FIRNTEC
BUILDING COMPLIANCE

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

| | |
|---|---|
| Document Version | 3 |
| Survey Date | 14/01/2025 |
| Suggested Review Date | 14/01/2030 |

# FIRE RISK APPRAISAL EXTERNAL WALLS

## BROOME HOUSE

Beaconview House
Beaconview Road
West Brom
B71 3PL

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# Summary

## Fire Risk Appraisal External Walls

**Assessment and Certificate Reference**
RB-S39A6I

**Assessed On, By**
14/01/2025, Dean Partridge MIFireE

**Recommended Review Date**
14/01/2030

**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**
Broome House

**Property Reference**
RB-6QQ83U

**Address**
Beaconview House
Beaconview Road
West Brom
B71 3PL

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**Assessing Organisation**
Firntec Ltd
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# 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 though 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 |
| --- | --- |
| **FRA (26/01/2024)**<br>L. Conway Trinee Fire Risk Assessor, Sandwell<br>Management Fire Risk assessment | Received |
| **External Wall Survey (07/01/2025)**<br>Firntec<br>External Wall Survey - Intrusive step 1 | 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.

| 9 Items | Effect | Risk |
|---|---|---|
| Wall Construction<br>Brick finish (9Q1NMF) | Neutral | Low |
| Wall Construction<br>Render (61N97E) | Neutral | Low |
| Wall Construction<br>Curtain wall -Aluminium Cladding - window infill sections (ZVGUHZ) | Neutral | Low |
| Wall Construction<br>Potential HPL Sections (FDJZ92) | Neutral | Medium |
| Attachment<br>Bolt-On Balcony (YE5S26) | Neutral | Low |
| Attachment<br>Cantilever Balcony (8HLMSI) | Neutral | Low |
| External Window<br>Top, Mid, Side Hung Casements (IFPKDC) | | |
| External Window<br>Top, Mid, Side Hung Casements (G3MTRU) | Neutral | Low |
| External Door<br>Single Leaf Entrance Doors (276MCR) | Neutral | 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.

# 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 **QWYCSY** which includes wall construction **9Q1NMF**.

**Conclusion**: Masonry brickwork in external walls 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.
The wall type has been assessed against the L7 performance benchmark
Beyond the external surface material is a cavity space that is fully filled with mineral wool.

The Mineral wool is viewed as presenting a non-combustible product. This means this product will not ignite as such this poses a low risk to the contribution of fire and external fire spread.
The fully filled cavity presents a barrier to fire spread and the location is at ground floor level with no gaps in insulation to allow horizontal or vertical fire and smoke paths
The concrete substrate is non-combustible.

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 manufacturers guidelines.

This system was identified at ground level and could be susceptible to any accidental or malicious ignition but given the external wall type being of non-combustible nature and the presence of fully filled non-combustible cavity, in the event of any ignition to the system the rate of any spread would be tolerable.

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

It is our professional opinion that given the analysis of this external wall type, that there is no requirement for remediation.


Medium

## Risk Factor Analysis 2

This analysis looks at façade configuration **C133EV** which includes wall construction **61N97E**.

**Conclusion**: The ETICs system assessed is a 4mm Sto render finish directly over 90mm mineral wool. The mineral wool is fixed by supporting external wall fixing pins to the inner leaf masonry system.
The render material is considered to be non-combustible and presents a low contributor to the development of external fire spread.

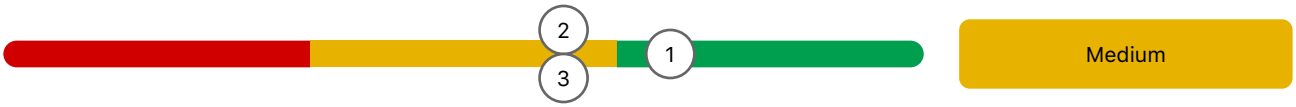
The wall type has been assessed against the L10 performance benchmark
Beyond the external surface material is a cavity space that is fully filled with mineral wool.

The Mineral wool is viewed as presenting a non-combustible product. This means this product will not ignite as such this poses a low risk to the contribution of fire and external fire spread.
The fully filled cavity presents a barrier to fire spread and the location is at ground floor level with no gaps in insulation to allow horizontal or vertical fire and smoke paths
The concrete substrate is non-combustible.

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 manufacturers guidelines.

This system was identified at 2 elevations spanning floors although the system type would not contribute to fire spread between floors and compartments.

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;
a) fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.
It is our professional opinion that given the analysis of this external wall type, that there is no requirement for remediation.




## Risk Factor Analysis 3

This analysis looks at façade configuration **6V44K8** which includes wall construction **ZVGUHZ**.

**Conclusion**: Aluminium infill spandrel section – between windows

This wall type is present as a vertical  strip spandrel in between windows on two elevations of the building. The composition is a boxed aesthetic section in between aluminium windows.
The boxed metal system is fixed to 50mm timber battens running vertically between sets of two windows and does not provide a continuous system vertically or horizontally across the elevations.
This boxed section also acts as a cover for a lightning protecting strip cover on one elevation
Metal is a soft metal that has a low melting point. As such this material is able to perform in temperatures between 400°c and 600°c, after which the metal will start to melt. Although it will not combust it will form molten droplets which may fall and ignite combustible materials below to cause secondary fires.

Spandrel infill is given as PIR insulation.  The PIR is in limited quantities although it should be noted that the heat from the flame causes the PIR insulation to undergo pyrolysis, which results in the black char that is formed on the surface of the board. This char layer creates a barrier inhibiting the oxygen to diffuse into the foam and may lead to self-extinguishment after a short period.

However, it should be noted that the final fire performance of plastic foams such as PIR strongly depend on the chemical composition and manufacturing process. e.g., content of isocyanate linkages and type of isocyanate-reactive component for PIR.
In addition, this insulation is encapsulated by the metal boxed section, 50mm timber fixing lining and the concrete substrate.
The wall system has been assessed on performance and configuration and the system will not lead to rapid fire

spread between compartments.
The wall type has been assessed against the L5 performance benchmark

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;
Fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.
It is our professional opinion that given the analysis of this external wall type, that there is no requirement for remediation.


Medium

## Risk Factor Analysis 4

This analysis looks at façade configuration **U8KVYB** which includes wall construction **FDJZ92**.

**Conclusion**: High density laminate board  panels installed are B,s1, d0.

HPL are typically made of organic materials. They consist of layers of cellulose fibrous material impregnated with thermosetting resins. During the high-pressure process, defined as a simultaneous application of heat and pressure, the polymer chains are joined (or cross-linked) by intermolecular bonding (thermosets). This produces homogeneous panels that in a fire situation do not soften or drip. But; has the ability if ignite to rapidly develop across the external envelope of the building.
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.
In this building, the HPL has a Class B fire rating. This indicates a material with a limited contribution to fire, meaning it's combustible but has a relatively low flame spread and smoke development.
Cavity barriers were identified at compartment junction lines horizontally with the barriers  supported by Rockwool duoslab / Ewi slab (A1) insulation infill.
Date of refurbishment was 2015.

The building is over 18m height and a class B material would not be compliant if built today, although the refurbishment would have used AD-B (Approved document B) 2010 addendum which does not included the enhanced regulation 7 for buildings over 18m which came in later amended versions of AD-B.

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

It is our professional opinion that given the analysis of this external wall type, that there is no requirement for remediation.


Medium

# Overall Building Risk Rating

Medium

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<br>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 |

### F.3 Escape Route Design

| | |
|---|---|
| Single staircase, with lobby approach | Neutral |

### F.4 Compartmentation

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

### F.5 Smoke Control

| | |
|---|---|
| Arrangements in which openable windows, AOVs or inlets and outlets of mechanical systems are of a satisfactory proximity aways 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 | Neutral |

### F.6 Fire Alarm & Detection

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

## F.7 Fire Suppression

| | |
|---|---|
| A suppression system is installed in high risk areas such as the refuse/bin store. | Neutral |

## F.8 - Firefighting Facilities

| | |
|---|---|
| Adequate access for firefighting vehicles<br>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

| | |
|---|---|
| Absence of firefighting lift in buildings above 18 m | Negative |

# 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 | 480 Seconds | 8 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** | **1,265 Seconds** | **21 Minutes 5 Seconds** |

## Nearest Fire Station

West Bromwich Fire Station which is 2.2 miles away

# Wall Constructions

| Wall Construction | Build-up |
|---|---|
| **Brick finish (9Q1NMF)** | • Surface Finish (Brick Slip / Brick Tile)<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Reinforced concrete) |
| **Render (61N97E)** | • Surface Finish (Sto render)<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Reinforced concrete) |
| **Curtain wall -Aluminium Cladding - window infill sections (ZVGUHZ)** | • Surface Finish (Suspected High Pressure Laminate (HPL) Panel)<br>• Cavity<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Blockwork) |
| **Potential HPL Sections (FDJZ92)** | • Surface Finish (Suspected High Pressure Laminate (HPL) Panel)<br>• Cavity<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Reinforced concrete) |

# Wall Construction: Brick finish

Construction Reference
9Q1NMF

This wall construction was identified by wall inspections VMV16R and USP71K. The build-up, cavity barrier, and floor slab information is taken directly from inspection VMV16R. See the Inspections section of this report for full inspection details.

| Construction | Effect | Risk |
|---|---|---|
| Brick finish (9Q1NMF) | Neutral | Low |

## Build-Up

| 3 Elements | Thickness/Depth | Material | Rating (BS EN13501) |
|---|---|---|---|
| Surface Finish | 20mm | Brick Slip / Brick Tile | A1 - Non-Combustible |
| Insulation | 90mm | Mineral Wool Insulation | A1 - Non-Combustible |
| Inner Leaf | | Reinforced concrete | A1 - Non-Combustible |

## Cavity Barriers

| 1 Cavity Barrier | Material |
|---|---|
| Horizontal Cavity Barrier | Solid State Mineral Wool |

## Floor Slab

Reinforced concrete

# 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

Cavity full filled with mineral wool — 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

## 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 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: Render

Construction Reference
61N97E

This wall construction was identified by wall inspections JZAARV and HVPGC4. The build-up, cavity barrier, and floor slab information is taken directly from inspection JZAARV. See the Inspections section of this report for full inspection details.

| Construction | Effect | Risk |
|---|---|---|
| Render (61N97E) | Neutral | Low |

## Build-Up

| 3 Elements | Thickness/Depth | Material | Rating (BS EN13501) |
|---|---|---|---|
| Surface Finish | 4mm | Sto render | A1 - Non-Combustible |
| Insulation | 90mm | Mineral Wool Insulation | A1 - Non-Combustible |
| Slab backed up to render | | | |
| Inner Leaf | | Reinforced concrete | A1 - Non-Combustible |

## Cavity Barriers

| 1 Cavity Barrier | Material |
|---|---|
| Horizontal Cavity Barrier | Solid State Mineral Wool |

## Floor Slab

Reinforced concrete

# 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

Low HRR — Positive

## K.4 Panel Construction

Not Applicable

## K.5 Cavities

Cavity full filled with mineral wool — 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

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.

# Wall Construction: Curtain wall - Aluminium Cladding - window infill sections

Construction Reference
ZVGUHZ

This wall construction was identified by wall inspections 9QJBQA, H8ASH9, and ELK6YV. The build-up, cavity barrier, and floor slab information is taken directly from inspection 9QJBQA. See the Inspections section of this report for full inspection details.

| Construction | Effect | Risk |
|---|---|---|
| Curtain wall -Aluminium Cladding - window infill sections (ZVGUHZ) | Neutral | Low |

## Build-Up

| 4 Elements | Thickness/Depth | Material | Rating (BS EN13501) |
|---|---|---|---|
| Surface Finish | 8mm | Suspected High Pressure Laminate (HPL) Panel<br>Material Brand: TRESPA METEON | D - Highly Combustible |
| Cavity | 85mm | | |
| Insulation | 80mm | Mineral Wool Insulation | A1 - Non-Combustible |
| Inner Leaf | | Blockwork | A1 - Non-Combustible |

## Cavity Barriers

Installed

## Floor Slab

Reinforced concrete

# Fire Performance

## K.1 General

| | |
|---|---|
| Materials with a calorific value (gross heat of combustion) >3 MJ/kg and ≤35 MJ/kg | Neutral |

## K.2 External Surfaces

| | |
|---|---|
| Class A1 | Positive |

## K.3 Facings/Cladding Panels

| | |
|---|---|
| Low HRR | Positive |

## K.4 Panel Construction

| | |
|---|---|
| Limited size of gaps between panels (Typically <10 mm) | Neutral |

## K.5 Cavities

| | |
|---|---|
| External boxed section over concrete- infill between windows | Neutral |

## K.6 Insulation

| | |
|---|---|
| Class C | Neutral |

## 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

Metal faced, with PIR insulation over concrete

Neutral

## K.12 Internal Finishes

Not Applicable

# PAS Standard Benchmark

## L5 Benchmark

.

## L10 Benchmark

CURTAIN WALLING SYSTEMS -

There are two principal forms of curtain wall system.
• Stand-off systems are built beyond the edges of floor slabs and run continuously across the height and width of a building. Unless a strategy has been devised to negate this need, fire stopping needs to be provided between slab edges and the inside face of the curtain wall system.
• Infill systems (now more commonly referred to as window assemblies) are built inboard of slab and/or wall edges, although they might pass across particular floor and/or wall lines to achieve a particular architectural objective. Where the system is broken up by lines of fire compartmentation, this limits the extent/speed at which fire can spread across the system.

The structures of these systems can differ substantially; whereas infill systems are invariably supported at regular intervals by the building's primary structure, low-rise stand-off systems can transmit their load down to ground level, with only lateral support back to the primary structure.

Regardless of whether a curtain wall system is built as a stick system (assembled on site) or a unitized system (prefabricated panels), it is the materials used to form the framework that influence the fire performance.
• Steel framed systems can provide good edge protection to the panels in the curtain wall (provided the geometry actually covers and protects edges) as well as good resistance to collapse in the event of fire.
• uPVC framed systems are combustible; they might offer some edge protection and resistance to collapse if steelwork is embedded within them, but this would need to be confirmed.
• Aluminium framed systems are non-combustible but melt when exposed to fire, offering little edge protection and potentially risking collapse (which can be extensive if the aluminium transmits the load of the curtain wall down to ground level).
The other components of curtain wall systems are covered in Table L.5.

## 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: Potential HPL Sections

Construction Reference
FDJZ92

This wall construction was identified by wall inspections 6XXZ22 and 5HBB1Q. The build-up, cavity barrier, and floor slab information is taken directly from inspection 6XXZ22. See the Inspections section of this report for full inspection details.

| Construction | Effect | Risk |
|---|---|---|
| Potential HPL Sections (FDJZ92) | Neutral | Medium |

## Build-Up

| 4 Elements | Thickness/Depth | Material | Rating (BS EN13501) |
|---|---|---|---|
| Surface Finish | 8mm | Suspected High Pressure Laminate (HPL) Panel<br>Material Brand: TRESPA METEON | D - Highly Combustible |
| Cavity | 110mm | | |
| Insulation | 100mm | Mineral Wool Insulation | A1 - Non-Combustible |
| Inner Leaf | | Reinforced concrete | A1 - Non-Combustible |

## Cavity Barriers

| 1 Cavity Barrier | Material |
|---|---|
| Horizontal Cavity Barrier | Solid State Mineral Wool |

## Floor Slab

Reinforced concrete

# Fire Performance

## K.1 General

| | |
|---|---|
| Materials with a calorific value (gross heat of combustion) >3 MJ/kg and ≤35 MJ/kg | Neutral |

## K.2 External Surfaces

| | |
|---|---|
| Class B | Positive |

## K.3 Facings/Cladding Panels

| | |
|---|---|
| Mechanically fixed | Positive |

## K.4 Panel Construction

| | |
|---|---|
| Limited size of gaps between panels (Typically <10 mm) | Neutral |

## K.5 Cavities

| | |
|---|---|
| Cavities closed by barriers/fire stopping located in line with all of the following:<br>• compartment floors;<br>• compartment walls;<br>• around openings, e.g. windows, doors; and<br>• ventilation ducts, grilles and other openings for services | 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

## 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

## 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 find a cladding system with the configuration and components that would constitute an exact match to what our inspections found installed on the Property.

# Façade Configuration: QWYCSY

## Items in Façade

| 3 Items | Effect | Risk |
|---|---|---|
| Wall Construction<br>Brick finish (9Q1NMF) | Neutral | Low |
| External Door<br>Single Leaf Entrance Doors (276MCR) | Neutral | Low |
| External Window<br>Top, Mid, Side Hung Casements (G3MTRU) | Neutral | Low |

## Façade Configuration Risk Factors

### N.1 Building Height/Cladding Height

| | |
|---|---|
| 18 m to 30 m | Negative |

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

| | |
|---|---|
| <2 m<br>NOTE At this height, the likelihood of a fire originating externally (e.g. involving a parked vehicle or waste skip started either accidently or deliberately) igniting the cladding is highly likely. | Negative |

### N.3 Extent of Cladding

| | |
|---|---|
| Limited in extent and not vertically aligned, such as to delay significantly fire spread to windows and other openings on upper levels | Neutral |

### N.4 Cavities & Openings

| | |
|---|---|
| Cavity limited in vertical extent - spanning ground floor only | Neutral |

## 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

Neutral

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

Not Applicable

## N.11 Attachments

Not Applicable

## 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**: Masonry brickwork in external walls 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.
The wall type has been assessed against the L7 performance benchmark
Beyond the external surface material is a cavity space that is fully filled with mineral wool.

The Mineral wool is viewed as presenting a non-combustible product. This means this product will not ignite as such this poses a low risk to the contribution of fire and external fire spread.
The fully filled cavity presents a barrier to fire spread and the location is at ground floor level with no gaps in insulation to allow horizontal or vertical fire and smoke paths
The concrete substrate is non-combustible.

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 manufacturers guidelines.

This system was identified at ground level and could be susceptible to any accidental or malicious ignition but given the external wall type being of non-combustible nature and the presence of fully filled non-combustible cavity, in the event of any ignition to the system the rate of any spread would be tolerable.

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

It is our professional opinion that given the analysis of this external wall type, that there is no requirement for remediation.


Medium

# Façade Configuration: C133EV

## Items in Façade

| 2 Items | Effect | Risk |
|---|---|---|
| Wall Construction<br>Render (61N97E) | Neutral | Low |
| External Window<br>Top, Mid, Side Hung Casements (G3MTRU) | Neutral | Low |

## Façade Configuration Risk Factors

### N.1 Building Height/Cladding 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 accidently 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

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

Neutral

### N.4 Cavities & Openings

Windows and other openings in line with vertical cavity

Negative

### 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

Not Applicable

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

Above doorways forming final exits from escape routes, such that burning material or debris from a fire involving
the external walls above will pose a danger to escaping occupants

Negative

## N.11 Attachments

Not Applicable

## 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 ETICs system assessed is a 4mm Sto render finish directly over 90mm mineral wool. The mineral wool is fixed by supporting external wall fixing pins to the inner leaf masonry system.
The render material is considered to be non-combustible and presents a low contributor to the development of external fire spread.

The wall type has been assessed against the L10 performance benchmark
Beyond the external surface material is a cavity space that is fully filled with mineral wool.

The Mineral wool is viewed as presenting a non-combustible product. This means this product will not ignite as such this poses a low risk to the contribution of fire and external fire spread.
The fully filled cavity presents a barrier to fire spread and the location is at ground floor level with no gaps in insulation to allow horizontal or vertical fire and smoke paths
The concrete substrate is non-combustible.

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 manufacturers guidelines.

This system was identified at 2 elevations spanning floors although the system type would not contribute to fire spread between floors and compartments.

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;
a) fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.
It is our professional opinion that given the analysis of this external wall type, that there is no requirement for remediation.


Medium

# Façade Configuration: 6V44K8

## Items in Façade

| 3 Items | Effect | Risk |
|---|---|---|
| Wall Construction<br>Curtain wall -Aluminium Cladding - window infill sections (ZVGUHZ) | Neutral | Low |
| Attachment<br>Bolt-On Balcony (YE5S26) | Neutral | Low |
| Attachment<br>Cantilever Balcony (8HLMSI) | Neutral | Low |

## Façade Configuration Risk Factors

### N.1 Building Height/Cladding 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 accidently 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

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

### N.4 Cavities & Openings

Cavity limited in extent — Neutral

## N.5 Infill / Spandrel Panels

Adjacent to, but not in a vertical continuous line with, windows

Neutral

## 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

Not Applicable

## 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

Positive

## N.11 Attachments

Not Applicable

## 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

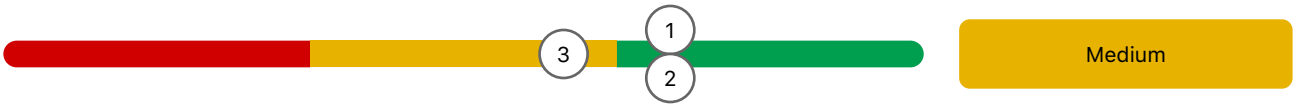
**Conclusion**: Aluminium infill spandrel section – between windows

This wall type is present as a vertical  strip spandrel in between windows on two elevations of the building. The composition is a boxed aesthetic section in between aluminium windows.
The boxed metal system is fixed to 50mm timber battens running vertically between sets of two windows and does not provide a continuous system vertically or horizontally across the elevations.
This boxed section also acts as a cover for a lightning protecting strip cover on one elevation
Metal is a soft metal that has a low melting point. As such this material is able to perform in temperatures between 400°c and 600°c, after which the metal will start to melt. Although it will not combust it will form molten droplets which may fall and ignite combustible materials below to cause secondary fires.

Spandrel infill is given as PIR insulation.  The PIR is in limited quantities although it should be noted that the heat from the flame causes the PIR insulation to undergo pyrolysis, which results in the black char that is formed on the surface of the board. This char layer creates a barrier inhibiting the oxygen to diffuse into the foam and may lead to self-extinguishment after a short period.

However, it should be noted that the final fire performance of plastic foams such as PIR strongly depend on the chemical composition and manufacturing process. e.g., content of isocyanate linkages and type of isocyanate-reactive component for PIR.
In addition, this insulation is encapsulated by the metal boxed section, 50mm timber fixing lining and the concrete substrate.
 The wall system has been assessed on performance and configuration and the system will not lead to rapid fire spread between compartments.
The wall type has been assessed against the L5 performance benchmark

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;
Fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.
It is our professional opinion that given the analysis of this external wall type, that there is no requirement for remediation.



# Façade Configuration: U8KVYB

## Items in Façade

| 3 Items | Effect | Risk |
|---|---|---|
| Wall Construction<br>Potential HPL Sections (FDJZ92) | Neutral | Medium |
| Attachment<br>Bolt-On Balcony (YE5S26) | Neutral | Low |
| External Window<br>Top, Mid, Side Hung Casements (G3MTRU) | Neutral | Low |

## Façade Configuration Risk Factors

### N.1 Building Height/Cladding 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 accidently 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

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

### N.4 Cavities & Openings

Cavity not continuous, due to façade being only partially clad or broken by other wall types — Neutral

## 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

Not Applicable

## 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

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**: High density laminate board  panels installed are B,s1, d0.

HPL are typically made of organic materials. They consist of layers of cellulose fibrous material impregnated with thermosetting resins. During the high-pressure process, defined as a simultaneous application of heat and pressure, the polymer chains are joined (or cross-linked) by intermolecular bonding (thermosets). This produces homogeneous panels that in a fire situation do not soften or drip. But; has the ability if ignite to rapidly develop across the external envelope of the building.
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.
In this building, the HPL has a Class B fire rating. This indicates a material with a limited contribution to fire, meaning it's combustible but has a relatively low flame spread and smoke development.
Cavity barriers were identified at compartment junction lines horizontally with the barriers  supported by Rockwool duoslab / Ewi slab (A1) insulation infill.
Date of refurbishment was 2015.

The building is over 18m height and a class B material would not be compliant if built today, although the refurbishment would have used AD-B (Approved document B) 2010 addendum which does not included the enhanced regulation 7 for buildings over 18m which came in later amended versions of AD-B.

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

It is our professional opinion that given the analysis of this external wall type, that there is no requirement for remediation.


Medium

# APPENDIX

# Asset Information

## Client Name

Sandwell Metropolitan Council

## Responsible Person

Sandwell Metropolitan Council

## Contact Details

0121 569 0162 - Lisa Ellis

## Fire Alarm System

There is no BS5839 (Part 6 or Part 1) Fire detection/alarm system provided in the common areas of the building. The smoke detection provided is part of the smoke ventilation system. Smoke vents have their own control panels located 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

## 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 installed on the stairwell/s.

## Suppression Systems

Partial sprinkler system installed (Detailed in Description)

## Suppression System

A suppression system is installed in 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

Hydrant is located next to approach road to the front of the main entrance/main access point. Information for services is in the PIB.
Public fire hydrants can be located: 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

Apartment Block

## Building Era / Age

Known Build Date

## Known Build Date

Circa 1964

## Guidance Applicable At Time Of Construction

CP3 Chapter 4

## 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 Flats

36

## Flat Types

Single Storey

## Structural Wall Material

Concrete / Brick

## Structural Floor Material

Reinforced Concrete

## Structural Stairs Material

Concrete

## Construction (Details)

Traditional concrete frame and brick construction which has had refurbishment works including aluminium windows, insulation and HPL classing system over existing façade.

## Exterior Cladding

FRAEW Completed on Exterior Cladding

## Exterior Cladding (Details)

Insulated Rockwool render (A2) and TRESPA METEON high density laminate board panels

## Electronic Entrance System

Yes

## Carpark

External/Outdoor Carpark

## Employees

Day staff

## Employees (Extended)

No staff on site (Occasional staff attendance expected - low numbers anticipated)

## Residents

Yes

## Approx number of Residents

72

## 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 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. The final exit door/s opens inwards however this is considered satisfactory as it will be used by less than 60 people due to the 'Stay Put' in place within the building.

## Number Of Internal Escape Stairs

1

## Number Of Final Exits

2

## 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.

## 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.

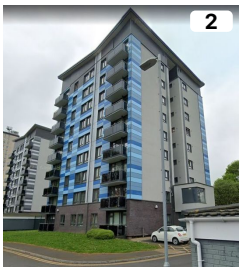
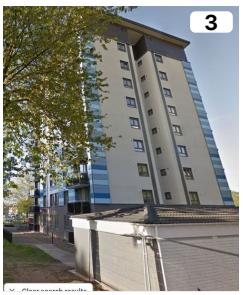
## What is the recommended evacuation strategy for the property?

Stay Put

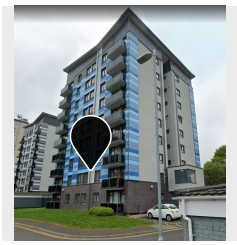
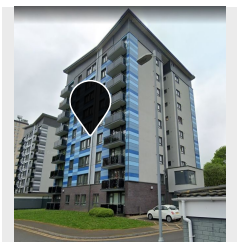
# Aerial Perspective: Broome House

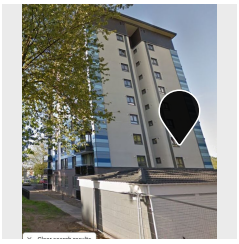
Aerial Perspective (picture sourced from Google Earth)

# Elevations

| Photo | Name | No. of Storeys |
|---|---|---|
|  | North Elevation | 9 Storeys |
|  | East Elevation | 9 Storeys |
|  | South Elevation | 9 Storeys |
|  | West Elevation | 9 Storeys |

# Inspections

| Elevation Location | Inspection | Elements |
|---|---|---|
|  | **Inspection: VMV16R**<br>North Elevation<br>Compartment Floor Junction | • Surface Finish (Brick Slip / Brick Tile)<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Reinforced concrete) |
|  | **Inspection: JZAARV**<br>North Elevation<br>Compartment Floor Junction | • Surface Finish (Sto render)<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Reinforced concrete) |
|  | **Inspection: H8ASH9**<br>North Elevation<br>Compartment Floor & System Interface | No elements identified |
|  | **Inspection: 9QJBQA**<br>East Elevation<br>Compartment Vertical Junction | • Surface Finish (Suspected High Pressure Laminate (HPL) Panel)<br>• Cavity<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Blockwork) |
|  | **Inspection: 6XXZ22**<br>East Elevation<br>Compartment Floor Junction | • Surface Finish (Suspected High Pressure Laminate (HPL) Panel)<br>• Cavity<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Reinforced concrete) |

| Elevation Location | Inspection | Elements |
| --- | --- | --- |
|  | **Inspection: ELK6YV**<br>East Elevation<br>Compartment Vertical Junction & System Interface | No elements identified |
|  | **Inspection: HVPGC4**<br>South Elevation<br>Compartment Floor Junction | No elements identified |
|  | **Inspection: USP71K**<br>West Elevation<br>Compartment Floor Junction | • Surface Finish (Brickwork)<br>• Cavity<br>• Inner Leaf (Blockwork) |
|  | **Inspection: 5HBB1Q**<br>West Elevation<br>Compartment Floor & Vertical Junction | No elements identified |

# Inspection: VMV16R

Elevation • Location
North Elevation • Compartment Floor Junction

## Name/Summary

Sample Area 1

## Build-Up

| 3 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| Surface Finish | 20mm | Brick Slip / Brick Tile | 5, 6, 7 | A1 - Non-Combustible |
| Insulation | 90mm | Mineral Wool Insulation | 8, 9 | A1 - Non-Combustible |
| Inner Leaf | | Reinforced concrete | 10, 11 | A1 - Non-Combustible |

## Cavity Barriers

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

## Floor Slab

Reinforced concrete

# Build-up Photos


5


6


7


8


9


10


11

# Inspection Photos


12

# Inspection: JZAARV

Elevation • Location
North Elevation • Compartment Floor Junction

## Name/Summary

Sample Area 2

## Build-Up

| 3 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| Surface Finish | 4mm | Sto render | 13, 14 | A1 - Non-Combustible |
| Insulation | 90mm | Mineral Wool Insulation | 15, 16, 17 | A1 - Non-Combustible |
| Slab backed up to render | | | | |
| Inner Leaf | | Reinforced concrete | 18, 19 | A1 - Non-Combustible |

## Cavity Barriers

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

## Floor Slab

Reinforced concrete

# Build-up Photos


13


14


15


16


17


18


19

# Inspection Photos


20

# Inspection: H8ASH9

Elevation • Location
North Elevation • Compartment Floor & System Interface

## Name/Summary

Grey Cladding

# Inspection: 9QJBQA

Elevation • Location
East Elevation • Compartment Vertical Junction

## Name/Summary

Sample Area 3

## Build-Up

| 4 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| Surface Finish | 8mm | Suspected High Pressure Laminate (HPL) Panel Material Brand: TRESPA METEON | 21, 22 | D - Highly Combustible |
| Cavity | 85mm | | 23, 24, 25 | |
| Insulation | 80mm | Mineral Wool Insulation | 26, 27 | A1 - Non-Combustible |
| Inner Leaf | | Blockwork | 28, 29, 30 | A1 - Non-Combustible |

## Cavity Barriers

Installed

## Floor Slab

Reinforced concrete

# Build-up Photos

21

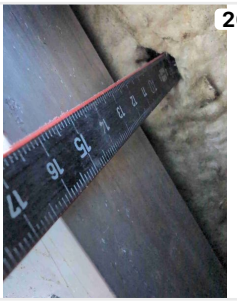
22

23

24

25

26



27

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# Inspection Photos

31

# Inspection: 6XXZ22

Elevation • Location
East Elevation • Compartment Floor Junction

## Name/Summary

Sample Area 4

## Build-Up

| 4 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| Surface Finish | 8mm | Suspected High Pressure Laminate (HPL) Panel Material Brand: TRESPA METEON | 32, 33 | D - Highly Combustible |
| Cavity | 110mm | | 34, 35, 36, 37 | |
| Insulation | 100mm | Mineral Wool Insulation | 38, 39 | A1 - Non-Combustible |
| Inner Leaf | | Reinforced concrete | 40, 41 | A1 - Non-Combustible |

## Cavity Barriers

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

## Floor Slab

Reinforced concrete

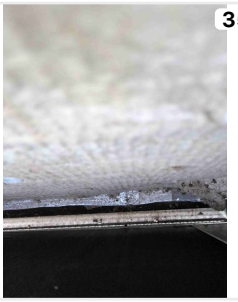
# Build-up Photos

32

33

34

35



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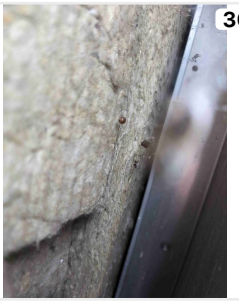

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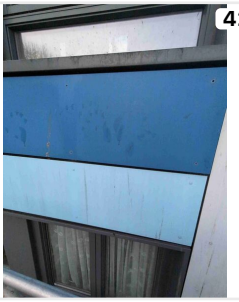
# Inspection Photos

42



# Inspection: ELK6YV

Elevation • Location
East Elevation • Compartment Vertical Junction & System Interface

## Name/Summary

Grey Cladding

# Inspection: HVPGC4

Elevation • Location
South Elevation • Compartment Floor Junction

## Name/Summary

Render

# Inspection: USP71K

Elevation • Location
West Elevation • Compartment Floor Junction

## Name/Summary

Sample Area 5

## Build-Up

| 3 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| Surface Finish | 100mm | Brickwork | 43, 44 | A1 - Non-Combustible |
| Cavity | 150mm | | 45, 46, 47, 48, 49, 50, 51, 52 | |
| Inner Leaf | | Blockwork | 53, 54 | A1 - Non-Combustible |

## Cavity Barriers

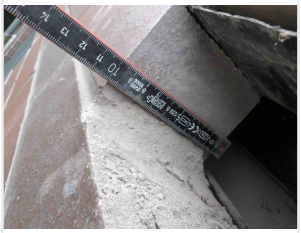
None

## Floor Slab

Reinforced concrete

# Build-up Photos

43



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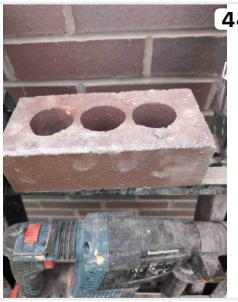

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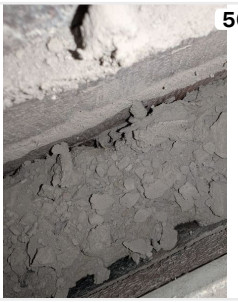


51

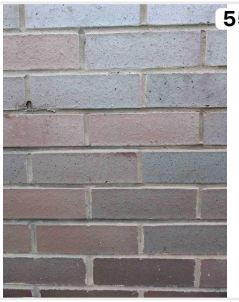
52

53

54

# Inspection Photos

55



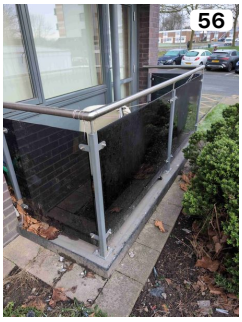
# Inspection: 5HBB1Q

Elevation • Location
West Elevation • Compartment Floor & Vertical Junction

## Name/Summary

HPL

# Attachments & Balconies

| Photo | Attachment |
| --- | --- |
| No Image | **Bolt-On Balcony (YE5S26)**<br>Configuration: Stacked<br>Size: Private balcony spanning only a single compartment |
|  | **Cantilever Balcony (8HLMSI)**<br>Configuration: Stacked, Single Unit<br>Size: Private balcony spanning only a single compartment |

# Attachment: Bolt-On Balcony

Attachment Reference
YE5S26

## Details

### Configuration

Stacked

### Size

Private balcony spanning only a single compartment

### Framework/Structure

Steel framed

### Handrail

Steel

### Balustrade

Laminated (non-laminated) glass with stainless steel fixings and handrail.

### Soffit

Render on a concrete base

### 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.

# Attachment: Cantilever Balcony

Attachment Reference
8HLMSI

## Details

### Configuration

Stacked, Single Unit

### Size

Private balcony spanning only a single compartment

### Framework/Structure

Reinforced concrete framework extension of the floor slab

### Decking & Supports

Concrete

### Handrail

Steel

### Balustrade

Steel handrail and balusters with clear glazing

### Soffit

Render on a concrete base

### 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.

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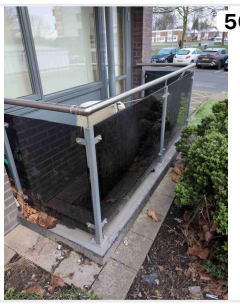
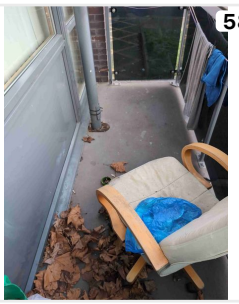
# Photos


56

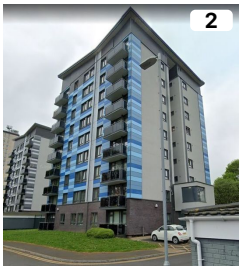
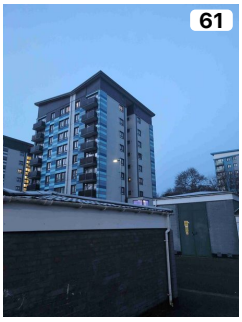

57


58


59


60

# External Windows

| Photo | External Window |
| --- | --- |
|  | Top, Mid, Side Hung Casements (IFPKDC) |
|  | Top, Mid, Side Hung Casements (G3MTRU) |

# External Window: Top, Mid, Side Hung Casements

External Window Reference
IFPKDC

## Details

### Surface Material

Aluminium

### Frame Material

Aluminium

### Infill / Panel Material

Toughened Glass

## Photos


# External Window: Top, Mid, Side Hung Casements

External Window Reference
G3MTRU

## Details

### Surface Material

Aluminium

### Frame Material

Aluminium

### Infill / Panel Material

Toughened Glass

## Photos

# External Doors

| Photo | External Door |
| --- | --- |
| No Image | **Single Leaf Entrance Doors (276MCR)** |

# External Door: Single Leaf Entrance Doors

External Door Reference
276MCR

## Details

### Surface Material

Aluminium powder coated

### Frame Material

Aluminium

### Infill / Panel Material

Toughened Glass

# Plan: North Elevation

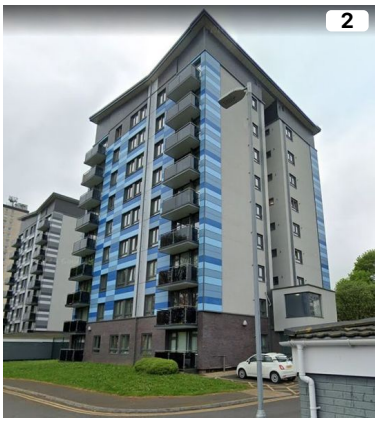
# Plan: East Elevation

# Plan: South Elevation

# Plan: West Elevation

# Photos


1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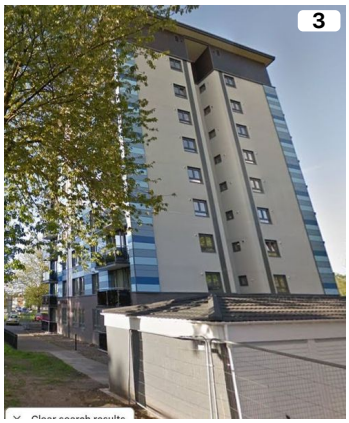
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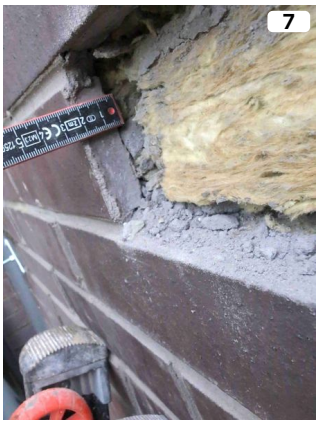
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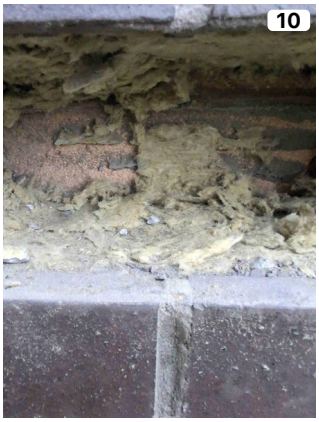
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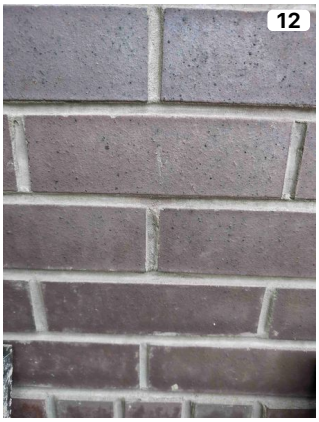
11


12

# Photos Continued...



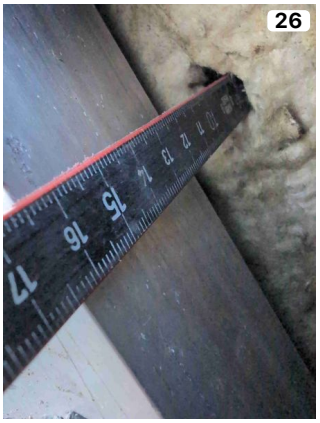









# Photos Continued...

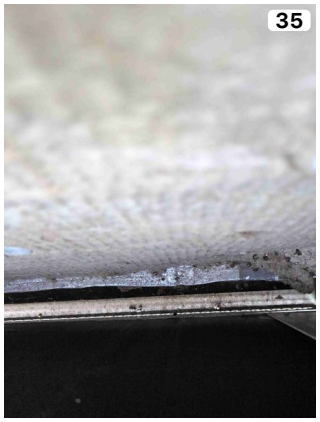



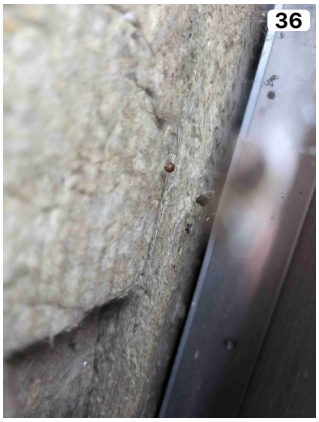




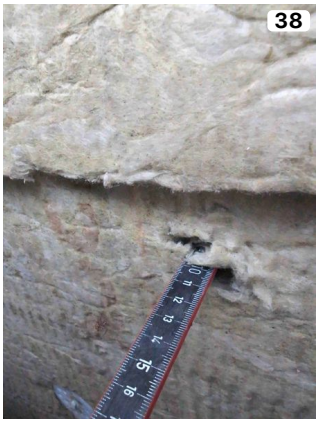




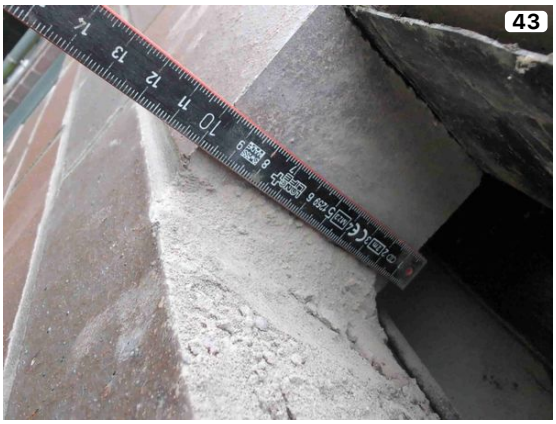



# Photos Continued...





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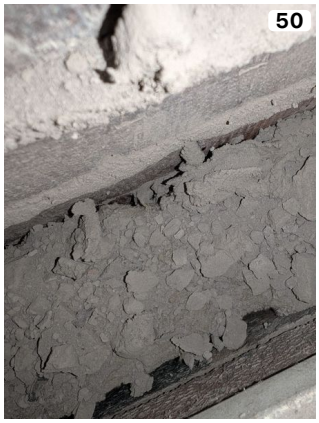
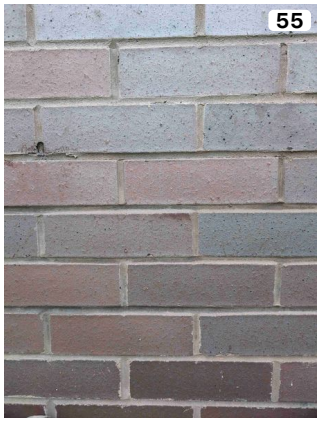
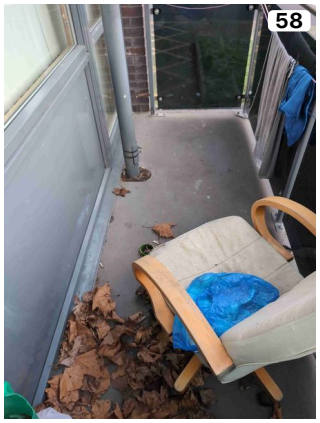




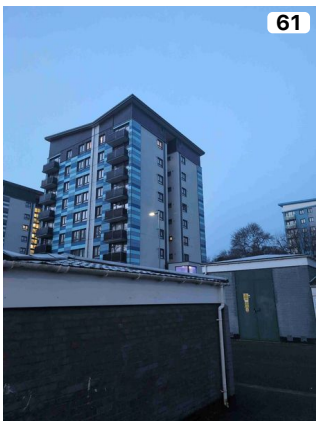



# Photos Continued...



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BUILDING COMPLIANCE

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