



FIRNTEC
BUILDING COMPLIANCE

Unit 4a, Darklake View,
Estover
Plymouth
PL6 7TL

Document Version 1
Survey Date 27/03/2025
Suggested Review Date 27/03/2030

FIRE RISK APPRAISAL EXTERNAL WALLS

BROADMEDE HOUSE

Broadmede House
Pavilion Avenue
Smethwick
West Midlands
B67 6LB



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Summary

Fire Risk Appraisal External Walls

Assessment and Certificate Reference

RB-AYHN3T

Assessed On, By

27/03/2025, Tom Barry CFPA-E Dip TC, TIFireE,
MIFSM, AMIFPO, CFRAR

Approved / Validated On, By

29/08/2025, James Major (Facade Manager)

Recommended Review Date

27/03/2030

Produced For the Responsible Person

Sandwell Metropolitan Council

Specification Conforms To

Our own internal quality system.

Assessment Scope

Assessment applies only to the building specified.

Assessed Property

Property Name

Broadmede House

Property Reference

RB-UWBWXZ

Address

Broadmede House
Pavilion Avenue
Smethwick
West Midlands
B67 6LB

Assessing Organisation

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

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).

Supporting Documents

The following documentation was requested for review prior to our visit. Any provided documentation has been reviewed and considered as part of our findings. The range, quality and reliability of the information contained in the provided documents have been examined and deemed satisfactory for completing this FRAEW report:

Document	Received
Fire Risk Assessment (24/04/2024) Sandwell Metropolitan Borough Council Fire Risk Assessment.	Received

Executive Summary

External Wall Systems and Attachments on the Building

9 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.

5 Items	Effect	Risk
Wall Construction Masonry (BY5HUK)	Positive	Low
Wall Construction ETICS (DT224W)	Positive	Low
Attachment Inset Balcony (VTADDG)	Positive	Low
External Window Top, Mid, Side Hung Casements (JW89MY)	Neutral	Medium
External Door Single Leaf Door (RU4CHK)	Neutral	Medium

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.

Risk Factor Analysis

The risk factor analysis is a three-stage process; rating the wall construction fire performance **(1)**, façade configuration **(2)**, and fire strategy/fire hazards **(3)** on a sliding risk scale. The risk scale is expressed as "high", "medium" and "low" in a continuum, left to right, from "high" risk to "low" risk. At the furthest left end of the "high" risk band, the risk is deemed to be the highest, reducing as the risk is positioned to the right of this.

Starting with high as a base line, **Stage 1** rates the fire performance risk factors of the wall construction.

Once fire performance factors have been taken into account, **Stage 2** overlays the risk factors of the façade configuration to determine the effect this has on where the risk now lies on the scale.

The final **Stage 3** overlays the risk factors arising from consideration of the fire strategy and fire hazards (including limitations of fire and rescue service intervention).

Risk Factor Analysis 1

This analysis looks at façade configuration **LP484B** which includes wall construction **BY5HUK**.

Conclusion: The external surface is masonry brickwork. This offers strong fire resistance due to its non-combustible properties and high thermal mass. Bricks are inherently resistant to fire and do not ignite, burn, or contribute fuel to a fire, making them excellent for containing flames and preventing fire spread.

During a fire, brickwork reacts by absorbing and gradually dissipating heat, though intense, prolonged heat may cause cracking or spalling (surface breakage) due to thermal expansion. Despite these effects, the overall structure of brick masonry generally remains intact, ensuring the wall continues to act as a robust barrier against fire, heat, and smoke, which enhances its reliability in fire protection.

Beyond the brickwork is a cavity ahead of the insulating layer (100mm). The thermal insulation was identified to be mineral wool insulation, which is non-combustible and would restrict the spread of smoke/fire within the cavity in the event of a fire. The presence of mineral wool insulation is considered to have a positive impact in accordance with the recommendations of PAS 9980:2022.

The insulation was not mechanically secured to the inner leaf block substrate. The inner leaf blockwork prevents the same fire behaviour as the outer leaf.

Due to the external wall construction (double skin masonry), cavity barriers are not typically required in line with compartment walls and floors; however, are provided via the mineral wool insulation.

Around aperture openings, cavity barriers were identified, but the windows were viewed to close the cavity to assist in preventing the free flow of air within the cavity. Window frames are constructed of aluminium and will provide a degree of fire resistance in the early stages of a fire.

The plasterboard inner leaf is considered limited in combustibility to prevent the passage of fire through the external wall system. No conclusion can be formed on the installation, fixing methods and spacings of fixings of the plasterboard sheets to confirm its installation as per the manufacturer's guidelines.

It is accepted that the brickwork wall type begins at ground floor level and extends to the full height of the property, however, the external facing construction provided is non-combustible.

It is accepted that the property height is considered to have a negative impact in accordance with PAS 9980:2022, however, all materials installed as part of this facade configuration are non-combustible, therefore, the risk of external fire spread is considered to be low.

The majority of the fire safety features provided to the block are in line with expectations for a general needs block of this size. The property operates a stay put policy and the existing fire safety provisions within the block would appear to support that.

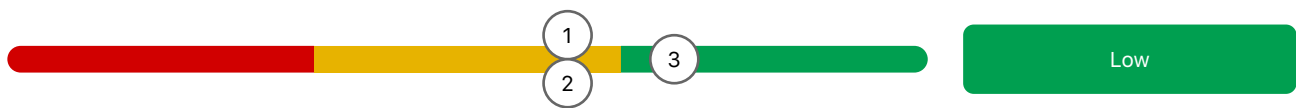
In the event of a fire, fire spread is likely to be at a rate within expectations for a building of this height, given the circumstances at the building in question; and/or

a) fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed

or prevented from escaping.

b) fire is unlikely to spread in such a way that the communal means of escape will be compromised before occupants can safely use them to escape.

It is our professional opinion that there is no requirement for remediation within this wall type.



Risk Factor Analysis 2

This analysis looks at façade configuration **ZR5WS9** which includes wall construction **DT224W**.

Conclusion: Cement render (2mm) has been adhesively applied to a dash coat, which has been installed onto a render mesh. The render mesh is adhesively applied onto the mineral wool insulation (100mm). The mineral wool insulation appears to be mechanically fixed to the concrete substrate.

Cement render is generally accepted as having a fire classification of Class A2 when tested in accordance with EN13501-1. The render was found to be in good condition, with no obvious signs of damage.

Beyond the render, thermal insulation is provided. The thermal insulation was identified to be mineral wool insulation (100mm), which is non-combustible and would restrict the spread of smoke/fire within the cavity in the event of a fire. The presence of mineral wool insulation is considered to have a positive impact in accordance with the recommendations of PAS 9980:2022.

Concrete is inherently resistant to fire and does not ignite, burn, or contribute fuel to a fire, making it excellent for containing flames and preventing fire spread. During a fire, masonry reacts by absorbing and gradually dissipating heat, though intense, prolonged heat may cause cracking or spalling (surface breakage) due to thermal expansion. Despite these effects, the overall structure of concrete generally remains intact, ensuring the wall continues to act as a robust barrier against fire, heat, and smoke, which enhances its reliability in fire protection.

Around aperture openings, cavity barriers were identified, but the windows were viewed to close the cavity to assist in preventing the free flow of air within the cavity. Window frames are constructed of aluminium and will provide a degree of fire resistance in the early stages of a fire.

The plasterboard inner leaf is considered limited in combustibility to prevent the passage of fire through the external wall system. No conclusion can be formed on the installation, fixing methods and spacings of fixings of the plasterboard sheets to confirm its installation as per the manufacturer's guidelines.

It is accepted that the render wall type begins at first floor level and extends to the full height of the property, however, the external facing construction provided is non-combustible.

It is accepted that the property height is considered to have a negative impact in accordance with PAS 9980:2022, however, materials installed as part of this facade configuration are non-combustible, therefore, the risk of external fire spread is considered to be low.

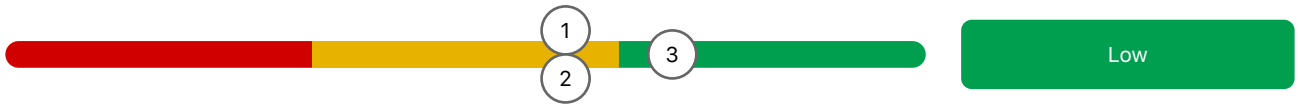
The majority of the fire safety features provided to the block are in line with expectations for a general needs block of this size. The property operates a stay put policy, and the existing fire safety provisions within the block would appear to support that.

In the event of a fire, fire spread is likely to be at a rate within expectations for a building of this height, given the circumstances at the building in question; and/or

a) fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.

b) fire is unlikely to spread in such a way that the communal means of escape will be compromised before occupants can safely use them to escape.

It is our professional opinion that there is no requirement for remediation within this wall type.



Overall Building Risk Rating



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

Recommended Remediations

No recommended remediations identified.

Recommended Interim Measures

No recommended interim measures identified.

Recommended Enhancements

No recommended enhancements 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

Neutral

Photo Ref. 1, 2, 3

F.3 Escape Route Design

Single staircase, with lobby approach

Photo Ref. 4, 5, 6, 7, 8, 9, 10

Neutral

F.4 Compartmentation

Adequate compartmentation in line with the expectations for a block of flats

Photo Ref. 11, 12

Neutral

F.5 Smoke Control

Arrangements in which openable windows, AOVs or inlets and outlets of mechanical systems are in close proximity to combustible cladding or otherwise exposed to fire and smoke spread from the external envelope that could compromise the effectiveness of the smoke control system or allow a route for fire spread back into the building

Negative

F.6 Fire Alarm & Detection

Domestic smoke and heat alarms within flats, Category LD2 or LD3

Neutral

F.7 Fire Suppression

Suppression system provided within the bin store of the property.

Neutral

F.8 - Firefighting Facilities

Adequate access for firefighting vehicles

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

Neutral

F.9 Rising Mains

Suitable rising main present

Neutral

F.10 Lifts Used By Firefighters

No dedicated firefighting lift present

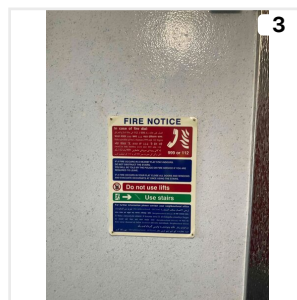
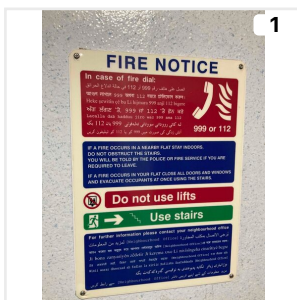
Negative

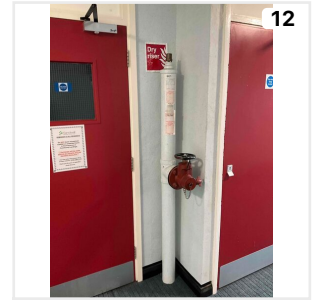
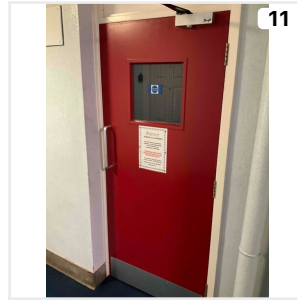
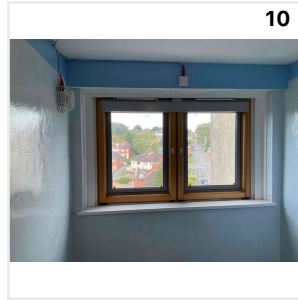
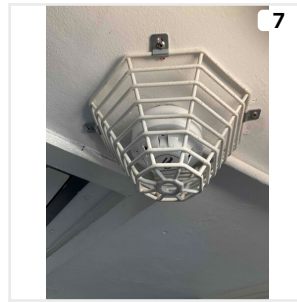
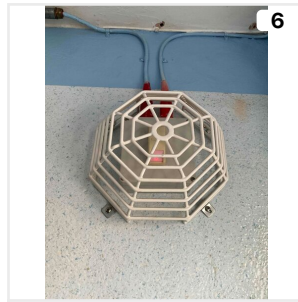
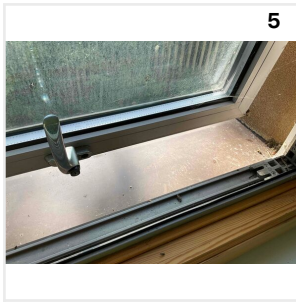
F.11 Specific Fire Hazards

Vehicle parking on roadways adjacent to building

Neutral

Photos





Fire Service Intervention

Event	Seconds	Minutes & Seconds
Initiation to fire detection	120 Seconds	2 Minutes
Actuation Of Fire Detector To Transmission Of Alarm	10 Seconds	10 Seconds
Processing By Central Monitoring Station	60 Seconds	1 Minute
Receipt of call by fire service mobilising control	10 Seconds	10 Seconds
Transmission To Fire Station And Response	60 Seconds	1 Minute
Travelling Time Of Fire Service	300 Seconds	5 Minutes
Arrival Protocol And Entry Preparation Time	180 Seconds	3 Minutes
Firefighting Travel In Firefighting Lift	0 Seconds	—
Firefighter travel to operational bridgehead	270 Seconds	4 Minutes 30 Seconds
Firefighter Travel Walking Up Two Flights Of Stairs To Fire Floor (75 Seconds)	75 Seconds	1 Minute 15 Seconds
Total Time	1,085 Seconds	18 Minutes 5 Seconds

Nearest Fire Station

Smethwick Fire Station is 1.5 miles in distance.

Wall Constructions

Wall Construction	Build-up
Masonry (BY5HUK)	• External Surface Material (Brickwork) • Insulation (Mineral Wool Insulation) • Substrate (Original brickwork)
ETICS (DT224W)	• External Surface Material (Render) • Outer leaf • Insulation (Mineral Wool Insulation) • Substrate (Original brickwork)

Wall Construction: Masonry

Construction Reference
BY5HUK

This wall construction was identified by wall inspections 91RDRF and L67XY1. The build-up, cavity barrier, and floor slab information is taken directly from inspection 91RDRF. See the Inspections section of this report for full inspection details.

Construction	Effect	Risk
Masonry (BY5HUK)	Positive	Low

Build-Up

3 Elements	Thickness/Depth	Material	Rating (BS EN13501)
External Surface Material	102mm	Brickwork	A1 - Non-Combustible
Insulation	100mm	Mineral Wool Insulation	A1 - Non-Combustible
The insulation fills the cavity			
Substrate		Original brickwork	A1 - Non-Combustible

Cavity Barriers

1 Cavity Barrier	Material
Vertical Cavity Barrier	Solid State Mineral Wool

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

Positive

K.3 Facings/Cladding Panels

Low HRR

Positive

K.4 Panel Construction

Not Applicable

K.5 Cavities

Facings into the cavity at least Class A2

Positive

K.6 Insulation

Mineral/glass insulation

Positive

K.7 Substrate

Masonry, >75 mm thick

Positive

K.8 Sheathing Boards

Not Applicable

K.9 Insulated Core Panels

Not Applicable

K.10 ETICS

Not Applicable

K.11 Infill / Spandrel Panels

Not Applicable

Negative

K.12 Internal Finishes

Plasterboard

Note: The plasterboard can not be confirmed to be installed as per the manufacturers instructions or ensure its method of fixing

Neutral

PAS Standard Benchmark

L7 Benchmark

DOUBLE SKIN MASONRY

As set out previously in this PAS, a building whose external walls are composed exclusively of this form of construction is not ordinarily expected to require an FRAEW. However, it is recognized that this form of wall construction might be mixed with other forms of wall construction.

This form of construction constitutes the lowest risk form of construction that might be used for external walls, for the following reasons.

- Each leaf of the wall, provided it is formed of masonry/concrete at least 75 mm thick and is generally well constructed, is likely to provide at least 30 min fire resistance.
- The masonry/concrete is likely to be of limited combustibility or better.

Given the above, this form of construction is invariably accepted as:

- not requiring cavity barriers generally, except that cavity closers are needed so that there is no free flow of air through the cavity; and
- being able to accommodate combustible materials within the cavity irrespective of building height.

This is illustrated in Diagram 8.2 in ADB Volume 1:2019 [8]. The equivalent diagram in Volume 2:2019 [9] is Diagram 9.2.

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. Therefore, a BR135 benchmark would not be applicable for this external wall type

Wall Construction: ETICS

Construction Reference
DT224W

This wall construction was identified by wall inspections 8BT22S, UKU2GD, P1417I, QXURVY, L67XY1, 9SHFU5, 9I2SIC, and DEUV1L. The build-up, cavity barrier, and floor slab information is taken directly from inspection 8BT22S. See the Inspections section of this report for full inspection details.

Construction	Effect	Risk
ETICS (DT224W)	Positive	Low

Build-Up

4 Elements	Thickness/Depth	Material	Rating (BS EN13501)
External Surface Material	1mm	Render	A2 - Limited Combustibility
Outer leaf	3mm		A1 - Non-Combustible
Cement dash coat			
Insulation	95mm	Mineral Wool Insulation	A1 - Non-Combustible
Substrate	102mm	Original brickwork	A1 - Non-Combustible

Cavity Barriers

1 Cavity Barrier	Material
Horizontal Cavity Barrier	Solid State Mineral Wool

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

Positive

K.3 Facings/Cladding Panels

Low HRR

Positive

Adhesive fixed

Negative

K.4 Panel Construction

Not Applicable

K.5 Cavities

Facings into the cavity at least Class A2

Positive

K.6 Insulation

Mineral wool insulation

Positive

K.7 Substrate

Masonry, >75 mm thick

Positive

K.8 Sheathing Boards

Not Applicable

K.9 Insulated Core Panels

Not Applicable

K.10 ETICS

Thin organic render or inorganic render on Class A1/A2 insulation

Positive

K.11 Infill / Spandrel Panels

Not Applicable

K.12 Internal Finishes

Plasterboard

Note: The plasterboard can not be confirmed to be installed as per the manufacturers instructions or ensure its method of fixing

Neutral

PAS Standard Benchmark

L10 Benchmark

ETICS -

These systems are sometimes referred to as rendered systems, as they feature an externally applied render coat as their weatherproof surface.

The level of risk that might potentially be posed by these systems is generally dictated by the type of insulation they incorporate.

- Mineral wool-based systems are likely to be low-risk.
- Rigid thermoset foam-based systems can be low-risk if fire barriers and cavity barriers (if a cavity exists behind the insulation) are properly provided. If there are gaps or other deficiencies then the level of risk might increase to medium or, in extreme cases, high.
- Thermoplastic foam-based systems might be low-risk if fire barriers and cavity barriers (if a cavity exists behind the insulation) are properly provided and where there is a significant thickness of cement-based render applied to the insulation. If there are gaps or other deficiencies, a non-cement-based (i.e. polymeric organic) render has been used or an insufficient thickness of cement-based render has been applied, then the level of risk is high.

In particular regard to thermoplastic systems, there are historic systems which are known to have had approximately 20 mm thick slivers of EPS insulation passing across the front of fire barriers, providing a route for fire to rapidly circumvent the barriers. It needs to be confirmed by inspection whether or not this situation exists; if it does exist, such a system is high risk irrespective of the type of render provided.

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. Therefore, a BR135 benchmark would not be applicable for this external wall type

Façade Configuration: LP484B

Items in Façade

4 Items

	Effect	Risk
Wall Construction Masonry (BY5HUK)	Positive	Low
Attachment Inset Balcony (VTADDG)	Positive	Low
External Door Single Leaf Door (RU4CHK)	Neutral	Medium
External Window Top, Mid, Side Hung Casements (JW89MY)	Neutral	Medium

Façade Configuration Risk Factors

N.1 Building Height

18 m to 30 m

Negative

N.2 Height of Base of Cladding (Above Ground)

<2 m

NOTE At this height, the likelihood of a fire originating externally (e.g. involving a parked vehicle or waste skip started either accidentally or deliberately) igniting the cladding is highly likely.

Negative

N.3 Extent of Cladding

Limited in extent such as to delay fire spread over the external walls

Positive

N.4 Cavities & Openings

Continuous vertically running cavity with cavity barriers or fire stops as appropriate

Positive

N.5 Infill / Spandrel Panels

Not Applicable

N.6 Setbacks - Combustible Cladding Setback from Wall Edge

Not Applicable

N.7 Overhangs & Projections

Not Applicable

N.8 Proximity to Windows and Other Openings to the Accommodation

Horizontally adjacent to windows and openings, but not vertically in line with such openings, such that fire and smoke spread into the buildings, causing secondary fires, as a result of direct flame impingement, is possible, but only under adverse wind conditions

Neutral

N.9 Presence of vents or other openings for services in the Façade

Where vents pass through a cavity, either:

- the cavity does not include combustible materials; or
- the cavity is faced on either side by brick or concrete at least 75 mm thick and any combustible insulation in the cavity is not thermoplastic

Positive

N10. Proximity of Combustible Elements of a Façade to Escape Route Windows & Other Openings

Remote from windows and openings, such that fire spread into the escape routes to give rise to untenable conditions is remote

Neutral

N.11 Attachments

Non-combustible open balconies

(Where these extend along a façade, they have the potential both to:

- interrupt a cavity; and
- deflect flames away from the building and away from the façade)

Positive

N.12 Proximity of Combustible Elements of a Façade to a Neighbouring Building

Windows or other openings in adjacent or abutting neighbouring buildings are sufficiently distanced that direct flame impingement from a fire in the neighbouring building is unforeseeable

Neutral

Risk Factor Analysis

Conclusion: The external surface is masonry brickwork. This offers strong fire resistance due to its non-combustible properties and high thermal mass. Bricks are inherently resistant to fire and do not ignite, burn, or contribute fuel to a fire, making them excellent for containing flames and preventing fire spread.

During a fire, brickwork reacts by absorbing and gradually dissipating heat, though intense, prolonged heat may cause cracking or spalling (surface breakage) due to thermal expansion. Despite these effects, the overall structure of brick masonry generally remains intact, ensuring the wall continues to act as a robust barrier against fire, heat, and smoke, which enhances its reliability in fire protection.

Beyond the brickwork is a cavity ahead of the insulating layer (100mm). The thermal insulation was identified to be mineral wool insulation, which is non-combustible and would restrict the spread of smoke/fire within the cavity in the event of a fire. The presence of mineral wool insulation is considered to have a positive impact in accordance with the recommendations of PAS 9980:2022.

The insulation was not mechanically secured to the inner leaf block substrate. The inner leaf blockwork prevents the same fire behaviour as the outer leaf.

Due to the external wall construction (double skin masonry), cavity barriers are not typically required in line with compartment walls and floors; however, are provided via the mineral wool insulation.

Around aperture openings, cavity barriers were identified, but the windows were viewed to close the cavity to assist in preventing the free flow of air within the cavity. Window frames are constructed of aluminium and will provide a degree of fire resistance in the early stages of a fire.

The plasterboard inner leaf is considered limited in combustibility to prevent the passage of fire through the external wall system. No conclusion can be formed on the installation, fixing methods and spacings of fixings of the plasterboard sheets to confirm its installation as per the manufacturer's guidelines.

It is accepted that the brickwork wall type begins at ground floor level and extends to the full height of the property, however, the external facing construction provided is non-combustible.

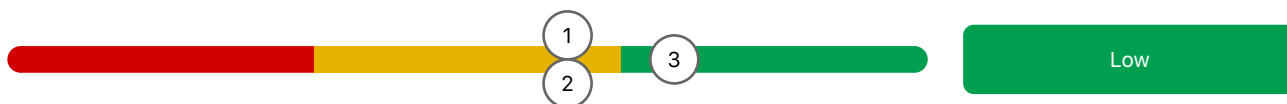
It is accepted that the property height is considered to have a negative impact in accordance with PAS 9980:2022, however, all materials installed as part of this facade configuration are non-combustible, therefore, the risk of external fire spread is considered to be low.

The majority of the fire safety features provided to the block are in line with expectations for a general needs block of this size. The property operates a stay put policy and the existing fire safety provisions within the block would appear to support that.

In the event of a fire, fire spread is likely to be at a rate within expectations for a building of this height, given the circumstances at the building in question; and/or

- a) fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.
- b) fire is unlikely to spread in such a way that the communal means of escape will be compromised before occupants can safely use them to escape.

It is our professional opinion that there is no requirement for remediation within this wall type.



Façade Configuration: ZR5WS9

Items in Façade

4 Items

	Effect	Risk
Wall Construction ETICS (DT224W)	Positive	Low
Attachment Inset Balcony (VTADDG)	Positive	Low
External Door Single Leaf Door (RU4CHK)	Neutral	Medium
External Window Top, Mid, Side Hung Casements (JW89MY)	Neutral	Medium

Façade Configuration Risk Factors

N.1 Building Height

18 m to 30 m

Negative

N.2 Height of Base of Cladding (Above Ground)

2 m to 5 m

NOTE At this height, the scope for a fire originating externally (e.g. involving a parked vehicle or waste skip started either accidentally or deliberately) igniting the cladding is considered possible, but not likely at an early stage in the development of the fire.

Neutral

N.3 Extent of Cladding

Entire façade covered

Negative

N.4 Cavities & Openings

Continuous vertically running cavity with cavity barriers or fire stops as appropriate

Positive

N.5 Infill / Spandrel Panels

Not Applicable

N.6 Setbacks - Combustible Cladding Setback from Wall Edge

Not Applicable

N.7 Overhangs & Projections

Not Applicable

N.8 Proximity to Windows and Other Openings to the Accommodation

Horizontally adjacent to windows and openings, and vertically in line with such openings, such that fire and smoke spread into the buildings, causing secondary fires, as a result of direct flame impingement, is highly likely

Negative

N.9 Presence of vents or other openings for services in the Façade

Where vents pass through a cavity, either:

- the cavity does not include combustible materials; or
- the cavity is faced on either side by brick or concrete at least 75 mm thick and any combustible insulation in the cavity is not thermoplastic

Positive

N10. Proximity of Combustible Elements of a Façade to Escape Route Windows & Other Openings

No combustible elements

Positive

N.11 Attachments

Non-combustible open balconies

(Where these extend along a façade, they have the potential both to:

- interrupt a cavity; and
- deflect flames away from the building and away from the façade)

Positive

N.12 Proximity of Combustible Elements of a Façade to a Neighbouring Building

Windows or other openings in adjacent or abutting neighbouring buildings are sufficiently distanced that direct flame impingement from a fire in the neighbouring building is unforeseeable

Neutral

Risk Factor Analysis

Conclusion: Cement render (2mm) has been adhesively applied to a dash coat, which has been installed onto a render mesh. The render mesh is adhesively applied onto the mineral wool insulation (100mm). The mineral wool insulation appears to be mechanically fixed to the concrete substrate.

Cement render is generally accepted as having a fire classification of Class A2 when tested in accordance with EN13501-1. The render was found to be in good condition, with no obvious signs of damage.

Beyond the render, thermal insulation is provided. The thermal insulation was identified to be mineral wool insulation (100mm), which is non-combustible and would restrict the spread of smoke/fire within the cavity in the event of a fire. The presence of mineral wool insulation is considered to have a positive impact in accordance with the recommendations of PAS 9980:2022.

Concrete is inherently resistant to fire and does not ignite, burn, or contribute fuel to a fire, making it excellent for containing flames and preventing fire spread. During a fire, masonry reacts by absorbing and gradually dissipating heat, though intense, prolonged heat may cause cracking or spalling (surface breakage) due to thermal expansion. Despite these effects, the overall structure of concrete generally remains intact, ensuring the wall continues to act as a robust barrier against fire, heat, and smoke, which enhances its reliability in fire protection.

Around aperture openings, cavity barriers were identified, but the windows were viewed to close the cavity to assist in preventing the free flow of air within the cavity. Window frames are constructed of aluminium and will provide a degree of fire resistance in the early stages of a fire.

The plasterboard inner leaf is considered limited in combustibility to prevent the passage of fire through the external wall system. No conclusion can be formed on the installation, fixing methods and spacings of fixings of the plasterboard sheets to confirm its installation as per the manufacturer's guidelines.

It is accepted that the render wall type begins at first floor level and extends to the full height of the property, however, the external facing construction provided is non-combustible.

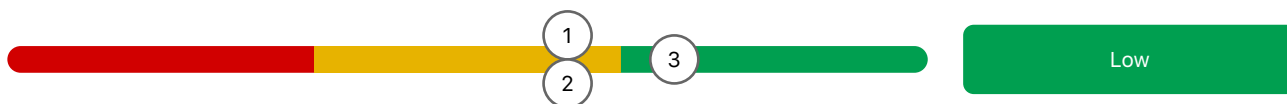
It is accepted that the property height is considered to have a negative impact in accordance with PAS 9980:2022, however, materials installed as part of this facade configuration are non-combustible, therefore, the risk of external fire spread is considered to be low.

The majority of the fire safety features provided to the block are in line with expectations for a general needs block of this size. The property operates a stay put policy, and the existing fire safety provisions within the block would appear to support that.

In the event of a fire, fire spread is likely to be at a rate within expectations for a building of this height, given the circumstances at the building in question; and/or

- a) fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.
- b) fire is unlikely to spread in such a way that the communal means of escape will be compromised before occupants can safely use them to escape.

It is our professional opinion that there is no requirement for remediation within this wall type.



APPENDIX

Asset Information

Client Name

Sandwell Metropolitan Council

Client Address

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

Responsible Person

Sandwell Metropolitan Council

Contact Details

569 0159 Susan Geddes

Fire Alarm System

Early warning is limited to hard wired or battery smoke alarms within each of the resident's flats. The equipment is subjected to a cyclical test. Based on a sample of properties at the time of the fire risk assessment, residents confirmed that smoke alarms within flats are installed to a minimum of an LD3 standard. There is no effective means for detecting an outbreak of fire to communal areas.

The smoke detection provided is part of the smoke ventilation system. Smoke detectors linked to the Automatic Opening Vents have been installed to the stairwell and corridors on all floors above ground. The vents will automatically open when smoke has been detected. These have a dedicated panel within the riser cupboards.

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 appear to be 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

Portable fire extinguisher (CO2) is provided to the lift motor room.

Smoke Control

Natural smoke control

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 suppression system is installed within high risk areas such as the refuse/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

Public fire hydrant are available. The hydrant is located adjacent to the front entrance (within 5m) of the building as per the on arrival information.

<https://dataservices.riscauthority.co.uk/map/index>

Housekeeping

Good standard. Means of escape clear. Refuse stored appropriately

Secure Information Boxes

Secure information box (SIB) installed

Signage

Appropriate signage installed throughout premises

Property Type

Residential, Residential Purpose-built

Building Era / Age

Known Build Date

Known Build Date

1965

Guidance Applicable At Time Of Construction

Building regulations 1965

Building Height

Approximately 24m to the highest occupied floor level. (calculated at 3m per floor as per PAS 9980-2022 section 3.1.22)

Number of Storeys (Ground and above)

9

Number of Basement Levels

1

Number of Flats

32

Flat Types

Single Storey

Structural Wall Material

Concrete / Brick / Render

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)

Insulated render/brick

Electronic Entrance System

Yes

Carpark

External/Outdoor Carpark

Employees

None

Residents

Yes

Approx number of Residents

64

Residents (Extended)

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

Visitors

Day

Visitors (Extended)

Residential block - low number of visitors expected at any one time

People With Reduced Mobility

None

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 that discharge from the premises of an assumed suitable width and within acceptable travel distances. These will aid in facilitating persons within the premises to evacuate safely in the event of fire. Emergency exits open inwards and outwards in direction of escape.

Number Of Internal Escape Stairs

1

Number Of Final Exits

1

External Means Of Escape

None Present

Types Of Lifts Installed

Passenger + Fireman's Control

Evacuation Chairs Installed

No

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.

Aerial Perspective: Broadmede House Pavilion Avenue Smethwick West Midlands B67 6LB

Aerial Perspective (picture sourced from Google Earth)



Elevations

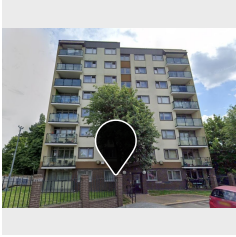
Photo	Name	No. of Storeys
 A photograph of the East Elevation of Broadmede House, showing a multi-story building with a mix of brick and concrete, and a small tree in the foreground. The number 13 is in the top right corner.	East Elevation	8 Storeys
 An aerial photograph of the South Elevation of Broadmede House, showing the building's footprint and surrounding greenery. The number 14 is in the top right corner.	South Elevation	8 Storeys
 An aerial photograph of the West Elevation of Broadmede House, showing the building's footprint and surrounding greenery. The number 15 is in the top right corner.	West Elevation	8 Storeys
 An aerial photograph of the North Elevation of Broadmede House, showing the building's footprint and surrounding greenery. The number 16 is in the top right corner.	North Elevation	8 Storeys

Inspections

Elevation Location

Inspection

Elements



Inspection: 91RDRF
East Elevation
Compartment Wall Junction

- External Surface Material (Brickwork)
- Insulation (Mineral Wool Insulation)
- Substrate (Original brickwork)



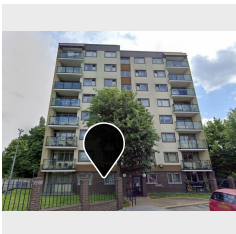
Inspection: DEUV1L
North Elevation
Compartment Floor

- External Surface Material (Render)
- Outer leaf
- Insulation (Mineral Wool Insulation)
- Substrate (Original brickwork)



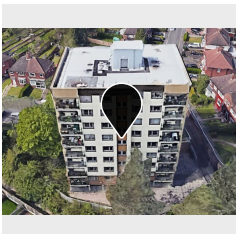
Inspection: 9I2SIC
North Elevation
Compartment Floor Junction

- External Surface Material (Render)
- Outer leaf
- Insulation (Mineral Wool Insulation)
- Substrate (Original brickwork)
- Cavity
- Inner Leaf (Blockwork)



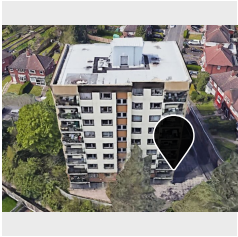
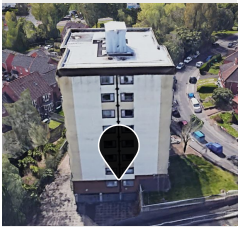
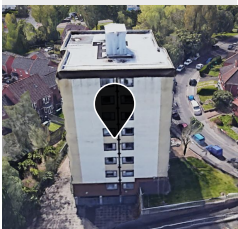
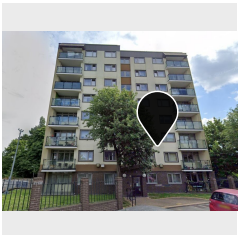
Inspection: L67XY1
East Elevation
Aperture Opening

- External Surface Material (Brickwork)
- Insulation (Mineral Wool Insulation)
- Substrate (Original brickwork)



Inspection: 9SHFU5
West Elevation
Compartment Floor Junction

- External Surface Material (Render)
- Outer leaf
- Insulation (Mineral Wool Insulation)
- Substrate (Original brickwork)

Elevation Location	Inspection	Elements
	Inspection: P14171 West Elevation Compartment Floor Junction/balcony	• External Surface Material (Render) • Outer leaf • Insulation (Mineral Wool Insulation) • Substrate (Original brickwork) • Cavity • Inner Leaf (Reinforced concrete column)
	Inspection: QXURVY North Elevation Compartment Floor Junction	• External Surface Material (Render) • Outer leaf • Insulation (Mineral Wool Insulation) • Substrate (Original brickwork) • Cavity • Inner Leaf (Blockwork)
	Inspection: UKU2GD North Elevation Compartment Floor & Vertical Compartment Junction	• External Surface Material (Render) • Outer leaf • Insulation (Mineral Wool Insulation) • Substrate (Original brickwork) • Cavity • Inner Leaf (Blockwork)
	Inspection: 8BT22S East Elevation Compartment Floor	• External Surface Material (Render) • Outer leaf • Insulation (Mineral Wool Insulation) • Substrate (Original brickwork)

Inspection: 91RDRF

Elevation • Location
East Elevation • Compartment Wall Junction



Name/Summary

Masonry (Brickwork)

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	102mm	Brickwork	17	A1 - Non-Combustible
Insulation	100mm	Mineral Wool Insulation	18, 19	A1 - Non-Combustible
The insulation fills the cavity				
Substrate		Original brickwork	20	A1 - Non-Combustible

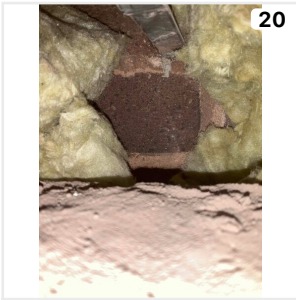
Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Vertical Cavity Barrier	Solid State Mineral Wool	
Cavity closed at compartmentation wall		

Floor Slab

Backing Wall Sits On The Floor Slab

Build-up Photos



Inspection Photos



Inspection: DEUV1L

Elevation • Location
North Elevation • Compartment Floor



Name/Summary

Light (cream) Render

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	1mm	Render		A2 - Limited Combustibility
Outer leaf	3mm		23	A1 - Non-Combustible
Cement dash coat				
Insulation	100mm	Mineral Wool Insulation	24	A1 - Non-Combustible
Substrate	102mm	Original brickwork		A1 - Non-Combustible

Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Horizontal Cavity Barrier	Solid State Mineral Wool	25

Build-up Photos



Cavity Barrier Photos



Inspection Photos



Inspection: 9I2SIC

Elevation • Location
North Elevation • Compartment Floor Junction



Name/Summary

Light (cream) Render

Build-Up

6 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	2mm	Render	28	A2 - Limited Combustibility
Outer leaf	3mm	Material Brand: Cement dash coat	29	A1 - Non-Combustible
Insulation	100mm	Mineral Wool Insulation	30, 31	A1 - Non-Combustible
Substrate	102mm	Original brickwork	32, 33	A1 - Non-Combustible
Cavity	60mm		34	
Inner Leaf		Blockwork	35	A1 - Non-Combustible

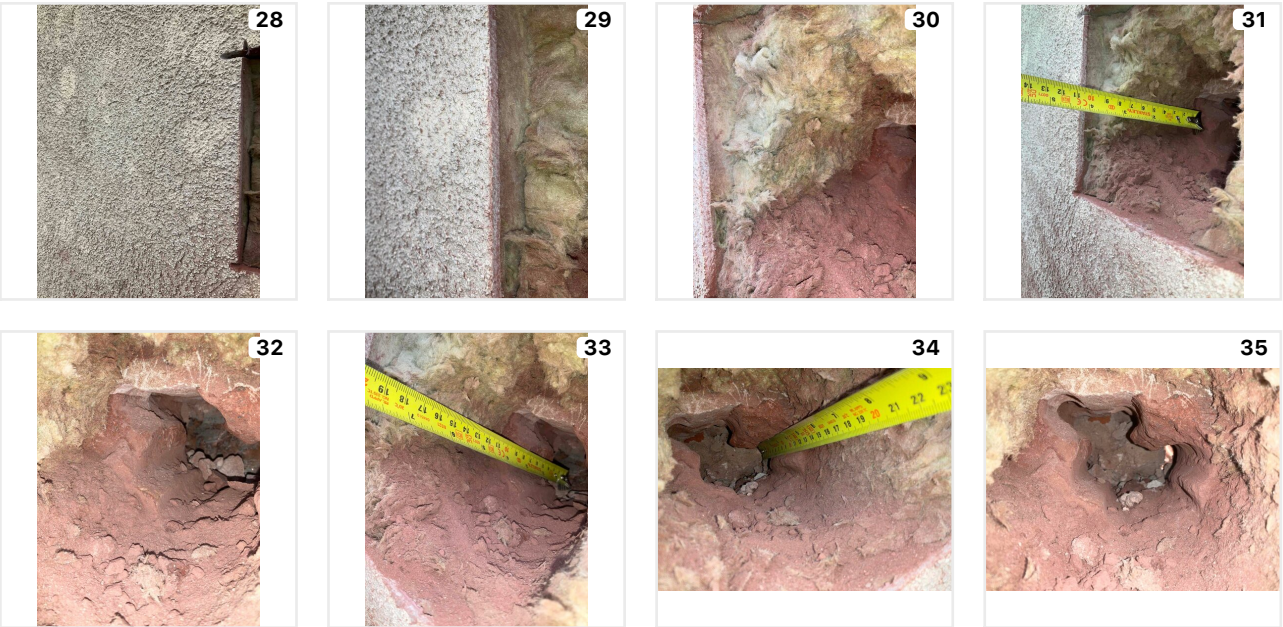
Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Horizontal Cavity Barrier	Solid State Mineral Wool	30
Cavity closed at compartmentation wall		

Floor Slab

Backing Wall Sits On The Floor Slab

Build-up Photos



Cavity Barrier Photos



Inspection Photos



Inspection: L67XY1

Elevation • Location
East Elevation • Aperture Opening



Name/Summary

Masonry (Brickwork)

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	102mm	Brickwork	38, 39	A1 - Non-Combustible
Insulation	100mm	Mineral Wool Insulation	40, 41	A1 - Non-Combustible
Substrate		Original brickwork	42	A1 - Non-Combustible

Cavity Barriers

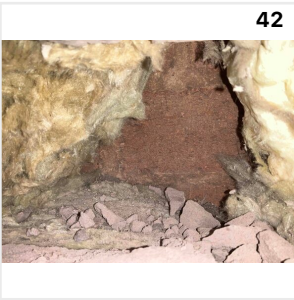
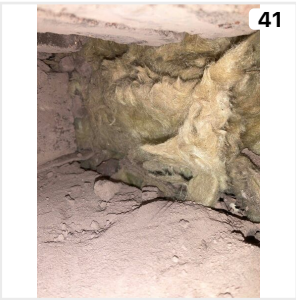
1 Cavity Barrier	Material	Photo Ref.
Window Aperture	Solid State Mineral Wool	41

Cavity closed at the window opening

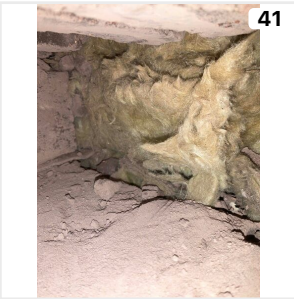
Floor Slab

Backing Wall Sits On The Floor Slab

Build-up Photos



Cavity Barrier Photos



Inspection Photos



Inspection: 9SHFU5

Elevation • Location
West Elevation • Compartment Floor Junction



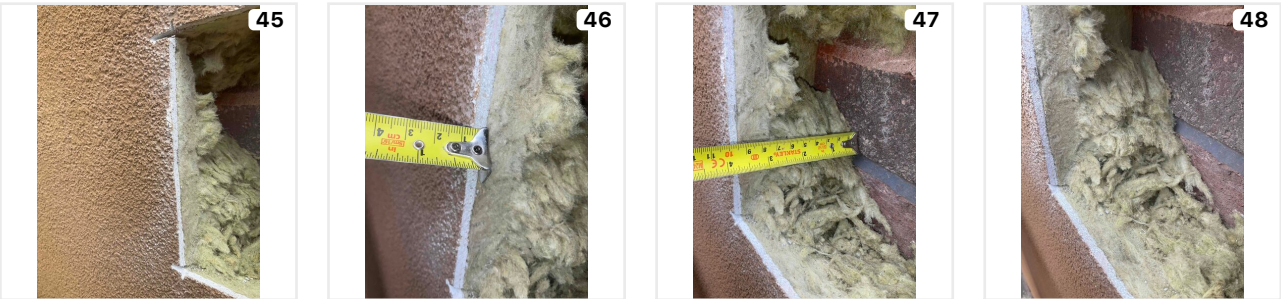
Name/Summary

Dark (brown) Render

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	1mm	Render	45	A2 - Limited Combustibility
Outer leaf	3mm		46	A1 - Non-Combustible
Cement dash coat				
Insulation	95mm	Mineral Wool Insulation	47, 48	A1 - Non-Combustible
Attached via mechanical fixers				
Substrate	102mm	Original brickwork	49	A1 - Non-Combustible

Build-up Photos



49



Inspection Photos

50



51



Inspection: P1417I

Elevation • Location
West Elevation • Compartment Floor Junction/balcony



Name/Summary

Dark (cream) Render

Build-Up

6 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	1mm	Render	52	A2 - Limited Combustibility
Outer leaf	8mm		53	A1 - Non-Combustible
Cement dash coat				
Insulation	95mm	Mineral Wool Insulation	54, 55	A1 - Non-Combustible
Substrate	102mm	Original brickwork		A1 - Non-Combustible
Cavity	40mm		56	
Inner Leaf		Reinforced concrete column	57	A1 - Non-Combustible

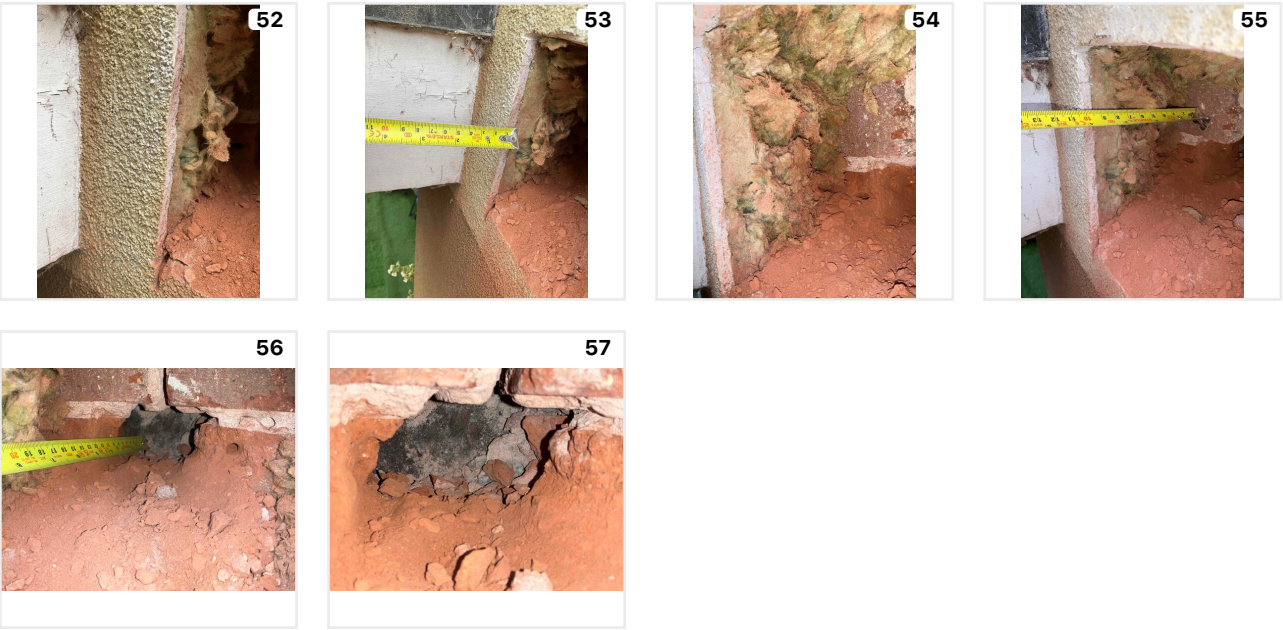
Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Horizontal Cavity Barrier	Solid State Mineral Wool	54
Cavity closed at compartmentation wall		

Floor Slab

Reinforced concrete

Build-up Photos



Cavity Barrier Photos



Inspection Photos



Inspection: QXURVY

Elevation • Location
North Elevation • Compartment Floor Junction



Name/Summary

Dark (cream) Render

Build-Up

6 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	2mm	Render	59	A2 - Limited Combustibility
Outer leaf	3mm	Material Brand: Cement dash coat	60	A1 - Non-Combustible
Cement dash coat				
Insulation	100mm	Mineral Wool Insulation	61, 62	A1 - Non-Combustible
Substrate	102mm	Original brickwork	63, 64	A1 - Non-Combustible
Cavity	40mm		65	
Inner Leaf		Blockwork		A1 - Non-Combustible

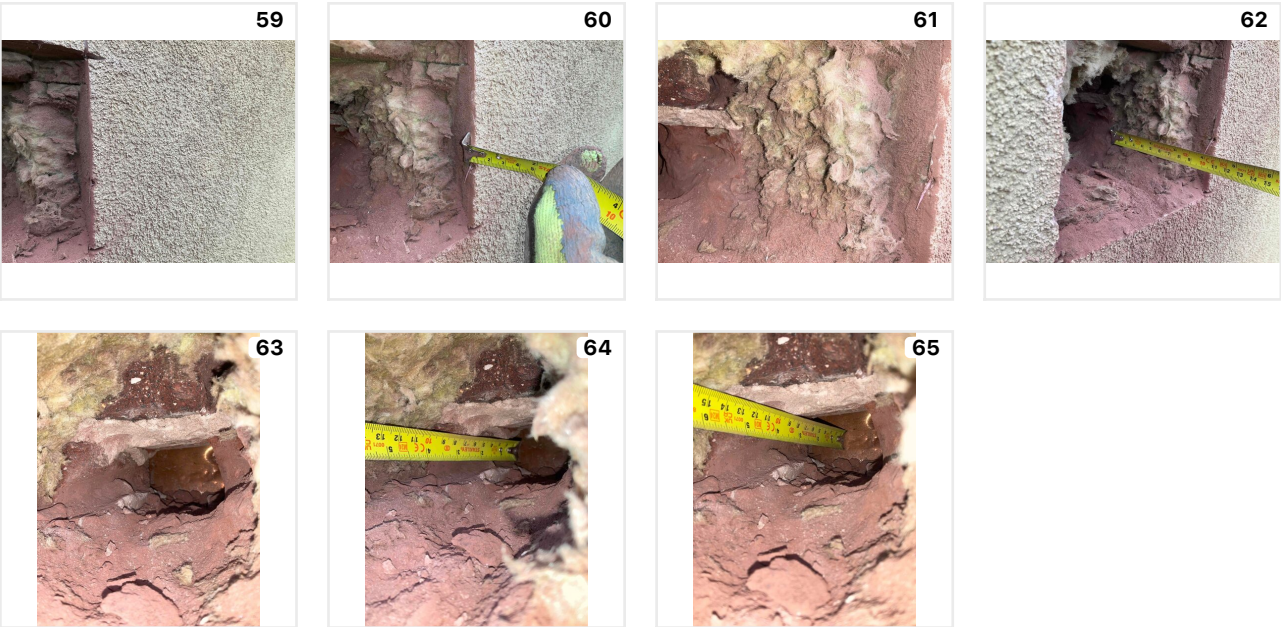
Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Horizontal Cavity Barrier	Solid State Mineral Wool	61
Cavity closed at compartmentation wall		

Floor Slab

Backing Wall Sits On The Floor Slab

Build-up Photos



Cavity Barrier Photos



Inspection Photos



Inspection: UKU2GD

Elevation • Location
North Elevation • Compartment Floor & Vertical Compartment Junction



Name/Summary

Dark (cream) Render

Build-Up

6 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	1mm	Render	68	A2 - Limited Combustibility
Outer leaf	4mm		69, 70	A1 - Non-Combustible
Cement dash coat				
Insulation	100mm	Mineral Wool Insulation	71	A1 - Non-Combustible
Substrate	102mm	Original brickwork	72, 73	A1 - Non-Combustible
Cavity	60mm		74	
Inner Leaf	100mm	Blockwork	75	A1 - Non-Combustible

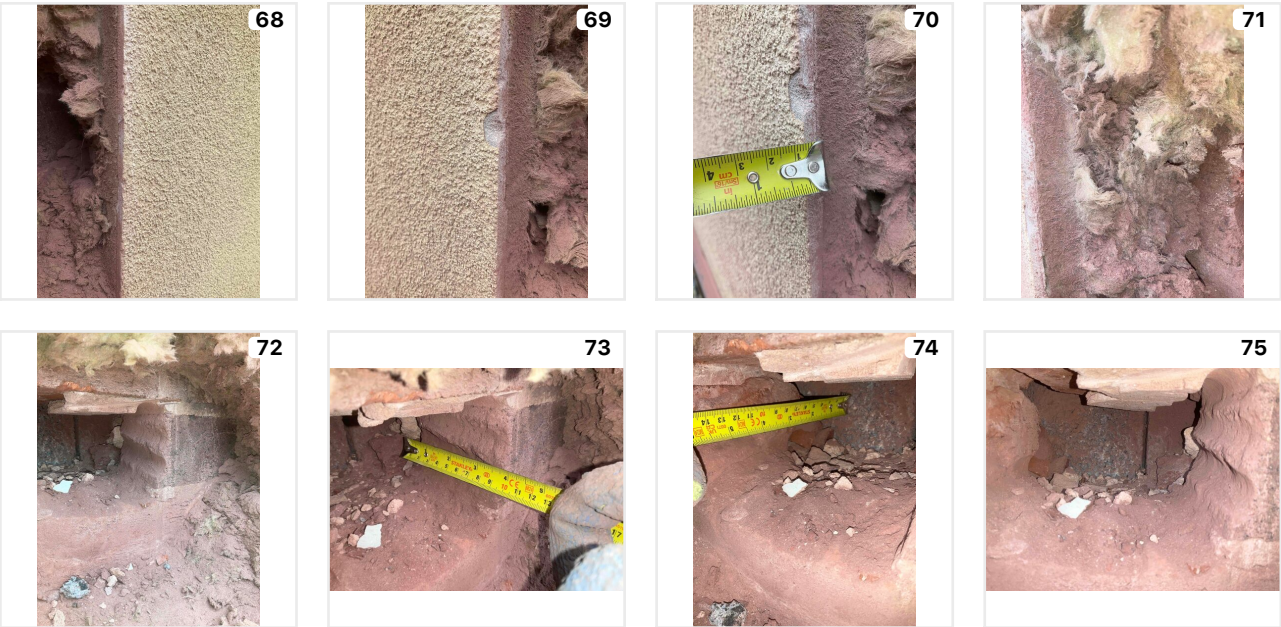
Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Horizontal Cavity Barrier	Solid State Mineral Wool	76
Cavity closed at compartmentation wall		

Floor Slab

Backing Wall Sits On The Floor Slab

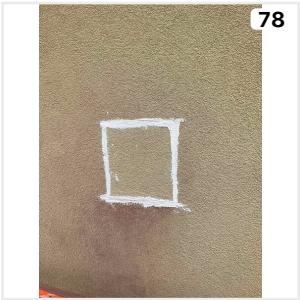
Build-up Photos



Cavity Barrier Photos



Inspection Photos



Inspection: 8BT22S

Elevation • Location
East Elevation • Compartment Floor



Name/Summary

Light (cream) Render

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	1mm	Render	79	A2 - Limited Combustibility
Outer leaf	3mm		80	A1 - Non-Combustible
Cement dash coat				
Insulation	95mm	Mineral Wool Insulation	81, 82	A1 - Non-Combustible
Substrate	102mm	Original brickwork	83	A1 - Non-Combustible

Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Horizontal Cavity Barrier	Solid State Mineral Wool	81
Cavity closed at compartmentation wall		

Floor Slab

Backing Wall Sits On The Floor Slab

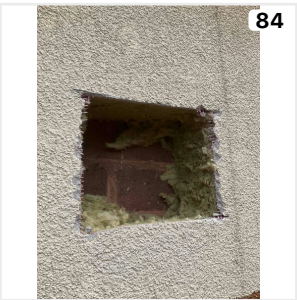
Build-up Photos



Cavity Barrier Photos



Inspection Photos



Attachments & Balconies

Photo

Attachment



Inset Balcony (VTADDG)

Configuration: Stacked, Inset

Size: Private balcony spanning only a single compartment

Attachment: Inset Balcony

Attachment Reference
VTADDG

Details

Configuration

Stacked, Inset

Size

Private balcony spanning only a single compartment

Framework/Structure

Reinforced concrete framework with inset balconies

Handrail

Steel

Balustrade

Steel

Soffit

Concrete

Infill

Toughened Safety Glass

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.

Fire Engineer Comments

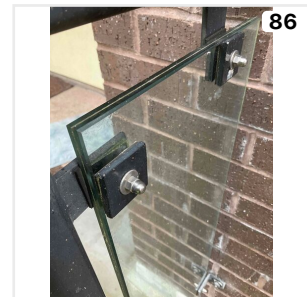
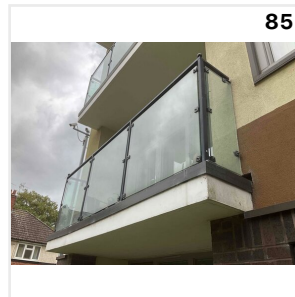
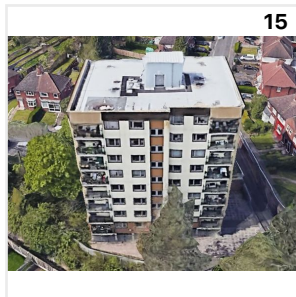
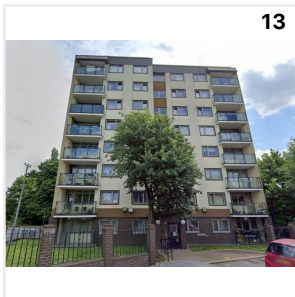
Non-combustible Juliet balcony is provided. Balconies are vertically stacked, however, are constructed via non-combustible materials (concrete) therefore the risk of fire spread is low. Concrete is inherently fire resistant and will not contribute to the development or assist in the growth of fire across the building's façade.

In the event of a fire, fire spread is likely to be at a lower rate within expectations for a building of this height, but nevertheless, tolerable rate, given the circumstances at the building in question; and/or

Neutral

- a) fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.
- b) fire is unlikely to spread in such a way that the communal means of escape will be compromised before occupants can safely use them to escape.
- c) fire and rescue services are likely to be able to intervene effectively to enable occupants to reach safety in time.

Photos



External Windows

Photo

External Window



Top, Mid, Side Hung Casements (JW89MY)

External Window: Top, Mid, Side Hung Casements

External Window Reference
JW89MY

Details

Surface Material

Aluminium

Frame Material

Timber

Infill / Panel Material

Toughened Safety Glass

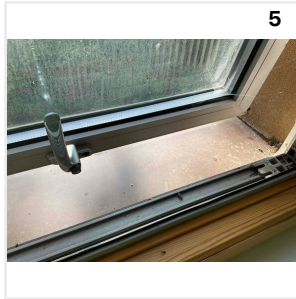
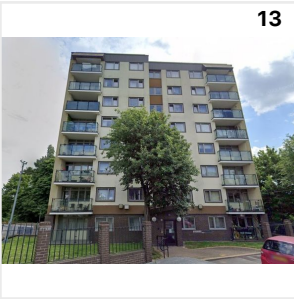
Fire Engineer Comments

Aluminium is a non-combustible material and does not contribute to the spread of fire. However, its relatively low melting point (approximately 660°C) and high thermal conductivity mean that it may deform or fail when exposed to high levels of heat.

The aluminium window frames are likely to maintain integrity beyond flashover temperatures. This offers a temporary barrier to flame ingress within the cavity, potentially delaying fire spread and supporting occupant evacuation and external firefighting intervention.

Neutral

Photos





External Doors

Photo

External Door



Single Leaf Door (RU4CHK)

External Door: Single Leaf Door

External Door Reference
RU4CHK

Details

Surface Material

Aluminium

Frame Material

Aluminium

Infill / Panel Material

Glazing

Fire Engineer Comments

Aluminium is a non-combustible material and does not contribute to the spread of fire. However, its relatively low melting point (approximately 660°C) and high thermal conductivity mean that it may deform or fail when exposed to high levels of heat.

The aluminium window frames are likely to maintain integrity beyond flashover temperatures. This offers a temporary barrier to flame ingress within the cavity, potentially delaying fire spread and supporting occupant evacuation and external firefighting intervention.

Neutral

Photos



Plan: East Elevation



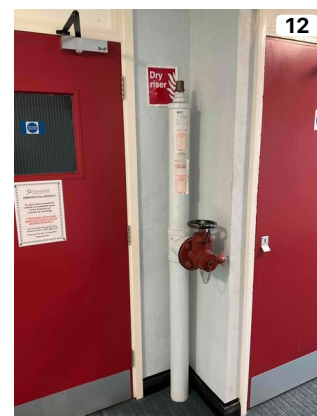
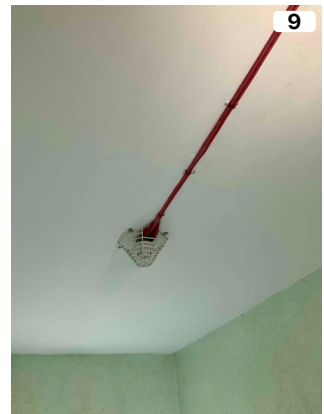
Plan: West Elevation



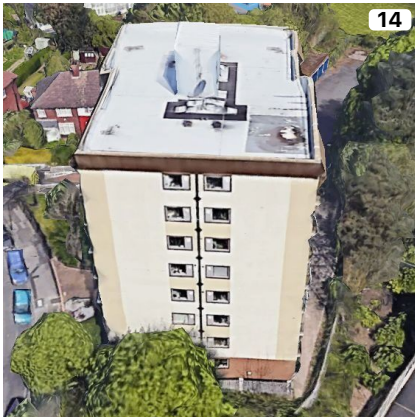
Plan: North Elevation



Photos



Photos Continued...



Photos Continued...



Photos Continued...



Photos Continued...



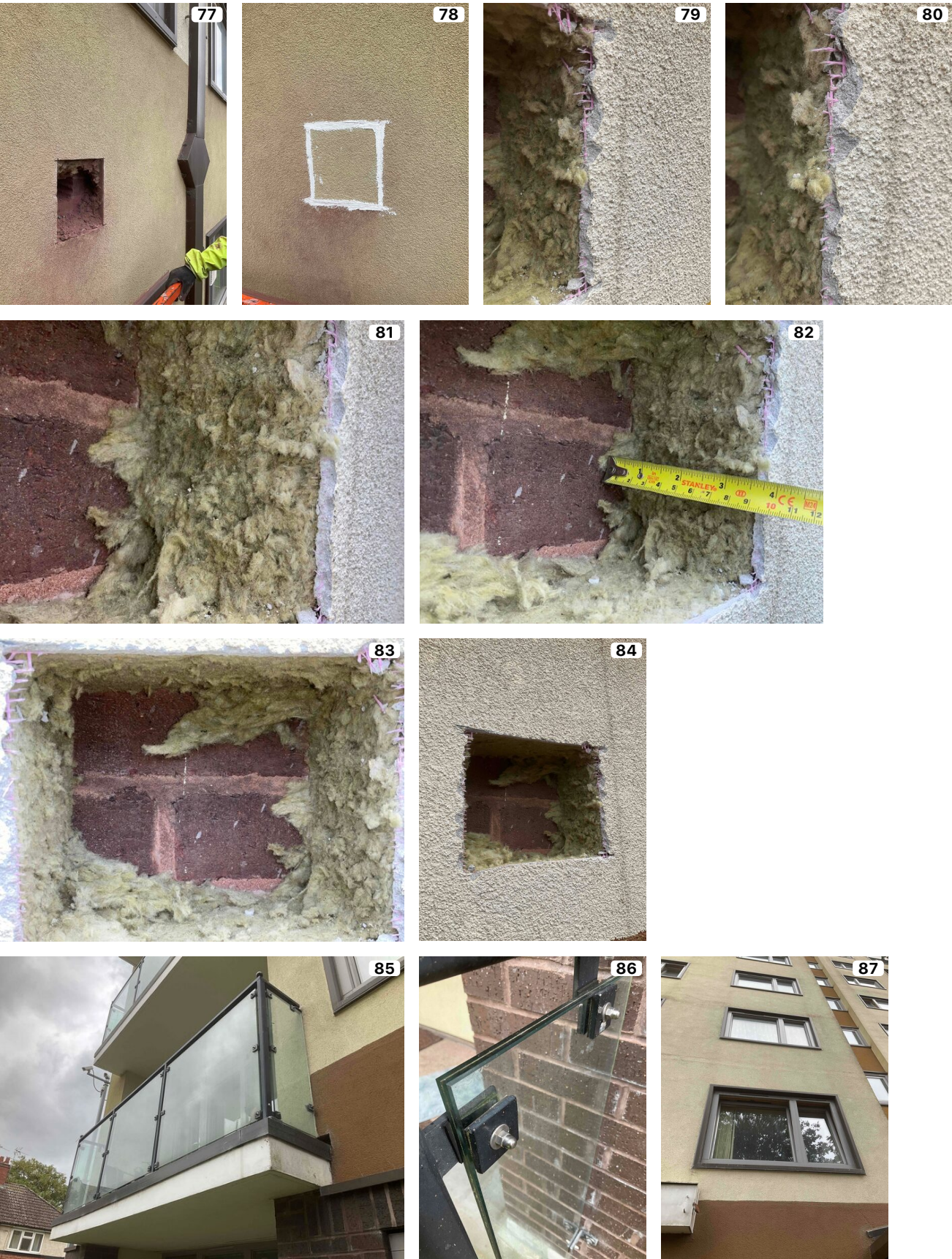
Photos Continued...



Photos Continued...



Photos Continued...



Photos Continued...





FIRNTEC
BUILDING COMPLIANCE