FIRNTEC
BUILDING COMPLIANCE

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

Document Version 1
Survey Date 27/08/2025
Suggested Review Date 27/08/2030

# FIRE RISK APPRAISAL EXTERNAL WALLS

## NELSON HOUSE

Upper Church Lane
Tipton
DY4 7TU

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# Summary

## Fire Risk Appraisal External Walls

**Assessment and Certificate Reference**
RB-TR2NCU

**Assessed On, By**
27/08/2025, James Major (Facade Manager)

**Approved / Validated On, By**
05/09/2025, Alex Dodd EngTech MinstRE (Lead Facade Consultant)

**Recommended Review Date**
27/08/2030

**Produced For the Responsible Person**
Sandwell Metropolitan Borough Council

**Specification Conforms To**
Our own internal quality system.

**Assessment Scope**
Assessment applies only to the building specified.

### Assessed Property

**Property Name**
Nelson House

**Property Reference**
RB-WZ2KLZ

**Address**
Upper Church Lane
Tipton
DY4 7TU

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**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 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 |
| --- | --- |
| **Fire Risk Assessment**<br>Sandwell Metropolitan Borough Council<br>Fire Risk Assessment | Received |

# Executive Summary

## External Wall Systems and Attachments on the Building

8 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.

| 6 Items | Effect | Risk |
|---|---|---|
| Wall Construction<br>HPL (TRWD97) | Neutral | Low |
| Wall Construction<br>Masonry (Brickwork) (DP2FS9) | Positive | Low |
| Wall Construction<br>Render (TPJ4FI) | Positive | Low |
| Attachment<br>Cantilever Balcony (WPU1S9) | Positive | Low |
| External Window<br>Top, Mid, Side Hung Casements (1DNCGH) | Neutral | Low |
| External Door<br>Single Leaf Entrance Doors (FSVJCC) | 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 **VK182T** which includes wall construction **TRWD97**.

**Conclusion**: This wall system was identified as being an external leaf of HPL cladding panels (detailed in the provided FRA as Bauclad HPL, achieving B,s2,d0), supported by an aluminium framework, followed by 100mm mineral wool (Rockwool) insulation and the underlying original masonry construction.

No material-specific documentation regarding the system installed in this building was provided. HPLs are most commonly formed of a mixture of cellulose (wood pulp, recycled paper or similar) and combustible polymeric resin, though 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 addition 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.

Although the aluminium framework is considered to be of limited combustibility, aluminium is recognised as having a lower melting point than other metals used in construction. This may mean that in scenarios resulting in prolonged exposure to fire, where temperatures exceed 600 degrees, the material may begin to lose its structural integrity. In this scenario, it may lead to structural failure and falling debris that could have a detrimental impact on escaping occupants or fire service intervention.

Mineral wool, which includes materials like stone wool, is known for its excellent fire-resistant properties. Mineral wool has a very high melting point, typically around 1,000°C to 1,200°C. This makes it non-combustible, meaning it does not contribute to the spread of fire. In the event of a fire, mineral wool acts as a thermal barrier. Its fibrous structure traps air, reducing the transmission of heat to other parts of the structure and slowing the spread of fire. Mineral wool maintains its insulation properties and shape even at high temperatures, further protecting the structural components of buildings, like steel, from heat damage.

The original building's construction was identified as a traditional brick/concrete construction and, as such, would not be expected to support, sustain, or contribute to fire spread across the external surface of the building.

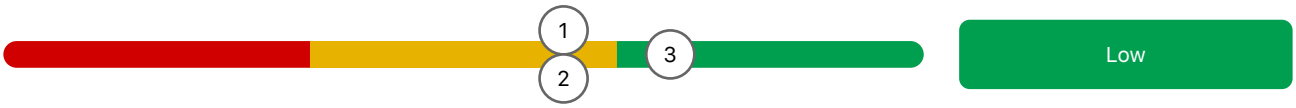
This wall system forms the primary facade type of the building. It is present on the East and West elevations and extends from the first floor to the uppermost storey of the building. Structural openings in this facade include windows and doors. The likelihood of external ignition has been determined to be very low due to this wall type starting on the first floor, and there being no sources of ignition immediately adjacent; there is no parking or refuse storage in close proximity to this wall type. The HPL was observed to be mechanically secured to an aluminium framework that provides structural integrity in the early stages of a fire, and the presence of the non-combustible insulation will also resist the spread of fire across the external surface of the building. A cavity was observed between the HPL panels and the insulation that would allow smoke and effluents to enter the cavity, but it is understood that solid-state mineral wool cavity barriers are present within the wall system that will disrupt the spread of fire within the cavity and should contain the fire to the compartment of origin. This wall type has no direct openings into the escape staircases, ensuring that in the event of a fire, they should remain tenable for all occupants, allowing them to escape the building in the event that they become affected by heat or smoke in their

dwelling, with an exit to the front and rear of the building in the event of falling debris.

This building operates a 'Stay Put' evacuation policy. It is anticipated that, due to the nature of the building's construction, a fire would be contained within the compartment of origin long enough for firefighter intervention to begin or for affected occupants to evacuate if necessary. The building has 2 escape staircases with lobby protection serving all floors. AOVs are located at the head of the staircases to prolong the tenability of the means of escape and to aid internal firefighter intervention. A dry riser is fitted to the building with an outlet on every floor. There is adequate access for the fire service to all elevations of the building. The nearest fire station is approximately 0.5 miles away, and as such, the response to a call out would be expected to be swift.

In the event of a fire:
a) fire spread is likely to be at a rate within expectations for a building of this height, or at a greater, but nevertheless, tolerable rate, given the circumstances at the building in question; and/or
b) fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or
c) 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; and/or
d) the fire and rescue service are likely to be able to intervene effectively to enable occupants to reach safety in time.

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




## Risk Factor Analysis 2

This analysis looks at façade configuration **375Q1H** which includes wall construction **DP2FS9**.

**Conclusion**: This system is formed of an outer leaf of brickslip adhesively bonded to a 100mm mineral wool insulation layer. Beneath the insulation is the original 1960s masonry construction of the building.

The brick slip presents a non-combustible surface material that does not sustain, support, or contribute to fire spread across the external surface of the building. Although the surface material is non-combustible, it appears to be only adhesively fixed to the insulation. Unlike full-size masonry bricks, which have a good thermal capacity to absorb heat released from a fire breaching a compartment aperture, the brickslips have limited capacity and their adhesion may fail prematurely, presenting a risk of falling debris, although in this building, the brickslips are located on the ground floor only.

Mineral wool, which includes materials like stone wool, is known for its excellent fire-resistant properties. Mineral wool has a very high melting point, typically around 1,000°C to 1,200°C. This makes it non-combustible, meaning it does not contribute to the spread of fire. In the event of a fire, mineral wool acts as a thermal barrier. Its fibrous structure traps air, reducing the transmission of heat to other parts of the structure and slowing the spread of fire. Mineral wool maintains its insulation properties and shape even at high temperatures, further protecting the structural components of buildings, like steel, from heat damage.

The inner leaf of masonry brickwork is generally considered fire-resistant and can provide significant protection against fire for structural and non-structural elements. Masonry bricks, typically made from clay or concrete, have very high melting points (above 1000°C for clay bricks), making them resistant to fire and heat. Bricks have low thermal conductivity. This helps prevent the spread of fire to adjacent areas and provides a thermal barrier that protects the underlying structure. Masonry walls provide effective fire containment, often preventing fire from spreading between compartments within a building. The thickness and density of the masonry wall determine its fire resistance rating.

The brickslip system is located on the ground floor only and extends the perimeter of the building. It encompasses windows and doors on the ground floor, as well as some service penetrations. The brickslip system is remote from sources of external ignition as there is no permanent parking immediately adjacent, nor is there permanent refuse storage nearby. Due to the non-combustible nature of the system, the likelihood of this system succumbing to external ignition is very low.

This building operates a 'Stay Put' evacuation policy. It is anticipated that, due to the nature of the building's

construction, a fire would be contained within the compartment of origin long enough for firefighter intervention to begin or for affected occupants to evacuate if necessary. The building has 2 escape staircases with lobby protection serving all floors. AOVs are located at the head of the staircases to prolong the tenability of the means of escape and to aid internal firefighter intervention. A dry riser is fitted to the building with an outlet on every floor. There is adequate access for the fire service to all elevations of the building. The nearest fire station is approximately 0.5 miles away, and as such, the response to a call out would be expected to be swift.

In the event of a fire:
a) fire spread is likely to be at a rate within expectations for a building of this height, or at a greater, but nevertheless, tolerable rate, given the circumstances at the building in question; and/or
b) fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or
c) 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; and/or
d) the fire and rescue service are likely to be able to intervene effectively to enable occupants to reach safety in time.

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


## Risk Factor Analysis 3

This analysis looks at façade configuration **E3K2T4** which includes wall construction **TPJ4FI**.

**Conclusion**: This wall system was identified as being an external leaf of 6mm Render (detailed in client client-provided FRA as a Wetherby EWI render system ), adhesively fixed via a supporting mesh to the underlying 100mm mineral wool (Rockwool) insulation. This is mechanically fixed to the underlying original masonry construction.

Renders are typically considered to be of limited combustibility and can withstand high temperatures without catching fire or releasing harmful gases. The fire resistance of render depends on its composition, thickness, and the type of reinforcement used. In general, thicker layers of render provide better fire resistance. Its insulating properties can contribute to how a building performs in a fire. In some cases, the render can help protect the underlying structure (such as brick or wood) from high heat by providing a protective layer. The render system that was identified achieves a Euroclass A2-s1, d0 rating and as such would not be expected to support, sustain, or contribute to fire spread across the external surface of the building.

Mineral wool, which includes materials like stone wool, is known for its excellent fire-resistant properties. Mineral wool has a very high melting point, typically around 1,000°C to 1,200°C. This makes it non-combustible, meaning it does not contribute to the spread of fire. In the event of a fire, mineral wool acts as a thermal barrier. Its fibrous structure traps air, reducing the transmission of heat to other parts of the structure and slowing the spread of fire. Mineral wool maintains its insulation properties and shape even at high temperatures, further protecting the structural components of buildings, like steel, from heat damage.

The original building's construction was identified as a traditional brick/concrete construction and, as such, would not be expected to support, sustain, or contribute to fire spread across the external surface of the building.

This wall system forms the secondary facade of the building. It is present on the North and South elevations and extends from the first floor to the uppermost storey of the building. Structural openings in this facade include windows and service penetrations. The likelihood of external ignition has been determined to be very low due to this wall type starting on the first floor, and there being no sources of ignition immediately adjacent; there is no parking or refuse storage in close proximity to this wall type. The limited combustibility nature of the external surface, coupled with the presence of the non-combustible insulation, will also resist the spread of fire across the external surface of the building. There is no air cavity present in this wall system to provide an envelope for fire or smoke to travel vertically or horizontally unseen. This wall type has no direct openings into the escape staircases or communal areas, ensuring that in the event of a fire, they should remain tenable for all occupants, allowing them to escape the building in the event that they become affected by heat or smoke in their dwelling, with an exit to the front and rear of the building in the event of falling debris.

This building operates a ‘Stay Put’ evacuation policy. It is anticipated that, due to the nature of the building’s

construction, a fire would be contained within the compartment of origin long enough for firefighter intervention to begin or for affected occupants to evacuate if necessary. The building has 2 escape staircases with lobby protection serving all floors. AOVs are located at the head of the staircases to prolong the tenability of the means of escape and to aid internal firefighter intervention. A dry riser is fitted to the building with an outlet on every floor. There is adequate access for the fire service to all elevations of the building. The nearest fire station is approximately 0.5 miles away, and as such, the response to a call out would be expected to be swift.

In the event of a fire:
a) fire spread is likely to be at a rate within expectations for a building of this height, or at a greater, but nevertheless, tolerable rate, given the circumstances at the building in question; and/or
b) fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or
c) 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; and/or
d) the fire and rescue service are likely to be able to intervene effectively to enable occupants to reach safety in time.

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


Low

# Overall Building Risk Rating

Low

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

### F.3 Escape Route Design

Access to more than one staircase for escape

Positive

### 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

Positive

Photo Ref. 3, 4

## F.6 Fire Alarm & Detection

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

Neutral

## F.7 Fire Suppression

Suppression (localised deluge system to bin store only; no whole-building or flat-level sprinklers)

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

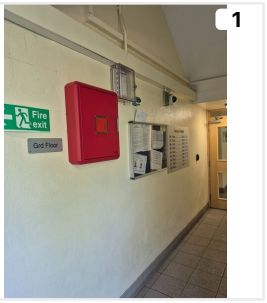
Negative

## F.11 Specific Fire Hazards

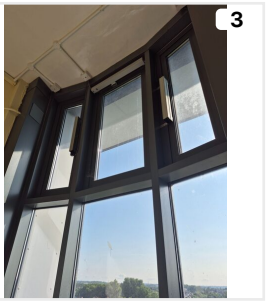
PV Panels on roof

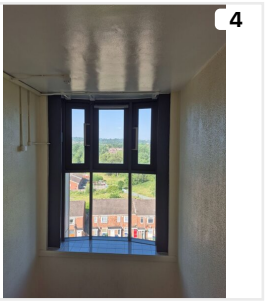
Neutral

## 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 | 120 Seconds | 2 Minutes |
| Arrival Protocol And Entry Preparation Time | 180 Seconds | 3 Minutes |
| 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** | **905 Seconds** | **15 Minutes 5 Seconds** |

## Nearest Fire Station

Tipton Fire Station, 0.5 miles, approx 2 minutes travel time under normal traffic conditions

# Wall Constructions

| Wall Construction | Build-up |
|---|---|
| **HPL (TRWD97)** | • External Surface Material (High Pressure Laminate (HPL) Panel)<br>• Framework (Aluminium L/T Rail)<br>• Cavity<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Brickwork) |
| **Masonry (Brickwork) (DP2FS9)** | • Outer leaf<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Brickwork) |
| **Render (TPJ4FI)** | • External Surface Material (Render)<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Brickwork) |

# Wall Construction: HPL

Construction Reference
TRWD97

This wall construction was identified by wall inspections HA3457, PAG8ET, UL45AL, and ZL22CJ. The build-up, cavity barrier, and floor slab information is taken directly from inspection HA3457. See the Inspections section of this report for full inspection details.

| Construction | Effect | Risk |
|---|---|---|
| HPL (TRWD97) | Neutral | Low |

## Build-Up

| 5 Elements | Thickness/Depth | Material | Rating (BS EN13501) |
|---|---|---|---|
| External Surface Material | 8mm | High Pressure Laminate (HPL) Panel | B - Combustible |
| Product details provided by Sandwell Council | | | |
| Framework | | Aluminium L/T Rail | A2 - Limited Combustibility |
| Cavity | 80mm | | |
| Insulation | 100mm | Mineral Wool Insulation | A1 - Non-Combustible |
| Inner Leaf | 100mm | 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) >3 MJ/kg and ≤35 MJ/kg | Neutral |

## K.2 External Surfaces

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

## K.3 Facings/Cladding Panels

| | |
|---|---|
| Low HRR | Positive |
| Mechanically fixed | Negative |

## 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 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: Masonry (Brickwork)

Construction Reference
DP2FS9

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

| Construction | Effect | Risk |
|---|---|---|
| Masonry (Brickwork) (DP2FS9) | Positive | Low |

## Build-Up

| 3 Elements | Thickness/Depth | Material | Rating (BS EN13501) |
|---|---|---|---|
| Outer leaf | 100mm | Material Brand: Brickwork | A1 - Non-Combustible |
| Insulation | 100mm | Mineral Wool Insulation | A1 - Non-Combustible |
| Inner Leaf | 100mm | Brickwork | A1 - Non-Combustible |

## Cavity Barriers

No external cavity

## Floor Slab

Backing Wall Sits On The Floor Slab

# Fire Performance

## K.1 General

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

## K.2 External Surfaces

Class A1/A2 — Positive

## K.3 Facings/Cladding Panels

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

## 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: Render

Construction Reference
TPJ4FI

This wall construction was identified by wall inspections J6QY61, 69WP89, and F1JNE1. The build-up, cavity barrier, and floor slab information is taken directly from inspection J6QY61. See the Inspections section of this report for full inspection details.

| Construction | Effect | Risk |
|---|---|---|
| Render (TPJ4FI) | Positive | Low |

## Build-Up

| 3 Elements | Thickness/Depth | Material | Rating (BS EN13501) |
|---|---|---|---|
| External Surface Material | 6mm | Render | A2 - Limited Combustibility |
| Insulation | 100mm | Mineral Wool Insulation | A1 - Non-Combustible |
| Inner Leaf | 100mm | Brickwork | A1 - Non-Combustible |

## Cavity Barriers

No external cavity

## Floor Slab

Backing Wall Sits On The Floor Slab

# Fire Performance

## K.1 General

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

## K.2 External Surfaces

| | |
|---|---|
| Class A1/A2 | Positive |

## K.3 Facings/Cladding Panels

| | |
|---|---|
| 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/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<br>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: VK182T

## Items in Façade

| 3 Items | Effect | Risk |
|---|---|---|
| Wall Construction<br>HPL (TRWD97) | Neutral | Low |
| Attachment<br>Cantilever Balcony (WPU1S9) | Positive | Low |
| External Window<br>Top, Mid, Side Hung Casements (1DNCGH) | Neutral | Low |

## 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 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

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

Not Applicable

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

Adjacent to windows and openings onto escape routes, but the same fire could not spread to affect more than one escape route

Negative

## 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**: This wall system was identified as being an external leaf of HPL cladding panels (detailed in the provided FRA as Bauclad HPL, achieving B,s2,d0), supported by an aluminium framework, followed by 100mm mineral wool (Rockwool) insulation and the underlying original masonry construction.

No material-specific documentation regarding the system installed in this building was provided. HPLs are most commonly formed of a mixture of cellulose (wood pulp, recycled paper or similar) and combustible polymeric resin, though 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 addition 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.

Although the aluminium framework is considered to be of limited combustibility, aluminium is recognised as having a lower melting point than other metals used in construction. This may mean that in scenarios resulting in prolonged exposure to fire, where temperatures exceed 600 degrees, the material may begin to lose its structural integrity. In this scenario, it may lead to structural failure and falling debris that could have a detrimental impact on escaping occupants or fire service intervention.

Mineral wool, which includes materials like stone wool, is known for its excellent fire-resistant properties. Mineral wool has a very high melting point, typically around 1,000°C to 1,200°C. This makes it non-combustible, meaning it does not contribute to the spread of fire. In the event of a fire, mineral wool acts as a thermal barrier. Its fibrous structure traps air, reducing the transmission of heat to other parts of the structure and slowing the spread of fire. Mineral wool maintains its insulation properties and shape even at high temperatures, further protecting the structural components of buildings, like steel, from heat damage.

The original building's construction was identified as a traditional brick/concrete construction and, as such, would not be expected to support, sustain, or contribute to fire spread across the external surface of the building.

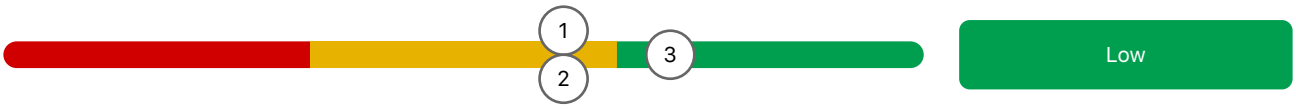
This wall system forms the primary facade type of the building. It is present on the East and West elevations and extends from the first floor to the uppermost storey of the building. Structural openings in this facade include windows and doors. The likelihood of external ignition has been determined to be very low due to this wall type starting on the first floor, and there being no sources of ignition immediately adjacent; there is no parking or refuse storage in close proximity to this wall type. The HPL was observed to be mechanically secured to an aluminium framework that provides structural integrity in the early stages of a fire, and the presence of the non-combustible insulation will also resist the spread of fire across the external surface of the building. A cavity was observed between the HPL panels and the insulation that would allow smoke and effluents to enter the cavity, but it is understood that solid-state mineral wool cavity barriers are present within the wall system that will disrupt the spread of fire within the cavity and should contain the fire to the compartment of origin. This wall type has no direct openings into the escape staircases, ensuring that in the event of a fire, they should remain tenable for all occupants, allowing them to escape the building in the event that they become affected by heat or smoke in their dwelling, with an exit to the front and rear of the building in the event of falling debris.

This building operates a ‘Stay Put’ evacuation policy. It is anticipated that, due to the nature of the building’s construction, a fire would be contained within the compartment of origin long enough for firefighter intervention to begin or for affected occupants to evacuate if necessary. The building has 2 escape staircases with lobby protection serving all floors. AOVs are located at the head of the staircases to prolong the tenability of the means

of escape and to aid internal firefighter intervention. A dry riser is fitted to the building with an outlet on every floor. There is adequate access for the fire service to all elevations of the building. The nearest fire station is approximately 0.5 miles away, and as such, the response to a call out would be expected to be swift.

In the event of a fire:
a) fire spread is likely to be at a rate within expectations for a building of this height, or at a greater, but nevertheless, tolerable rate, given the circumstances at the building in question; and/or
b) fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or
c) 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; and/or
d) the fire and rescue service are likely to be able to intervene effectively to enable occupants to reach safety in time.

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



# Façade Configuration: 375Q1H

## Items in Façade

| 3 Items | Effect | Risk |
|---|---|---|
| Wall Construction<br>Masonry (Brickwork) (DP2FS9) | Positive | Low |
| External Door<br>Single Leaf Entrance Doors (FSVJCC) | Neutral | Low |
| External Window<br>Top, Mid, Side Hung Casements (1DNCGH) | Neutral | Low |

## 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 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 — Positive

### N.4 Cavities & Openings

Cavity not continuous, due to façade being only partially clad or broken by building features:
• projecting floor slabs that divide part of the wall and isolate sections of cavity from each other; and
• walls that project out or are set back, such as to limit the vertical extent of cavities) — 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

Not Applicable

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

No combustible elements

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**: This system is formed of an outer leaf of brickslip adhesively bonded to a 100mm mineral wool insulation layer. Beneath the insulation is the original 1960s masonry construction of the building.

The brick slip presents a non-combustible surface material that does not sustain, support, or contribute to fire spread across the external surface of the building. Although the surface material is non-combustible, it appears to be only adhesively fixed to the insulation. Unlike full-size masonry bricks, which have a good thermal capacity to absorb heat released from a fire breaching a compartment aperture, the brickslips have limited capacity and their adhesion may fail prematurely, presenting a risk of falling debris, although in this building, the brickslips are located on the ground floor only.

Mineral wool, which includes materials like stone wool, is known for its excellent fire-resistant properties. Mineral wool has a very high melting point, typically around 1,000°C to 1,200°C. This makes it non-combustible, meaning it does not contribute to the spread of fire. In the event of a fire, mineral wool acts as a thermal barrier. Its fibrous structure traps air, reducing the transmission of heat to other parts of the structure and slowing the spread of fire. Mineral wool maintains its insulation properties and shape even at high temperatures, further protecting the structural components of buildings, like steel, from heat damage.

The inner leaf of masonry brickwork is generally considered fire-resistant and can provide significant protection against fire for structural and non-structural elements. Masonry bricks, typically made from clay or concrete, have very high melting points (above 1000°C for clay bricks), making them resistant to fire and heat. Bricks have low thermal conductivity. This helps prevent the spread of fire to adjacent areas and provides a thermal barrier that protects the underlying structure. Masonry walls provide effective fire containment, often preventing fire from spreading between compartments within a building. The thickness and density of the masonry wall determine its fire resistance rating.

The brickslip system is located on the ground floor only and extends the perimeter of the building. It encompasses windows and doors on the ground floor, as well as some service penetrations. The brickslip system is remote from sources of external ignition as there is no permanent parking immediately adjacent, nor is there permanent refuse storage nearby. Due to the non-combustible nature of the system, the likelihood of this system succumbing to external ignition is very low.

This building operates a ‘Stay Put’ evacuation policy. It is anticipated that, due to the nature of the building’s construction, a fire would be contained within the compartment of origin long enough for firefighter intervention to begin or for affected occupants to evacuate if necessary. The building has 2 escape staircases with lobby protection serving all floors. AOVs are located at the head of the staircases to prolong the tenability of the means of escape and to aid internal firefighter intervention. A dry riser is fitted to the building with an outlet on every floor. There is adequate access for the fire service to all elevations of the building. The nearest fire station is approximately 0.5 miles away, and as such, the response to a call out would be expected to be swift.

In the event of a fire:
a) fire spread is likely to be at a rate within expectations for a building of this height, or at a greater, but nevertheless, tolerable rate, given the circumstances at the building in question; and/or
b) fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or
c) 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; and/or
d) the fire and rescue service are likely to be able to intervene effectively to enable occupants to reach safety in time.

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

# Façade Configuration: E3K2T4

## Items in Façade

| 2 Items | Effect | Risk |
|---|---|---|
| Wall Construction<br>Render (TPJ4FI) | Positive | Low |
| External Window<br>Top, Mid, Side Hung Casements (1DNCGH) | Neutral | Low |

## 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 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

Entire façade covered

Negative

### N.4 Cavities & Openings

No cavity

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

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**: This wall system was identified as being an external leaf of 6mm Render (detailed in client client-provided FRA as a Wetherby EWI render system ), adhesively fixed via a supporting mesh to the underlying 100mm mineral wool (Rockwool) insulation. This is mechanically fixed to the underlying original masonry construction.

Renders are typically considered to be of limited combustibility and can withstand high temperatures without catching fire or releasing harmful gases. The fire resistance of render depends on its composition, thickness, and the type of reinforcement used. In general, thicker layers of render provide better fire resistance. Its insulating properties can contribute to how a building performs in a fire. In some cases, the render can help protect the underlying structure (such as brick or wood) from high heat by providing a protective layer. The render system that was identified achieves a Euroclass A2-s1, d0 rating and as such would not be expected to support, sustain, or contribute to fire spread across the external surface of the building.

Mineral wool, which includes materials like stone wool, is known for its excellent fire-resistant properties. Mineral wool has a very high melting point, typically around 1,000°C to 1,200°C. This makes it non-combustible, meaning it does not contribute to the spread of fire. In the event of a fire, mineral wool acts as a thermal barrier. Its fibrous structure traps air, reducing the transmission of heat to other parts of the structure and slowing the spread of fire. Mineral wool maintains its insulation properties and shape even at high temperatures, further protecting the structural components of buildings, like steel, from heat damage.

The original building's construction was identified as a traditional brick/concrete construction and, as such, would not be expected to support, sustain, or contribute to fire spread across the external surface of the building.

This wall system forms the secondary facade of the building. It is present on the North and South elevations and extends from the first floor to the uppermost storey of the building. Structural openings in this facade include windows and service penetrations. The likelihood of external ignition has been determined to be very low due to this wall type starting on the first floor, and there being no sources of ignition immediately adjacent; there is no parking or refuse storage in close proximity to this wall type. The limited combustibility nature of the external surface, coupled with the presence of the non-combustible insulation, will also resist the spread of fire across the external surface of the building. There is no air cavity present in this wall system to provide an envelope for fire or smoke to travel vertically or horizontally unseen. This wall type has no direct openings into the escape staircases or communal areas, ensuring that in the event of a fire, they should remain tenable for all occupants, allowing them to escape the building in the event that they become affected by heat or smoke in their dwelling, with an exit to the front and rear of the building in the event of falling debris.

This building operates a ‘Stay Put’ evacuation policy. It is anticipated that, due to the nature of the building’s construction, a fire would be contained within the compartment of origin long enough for firefighter intervention to begin or for affected occupants to evacuate if necessary. The building has 2 escape staircases with lobby protection serving all floors. AOVs are located at the head of the staircases to prolong the tenability of the means of escape and to aid internal firefighter intervention. A dry riser is fitted to the building with an outlet on every floor. There is adequate access for the fire service to all elevations of the building. The nearest fire station is approximately 0.5 miles away, and as such, the response to a call out would be expected to be swift.

In the event of a fire:
a) fire spread is likely to be at a rate within expectations for a building of this height, or at a greater, but nevertheless, tolerable rate, given the circumstances at the building in question; and/or
b) fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or
c) 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; and/or
d) the fire and rescue service are likely to be able to intervene effectively to enable occupants to reach safety in time.

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


Low

# APPENDIX

# Asset Information

## Client Name

Sandwell Metropolitan Borough Council

## Client Address

Sandwell Council House, Freeth Street, Oldbury B69 3DE

## Responsible Person

Sandwell Metropolitan Borough Council

## Fire Alarm System

There is no effective means for detecting an outbreak of fire to communal areas. Hardwired smoke detection was noted within the area containing the resident's storage sheds.

Detection and alarm system installed in accordance with BS 5839 Part 6: 2019. British Standard that provides guidance and recommendations for the design, installation, commissioning, and maintenance of fire detection and fire alarm systems in domestic premises. Early warning is limited to hard wire or battery smoke alarms within each of the resident's flats. Fire detection within flats is installed to a LD2  standard.

## 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

The only portable fire extinguisher at Nelson House is:
Type: $CO_2$ extinguisher
Location: Installed within the lift motor room on the 8th floor
Access: The lift motor room is protected by an FD60s door and secured with a suited mortice lock
This is consistent with best practice, as $CO_2$ is typically used in electrical plant areas to avoid equipment damage and eliminate conductivity risk.

## Smoke Control

Natural smoke control, Smoke control installed

## Smoke Control

Two AOVs are provided—one in each protected staircase. These systems are connected to:
An information panel and firefighter override switch located near the front entrance

## Suppression Systems

Partial sprinkler system installed (Detailed in Description)

## Suppression System

A deluge system protects the refuse chute bin store:
Controlled via a panel in the welfare room (ground floor)
Inspected twice annually

## 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

Good access for firefighting vehicles
NOTE This is where access exceeds 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. This might be the case where access is possible to all elevations of the building.

## Fire Hydrant Location/ Water Supply

Public fire hydrant are available. Located adjacent to the front main entrance, 3m from the building, as denoted in the on arrival information.
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

## Secure Information Boxes

Nelson House is equipped with a Secure Information Box (SIB), located in the ground floor front entrance lobby. This is a:
Gerda SIB unit, which:
Meets the requirements of the Fire Safety (England) Regulations 2022
Is accessible by West Midlands Fire Service via the standard WMFS Gerda key

## Signage

Appropriate signage installed throughout premises

## Property Type

Apartment Block, Residential Purpose-built

## Building Era / Age

Known Build Date

## Known Build Date

1961, Refurbished 2017.

## Guidance Applicable At Time Of Construction

Building Regulations 1961 (England and Wales) Introduced in July 1961 Nelson House likely designed under pre-1961 byelaws or transitional guidance.
Model Byelaws (1947) + Local Bylaws Active at design stage Covered compartmentation, stairs, and construction materials.

## Building Height

Overall Building Height Approximately 27m
Highest Occupied Floor Level 24m
(calculated at 3m per floor as per PAS 9980-2022 section 3.1.22)

## Approx Floor Area Per Floor

300 m2

## Gross Internal Floor Area (GIFA)

2400 m2

## External Dimensions

D18m x W15m x H24.3m = 270m2

## Number of Storeys (Ground and above)

9

## Number of Basement Levels

None

## Number of Flats

34

## Flat Types

Single Storey

## Structural Wall Material

Traditional build with concrete floor slab

## 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

## Electronic Entrance System

Yes

## Carpark

External/Outdoor Carpark

## Employees

None

## Residents

Yes

## Approx number of Residents

68

## Residents (Extended)

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

## Visitors

Not Known

## People With Reduced Mobility

Not Known

## 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.

## Number Of Internal Escape Stairs

Two protected staircases

## Number Of Final Exits

Nelson House is provided with two final exit doors (front and rear), each serving one of the two protected staircases:

## External Means Of Escape

None Present

## Types Of Lifts Installed

Passenger + Fireman's Control

## Evacuation Chairs Installed

No

## Refuge Points Present

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

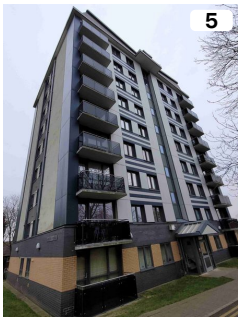
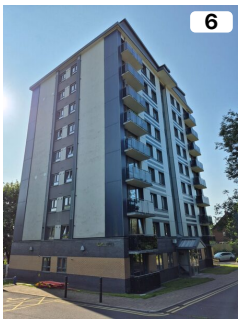
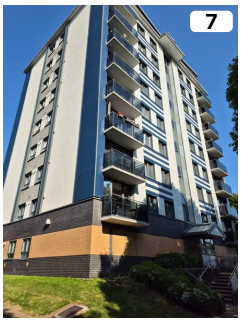
## What is the recommended evacuation strategy for the property?

Stay Put

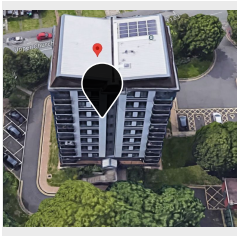
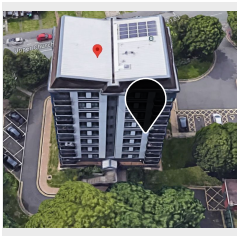
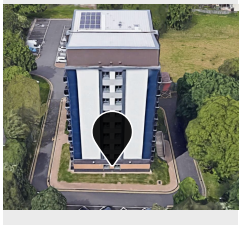
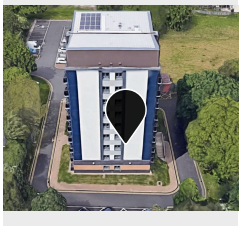
# Aerial Perspective: Nelson House

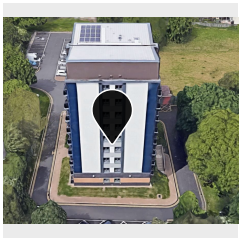
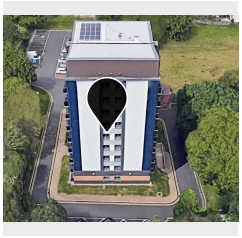
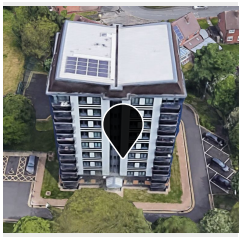
Aerial Perspective (picture sourced from Google Earth)

# Elevations

| Photo | Name | No. of Storeys | Features |
|---|---|---|---|
|  | West Elevation | 9 Storeys | • Escape Route Exit<br>• Private Balconies Stacked |
|  | North Elevation | 9 Storeys | |
|  | South Elevation | 9 Storeys | |

# Inspections

| Elevation Location | Inspection | Elements |
|---|---|---|
|  | **Inspection: HA3457**<br>East Elevation<br>Compartment Floor and Wall Junction Interface | • External Surface Material (High Pressure Laminate (HPL) Panel)<br>• Framework (Aluminium L/T Rail)<br>• Cavity<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Brickwork) |
|  | **Inspection: PAG8ET**<br>East Elevation<br>Aperture Opening | • External Surface Material (High Pressure Laminate (HPL) Panel)<br>• Framework (Aluminium L/T Rail)<br>• Cavity<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Brickwork) |
|  | **Inspection: UL45AL**<br>East Elevation<br>Aperture Opening | • External Surface Material (High Pressure Laminate (HPL) Panel)<br>• Framework (Aluminium L/T Rail)<br>• Cavity<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Brickwork) |
|  | **Inspection: LAMPNS**<br>South Elevation<br>Compartment Wall Junction | • Outer leaf<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Brickwork) |
|  | **Inspection: J6QY61**<br>South Elevation<br>Compartment Floor and Wall Junction Interface | • External Surface Material (Render)<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Brickwork) |

| Elevation Location | Inspection | Elements |
| --- | --- | --- |
|  | **Inspection: 69WP89**<br>South Elevation<br>Compartment Floor and Wall Junction Interface | • External Surface Material (Render)<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Brickwork) |
|  | **Inspection: F1JNE1**<br>South Elevation<br>Aperture Opening | • External Surface Material (Render)<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Brickwork) |
|  | **Inspection: ZL22CJ**<br>West Elevation<br>Compartment Wall Junction | • External Surface Material (High Pressure Laminate (HPL) Panel)<br>• Framework (Aluminium L/T Rail)<br>• Cavity<br>• Insulation (Mineral Wool Insulation)<br>• Inner Leaf (Brickwork) |

# Inspection: HA3457

Elevation • Location
East Elevation • Compartment Floor and Wall Junction Interface

## Name/Summary

HPL Bauclad High Pressure Laminate (HPL) panels by Euro Clad Ltd.

## Proposed Inspection

The purpose of the intrusive survey will consist of the visual and intrusive inspections of the identified systems and attachments to determine the through wall construction.

The Engineer will be looking to determine the:
a) External Leaf (Identify the material and Euroclass)
b) Cavities (if a cavity is present and if so the depth and extent)
c) Insulation (identify the material and Euroclass)
d) Sheathing Board (the presence of any Sheathing Board)
e) Membranes (identify their presence and where possible manufacturer)
f) Substrates (the means in which the façade is attached to the building)
g) Cavity Barriers (Horizontally, Vertically, Around Openings)

The external inspection is undertaken by either using an approximate 25mm – 150mm bore in a discreet location or the removal of the external surface material. The engineer will then gather the external walls construction from external to internal.

The materials are then measured and observed in there construction along with photographic evidence.
Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

## Build-Up

| 5 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| External Surface Material | 8mm | High Pressure Laminate (HPL) Panel | | B - Combustible |
| Product details provided by Sandwell Council | | | | |
| Framework | | Aluminium L/T Rail | | A2 - Limited Combustibility |
| Cavity | 80mm | | | |

| 5 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| Insulation | 100mm | Mineral Wool Insulation | | A1 - Non-Combustible |
| Inner Leaf | 100mm | Brickwork | | A1 - Non-Combustible |

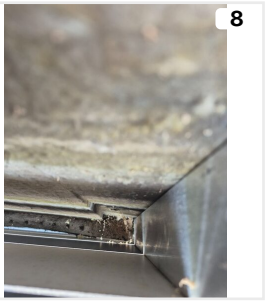
## Cavity Barriers

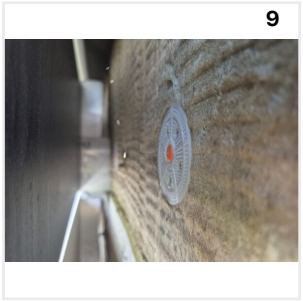
| 1 Cavity Barrier | Material | Photo Ref. |
|---|---|---|
| Vertical Cavity Barrier | Solid State Mineral Wool | |

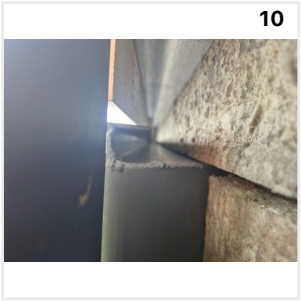
## Floor Slab

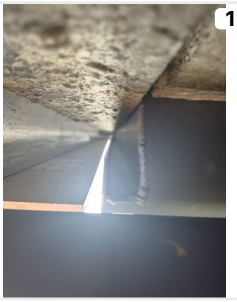
Backing Wall Sits On The Floor Slab

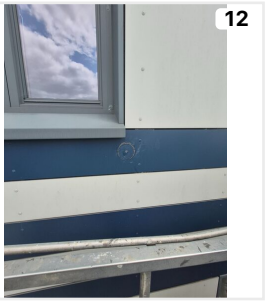
## Inspection Photos



# Inspection: PAG8ET

Elevation • Location
East Elevation • Aperture Opening

## Name/Summary

HPL Bauclad High Pressure Laminate (HPL) panels by Euro Clad Ltd.

## Proposed Inspection

The purpose of the intrusive survey will consist of the visual and intrusive inspections of the identified systems and attachments to determine the through wall construction.

The Engineer will be looking to determine the:
a) External Leaf (Identify the material and Euroclass)
b) Cavities (if a cavity is present and if so the depth and extent)
c) Insulation (identify the material and Euroclass)
d) Sheathing Board (the presence of any Sheathing Board)
e) Membranes (identify their presence and where possible manufacturer)
f) Substrates (the means in which the façade is attached to the building)
g) Cavity Barriers (Horizontally, Vertically, Around Openings)

The external inspection is undertaken by either using an approximate 25mm – 150mm bore in a discreet location or the removal of the external surface material. The engineer will then gather the external walls construction from external to internal.

The materials are then measured and observed in there construction along with photographic evidence.
Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

## Build-Up

| 5 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| External Surface Material | 8mm | High Pressure Laminate (HPL) Panel | | B - Combustible |
| Framework | | Aluminium L/T Rail | | A2 - Limited Combustibility |
| Cavity | 80mm | | | |
| Insulation | 100mm | Mineral Wool Insulation | | A1 - Non-Combustible |

| 5 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| Inner Leaf | 100mm | Brickwork | | A1 - Non-Combustible |

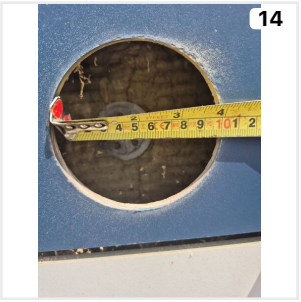
# Cavity Barriers

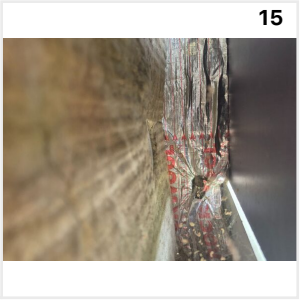
| 1 Cavity Barrier | Material | Photo Ref. |
|---|---|---|
| Horizontal Cavity Barrier | Solid State Mineral Wool | |

# Floor Slab

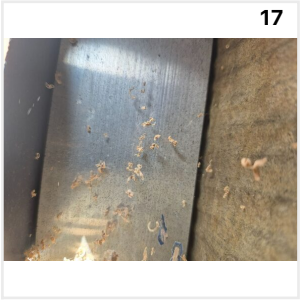
Backing Wall Sits On The Floor Slab

# Inspection Photos

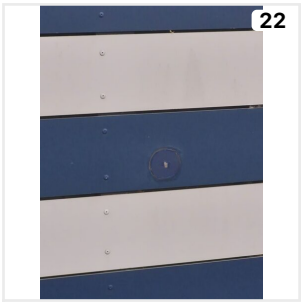








21


22

# Inspection: UL45AL

Elevation • Location
East Elevation • Aperture Opening

## Name/Summary

HPL Bauclad High Pressure Laminate (HPL) panels by Euro Clad Ltd.

## Proposed Inspection

The purpose of the intrusive survey will consist of the visual and intrusive inspections of the identified systems and attachments to determine the through wall construction.

The Engineer will be looking to determine the:
a) External Leaf (Identify the material and Euroclass)
b) Cavities (if a cavity is present and if so the depth and extent)
c) Insulation (identify the material and Euroclass)
d) Sheathing Board (the presence of any Sheathing Board)
e) Membranes (identify their presence and where possible manufacturer)
f) Substrates (the means in which the façade is attached to the building)
g) Cavity Barriers (Horizontally, Vertically, Around Openings)

The external inspection is undertaken by either using an approximate 25mm – 150mm bore in a discreet location or the removal of the external surface material. The engineer will then gather the external walls construction from external to internal.

The materials are then measured and observed in there construction along with photographic evidence.
Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

## Build-Up

| 5 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| External Surface Material | 8mm | High Pressure Laminate (HPL) Panel | | B - Combustible |
| Framework | | Aluminium L/T Rail | | A2 - Limited Combustibility |
| Cavity | 80mm | | | |
| Insulation | 100mm | Mineral Wool Insulation | | A1 - Non-Combustible |

| 5 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| Inner Leaf | 100mm | Brickwork | | A1 - Non-Combustible |

## Cavity Barriers

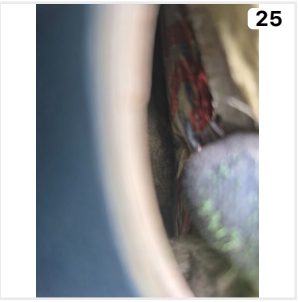
| 1 Cavity Barrier | Material | Photo Ref. |
|---|---|---|
| Vertical Cavity Barrier | Solid State Mineral Wool | |

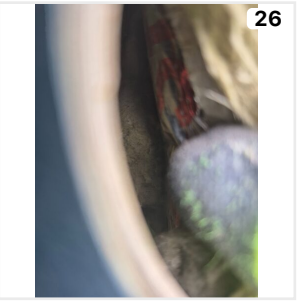
## Floor Slab

Backing Wall Sits On The Floor Slab

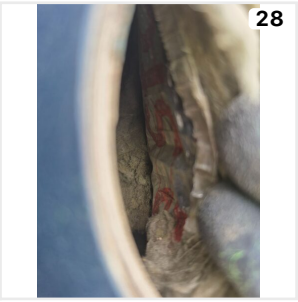
## Inspection Photos

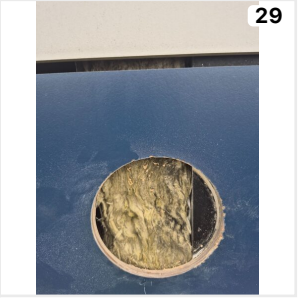


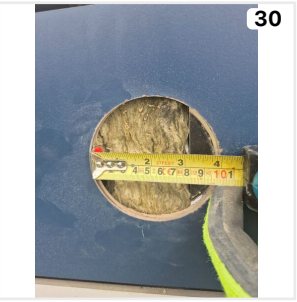




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# Inspection: LAMPNS

Elevation • Location
South Elevation • Compartment Wall Junction

## Name/Summary

Masonry Ibstock Staffordshire Smooth Blue and Cheddar Golden brick slips.

## Description

No external cavity. The internal void is filled with insulation

## Build-Up

| 3 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| Outer leaf | 100mm | Material Brand: Brickwork | | A1 - Non-Combustible |
| Insulation | 100mm | Mineral Wool Insulation | | A1 - Non-Combustible |
| Inner Leaf | 100mm | Brickwork | | A1 - Non-Combustible |

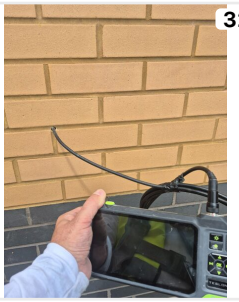
## Cavity Barriers

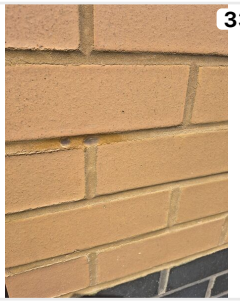
No external cavity

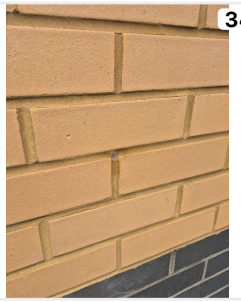
## Floor Slab

Backing Wall Sits On The Floor Slab

# Inspection Photos



# Inspection: J6QY61

Elevation • Location
South Elevation • Compartment Floor and Wall Junction Interface

## Name/Summary

Render (White) Wetherby External Wall Insulation (EWI) render system.

## Proposed Inspection

The purpose of the intrusive survey will consist of the visual and intrusive inspections of the identified systems and attachments to determine the through wall construction.

The Engineer will be looking to determine the:
a) External Leaf (Identify the material and Euroclass)
b) Cavities (if a cavity is present and if so the depth and extent)
c) Insulation (identify the material and Euroclass)
d) Sheathing Board (the presence of any Sheathing Board)
e) Membranes (identify their presence and where possible manufacturer)
f) Substrates (the means in which the façade is attached to the building)
g) Cavity Barriers (Horizontally, Vertically, Around Openings)

The external inspection is undertaken by either using an approximate 25mm – 150mm bore in a discreet location or the removal of the external surface material. The engineer will then gather the external walls construction from external to internal.

The materials are then measured and observed in there construction along with photographic evidence.
Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

## Build-Up

| 3 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| External Surface Material | 6mm | Render | | A2 - Limited Combustibility |
| Insulation | 100mm | Mineral Wool Insulation | | A1 - Non-Combustible |
| Inner Leaf | 100mm | Brickwork | | A1 - Non-Combustible |

# Cavity Barriers

No external cavity

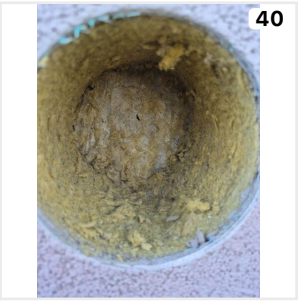
# Floor Slab

Backing Wall Sits On The Floor Slab

# Inspection Photos






# Inspection: 69WP89

Elevation • Location
South Elevation • Compartment Floor and Wall Junction Interface

## Name/Summary

Render (Grey) Wetherby External Wall Insulation (EWI) render system.

## Proposed Inspection

The purpose of the intrusive survey will consist of the visual and intrusive inspections of the identified systems and attachments to determine the through wall construction.

The Engineer will be looking to determine the:
a) External Leaf (Identify the material and Euroclass)
b) Cavities (if a cavity is present and if so the depth and extent)
c) Insulation (identify the material and Euroclass)
d) Sheathing Board (the presence of any Sheathing Board)
e) Membranes (identify their presence and where possible manufacturer)
f) Substrates (the means in which the façade is attached to the building)
g) Cavity Barriers (Horizontally, Vertically, Around Openings)

The external inspection is undertaken by either using an approximate 25mm – 150mm bore in a discreet location or the removal of the external surface material. The engineer will then gather the external walls construction from external to internal.

The materials are then measured and observed in there construction along with photographic evidence.
Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

## Build-Up

| 3 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| External Surface Material | 6mm | Render | | A2 - Limited Combustibility |
| Insulation | 100mm | Mineral Wool Insulation | | A1 - Non-Combustible |
| Inner Leaf | 100mm | Brickwork | | A1 - Non-Combustible |

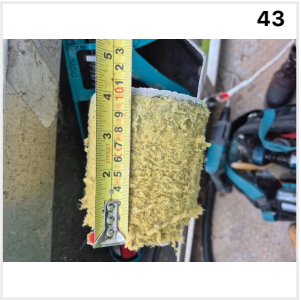
# Cavity Barriers

No external cavity

# Floor Slab

Backing Wall Sits On The Floor Slab

# Inspection Photos






# Inspection: F1JNE1

Elevation • Location
South Elevation • Aperture Opening

## Name/Summary

Render (Grey)Wetherby External Wall Insulation (EWI) render system.

## Proposed Inspection

The purpose of the intrusive survey will consist of the visual and intrusive inspections of the identified systems and attachments to determine the through wall construction.

The Engineer will be looking to determine the:
a) External Leaf (Identify the material and Euroclass)
b) Cavities (if a cavity is present and if so the depth and extent)
c) Insulation (identify the material and Euroclass)
d) Sheathing Board (the presence of any Sheathing Board)
e) Membranes (identify their presence and where possible manufacturer)
f) Substrates (the means in which the façade is attached to the building)
g) Cavity Barriers (Horizontally, Vertically, Around Openings)

The external inspection is undertaken by either using an approximate 25mm – 150mm bore in a discreet location or the removal of the external surface material. The engineer will then gather the external walls construction from external to internal.

The materials are then measured and observed in there construction along with photographic evidence.
Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

## Build-Up

| 3 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| External Surface Material | 6mm | Render | | A2 - Limited Combustibility |
| Insulation | 100mm | Mineral Wool Insulation | | A1 - Non-Combustible |
| Inner Leaf | 100mm | Brickwork | | A1 - Non-Combustible |

# Cavity Barriers

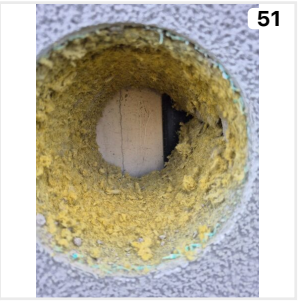
No external cavity

# Floor Slab

Backing Wall Sits On The Floor Slab

# Inspection Photos








# Inspection: ZL22CJ

Elevation • Location
West Elevation • Compartment Wall Junction

## Name/Summary

HPL Bauclad High Pressure Laminate (HPL) panels by Euro Clad Ltd.

## Proposed Inspection

The purpose of the intrusive survey will consist of the visual and intrusive inspections of the identified systems and attachments to determine the through wall construction.

The Engineer will be looking to determine the:
a) External Leaf (Identify the material and Euroclass)
b) Cavities (if a cavity is present and if so the depth and extent)
c) Insulation (identify the material and Euroclass)
d) Sheathing Board (the presence of any Sheathing Board)
e) Membranes (identify their presence and where possible manufacturer)
f) Substrates (the means in which the façade is attached to the building)
g) Cavity Barriers (Horizontally, Vertically, Around Openings)

The external inspection is undertaken by either using an approximate 25mm – 150mm bore in a discreet location or the removal of the external surface material. The engineer will then gather the external walls construction from external to internal.

The materials are then measured and observed in there construction along with photographic evidence.
Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

## Build-Up

| 5 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| External Surface Material | 8mm | High Pressure Laminate (HPL) Panel | | B - Combustible |
| Framework | | Aluminium L/T Rail | | A2 - Limited Combustibility |
| Cavity | 80mm | | | |
| Insulation | 100mm | Mineral Wool Insulation | | A1 - Non-Combustible |

| 5 Elements | Thickness/Depth | Material | Photo Ref. | Rating (BS EN13501) |
|---|---|---|---|---|
| Inner Leaf | 100mm | Brickwork | | A1 - Non-Combustible |

## Cavity Barriers

No cavity barrier identified at this inspection location

## Floor Slab

Backing Wall Sits On The Floor Slab

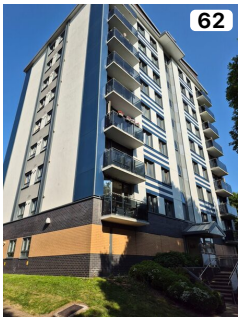
## Inspection Photos







# Attachments & Balconies

| Photo | Attachment |
| --- | --- |
|   | **Cantilever Balcony (WPU1S9)**<br>Configuration: Stacked<br>Size: Private balcony spanning only a single compartment |

# Attachment: Cantilever Balcony

Attachment Reference
WPU1S9

## Details

### Configuration

Stacked

### Size

Private balcony spanning only a single compartment

### Framework/Structure

Reinforced concrete framework extension of the floor slab

### Handrail

Stainless steel

### Balustrade

Stainless steel

### Insulation

NA

### Soffit

Concrete

### Infill

Glazing

### 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

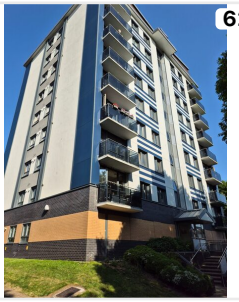
These cantilever-type balconies are present on the East and West elevations. They begin on the first floor and extend the full height of the building.

They are primarily formed of non-combustible materials. The concrete frame, steel balustrade, and glazing will not contribute to the spread of fire across the external surface of the building. The presence of a non-combustible imperforate soffit will also act to disrupt the mechanism for vertical fire spread between the balconies.

It is our opinion that there is no requirement for remediation of the balconies.

It should be noted that during our inspection, the condition of the metalwork frame on some balconies was beginning to deteriorate.

# Photos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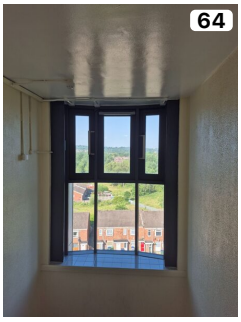
# External Windows

| Photo | External Window |
| --- | --- |
|   | Top, Mid, Side Hung Casements (1DNCGH) |

# External Window: Top, Mid, Side Hung Casements

External Window Reference
1DNCGH

## Details

### Surface Material

Aluminium

### Frame Material

Timber

### Infill / Panel Material

Glazing

### Details

Windows are formed from a timber frame with an aluminium sheathed finish. Windows on stairs are set into the available opening and infill stud and brickwork provides substrate support.

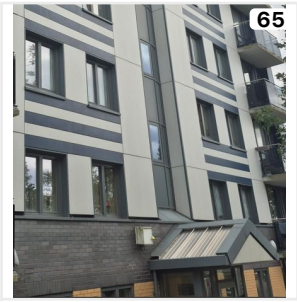
## Fire Engineer Comments

The window is composite in construction that incorporates an aluminium surface finish and a timber frame. The timber window frame exceeds 38mm in thickness, which may provide a level of fire resistance sufficient to delay the spread of fire originating internally, allowing time for external intervention.

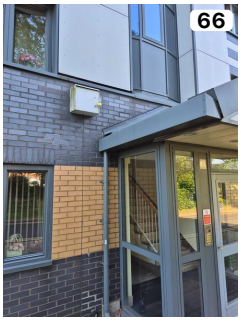
This fire resistance can help to contain fire within the cavity for a limited period. The timber framing also plays a crucial role in sealing the cavity, thereby restricting the free flow of air. This limitation reduces the potential for fire spread and slows the growth of the fire within the cavity, contributing to improved fire safety performance.

The window infill has been identified as laminated glass, which consists of layers of glass bonded with a polymer interlayer, typically PVB or EVA. While these interlayers are combustible, they are generally slow to ignite. Under prolonged exposure to elevated temperatures or direct flame, the interlayers may degrade, and the glass may crack or shatter due to thermal stress.

# Photos

# External Doors

| Photo | External Door |
| --- | --- |
|  | Single Leaf Entrance Doors (FSVJCC) |

# External Door: Single Leaf Entrance Doors

External Door Reference
FSVJCC

## 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 door infill has been assumed as laminated glass, which consists of layers of glass bonded with a polymer interlayer, typically PVB or EVA. While these interlayers are combustible, they are generally slow to ignite. Under prolonged exposure to elevated temperatures or direct flame, the interlayers may degrade, and the glass may crack or shatter due to thermal stress.

However, the aluminium door frames may be 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

## Photos

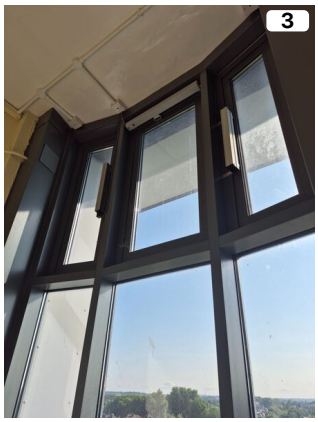

# Plan: East Elevation

# Plan: South Elevation

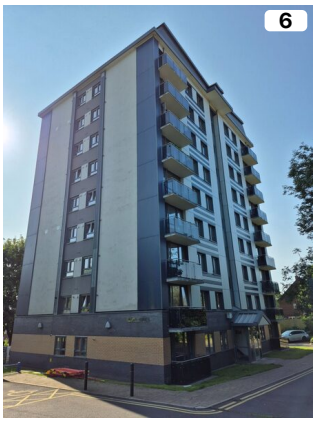
# Plan: West Elevation

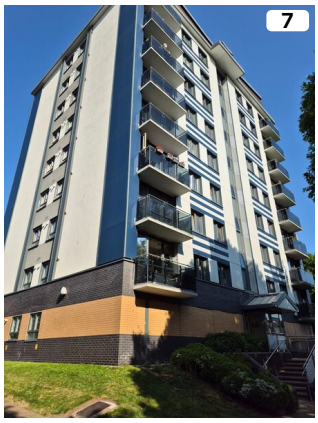
# Photos





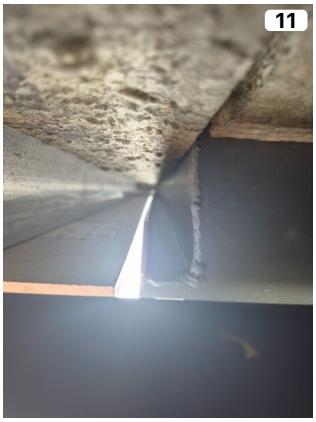


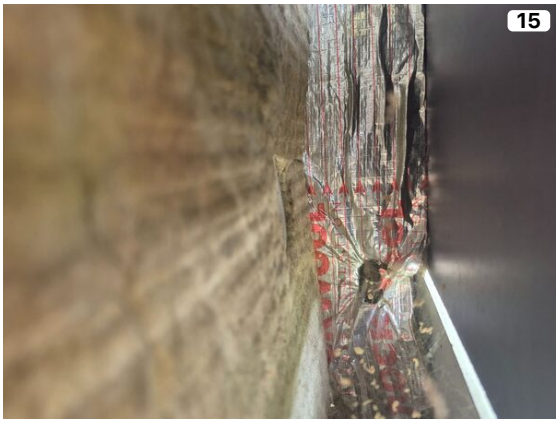








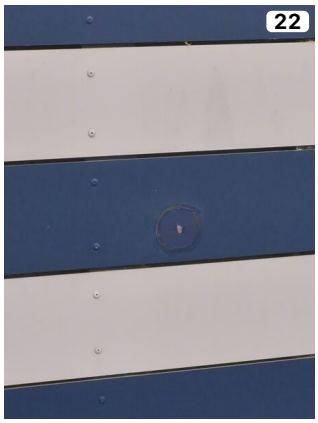

# Photos Continued...



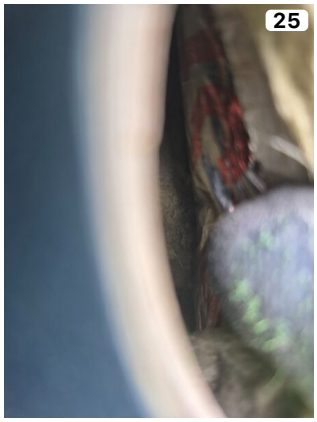


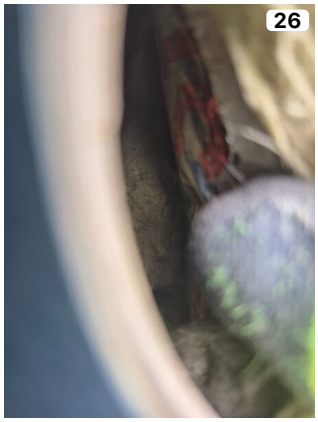







# Photos Continued...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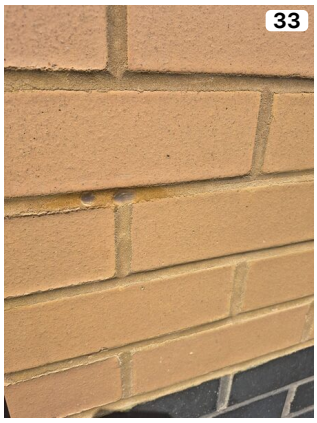
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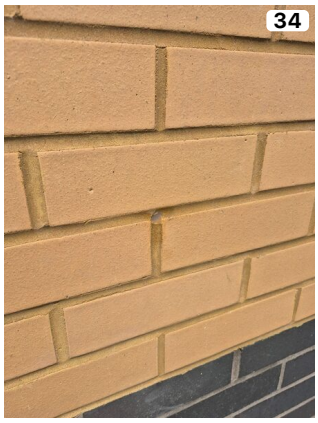
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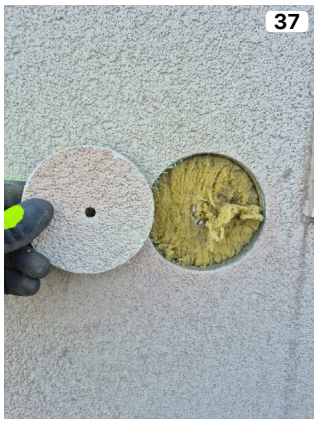
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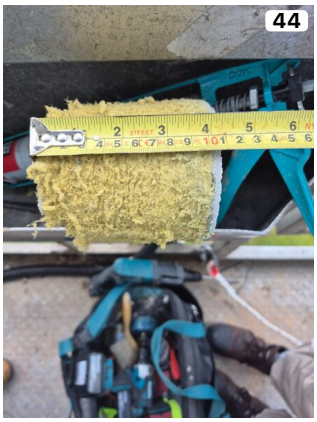
# Photos Continued...

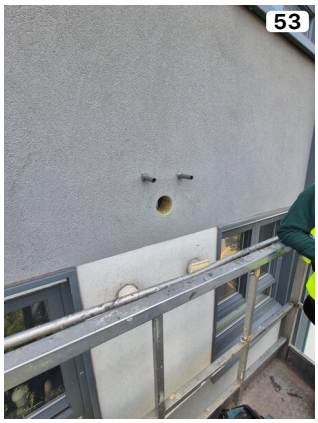











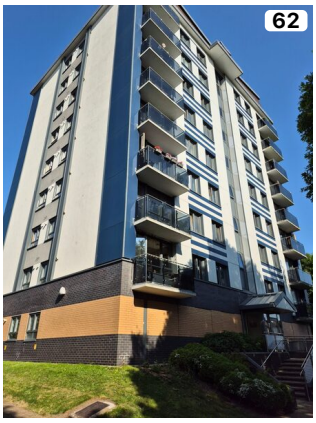




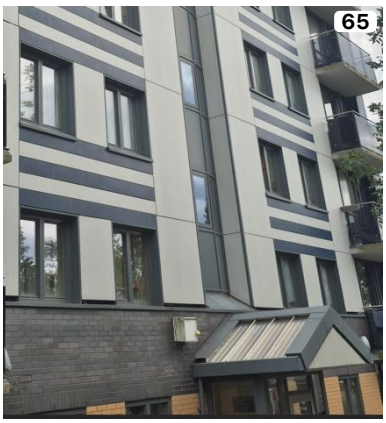
# Photos Continued...

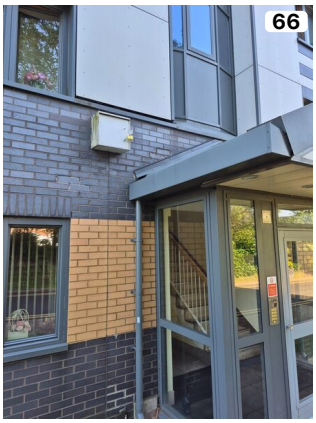






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