

FIRE STRATEGY DOCUMENT

FOR

Emil Dale Academy, Broadway, Letchworth Garden
City, SG6 3PA



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EXECUTIVE SUMMARY

This Fire Strategy outlines a comprehensive approach to fire safety for Emil Dale Academy, Broadway, Letchworth Garden City, SG6 3PA.

It addresses key elements to ensure the safety of occupants and the protection of assets in the event of a fire.

Key Objectives:

- **Prevention:** Proactive measures to minimise fire risks are detailed. This includes regular maintenance of fire safety equipment, electrical systems, and the responsible storage of flammable materials. Strict adherence to fire codes and regulations is emphasised.
- **Detection and Alarm:** The strategy specifies the types of fire detection systems in place (e.g., smoke detectors, heat detectors, sprinkler systems) and outlines procedures for the swift activation of alarms for rapid notification of occupants and emergency services.
- **Evacuation:** Clearly defined evacuation routes, assembly points, and procedures are established. Regular fire drills ensure that staff are familiar with these procedures.
- **Suppression:** The strategy describes the types of fire suppression systems present (e.g., sprinklers, extinguishers) and the training of designated personnel in their use.
- **Fire Service Liaison:** Effective communication and coordination plans with the local fire service ensure a timely and efficient response in the case of an emergency.
- **Training and Education:** Comprehensive fire safety training is mandatory for all employees. Procedures for educating occupants and visitors on fire safety protocols are established.
- **Maintenance and Review:** Regular inspections, testing, and maintenance of all fire safety systems and equipment are scheduled. The Fire Strategy is a dynamic document, and it will be reviewed and updated periodically as necessary.

Commitment

Emil Dale Academy is fully committed to prioritising fire safety. This Fire Strategy is a critical tool for protecting lives, property, and the continuity of business operations/services. It reflects a strong organisational culture of fire safety and preparedness.

The following highlights areas for attention including recommendations, information and advice where applicable:

New Theatre – Ground Floor occupancy levels

The new theatre has a usable space of 167m² (all standing or seated without chairs).

$167 / 0.45 = \text{Total occupancy capacity} = 371$ people (from BB 100 table 2)

For > 60 people to be able to use the area a minimum of 2 exit routes are required (once the widest width has been excluded).

The hall has sets of doors as follows: The 1210mm door is greater than 45 degrees apart from the two doors (779mm & 800mm), which are on the same wall, not 45 degrees apart for escape purposes.

1 @ 779mm (60 persons)

1 @ 1210mm (220 persons) + an additional 10 per 50mm or part thereof, $1210 - 1050 = 160$, $160 / 50 = 3$ ($3 \times 10 = 30$). Total for door 250 persons.

1 @ 779mm (60 persons)

The widest exit route must now be excluded from all subsequent calculations, which leaves:

1 @ 800mm with a capacity of 60 people, which would be total allowable occupancy without the addition of an alternate exit door as proposed.

With the additional exit being installed, which would be discounted from calculations, as it would be the largest, with a minimum width of 1050mm, but with the recommended width of 1500mm, the occupancy can be adjusted as follows:

1 @ 1210mm (220 persons) + an additional 10 per 50mm or part thereof, $1210 - 1050 = 160$, $160 / 50 = 3$ ($3 \times 10 = 30$). Total for door 250 persons.

1 @ 779mm (60 persons)

Therefore, the number of persons allowed in the Theatre equals the lowest calculated figure of 310 persons.

Table 4 – BB100 (for reference purposes)

Table 4 Escape route width and exit capacity	
Maximum number of persons	Minimum width mm ⁽¹⁾⁽²⁾⁽³⁾
60	750 ⁽⁴⁾
110	850
220	1050
More than 220	50mm for each additional 10 persons or part of 10 ⁽⁵⁾

Fire Doors throughout Site

A survey was conducted by the assessor to review the standard and compliance of the currently installed fire doors within the premises. A number of issues were found as per the attached plan, with faults including the following concerns:

- Excessive linear Gaps.
- Insufficient numbers of hinges (3 required).
- Intumescent strips damaged.
- General degradation including penetrations in some doors.

A program of refurbishment/upgrade/replacement is required to ensure compliance with BS476, Regulation 38 and Articles 17 & 38 of the Fire Safety Order.

Proposed Storage Area (First Floor)

This storage area should be controlled and managed to ensure that stores are not excessive, and any stores with a COSHH requirement are stored within purpose built lockers and limited to small amounts only.

Automatic Fire Detection (AFD) within loft/roofspace areas

It is recommended that AFD in the form of smoke detection be extended into the roofspace areas.

Passenger Lift

The lift installed is for passenger, not emergency use. The lift function should be checked to ensure it "failsafes" to a safe location on activation of the fire alarm sounding. The installation of evacuation chairs may be pertinent to ensure a means of evacuation from the first floor for persons with PEEPS or mobility issues.

Community use of Premises

It was identified that no community use will take place. This will be re-assessed if changes are proposed moving forward.

Doors within Circulation Areas

All doors within circulation areas should open in the direction of travel towards designated fire exits. Cross corridor doors should "swing" in both directions if exit is available in two directions.

Building Bulletin 100 (BB100) does not specifically require cross-corridor fire doors to be held open in schools. However, it acknowledges that in some cases, fire doors may need to be held open for accessibility and ease of movement.

BB100 emphasises that fire doors should only be held open using approved devices that are designed to automatically release and close the door when a fire alarm is triggered. These devices should be regularly inspected and maintained to ensure they function properly.

Here's a summary of BB100 guidance on holding open fire doors:

- **Not Required:** Holding open cross-corridor fire doors or circulation doors is not a requirement in BB100.

- **Approved Devices:** If doors are held open, they must be held open using approved devices that automatically close upon fire alarm activation.
- **Regular Inspection:** These devices must be regularly inspected and maintained to ensure proper function.

It's important to note that fire safety regulations and guidance can vary depending on the specific circumstances of a school and local fire authority requirements.

INTRODUCTION

GENERAL

My Fire Safety Ltd has been commissioned to provide a Fire Strategy document, from the perspective of a fire safety assessor to the proposed refurbishment to Emil Dale Academy, Broadway, Letchworth Garden City, SG6 3PA. The purpose of this report is to provide an assessment as to this building(s) compliance with current fire safety standards.

This Fire Strategy document has been developed, in part, following a BS7974 led process, using Qualitative Design / Build Review techniques. The principal documents referred to are:

- The Building Regulation Approved Document B, Volume 2:2019 with 2021 and 2022 amendments (referred to as ADB in this document).
- Regulatory Reform (Fire Safety) Order 2005, as amended by the Fire Safety Act 2021.
- BS 9999:2017 Fire Safety in Design, Management and Use of Buildings – Code of Practice.
- Building Bulletin (100:design for Fire Safety in Schools) known as BB100.
- This detailed fire strategy report has been developed based upon the information contained within the provided plans/drawings and a physical visit to the site.

This document is in part based upon the information provided by other parties linked to this project/strategy. The author has used best endeavours within the limitations of the commission to ensure all information is accurate.

This document does not represent a guarantee or warranty of compliance which relies on other parties, particularly those with operational duties. It may not be relied upon as proof of compliance.

OBJECTIVES

THE OBJECTIVES OF THIS REPORT ARE:

- To provide support to the Responsible Person (RP) by reviewing the management and use of the building, and adjacent buildings, thereby providing guidance that may assist with fire safety for the life cycle of the buildings from current / existing occupation to decommissioning.
- To demonstrate how the design teams fire safety design has met the requirements of Approved Document B of the Building Regulations 2010, in terms of life safety and, therefore, the requirements of the Regulatory Reform (Fire Safety) Order 2005 when operational.
- Enable an opportunity for round table agreement on the adopted strategy by the user, competent advisors, Fire and Rescue Service, and Third Parties.

WHAT IS A RESPONSIBLE PERSON

A Responsible Person (RP) is defined in the Fire Safety Order as “anyone who has control or anyone who has a degree of control over certain areas within the premises”.

The definition of control is wide-ranging and includes, for example, landlords, tenants, occupiers, employers, and managers.

If you are an RP for a building to which the Fire Safety Act 2021 applies, you must take steps to ensure that the building complies with the requirements of the act.

Guidance has a mandatory element which is life safety, but also strives to provide asset protection, giving stakeholders confidence of continuous operation as required.

APPLICABLE LEGISLATION AND GUIDANCE

The primary legislation relevant to the project is the Building Regulations 2010 Part B, known as ADB. We have also referred to parts of BS 9999:2017 and BB100, with reference to the Regulatory Fire Safety Reform Order:2005 (and other applicable legislation as listed below) to create this document.

It is noted that the guidance documents above do not set out statutory requirements. They are intended to provide guidance only for generic building designs. An alternative solution can be applied to achieve an acceptable level of safety, commensurate with the Functional Requirements of the Building Regulations 2010. Where deviation from guidance occurs within the design, this will be justified using the guidance presented in BS 7974. For example, proximity of buildings and use by disabled occupants.

In preparing this document it has been assumed that detailed aspects of the design and construction will, unless stated otherwise in this report, be in accordance with the recommendations of ADB and the appropriate British Standards at the time of

construction. The document has been prepared from the viewpoint of a fire safety assessor with no responsibility for the design or original construction.

The Building Regulations that need to be satisfied are as follows:

- 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.

- Internal fire spread (linings)

B2 (1) to inhibit the spread of fire within the building the internal linings shall:

(a) Adequately resist the spread of flame over their surfaces; and

(b) Have, if ignited, a rate of heat release which is reasonable in the circumstances.

(2) In this paragraph "internal linings" mean the materials lining any partition, wall, ceiling or other internal structure.

- Internal fire spread (structure)

B3 (1) The building shall be designed and constructed so that in the event of fire, its stability will be maintained for a reasonable period.

(2) A wall common to two or more buildings shall be designed and constructed so that it adequately resists the spread of fire between those buildings.

(3) To inhibit the spread of fire within the building, it shall be sub-divided with fire-resisting construction to an extent appropriate to the size and intended use of the building.

(4) The building shall be designed and constructed so that the unseen spread of fire and smoke within concealed spaces in its structure and fabric is inhibited.

- External fire spread.

B4 (1) The external walls of the building shall adequately resist the spread of fire over the walls and from one building to another, having regard to the height, use and position of the buildings.

(2) The roof of the building shall adequately resist the spread of fire over the roof and from one building to another, having regard to the use and position of the building.

- Access and facilities for the fire service.

B5 (1) The building shall be designed and constructed so as to provide reasonable facilities to assist fire fighters in the protection of life.

(2) Reasonable provision shall be made within the site of the building to enable fire appliances to gain access to the building.

2.2 Guidance is given in Approved Document B, and BS9999(2017) on how compliance can be achieved.

There is also no requirement to follow the guidance to achieve compliance in principle and alternative methods to compliance can be adopted. In this case the framework of BS 9999;2017 will be used "Code of practice for fire safety in the design and use of buildings."

PROJECT CHARACTERISATION

BUILDING DESCRIPTION

Emil Dale Academy is a standalone 2 floor building located in Letchworth Garden City, Hertfordshire, UK. Situated in the heart of the historic town, with a footprint of 5202 square metres over two stories in the landmark location in town.

Featuring 17 studios, including dedicated and multi-purpose spaces for singing, acting, dance (including ballet & tap studios), and musical theatre training, the facility also includes a costume and props workshop, 8 private 1-to-1 singing rooms, a content creation studio for multi-cam performances and two fully equipped on-site theatres for productions.

The building is primarily brick facing with glazing as expected. All areas of the building are connected with a varied roofscape, but predominantly of pitched tiled design.

The building is Letchworth Garden City Heritage owned.

The height of the building does not exceed 18m.

The bulk of the building is contained within one block with access to the front and limited access to the rear.

Active Fire Protection systems are provided in the form of an L2 Fire Alarm system. Passive Fire Protection is provided throughout the premises. Multiple means of escape routes are provided.

The designated Assembly Point is located to the front of the building.

Partition walls are a mixture of brick/concrete and plaster/fireboard in places.

No significant external cladding (no requirement for FRAEW – Fire Risk Appraisal for External Walls).

Table 1 Building(s) Occupancy levels:

LOCATION	OCCUPANCY
Theatre (Ground floor)	310
Boiler Room	3
Recreation Space	84

Main Reception/Office area	15
Dance/Classrooms	Max design Capacity – are there seats/props etc – Risk assess as per use.
Offices	Max design capacity

Table 2 of BB100 has been utilised for occupancy calculations.

Table 2 Occupant capacity in rooms or areas	
Room/Area	Occupant capacity based on floor space factor (m ² /person) or design intent
Classroom/Lecture Room/Study Room	Maximum design capacity (eg, no. of seats)
Dining Room	0.9
Assembly Hall/Dual Purpose Area	0.45
Sports Hall (not used for assembly or examinations, etc)	5.0
Store Room	30.0
Office	6.0
Staff Common Room	1.0

OCCUPANCY CHARACTERISTICS

The majority of building users will predominately be staff, students and guests/visitors. Staff/Students will be categorised as A – Awake and familiar with the building.

General Contractors and visitors would fall into the occupancy characteristic of B – awake and unfamiliar with the building. It is imperative that all visitors are monitored on their actions and responsibilities should an emergency incident occur whilst they are within the premises boundaries.

For the purposes of this strategy, I am applying category A to the building.

It is reasonable to assume the Fire Strategy only needs to deal with one fire at any one time. This building's fire strategy (as detailed by the Fire Safety Notices) will be based on a "Simultaneous" evacuation policy under the strict control of London Fire Brigade (LFB) at any incident.

An Automatic Water Suppression System (AWSS) is optional when considering:

- *The BS5839-1 compliant automatic fire and smoke detection system.*
- *The "tolerable" risk to life classification.*
- *No overnight sleeping.*
- *Height of the building.*
- *That there is always an alternative means of escape.*
- *The "Stay Put" evacuation policy.*

No AWSS required for this design.

Vulnerable Persons:

Applicable Regulations for Vulnerable / Less Mobile Persons (PEEPs):

- *The Health and Safety at Work Act 1974*
- *The Regulatory Reform Fire Safety Order:2005 (The Fire Safety Act 2021)*
- *Equality Act 2010 (formerly Disability Discrimination Act 1985)*
- *PUWER Regulation (Provision and Use of Work Equipment Regulations)*

Penalties and Enforcement:

- *A breach in the Fire Safety Order may result in an enforcement notice or prosecution.*
- *Local Fire and Rescue Authorities may issue enforcement notices advising changes. Prohibition Notices may be issued which prohibit or restrict the use of premises (Use of Works Equipment Regulations).*
- *The RP should ensure that PEEPs are implemented for all residents requiring assistance. The PEEPs should be accessible to Fire Service Personnel during any emergency scenario.*

In accordance with BS 9999(2017), the risk profile is established to determine that appropriate means of escape and other fire safety provisions are provided. The risk profile is a function of the occupancy of the building and the fire growth rate.

Occupancy characteristic	Description	Examples
<i>A</i>	<i>Occupants awake and familiar with the building</i>	<i>Offices and Industrial premises</i>
<i>B</i>	<i>Occupants awake and unfamiliar with the building</i>	<i>Shops, leisure centres, assembly buildings</i>
<i>C</i>	<i>Occupants likely to be asleep.</i> <i>Ci Long term individual occupancy</i> <i>Cii Long Term managed occupancy</i> <i>Ciii Short Term occupancy</i>	<i>Individual flats without 24-hour maintenance and management control on site</i> <i>Long-term managed occupancy Serviced flats, halls of residence, sleeping areas or boarding schools</i> <i>Hotels</i>
<i>D</i>	<i>Occupants receiving medical care</i>	<i>Hospitals, residential care facilities</i>
<i>E</i>	<i>Occupants in transit</i>	<i>Railways, airports etc</i>

FIRE GROWTH RATE

The appropriate fire growth rate within all communal areas shall be 2 (medium) – with reference to BS 9999:2017 shown below).

Category	Fire growth rate ^{A)}	Fire growth parameter ^{B)} kJ/s ²	Description	Typical examples ^{C)}
1	Slow	0.003	Evenly distributed low level fire load, small discrete packets of fuel or material of limited combustibility ^{D)}	Reception areas, concourses (without concession outlets) and halls with limited fire load such as sports stadia and foyers
2	Medium	0.012	Evenly distributed low to mid-level fire load comprising a mix of combustible materials	Offices, lounges, classrooms, auditoria, seating areas, galleries and car parks ^{E)}
3	Fast	0.047	Stacked combustibles (on or off racking and shelving but excluding high rack storage), some small quantities of materials other than materials of limited combustibility ^{D)} (or where larger quantities are stored in separate fire-resisting enclosures), process, manufacturing or storage of combustible materials	Shop sales areas ^{F)} , workshops, factories and small storage buildings
4 ^{G)}	Ultra-fast	0.188	Medium to large quantities of materials other than materials of limited combustibility ^{D)} , high racked storage, flammable liquids and gases or where rapid uncontrolled fire growth could occur	Warehousing ^{H)} , processing plants and car parks ^{E)} utilizing a car stacker or similar method where there is no fire separation between stacked cars

^{A)} These categories are related to the fire growth rate and not the ultimate potential fire size.

^{B)} This is discussed in PD 7974-1.

^{C)} These are examples only and may be varied according to the specifics of the building/room contents.

^{D)} Limited combustibility is defined in 3.77 and includes for this purpose materials also defined in 3.85 as non-combustible.

^{E)} Includes both open and non-open sided car parks.

^{F)} Includes covered shopping complexes and department stores as well as high street shops and premises for personal services, delivery and collection of goods for cleaning/repair/treatment either carried out by staff or by members of the public themselves. Combustibility, quantity and how goods are displayed should also be taken into account and the risk category amended accordingly.

^{G)} See Table 4. This category is unacceptable unless a sprinkler system is installed.

^{H)} This is a worst case assumption. Combustibility, quantity and the way in which goods (including packaging) are stored should be taken into account and the risk category amended accordingly.

OCCUPANCY TYPE / RISK PROFILE

I have assigned a BS 9999:2017 Risk Profile of **(A)** (Defined as **Awake and familiar with the building**).

MEANS OF WARNING AND ESCAPE

GENERAL

It is reasonable to assume the Fire Strategy only needs to deal with one fire at any one time. This building's fire strategy (as detailed by the Fire Safety Notices) will be based on the principle of Immediate Simultaneous Evacuation of all relevant occupants to the Assembly Points, which will be a place of ultimate safety.

"Simultaneous Evacuation" should be the default approach where it is unreasonable to expect the occupants to remain in the building for a prolonged time when there is a fire.

NOTE This takes into account not only the physical effects of the fire, but the psychological response of occupants confronted by an outbreak of fire.

An appropriate alarm arrangement should be selected in accordance with BS 5839-1:2017.

Widths of escape stairs for simultaneous evacuation should be in accordance with BS9999(2017).

The principal of Fire Marshal "sweeping" shall be deployed.

The final exit doors throughout the premises have a clear minimum opening width of **1050mm** which, using the BS9999 Risk Profile of **A2** this is sufficient for the maximum expected occupancy, so clearly adequate.

MEANS OF WARNING

A BS5839-1:2017 compliant **L2** category system (addressable) of automatic means of warning of fire is to be installed into the building. It should be tested and maintained in accordance with BS5839-1 and RRF50:2005 article 17 – Maintenance.

The building will have multiple Fire Alarm Zones/Areas.

MEANS OF ESCAPE

TRAVEL DISTANCE

Travel distances for escape are measured from any point within the premises to the final exit door(s). As defined in BS9999(2017) for an "A2" risk profile.

Maximum travel distance when minimum fire protection measures are provided:

Risk profile	Travel distance, in metres (m)			
	Two-way travel ^{B)}		One-way travel	
	Direct	Actual	Direct	Actual
A1	44	65	17	26
A2	37	55	15	22
A3	30	45	12	18
A4 ^{C)}	Not applicable ^{C)}	Not applicable ^{C)}	Not applicable ^{C)}	Not applicable ^{C)}
B1	40	60	16	24
B2	33	50	13	20
B3	27	40	11	16
B4 ^{C)}	Not applicable ^{C)}	Not applicable ^{C)}	Not applicable ^{C)}	Not applicable ^{C)}
C1	18	27	9	13
C2	12	18	6	9
C3 ^{C)}	9	14	5	7
C4 ^{C)}	Not applicable ^{C)}	Not applicable ^{C)}	Not applicable ^{C)}	Not applicable ^{C)}

NOTE 1: Direct travel applies where the layout is unknown, actual travel distance applies where it is known.

NOTE 2: Where premises contain provisions for the consumption of alcoholic beverages then a reduction in the travel distances of 25% might be advisable for those particular parts of the premises.

The maximum travel distances in the design are as follows and acceptable:

- Maximum permissible travel distance – minimum fire protection measures applied (actual distances applied):
- One way travel: **22m**, Two Way Travel: **55m**

1. HORIZONTAL MEANS OF ESCAPE

The building design allows for all sufficient Available Safe Evacuation Time with internal travel distances significantly within guidelines. Meaning walls and self-closing fire doors to habitable rooms, cross corridors and stairways provide at least 30 minutes of fire resistance when tested to BS476:22.

2. AUTOMATIC DOORS

Any final exit door with electromagnetic locks shall be designed such that they fail safely to an unlocked position, conforming to BS 7036 upon activation of the fire alarm, fire alarm system fault or power failure.

4. HEADROOM IN ESCAPE ROUTES

In accordance with BS 9999 (2017), escape routes (except for door frames) should have a minimum height of 2m.

5. LOCATION AND NUMBER OF FINAL EXIT DOORS

The design allows for multiple final exit doors leading directly to pathway / driveway level. The stairways ultimately lead directly to the final exit doors which open outwards.

This is an acceptable design and meets Requirement B1, Means of Warning and Escape, Approved Document B.

6. VERTICAL MEANS OF ESCAPE – USING COMMON STAIRWAYS

The Escape stairs are protected on the first floor with 30 minutes fire protection. The stairs discharge to a protected lobby at the base, leading directly to the external of the building, and ultimately to the assembly areas. The design allows for 30 minutes of fire separation to other parts of the building. This is considered tolerable.

Absolute minimum width of stairs (BS 9999:2017 refers as per the table below)

Occupancy characteristic	Width of stair for downward travel mm	Width of stair for upward travel mm
A	1,000	1,200
B (except assembly)	1,000	1,200
B (assembly only)	1,100	1,200
C	1,000	1,200

Minimum width of stair per person served over total number of floors served for an A2 risk profile is 3.80mm per person. Therefore:

1. 1420mm width/3.80mm = 373 persons, so tolerable.
2. 1430mm width/3.80mm = 376 persons, so tolerable

7. FINAL EXITS FROM STAIRS

The protection escape stair(s) discharge directly to the final exit doors, and then subsequently allow occupants to move directly to ultimate safety away from the building.

Strict mandatory door unlocking management protocols must be enforced to ensure that these doors are not locked during occupation.

8. ESCAPE USING ESCAPE WINDOWS

No requirement in this design.

DISABLED EVACUATION

It is envisaged that, where applicable, the RP will monitor the suitability of the building for occupants and develop Personal Emergency Evacuation Plans for each person requiring assistance in the case of an emergency. This may prohibit or restrict their access or use of the building, for example, occupation on the ground floor only ensuring that occupants will have left the building before the Fire and Rescue Service arrives.

There is no provision for refuge areas in accordance with Approved Document B, section B1 – Provision of Refuges, this is tolerable. –

EMERGENCY LIGHTING AND SIGNAGE

Escape Signage:

This is a simple building with no general public access; however, the common internal escape routes are to be distinctively and conspicuously marked by wayfinder signs following the recommendations of BS ISO 3864-1:2011 and BS 5499-4:2013.

Wayfinder Signage:

Floor level signage in stairways primarily for Fire and Rescue Service navigation should be used.

Emergency Lighting:

The common escape routes, internal and external, must be adequately illuminated at all material times, in accordance with BS 5266-1:2016.

Emergency escape lighting is to be provided in the areas listed below:

- The common lobbies and stairway
- Externally above final exit doors.

Emergency lighting should be installed in accordance with the recommendations of BS 5266 Part 1 and Part 7.

MULTIPLE TENANTS PER FLOOR

The design is appropriate for single occupancy only – Emil Dale Academy.

FORCED MECHANICAL VENTILATION

Provided all general fire precautions in this strategy are followed, there is no requirement to have a means of forced mechanical extraction of ambient temperature smoke from a fire.

AUTOMATIC VENTILATION

The design does not allow for automatic opening ventilation in the common stairway. This is tolerable.

MEANS OF CONTROLLING FIRE SPREAD

STRUCTURAL FIRE RESISTANCE

Load bearing elements of structure (including walls and floors) are required to retain their structural integrity by having a fire resistance period of at least 60 minutes. The elements of the structure should meet 'Requirement B3 Fire Spread (Structure), of Approved Document B'.

COMPARTMENTATION

The following table summarises the compartmentation (integrity and insulation) requirements throughout the building. The design meets the rating detailed in the Table below:

LOCATION	FIRE RATING (MINUTES) WHEN TESTED TO BS 476:22
Compartment floors	60
Between habitable rooms	30
Between habitable rooms and the Common Escape Stair	30
Protected corridors	30
Fire Hazard Rooms: Common electrical switch gear cupboards.	

• Rooms housing batteries – N/A • Refuse stores or stores and the common stair – N/A	30

Compartmentation Requirements

Compartment Floors:

Refer to Table above. The rating quoted in this table shall include all service penetrations.

Automatic Fire Suppression:

The design does not incorporate a BS 9251:2021 compliant Automatic Water Suppression System (AWSS). This is acceptable.

Dead-End Corridors:

There are no dead-end corridors in excess of 22m in the premises.

THIRD PARTY CERTIFICATION

The benefits of using third party certificated contractors for any subsequent fire compartmentation works, such as fire sealing service penetrations, should not be underestimated.

All fire compartmentation works should be installed by specialist companies with valid third-party certification of a relevant scheme, operated by a UKAS accredited organisation. The clause of each scheme shall be followed the scheme 'Certificates of Conformant Installation', and digital records of works issued to the project Health and Safety files.

FIRE DOORS

The following table summarises the fire door requirements throughout the buildings:

LOCATON	FIRE RATING
Between habitable rooms and corridors in a fire resisting wall	FD 30S (Self closing)
Storey Exits and cross corridors	FD 30S (Self closing)
Communal stores in the common stairway	FD 30 (Kept locked shut)
Doors to electrical risers in common stairway	FD 30 (Kept locked shut)

Fire door sets shall be BS 476:22 tested and approved, from a single manufacturer with valid Primary or Global test evidence, installed under a valid third-party certified fire door installer scheme, operated by a UKAS accredited organisation.

FIRE STOPPING AND CONCEALED SPACES

Any services which pass through a fire separating element shall meet either of the provisions outlined below, in accordance with Table 1 of this strategy:

- A proprietary sealing system from a single manufacturer which has been tested and approved to BS 476:22 for each application.
- Where ducts cross fire-resisting lines that are not escape routes, fire dampers activated by fusible links or heat reactive intumescent are acceptable. Where the fire resisting walls protect escape routes, smoke and fire dampers are required that are activated via smoke detection.

Any service penetration passing through the new external wall systems must be isolated from the walling system. This must be via a tested and approved product intended for this purpose and provide a minimum of 30 minutes of fire resistance.

Where there are external wall vented cavities, all cavity edges, for example around window reveals and service penetrations, a 30-minute tested and approved fire resisting cavity barrier system within the field of application is required to be installed.

Cavities must be fire stopped horizontally at all floor levels. This must be a tested and approved product to an E30 rating for this application.

INTERNAL LININGS

Fire spread will be limited by ensuring that internal linings conform to the description in the table below:

LOCATION	NATIONAL CLASS OR EUROPEAN CLASS OF LINING	LINING
Small rooms less than 4m sq	3	D-s3, d2
Circulation areas, other rooms	1	C-s3, d2
Common circulation spaces (stairways)	0	B-s3, d2

Table 3 - Internal Linings

EXTERNAL WALL FIRE SPREAD

The external wall should be independently assessed as meeting the standard of A2-s1, d0, which meets Building Regulations Approved Document B Requirement B4 Table 12.1.

Requirement:

External fire spread: The external walls of the building shall adequately resist the spread of fire over the walls and from one building to another, having regard to the height, use and position of the building. The roof of the building shall adequately resist the spread of fire over the roof and from one building to another, having regard to the use and position of the building.

Intention – Resisting the fire spread over external walls:

The external envelope of a building should not contribute to undue fire spread from one part of a building to another part. This intention can be met by constructing external walls so that both of the following are satisfied.

- The risk of ignition by an external source to the outside surface of the building and spread of fire over the outside surface is restricted.
- The materials used to construct external walls, and attachments to them, and how they are assembled, do not contribute to the rate of fire spread up the outside of the building.

The extent to which this is necessary depends on the height and use of the building.

Intention – Resisting fire spread from one building to another:

The external envelope of a building should not provide a medium for undue fire spread to adjacent buildings or be readily ignited by fires in adjacent buildings.

This intention can be met by constructing external walls so that all the following are satisfied:

- The risk of ignition by an external source to the outside surface of the building is restricted.
- The amount of thermal radiation that falls on a neighbouring building from window openings and other unprotected areas in the building on fire is not enough to start a fire in the other building.
- Flame spread over the roof and/or fire penetration from external sources through the roof is restricted.

The extent to which this is necessary depends on the building's use and position in relation to adjacent buildings and, therefore, the site boundary. The building's external walls will have an appropriate resistance to ignition and fire spread.

Treatments to existing external walls are to be maintained or any replacement systems are to provide at least the same level of fire performance as the existing system.

Intention – External cladding and wall finishes:

The existing façade treatment is facing brick and glazed windows. Any insulation materials introduced as part of any future works shall be non-combustible. Any other materials shall be non-combustible or shall meet the recommendations for limited combustibility as set out in Approved Document B or relevant legislation.

There is no requirement for FRAEW (Fire Risk Appraisal of External Walls) for these premises.

Roof Scape

The roof scape is a mixture of pitched tiled and flat design in places and acceptable. The building has no Photovoltaic (Solar PV) to consider.

ADB – B4 – EXTERNAL FIRE SPREAD – UNPROTECTED AREAS

RELEVANT BOUNDARIES: When considering the proximity to other buildings, the notional boundary is set at 2m.

FIRE FIGHTING ACCESS AND FACILITIES

FIRE SERVICE ACCESS

In accordance with Requirement B5 of Approved Document B, access to at least 50% of the perimeter should be possible. This is acceptable for these premises and access was available to the front and rear (although slightly limited) of the building.

FIRE HYDRANTS AND FIRE FIGHTING WATER SUPPLY

The premises has no compartments that are in excess of 280m². However, fire hydrant capability is situated within 100m of the building.

The nearest identified Fire Hydrant was located on Broadway/West View junction approx. 60 metres from the main entrance (As shown below).



SECONDARY POWER SUPPLIES

The fire protection system, such as automatic fire detectors and alarms, and emergency lighting, should comply with their respective British Standards which require back-up power supplies. Emergency lighting can be provided with battery back-up within the units themselves. There must be minimal delay in changing over if the main power fails.

FIRE SAFETY MANAGEMENT

FIREFIGHTING EQUIPMENT

Within all areas the management have an option to install suitable manual extinguishers in accordance with BS5306.

The scale of provision should be in line with the recommendations of BS 5306.

Co2 manual extinguishers should be installed for use on electrical fires linked to the electrical switch gear in any common stairway risers.

Their use should be detailed on staff inductions and training plans, and Fire Safety Action plans. The RP should actively train all staff on fire procedures, firefighting equipment and conduct regular evacuation drills to test this process.

No firefighting shafts or firefighting lifts are required.

FIRE RISK ASSESSMENT

Where relevant, a suitable and sufficient fire risk assessment (FRA) shall be carried out by the Responsible Person/Competent person. This Fire Strategy document should be used as a key reference document in the fire risk assessment process. It is important that occupants (staff, Students & visitors where applicable) are made aware of essential fire safety information, the level of risk, and their duty, as soon as practicable when the building is put into use and occupied.

The FRA should not go beyond the review date advised within the FRA without being reviewed. In the event of a significant change to the building (for example installation of PV panels), the occupancy, or management. or a fire event the FRA should be reviewed regardless of the formal review date.

The date of the last FRA could not be determined at the time of visit.

MANAGEMENT – ALL AREAS

The latest FRA should be utilised and judgements made with regards to the available management resources. The following factors should be considered to achieve the

expected management as recommended in BS 9999 for all buildings. The list of factors is not exhaustive but highlights some of the issues that need to be considered.

- Co-ordination and co-operation of staff.
- Planning for changes in risk profile.
- Work control and contractor controls (e.g. repairs to compartmentation, hot works permit)
- Communications procedures.
- Maintenance, testing, and record keeping of fire safety systems (for example fire doors, communal emergency lighting, communal fire alarm systems).
- Liaison with fire and rescue service

FIRE TRAINING

In line with the premises general policies, but to include Fire Marshal training with sweeping.

Management systems actively control work on site, e.g. repairs to structure, and in particular hot work. A work control system for this building has been developed to control work required on site and includes clear lines of responsibility; a permit system; and logging and audit processes.

ARSON

Arson in buildings has increased greatly in recent years. The motives for arson are varied, but include spite, revenge, jealousy, pyromania, profit-making including insurance fraud following bankruptcy, the desire to damage competitors, fraud related to slum clearance, gaining possession of a building, and the desire of criminals to conceal their crime.

Arson can present a serious threat to life, especially if the fire is started with a rapid-burning material such as petrol or if the arsonist starts fires in several places simultaneously so that the alternative escape routes normally provided in a building are blocked.

In commercial and industrial buildings, arson can also cause large direct losses and serious interruptions in business operations.

Good security arrangements can reduce the risk of arson, but care should be taken to ensure that they do not prejudice the means of escape.

The RP should ensure that any measures intended to prevent unauthorised access do not hinder the entry of the fire and rescue service to fight the fire or effect the rescue of trapped persons.

COMMUNICATIONS PROCEDURES

Communications procedures include means of being alerted to a fire, unwanted alarm(s) or near miss; communications between management and staff; messages to staff, and communications with the fire and rescue service in the event of a fire. A communications system will provide information to all those involved, with alternative arrangements as necessary, but will not have contingency arrangements.

FIRE SAFETY (ENGLAND) REGULATIONS 2022

This regulation is not applicable.

BUILDING SAFETY ACT 2022

This building is not a 'High Risk' building, as defined by the Building Safety Act 2022.

MAINTENANCE, TESTING AND RECORD KEEPING OF FIRE SAFETY SYSTEMS

LIAISON WITH FIRE AND RESCUE SERVICE

A good relationship with the fire and rescue service will have benefits for both building occupants and the fire and rescue service. It will ensure that the fire and rescue service are able to have an appropriate, pre-determined, response strategy for the premises, and will enable relevant persons to seek advice where appropriate on:

- How to prevent fires and restrict their spread throughout the building.
- The means of escape from the building in case of fire.

The liaison includes arrangements for notifying the fire and rescue service of changes to the occupancy, periods of abnormal occupancy, fire growth characteristics, and other relevant factors. However, the arrangements are unlikely to provide for routine meetings with the fire and rescue service.

ELECTRIC VEHICLES AND VEHICLE PARKING

The building has no provision for EV charging points. The charging of bicycles and scooters within all areas must be dealt with under the management procedures by the Responsible Person and their RRFSo:2005 Fire Risk Assessment. Such charging is prohibited. It is recommended that E Scooters are not permitted within the building confines. External storage should be sought.

Vehicle Parking

There should be no vehicle parking within 1.8m for the building(s) footprint.

CONTINGENCY PLANNING

Contingency plans need to include preparation and response to a wide range of foreseeable event, not a system that considers a narrow range of possible emergencies and incidents. These are likely to include planning for logistical issues such as weather extremes, time of day, time of week, time of year (holidays, etc.) and traffic-related issues (road works restricting access), as well as scenarios such as power failures.

EVACUATION DRILLS

It is best practice and a requirement in the RRFSo to complete evacuation drills. My Fire Safety Limited recommend twice a year, but it may be pertinent that these premises conduct 1 per term, this would be acceptable.

Drills must be recorded to include date, start time, finish time, i.e. confirmation of full evacuation to the planned point of ultimate safety (Muster Point), the weather, any

incidents. Any non-conformances ought to be subject to a non-conformance report, the root cause established, remediations created and monitored until the non-conformance can be accepted as "closed-off".

REPORT APPLICABILITY

GENERAL

Measures which fall outside the scope of the Building Regulations 2010 such as those for property protection may not have been addressed within this report. Whilst many of the proposed life safety features will have a property protection benefit, any insurers for the buildings or the council should be consulted to determine any additional requirements which they may propose for the development.

The report is intended for the sole use of the client, and the design team for this project, in support of their operation of the building(s). The information contained herein will not be relied upon by any third party and My Fire Safety will not accept any responsibility for matters arising because of third-party use.

Where specific fire safety details are not discussed within this report, it should be assumed that the recommendations of the relevant British Standard and ADB should be followed.

CONSTRUCTION, DESIGN AND MANAGEMENT REGULATIONS

Projects undertaken within the UK are subject to the requirements of the Construction, Design and Management Regulations 2015 (CDM).

It is intended to form part of the submission for Building Regulations Part B approval. Where any conclusions or recommendations have been arrived at which specify particular materials, products, or forms of construction, these will have been assessed in accordance with CDM Regulations 13. Where the design team or other consultants use the standard put forward in this report to specify works, they are understood to be competent in alerting the Client, Planning Supervisor, Contractors and Building Occupier of CDM issues.

Contractors and subcontractors can present an additional fire risk, as they are likely to be unfamiliar with the premises and with the associated fire risks and fire precautions. The risk is increased when contractors and subcontractors are carrying out hazardous activities such as hot work (e.g. cutting or welding), or when they are using substances that give off flammable vapours (e.g. some adhesives).

REGULATORY REFORM (FIRE SAFETY) ORDER:2005 AS AMENDED BY THE FIRE SAFETY ACT 2021

The development of a detailed management strategy for fire safety issues relating to the communal areas will be required to show that the owner or the Responsible Person (duty holder) has a strategy in place to cover the main areas of risk highlighted during the risk assessment process. It will be the responsibility of the building owner and any owner appointed management company, not the fire service to ensure the management strategy is implemented within the building.

GOLDEN THREAD OF INFORMATION

To support the principal of having a Golden Thread of Information, and a suitable and sufficient system of maintenance for the life cycle of the building, it is recommended that suitable and sufficient Operations and Maintenance manuals are created which must include fire safety information in line with Approved Document B Regulation 38.

PLANNING APPLICATION FIRE STATEMENT

There may be a requirement to complete a Fire Statement as part of any future planning application for this development. This document can meet this need.

CONCLUSIONS AND RECOMMENDATIONS

The fire safety needs identified within this Fire Strategy, and the solutions proposed by the project design team, provide relevant persons with an appropriate level of fire safety such that the requirements of the Building Regulations 2010 in relation to Part B: Fire Safety are met.

ADDITIONAL COMMENTS / RECOMMENDATIONS

No additional comments

REFERENCE DOCUMENTS

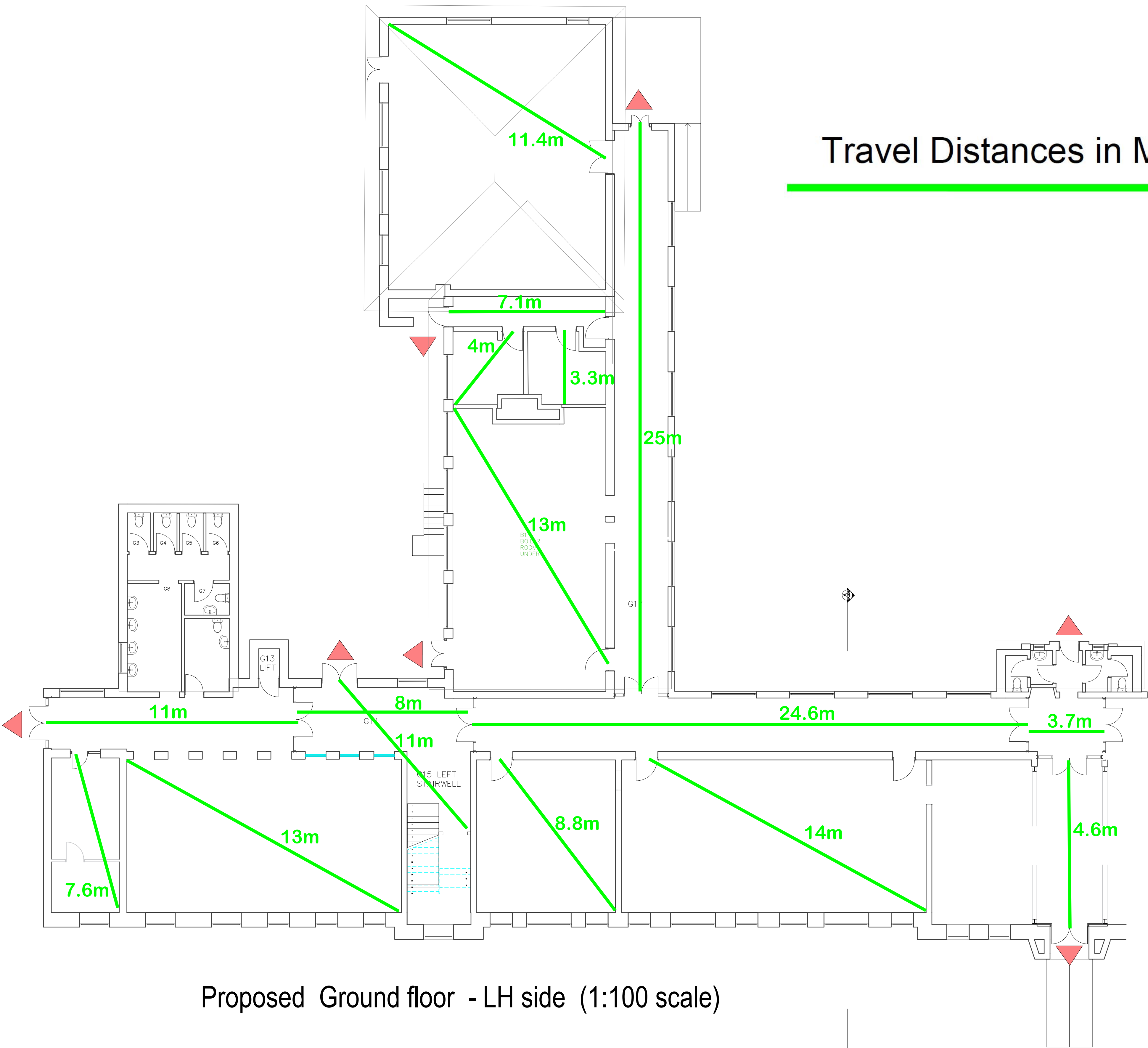
The main reference documents used in preparing this fire strategy are Building Regulation Approved Document B Vol 1 and Vol 2, 2019 incorporating up to the 2022 amendments.

BS 9999:2017 Code of practice for fire safety in the design, management, and use of buildings, plus with reference to

This report gives the relevant details of how the provisions of the above documents are applied to these designs to achieve an acceptable level of fire safety.

Other key reference documents potentially referred to in this report are:

- BS 5839-6:2019 +A1 2022 Fire detection and fire alarm systems for buildings.
- BS 5839-1:2017 Fire detection and fire alarm systems for buildings. Part 1 Code of practice for system design, installation, commissioning and maintenance.
- BS 5499-1:2002 Graphical symbols and signs. Safety signs, including fire safety signs. Part 1 Specification for geometric shapes, colours and layout.
- BS 5499-4:2000 Safety signs, including fire safety signs. Part 4 Code of practice for escape route signing.
- BS 5266-1:2016 Emergency lighting. Part 1 Code of practice for the emergency lighting of premises.
- BS 5306-8:2012 Fire extinguishing installations and equipment on premises. Part 8 Selection and installation of portable fire extinguishers - code of practice.
- BS 7273-4: 2007 Code of practice for the operation of fire protection measures. Part 4 Actuation of release mechanisms for doors.
- BS 7974:2019 Application of fire safety engineering principles to the design of buildings – Code of Practice.
- Building Safety Act 2022.
- Regulatory Reform (Fire Safety) Order:2005
- Fire Safety Act:2021.
- Fire Safety (England) Regulations 2022.
- National Fire Chiefs Council – future of EV in and around buildings.
- FPA:RC59 – fire safety with EVs.



Proposed Ground floor - LH side (1:100 scale)

Travel Distances in Metres

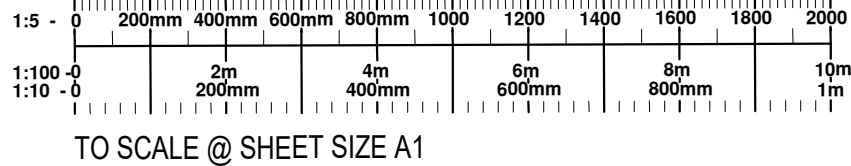
- represents existing device to be kept (smoke detector with sounder)
- represents existing device to be kept (smoke detector)
- represents existing device to be kept
- represents new device for L2 compliance (smoke detector with sounder)
- represents new device for L2 compliance (smoke detector)
- represents fire exit with push-bar fitted to the door

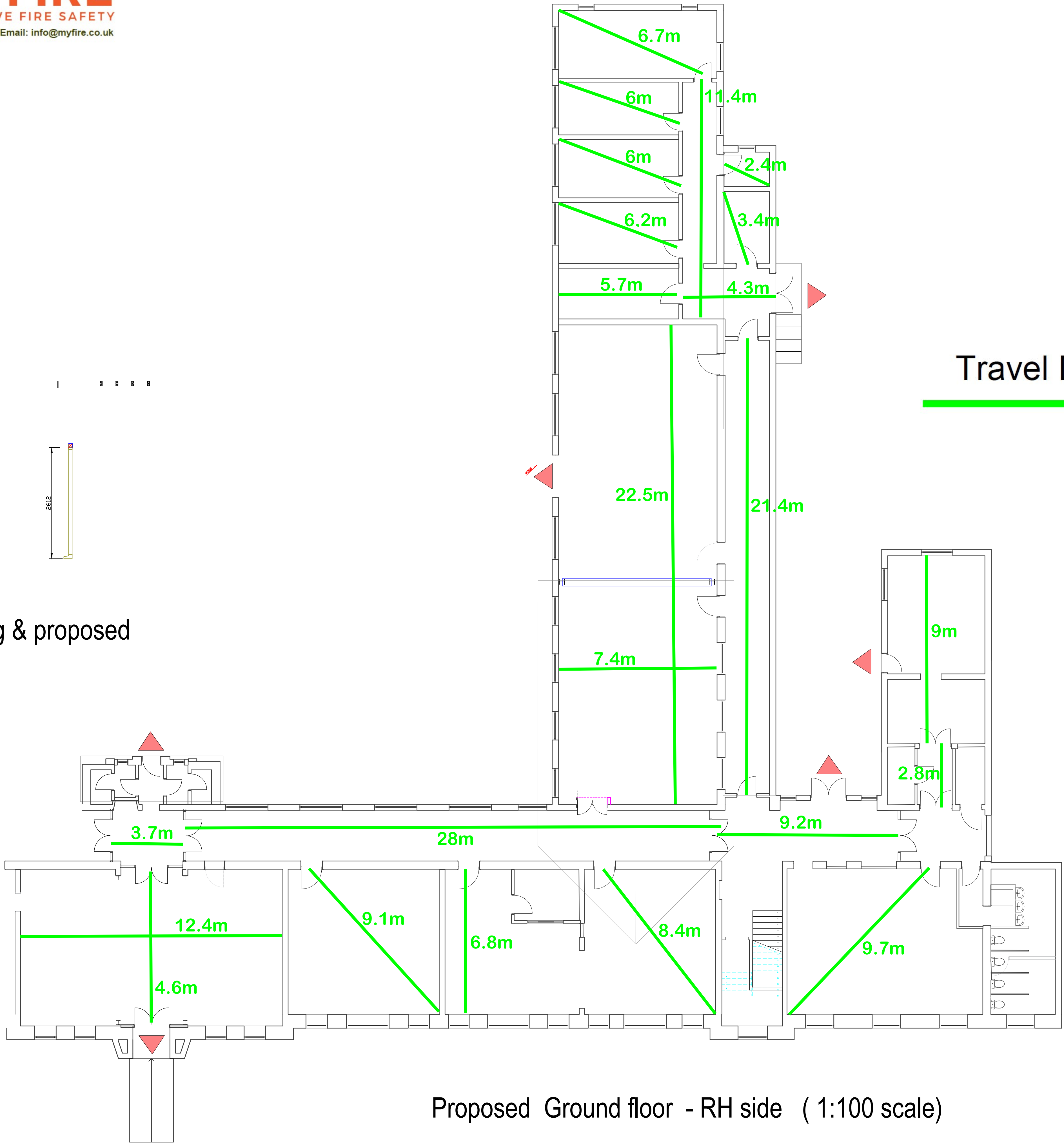
REVISION	DESCRIPTION	DATE
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CLIENT/PROJECT
Emil-Dale School of Performing Arts Ltd.
Old Grammar School, Letchworth.

Proposed Ground floor Left side
with rooms re-numbered

65 Shefford Road
Clifton Beds. SG17 5RQ
Tel. / Fax. 01462 650050





1:50 scale extg & proposed

Travel Distances in Metres

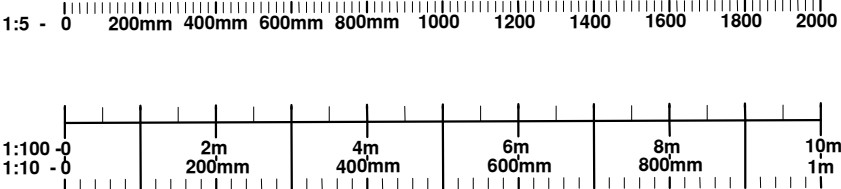
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represents new device for L2 compliance

represents new device for L2 compliance



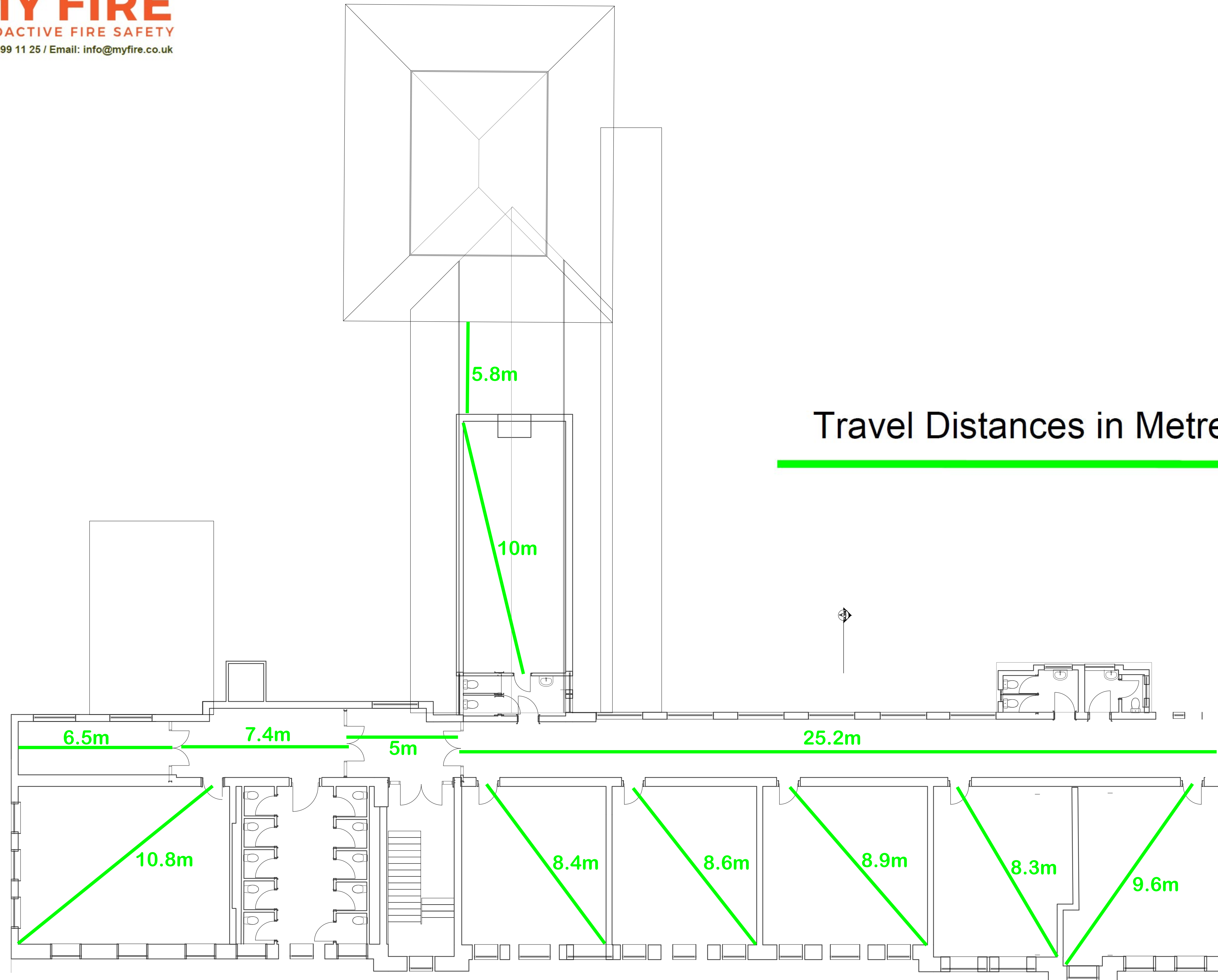
TO SCALE @ SHEET SIZE A1

REVISION	DESCRIPTION	DATE
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CLIENT/PROJECT
Emil-Dale School of
Performing Arts Ltd.
Old Grammar School, Letchworth.

Proposed Ground floor Right side
with rooms re-numbered

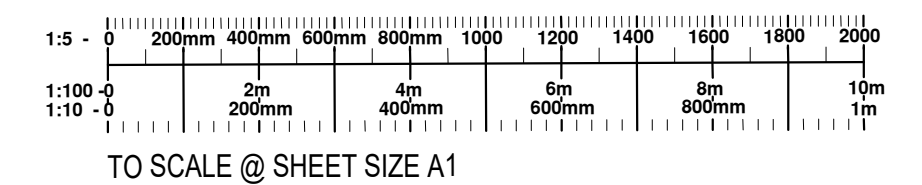
65 Shefford Road
Clifton Beds. SG17 5RQ
Tel. / Fax. 01462 650050



Proposed First floor - LH side (1:100 scale)

Travel Distances in Metres

- represents existing device to be kept
- represents existing device to be kept
- represents existing device to be kept
- represents new device for L2 compliance
- represents new device for L2 compliance

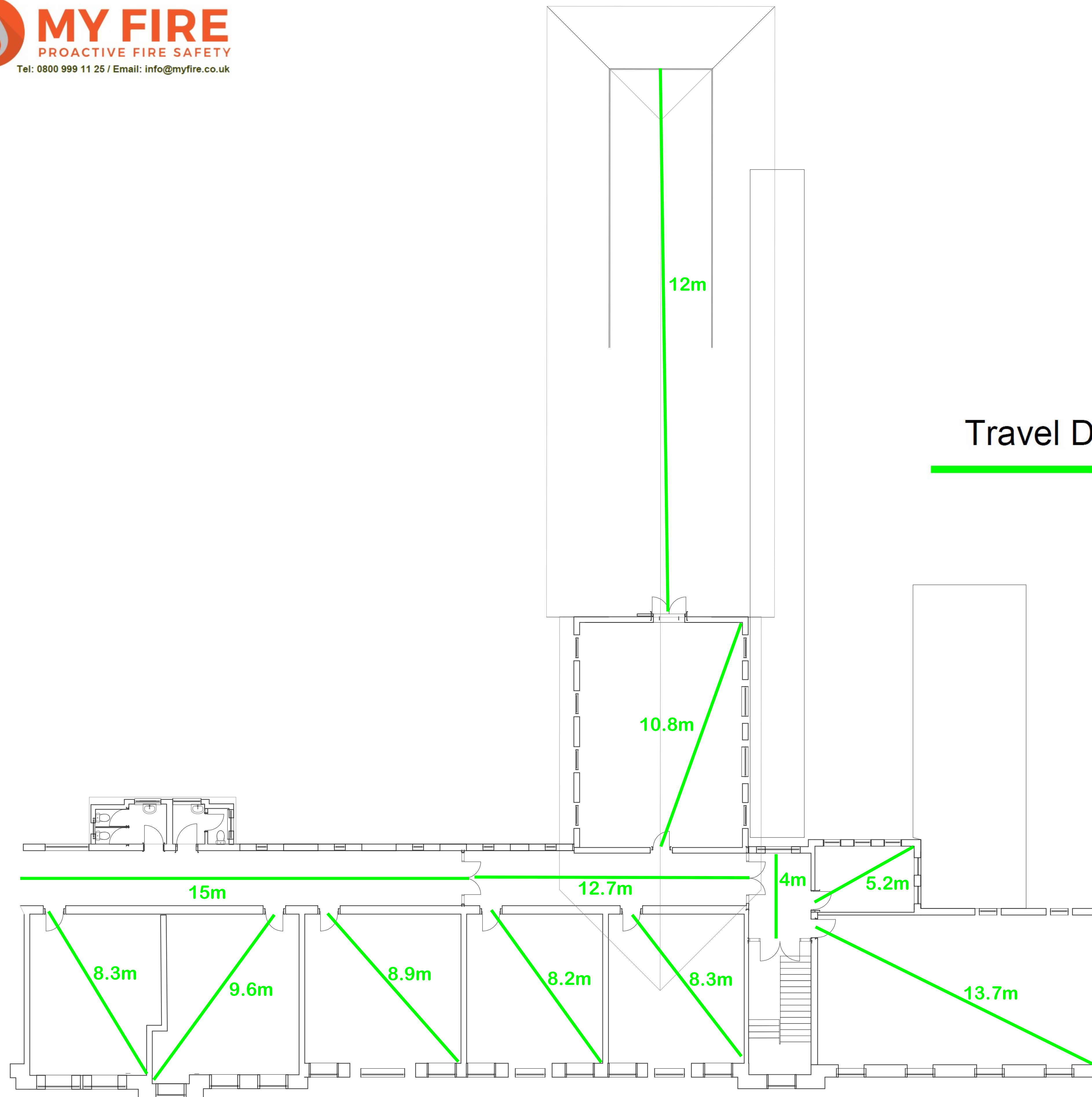


REVISION	DESCRIPTION	DATE
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CLIENT/PROJECT Emil-Dale School of
Performing Arts Ltd.

Old Grammar School, Letchworth.

Proposed First floor Left side
with rooms re-numberd



Proposed First floor - RH side (1:100 scale)

Travel Distances in Metres

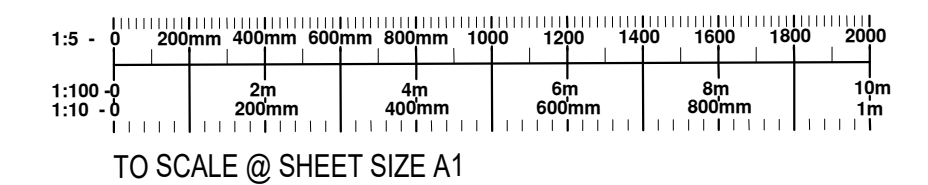
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represents existing device to be kept

represents new device for L2 compliance

represents new device for L2 compliance



REVISION	DESCRIPTION	DATE
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CLIENT/PROJECT Emil-Dale School of
Performing Arts Ltd.

Old Grammar School, Letchworth.

Proposed First floor Right side
with rooms re-numbered