



# Planning Fire Safety Statement (PFSS) for Aldersons Garage, Station Road, Hampton

## Introduction

### Context

The proposed development comprises the demolition of an existing garage and redevelopment to comprise Block A (mixed use of 7 no. flats over two storeys above 3 no. ground floor commercial units) and Block B (2 no. semi-detached two storey townhouses) at 139-143 Station Road, Hampton. The proposed 9 no. dwellings comprise a maximum of 3 no. storeys and have a relevant maximum height in fire safety terms of 6.3 metres (measured from Station Road).

The total extent of the proposed building works involves fewer than 10 no. residential units and the works are not designated as comprising a major development under the London Plan 2021. The buildings do not contain lifts. Accordingly, this Statement is structured to address London Plan Policy 12A only and is presented in that order prescribed in Policy D12A, i.e. Policies D12A(1) through D12A(6).

### Competence

This Fire Statement has been prepared by Dr. Raymond Connolly of Fire & Risk Solutions Ltd. who is a suitably qualified and experienced Chartered Engineer and Member of the Institution of Fire Engineers and attests that he meets the competency standards contained in Clause 3.12.9 of Policy D12.

### Design Objectives

In the first instance the fire safety objectives are those contained outlined in the Greater London Authority's London Plan 2021 **Policy D12A – Fire Safety**.

It is confirmed that London Plan Policies D12B (*Fire Safety - Major Developments*) and D5(B5) (*Evacuation Lifts*) do not apply to the subject development. The proposed development has been evaluated in terms of its capacity to deliver the stated Policy 12A objectives, specifically:-

- 1) Identification of suitably positioned unobstructed outside spaces for (a) fire appliances and (b) evacuation assembly.
- 2) Measures to ameliorate risk to life and of serious injury due to fire (active & passive fire safety precautions).
- 3) Fire safety performance in respect of the building's inherent construction and the fitness for purpose of the materials used therein to limit fire spread.
- 4) Adequate, dignified and universal means of escape in case of fire for all potential building users.
- 5) Evacuation Strategy.
- 6) Access and facilities for London Fire Brigade.

## Design Development

### Building Regulations 2010 (as amended in 2018)

During detailed design, these London Plan policy objectives will be further supplemented by the minimum requirements of Part B to Schedule 1 of the Building Regulations, namely:-

- To ensure the life safety in case of fire of all building, i.e. to permit all building occupants to safely
- To inhibit the spread of fire via the internal wall/ceiling linings.
- To design and construct the building such that it will retain its stability for a reasonable period during a fire.
- To appropriately sub-divide the building to restrict the internal spread of fire and to inhibit the unseen spread of smoke and fire within concealed spaces.
- To prevent the spread of fire from the building beyond the site boundaries to adjacent buildings.
- To enable access to the building to assist fire-fighting.

These statutory objectives shall be met to the extent determined by the Building Control Body (identity to be confirmed) in consultation with London Fire Brigade as being sufficient to achieve compliance with the specific requirements of Part B to the Building Regulations 2010 (as amended 2018).

Each dwelling is served by a full height protected escape stairway discharging to fresh air at street level. In fire safety terms, the subject developments are allocated Building Regulations Purpose Group as outlined in Table 1.

Buildings	Use	Purpose Group *
A	Flats	1(a) – Flats
	Commercial	4 – Shop & commercial
B	Dwellinghouses < 4.5 metres	1(b) – Residential (dwellings)

\*Table 0.1 of HM Government Approved Document B Vol. 1

**Table 1. Building Regulations Purpose Groups**

The relevant building heights (measured from lowest adjacent external ground level to the top floor level) do not exceed the 11 metres (flats) or 7.5 metres (dwellings) thresholds that would make provision of automatic sprinkler protection necessary. For similar reasons of their limited size, fire-fighting stairs and lifts are not required and neither building attracts the "relevant building" designation under Building Regulation 7.

### Block A

The proposed layouts may be summarised in fire safety terms as comprising a single protected enclosed stairway serving 2 no. storeys of flats (7 no.) over 3 no. separated and independent commercial units. Block A qualifies as a "small" building in fire safety terms and therefore is provided with a protected ventilated escape stairway. Not more than 7 no. flats open directly into the stairway and each flat is provided with an internal protected entrance hallway to afford 2 no. fire door protection to the stairs.

The evacuation strategy shall be individual to flats with escape via the protected escape stairway that discharge to a place of safety at ground level and ultimately to the public pavement.

The 3 no. commercial units are accessed and egressed directly from Station Road. The units are sufficiently small to be served by a single exit only. The service doors to the rear are not required to serve as escape routes. The commercial units will operate entirely independently of the residential units overhead.

### Block B

The proposed layouts may be summarised in fire safety terms as comprising 2 no. two-storey townhouses each including an internal protected stairway. Both units shall be separated from each other by imperforate fire-resisting party walls and shall be independent in fire safety terms. The site is of sufficient size to include suitable locations for assembly of evacuated persons and mustering of the Fire Service simultaneously for all demises.

## Relevant Fire Safety Design Code

This PFSS outlines a means for delivering future compliance with Part B to the Building (Amendment) Regulations 2018, as will be further developed during the detailed design process within the formal statutory regime under the jurisdiction of the appointed Building Control Body and London Fire Brigade. This approach shall include adoption of the appropriate guidance contained in:-

- **BS 9991, Fire safety in the design, management and use of residential buildings - Code of practice (2015).**
- and
- **BS 9999, Fire safety in the design, management and use of buildings - Code of practice (2017).**

The Risk Profiles for the proposed building are outlined in Table 2.

Area	Risk Profile
Commercial Units	B2
Flats	C1(i)

**Table 2. Allocation of Risk Profiles as per BS 9999**



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## Future Modifications (The Golden Thread)

The fire safety strategy underpinning the building design shall be maintained into the design and construction stages (RIBA Stages 3-6), allowing for future modifications as might arise. It is highlighted that the Building Regulations (Amendment) Regulations 2018 will apply to this building.

Specific construction products and manufacturer's verification of performance shall be proposed in due course by the Design Team to comply with the statutory obligation of Regulation 7 and specifically Regulation 7(2) with regard to delivery on the principles contained in this Planning Statement, i.e. specification of appropriate materials and standards of workmanship.

As per Regulation 38, all relevant design fire safety information (including operations, maintenance and routine testing of fire safety systems) shall be formally handed over to the responsible person on completion.

The *Materials Information Register* contained within this PFSS shall be passed to any third party engaged in the future construction phase to maintain the "golden thread" of fire safety design. It is noted that this PFSS is a document of public record and will be available to the Building Control Body overseeing the design and construction stages.

## London Policy Objective D12A(1)a Fire Service Access (Building Regulation B5)

The buildings are afforded Fire Service access from the existing public highways (Station and Oldfield Roads). The site is suitably sized to permit all fire-fighting access to be internal and no constraints arise in respect of the public roads. The access is outlined in Figure 1 and permits vehicles to access all parts without having to reverse more than 20 metres onto the site.

This extent of clear fire-fighting access shall be maintained during the construction process and shall include pumping appliance access as outlined in Table 3.

Measures	Parameters *
Minimum width between kerbs	3.7 metres
Minimum carrying capacity	12.5 tonnes

\*Table 13.1 of HM Government Approved Document B Vol. 1

Table 3. Access route specification

This extent of access is sufficient for buildings of this size and access is to within 45 metres of all locations.

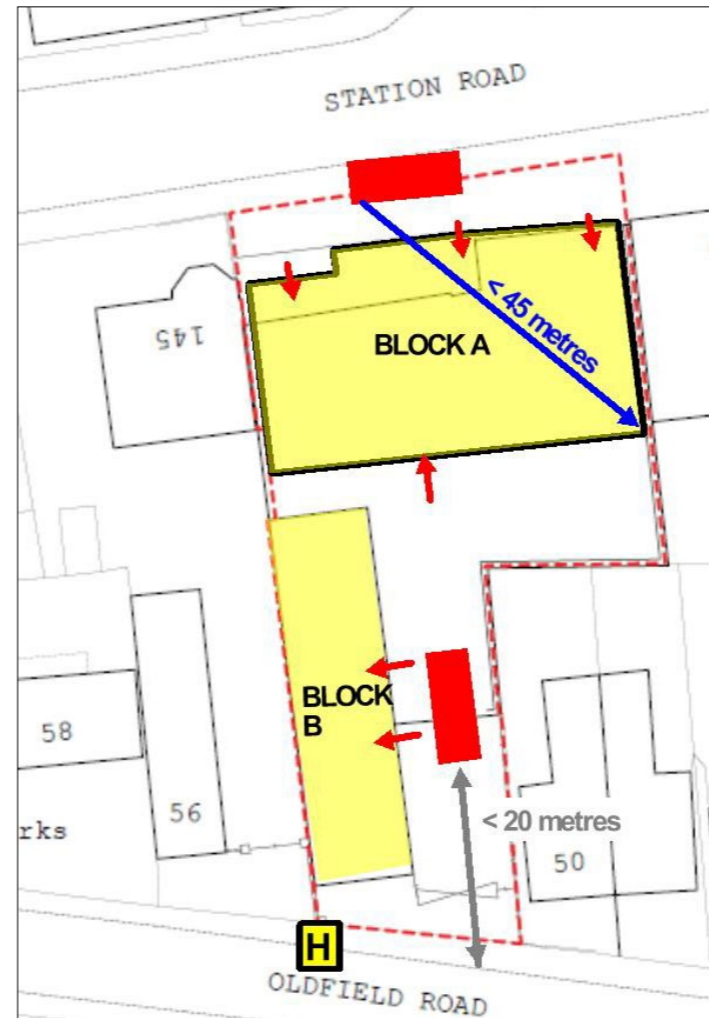


Figure 1. Fire Service access within site

## London Policy Objective D12A(1)b Evacuation Assembly (Building Regulation B1)

Both blocks sit on a single private site that is well served on opposite sides by public highways and the site is of sufficient size to offer unobstructed space for evacuation, mustering and emergency intervention (Figure 2 refers). The rear yard is of sufficient size relative to the height of the blocks to be treated as a place of relative safety in the event of a fire.

Further evacuation onto Oldfield and Station Road's public pavements is also available and may be used during the construction process. External Evacuation Assembly Points are identified in Figure 2.

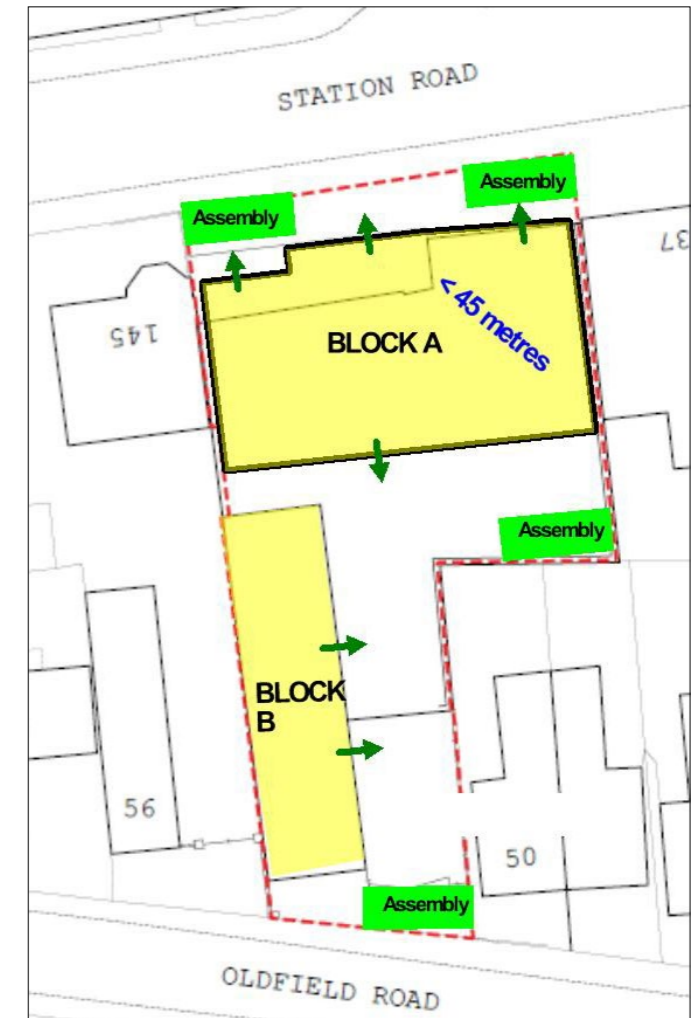


Figure 2. External Assembly Points

## London Policy Objectives D12A(2) Fire Safety Systems (Building Regulation B1)

### Active Fire Precautions

Automatic fire detection and alarm to BS 5839:Part 6:2019 (Type LD2) shall be provided within all dwellings. Detection shall be to a minimum Grade D1 standard, i.e. mains powered inter-linked detection and alarm. Communal automatic fire detection and alarm to BS 5839:Part 1:2017 (Type L5) shall be provided within the common stairway in Block A. Detection shall be mains powered, inter-linked and capable of triggering the automatic opening vent.

The 3 no. commercial units and the common escape stair in Block A shall be fitted with emergency escape lighting to BS 5266:Part 1:2016.

A 1.0 m<sup>2</sup> natural automatic opening vent shall be provided above the stairway in Block A.

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The 3 no. commercial units shall be individually provided with Type M (manual) fire alarm systems to BS 5839:Part 1:2017.

### Passive Fire Precautions (Figures 6 to 9 refer)

Good design practice and construction standards shall be employed throughout, so as to reduce ignition risks, e.g. suitably sized unjointed electrical wiring, fire-resisting non-combustible post boxes. All electrical wiring shall meet current IET National Wiring Regulations (BS 7671).

The common stairway shall be enclosed at all levels in 60 minutes fire-resisting construction to protect the escape routes, including FD30 fire-resisting doorsets. Window escape is not relied upon.

Fire-resisting construction shall be provided to separate individual flats, storey levels and different purpose groups.

### Fire Safety Management (Regulation 38)

At handover, owners/leaseholders shall be fully apprised of the fire safety systems installed within their demises including advice on the routine weekly testing and annual maintenance of the fire detection and alarm system to BS 5839:Part 6 requirements.

### London Policy Objective D12A(3) Building Construction (Building Regulations B2, B3, B4 & Regulation 7)

### Materials Information Register (Regulation B2)

The buildings comprise steel framed construction with Metsec (cold formed steel framing and dry lining) inner leaf and brick outer leaf. Roofs are to comprise green roofs over composite insulation flat roof construction over structural steel. Windows are to be aluminium framed. Construction materials shall achieve performance classifications to BS EN 13501-1 as follows:-

- Roofs to minimum **Class B<sub>ROOF(t4)</sub>**. Green roofs shall comply with the Department of Communities & Local Government's guide "Fire performance of green roofs and walls" as published in August 2013.
- External walls within 1 metre of site boundaries to minimum **Class B<sub>s3,d2</sub>**
- Internal walls and ceilings to escape routes to **Class B<sub>s3,d2</sub>**
- Other internal walls/ceilings generally to minimum **Class C<sub>s3,d2</sub>**, with the exception of small rooms (having areas < 4m<sup>2</sup>), which may be relaxed to **Class D<sub>s3,d2</sub>**.

### Protection against undue fire spread via structure (Regulation B3)

The proposed materials of construction generally comprise concrete, steelwork, masonry brick and stonework, gypsum plaster and glazed components. Both buildings shall be designed to retain their stability in the event of a fire for a reasonable period. This shall be verified during detailed design through:-

- Provision of elements of structure (beams, columns and floor slabs) having minimum fire resistance ratings of **60 minutes** – reduced to 30 minutes in the case of Block B.
- Provision of imperforate **60 minutes** fire-resisting compartment floors between individual levels – reduced to 30 minutes in the case of Block B.
- Provision of imperforate **60 minutes** fire-resisting non-combustible separating walls between individual dwellings – both blocks.
- Provision of imperforate **60 minutes** fire-resisting compartment floors between the residential and commercial parts of Block A.
- Enclosure of the common escape stair in Block A with **60 minutes** fire-resisting construction, accessed via FD30S flat entrance doors with second door protection from the internal private FD30 doors within entrance hallways.

### Protection against undue fire spread externally (Regulation B4)

The relevant boundaries are identified in Figure 3. The buildings' elevations shall be controlled as necessary to include fire-resisting construction as necessary to ensure that fire does not spread beyond the site's relevant boundaries.

An initial assessment of the building's elevations in the context of their space separation requirements has been undertaken. Using enclosing rectangles as illustrated in Figures 4 and 5, it is confirmed that the external walls (excluding party walls) do not require fire-resisting construction or any restriction on the use of glazing. External wall surfaces within 1 metre of the site boundary shall be **Class B<sub>s3,d2</sub>**. In addition all party walls adjoining the site boundary properties shall comprise minimum 60 minutes fire-resisting imperforate.

### Materials and Workmanship (Regulation 7)

Specific new construction products and manufacturer's verification of performance shall be proposed in due course by the Design Team to comply with the statutory obligation of Regulation 7 and specifically Regulation 7(2) with regard to delivery on the principles contained in this Planning Statement, i.e. specification of appropriate new materials and standards of workmanship.

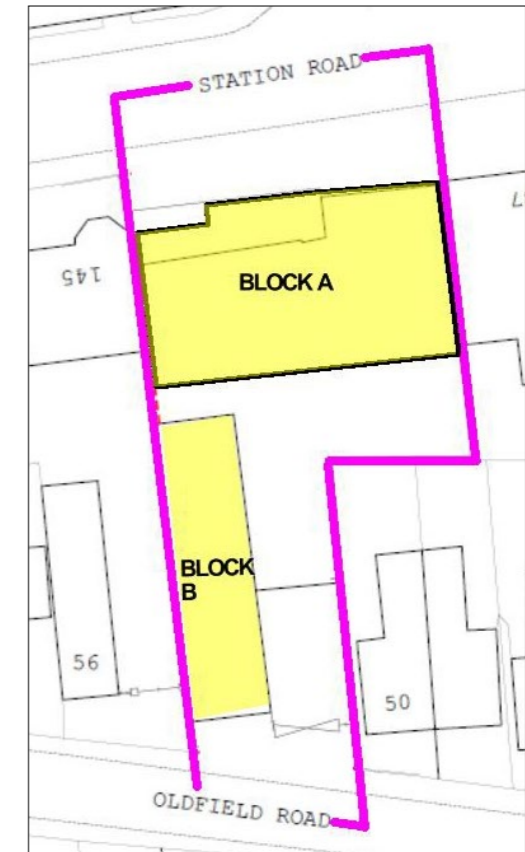


Figure 3. Overview of Relevant Boundaries (magenta)



Figure 4. Front elevation (enclosing rectangle) Block A



Figure 5. Rear elevation (enclosing rectangle) Block A



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## London Policy Objectives D12A(4) Means of Escape for all building users (Building Regulation B1)

### Design Philosophy

The proposed buildings have been appraised in terms of the means of escape infra-structure for all occupants (including persons of impaired mobility) comprising residents, their visitors and trade/service staff (visitors). The fire safety design shall deliver compliance with Part B of the Building Regulations by full adoption of all relevant guidance contained in BS 9991, *Fire safety in the design, management and use of residential buildings - Code of practice*, 2015. The commercial spaces are each suited to occupation by a maximum of 60 persons, with level access self-escape to be provided for disabled persons.

Block A qualifies as a “small single stair building” and is to be protected with a 1.0 m<sup>2</sup> automatic opening vent above the protected stairway. All escape routes shall be protected from smoke and heat ingress by their enclosure in fire-resisting and smoke-containing construction. The safety of occupants in and around the residential parts of the building in case of fire is to be assured by full adoption of all relevant BS 9991 guidance appropriate to flats > 4.5 metres above ground level including:-

- Provision of protected entrance hallways enclosed with 30 minutes fire-resisting construction and limited to a maximum extent of 9 metres travel distance.
- Control of maximum travel distances (in single or multiple directions) are appropriately controlled as outlined in Table 4.
- The ground floor spaces shall be subject of independent fire detection and alarm system with independent evacuation.

Location	Single
Within Flat Hallway	9 metres
Commercial Unit	18 metres
Refuse Storage	9 metres
Plant Room	9 metres

**Table 4. Control of travel distances**

### Proposed Means of Escape

Buildings are not provided with lifts. Evacuation shall not rely on Fire Service intervention. The sounding of the **Type LD2** automatic fire detection and alarm system shall motivate the **simultaneous single-phase evacuation of all residents** within the flat of fire origin.

The flats may be summarised in fire safety terms as a single protected stair building with one storey in excess of 4.5 metres above ground level. Therefore, protected internal escape routes

are required and no reliance is placed on escape via windows. Stair enclosures are to be protected against smoke and heat ingress by their enclosure in 30 minutes fire-resisting construction. In accordance with best practice, no inner room habitable rooms are proposed.

The importance of maintaining the integrity of the protected stair infra-structure through closing of fire doors including the internal private entrance hallway FD30 doors shall be emphasised in writing to the end-user occupier at handover.

## London Policy Objective D12A(5) Evacuation Strategy (Building Regulation B1)

Residential parts shall be designed using the London Fire Brigade preferred “**stay put**” evacuation model, i.e. only the residents of the flat of fire origin to evacuate prior to Fire Service arrival. The common escape routes are fitted with automatic smoke ventilation facilities to assist escape and Fire Service operations. Should a “**total evacuation**” of the building be deemed necessary by the Fire Service, the width of the proposed single stairway is adequate to discharge the entire building’s occupants simultaneously.

Evacuation shall not rely on Fire Service intervention. A building specific Escape Plan should be developed by the responsible person under the *Regulatory Reform (Fire Safety) Order (2005)* that recognises:-

- The critical reliance of the protected escape stairways on ALL fire doors being closed at all material times.
- The need for self-reliance in terms of escape with appropriate assistance provided from within the building where necessary for younger, older or cognitively/mobility impaired occupants. Personal Emergency Evacuation Plans (PEEPs) shall be documented for residents requiring assisted escape.

It is highlighted that these responsibilities are likely to evolve over time and the Evacuation Plans shall be subject of periodic review (not less than annually).

It is recommended that the Evacuation Plans should also be extended to consideration of wider fire safety matters such as regular weekly testing and maintenance of the fire alarm system.

Such information shall be fit-for-purpose to permit the responsible person in discharging obligations arising from the *Regulatory Reform (Fire Safety) Order (2005)*.

Indicative floor layouts and associated fire precautions are shown in Figures 6 to 9. (Note: Red lines indicate 60 minutes fire-resisting construction and blue lines indicate 30 minutes fire-resisting construction). The Evacuation Assembly Points were identified previously in Figure 2.

## London Policy Objective D12A(6) Fire Service Access in and around the building (Building Regulation B5)

The buildings are less than 18 metres in height and less than 1,000 m<sup>2</sup> in area so do not require provision of any specialist fire-fighting facilities. It is confirmed (refer to the previous Figure 1) that all locations within the proposed site are within the 45 metres range of a hose laid from the Fire Service vehicle (pumping appliance) sitting on one of two notional hard-standings (as also previously identified in Figure 1). This extent of access shall remain available during the construction phase. A public fire hydrant is existing immediately adjacent the site on Oldfield Road and sits well within 90 metres of the London Fire Brigade vehicle hard-standing (as shown in Figure 1).

### Declaration by Expert Assessor

This Planning Fire Safety Statement has been prepared in good faith using our specific fire safety expertise to meet our best understanding of the requirements of Policies D12A of *The London Plan 2021* using the recommended checklist therein.

The subject buildings are amenable to achieving full compliance with Part B (Fire Safety) to the Building Regulations, 2010 and Building (Amendment) Regulations 2018. Any future modifications to the building as described in this PFSS should be assumed to adversely affect this declaration, unless demonstrated to the contrary by a competent person.

Dr Raymond J. Connolly  
BE, PhD, CEng, MIEI, MIFireE, MSFPE  
**Chartered Engineer & Fire Safety Specialist  
For Fire & Risk Solutions Ltd.**

### Supporting schedule of relevant plan drawings

This Fire Statement has been prepared following our appraisal of the drawings (as prepared by Aros Architects) as scheduled below.



# Planning Fire Safety Statement (PFSS) for Aldersons Garage, Station Road, Hampton



Figure 3. Indicative Fire Safety Precautions at Ground Level



Figure 4. Indicative Fire Safety Precautions at First Floor Level



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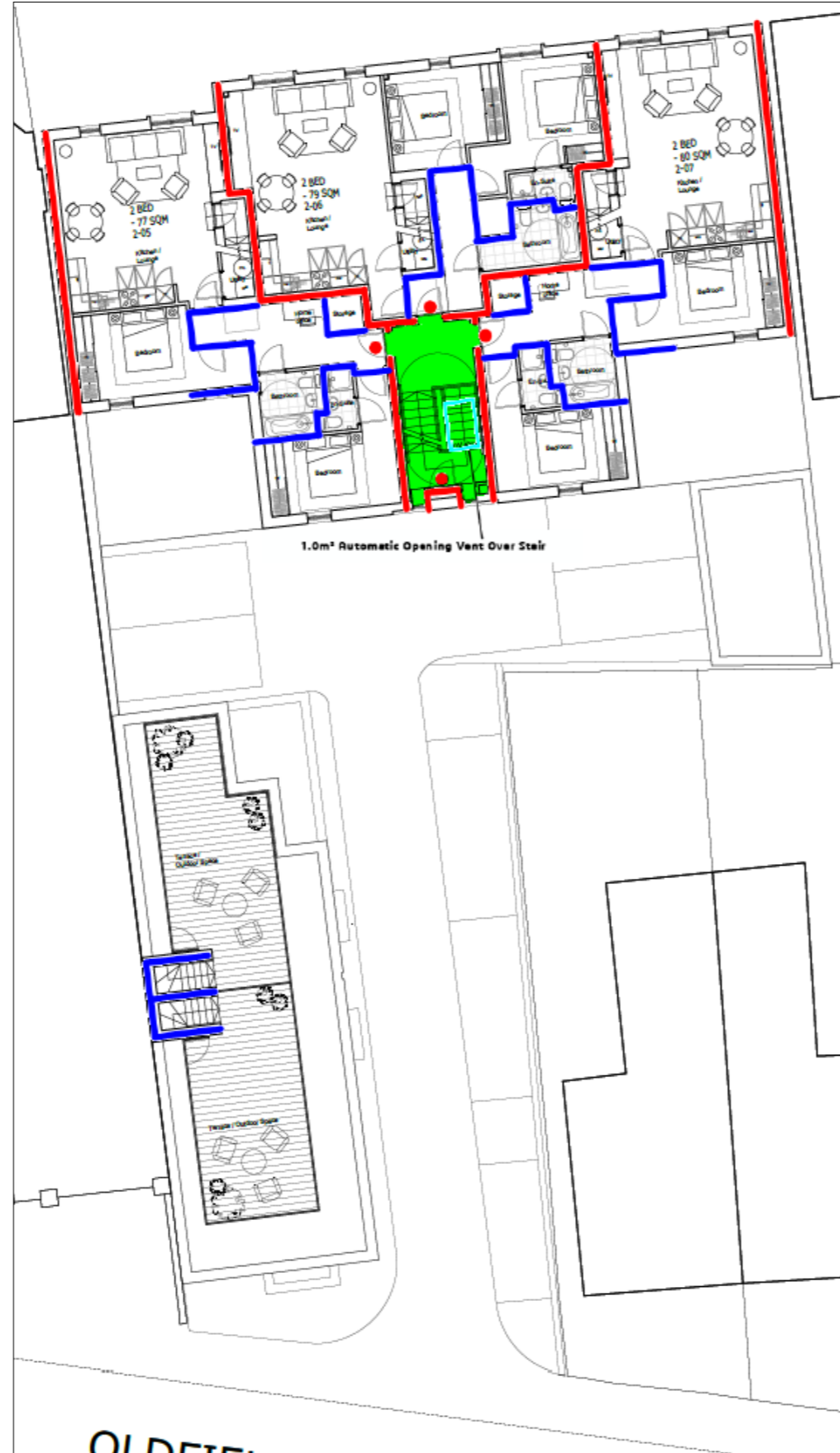


Figure 5. Indicative Fire Safety Precautions at Second Floor Level

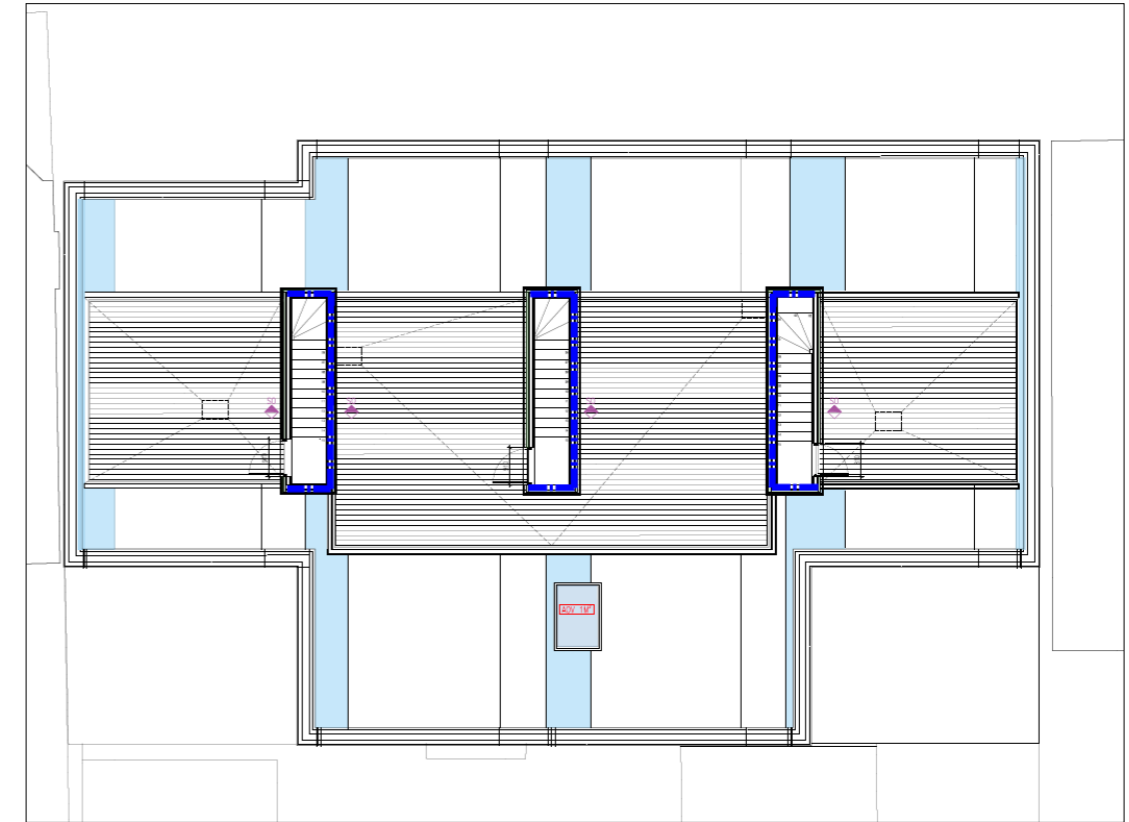


Figure 6. Indicative Fire Safety Precautions at Roof Level (external spaces)

GENERAL ARRANGEMENT DRAWINGS	
6034 - (00) - 000	SITE LOCATION PLAN
6034 - (20) - 111	PROPOSED GROUND FLOOR PLAN
6034 - (20) - 101	PROPOSED FIRST FLOOR PLAN
6034 - (20) - 102	PROPOSED SECOND FLOOR PLAN
6034 - (20) - 103	PROPOSED ROOF PLAN
6034 - (20) - 410	PROPOSED FRONT ELEVATION AA
6034 - (20) - 402	PROPOSED REAR ELEVATION BB
6034 - (20) - 403	PROPOSED ELEVATIONS CC & DD
6034 - (20) - 404	PROPOSED ELEVATIONS EE & FF
6034 - (20) - 405	PROPOSED SITE SECTIONS GG & HH
6034 - (20) - 406	PROPOSED ELEVATIONS BB & FF

Drawing Schedule