MARSHALL FIRE

Title:	99 Frognal, London
Revision:	00
Date:	1 November 2023
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Revision	Description	Author	Approver	Date
00	Initial issue	Jotham Steed	Richard Baker	1 November 2023
01	Stage 3 update following Architects feedback	Jotham Steed	Richard Baker	30 November 2023

Contents

1. Executive Summary

Frognal is located at 99 Frognal, London NW3 6XR. The proposed works consist of the repurposing, refurbishment and extension of the existing 4 storey (ground plus 3) main building that was formerly used as a convent into a private dwelling with a roof extension (4rd floor) to create a social space that as the top floor will be at about 6.4m above ground. The works also consist of demolishing a former residential wing and construction of the new extension wing creating a new ground floor kitchen and dinning area with a basement pool area and associated plant

The topmost storey of the existing dwelling is approximately 7.5m above ground access level.

The proposals outlined in this document are considered to demonstrate a level of fire safety equal to or greater than the general standard implied by compliance with the recommendations in Approved Document B: Volume 1 2019 edition including 2020 and 2022 ammendments, This level of safety therefore satisfies the functional requirements of Part B of the Building Regulations.

The fire strategy described in this report can be summarised as follows (note this is not an exhaustive list but outlines the main fire safety requirements. Please read the remainder of the report for the full requirements):

- All dwellings will have a Category LD1 (Grade D1 if rented accommodation) fire alarm system in accordance with BS 5839-6.
- The existing dwelling has a floor greater than 7,5m and will be provided with a single protected stair and sprinkler system.
- House to currently relies on means of escape windows from the fist floor bedroom.
- The layout of house 4 is fully compliant with the requirements of Approved Document B
- House 3 is to be designed to be compliance in line with the requirements of BS 9991 9.4.2 and will include a full sprinkler system

The fire strategy for the proposed building complies with Approved Document B except for the following departures:

- The proposal to the existing part of the main house is to provide the protected stair and automatic sprinkler protection in accordance with BS 9251. The ground floor extension wing will be separated by 60 minutes fire resistant construction with FD30S doors. The extension will no be provided sprinklers
- The proposed new ground and basement extension will not be sprinkler protected and it is therefore proposed to provide a 60-minute compartment between these areas and only provide sprinklers to the existing house and rooftop extension
- The internal travel distance of house 3 is over 9m, one of the following options should be adopted:

    1) Reduce the over all travel distance, this could be achieved by creating an internal protected entrance lobby
    2) Install sprinklers throughout the unit in accordance with BS 9251,and upgrade the alarm system to LD1 system in accordance with BS 5839-6. This would achieve a level of compliance in line with the requirements of BS 9991 9.4.2 for open plan flats and is therefore deem acceptable

- Due to current site constraints fire service access is not available to within 45m of th newdwellinhgs of the extended existing dwelling, to overcome this the following options are available:
    - Increase the size of the access on site to allow the fire service to achieve compliant access
    - Providing sprinkler provisions throughout all the dwellings in accordance with BS9251:2021 and then the guidance within BS 9991 permits an increase in hose length from 45m to circa 75m,

The above undertakings are subject to agreement with the Approving Authority and the Local Fire Brigade.

2. Introduction

2.1 Overview

Marshall Fire has been appointed by Hayhurst and Co. Architects to produce a fire strategy report for the alterations, extension and refurbishment works to the existing main house and the creation of 3 newbuild dwellings at Frognal House, 99 Frognal, London,

2.2 Purpose of this report

This Stage 3 Fire Strategy Note illustrates how the design of the buildings will comply with the functional requirements of the Building Regulations. In doing so guidance is taken from the code of practice that was applicable at the time of approval, which was Approved Document B: Volume 1 2019 edition, incorporating 2020 and 2022 amendments, referred to herein as AD-B. The layout of this report follows the structure of AD-B of the Building Regulations for ease of application.

The approval status of the fire strategy should be considered as a risk until such time as the appointed Building Control Body has reviewed the proposals and provided their approval in principle. Once approved in principle the building should be constructed in accordance with the contents of this report and any amendments should be reviewed and approved accordingly by the Building Control Body.

The findings of this report are based on the information available at the time of writing this report. Marshall Fire cannot be held responsible for any subsequent changes to the design that we are not made aware of.

2.3 Scheme description

Frognal is located at 99 Frognal, London NW3 6XR. The proposed works consist of the repurposing, refurbishment and extension of the existing 4 storey (ground plus 3) main building that was formerly used as a convent into a private dwelling with a roof extension (4rd floor) to create a social space that as the top floor will be at about 6.4m above ground. The works also consist of demolishing a former residential wing and construction of the new extension wing creating a new ground floor kitchen and dinning area with a basement pool area and associated plant. Figures 1-5 below show the proposed floor plans for the main house..

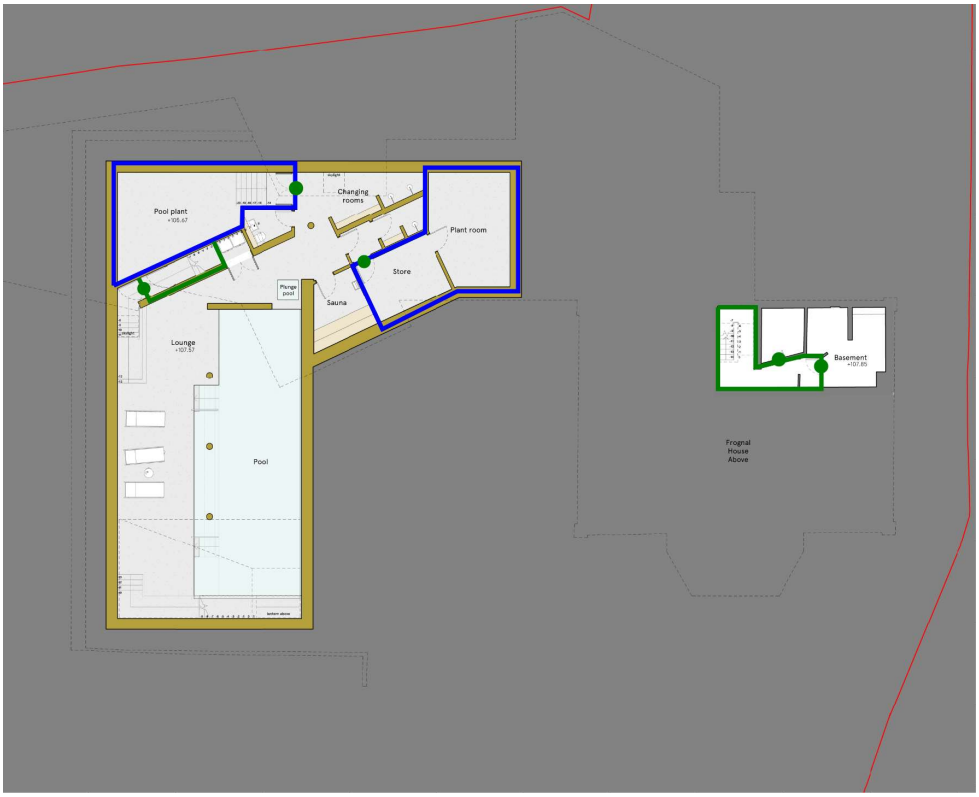

Figure 1: Main House Basement Floor Plan

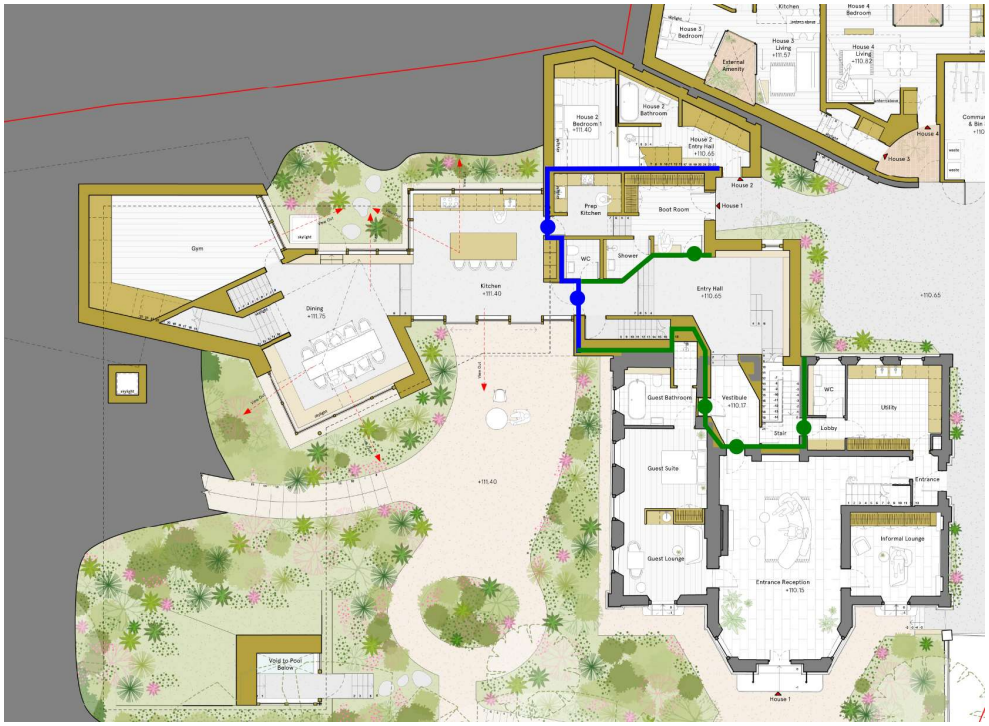

Figure 2: Main House Ground Floor Plan

Figure 3: Main House First Floor Plan

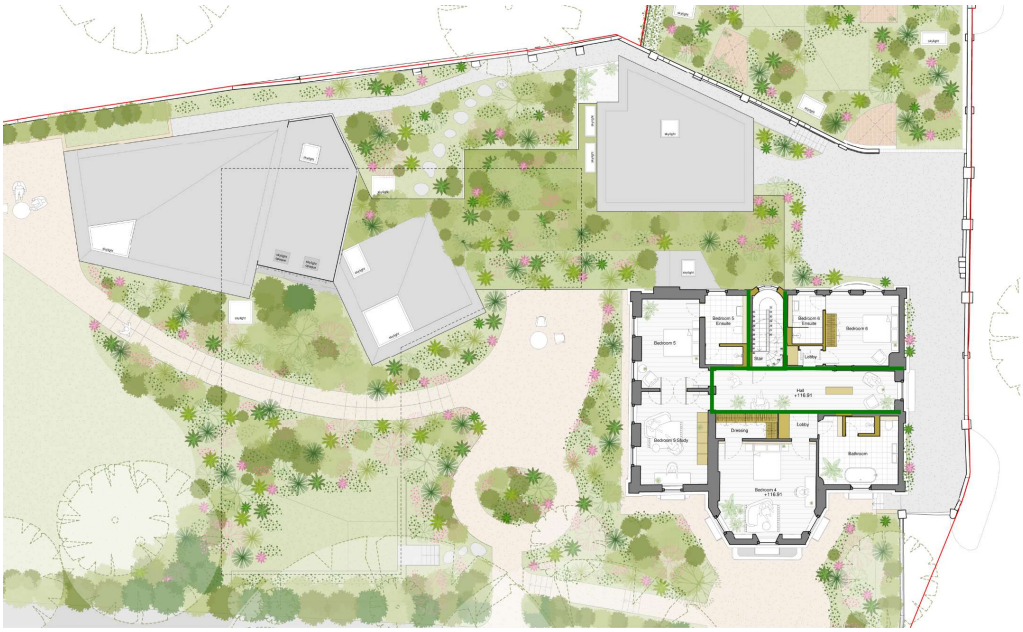

Figure 4: Main House Second Floor Plan

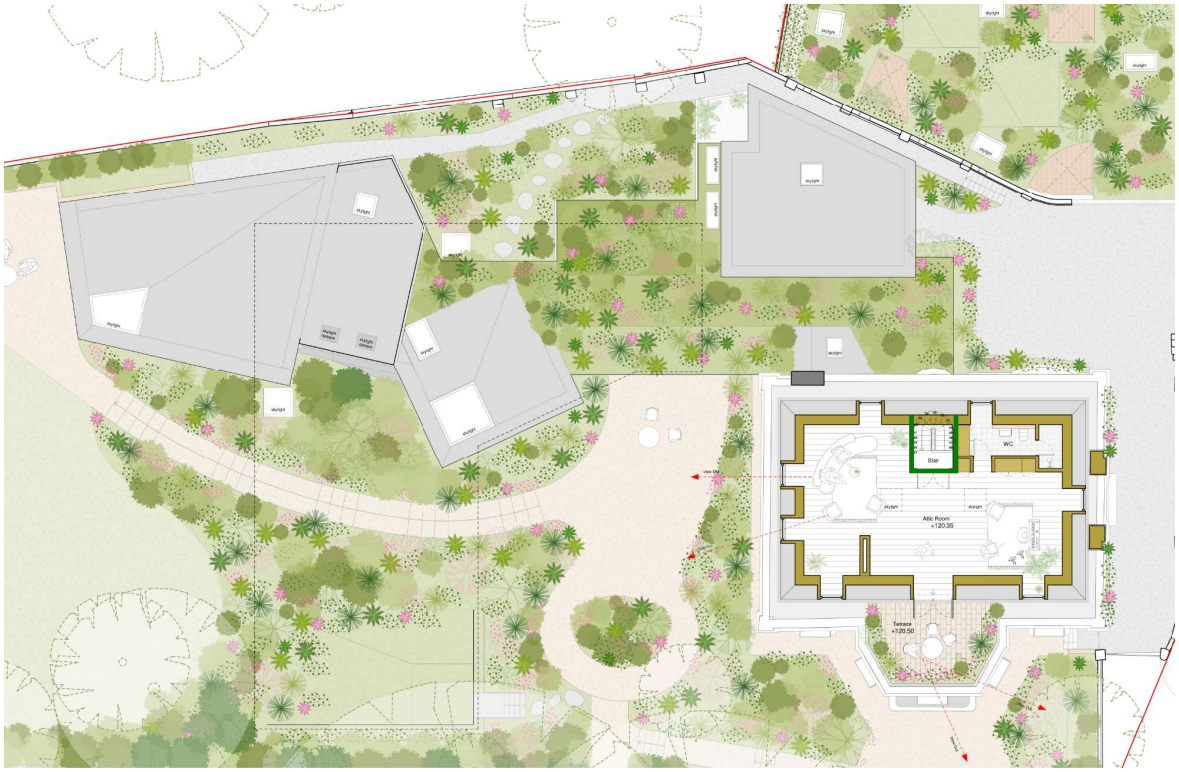

Figure 5: Main House Third Floor Plan

The project also includes the construction of 3 additional dwellings referred to as Houses 2, 3 and 4. These are arranged as follows:

House 2 is a 2 storey (Ground and First) separate dwelling that is attached to the main building extension at ground floor. The property consists of the entrance hall, bedroom 1 and the main bathroom, at first floor there is a single bedroom and an open plan kitchen living area with independent access to outside. As shown in figure 6 and 7 below

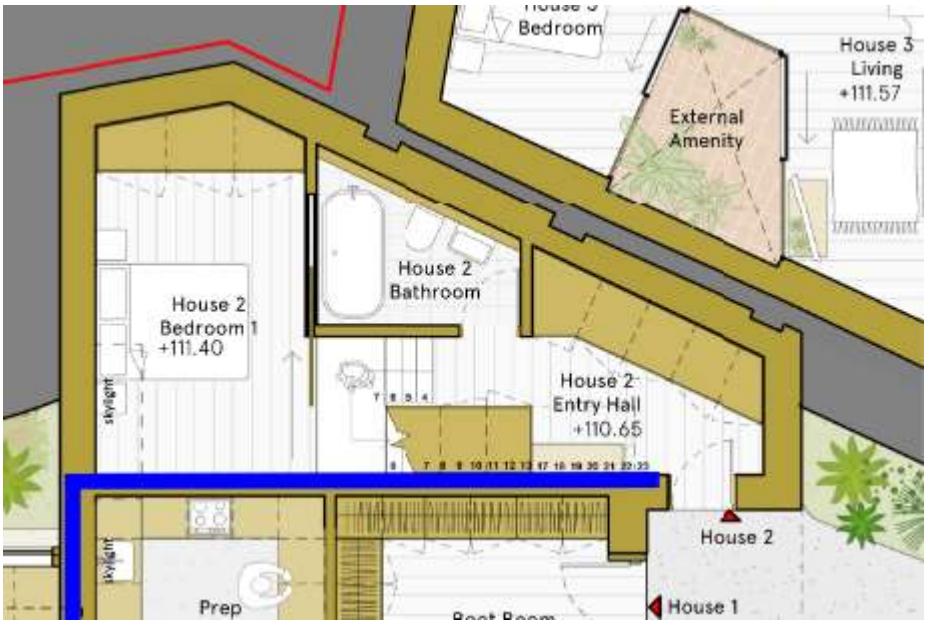

Figure 6: House 2 Ground Floor

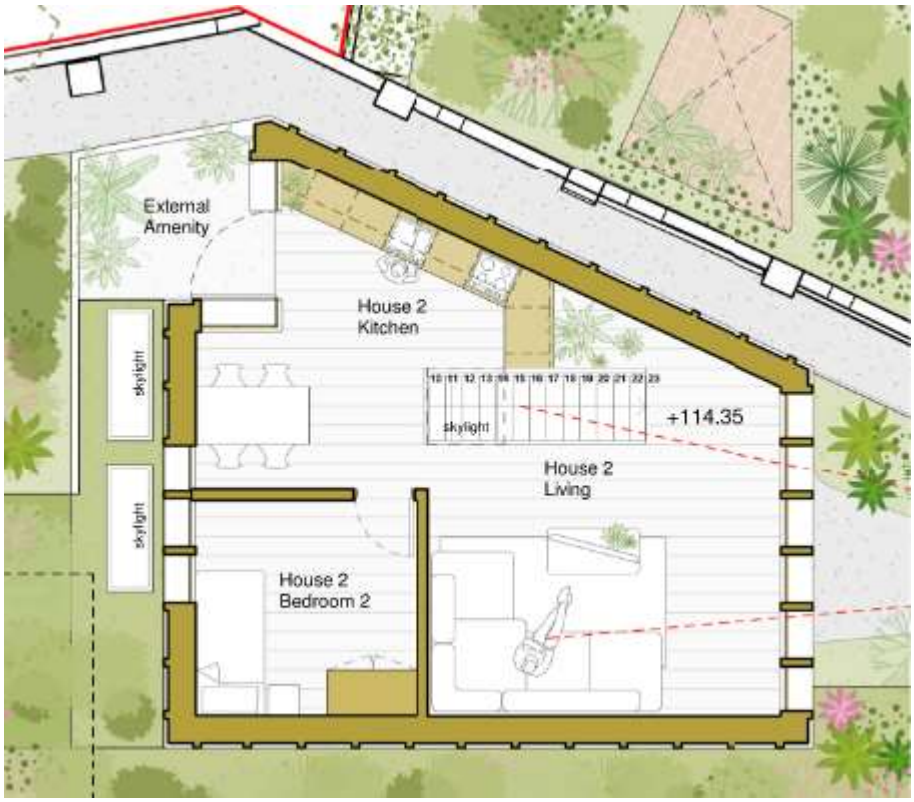

Figure 7: House 2 First Floor

Houses 3 and 4 are semi detached units that are both single storey open plan dwellings, consisting of a kitchen, dining and bedroom area, both units have a small external amenity space. Due to the open plan nature of these units and there arrangement with no windows in external walls (as below ground) they are to be treated as single storey flats. As shown in figure 8 below

Figure 8: House 3 and 4 Ground Floor

2.4 Report limitations

This report is intended for use on this project only and the contents and approaches should not be applied to any other building. This report details how the building will be constructed and does not guarantee that the building has been constructed in accordance with this document. Marshall Fire cannot take any responsibility for any shortfalls in the standard of construction on site as this would lie with the installer.

The proposals within this report are strategic only and any works listed herein will need to be appropriately designed and installed by others. Where it is considered that the proposals within this report may present a risk under the Construction (Design and Management) Regulations 2015 (CDM) these will be highlighted to the Principal Designer.

This report focuses on Part B of the Building Regulations. Compliance under the other Parts of the Building Regulations will also need to be achieved through works undertaken by others.

The contents and findings herein are based on the information available at the time of publication and referred to within this document. The contents should be considered an approvals risk until formally approved by the appointed Building Control Body.

By complying with the recommendations in this report it will not ensure that fires will not occur and ongoing management of the building is essential to ensure the fire risk is controlled as much as possible. This is controlled in part by the risk assessment required under the Regulatory Reform (Fire Safety) Order 2005. This legislation applies to the common areas in the building and requires that a fire risk assessment is undertaken and regularly reviewed (including whenever changes occur that might affect standards of fire safety within the building). The risk assessment will need to be made available to the Fire Service upon inspection of the building and any findings within the risk assessment are required to be addressed by the person responsible for fire safety within the building. If this is not undertaken the Fire Service have powers to serve notices on the building which could ultimately lead to it being shut down or penalties applied.

3. B1 - Means of Warning and Escape

Requirement: *Means of warning and escape*

B1. The building shall be designed and constructed so that there are appropriate provisions for the early warning of fire, and appropriate means of escape in case of fire from the building to a place of safety outside the building capable of being safely and effectively used at all material times.

1.1 Fire detection and alarm systems

Main House

As a dwelling having two storeys more than 4.5m above ground level, the Main Housewill be provided with a Grade A Category LD1 fire detection and alarm system through, in accordance with recommendations from BS 5839-6.

Houses 2, 3 and 4

The minimum provision should be Grade A Category LD1 fire detection and alarm system, in accordance with recommendations from BS 5839-6. See section below for a possible upgrade to LD1 for House 3

1.2 Vertical Means of Escape

Existing Dwelling

Figure 9 below, illustrates a basic code complaint scenario for a private dwelling with a storey greater than 7.5m above ground, utilising a 30-minute protected stairway, discharging occupants at ground level onto the street. Due to the addition of the roof top extension the dwelling now has a storey more than 7.5m above ground level that should be provided with a protected stair and an alternative escape route. The storeys below 7.5m above ground would only need to be provided with a protected stair providing there are no inner rooms.

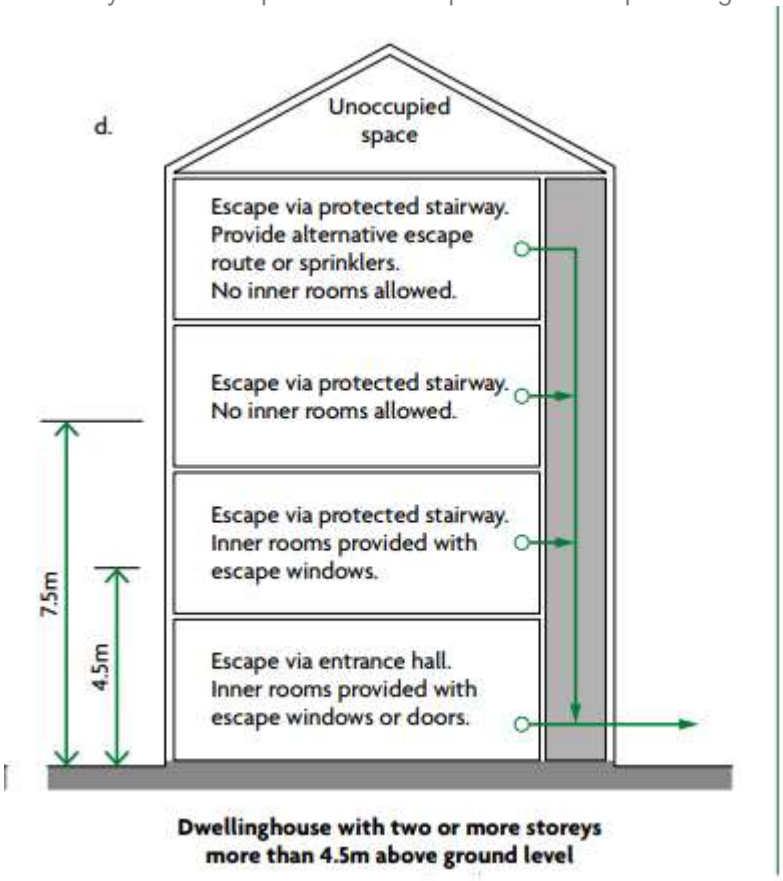

Figure 9: AD-B compliant means of escape using a protected stair.

At first floor there is an open link staircase to the ground floor entrance reception, all first floor rooms off the landing are to be provided with an emergency egress escape window. Note: the escape window should provide a minimum free area of 0.33m^2 with a minimum width or height of 0.45m (i.e. 0.45m x 0.75m = 0.33m^2). The window cill should be no greater than 1.1m above the finished floor level and be capable of remaining open without being held.

At second floor level the hallway is currently shown having a seating area, this area needs to be maintained as a sterile area or an alternative escape provided for each of the second floor rooms. The third floor living room will access the protected stair, with escape from the terrace as an inner room with the living area as the access room. The proposal to the existing part of the main house is to provide the protected stair and automatic sprinkler protection in accordance with BS 9251. The ground floor extension wing will be separated by 60 minutes fire resistant construction with FD30S doors.

This should be considered a risk until formally approved by building control.

1.3 Use of space within protected stairways

A protected stairway should not be used for anything else except for the following items:

- Lift
- WC / Bathroom

1.4 Inner-room

An inner-room is a room that does not have direct access to the protected stairway and escape can only be made through the access room. However, the following scenarios are permitted to be inner-rooms:

a) A kitchen.

b) A laundry or utility room.

c) A dressing room.

d) A bathroom, WC or shower room.

e) Any room on a storey with a maximum height of 4.5m above ground level which is provided with an emergency egress escape window. Note: the escape window should provide a minimum free area of 0.33m^2 with a minimum width or height of 0.45m (i.e. 0.45m x 0.75m = 0.33m^2). The window cill should be no greater than 1.1m above the finished floor level and be capable of remaining open without being held.

It is noted that the following areas are inner-rooms:

- Gym at ground – emergency egress window to be provided to this room.
- Anti Room at first floor - , emergency egress window to be provided to this room.

Additional houses

House 2

Figure 10 below, illustrates a basic code complaint scenario for 2 storey (Ground and First floor) dwelling.

At ground floor escape from the bedroom is via the ground floor entrance hall, although this area is not a fire rated enclosure it is to remain sterile at all times

At first floor the open plan living kitchen area has a door directly to external air. The bedroom is an inner room off the open plan living area so this room should be provided with an emergency egress escape window. Note: the escape window should provide a minimum free area of 0.33m^2 with a minimum width or height of 0.45m (i.e. 0.45m x 0.75m = 0.33m^2). The window cill should be no greater than 1.1m above the finished floor level and be capable of remaining open without being held

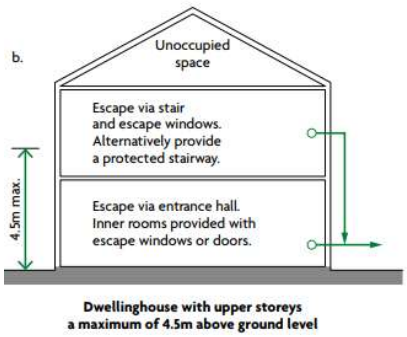

Figure 10: AD-B compliant means of escape

House 3 and 4

Figure 11 below, illustrates a basic code complaint scenario for Single storey dwelling.

Approved Document B volume 1 set out the requirements for escape from the ground floor to have either of the following.

a. An opening directly onto a hall leading to a final exit.

b. An emergency escape window or door

Both House 3 and 4 are open plan in layout and shall be treated as flats

Approved Document B volume 1 restricts the max travel distance in open plan flats to Maximum 9m as set out in figure 11 below. The travel distance in House 4 is less than 9m and therefore acceptable. The travel distance in House 3 is over 9m, one of the following options should be adopted:

1. Reduce the over all travel distance, this could be achieved by creating an internal protected entrance lobby
2. Install sprinklers throughout the unit in accordance with BS 9251,and upgrade the alarm system to LD1 system in accordance with BS 5839-6. This would achieve a level of compliance in line with the requirements of BS 9991 9.4.2 for open plan flats and is therefore deem acceptable This, however, should be considered as a project risk until agreed with the approving authorities

The kitchens in both houses 3 and 4 are remote from the exits.

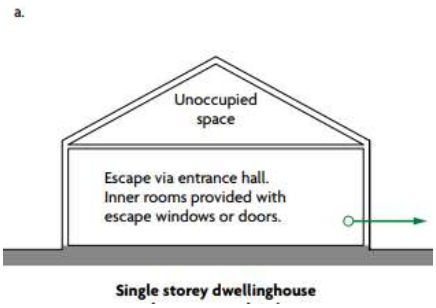

Figure 11: AD-B compliant means of escape

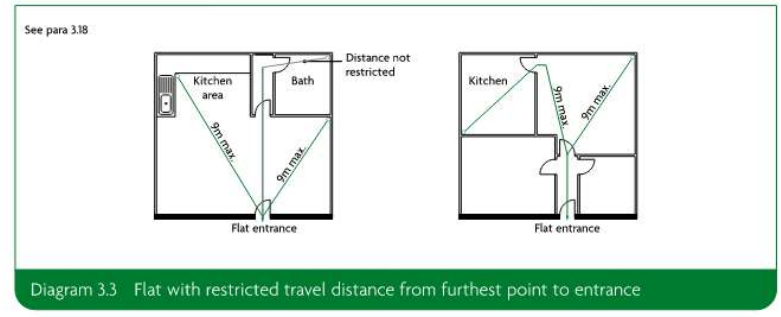

Figure 12: AD-B open plan flats

Figure 13: House 3 and 4 maximum internal travel distance

People escaping from the dwellings are able to reach a place free from danger from fire via the shared paths and driveways to a place of safety at least the hight of the dwelling house away.

4. B2 - Internal Fire Spread (Linings)

The following applies to both the works to the exiting dwelling and the 3 additional dwellings.

Under the standard guidance the internal linings would be required to meet the criteria laid out in Table 4.1 in AD-B. This is reproduced below.

Table 4.1 Classification of linings

Location	Classification
Small rooms of maximum internal floor area of 4m²	D-s3, d2
Garages (as part of a dwellinghouse) of maximum internal floor area of 40m²	
Other rooms (including garages)	C-s3, d2
Circulation spaces within a dwelling	
Other circulation spaces (including the common areas of blocks of flats)	B-s3, d2[1]

NOTE:

1. Wallcoverings which conform to **BS EN 15102**, achieving at least class C-s3, d2 and bonded to a class A2-s3, d2 substrate, will also be acceptable.

Figure 13: Classification of linings

Please note: for clarification the substrate referred to in Table 4.1 above, is the wall finish that internal decorations will be applied to. This item is mainly focused on the application of paper wall coverings. Paint finishes due to their thickness are not considered under this provision.

Rooms and circulation spaces require a classification of C-s3,d2, this can be reduced to no worse than class D-s3, d2. In any one room, the total area of lower performance wall lining should be less than an area equivalent to half of the room's floor area, up to a maximum of 20m2 of wall lining.

Where existing panelling existing within the main dwelling provide the situation has been made no less compliant that before these works this panelling will not be required to be upgraded.

5. B3 - Internal Fire Spread (Structure)

5.1 Loadbearing Elements of Structure

For both the works to the exiting dwelling and the 3 additional dwellings, AD-B guidance states that loadbearing elements of structure should achieve a minimum of 30 minutes fire resistance.

5.2 Compartmentation

A compartment wall between each dwelling should provide a minimum fire protection of 60-minutes (REI 60)

The floor over the basement in the existing dwelling extension should provide a minimum fire protection of 60-minutes (REI 60)

5.3 Fire Doors

Fire doors are as follows in accordance with AD-B:

- Protected stairway – FD30
- Plant room – FD30 with self-closing device.
- On 60 minuet compartment line between existing dwelling and extension – FD60S with self-closing device

5.4 Sprinkler Protection

Existing House

Due to the Addition of the roof top extension the dwelling now has a storey more than 7.5m above ground level, and will be provided with a protected stair and an Automatic Sprinkler system throughout the existing part of the main house, designed and installed in accordance with BS 9251.

The proposed new ground and basement extension will not be sprinkler protected and it is therefore proposed to provide a 60-minute compartment between these areas and only provide sprinklers to the existing house and rooftop extension. It is understood that this has been agreed with Building Control.

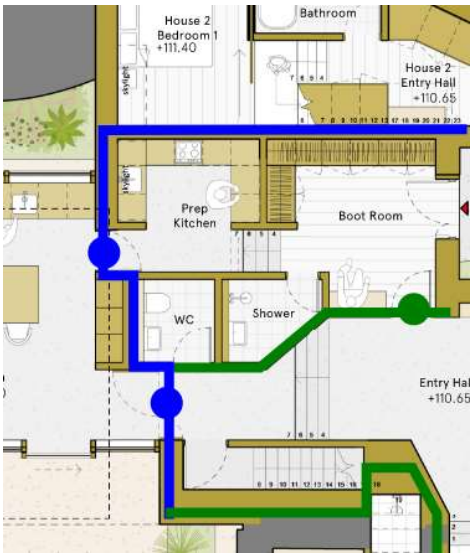

Figure 14: location of compartment line between existing dwelling and extension.

Additional Houses

Houses 2 and 4

There are no requirements for sprinkler in these dwellings.

House 3

House 3 is arranged with a bedroom as an inner room with no self escape windows and is therefore considered similar to a flat. The travel distance in House 3 from bedroom to exit is +13m and so greater than the limit of 9m as set out in Approved Document B Volume 1 for open plan flat layout. Installing sprinklers

throughout the unit in accordance with BS 9251 and upgrade the alarm system to LD1 in accordance with BS 5839-6 would provide suitable justification. This would achieve a level of compliance in line with the requirements of BS 9991 9.4.2 for open plan flats and is therefore deem acceptable.

5.5 Provisions for Cavities

The following applies to both the works to the exiting dwelling and the 3 additional dwellings.

The unseen spread of fire and smoke is controlled by the provision of cavity barriers. These would be rated to 30 minutes integrity and 15 minutes insulation and be provided such that the maximum dimension of any cavity will be limited in size to 20m in any direction.

In external walls cavity barriers would be required to be provided in the following locations:

- Around openings
- Compartment walls (party walls)

5.6 Protection of Openings and Firestopping

Any ductwork passing through compartment/fire resistant walls will maintain integrity of those elements by either:

Be contained within fire resisting construction.

Containment by using fire resistant ductwork.

Protection by installing fire dampers.

Ventilation ducts supplying or extracting air directly to or from a protected stairway should not serve any other areas. Ductwork serving other areas and passing through a stair enclosure should be protected by fire and smoke rated dampers linked to the fire alarm or separated by a fire-resistant enclosure.

Ductwork serving both escape routes and accommodation will be provided with fire and smoke dampers (ES Rated) that are activated automatically on the activation of the building fire alarm and detection system. Dampers to be fully in accordance with BS 9991.

Ductwork passing through fire rated walls separating fire compartments could be provided with fusible link fire dampers in accordance with BS 9991: 2015 Section 21.2. All dampers are to be mechanically fixed to the structure so they are self-supporting and be fitted within the fire line in accordance with the manufacturer's installation guidelines.

Any openings for pipes with a restricted diameter (as given in Table 3) breaching compartment walls are required to be fire stopped (unless protected along its entire length with fire resisting material), keeping the opening as small as possible, in accordance with BS 9991: 2015. All other pipes (of any diameter) should be provided with a proprietary seal, tested in accordance with BS EN 1366-3:2015.

Table 1: Maximum nominal interior diameter of pipes passing through a compartment wall/floor

Situation	*Maximum nominal internal diameter (mm)*		
	a) High melting point metal(1)	b) Lead, aluminium, aluminium alloy, uPVC (2), fibre-cement.	c) Any other material
1. *Structure (but not a wall separating buildings) enclosing a protected shaft which is not a stairway)*	160	110	40
2. *Compartment wall or compartment floor between flats*	160	160 (stack pipe) (3) 110 (branch pipe) (3)	
3. *Any other situation*	160	40	40

NOTES:

1. Any metal (such as cast iron, copper or steel) which, if exposed to a temperature of 800°C, will not soften or fracture to the extent that flame or hot gas will pass through the wall of the pipe.

2. uPVC pipes that comply with either BS 4514 or BS 5255.

3. These diameters are only in relation to pipes that form part of an above-ground drainage system and are enclosed as shown in BS 9991 Figure 29. In other cases, the maximum diameters given for situation 3 apply.

5.7 Provisions for Cavities

The unseen spread of fire and smoke will be controlled by the provision of cavity barriers. Cavity barriers will be provided to close cavities and openings in the following locations:

- At the edges of cavities, including around openings such as doors and windows.
- At the junction between an internal cavity wall and every compartment floor, compartment wall or other wall or door assembly forming a fire resisting barrier.

In addition to the above locations cavity barriers are also proposed in any newly created cavities (including ceiling voids and under floor service voids) where the cavity exceeds 20m (i.e. at 20m centres).

The cavity barriers will provide a 30 minute fire rating (i.e. 30 minutes integrity and 15 minutes insulation). Any penetrations through the cavity barriers will be either:

- Fitted with a proprietary sealing system.
- Pipes of limited diameters that are sealed with fire-stopping, or sealed with sleeving of non-combustible pipe material.
- Dampers are required to ductwork.

Figure 24 from BS 9991 is reproduced below for ease of reference.

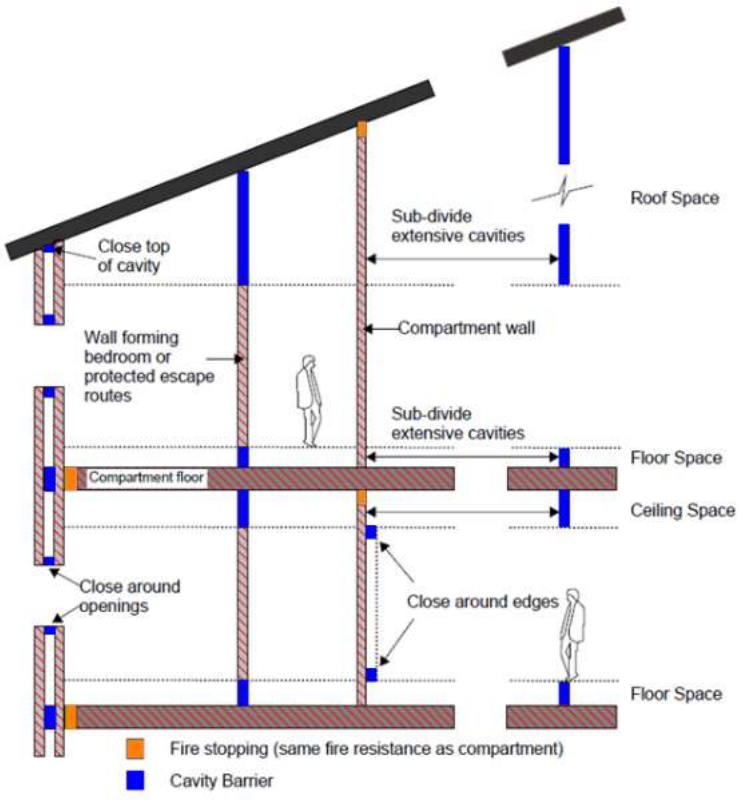

Figure 15: Cavity Barrier Provisions

6. B4 - External Fire Spread

6.1 External surface of walls

With the inclusion of the additional dwellings on the site the legal and notional boundaries need to be agreed in order that an assessment of unprotected areas can be made

External fire spread can be assessed using BRE 187 building separation and boundary distances. This document is used to determine radiative heat from unprotected openings in relation to known boundaries.

Fire resistance to external walls should achieve 30-minute integrity and 15-minute fire insulation from the inside of the building where there is a requirement to limit unprotected openings (i.e. garage North elevation).

Existing house

The elevation of the existing house remains unchanged by the works; however, the roof top extension would need to be assessed along with an assessment to the exiting dwelling if the notional and legal boundaries have changed. Once the legal and notional boundaries are agreed elevations are providing an assessment of the existing dwelling with the roof top extension can be undertaken.

The addition of the extension at ground floor will need to be assessed once the legal and notional boundaries are agreed.

Additional Houses

The legal and notional boundaries for the site are shown below in figure 16 and 17an

Figure 16 Ground floor of house 2, 3 and 4 ground floor with legal boundary shown in red

Figure 17 First floor of additional House 2 first floor with legal boundary shown in red

As the external walls are within 1000mm of a relevant boundary need to be fire resisting from both sides separately, limited unprotected areas are permitted and should meet the condition set out in the extract below:

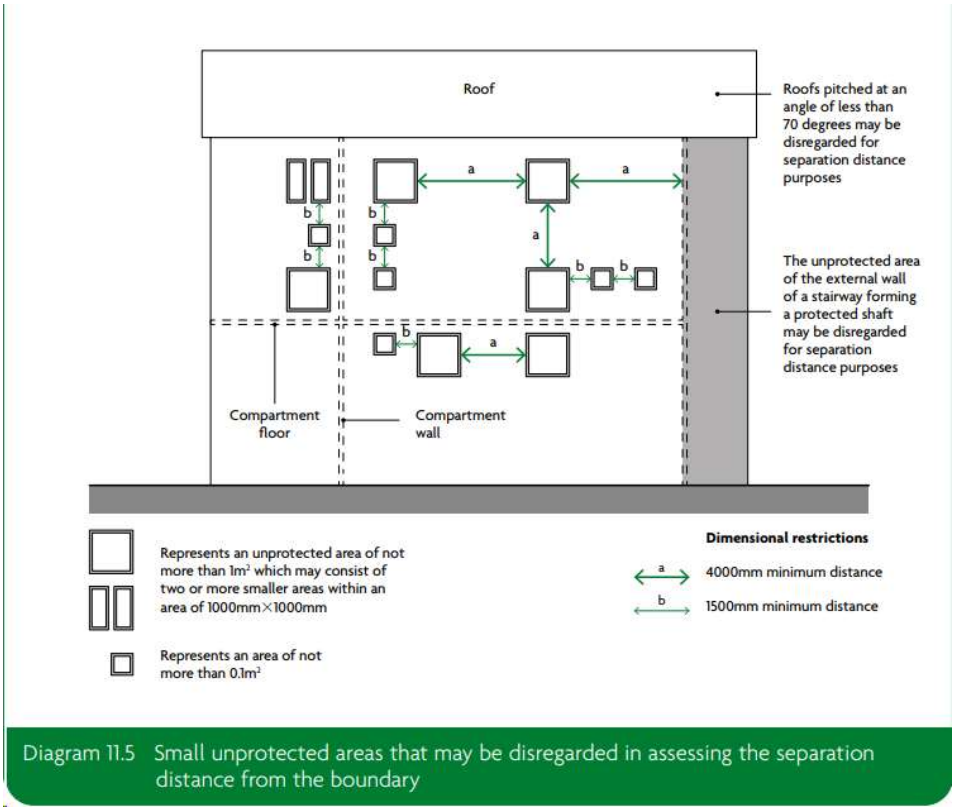

Figure 18 extract from Approved Document B

At first floor in house 2 the large window to the living room would need to be fire rated based on these boundary lines, and the window from the first floor bedroom window not be large enough for self escape so would require internal alterations as currently an inner room. that the bedroom window would escape to the main building extension roof and as such is to another ownership.

The notional boundary at the mid point between the existing dwelling and house 2 is 2.05m Approved document B diagram 11.7 would allow for this elevation to be 12% unprotected

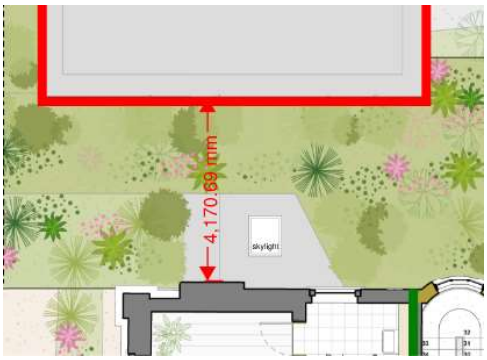

Figure 19 Boundary distance between the existing house and house 2

The external surface of the wall should also achieve. Class B-s3-d2

None of these buildings have a floor greater than 18m above ground and are not considered as ‘relevant buildings’ under the requirements of Regulation 7(2).

7. B5 - Access and Facilities for the Fire Service

7.1 Access to the Building for Firefighting

Fire brigade access needs to be provided to within 45m of all points of the dwelling.

From the locations shown in figure 15 below, access is provided to with 45m of all parts of the all dwelling, provided that the access meets criteria laid out in Table 13.1 in AD-B. This is reproduced below.

Table 13.1 Typical fire and rescue service vehicle access route specification

Appliance type	Minimum width of road between kerbs (m)	Minimum width of gateways (m)	Minimum turning circle between kerbs (m)	Minimum turning circle between walls (m)	Minimum clearance height (m)	Minimum carrying capacity (tonnes)
Pump	3.7	3.1	16.8	19.2	3.7	12.5
High reach	3.7	3.1	26.0	29.0	4.0	17.0

NOTES:

1. Fire appliances are not standardised. The building control body may, in consultation with the local fire and rescue service, use other dimensions.
2. The roadbase can be designed to 12.5 tonne capacity. Structures such as bridges should have the full 17-tonne capacity. The weight of high reach appliances is distributed over a number of axles, so infrequent use of a route designed to accommodate 12.5 tonnes should not cause damage.

Figure 20: fire service Vehicle Access Routes Specification

Figure 21: fire Service Vehicle Access Routes on site to provide 45m access

Figure 22: fire Service Vehicle Access Routes with sprinklers

The fire appliance should not have to reverse more than 20m. Where this is exceeded a suitable turning circle or hammer-head should be provided (16.8 between curbs), minimum road width is 3.7m. with a minimum carrying capacity of 12.5 tonnes.

Due to current site constraints fire service access is not available to within 45m, to overcome this the following options are available:

- Increase the size of the access on site to allow the fire service to achieve compliant access in line with figure 17 above
- Providing sprinkler provisions throughout all the dwellings in accordance with BS9251:2021 and then the guidance within BS 9991 permits an increase in hose length from 45m to circa 75m, as shown in figure 18 above.

This should be considered a project risk until formally approved by Building Control

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7.2 Emergency Power Supplies

In the event of failure of the mains power supply a secondary backup power supply will be provided to feed all life safety systems that require electricity to function as intended. The secondary supply will be appropriate for the life safety system concerned. The following life safety systems will include a backup power supply:

- Emergency lighting
- Automatic fire alarm and detection systems
- All fire alarm-interlinked fire/smoke dampers (where present)
- Automatic Opening Vents (AOV's)

The power back up for the above systems are by battery backup, with integral batteries in the emergency light fittings and batteries within the AOV control unit and Fire Detection and Alarm main control panel.

8. Fire Safety Management

The primary focus of this strategy is on two groups, the persons present in the building (and the provisions associated with ensuring safe egress), and on fire-fighter protection.

Regulation 38 of the Building Regulations requires that the Fire Strategy be brought to the attention of building management and incorporated into the risk assessment that will have to be carried out post occupation under the Regulatory Reform (Fire Safety) Order together with staff training, systems maintenance etc. and documented.

The Regulatory Reform (Fire Safety) Order 2005 requires that systems provided for fire safety are maintained in good working order at all times. This includes firefighting equipment together with other facilities to be provided for the safety of people in the building and to help firefighters.

At completion of the project the following information is recommended to be passed onto the responsible person where applicable:

- This Fire Strategy
- All design assumptions relating to the management of the building (where not included in the Fire Strategy)
- Escape routes, escape strategy and muster points
- Details of all passive fire safety measures including compartmentation, cavity barriers, fire doors, self-closing fire doors and other doors equipped with relevant hardware (e.g. access controls), duct dampers and fire shutters.
- Fire detector heads, smoke detector heads, alarm call-points, detection/alarm control panels, alarm sounders, emergency communication systems, CCTV, fire safety signage, emergency lighting, fire extinguishers, wet risers and other firefighting equipment, other interior facilities for the fire service, emergency control rooms, location of hydrants outside the building, other exterior facilities for the fire service.
- Details of all active fire safety measures including:
    - Smoke control system(s) (or HVAC system with a smoke control function) design, including mode of operation and control systems.
    - Any high risk areas (e.g. heating machinery) and particular hazards
    - As built plans of the building showing the locations of the above items.
    - Specifications of any fire safety equipment provided, including operational details, operators manuals, software, system zoning and routine inspection, testing and maintenance schedules. Records of any acceptance or commissioning test.
    - Any provision incorporated into the building to facilitate the evacuation of disabled people.
- Any other details appropriate for the specific building.

This information is mainly provided in the form of as built plans, but supplemented in this case by the Fire Strategy, i.e. this document. Using this information the “responsible person” should ensure a fire risk assessment is carried out for the building. It is recommended that this is recorded, kept with the other information indicated in this document and updated on a regular basis or when any significant change is made to the fire risk or facilities in these areas.

9. References

i. The Building Regulations 2010: Approved Document B. Volume 1. 2019 edition, incorporating 2022 amendments. London: HMSO

ii. BS 5839-1:2017, Fire detection and fire alarm systems for buildings. Code of practice for system design, installation, commissioning and maintenance.

iii. BS 5839-6:2019, Fire detection and fire alarm systems for residential buildings. Code of practice for system design, installation, commissioning and maintenance.

iv. BS 5266-1:2016, Emergency lighting. Code of practice for the emergency lighting of premises.

v. BS EN 1838:2013, Lighting applications. Emergency lighting.

vi. BS 5499-4:2013, Code of practice for escape route signing.

vii. BS ISO 3864-1:2011, Graphical symbols. Safety colours and safety signs. Design principles for safety signs and safety markings.

viii. BS 476 series: 1987, Fire tests on building materials.

ix. BS EN 1366-3:2009, Fire resistance tests for service installations. Penetration seals.

x. BS 8519:2020, Selection and installation of fire-resistance power and control cable systems for life safety and fire-fighting applications. Code of practice.

xi. BR 187: 2014 External Fire Spread Building Separation and Boundary Distances.