 [15].

3.9.2 The purpose of fire signs is to direct persons towards fire exits, or to provide specific information or warning about equipment, doors, rooms, or procedures. They should be recognisable, readable, and informative, as they convey essential information to regular and infrequent users of the premises, and the fire and rescue service. Fire notices should be permanently displayed in conspicuous positions throughout the building, including storey exits, and should provide information specific to the building.

3.9.3 All fire doors will be marked with an appropriate fire safety sign conforming to BS 5499-1 [16] (white on blue) according to whether the door is:

- to be kept closed when not in use ('FIRE DOOR - KEEP SHUT').
- to be kept locked when not in use ('FIRE DOOR - KEEP LOCKED').
- held open by an automatic release mechanism ('AUTOMATIC FIRE DOOR - KEEP CLEAR').

3.9.4 Any emergency securing device fitted to doors on escape routes are to be provided with instruction notices, adjacent to the device, indicating the method of operation.

4. Internal fire spread

4.1 Internal wall and ceiling linings

- 4.1.1 During the development of a fire in a building, the choice of material for the lining of walls and ceilings can significantly affect the spread and growth of fire. Restrictions are placed on the wall and ceiling lining materials in certain parts of buildings to limit the spread of fire and production of smoke in these areas.
- 4.1.2 It is particularly important that in circulation spaces, where the rapid spread of fire is most likely to prevent occupants from escaping, the surface linings are restricted, by making provision for them to have low rates of heat release and surface spread of flame.
- 4.1.3 All wall and ceiling linings in the building should meet the recommendations summarised in Table 8. However, parts of walls in rooms may be of a lower class but not lower than European Class D-s3, d2, provided that the area of linings having the lower classification does not exceed half of the floor area of the room, subject to a maximum of 60 m².
- 4.1.4 No thermoplastic rooflights shall be used at the development.

Table 5 – Reaction to fire classification expectations

Location	Minimum classification to BS EN 13501-1 [17]
Small rooms ≤ 30 m ²	Class D-s3, d2
Circulation spaces	Class B-s3, d2*
Other rooms	Class C-s3, d2
*Wallcoverings meeting BS EN 15102 [18] achieving Class C-s3, d2 bonded to a Class A2-s3, d2 or better substrate are also deemed acceptable.	

4.2 Automatic fire suppression

- 4.2.1 This commercial building is less than 30 m in height to the uppermost floor, and as such is not required to be provided with automatic suppression in support of the building height. Automatic suppression is not utilised in support of any other element of this fire safety strategy.
- 4.2.2 The client has not requested that automatic suppression be incorporated for other reasons. As such, automatic suppression is not proposed or incorporated within the building.

4.3 Structural fire resistance

- 4.3.1 Above ground elements of structure should be designed and / or protected to achieve 30 minutes fire resistance, suitable for an unsprinklered office building with an uppermost occupied floor less than 5 m in height. Below ground elements of structure (including elements supporting the Ground floor) should achieve at least 60 minutes of fire resistance, suitable for an unsprinklered office having a basement of depth no greater than 10 m.
- 4.3.2 Elements of structure that only support a roof do not generally require fire resistance. Structure is considered to support more than only a roof if it supports a load other than the roof itself (e.g., rooftop plant), or is essential to the stability of a compartment or other fire resisting wall (internal or external).
- 4.3.3 When determining the elements required to be fire-resisting, the structural engineer may utilise safety factors for the fire design loading case. These are typically less onerous than for the maximum ambient design loading case for primary members, or less onerous than the wind design loading case for stabilising members such as cross-bracing.

4.4 Fire-resisting construction and fire doors

- 4.4.1 Unsprinklered multi-storey commercial buildings are limited to a maximum compartment size of 2,000 m² by Table 8.1 in ADB. With the overall floor area of a single storey being no greater than ~50 m², each floor may be a single compartment.
- 4.4.2 All floors should be fire-resisting floors, though are not required to be compartment floors where the commercial building does not feature a floor at greater than 30 m in height and may include floor voids.
- 4.4.3 Elements of fire resisting construction are to be provided in accordance with Table 9 and as illustrated on the fire strategy drawings in Appendix A. With the refuse store being accessed externally, this will also be separated from the internal areas by fire-resisting construction rated to at least 30 minutes.
- 4.4.4 BR 128 [19] contains advice for the nominal fire-resistance ratings of masonry walls. New drylining partitions or floor systems should be selected using a manufacturer’s guidance documents for complete systems (such as the White Book from British Gypsum or the Knauf Manual), which will also provide a fire-resistance rating for the selected build-up.

Table 6 – Periods of fire resistance for fire-separating elements (in minutes, for loadbearing, integrity, and insulation where exposed from each side separately unless otherwise stated)

Element requiring fire-resistance	Fire resistance rating	Fire doors
Elements of structure:		
Above ground	30	N/A
Below ground	60	N/A
Fire-resisting floors:		
Mezzanine floor	30 (from underside)	N/A
Ground floor	60 (from underside)	N/A
Party walls	60	N/A
External walls (if required by Section 5.3):		
Less than 1,000 mm from a point in the relevant boundary	30	FD30
More than 1,000 mm from the relevant boundary	30 integrity, 15 insulation	N/A
Separation to places of special fire hazard	30	FD30
Cavity barriers	30 integrity, 15 insulation	N/A

4.5 Concealed spaces and cavity barriers

- 4.5.1 Cavity barriers are provided in concealed spaces to prevent the rapid spread of unseen fire or smoke in voids, and to prevent the spread of fire around compartmentation via voids.
- 4.5.2 All cavity barriers are to have a fire resistance rating of at least 30 minutes for integrity (E) and 15 minutes for insulation (I). Cavity barriers should be at no greater than 20 m centres in cavities with Class C-s3, d2 linings or better to BS EN 13501-1, as well as being located to align with fire-resisting construction as indicated in Figure 4. For other linings, the spacing between cavity barriers should be reduced to 10 m.
- 4.5.3 Cavity closers provided around openings may be formed of:
- steel at least 0.5 mm thick or timber at least 38 mm thick; or
 - polythene-sleeved mineral wool, or mineral wool slab under compression when installed cavity; or
 - calcium silicate, cement-based or gypsum-based boards at least 12 mm thick.

4.6 Fire-stopping and penetrations through fire-resisting construction

- 4.6.1 Fire-stopping should be provided at the junction of fire-separating walls and external walls to maintain the fire resistance period of fire-separating walls and prevent a fire from travelling around the junction and into the neighbouring space. Penetrations through lines of fire-resisting separation should also be fire-stopped using a product or system that will achieve the same fire resistance rating as the penetrated wall or floor.
- 4.6.2 To maintain the fire resistance rating of separating construction, any pipe or cable penetrations through lines of fire-resisting separation should be fire-stopped in accordance with one of the following methods set out by Section 10 in ADB, unless located within a protected shaft. Figure 5 is provided to assist in the interpretation of the above recommendations.
- for pipes of any diameter, a proprietary seal which has been shown by test to meet the fire-resistance rating of the wall, floor, or cavity barrier for the penetration circumstance; or
 - for pipes with a restricted diameter, keeping the opening as small as possible and providing fire-stopping around the pipe. The nominal interior diameter of the pipe should not be more than the relevant dimensions given in Table 10.1 in ADB.

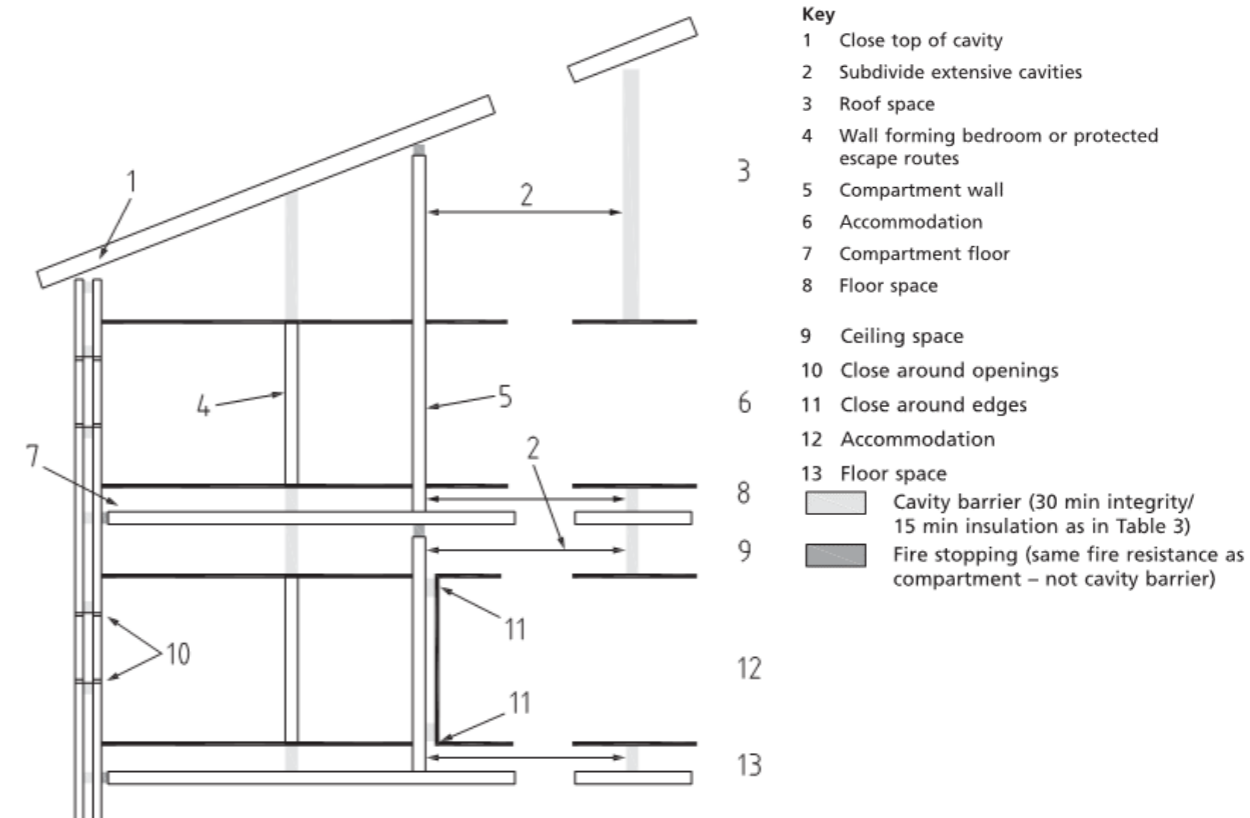


Figure 7 – Generic cavity barrier expectations

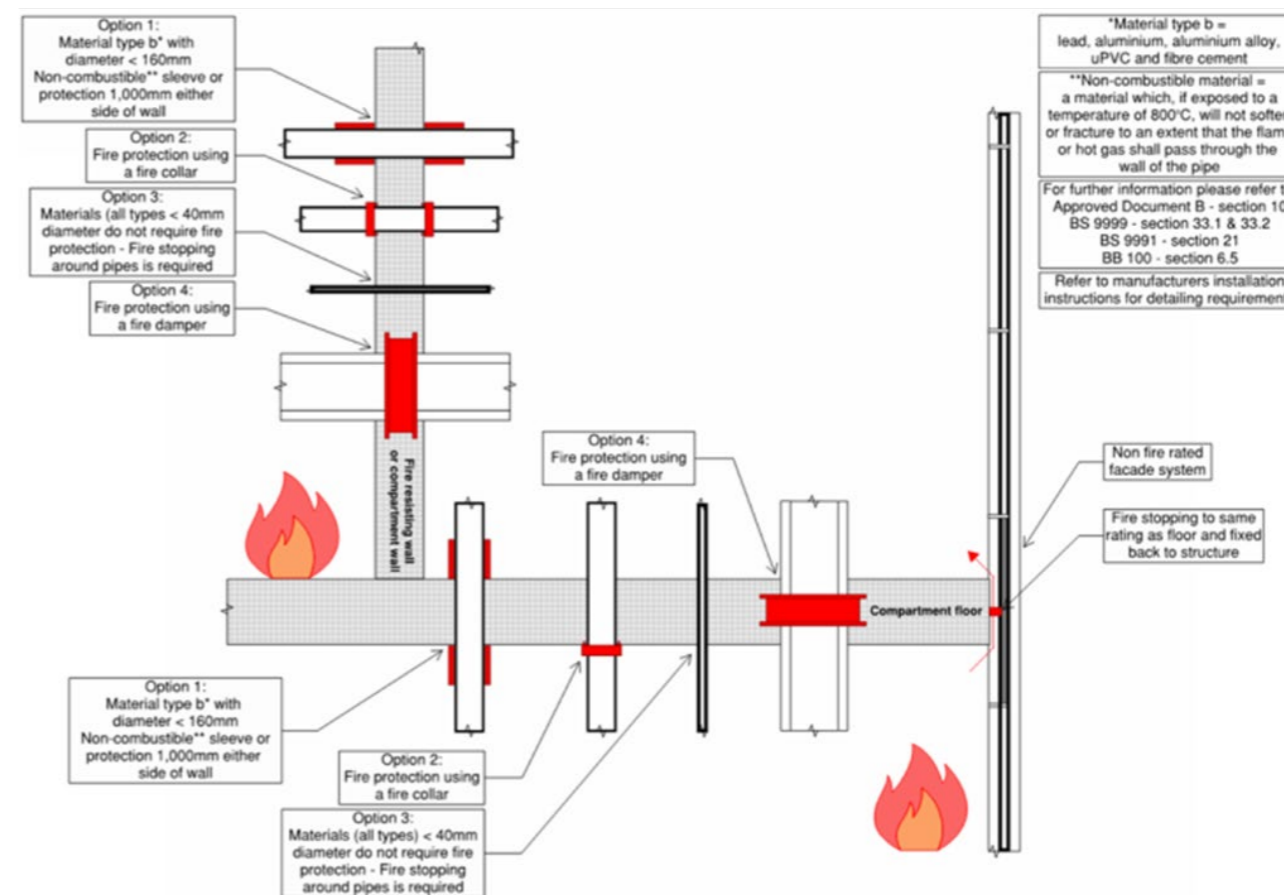


Figure 8 – Generic fire-stopping expectations

5. External fire spread

5.1 Construction and materials used for external walls

5.1.1 To prevent the spread of flame across the surface of building at a speed which may pose a threat to life, materials forming the external surfaces of the external walls of this (<18 m in height) commercial building are to meet the following recommendations:

- Class B-s3, d2 or better to BS EN 13501-1 where located within 1,000 mm of the site boundary; or
- No restriction where at least 1,000 mm from the site boundary.

5.1.2 For commercial buildings less than 18 m to the uppermost floor, no restrictions are placed on the combustibility of materials in the external wall (except for external surfaces within 1,000 mm of the site boundary). As such, suitable combustible external wall materials may be used provided these meet the overall intent of Building Regulation B4, which states that external walls should be constructed to adequately resist fire spread.

5.1.3 External walls are also expected to have cavity barriers in accordance with Section 4.5, located to align with internal fire resisting construction or to limit the unbroken length of external wall cavities.

5.1.4 The building does not feature any external balconies, being external areas located above external space below. Terraces should meet the recommendations for roof coverings as set out in Section 5.2 below.

5.2 Roof coverings

5.2.1 Roof coverings are to be resistant to fire spread where being either close enough to a boundary to be at risk of ignition from a fire in another building, or where needed to resist fire spread between compartments via the roof coverings above.

5.2.2 Roof coverings 1.5 m either side of a fire-resisting wall and the floors of terraces should achieve an $B_{ROOF}(t4)$ rating. The remaining roof areas should meet the recommendations of Table 14.1 in ADB, as summarised in Table 10. In general, it would be recommended that all roof areas achieve $B_{ROOF}(t4)$.

5.2.3 Roof coverings may constitute a number of materials (but does not include the roof structure as a whole). Therefore, the top covering material should be considered in tandem with the substrate(s) to assess the performance of the coverings. The covering system as a whole is to meet the provisions of Section 5.2.2.

5.2.4 In the event that green roofs (including sedum or brown roofs) are used at the development, these are recommended to be specified in accordance with the GRO code [25], including:

- Having a growing medium / substrate of at least 80 mm thick and featuring <20% organic content with no peat. The growing medium / substrate should have also been tested in accordance with BS 8616 [26].
- Have fire breaks (i.e., gravel areas) of a least 300 mm around rooflights, soil pipes, rainwater outlets, and of at least 500 mm where adjacent to openable windows or doors.

5.2.5 Any photovoltaic panels should also be in accordance with roof classification guidance. If the photovoltaic array results in live cables with a current / voltage that may pose a hazard to firefighters, a remote isolation switch should be provided to allow these to be disconnected prior to commencement of wet operations.

Table 7 – Limitations on roof coverings

Distance from boundary	Allowable roof covering classifications to BS EN 13501-5 [27]		
	$B_{ROOF}(t4)$	$C_{ROOF}(t4)$	$D_{ROOF}(t4)$
Less than 6 m	✓	✗	✗
At least 6 m	✓	✓	✗
At least 20 m	✓	✓	✓

5.3 Space separation and unprotected areas of the façade

5.3.1 Should a fire occur, heat will radiate through openings in the external walls. This heat can be enough to set fire to nearby buildings. To reduce the likelihood of this occurring, the Building Regulations guidance place limits on the area of the external elevation with no fire resistance, known as the unprotected area.

5.3.2 The building is to be designed and constructed with sufficient space separation and / or fire-resisting construction in the external façade to adequately limit the likelihood of fire spread to, or from, the adjacent relevant boundaries.

5.3.3 The relevant boundaries are the reference distances at which the potential for fire spread is considered, being the site boundary or a notional boundary created at the centreline of an adjacent road, railway, or other area with a sufficiently low likelihood of development. These are indicated on Figure 6, being either the property boundary to adjacent sites or the centreline of Rosedale Road or Spring Mews.

5.3.4 The proposed works will retain the external façade as existing, where new areas of glazing are rooflights that are not required to be considered with respect to unprotected areas and external fire spread. As such, detailed calculation and review of the potential for external fire spread is not required where this will be retained as per the current condition at the site.



Figure 9 – Location of relevant boundaries

6. Fire service access and facilities

6.1 Notification and information for the fire and rescue service

6.1.1 In the event of a fire, the local Fire and Rescue Service (FRS) are expected to be notified by a member of building staff upon witnessing the fire.

6.2 Fire appliance access to the site

6.2.1 Vehicle access for a fire appliance is currently available via Rosedale Road to the building as indicated in Figure 7. This route is a public highway that is expected to meet the fire appliance access guidance given in London Fire Brigade document GN29 [28], as summarised in Table 11.

6.2.2 The building is less than 11 m in height and floor area of less than 2,000 m². As such, Section 15.1 in ADB would recommend that access be provided to either at least 15% of the building perimeter or to a location that is within 45 m of the entire footprint of the building.

6.2.3 The existing condition at the site is that an extended dead-end distance is present at Rosedale Road, being circa 80 m between the 36b Rosedale Road building and a turning area as indicated on Figure 7. With the proposed works at the site being limited to alterations that will not extend or exacerbate the existing dead-end firefighting access condition, it is considered that this is retained as no worse than existing at the site and would meet the expectation of Regulation 4(3) of the Building Regulations.

6.3 Firefighting water supplies

6.3.1 As a mature urban site, the existing water supply for firefighting will continue to serve the site. This will be via a nearby public hydrant adjacent to Rosedale Road as indicated in Figure 7.

6.3.2 Section 16.9 in ADB recommends at least one existing fire hydrant be located a maximum of 100 m from the building. This is achieved where the existing hydrant is located at ~8 m from the entrance to the building.

6.4 Firefighting facilities within the building

6.4.1 As the building does not feature an occupied floor at greater than 18 m above ground level, a firefighting shaft is not expected or provided.

6.4.2 A dry rising main is not currently present or proposed at the development. Access for firefighters into the building would utilise direct hose laying from the fire appliance hardstanding area via the internal circulation routes and stairs.

6.5 Basement smoke clearance

6.5.1 The basement will be retained as per the existing condition at the building, with venting available via the floor voids to the above ground levels. As the basement is less than 200 m² and less than 3 m below ground level, additional means of smoke venting are not expected from the basement to meet Section 18.3 of ADB2.

6.6 Car park smoke clearance

6.6.1 No car park is proposed within the building, and as such, no car park smoke clearance system is expected.

6.7 Stand-by power supplies

6.7.1 Powered life safety systems should have emergency back-up power in accordance with BS 8519 [29].

6.7.2 The emergency lighting, any internally illuminated signage, and fire detection and alarm systems are expected to be utilised batteries capable of a continuous stand-by supply in accordance with the relevant design standard and be fully rechargeable within a period of 24 hours.

Table 8 – Pump-type firefighting appliance access requirements

Minimum access route specification	Dimension
Width between kerbs	3.7 m
Width between gateways	3.1 m
Turning circle between kerbs	16.8 m
Turning circle between walls	19.2 m
Clearance height	3.7 m
Carrying capacity	14 tonnes
Maximum reversing distance	20 m



Figure 10 – Firefighting vehicle access and water supplies

7. Additional fire safety guidance

7.1 Fire safety information and future development

- 7.1.1 This Planning Fire Safety Statement details an appropriate level of information to support a planning application for a development of this scale and nature.
- 7.1.2 Following planning, this Planning Fire Safety Strategy should be provided to the design team responsible for progressing the scheme through detailed and technical design. The design team will be required to seek approval for the development under the Building Regulations by the appointed building control authority, including consultation with the local fire and rescue service.
- 7.1.3 Further development of the fire safety provisions set out within this Planning Fire Safety Strategy is expected during the Building Regulations approvals process, including the selection of specific products, systems, or materials to fulfil the expectations of the Planning Fire Safety Strategy.
- 7.1.4 Where any modification to the fire safety provisions set out in Section 3 to 6 of this fire strategy are proposed during ongoing design or construction, these should not be incorporated unless agreed in writing by the appointed building control authority.
- 7.1.5 The as-built fire safety strategy for the buildings, as agreed by the appointed building control authority, should be documented and provided to the Responsible Person for the building as defined in the Regulatory Reform (Fire Safety) Order 2005 (as amended), to meet the expectations of Regulation 38 of the Building Regulations and principles of the Golden Thread of Information. This should be provided as part of a wider package of building information including, but not being limited to:
- This Planning Fire Safety Statement report
 - The as-built fire safety strategy report and associated fire strategy drawings
 - Manufacturer's literature for fire safety products and equipment provided at the building
 - Drawings indicating the installed locations of fire safety products and equipment
 - Manufacturer's literature detailing suitable methods of operation and maintenance of fire safety products and equipment
- 7.1.6 It is recommended that the above information is provided to the Responsible Person in a digital format that may be retained using a cloud-based or other remote service, to reduce the potential for loss of information in the event of fire, flooding, theft, etc.
- 7.1.7 The Responsible Person is recommended to ensure that periodic maintenance of the fire safety equipment in the building is undertaken in accordance with the manufacturer's recommendations. The information provided within the Regulation 38 documentation may be used to assist maintenance professionals in identifying the systems, spare parts, operational procedures, maintenance procedures, etc. for the various systems present.
- 7.1.8 Any subsequent amendment to the fire safety provisions at the building will require consent from an appointed building control authority. The building owner should consult with a suitable building control authority or fire safety professional prior to conducting any future modification works, to ensure that these will be in accordance with any relevant fire safety legislation in force at that time.

7.2 Management and maintenance of fire safety systems

- 7.2.1 Management of fire safety must be integrated with all other management systems. If this management is lacking, then there is a danger that all the other areas such as security measures and alarm systems will be ineffective. To ensure there is no doubt as to where the responsibility for fire safety rests, and to enable consistency of approach, it is important that each establishment appoints a designated Fire Safety Manager. It may be possible to appoint a professional to take on this role but that will depend on the size of the premises, costs, etc.
- 7.2.2 In support of suitable management of fire safety within the building, it would be recommended that conformity with BS 9997 [30] guidance is adopted as best practice.
- 7.2.3 The appointed person should have the necessary authority and powers of sanction to ensure that standards of fire safety are maintained. The main duties of the Fire Safety Manager include:
- management to minimise the incidence of fire (e.g., good housekeeping and security)
 - producing an Emergency Fire Plan
 - being aware of all fire safety features provided and their purpose
 - being aware of any particular risks on the premises (e.g., issues relating to hot work)
 - being aware of their responsibilities towards disabled people
 - liaising with, and where necessary seek the advice of, the fire authority, local council, or other relevant enforcing authorities
 - having powers to deal with individuals who sabotage or tamper with fire safety systems, who ignore any smoking policy or who block exits
 - liaising with other fire safety managers in a multi-occupancy arrangement
 - ensuring that any residents, tenants, concessionaires, or caretakers are appropriately briefed
 - ensuring that appropriate communication systems are in place to deal with any fire incident
 - checking the adequacy of firefighting equipment and ensuring its regular maintenance
 - ensuring fire escape routes and fire exits are unobstructed and doors operate correctly
 - ensuring that fire detection or protection systems are maintained, tested, with records kept
 - ensuring any close down procedures are followed
- 7.2.4 Good housekeeping is to ensure that the effectiveness of the fire safety provisions are not adversely affected, including the adequate provision for the disposal of waste and / or rubbish.
- 7.2.5 Maintenance procedures are to be enacted so that equipment will be able to operate effectively. Maintenance staff are to be trained in the importance of the fire safety systems and planned maintenance.
- 7.2.6 Protected escape routes should have wall and ceiling linings achieving a Class B-s3, d2 reaction to fire standard, apart from permitted exceptions noted in this report. These finishes must be maintained for the life of the building. Display features or items such as posters, artwork pieces, etc. may be included with appropriate consideration, justification, and on-going control.

7.3 Fire extinguishers

- 7.3.1 First-aid firefighting provisions should be assessed and provided as part of the fire risk assessment for the building, including consideration for the day-to-day management of these provisions. Suitable first-aid firefighting provisions can help with the extinguishment of small fires, preventing these from growing into significant fires.
- 7.3.2 In general, fire points should be provided within circulation areas and areas presenting a significant fire ignition risk, such as kitchens, refuse stores and plant rooms. The fire risk assessment that should be undertaken upon occupation of the building may assist with the placement of suitable fire extinguishers.
- 7.3.3 Where provided, the type and size of extinguisher(s) are recommended to be chosen in accordance with the guidance given in BS 5306-8 [31], as summarised by Table 12 and the classification of fire fuel hazards summarised as follows:
- Class A – fires involving solid materials, usually of an organic nature (general hazards);
 - Class B – fires involving liquid or liquefiable solids (such as liquid fuels, lubricants, paints, etc.);
 - Class C – fires involving gases;
 - Class D – fire involving metals; and
 - Class F – fires involving cooking media (vegetable or animal oils or fats).
- 7.3.4 Fire blankets should be provided in any kitchen areas for extinguishing cooking fires and should be affixed vertically to a wall or door to for ease of deployment in an emergency. The blanket should be located close to the cooking appliance, but far enough away such that a hob fire would not prevent access to the fire blanket.

Table 9 – Fire extinguisher types

Medium	Colour code	Application	Do NOT use for
Water	White	Class A fires	Liquid, electrical, metal or cooking fires
Powder	Blue	Class A, B or C fires	Metal or cooking fires
Foam	Cream	Class A or B fires	Electrical*, metal or cooking fires
CO ₂	Black	Class B fires	Metal or cooking fires
Wet chemical	Yellow	Class A or F fires	Liquid, electrical or metal fires

* AFFF Foam extinguishers may be used for electrical fires up to 35 kV (dielectric test) and where operated from a distance of at least 1 m.

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Appendix A – Fire safety and fire-resisting construction mark-ups

