

Document Version 4

Survey Date 24/08/2024

Suggested Review Date 24/08/2025

PAS 9980 STEP 2-5 (FRAEW)

GREENFORD HOUSE

Greenford House
Maria Street
West Brom
B70 6DX

This report must be retained on the premises for inspection by statutory authorities.
Management is responsible for actions required in this report and should brief all staff on the report's findings.

Enforcement Officers are requested to note that this document is designed to inform the Lessee Tenant Manager of the existing Fire Safety Arrangements and any Significant Findings. Issues relating to the control and management of fire safety management for fire safety measures can be found in in-house documents such as:

Fire Policy and Testing and Maintenance records

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Summary

PAS 9980 Step 2-5 (FRAEW)

Assessment and Certificate Reference

RB-N87BP2

Assessed On, By

24/08/2024, Douglas Murray (Building Safety Consultant)
(BSc Building Surveying, ABBE DipFRA, AIFireE, AssocRICS, MFPA)

Produced For the Responsible Person

Sandwell Metropolitan Borough Council

Specification Conforms To

Our own internal quality system.

Assessment Scope

Assessment applies only to the building specified.

Recommended Review Date

24/08/2025

Assessed Property

Property Name

Greenford House

Property Reference

RB-9P718M

Address

Greenford House
Maria Street
West Brom
B70 6DX

Assessing Organisation

Firntec Ltd
4a Darklake View, Estover, Plymouth, Devon, PL6 7TL
0345 646 1566 — www.firntec.com

Assessor Remarks

Greenford House is a 17 storey tower block in a wider complex of high rise multi occupancy buildings in West Bromwich. The block was completed circa 1967 and it is considered to be approximately 45 metres tall.

The block now contains 132 individual flats, after a recent modernisation programme. There are eight flats per floor, plus four flats on the ground floor. Each floor from 1st to 16th comprises 8 flats, 4 two bedroom (one at each corner) and 4 one bedroom flats (centre building), a stairway is situated at the end of each landing. There are two lifts in the block and these serve alternate floor levels.

Each flat has its own balcony, except the ground floor and on even numbered floors the two bedroom balcony's are physically separate from the single bedroom balcony's. On odd numbered floors the balconies are separated by a small metal partition.

The structure appears to be of reinforced concrete frame with reinforced staircores, lift core, floor slabs and foundations. The external walls are formed from a hand laid brick outer leaf and an internal leaf of concrete blockwork with projecting balconies on all occupied floors.

Improvement works were carried out 2010 planning reference DC/10/52440 which comprised of external insulated cladding, replacement windows, new front entrance porch, replacement balcony panels and addition of 2 flats at ground floor.

This report has been prepared for Sandwell Metropolitan Borough Council by Firntec Ltd Building Compliance. This survey has included consideration of the following pieces of legislation and other guidance relevant at the time of reporting:

The RRO (FSO) 2005

The Fire Safety Act 2021

The Building Safety Act 2022

Approved Document B of building regulations 2006

This report was prepared by Douglas Murray (BSc Building Surveying, ABBE DipFRA, AIFireE, AssocRICS, MFPA) who is a Building Surveyor with 25 years of fire related and construction experience in both new build and refurbishment projects on behalf of Firntec Ltd. Douglas is a member of the Royal Institute of Chartered Surveyors, the Institute of Fire Engineers, the Fire Protection Association, and an ABBE qualified Fire Risk Assessor. Douglas has specialised within Fire Safety and cladding investigations for eight years and has held senior posts with London and nationally based Registered Social Landlords. Douglas advises on and produces Building Safety Case Reports and has taken the lead for various clients securing, quality checking and completing Type 1-4 Fire Risk Assessments, completing Fire Risk Assessments of External Walls (FRAEW), leading on Intrusive investigative surveys, and preparing fire strategy documents. Part of the work Douglas completes, supports and evidence claims brought forward under the Defective Premises Act in the context of non-compliance and fire safety defects within multi occupancy buildings.

Summary

Abbreviation/ Term Definition

- **ACM** Aluminium Composite Material
- **ADB** Approved Document B
- **AOV** Automatic Opening Vent
- **BSA** Building Safety Act 2022
- **Cavity Barrier** Product used to close or separate a concealed space to restrict fire and smoke
- **Close State Cavity Barrier** Cavity Barrier designed to be fitted under compression/friction between inner and outer surfaces of a cavity to seal it
- **Open State Cavity Barrier** Cavity Barrier that is open to allow ventilation/drainage of cavity in open state but closes when a developing fire occurs (e.g., intumescent strip)
- **Combustible** Not classified as A1 OR A2 in accordance with BS EN 13501-1: 2018, and not meeting definitions of non-combustible or limited combustibility
- **Compartmentation** Subdivision of building by fire resisting walls and/or floors for limiting fire spread
- **EPS** Expanded Polystyrene
- **EWS1** External Wall System Fire Valuation Form
- **FB** Fire Barrier - Separating element with fire integrity for a specific time
- **Fire Stop** Barrier seal to close an imperfect fit in design between elements of components to stop the spread of fire
- **FRAEW** Fire Risk Appraisal of External Walls
- **FRA** Fire Risk Assessment
- **FRS** Fire and Rescue Services
- **FSA** Fire Safety Act 2021
- **HPL** High Pressure Laminate
- **HRR** Heat Release Rate
- **MDF** Medium Density Fibre Board (a type of manufactured timber)
- **PIR** Polyisocyanurate Rigid Foam
- **PUR** Polyurethane Foam
- **RP** Responsible Person
- **RRFSO** Regulatory Reform (Fire Safety) Order 2005
- **SFS** Steel Framing System
- **SIB** Secure Information Box

Statement of Competency

Statement of Competency to Carry out a Fire Risk Appraisal of External Wall Construction

Within PAS 9980:2022 it requires that a person conducting the FRAEW are competent to do so in accordance with Annex H and to demonstrate the expected skill sets of competent external wall assessors.

This is our Statement of Competence to carry out a Fire Risk Appraisal of External Wall construction.

We confirm that they have:

- a) Read and understood the commentary and provisions relating to the competence of external wall assessors set out in Section 8 and Annex H of PAS 9980:2022;
- b) Adequate and relevant competence to undertake the FRAEW;
- c) Sufficient knowledge, skills and experience in relation to fire safety of external walls to be able to complete an assessment at the level required;
- d) The relevant skill, knowledge, and experience to manage and interpret the results of intrusive inspections; and
- e) The competence to appraise and assess the nature of external wall construction in terms of fire performance and provide an opinion on the risk.
- f) No conflicts of interest of any kind, other than any which are disclosed in the report.
- g) The conclusions of the report are the author's independent assessment of the risks and remedial actions and have not been influenced in any way by the opinions or actions of others except where stated.

Terms of Reference

Particulars

This FRAEW report follows the guidance in accordance and reference to PAS9980:2022 Fire Risk Appraisal of External Walls construction and cladding of existing blocks of flats – Code of Practice.

Limitations

The FRAEW addresses life safety only in relation to the appraisal of the external walls of the building; and in considering risk, this is only in relation to the threat to the occupants in the building and not in terms of property damage or other potential objectives, such as safety of firefighters.

The FRAEW is not aimed at confirming compliance with building regulations, either at the time of construction, or currently.

The FRAEW cannot provide certainty and being risk-based report, it is, therefore, to a degree, reliant on professional judgement in its assessment and in the conclusions drawn within the report.

The FRAEW report is to be reviewed:

- a) if significant changes/repairs have been made to the external wall; and/or
- b) in the event of a fire incident, if the fire involved the external wall construction; and/or
- c) if there are any circumstances, depending upon the nature of the construction, the extent of available knowledge in relation to the particular materials, components and systems used on the building or the degree of uncertainty over the findings, which suggest review is appropriate. In these cases, the report will include a clear explanation as to why periodic review is necessary and include a suggested review date."

If more definitive information becomes available subsequent to the FRAEW on how particular external wall materials, components and systems behave in fire, or there are changes in the fire performance data relied upon in an FRAEW, such information will be expected to take precedence.

Assumptions

It is understood that the absence of evidence, is not evidence of the absence; therefore, within the FRAEW report suitable caveats or assumptions may be applied in arriving at a risk rating, for example, in relation to:

- a) the extent of sampling carried out.
- b) the accuracy of information upon which it has been necessary to rely, especially where it has not been possible to verify the information through site survey and inspection.
- c) the extent of the content and detail within the report; and
- d) the limitations at the time of the FRAEW of available knowledge on the fire performance of the materials, products and systems forming the external walls of the building.

Any caveats or assumptions made within the report are based on the most onerous and worst-case scenarios.

Statement of Intent

The investigation and writing of this FRAEW report has been commissioned at the clients request in line with PAS9980: 2022, which covers residential buildings of all heights with 2 or more dwellings, including hotels, with the aim to make sure that residents of multi-occupancy buildings are safe.

The Fire Safety Act 2021 also puts a legal responsibility on the responsible person where a building contains two or more sets of domestic premises to identify the building's structure and external walls and any common parts including doors or windows in those walls, and anything attached to the exterior of those walls (including balconies).

Executive Summary

External Wall Systems and Attachments on the Building

12 areas were inspected to gain data about the building's wall constructions. See the Inspections section of this report for full inspection details.

The table below outlines the ratings of the various wall systems and constructions to the property. Each element is explained in more detail further within this report.

8 Items	Effect	Risk
Wall Construction Wall Type 1 brickwork over mineral wool insulation (22P4XH)	Positive	Low
Wall Construction Wall Type 2 - render over mineral wool insulation (WPR1XG)	Positive	Low
Wall Construction Wall Type 3 - HPL balustrade panels (1VQESL)	Neutral	Medium
Attachment Cantilever Balcony (XMSQBK)	Neutral	Medium
Penetration Flue (4AVFJ6)		
External Window Top, Mid, Side Hung Casements (WR77FN)	Positive	Low
External Door Single Leaf Entrance Doors (D8TGAM)	Positive	Low
External Door Single Leaf Entrance Doors (ZMQUK6)	Positive	Low

In accordance with the PAS 9980 Guidance, any items of construction which are considered as "Medium Risk" should be subject to periodic review, to ensure that conditions do not change, such that the risk may be upgraded to high, prompting the requirement for remediation.

Overall Building Risk Rating



Our professional opinion is that overall this Building represents a Neutral PAS9980:2022 Outcome.

Recommended Remediations

No recommended remediations identified.

Recommended Interim Measures

No recommended interim measures identified.

Fire Strategy

Fire Strategy & Hazard Risk Factors

F.1 Occupancy

General needs housing

Neutral

F.2 Evacuation

Stay put

A 'stay put' policy is adopted for the flats. That is, in the event of a fire in a flat, the occupants of that dwelling will evacuate, having been alerted by their own domestic fire detection and alarm system, and request fire service attendance. All other occupants will remain in their flat unless they are threatened by fire and smoke or are advised to evacuate by the fire service. The 'stay put' evacuation policy relies heavily on adequate compartmentation being provided; fire should not spread from one dwelling to another, including by means of the external fabric of the building

Positive

Photo Ref. 1

F.3 Escape Route Design

Single staircase, with lobby approach

Photo Ref. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Positive

F.4 Compartmentation

Adequate compartmentation in line with the expectations for a block of flats. Sandwell operate a regime of fire stopping and compartmentation checks to ensure compartmentation is satisfactory

Positive

F.5 Smoke Control

Arrangements in which openable windows, AOVs or inlets and outlets of mechanical systems are of a satisfactory proximity away from combustible cladding; or that fire and smoke spread from the external envelope would be unlikely to compromise the effectiveness of the smoke control system or allow a route for fire spread back into the building

Positive

Photo Ref. 13, 14, 15, 16

F.6 Fire Alarm & Detection

Fire detection is installed to a minimum of LD3 standard, with many flats upgraded to LD2 and LD1.

LD3 – Smoke detection in the hallway only.

LD2 – Smoke detection in the hallway and living room, plus heat detection in the kitchen.

LD1 – Smoke detection in all rooms except wet rooms.

No general fire alarm system is installed in communal areas.

Smoke detectors are only used for Automatic Opening Vent (AOV) activation.

Positive

F.7 Fire Suppression

A deluge (sprinkler) system is installed only in the bin store.

Positive

F.8 – Firefighting Facilities

A dry riser is available at ground and all other floor levels

Photo Ref. 17, 18

Positive

F.9 Rising Mains

A rising main is available directly at the main entrance and on each other floor level, the fire hydrant is within 5 metres of the building

Photo Ref. 19, 20, 21

Positive

F.10 Lifts Used By Firefighters

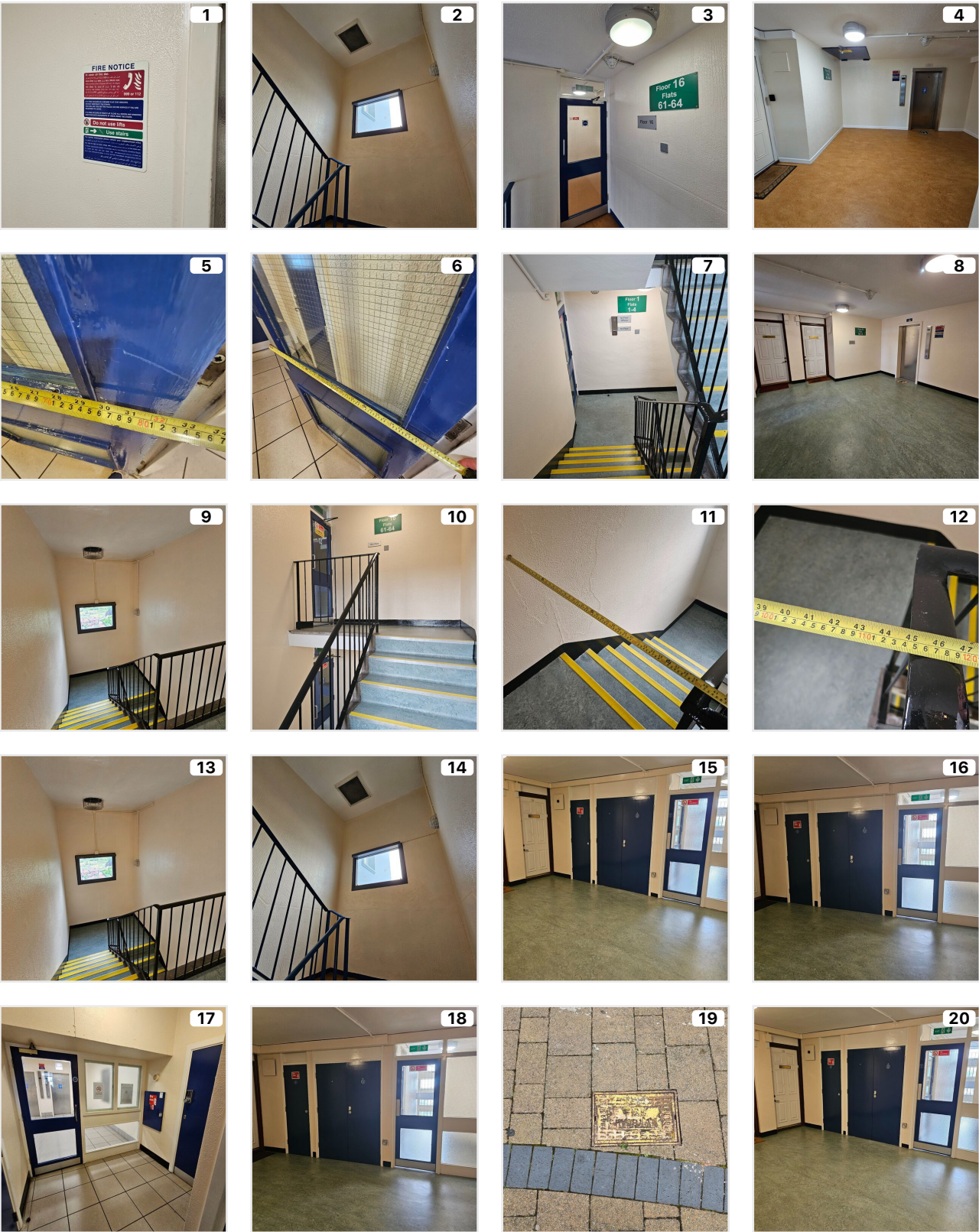
There are two lifts serving alternative floors and each has been fitted with fire switch at ground

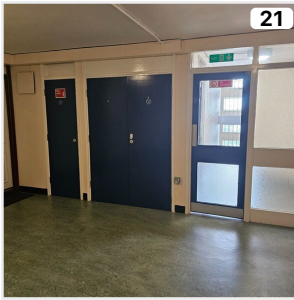
Photo Ref. 22

Positive

F.11 Specific Fire Hazards

Photos





Fire Service Intervention

Event	Seconds	Minutes & Seconds
Initiation to fire detection	30 Seconds	30 Seconds
Actuation Of Fire Detector To Transmission Of Alarm	30 Seconds	30 Seconds
Processing By Central Monitoring Station	90 Seconds	1 Minute 30 Seconds
Receipt of call by fire service mobilising control	90 Seconds	1 Minute 30 Seconds
Transmission To Fire Station And Response	60 Seconds	1 Minute
Travelling Time Of Fire Service	240 Seconds	4 Minutes
Arrival Protocol And Entry Preparation Time	240 Seconds	4 Minutes
Firefighting Travel In Firefighting Lift	120 Seconds	2 Minutes
Firefighter travel to operational bridgehead	240 Seconds	4 Minutes
Firefighter Travel Walking Up Two Flights Of Stairs To Fire Floor (75 Seconds)	75 Seconds	1 Minute 15 Seconds
Total Time	1,215 Seconds	20 Minutes 15 Seconds

Nearest Fire Station

Is Hargate Lane West Bromwich B71 1PD, which is 2.1 miles or 6 minutes in peak hours traffic

Wall Constructions

Wall Construction	Build-up
Wall Type 1 brickwork over mineral wool insulation (22P4XH)	• Surface Finish (Brickwork) • Insulation (Mineral Wool Insulation) • Inner Leaf Support (Backing Wall) (Original brickwork)
Wall Type 2 - render over mineral wool insulation (WPR1XG)	• Surface Finish (Render) • Insulation (Mineral Wool Insulation) • Inner Leaf Support (Backing Wall) (Original brickwork)
Wall Type 3 - HPL balustrade panels (1VQESL)	• Surface Finish (Suspected High Pressure Laminate (HPL) Panel)

Wall Construction: Wall Type 1 brickwork over mineral wool insulation

Construction Reference
22P4XH

This wall construction was identified by wall inspections SPNPDG, KM4A9X, and 8UY7MR. The build-up, cavity barrier, and floor slab information is taken directly from inspection SPNPDG. See the Inspections section of this report for full inspection details.

Construction	Effect	Risk
Wall Type 1 brickwork over mineral wool insulation (22P4XH)	Positive	Low

Build-Up

3 Elements	Thickness/Depth	Material	Rating (BS EN13501)
Surface Finish	102mm	Brickwork	A1 - Non-Combustible
Brickwork sections have a full fill mineral wool insulation, the internal leaf forms part of the original external masonry wall			
Insulation	100mm	Mineral Wool Insulation	A1 - Non-Combustible
Inner Leaf Support (Backing Wall)	102mm	Original brickwork	A1 - Non-Combustible

Cavity Barriers

There is no external wall cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Fire Performance

K.1 General

Materials with a calorific value (gross heat of combustion) of ≤ 3 MJ/kg

Positive

K.2 External Surfaces

Class A1/A2

Positive

K.3 Facings/Cladding Panels

Adhesive fixed

Neutral

K.4 Panel Construction

No gaps between panels

Neutral

K.5 Cavities

Facings into the cavity at least Class A2

Neutral

K.7 Substrate

Masonry, >75 mm thick

Positive

PAS Standard Benchmark

L1 Benchmark

The Construction benchmark is outlined in section L1 of the PAS 9980 Guidance Document -

Masonry (brickwork, blockwork, reinforced concrete)

Loadbearing masonry, provided it is in good condition, can generally be regarded as providing a substrate which is both non-combustible and fire-resisting to a standard of at least 30 min (60 min if 100 mm thick or more). Non-loadbearing masonry might, or might not, have the same properties.

L3 Benchmark

Insulation materials previously classified as non-combustible/ limited combustibility (now Class A1 or Class A2)

- Stone wool
- Ceramic fibre
- Glass fibre
- Foamed glass
- Exfoliated vermiculite

Class A1 or Class A2 (non-combustible and limited combustibility) insulators pose negligible risk in external wall construction. Where such insulators fully fill wall construction then this might indicate that they are being relied upon as contributing to a period of fire resistance. However, if fire resistance is required or being relied upon as part of the assessment, it is important that these insulators fully fill the space they are in or are sufficiently rigid or otherwise mechanically retained/supported to provide a continuous barrier through the space (e.g. batts will retain their shape whereas quilt can slump in a cavity).

L5 Benchmark

FRAMES -

The frames of windows and doors can, subject to the materials used in their construction, provide the function of cavity barriers or cavity closers around these openings. Typically, timber and steel frame windows offer the cavity barrier function whereas aluminium and uPVC do not. However, it is advisable to check uPVC frames with a magnet, as steel can be incorporated within the frame, particularly where the doors are required to provide a level of security.

L6 Benchmark

FIXING METHODS -

Mechanical fixings are invariably the most reliable means of fixing together the various components of external wall construction.

Metals, depending upon their softening/melting temperature, might remain in situ or might soften, melt, or even rapidly oxidize, exposing the underlying construction to fire.

Adhesives can be simply relied upon where it is clear that they are cementitious in nature and provide a good bond onto their substrate. Where an adhesive is not clearly cementitious, it might need to be identified so that its fire performance can be ascertained, particularly where failure of the adhesive could have direct implications for fire performance (e.g. supporting insulation, rainscreen or cavity/fire barriers).

L7 Benchmark

MASONRY (OUTER SINGLE SKIN ONLY)

When assessing a building which appears to have masonry or concrete external wall construction, the following issues need to be taken into account.

- a) Is the masonry/concrete loadbearing or simply providing a façade?
- b) Is the masonry/concrete traditional (i.e. full bricks laid in courses using sand/cement mortar or concrete exceeding 75 mm thick); or

- 1) brick slip (tiles) fixed to a substrate; or
- 2) factory produced (typically panellized) brickwork?

If either item 1) or item 2) above, then treat as other form of cladding depending upon underlying construction (most likely rainscreen).

- c) What is the underlying construction? For example:

- 1) second leaf of masonry/concrete forming a cavity;
- 2) timber frame;
- 3) steel structure and frame;
- 4) concrete structure and SFS;
- 5) concrete structure and concrete panels; or
- 6) insulated build-up (this is typically used where historic façades are retained over more modern construction, and can come in a variety of forms).

BR135 Benchmark

We have compared this external wall type to the cladding systems found on the BR135 database and we did find a cladding system with the configuration and components that would constitute an exact match to what our inspections found installed on the Property.

Wall Construction: Wall Type 2 - render over mineral wool insulation

Construction Reference
WPR1XG

This wall construction was identified by wall inspections 9BWRGQ, UF4LLN, and HXLQYS. The build-up, cavity barrier, and floor slab information is taken directly from inspection 9BWRGQ. See the Inspections section of this report for full inspection details.

Construction	Effect	Risk
Wall Type 2 - render over mineral wool insulation (WPR1XG)	Positive	Low

Build-Up

3 Elements	Thickness/Depth	Material	Rating (BS EN13501)
Surface Finish	6mm	Render	A1 - Non-Combustible
The EWI system is a 4-8mm render with mineral wool slab/substrate attached mechanically to the original wall system. The EWI is considered to be A1 or non-combustible			
Insulation	100mm	Mineral Wool Insulation	A1 - Non-Combustible
Inner Leaf Support (Backing Wall)	102mm	Original brickwork	A1 - Non-Combustible

Cavity Barriers

There is no external wall cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Fire Performance

K.1 General

Materials with a calorific value (gross heat of combustion) of ≤ 3 MJ/kg

Positive

K.2 External Surfaces

Class A1/A2

Positive

K.3 Facings/Cladding Panels

Mechanically fixed

Positive

K.4 Panel Construction

No gaps between panels

Neutral

K.5 Cavities

Facings into the cavity at least Class A2

Neutral

K.6 Insulation

Mineral/glass insulation

Positive

K.7 Substrate

Masonry, >75 mm thick

Positive

PAS Standard Benchmark

L1 Benchmark

The Construction benchmark is outlined in section L1 of the PAS 9980 Guidance Document -

Masonry (brickwork, blockwork, reinforced concrete)

Loadbearing masonry, provided it is in good condition, can generally be regarded as providing a substrate which is both non-combustible and fire-resisting to a standard of at least 30 min (60 min if 100 mm thick or more). Non-loadbearing masonry might, or might not, have the same properties.

L3 Benchmark

Insulation materials previously classified as non-combustible/ limited combustibility (now Class A1 or Class A2)

- Stone wool
- Ceramic fibre
- Glass fibre
- Foamed glass
- Exfoliated vermiculite

Class A1 or Class A2 (non-combustible and limited combustibility) insulators pose negligible risk in external wall construction. Where such insulators fully fill wall construction then this might indicate that they are being relied upon as contributing to a period of fire resistance. However, if fire resistance is required or being relied upon as part of the assessment, it is important that these insulators fully fill the space they are in or are sufficiently rigid or otherwise mechanically retained/supported to provide a continuous barrier through the space (e.g. batts will retain their shape whereas quilt can slump in a cavity).

L5 Benchmark

FRAMES -

The frames of windows and doors can, subject to the materials used in their construction, provide the function of cavity barriers or cavity closers around these openings. Typically, timber and steel frame windows offer the cavity barrier function whereas aluminium and uPVC do not. However, it is advisable to check uPVC frames with a magnet, as steel can be incorporated within the frame, particularly where the doors are required to provide a level of security.

L6 Benchmark

FIXING METHODS -

Mechanical fixings are invariably the most reliable means of fixing together the various components of external wall construction.

Metals, depending upon their softening/melting temperature, might remain in situ or might soften, melt, or even rapidly oxidize, exposing the underlying construction to fire.

Adhesives can be simply relied upon where it is clear that they are cementitious in nature and provide a good bond onto their substrate. Where an adhesive is not clearly cementitious, it might need to be identified so that its fire performance can be ascertained, particularly where failure of the adhesive could have direct implications for fire performance (e.g. supporting insulation, rainscreen or cavity/fire barriers).

BR135 Benchmark

We have compared this external wall type to the cladding systems found on the BR135 database and we did find a cladding system with the configuration and components that would constitute an exact match to what our inspections found installed on the Property.

Wall Construction: Wall Type 3 - HPL balustrade panels

Construction Reference
1VQESL

This wall construction was identified by wall inspections 5ZM6PC, BQAGVL, and MGNQ3I. The build-up, cavity barrier, and floor slab information is taken directly from inspection 5ZM6PC. See the Inspections section of this report for full inspection details.

Construction	Effect	Risk
Wall Type 3 - HPL balustrade panels (1VQESL)	Neutral	Medium

Build-Up

1 Element	Thickness/Depth	Material	Rating (BS EN13501)
Surface Finish	6mm	Suspected High Pressure Laminate (HPL) Panel	B - Combustible

Cavity Barriers

None

Fire Performance

K.1 General

Materials with a calorific value (gross heat of combustion) >3 MJ/kg and ≤35 MJ/kg	Neutral
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K.2 External Surfaces

Class B	Neutral
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K.3 Facings/Cladding Panels

Mechanically fixed

Positive

K.4 Panel Construction

Gaps between panels of 10 mm to 20 mm

Neutral

K.5 Cavities

No cavity barriers present, or cavity barriers ineffective through poor installation/maintenance

Neutral

K.7 Substrate

Masonry, >75 mm thick

Positive

PAS Standard Benchmark

L2 Benchmark

Hybrid Boards

Hybrid boards have been developed to provide particular combinations of properties (e.g. non-combustibility and fire resistance with flexibility). Performance of hybrid boards cannot be assumed and manufacturers' data needs to be sought.

L6 Benchmark

BALCONIES -

Balconies are defined in BS 8579. However, for the purpose of this PAS and the manner in which balconies impact external fire behaviour, balconies fall into one of three categories:

- a) those which fall entirely within the curtilage of the building structure (i.e. they are built on the slab and appear inset into the building when observed from outside). They might be enclosed to an extent and might effectively be made fully enclosed (sometimes referred to as a "winter garden"). The extent of enclosure needs to be considered in light of whether, from a fire perspective, the space can be treated as part of the outside or whether it is in effect a compartment (i.e. subject to compartment fire behaviour);
- b) those which project beyond the main building structure but do so on an extension of the floor slab. They provide an advantage in that their construction matches that of the compartment floor within the building, and can deflect fire/smoke plumes away from the building; and
- c) those which project beyond the main building structure and are fixed to the outside face of the building. They can only be of lightweight construction; their construction needs to be assessed based upon the combustibility and fire resistance of any materials used.

Regardless of balcony type, the materials used to line the balconies (including soffits) need to be assessed in light of their likely contribution to external fire spread.

Storage of materials and other uses by residents also need to be taken into account. Any bulk storage can pose a significant hazard, as can the use of combustion appliances such as barbecues and heaters.

Aside from the above, means of escape external walkways (a form of balcony) are not within the scope of this PAS, as any risk associated with these would need to be considered as part of the overarching FRA.

L9 Benchmark

HPL -

HPLs are most commonly formed of a mixture of cellulose (wood pulp, recycled paper or similar) and combustible polymeric resin, though external wall assessors need to be aware that any combination of materials formed in a press can be termed a "high pressure laminate" and might be difficult to differentiate visually.

HPLs formed of cellulose and resin typically behave in a charring manner analogous to timber, with similar flame spread, energy release and mechanical behaviour (charring until breaking apart). With treatment for enhanced fire performance (usually by additive of chemical fire retardant), these behaviours can potentially be improved, but need to be known on a product-specific basis before they can be relied upon as providing better performance.

BR135 Benchmark

We have compared this external wall type to the cladding systems found on the BR135 database and we did not find a cladding system with the configuration and components that would constitute an exact match to what our inspections found on the Property.

APPENDIX

Asset Information

Client Name

Sandwell Metropolitan Borough Council

Client Address

Sandwell Council House
Freeth Street PO Box 2374
Oldbury
B69 3DE

Responsible Person

Sandwell Metropolitan Borough Council

Safety Assistance

Not Required

Contact Details

As provided by client

Fire Alarm System

Fire detection is installed to a minimum of LD3 standard, with many flats upgraded to LD2 and LD1.

LD3 – Smoke detection in the hallway only.

LD2 – Smoke detection in the hallway and living room, plus heat detection in the kitchen.

LD1 – Smoke detection in all rooms except wet rooms.

No general fire alarm system is installed in communal areas.

Smoke detectors are only used for Automatic Opening Vent (AOV) activation.

Emergency Lighting

Installed in communal parts

Emergency Lighting

Emergency lighting appears to conform to the requirements of BS5266-1 design standard. The system appears to provide adequate coverage and be in good working order (indicator lights active on luminaires). Luminaires are correctly sited and appear to provide adequate lighting.

Portable Fire Fighting Equipment

Portable Fire Fighting Equipment installed within staff only / Restricted areas of the building

Portable Fire Fighting Equipment

Extinguisher equipment is installed within staff only / Restricted access areas of the building.

Smoke Control

Smoke control installed

Smoke Control

The stairs and/or lobbies are provided with adequate permanent or manually operated ventilation openings for the control of smoke. Manual openable windows within the stairwell and the stairs and lobbies are provided with an automatic smoke ventilation system

Suppression Systems

Partial sprinkler system installed (Detailed in Description)

Suppression System

A deluge (sprinkler) system is installed only in the bin store.

Fire Fighting Facilities

Dry Riser

Fire Fighting Facilities

Dry riser outlets were located on each floor within the firefighting lobby area, ensuring accessible water supply for firefighting operations. This placement allows for efficient connection of firefighting hoses, providing vital water access to emergency services during fire incidents across all floor levels.

Access for fire-fighting vehicles

Adequate access for firefighting vehicles

NOTE This is where access is possible in line with benchmark guidance on access for firefighting vehicles from Approved Document B, taking into account the size of the building (floor area), height of the building and whether fire mains are present in the building.

Fire Hydrant Location/ Water Supply

The fire hydrant is located at the rear entrance/exit of the building, approximately 1 meter from the door, near the bin store shutters.

The hydrant's location is also recorded on the orientation plan within the Premises Information Box (PIB).

Housekeeping

Good standard. Means of escape clear. Refuse stored appropriately

Secure Information Boxes

Secure information box (SIB) installed

Secure Information Boxes

A proprietary steel SIB is fitted within the main entrance lobby

Signage

Appropriate signage installed throughout premises

Signage

There is a consistent standard of Directional. Wayfinding. Fire Action Notices. No Smoking. Do Not Use Lift in Case of Fire. Final Exit. Fire Door.

Property Type

Apartment Block, Residential Purpose-built

Building Era / Age

Known Build Date

Known Build Date

1967

Building Height

Is approximately 45 metres from lowest point at ground to the upper most enclosed finished floor slab

Approx Floor Area Per Floor

The approximate footprint of Greenford House is 600m²

Number of Storeys (Ground and above)

There are 17 floors including the ground floor

Number of Basement Levels

None

Number of Flats

67

Flat Types

Single Storey

Structural Wall Material

Brick / Block

Structural Floor Material

Reinforced Concrete

Structural Stairs Material

Concrete

Construction (Details)

Traditional concrete frame and brick construction which has had refurbishment works including UPVC windows, insulation and render facade over the existing facade.

Exterior Cladding

FRAEW Completed on Exterior Cladding

Exterior Cladding (Details)

Improvement works were carried out 2010 planning reference DC/10/52440 which comprised of external insulated cladding that was found to be a mineral wool based external wall insulation with cement based render finish; replacement windows were found to be softwood timber with metal capping; the new front entrance porch was found to be polyester powder coated metal.

Replacement balcony panels are Trespa panels which have been installed on all balconies

Electronic Entrance System

Yes

Carpark

External/Outdoor Carpark

Employees

None

Residents

Yes

Approx number of Residents

134

Residents (Extended)

Assumed to be two residents per flat (Exact numbers not known)

People With Reduced Mobility

Other

People with Reduced Mobility (Extended)

General Needs - No information however, General Needs premises so occupants are typical of the general population

Lone Workers

None

Young Persons Employed in the Premises

None

Escapes & Exits

There are sufficient fire exits from the premises of suitable width and within acceptable travel distances. These will allow all persons in the premises to evacuate safely in the event of fire. Emergency exits open outwards in escape direction.

Number Of Internal Escape Stairs

The building is provided with a single escape stair

Number Of Final Exits

The building is provided with two individual escape exits

External Means Of Escape

None Present

Types Of Lifts Installed

Passenger + Fireman's Control

Evacuation Chairs Installed

No

Refuge Points Present

Yes

Stairwells Protected / Lobbied

Yes

Flat Doors Open Onto Stairs

No

Current Evacuation Strategy

Stay Put

Current Stay Put Strategy Description

The current evacuation strategy is Stay Put as denoted by the fire action notices displayed in the common area.

Current Evacuation Strategy for the property considered appropriate?

Yes

Description

The premises is purpose-built with an adequate standard of compartmentation. The current Stay Put evacuation strategy is considered appropriate.

What is the recommended evacuation strategy for the property?

Stay Put

Aerial Perspective: Greenford House

Aerial Perspective: Showing Aerial view of Lissimore House and the surrounding area



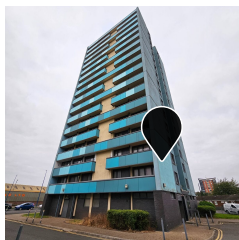
Elevations

Photo	Name	No. of Storeys
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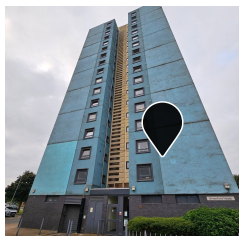
Inspections

Elevation Location	Inspection	Elements
	Inspection: SPNPDG Survey locations as tagged Accessible wall	• Surface Finish (Brickwork) • Insulation (Mineral Wool Insulation) • Inner Leaf Support (Backing Wall) (Original brickwork)
	Inspection: ML5F2T Inspection: 9BWRGQ Accessible wall	• Surface Finish • Surface Finish (Render) • Insulation (Mineral Wool Insulation) • Inner Leaf Support (Backing Wall) (Original brickwork)
	Inspection: CQH5N1 Inspection: 5ZM6PC Survey locations as tagged Accessible wall	• Surface Finish • Surface Finish (Suspected High Pressure Laminate (HPL) Panel)
	Inspection: ZHX4MV Inspection: KM4A9X Survey locations as tagged Accessible wall	• Surface Finish • Surface Finish (Brickwork) • Insulation (Mineral Wool Insulation) • Inner Leaf Support (Backing Wall) (Original brickwork)
	Inspection: 8UY7MR Survey locations as tagged Accessible wall	• Surface Finish (Brickwork) • Insulation (Mineral Wool Insulation) • Inner Leaf Support (Backing Wall) (Original brickwork)

Elevation Location**Inspection****Elements****Inspection: UF4LLN**

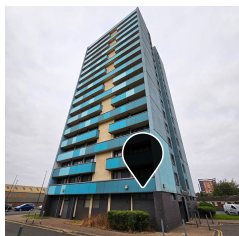
Survey locations as tagged
Accessible wall

- Surface Finish (Render)
- Insulation (Mineral Wool Insulation)
- Inner Leaf Support (Backing Wall) (Original brickwork)

**Inspection: HXLQYS**

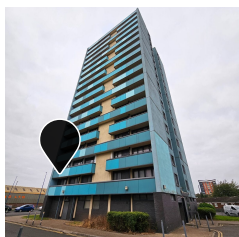
Survey locations as tagged
Accessible wall

- Surface Finish (Render)
- Insulation (Mineral Wool Insulation)
- Inner Leaf Support (Backing Wall) (Original brickwork)

**Inspection: BQAGVL**

Survey locations as tagged
Accessible wall

- Surface Finish (Suspected High Pressure Laminate (HPL) Panel)

**Inspection: MGNQ3I**

Survey locations as tagged
Accessible wall

- Surface Finish (Suspected High Pressure Laminate (HPL) Panel)

Inspection: SPNPDG

Elevation • Location
Survey locations as tagged • Accessible wall



Name/Summary

Wall Type 1 - brickwork over mineral wool insulation

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	102mm	Brickwork		A1 - Non-Combustible
Brickwork sections have a full fill mineral wool insulation, the internal leaf forms part of the original external masonry wall				
Insulation	100mm	Mineral Wool Insulation		A1 - Non-Combustible
Inner Leaf Support (Backing Wall)	102mm	Original brickwork		A1 - Non-Combustible

Cavity Barriers

There is no external wall cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Inspection: ML5F2T

Name/Summary

Wall Type 1 - hand laid class 2 brickwork with residual cavity of 80mm

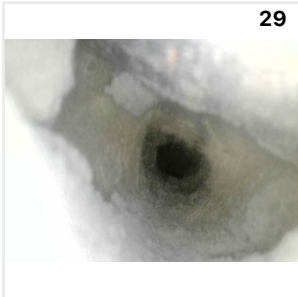
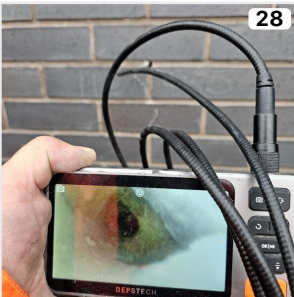
Build-Up

1 Element	Thickness/Depth	Photo Ref.	Rating (BS EN13501)
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Surface Finish	102mm		A1 - Non-Combustible
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Brickwork sections have a full fill mineral wool insulation, the internal leaf forms part of the original external masonry wall

Inspection Photos



Inspection: 9BWRGQ

Location
Accessible wall

Name/Summary

Wall Type 2 - render over mineral wool insulation

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
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Surface Finish	6mm	Render		A1 - Non-Combustible
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The EWI system is a 4-8mm render with mineral wool slab/substrate attached mechanically to the original wall system. The EWI is considered to be A1 or non-combustible

Insulation	100mm	Mineral Wool Insulation		A1 - Non-Combustible
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Inner Leaf Support (Backing Wall)	102mm	Original brickwork		A1 - Non-Combustible
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Cavity Barriers

There is no external wall cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Inspection: CQH5N1

Name/Summary

Wall Type 2 - mineral wool substrate EWI with cement based render system of between 4-8mm

Description

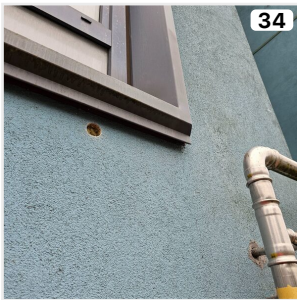
The EWI system is a 4-8mm render with mineral wool slab/substrate attached mechanically to the original wall system. The EWI is considered to be A1 or non-combustible

Build-Up

1 Element	Thickness/Depth	Photo Ref.	Rating (BS EN13501)
Surface Finish	8mm		A1 - Non-Combustible

The EWI system is a 4-8mm render with mineral wool slab/substrate attached mechanically to the original wall system. The EWI is considered to be A1 or non-combustible

Inspection Photos



Inspection: 5ZM6PC

Elevation • Location
Survey locations as tagged • Accessible wall



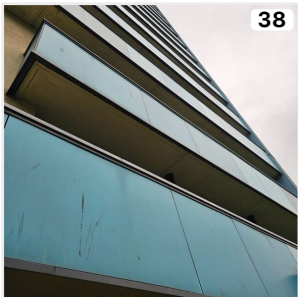
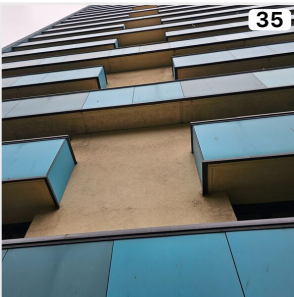
Name/Summary

Wall Type 3 - HPL panels attached by a metal frame onto original concrete balustrades

Build-Up

1 Element	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	6mm	Suspected High Pressure Laminate (HPL) Panel		B - Combustible

Inspection Photos



Inspection: ZHX4MV

Name/Summary

Wall Type 4 - render system unknown

Build-Up

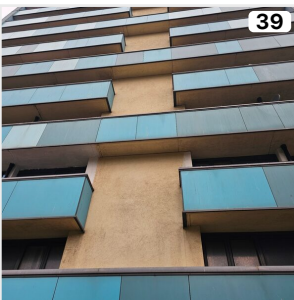
1 Element	Photo Ref.	Rating (BS EN13501)
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Surface Finish		
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		A1 - Non-Combustible
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Render system which has been installed between flats vertically, we would expect these sections to be a mineral wool based EWI render as found on other render sections

Inspection Photos



Inspection: KM4A9X

Elevation • Location
Survey locations as tagged • Accessible wall



Name/Summary

Wall Type 1 - brickwork over mineral wool insulation

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	102mm	Brickwork		A1 - Non-Combustible
Brickwork sections have a full fill mineral wool insulation, the internal leaf forms part of the original external masonry wall				
Insulation	100mm	Mineral Wool Insulation		A1 - Non-Combustible
Inner Leaf Support (Backing Wall)	102mm	Original brickwork		A1 - Non-Combustible

Cavity Barriers

There is no external wall cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection: 8UY7MR

Elevation • Location
Survey locations as tagged • Accessible wall



Name/Summary

Wall Type 1 - brickwork over mineral wool insulation

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	102mm	Brickwork		A1 - Non-Combustible
Brickwork sections have a full fill mineral wool insulation, the internal leaf forms part of the original external masonry wall				
Insulation	100mm	Mineral Wool Insulation		A1 - Non-Combustible
Inner Leaf Support (Backing Wall)	102mm	Original brickwork		A1 - Non-Combustible

Cavity Barriers

There is no external wall cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection: UF4LLN

Elevation • Location
Survey locations as tagged • Accessible wall



Name/Summary

Wall Type 2 - render over mineral wool insulation

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	6mm	Render		A1 - Non-Combustible
The EWI system is a 4-8mm render with mineral wool slab/substrate attached mechanically to the original wall system. The EWI is considered to be A1 or non-combustible				
Insulation	100mm	Mineral Wool Insulation		A1 - Non-Combustible
Inner Leaf Support (Backing Wall)	102mm	Original brickwork		A1 - Non-Combustible

Cavity Barriers

There is no external wall cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection: HXLQYS

Elevation • Location
Survey locations as tagged • Accessible wall



Name/Summary

Wall Type 2 - render over mineral wool insulation

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	6mm	Render		A1 - Non-Combustible
The EWI system is a 4-8mm render with mineral wool slab/substrate attached mechanically to the original wall system. The EWI is considered to be A1 or non-combustible				
Insulation	100mm	Mineral Wool Insulation		A1 - Non-Combustible
Inner Leaf Support (Backing Wall)	102mm	Original brickwork		A1 - Non-Combustible

Cavity Barriers

There is no external wall cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection: BQAGVL

Elevation • Location
Survey locations as tagged • Accessible wall



Name/Summary

Wall Type 3 - HPL panels attached by a metal frame onto original concrete balustrades

Build-Up

1 Element	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	6mm	Suspected High Pressure Laminate (HPL) Panel		B - Combustible

Inspection: MGNQ3I

Elevation • Location
Survey locations as tagged • Accessible wall



Name/Summary

Wall Type 3 - HPL panels attached by a metal frame onto original concrete balustrades

Build-Up

1 Element	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	6mm	Suspected High Pressure Laminate (HPL) Panel		B - Combustible

Attachments & Balconies

Photo

Attachment



Cantilever Balcony (XMSQBK)
Configuration: Stacked

Attachment: Cantilever Balcony

Attachment Reference
XMSQBK

Details

Configuration

Stacked

Framework/Structure

The balcony forms part of the corresponding floor slab and is therefore reinforced concrete

Soffit

Concrete

L6 Benchmark

Balconies -

Balconies are defined in BS 8579. However, for the purpose of this PAS and the manner in which balconies impact external fire behaviour, balconies fall into one of three categories:

- a) Those which fall entirely within the curtilage of the building structure (i.e. they are built on the slab and appear inset into the building when observed from outside). They might be enclosed to an extent and might effectively be made fully enclosed (sometimes referred to as a "winter garden"). The extent of enclosure needs to be considered in light of whether, from a fire perspective, the space can be treated as part of the outside or whether it is in effect a compartment (i.e. subject to compartment fire behaviour);
- b) Those which project beyond the main building structure but do so on an extension of the floor slab. They provide an advantage in that their construction matches that of the compartment floor within the building, and can deflect fire/smoke plumes away from the building; and
- c) Those which project beyond the main building structure and are fixed to the outside face of the building. They can only be of lightweight construction; their construction needs to be assessed based upon the combustibility and fire resistance of any materials used.

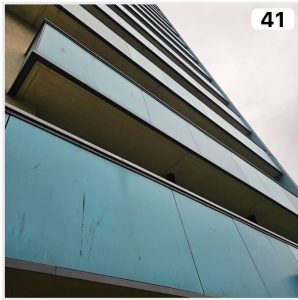
Regardless of balcony type, the materials used to line the balconies (including soffits) need to be assessed in light of their likely contribution to external fire spread.

Storage of materials and other uses by residents also need to be taken into account.

Any bulk storage can pose a significant hazard, as can the use of combustion appliances such as barbecues and heaters.

Aside from the above, means of escape external walkways (a form of balcony) are not within the scope of this PAS, as any risk associated with these would need to be considered as part of the overarching FRA.

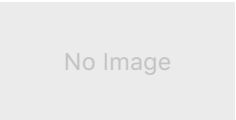
Photos



Penetrations

Photo

Penetration



Flue (4AVFJ6)
Inspection Type: Visual

Penetration: Flue

Penetration Reference
4AVFJ6

Details

Photo

1 Image

Inspection Type

Visual

Duct Pipework Material

Flexible ducting

External Windows

Photo

External Window



Top, Mid, Side Hung Casements (WR77FN)

External Window: Top, Mid, Side Hung Casements

External Window Reference
WR77FN

Details

Surface Material

Aluminium

Details

Aluminium windows would not add to or support the growth of a fire

Photos



External Doors

Photo

External Door



Single Leaf Entrance Doors (D8TGAM)



Single Leaf Entrance Doors (ZMQUK6)

External Door: Single Leaf Entrance Doors

External Door Reference
D8TGAM

Details

Surface Material

Aluminium

Frame Material

Aluminium

Infill / Panel Material

Aluminium

Details

Aluminium doors would not add to, or support the growth of a fire

Photos



External Door: Single Leaf Entrance Doors

External Door Reference
ZMQUK6

Details

Surface Material

Aluminium

Frame Material

Aluminium

Infill / Panel Material

Aluminium

Details

Aluminium doors would not add to, or support the growth of a fire

Photos



Plan: Survey locations as tagged



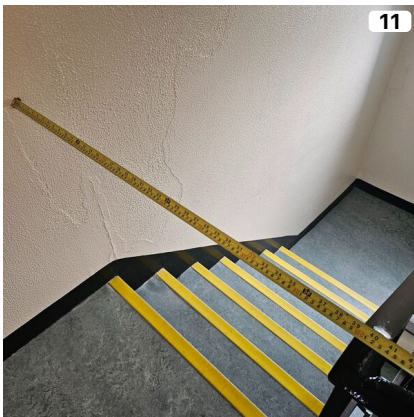
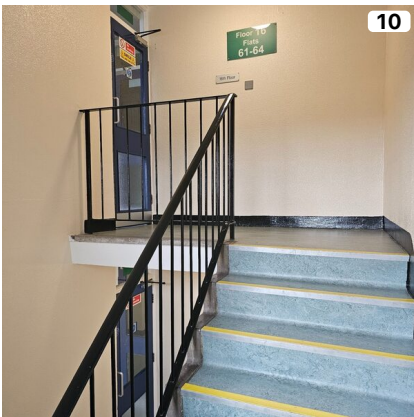
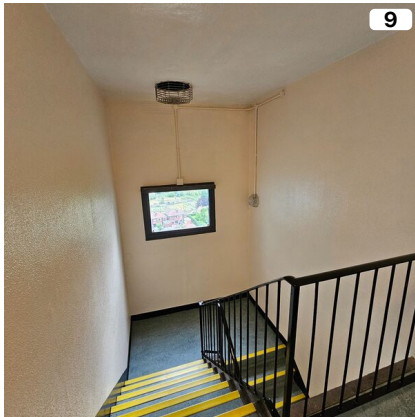
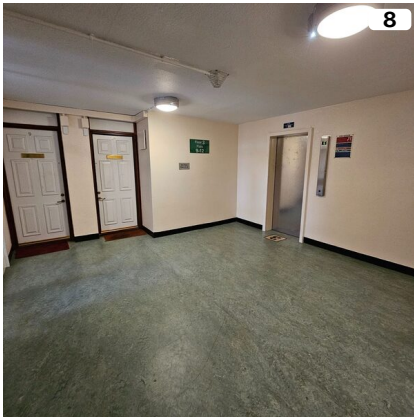
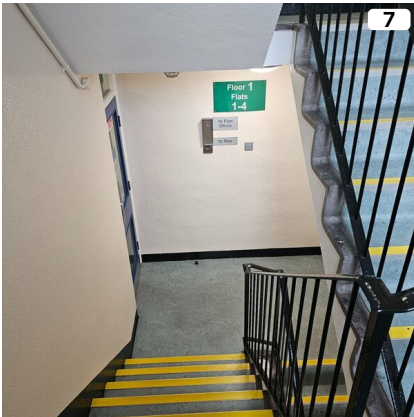
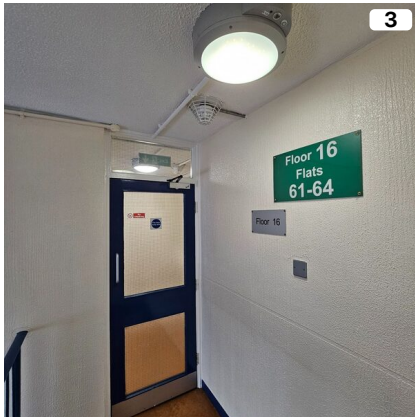
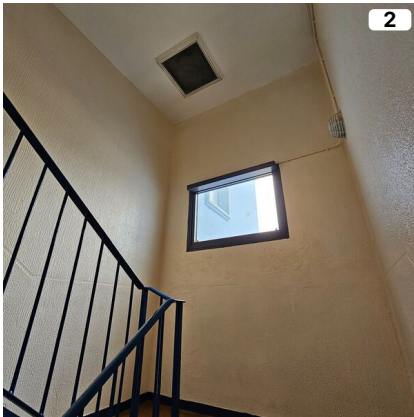
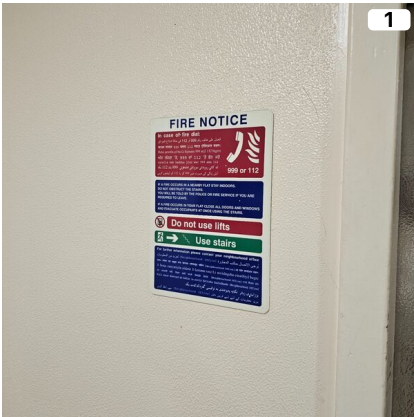
Plan: Survey locations as tagged



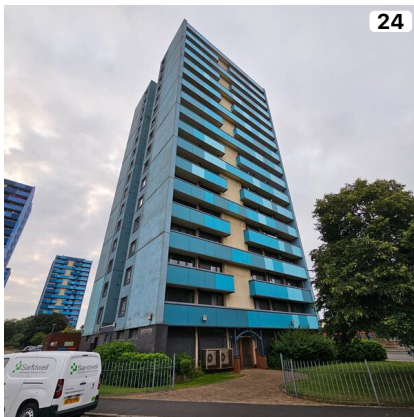
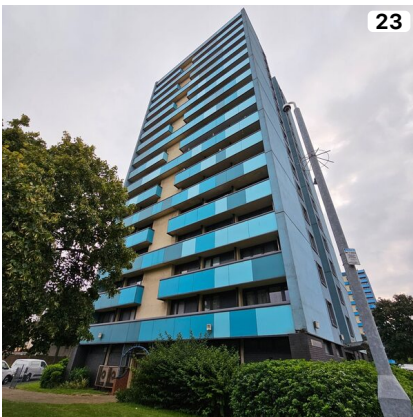
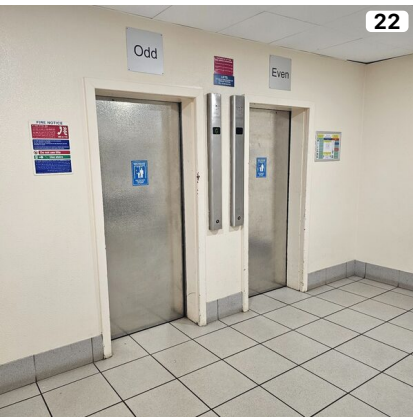
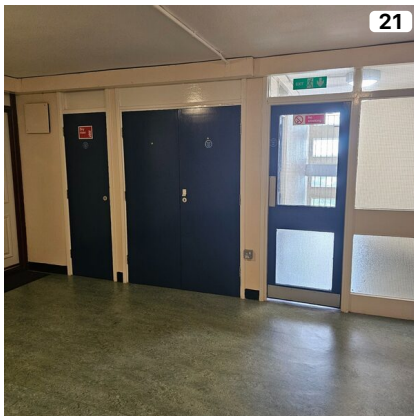
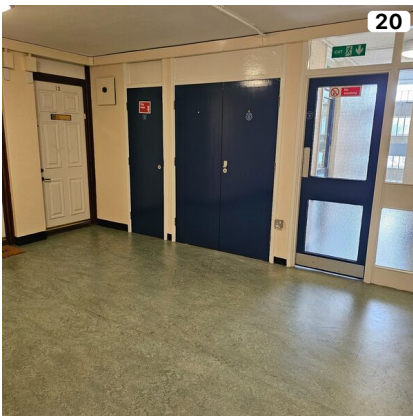
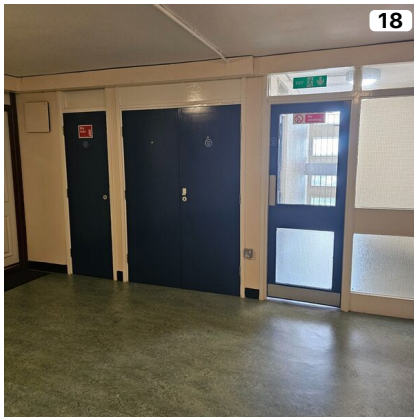
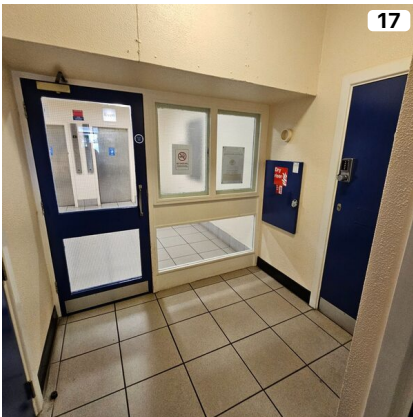
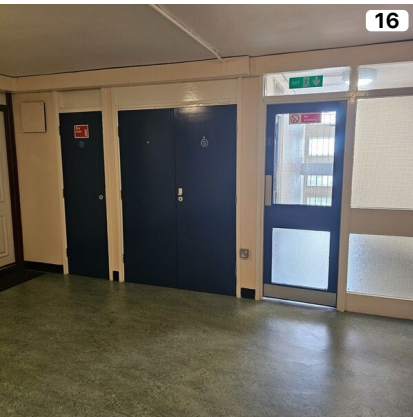
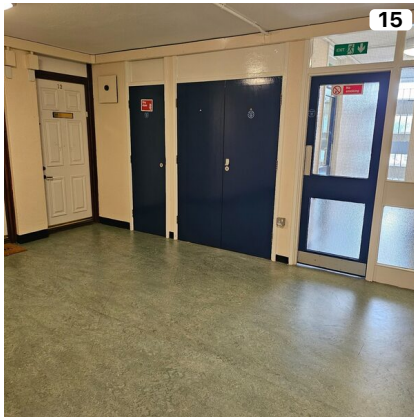
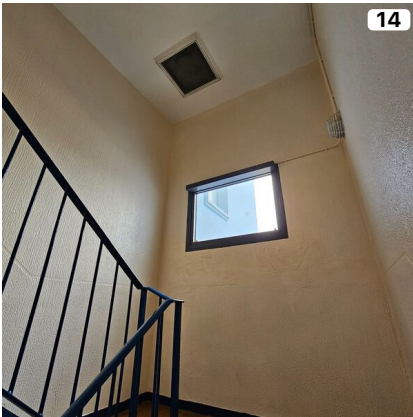
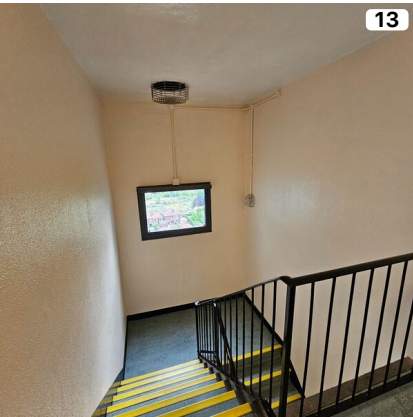
Plan: Survey locations as tagged



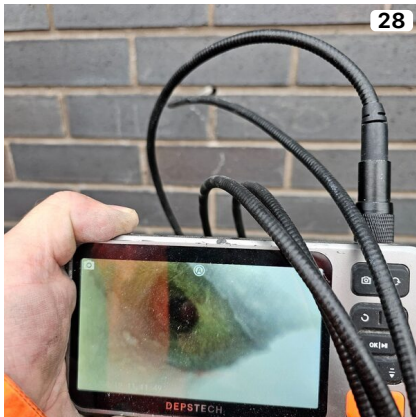
Photos



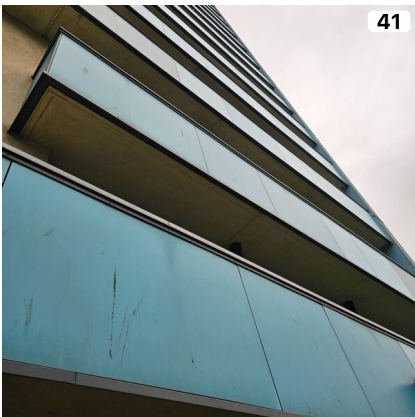
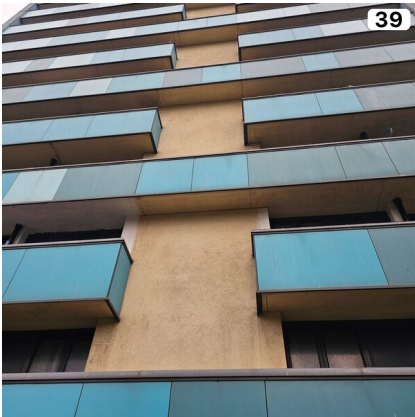
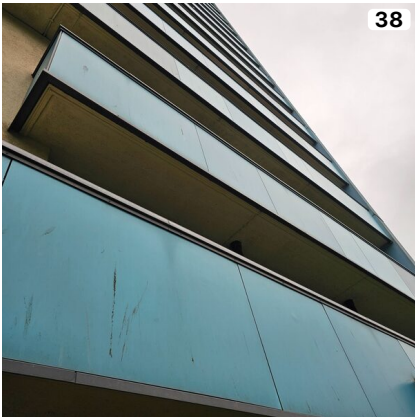
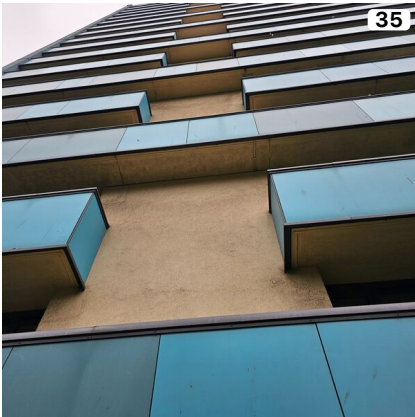
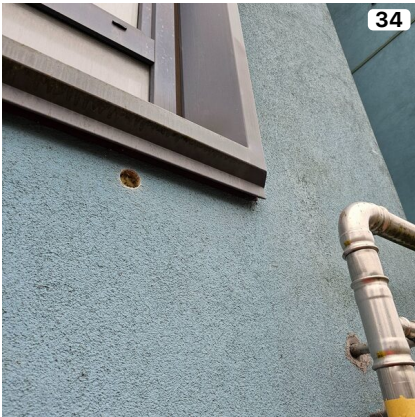
Photos Continued...



Photos Continued...



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Photos Continued...





FIRNTEC

BUILDING COMPLIANCE