tenos

Regent House
Wrexham

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Fire safety feasibility review

for:
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Issue and amendment record

Issue	Date	Author	Checked by	Amendment details
Issue 01	30 March 2026	W Stainburn & M Bell	A Storey	First issue.
Issue 02	20 April 2026	M Bell	A Storey	Updated following receipt of revised designs and comments from architect.
Issue 03	20 July 2026	M Bell	A Storey	Updated following receipt of updated drawings showing: - the existing dry riser - the gas pipe adjacent to the stair - extract duct from retail units
Issue 03a	23 July 2026	M Bell	-	Removed ‘bin store’ reference from architect layout in Figure 2.2.

Important information

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As this report relates to a project that is subject to third party approval it must be ensured that the contents are agreed with all relevant approval bodies prior to implementation.

In preparing this fire safety feasibility report it has been assumed that all aspects of the design and construction will, unless stated otherwise in this report, be in accordance with the recommendations of Approved Document B Wales, applicable British Standards and codes of practice.

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1 Introduction

1.1 This report presents a summary of our preliminary fire safety review of the proposals for Regent House, Wrexham in terms of compliance with statutory (life safety) requirements.

1.2 The main findings are summarised in Sections 3 and 4 and the most significant items are listed below:

- The proposed layouts do not conform with statutory guidance for the design of Purpose Group 2(b) buildings (i.e. Halls of residence) or Purpose Group 1(a) buildings (i.e. Flats).
- The proposed layouts can largely conform with the alternative design code BS 9991:2024. The use of BS 9991, and any outstanding variations (see Section 3), should be agreed with the approvals authority.
- The protection of the stair is a variation from guidance – see section 3.
- Automatic fire suppression (i.e. sprinklers) is required (see 1.10 et seq.).

1.3 Non-compliance with standard guidance will continue to represent a design risk until agreement to alternative approaches has been reached with the approvals bodies.

1.4 The review is intended to cover items that may have a major impact on cost or the building layout. Detailed aspects of design have not been addressed at this stage.

Building Regulations

1.5 The building will be subject to the provisions of the Building Regulations 2010, which are the primary basis for statutory control of building design in England and Wales.

1.6 Guidance on compliance with the requirements of Part B of the Building Regulations is presented in Approved Document B Wales 2020 (ADB). In some cases, this guidance is replaced or supplemented by reference to other standards such as BS 5839-1 for fire alarm systems, or to specific annexes and clauses of BS 9999 for certain building types / features. However, there is no obligation to adopt the recommendations given in ADB, or other guidance documents, if the functional requirements of the Regulations are met in some other way.

Regulation 5 – Change of use in an existing building

1.7 The use of part of the building will be changed to include residential use where previously it did not.

1.8 While the top storey is less than 11m above adjacent ground level, the building is taller than 11m high (i.e. to the roof level) and therefore it is required to comply with current requirements B1 to B5.

1.9 The building is not of sufficient height for the change of use of the building to result in the building becoming a relevant building (defined in Regulation 7 of The Building Regulations 2010, as amended).

Regulation 37 (Wales)

1.10 In Wales, the Building Regulations 2010 (as amended), at Regulation 37(a) require the provision of sprinklers where building work consists of the material change of use of a building in relation to rooms for residential purposes.

1.11 Approved Document B Wales states that it is normal practice to provide the automatic fire suppression system **throughout** a building to cover all areas required by the relevant technical standards.

Regulatory Reform (Fire Safety) Order

1.12 The Regulatory Reform (Fire Safety) Order 2005 (FSO) came into effect in 2006 and replaced the Fire Precautions Act, the Fire Precautions (Workplace) Regulations and various other pieces of fire safety legislation.

1.13 Responsibility for compliance with the FSO will rest with the "responsible person". In a workplace this will usually be the employer together with persons who may have control of other parts of the premises. In other cases, the person(s) who has control of the premises will be the "responsible person".

1.14 The FSO places on the "responsible person" specific duties such as carrying out a risk assessment and providing first-aid fire-fighting equipment. In order to comply with the FSO a fire risk assessment must be in place at the completion of the works.

1.15 Compliance with the measures outlined in this report will not in itself afford compliance with the FSO. However, subject to undertaking a fire risk assessment and implementing suitable fire safety management procedures additional physical measures should not normally be required unless high hazard materials or processes are introduced.

Loss prevention

1.16 Legislation is only concerned with life safety and not with financial loss. It may, therefore, be desirable to take additional measures to reduce the potential for fire related losses. Please let us know if you would like us to provide a separate commentary on loss prevention matters.

Drawings

1.17 The following information has been used in the preparation of this report:

Table 1.1: Drawings used in preparing this report

Reference	Title/ description	Rev.	Author
806.7 OBH 200 01	Existing Site and Location Plan A1h	REV -	Initiatives (Design) Ltd
806.7 OBH 200 02	Existing Site Block Plan A1h	REV -	Initiatives (Design) Ltd
806.7 OBH 200 03	Existing Floor Plans Combined A1v	REV -	Initiatives (Design) Ltd
806.7 OBH 200 04	Existing Elevations A1h	REV -	Initiatives (Design) Ltd
806.7 OBH 100 05	Proposed Floor Plans Combined A1v	REV -	Initiatives (Design) Ltd
806.7 OBH 200 06	Proposed Elevations A1h	REV -	Initiatives (Design) Ltd
806.7 OBH 200 07	Proposed Site Block Plan A1h	REV -	Initiatives (Design) Ltd

2 Brief description of the building

2.1 Summary of key parameters:

- Height of building ~17.8m
- Number of storeys 4 (G+3)
- Height of top storey ~10.3m

General layout and construction

2.2 The building is existing and consists of four above-ground levels with the highest floor being 10.3m above ground level. There is an existing plant level at a notional 4th floor which also provides access to the roof. A PV array is proposed on the roof.

2.3 The building will have overall dimensions of approximately 31m by 23m with a footprint area of approximately 565m².

2.4 The main structural frame is of concrete construction with concrete floors and brick cladding. The roof construction is yet to be confirmed.

2.5 A schematic plan of the building is presented in Figure 2.1 and Figure 2.2 below.

Use and classification

2.6 The existing ground floor comprises three retail units and is classified in Purpose Group 4 in ADB. The residential uses above will be used as student residences (halls of residence) and accordingly should be classified as Purpose Group 2(b).

2.7 However, based on our preliminary assessment, the current designs do not conform with ADB guidance for Purpose Group 2(b) buildings. Due to the position of the existing stair, it is unlikely that travel distances for this Purpose Group could be met for any configuration (based on direct travel distance assessment, travel distances would be to the order of 30m from the most remote corner to the stair, which exceeds the limit by ~50%).

2.8 As an alternative, it is typical to design these types of buildings where each “studio” is a standalone residential unit against guidance for Flats (Purpose Group 1(a)). However, the travel distances, again, do not accord with the guidance in ADB.

Design as Flats in accordance with BS 9991

2.9 The travel distances could be accommodated by an alternative method of assessing compliance (i.e. BS 9991). This approach should be agreed with the relevant approvals body but is recognised in paragraph 2.9 of ADB.

Location

2.10 The building is located with the principal elevation facing Regent Street (Stryt y Rhaglaw) and the car park to the rear accessed from Caxton Place. Vehicular access is available to these elevations.



Figure 2.1: Schematic plan of 3rd floor of the main building components (refer to architectural plans listed in Table 1.1 for detailed layouts)

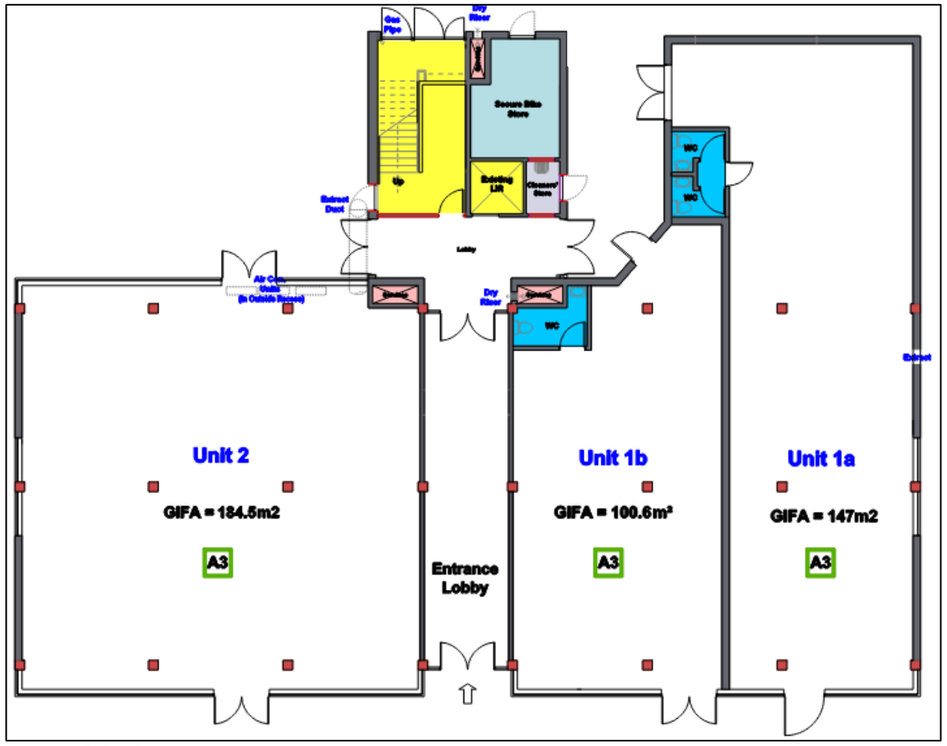


Figure 2.2: Schematic plan of ground floor of the main building components (refer to architectural plans listed in Table 1.1 for detailed layouts)



Figure 2.3: Schematic elevation for the front of the building

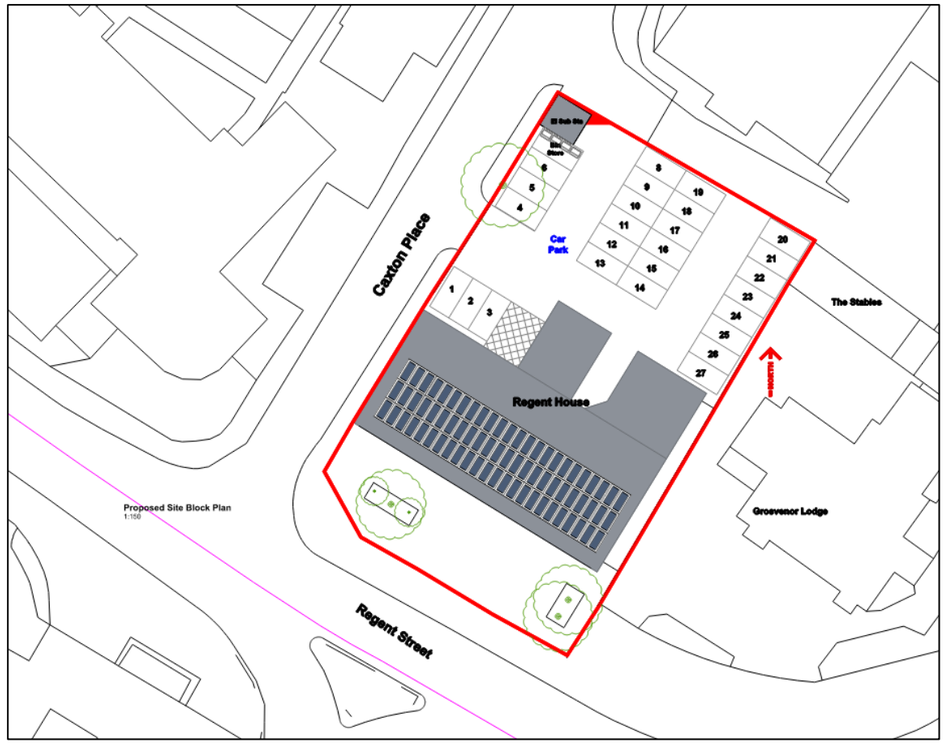


Figure 2.4: Site location and boundaries

3 Non-compliances

3.1 Table 3.1 summarises the significant items of non-compliance with the guidance in BS 9991:2024 and highlights potential options for their resolution.

Table 3.1: Non-compliances with standard guidance

Item	Conflict with guidance	Comments
B1 Means of warning and escape		
Protection of means of escape stair	The external walls forming internal angles between the stair/stair lobby and adjacent accommodation is not fire resisting.	It will be necessary to infill window glazing in the protected stair lobby and ground floor units with fire resisting construction to comply with BS 9991.
Protection of means of escape stair	The design of the residential stair and common corridors does not accord with guidance, see Figure 3.1 compared to Figure 3.2 (the travel distance exceeds 7.5m) and Figure 3.3 (cross corridor sub-division is required to separate 'wings' of the building).	Whilst the building has a top storey less than 11m, the guidance in BS 9991 for buildings with a top storey between 11m and 18m has been adopted. It is proposed to omit a central common corridor lobby (shown in Figure 3.3), in order to enable the common corridor to be a single space ventilated via two automatic opening vents (AOVs) (i.e. one at each end) to enable cross-flow ventilation and thereby enhance smoke ventilation. In addition, it is proposed that the stair lobby at the residential floors is provided with 1.5m^2 AOV or natural smoke shaft (in accordance with BS 9991 section 20.2.2.2 and Annex F). The proposed arrangement is shown in Figure 3.1. This indicates the AOV provision, and the vent provision (see *Vertical: Protection of common escape routes* and *Smoke control for escape* in Table 4.1).
B5 Fire service facilities		
Hose laying distances / dry riser	Hose laying distance from appliance parking position to most remote part of the building. Dry riser is located in the stair lobby and not the stair.	The hose laying distance from the fire appliance parking position is ~75m. However, there is also an existing dry riser which will be maintained, albeit this is located in the stair lobby. Given that the stair lobby is additional to the common corridor and is also to be ventilated, in our view this meets with the functional requirements.



Figure 3.1: Regent House schematic; ventilated common corridor & lobby - AOVs and permanent vents indicated.

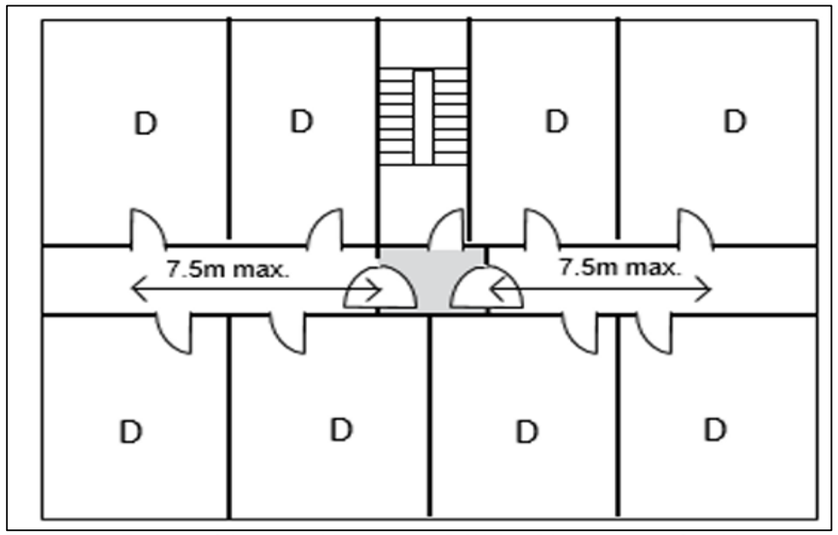


Figure 3.2: Extract of Approved Document B Wales Diagram 7a – Corridor access dwellings

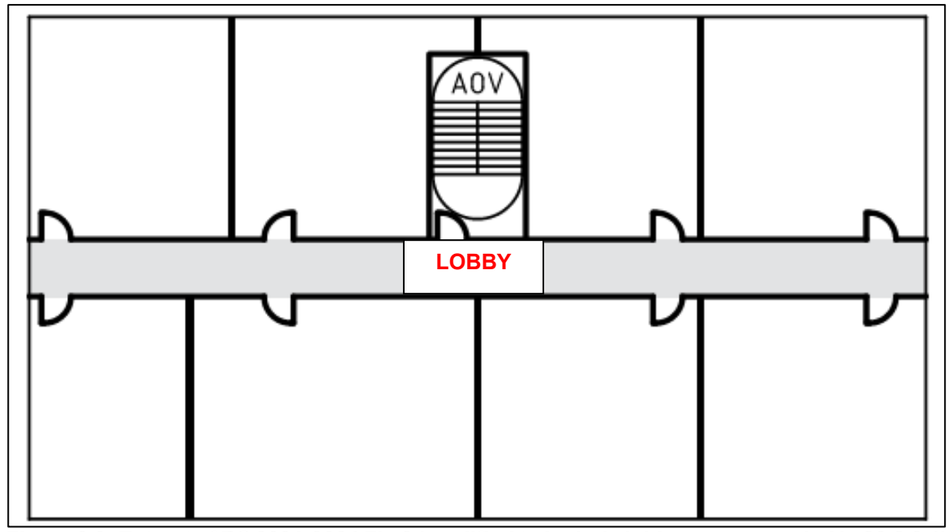


Figure 3.3: Extract of BS 9991:2024 Fig 8 (modified to include lobby recommended in 20.2.2.1)

3.2 Figure 8 of BS 9991 does not require a lobby between a common corridor and the stair. However, BS 9991 states in 20.2.2.1 that '*In a building that has accommodation on two or more sides of the common stair, the various wings of the building should be isolated by fire doors in accordance with 30.1* [of BS 9991]'. This recommendation creates a central lobby to separating wings, which would also require ventilation to comply with BS 9991.

3.3 Notwithstanding this, an alternative solution is proposed, whereby the undivided common corridor is provided with cross-ventilation via an AOV window at each end and the stair lobby is also ventilated via an AOV window.

4 Fire safety measures

4.1 Table 4.1 summarises the main fire safety measures that are likely to be necessary to achieve compliance with statutory requirements.

4.2 However, these items should be treated as indicative only until the fire safety strategy has been fully developed.

Table 4.1: Main fire safety measures

Fire protection measure	Comment
Requirement B1: Means of warning and escape	
Evacuation strategy	Defend in place for the residential element. Retail areas should be unaffected.
Electrical fire alarm system	Traditional sounders provided in accordance with BS 5839-6.
Automatic fire detection	Flats: Grade D1, Category LD2 in accordance with BS 5839-6. Common areas: Category L5 detection in accordance with BS 5839-1 to activate smoke ventilation systems.
Travel distances	Within flat: 9m (cooking area remote from flat entrance door) Within common corridor: 15m from flat entrance door to protected stair lobby (corridor and lobby provided with automatic smoke ventilation and travel distance limited to 7.5m within the lobby) – subject to agreement with the approval authorities to use BS 9991. In ancillary areas: in accordance with Table 16 of BS 9991.
Exit widths	Exit widths in accordance with Part M of the Building Regulations would be sufficient for means of escape from flats.
Horizontal: Protection of common escape routes	Common corridors (walls to be constructed as 60 minute fire resisting compartment walls).
Vertical: Protection of common escape routes	Stair to be enclosed in 60 minute fire resisting construction. Approached via: • Ventilated common corridor • Ventilated protected lobby See *Smoke control for escape*. Stair to be confirmed to be constructed of Class A2 materials. The external walls of the protected stair and stair lobby are to be made fire resisting (60 minutes) – to protect the residential means of escape route – so that the distance between the protected and unprotected parts of the building is at least 1.8m. This will require fire resisting external doors are ground floor. Refer to Figure 4.1. The existing gas service pipe runs up the external wall of the stair adjacent to the glazed wall construction. Whilst not within the stair there is no fire resistance between the gas service pipe and the stair. The objective of achieving 30 minutes fire resistance (per clause 37 of BS 9991) could be achieved by relocating the gas service pipe onto the brickwork façade.
Lift	Accessed from protected lobby serving stair at both ground floor and upper floors in accordance with BS 9991.
Provisions for persons of reduced mobility	Defend in place evacuation strategy in an unmanaged building (i.e. there is no 24/7 concierge). Wheelchair refuges are not typically required in Flats, but the stair is adequately protected from fire and smoke. Operator to develop a plan for the dissemination of relevant fire safety information, including the building's evacuation plan, to residents. The Building Safety (Wales) Bill introduces requirements for residential buildings to apply proportionate safety management. Considering this, it is our recommendation that Residential Personal Emergency Evacuation Plans (RPEEPs) are implemented as part of the building management procedures, in order to help improve the safety of residents who may need support to evacuate their building in the event of a fire.
Escape lighting	To be provided to all common escape routes and windowless accommodation in accordance with BS 5266-1.
Exit signage	In accordance with BS 5499-1 and the Health and Safety (Safety Signs and Signals) Regulations 1996.
Smoke control for escape	Common corridor: Provided in accordance with Clause 20.2.2 of BS 9991 with enhancements (see section 3). Protected stair lobby: Provided in accordance with Clause 20.2.2.2 of BS 9991 with enhancements. Ancillary accommodation lobby: Provided in accordance with Table 1 of BS 9991 (i.e. fixed openings at with a geometric free area of at least 0.4m^2) - see 'V' in Figure 3.1. AOVs will have an aerodynamic free area of at least 0.9m^2 - see 'AOV' in Figure 3.1.
Emergency electrical power supply	Required for life safety systems (e.g. fire alarm, emergency lighting, sprinklers).
Requirement B2: Internal fire spread (linings)	
Common areas	Class B-s3, d2 or better.
Small rooms (not exceeding 4m^2)	Class D-s3, d2 or better.
Other rooms	Class C-s3, d2 or better.
Requirement B3: Internal fire spread (structure)	
Fire resistance of structure	60 minutes
Maximum compartment size	Not applicable to flats.

Fire protection measure	Comment
Compartment walls	60 minutes fire resistance: To separate flats from each other and other parts of the building To enclose common corridors To enclose protected shafts To separate ground floor retail use from residential areas (including construction to separate the retail duct which runs external to the building)
Compartment floors	All floors in the building to be 60 minutes fire resisting compartment floors.
Cavity barriers	To be provided in accordance with BS 9991 clause 25.
Sprinkler system	Provided in the residential elements in accordance with BS 9251:2021. The residential use is provided with separate means of escape and there are no door openings between the residential stair / corridor and the retail uses at ground floor. This is consistent with the principles of 5.4 h) of BS 9251: 2021. Further, in our opinion, the material change of use to the upper floors would not require provision of sprinklers to the retail uses at ground floor to meet the functional requirements of Part B (Fire Safety) of the Building Regulations and, indeed, sprinklers are not recommended by BS 9991 guidance for this purpose. The project team met with Wrexham Building Control on 6th May 2026 to review the proposals and it was confirmed that the application of Regulations 37(A) and 37(B), for the material change of use of a part of a building, did not require sprinklers in the retail units in accordance with BS EN 12845.
Enclosure of places of special fire hazard	None proposed. *Note that there will be no refuse chutes or storage in the building. The bin store will be located in the car park away from the building and exits.*
Ancillary accommodation	Separated from other areas by fire compartment walls and floors. Connection to the common corridor via a protected lobby ventilated in accordance with Table 1 of BS 9991.
Requirement B4: External fire spread	
Relevant boundaries	Regent Street 20.2m Caxton Place 5.1m North Site 19.0m East Site 1.4m
Construction of external walls	Height of top finished floor level above ground: 10.3m. Table 9 of BS 9991 states that for walls more than 1m from the relevant boundary there is no provisions. We recommend that alterations to existing construction will use materials of Class A2-s3, d2 or better. Any alterations should be subject to a risk assessment.
Unprotected areas (UPA)	Regent Street 100% allowable UPA Caxton Place 100% allowable UPA North Site 100% allowable UPA East Site 31% allowable UPA – currently ~ 23%
Roof coverings	We recommend that the existing construction is investigated and confirmed as European Class B_{ROOF}(t4).
Photovoltaic panels	No specific requirements for fire safety in statutory guidance. However, RC62 provides guidance on provision of PV panels. Provision should be made for shutdown isolation by fire service and arc fault protection.
Requirement B5: Facilities for the fire service	
Fire tender access	Access to be provided to the stair via the rear car park. BS 9991 recommends that the parking position is to be provided within 75m of the furthest part of the building or dry rising mains provided. However, there is also an existing dry riser which will be maintained, albeit this is located in the stair lobby. Given that the stair lobby is additional to the common corridor and is also to be ventilated, in our view this meets with the functional requirements.

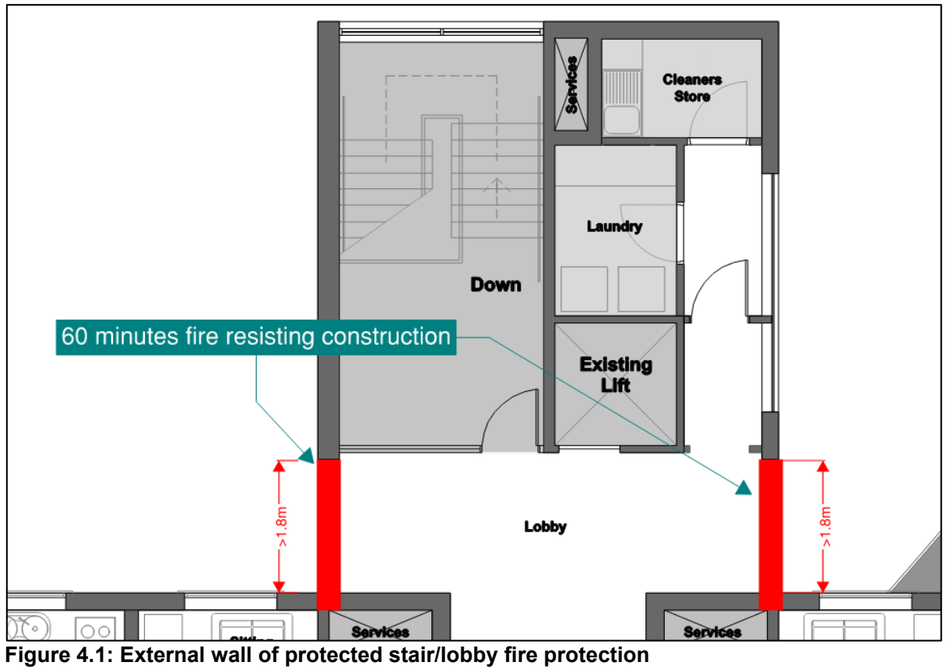


Figure 4.1: External wall of protected stair/lobby fire protection

5 Conclusions

5.1 The proposals contain non-compliances with standard guidance and fire engineering solutions are proposed.

5.2 Non-compliance with standard guidance will continue to represent a design risk until agreement to alternative approaches has been reached with the approvals bodies.

5.3 On the basis that the fire strategy is developed to align with the principles in this report, and otherwise the guidance in BS 9991: 2024 (as amended), it is our opinion that the proposed works will satisfy the functional requirements of Part B (fire safety) of the Building Regulations.

5.4 As the requirements of the Building Regulations and Fire Safety Order are set out in functional terms and can be interpreted in differing ways, it is essential that the fire strategy is fully developed and that recommendations of this report are agreed with the relevant approvals bodies prior to implementation.

5.5 Regulation 38 of the Building Regulations requires that fire safety information be given to the person responsible for the occupied building. Therefore, copies of the finalised fire strategy report, when developed, and other relevant fire safety information should be issued to the responsible person.

5.6 The Building Safety (Wales) Bill will generally apply to all residential buildings that contain two or more residential units and may impose new fire safety requirements on residents and owners when it comes in force.

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