FIRNTEC
BUILDING COMPLIANCE

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

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Suggested Review Date 27/08/2030

FIRE RISK APPRAISAL EXTERNAL WALLS

SCOTT HOUSE

Coniston Crescent
Hamstead
B43 5RD

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Summary

Fire Risk Appraisal External Walls

Assessment and Certificate Reference
RB-V3XR63

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

Approved / Validated On, By
04/09/2025, 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
Scott House

Property Reference
RB-5CIZ77

Address
Coniston Crescent
Hamstead
B43 5RD

Assessing Organisation
Firntec Ltd
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Abbreviation/ Term Definition

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

Statement of Competency

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

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

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

We confirm that they have:

a) Read and understood the commentary and provisions relating to the competence of external wall assessors set out in Section 8 and Annex H of PAS 9980:2022;

b) Adequate and relevant competence to undertake the FRAEW;

c) Sufficient knowledge, skills and experience in relation to fire safety of external walls to be able to complete an assessment at the level required;

d) The relevant skill, knowledge, and experience to manage and interpret the results of intrusive inspections; and

e) The competence to appraise and assess the nature of external wall construction in terms of fire performance and provide an opinion on the risk.

f) No conflicts of interest of any kind, other than any which are disclosed in the report.

g) The conclusions of the report are the author's independent assessment of the risks and remedial actions and have not been influenced in any way by the opinions or actions of others except where stated.

Terms of Reference

Particulars

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

Limitations

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

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

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

The FRAEW report is to be reviewed:

a) if significant changes/repairs have been made to the external wall; and/or

b) in the event of a fire incident, if the fire involved the external wall construction; and/or

c) if there are any circumstances, depending upon the nature of the construction, the extent of available knowledge in relation to the particular materials, components and systems used on the building or the degree of uncertainty over the findings, which suggest review is appropriate. In these cases, the report will include a clear explanation as to why periodic review is necessary and include a suggested review date."

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

Assumptions

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

a) the extent of sampling carried out.

b) the accuracy of information upon which it has been necessary to rely, especially where it has not been possible to verify the information though site survey and inspection.

c) the extent of the content and detail within the report; and

d) the limitations at the time of the FRAEW of available knowledge on the fire performance of the materials, products and systems forming the external walls of the building.

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

Statement of Intent

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

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

Supporting Documents

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

Document	Received
Fire Risk Assessment Sandwell Metropolitan Borough Council Fire Risk Assessment	Received

Executive Summary

External Wall Systems and Attachments on the Building

10 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 Render on Mineral Wool (JVA9U4)	Positive	Low
Wall Construction Render on Masonry (QZ97UC)	Positive	Low
Wall Construction Masonry (Brickwork) (YE6CWM)	Neutral	Medium
Attachment Cantilever Balcony (R87Z9M)	Positive	Low
External Window Top, Mid, Side Hung Casements (5U1DC1)	Neutral	Low
External Door Single Leaf Door (E3TFU9)	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 **88CU3H** which includes wall construction **JVA9U4**.

Conclusion: This wall system was identified as being an external leaf of 6mm Render (detailed in client client-provided FRA as an Alumasc 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 Rockwool RedArt 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 primary facade of the building. It is present on the Northwest and Southeast elevations and extends from the first floor to the uppermost storey of the building. Structural openings in this facade include windows 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 2.5 miles away, and as such, the response to a call out would be expected to be within fire service

target times.

In the event of a fire:
a) fire spread is likely to be at a rate within expectations for a building of this height; 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

Risk Factor Analysis 2

This analysis looks at façade configuration **R51JNR** which includes wall construction **QZ97UC**.

Conclusion: This wall system is comprised of a render applied to a double-leaf masonry system that was observed to contain no insulation. The outer leaf of masonry was identified to be a render coat applied to 102mm brickwork, and the inner leaf was observed to be a 100mm blockwork.

Renders are typically non-combustible and can withstand high temperatures without catching fire or releasing harmful gases. The fire resistance of cementitious 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, cementitious render can help protect the underlying structure (such as brick or wood) from high heat by providing a protective layer.

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.

As set out in PAS9980, a building whose external walls are composed exclusively of this form of construction is not ordinarily expected to require an FRAEW. However, it is recognised 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 wall system forms the external wall system of the ground floor of the building. Structural openings in the facade include windows and doors opening into the escape staircases. Given the non-combustibility of the materials used in this wall type, an externally venting fire from a compartment would not be expected to spread across this wall type, and the likelihood of an external fire igniting this wall type is also low. This wall type would not support, sustain, or contribute to fire spread or have a detrimental effect on occupants escaping the premises.

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. The stairs are provided with adequate ventilation (louvres to the front elevation, AOV

to the rear) and manually opening windows for the control of smoke. There is no smoke ventilation provided to the central lobbies, which give access to the flats 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 the front and rear of the building. The nearest fire station is approximately 3 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, 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 **XEVAEZ** which includes wall construction **YE6CWM**.

Conclusion: This wall system is comprised of a double-leaf masonry system that was observed to contain approximately 50mm Phenolic foam insulation. The outer and inner leaves of masonry were identified to be 102mm brickwork and 100mm blockwork respectively.

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.

Phenolic insulation typically ignites at temperatures around 450°C to 500°C. This is relatively high compared to other foam insulations, making phenolic insulation more resistant to ignition. Once ignited, phenolic insulation burns, but it generally has a lower flame spread rate compared to other forms of insulating material. The material forms a char layer on its surface, which helps to insulate and protect the underlying material slowing down the rate of heat penetration and combustion. Phenolic insulation has a relatively low heat release rate, contributing less to the intensity and growth of a fire compared to more combustible foam insulations. Burning phenolic insulation produces smoke, but the amount and density can vary depending on the specific formulation. The smoke is generally less dense compared to EPS and PIR.

As set out in PAS9980, a building whose external walls are composed exclusively of this form of construction is not ordinarily expected to require an FRAEW. However, it is recognised 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

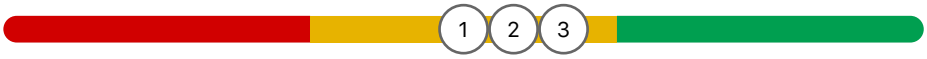
No dedicated cavity barriers were identified within the wall system; however, it was observed that the floor slab extends to the external surface, effectively disrupting the mechanism for vertical fire spread within the cavity.

This wall system forms the secondary facade type and is present on the Northeast and Southwest elevations of the building and extends from the ground floor to the full height of the building. Structural openings in the facade include windows opening into the accommodation and service penetrations. Given the non-combustibility of the materials used to form the outer and inner leaf of the system, an externally venting fire from a compartment would not be expected to spread across this wall type, and the likelihood of an external fire igniting this wall type is also low. The phenolic foam is encapsulated between the non-combustible leaves, and the cavity is disrupted at the floor slab level.

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. The stairs are provided with adequate ventilation (louvres to the front elevation, AOV to the rear) and manually opening windows for the control of smoke. There is no smoke ventilation provided to the central lobbies, which give access to the flats 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 the front and rear of the building. The nearest fire station is approximately 3 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 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.



Medium

Overall Building Risk Rating

Medium

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

Recommended Remediations

No recommended remediations identified.

Recommended Interim Measures

No recommended interim measures identified.

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

F.3 Escape Route Design

Access to more than one staircase for escape, where it is not possible for the same fire to affect all escape routes

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

F.6 Fire Alarm & Detection

Domestic smoke and heat alarms within flats, Category LD2

Neutral

F.7 Fire Suppression

A water-based deluge suppression system is installed in the bin store only; no other suppression systems are provided within the building or individual flats.

Neutral

F.8 - Firefighting Facilities

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.

Positive

F.9 Rising Mains

Suitable rising main present

Neutral

F.10 Lifts Used By Firefighters

Absence of firefighting lift in buildings above 18 m

Negative

F.11 Specific Fire Hazards

Not Applicable

Fire Service Intervention

Event	Seconds	Minutes & Seconds
Initiation to fire detection	120 Seconds	2 Minutes
Actuation Of Fire Detector To Transmission Of Alarm	10 Seconds	10 Seconds
Processing By Central Monitoring Station	60 Seconds	1 Minute
Receipt of call by fire service mobilising control	10 Seconds	10 Seconds
Transmission To Fire Station And Response	60 Seconds	1 Minute
Travelling Time Of Fire Service	480 Seconds	8 Minutes
Arrival Protocol And Entry Preparation Time	180 Seconds	3 Minutes
Firefighter travel to operational bridgehead	270 Seconds	4 Minutes 30 Seconds
Firefighter Travel Walking Up Two Flights Of Stairs To Fire Floor (75 Seconds)	75 Seconds	1 Minute 15 Seconds
Total Time	**1,265 Seconds**	**21 Minutes 5 Seconds**

Nearest Fire Station

Perry Barr Fire Station, 2.5 miles, approximately 8 minutes travel time under normal traffic conditions.

Wall Constructions

Wall Construction	Build-up
Render on Mineral Wool (JVA9U4)	• External Surface Material (Render) • Insulation (Mineral Wool Insulation) • Substrate (Original Masonry)
Render on Masonry (QZ97UC)	• External Surface Material (Render) • Outer leaf • Cavity • Inner Leaf (Blockwork)
Masonry (Brickwork) (YE6CWM)	• Outer leaf • Cavity • Insulation (Phenolic Foam Insulation) • Inner Leaf (Blockwork)

Wall Construction: Render on Mineral Wool

Construction Reference
JVA9U4

This wall construction was identified by wall inspections QFSYHL, HU6R5L, 8KU54T, 3SIKLD, and 9DT1QT. The build-up, cavity barrier, and floor slab information is taken directly from inspection QFSYHL. See the Inspections section of this report for full inspection details.

Construction	Effect	Risk
Render on Mineral Wool (JVA9U4)	Positive	Low

Build-Up

3 Elements	Thickness/Depth	Material	Rating (BS EN13501)
External Surface Material	6mm	Render	A1 - Non-Combustible
Insulation	100mm	Mineral Wool Insulation	A1 - Non-Combustible
Substrate	100mm	Original Masonry	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	Positive

K.3 Facings/Cladding Panels

Low HRR	Positive
Adhesive fixed	Negative

K.4 Panel Construction

Not Applicable

K.5 Cavities

Facings into the cavity at least Class A2	Positive

K.6 Insulation

Mineral wool insulation	Positive

K.7 Substrate

Masonry, >75 mm thick	Positive

K.8 Sheathing Boards

Not Applicable

K.9 Insulated Core Panels

Not Applicable

K.10 ETICS

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

Positive

K.11 Infill / Spandrel Panels

Not Applicable

K.12 Internal Finishes

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

Neutral

PAS Standard Benchmark

L10 Benchmark

ETICS -

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

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

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

BR135 Benchmark

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

Wall Construction: Render on Masonry

Construction Reference
QZ97UC

This wall construction was identified by wall inspections ZVFJZ7 and 1PKAAJ. The build-up, cavity barrier, and floor slab information is taken directly from inspection ZVFJZ7. See the Inspections section of this report for full inspection details.

Construction	Effect	Risk
Render on Masonry (QZ97UC)	Positive	Low

Build-Up

4 Elements	Thickness/Depth	Material	Rating (BS EN13501)
External Surface Material	8mm	Render	A1 - Non-Combustible
Outer leaf	100mm	Material Brand: Brickwork	A1 - Non-Combustible
Cavity	75mm		
Inner Leaf	100mm	Blockwork	A1 - Non-Combustible

Cavity Barriers

None

Floor Slab

Backing Wall Sits On The Floor Slab

Fire Performance

K.1 General

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

K.2 External Surfaces

Class A1 — Positive

K.3 Facings/Cladding Panels

Low HRR — Positive

K.4 Panel Construction

Not Applicable

K.5 Cavities

Facings into the cavity at least Class A2 — Positive

K.6 Insulation

No 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: Masonry (Brickwork)

Construction Reference
YE6CWM

This wall construction was identified by wall inspections 856UCS, GJKXHA, and QUGPAB. The build-up, cavity barrier, and floor slab information is taken directly from inspection 856UCS. See the Inspections section of this report for full inspection details.

Construction	Effect	Risk
Masonry (Brickwork) (YE6CWM)	Neutral	Medium

Build-Up

4 Elements	Thickness/Depth	Material	Rating (BS EN13501)
Outer leaf	100mm	Material Brand: Brickwork	A1 - Non-Combustible
Cavity	80mm		
Insulation	50mm	Phenolic Foam Insulation	C - Combustible
Inner Leaf	100mm	Blockwork	A1 - Non-Combustible

Cavity Barriers

No cavity barrier identified at this inspection location

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 A1 — Positive

K.3 Facings/Cladding Panels

Low HRR — Positive

K.4 Panel Construction

Not Applicable

K.5 Cavities

No cavity barriers present.
Cavity barriers are generally accepted as not required in double-leaf masonry systems. — Neutral

K.6 Insulation

Thermoset polymeric foams that form a stable char on fire exposure, e.g. phenolic foams — Neutral

K.7 Substrate

Masonry, >75 mm thick — Positive

K.8 Sheathing Boards

Not Applicable

K.9 Insulated Core Panels

Not Applicable

K.10 ETICS

Not Applicable

K.11 Infill / Spandrel Panels

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

Façade Configuration: 88CU3H

Items in Façade

3 Items	Effect	Risk
Wall Construction Render on Mineral Wool (JVA9U4)	Positive	Low
Attachment Cantilever Balcony (R87Z9M)	Positive	Low
External Window Top, Mid, Side Hung Casements (5U1DC1)	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

Not Applicable

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

No combustible elements

Positive

N.11 Attachments

Non-combustible open balconies

(Where these extend along a façade, they have the potential both to:
• interrupt a cavity; and
• deflect flames away from the building and away from the façade)

Positive

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

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

Neutral

Risk Factor Analysis

Conclusion: This wall system was identified as being an external leaf of 6mm Render (detailed in client client-provided FRA as an Alumasc 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 Rockwool RedArt 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 primary facade of the building. It is present on the Northwest and Southeast elevations and extends from the first floor to the uppermost storey of the building. Structural openings in this facade include windows 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 2.5 miles away, and as such, the response to a call out would be expected to be within fire service target times.

In the event of a fire:
a) fire spread is likely to be at a rate within expectations for a building of this height; 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

Façade Configuration: R51JNR

Items in Façade

2 Items	Effect	Risk
Wall Construction Render on Masonry (QZ97UC)	Positive	Low
External Door Single Leaf Door (E3TFU9)	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 such as to delay fire spread over the external walls — 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 wall system is comprised of a render applied to a double-leaf masonry system that was observed to contain no insulation. The outer leaf of masonry was identified to be a render coat applied to 102mm brickwork, and the inner leaf was observed to be a 100mm blockwork.

Renders are typically non-combustible and can withstand high temperatures without catching fire or releasing harmful gases. The fire resistance of cementitious 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, cementitious render can help protect the underlying structure (such as brick or wood) from high heat by providing a protective layer.

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.

As set out in PAS9980, a building whose external walls are composed exclusively of this form of construction is not ordinarily expected to require an FRAEW. However, it is recognised 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 wall system forms the external wall system of the ground floor of the building. Structural openings in the facade include windows and doors opening into the escape staircases. Given the non-combustibility of the materials used in this wall type, an externally venting fire from a compartment would not be expected to spread across this wall type, and the likelihood of an external fire igniting this wall type is also low. This wall type would not support, sustain, or contribute to fire spread or have a detrimental effect on occupants escaping the premises.

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. The stairs are provided with adequate ventilation (louvres to the front elevation, AOV to the rear) and manually opening windows for the control of smoke. There is no smoke ventilation provided to the central lobbies, which give access to the flats 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 the front and rear of the building. The nearest fire station is approximately 3 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, 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

Façade Configuration: XEVAEZ

Items in Façade

2 Items	Effect	Risk
Wall Construction Masonry (Brickwork) (YE6CWM)	Neutral	Medium
External Window Top, Mid, Side Hung Casements (5U1DC1)	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

Entire façade covered

Negative

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

Where vents pass through a cavity, either:
• the cavity does not include combustible materials; or
• the cavity is faced on either side by brick or concrete at least 75 mm thick and any combustible insulation in the cavity is not thermoplastic

Neutral

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

Remote from windows and openings, such that fire and smoke spread into the escape routes to give rise to untenable conditions is not possible

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 is comprised of a double-leaf masonry system that was observed to contain approximately 50mm Phenolic foam insulation. The outer and inner leaves of masonry were identified to be 102mm brickwork and 100mm blockwork respectively.

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.

Phenolic insulation typically ignites at temperatures around 450°C to 500°C. This is relatively high compared to other foam insulations, making phenolic insulation more resistant to ignition. Once ignited, phenolic insulation burns, but it generally has a lower flame spread rate compared to other forms of insulating material. The material forms a char layer on its surface, which helps to insulate and protect the underlying material slowing down the rate of heat penetration and combustion. Phenolic insulation has a relatively low heat release rate, contributing less to the intensity and growth of a fire compared to more combustible foam insulations. Burning phenolic insulation produces smoke, but the amount and density can vary depending on the specific formulation. The smoke is generally less dense compared to EPS and PIR.

As set out in PAS9980, a building whose external walls are composed exclusively of this form of construction is not ordinarily expected to require an FRAEW. However, it is recognised 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

No dedicated cavity barriers were identified within the wall system; however, it was observed that the floor slab extends to the external surface, effectively disrupting the mechanism for vertical fire spread within the cavity.

This wall system forms the secondary facade type and is present on the Northeast and Southwest elevations of the building and extends from the ground floor to the full height of the building. Structural openings in the facade include windows opening into the accommodation and service penetrations. Given the non-combustibility of the materials used to form the outer and inner leaf of the system, an externally venting fire from a compartment would not be expected to spread across this wall type, and the likelihood of an external fire igniting this wall type is also low. The phenolic foam is encapsulated between the non-combustible leaves, and the cavity is disrupted at the floor slab level.

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. The stairs are provided with adequate ventilation (louvres to the front elevation, AOV to the rear) and manually opening windows for the control of smoke. There is no smoke ventilation provided to the central lobbies, which give access to the flats 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 the front and rear of the building. The nearest fire station is approximately 3 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 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.

Medium

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

Early warning is limited to hard wire or battery smoke alarms within each of the resident's flats. Based on the sample of properties accessed during the fire risk assessment the smoke alarms within resident's flats are installed to an LD2 Standard. There is no effective means for detecting an outbreak of fire to communal areas.

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

CO2 extinguisher in lift motor room; annually serviced

Smoke Control

Natural smoke control, Smoke control installed

Smoke Control

Automatic Opening Vent (AOV) system
Two stairwells – front and rear, each protected
Automatically in the event of smoke detection (noting no communal detection), with override
Manual status panel and override switch in ground floor lobby
Louvred vents at stairhead supplement AOVs

Suppression Systems

Partial sprinkler system installed (Detailed in Description)

Suppression System

A water-based deluge suppression system is installed in the bin store and maintained biannually, providing localised fire control in a high-risk area..

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. Fire hydrant is located to the left hand side of the front entrance approximately 1m from the building.
Public fire hydrants can be located: https://dataservices.riscauthority.co.uk/map/index

Housekeeping

Good standard. Means of escape clear. Refuse stored appropriately

Housekeeping

Clean; daily checks and bulk item removal in place .

Secure Information Boxes

Secure information box (SIB) installed

Secure Information Boxes

Scott House has a ground floor Premises Information Box (Gerda) secured with a WMFS-suited key, containing floor plans, orientation details, and PEEPs, supported by a firefighter's key box externally by the main entrance.

Signage

Appropriate signage installed throughout premises

Property Type

Apartment Block, Residential Purpose-built

Building Era / Age

Known Build Date

Known Build Date

Circa 1967, Wates system-built concrete and brick structure Wates system-built with reinforced concrete floor structure, traditional brick to side elevations, flat roof, and two protected staircases

Guidance Applicable At Time Of Construction

CP3 Chapter IV (1962) – Fire precautions and means of escape
BS 476: Parts 4 & 5 (1953, 1959)
Local byelaws (pre-1965)
Joint Fire Code / MoH Circulars
Building Regulations 1965 likely applied retrospectively to minor works

Building Height

Overall Building Height Approximately 24.6m
Highest Occupied Floor Level 21.6m, as detailed in the FRA
(calculated at 3m per floor as per PAS 9980-2022 section 3.1.22)

Approx Floor Area Per Floor

200–220 m^2 per floor based on 4 flats of ~50–55 m^2 each plus circulation 36 self-contained flats, arranged at 4 per floor

External Dimensions

Approx. 22–24 m (L) x 9–10 m (W) x 21.6 m (H) – consistent with 4-flat-per-floor Wates blocks

Number of Storeys (Ground and above)

9

Number of Basement Levels

Not applicable

Number of Flats

36 self-contained flats, arranged at 4 flats per floor

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

Exterior Cladding (Details)

- Side elevations: Brickwork (non-combustible)
- Front/rear elevations: A2-rated mineral wool render over EWI system (Alumasc)

Electronic Entrance System

Yes

Carpark

External/Outdoor Carpark

Employees

Day staff

~ Number of Employees on duty

1

Employees (Extended)

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

Residents

Yes

Approx number of Residents

72

Residents (Extended)

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

Visitors

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. Emergency exits open outwards in escape direction.

Number Of Internal Escape Stairs

Two protected staircases serve all floors, located at front and rear of the building.

Number Of Final Exits

Front entrance (main door, fob + firefighter override access)
Rear entrance (secured, with internal access to rear lobby and firefighter switch)

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?

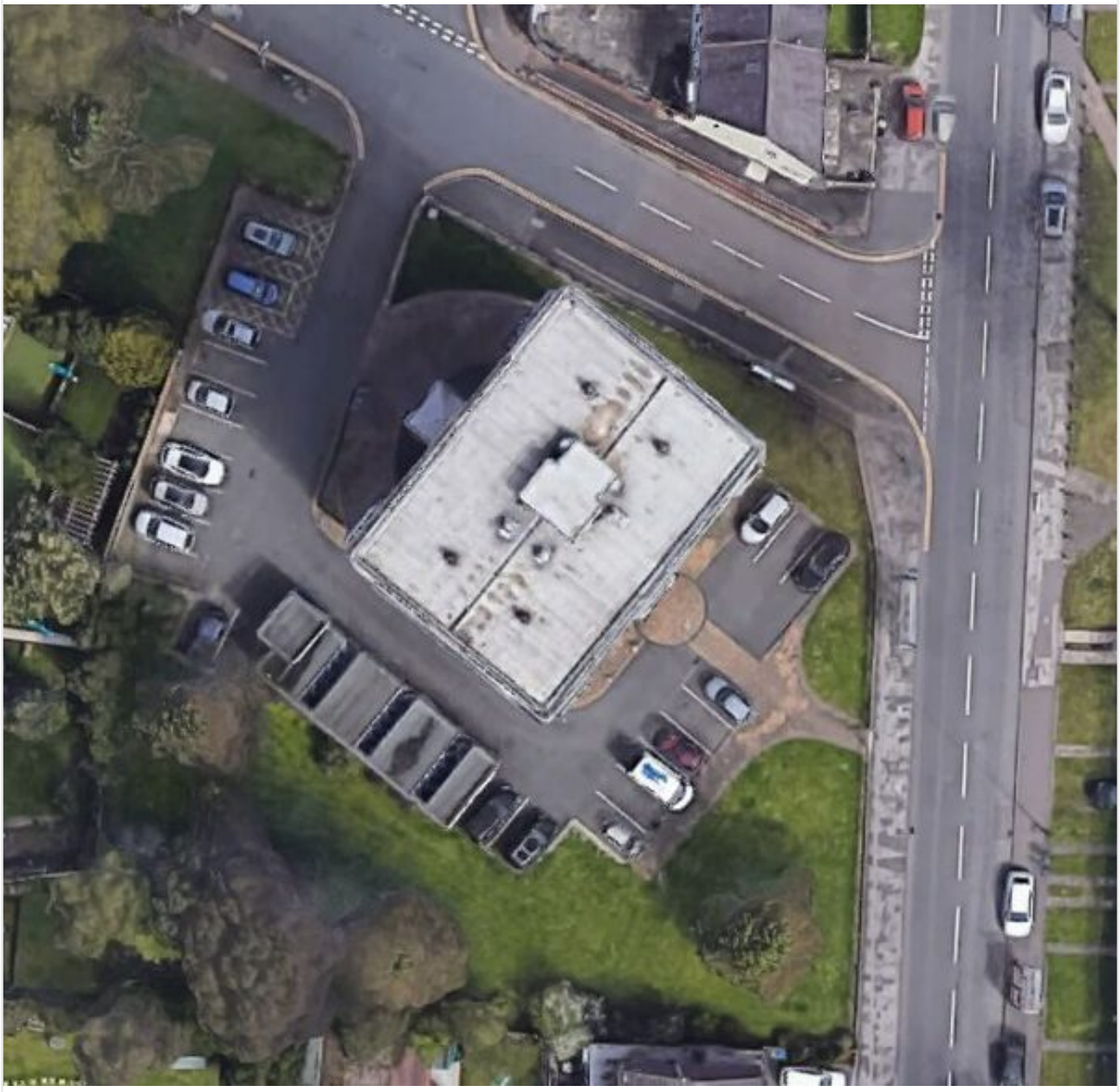
Yes

What is the recommended evacuation strategy for the property?

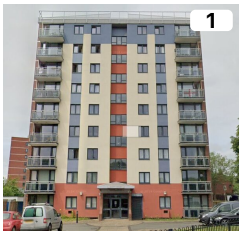
Stay Put

Aerial Perspective: Scott House

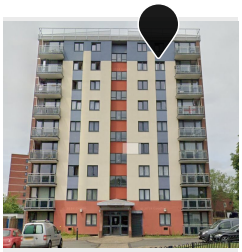
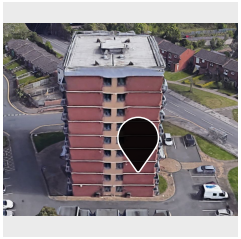
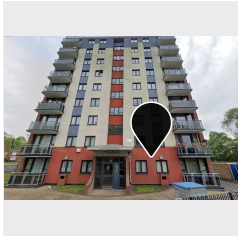
Aerial Perspective (picture sourced from Google Earth)



Elevations

Photo	Name	No. of Storeys	Features
	East Elevation	9 Storeys	• Escape Route Exit • Private Balconies Stacked
	North Elevation	9 Storeys	
	West Elevation	9 Storeys	• Escape Route Exit • Private Balconies Stacked
	South Elevation	9 Storeys	

Inspections

Elevation Location	Inspection	Elements
	**Inspection: QFSYHL** West Compartment Floor Junction	• External Surface Material (Render) • Insulation (Mineral Wool Insulation) • Substrate (Original Masonry)
	**Inspection: QUGPAB** South Compartment Floor Junction	• Outer leaf • Cavity • Insulation (Phenolic Foam Insulation) • Inner Leaf (Blockwork)
	**Inspection: ZVFJZ7** East Compartment Floor Junction	• External Surface Material (Render) • Outer leaf • Cavity • Inner Leaf (Blockwork)
	Inspection: HU6R5L Aperture Opening	• External Surface Material (Render) • Insulation (Mineral Wool Insulation) • Substrate (Original Masonry)
	Inspection: 8KU54T Compartment Floor Junction	• External Surface Material (Render) • Insulation (Mineral Wool Insulation) • Substrate (Original Masonry)
	Inspection: 3SIKLD Compartment Floor Junction	• External Surface Material (Render) • Insulation (Mineral Wool Insulation) • Substrate (Original Masonry)
	Inspection: 9DT1QT Aperture Opening	• External Surface Material (Render) • Insulation (Mineral Wool Insulation) • Substrate (Original Masonry)
	Inspection: 1PKAAJ Compartment Floor Junction	• External Surface Material (Render) • Outer leaf • Cavity • Inner Leaf (Blockwork)

Elevation Location	Inspection	Elements
	Inspection: GJKXHA Compartment Floor Junction	• Outer leaf • Cavity • Insulation (Phenolic Foam Insulation) • Inner Leaf (Blockwork)
	Inspection: 856UCS Compartment Floor Junction	• Outer leaf • Cavity • Insulation (Phenolic Foam Insulation) • Inner Leaf (Blockwork)

Inspection: QFSYHL

Elevation • Location
West • Compartment Floor Junction

Name/Summary

Render on Mineral Wool

Description

The insulation within the render system is confirmed as mineral wool (likely stone wool), based on:
Fibrous, non-combustible texture yellow-beige colour and open texture consistent with A1/A2-rated slab mineral wool

Clearly visible mechanical pin fixings (e.g. Ejot Termoz type) embedded within the insulation with plastic washers, indicating a mechanically fixed system. Tape measure readings confirm approx. 90–100 mm of insulation thickness, consistent with typical retrofitted Alumasc or Wetherby mineral wool EWI systems.

Behind the mineral wool is original brick masonry, rough-textured and uniform, confirming the substrate as solid wall brickwork rather than framed construction.

Mineral wool insulation is non-combustible, typically classified as A1 or A2-s1,d0, satisfying high fire performance criteria under BS EN 13501-1. Based on visible construction and prior refurbishment records (2008), this EWI system is low-risk with respect to fire spread, assuming: Cavity barriers are not required due to direct-to-substrate application System is fully bonded without open cavities No evidence of PIR or PF in this area; previously noted combustible rigid insulation appears confined to side elevations (brick cavity walls) only.

Conclusion for Front and Rear Elevations
The EWI system is confirmed as a non-combustible mineral wool render system, mechanically fixed to brick masonry substrate. No elevated fire risk is introduced by this build-up, and it supports the existing Stay Put – Unless Affected strategy without further remediation. Observation aligns with FRA description and PAS 9980 Step 1 classification of “Low risk” façade condition for these elevations.

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	6mm	Render		A1 - Non-Combustible
Insulation	100mm	Mineral Wool Insulation		A1 - Non-Combustible
Substrate	100mm	Original Masonry		A1 - Non-Combustible

Cavity Barriers

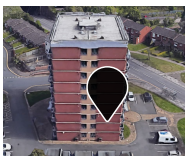
No external cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos

Inspection: QUGPAB



Elevation • Location
South • Compartment Floor Junction

Name/Summary

Masonry (Brickwork Red)

Description

Flank (Side) Elevations
The flank (side) elevations comprise traditional cavity wall construction with an external leaf of clay brickwork and an internal concrete blockwork leaf, separated by a cavity containing partial-fill rigid phenolic (PF) insulation boards. Intrusive investigations confirmed the insulation is foil-faced and combustible, consistent with mid-2000s partial-fill retrofit practice. No render or cladding system is present, and the insulation appears loosely placed directly within the cavity. There is no evidence of horizontal or vertical cavity barriers at floor levels or around openings.

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Outer leaf	100mm	Material Brand: Brickwork		A1 - Non-Combustible
Cavity	80mm			
Insulation	50mm	Phenolic Foam Insulation		C - Combustible
Inner Leaf	100mm	Blockwork		A1 - Non-Combustible

Cavity Barriers

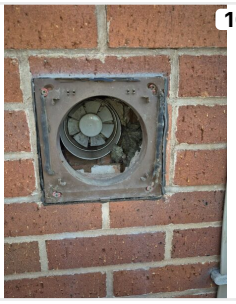
No cavity barrier identified at this inspection location

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos

10



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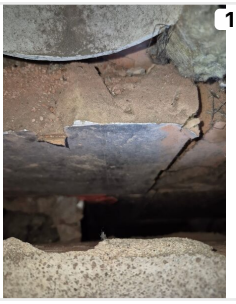


12

13

14

15

Inspection: ZVFJZ7

Elevation • Location
East • Compartment Floor Junction

Name/Summary

Orange Render on Masonry

Description

From external to internal face:

Thin-Coat Render (Coloured Finish – Orange)
• Synthetic polymer-based render
• Applied directly over carrier basecoat
• Manufacturer likely Wetherby or similar (installed ~2009)

Basecoat with Mesh Reinforcement
• Light grey cementitious layer
• Applied directly to outer leaf (brick)
• Reinforcement mesh not visible in samples but typical in system design

Outer Leaf – Traditional Red Facing Brick
• Solid full-brick skin
• Clean bond visible
• Forms outer cavity wall leaf

Clear Ventilated Cavity
• Cavity appears 50–75 mm wide
• Free from obstructions, no insulation or fire-stopping visible
• Typical mid-century cavity wall construction

Inner Leaf – Lightweight Concrete Blockwork
• Inner structural wall
• Uniform face, visible in borescope images
• Supports internal finishes and loadbearing structure

Build-Up

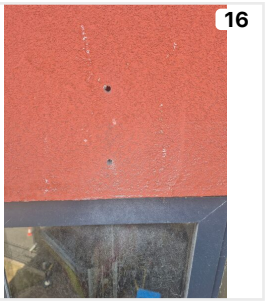
4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	8mm	Render		A1 - Non-Combustible
Outer leaf	100mm	Material Brand: Brickwork		A1 - Non-Combustible

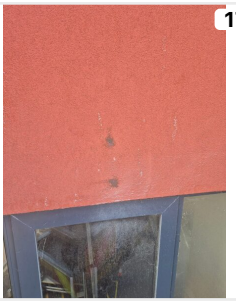
4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Cavity	75mm			
Inner Leaf	100mm	Blockwork		A1 - Non-Combustible

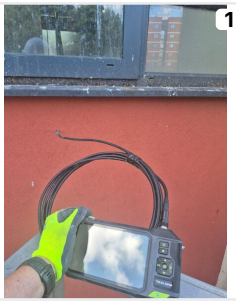
Floor Slab

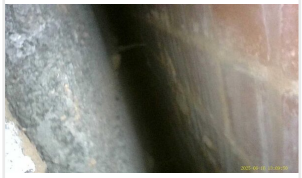
Backing Wall Sits On The Floor Slab

Inspection Photos









Inspection: HU6R5L

Location
Aperture Opening

Name/Summary

Render on Mineral Wool

Description

The insulation within the render system is confirmed as mineral wool (likely stone wool), based on:
Fibrous, non-combustible texture yellow-beige colour and open texture consistent with A1/A2-rated slab mineral wool

Clearly visible mechanical pin fixings (e.g. Ejot Termoz type) embedded within the insulation with plastic washers, indicating a mechanically fixed system. Tape measure readings confirm approx. 90–100 mm of insulation thickness, consistent with typical retrofitted Alumasc or Wetherby mineral wool EWI systems.

Behind the mineral wool is original brick masonry, rough-textured and uniform, confirming the substrate as solid wall brickwork rather than framed construction.

Mineral wool insulation is non-combustible, typically classified as A1 or A2-s1,d0, satisfying high fire performance criteria under BS EN 13501-1. Based on visible construction and prior refurbishment records (2008), this EWI system is low-risk with respect to fire spread, assuming: Cavity barriers are not required due to direct-to-substrate application System is fully bonded without open cavities No evidence of PIR or PF in this area; previously noted combustible rigid insulation appears confined to side elevations (brick cavity walls) only.

Conclusion for Front and Rear Elevations
The EWI system is confirmed as a non-combustible mineral wool render system, mechanically fixed to brick masonry substrate. No elevated fire risk is introduced by this build-up, and it supports the existing Stay Put – Unless Affected strategy without further remediation. Observation aligns with FRA description and PAS 9980 Step 1 classification of “Low risk” façade condition for these elevations.

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	6mm	Render		A1 - Non-Combustible
Insulation	100mm	Mineral Wool Insulation		A1 - Non-Combustible
Substrate	100mm	Original Masonry		A1 - Non-Combustible

Cavity Barriers

No external cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos

Inspection: 8KU54T

Location
Compartment Floor Junction

Name/Summary

Render on Mineral Wool

Description

The insulation within the render system is confirmed as mineral wool (likely stone wool), based on:
Fibrous, non-combustible texture yellow-beige colour and open texture consistent with A1/A2-rated slab mineral wool

Clearly visible mechanical pin fixings (e.g. Ejot Termoz type) embedded within the insulation with plastic washers, indicating a mechanically fixed system. Tape measure readings confirm approx. 90–100 mm of insulation thickness, consistent with typical retrofitted Alumasc or Wetherby mineral wool EWI systems.

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Conclusion for Front and Rear Elevations
The EWI system is confirmed as a non-combustible mineral wool render system, mechanically fixed to brick masonry substrate. No elevated fire risk is introduced by this build-up, and it supports the existing Stay Put – Unless Affected strategy without further remediation. Observation aligns with FRA description and PAS 9980 Step 1 classification of “Low risk” façade condition for these elevations.

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	6mm	Render		A1 - Non-Combustible
Insulation	100mm	Mineral Wool Insulation		A1 - Non-Combustible
Substrate	100mm	Original Masonry		A1 - Non-Combustible

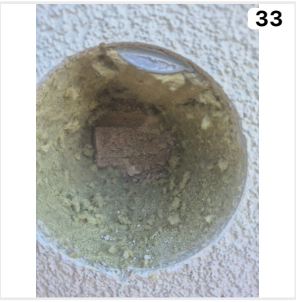
Cavity Barriers

No external cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Inspection: 3SIKLD

Location
Compartment Floor Junction

Name/Summary

Render on Mineral Wool

Description

The insulation within the render system is confirmed as mineral wool (likely stone wool), based on:
Fibrous, non-combustible texture yellow-beige colour and open texture consistent with A1/A2-rated slab mineral wool

Clearly visible mechanical pin fixings (e.g. Ejot Termoz type) embedded within the insulation with plastic washers, indicating a mechanically fixed system. Tape measure readings confirm approx. 90–100 mm of insulation thickness, consistent with typical retrofitted Alumasc or Wetherby mineral wool EWI systems.

Behind the mineral wool is original brick masonry, rough-textured and uniform, confirming the substrate as solid wall brickwork rather than framed construction.

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Conclusion for Front and Rear Elevations
The EWI system is confirmed as a non-combustible mineral wool render system, mechanically fixed to brick masonry substrate. No elevated fire risk is introduced by this build-up, and it supports the existing Stay Put – Unless Affected strategy without further remediation. Observation aligns with FRA description and PAS 9980 Step 1 classification of “Low risk” façade condition for these elevations.

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	6mm	Render		A1 - Non-Combustible
Insulation	100mm	Mineral Wool Insulation		A1 - Non-Combustible
Substrate	100mm	Original Masonry		A1 - Non-Combustible

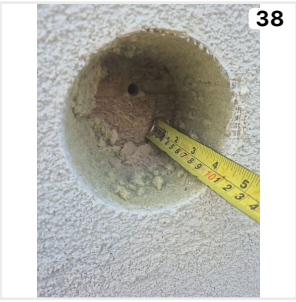
Cavity Barriers

No external cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Inspection: 9DT1QT

Location
Aperture Opening

Name/Summary

Render on Mineral Wool

Description

The insulation within the render system is confirmed as mineral wool (likely stone wool), based on:
Fibrous, non-combustible texture yellow-beige colour and open texture consistent with A1/A2-rated slab mineral wool

Clearly visible mechanical pin fixings (e.g. Ejot Termoz type) embedded within the insulation with plastic washers, indicating a mechanically fixed system. Tape measure readings confirm approx. 90–100 mm of insulation thickness, consistent with typical retrofitted Alumasc or Wetherby mineral wool EWI systems.

Behind the mineral wool is original brick masonry, rough-textured and uniform, confirming the substrate as solid wall brickwork rather than framed construction.

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Conclusion for Front and Rear Elevations
The EWI system is confirmed as a non-combustible mineral wool render system, mechanically fixed to brick masonry substrate. No elevated fire risk is introduced by this build-up, and it supports the existing Stay Put – Unless Affected strategy without further remediation. Observation aligns with FRA description and PAS 9980 Step 1 classification of “Low risk” façade condition for these elevations.

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	6mm	Render		A1 - Non-Combustible
Insulation	100mm	Mineral Wool Insulation		A1 - Non-Combustible
Substrate	100mm	Original Masonry		A1 - Non-Combustible

Cavity Barriers

No external cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos

Inspection: 1PKAAJ

Location
Compartment Floor Junction

Name/Summary

Orange Render on Masonry

Description

From external to internal face:

Thin-Coat Render (Coloured Finish – Orange)
• Synthetic polymer-based render
• Applied directly over carrier basecoat
• Manufacturer likely Wetherby or similar (installed ~2009)

Basecoat with Mesh Reinforcement
• Light grey cementitious layer
• Applied directly to outer leaf (brick)
• Reinforcement mesh not visible in samples but typical in system design

Outer Leaf – Traditional Red Facing Brick
• Solid full-brick skin
• Clean bond visible
• Forms outer cavity wall leaf

Clear Ventilated Cavity
• Cavity appears 50–75 mm wide
• Free from obstructions, no insulation or fire-stopping visible
• Typical mid-century cavity wall construction

Inner Leaf – Lightweight Concrete Blockwork
• Inner structural wall
• Uniform face, visible in borescope images
• Supports internal finishes and loadbearing structure

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	8mm	Render		A1 - Non-Combustible
Outer leaf	100mm	Material Brand: Brickwork		A1 - Non-Combustible

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Cavity	75mm			
Inner Leaf	100mm	Blockwork		A1 - Non-Combustible

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection: GJKXHA

Location
Compartment Floor Junction

Name/Summary

Masonry (Brickwork Red)

Description

Flank (Side) Elevations
The flank (side) elevations comprise traditional cavity wall construction with an external leaf of clay brickwork and an internal concrete blockwork leaf, separated by a cavity containing partial-fill rigid phenolic (PF) insulation boards. Intrusive investigations confirmed the insulation is foil-faced and combustible, consistent with mid-2000s partial-fill retrofit practice. No render or cladding system is present, and the insulation appears loosely placed directly within the cavity. There is no evidence of horizontal or vertical cavity barriers at floor levels or around openings.

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Outer leaf	100mm	Material Brand: Brickwork		A1 - Non-Combustible
Cavity	80mm			
Insulation	50mm	Phenolic Foam Insulation		C - Combustible
Inner Leaf	100mm	Blockwork		A1 - Non-Combustible

Cavity Barriers

No cavity barrier identified at this inspection location

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos

Inspection: 856UCS

Location
Compartment Floor Junction

Name/Summary

Masonry (Brickwork Red)

Description

Flank (Side) Elevations
The flank (side) elevations comprise traditional cavity wall construction with an external leaf of clay brickwork and an internal concrete blockwork leaf, separated by a cavity containing partial-fill rigid phenolic (PF) insulation boards. Intrusive investigations confirmed the insulation is foil-faced and combustible, consistent with mid-2000s partial-fill retrofit practice. No render or cladding system is present, and the insulation appears loosely placed directly within the cavity. There is no evidence of horizontal or vertical cavity barriers at floor levels or around openings.

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Outer leaf	100mm	Material Brand: Brickwork		A1 - Non-Combustible
Cavity	80mm			
Insulation	50mm	Phenolic Foam Insulation		C - Combustible
Inner Leaf	100mm	Blockwork		A1 - Non-Combustible

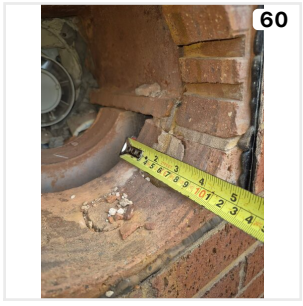
Cavity Barriers

No cavity barrier identified at this inspection location

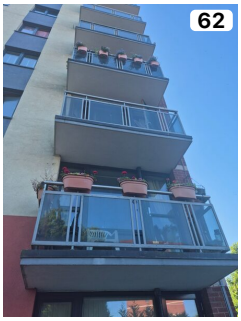
Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Attachments & Balconies

Photo	Attachment
	**Cantilever Balcony (R87Z9M)** Configuration: Stacked Size: Private balcony spanning only a single compartment

Attachment: Cantilever Balcony

Attachment Reference
R87Z9M

Details

Configuration

Stacked

Size

Private balcony spanning only a single compartment

Framework/Structure

Reinforced concrete framework extension of the floor slab

Handrail

Steel

Balustrade

Steel

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.

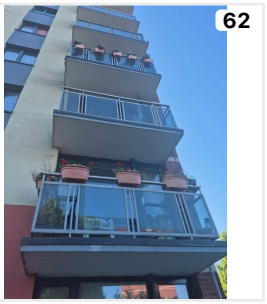
Fire Engineer Comments

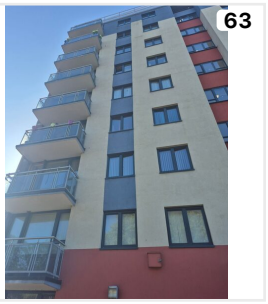
These cantilever balconies are configured in a vertically stacked configuration on the east and west elevations of the building. They extend from the ground floor to the uppermost floor and each spans a single compartment.

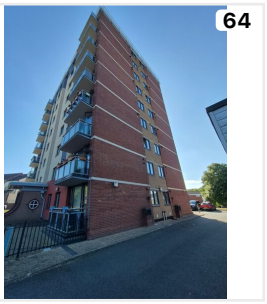
They are primarily formed of non-combustible materials. The steel frame, glazing, and concrete decking/soffit will not support, sustain, or contribute to the spread of fire across the external surface of the building.

The soffit will also act to disrupt the mechanism for vertical fire spread between the balconies. The adjacent wall system is a non-combustible double leaf masonry system filled with mineral wool and as such will not be negatively impacted by a fire occurring on a balcony.

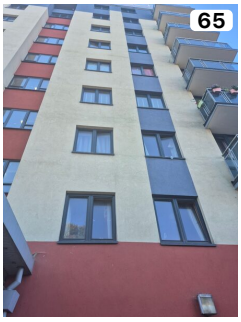
Photos







External Windows

Photo	External Window
	Top, Mid, Side Hung Casements (5U1DC1)

External Window: Top, Mid, Side Hung Casements

External Window Reference
5U1DC1

Details

Surface Material

Aluminium

Frame Material

Aluminium

Infill / Panel Material

Glazing

Fire Engineer Comments

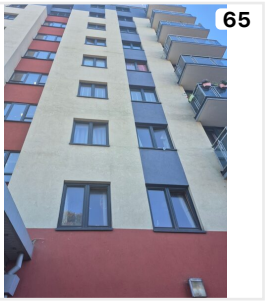
Aluminium is a non-combustible material and does not contribute to the spread of fire. However, its relatively low melting point (approximately 660°C) and high thermal conductivity mean that it may deform or fail when exposed to high levels of heat.

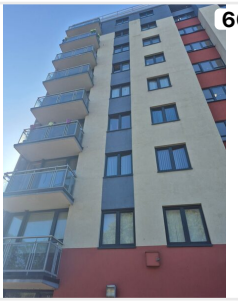
The window infill has been assumed as laminated glass, which consists of layers of glass bonded with a polymer interlayer, typically PVB or EVA. While these interlayers are combustible, they are generally slow to ignite. Under prolonged exposure to elevated temperatures or direct flame, the interlayers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

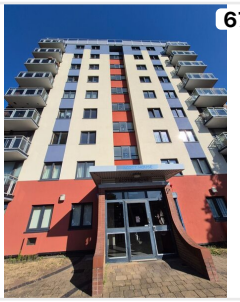
The windows are vertically aligned with less than 2 metres of separation between openings, which could create a potential pathway for vertical fire spread.

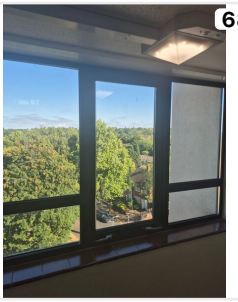
However, the aluminium window frames may be likely to maintain integrity beyond flashover temperatures. This offers a temporary barrier to flame ingress within the cavity, potentially delaying fire spread and supporting occupant evacuation and external firefighting intervention.

Photos









External Doors

Photo	External Door
	**Single Leaf Door (E3TFU9)**

External Door: Single Leaf Door

External Door Reference
E3TFU9

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 window 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.

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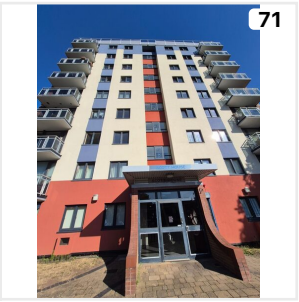
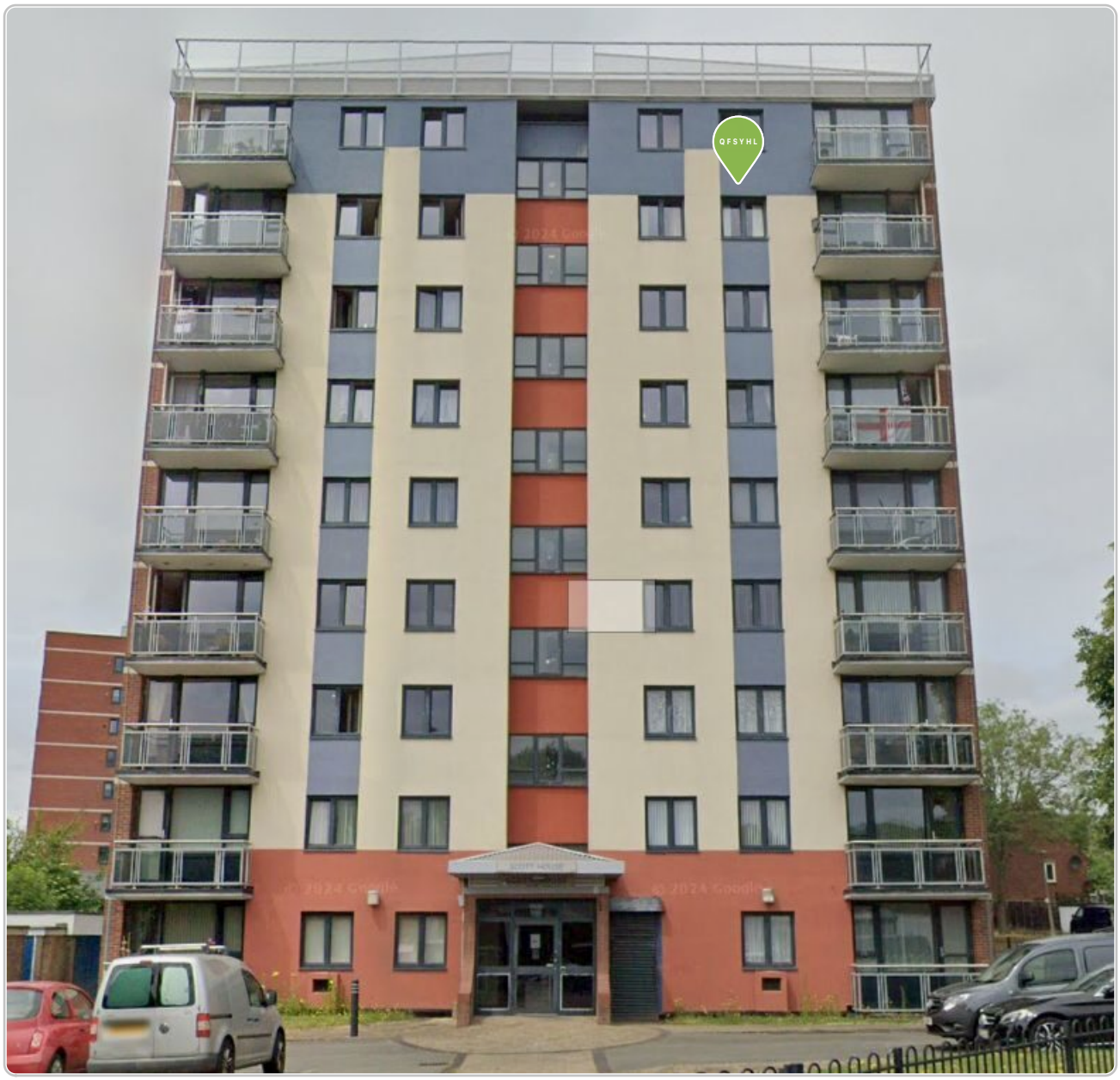


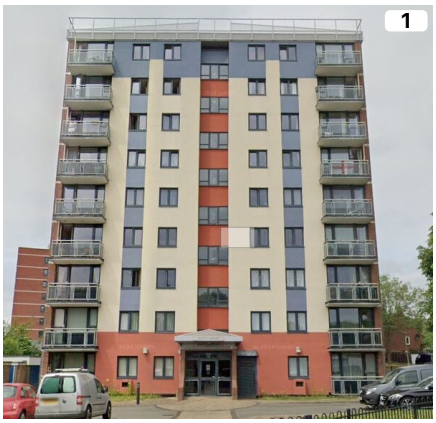
Plan: West



Plan: South

Plan: East

Photos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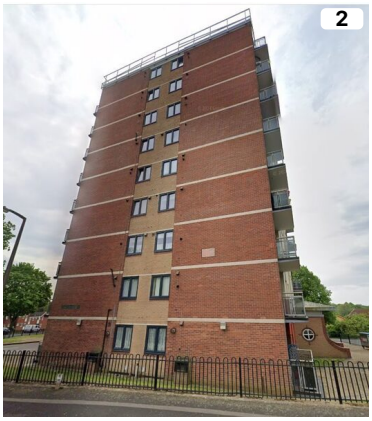
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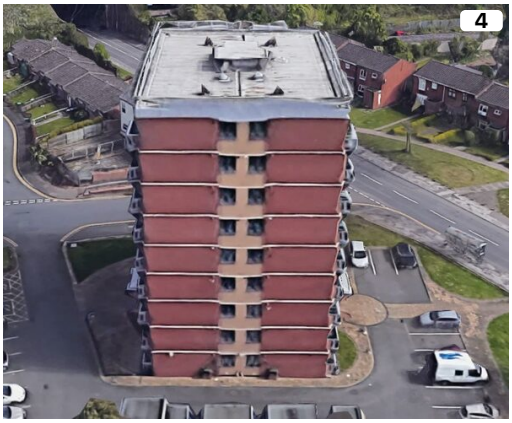
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Photos Continued...

Photos Continued...

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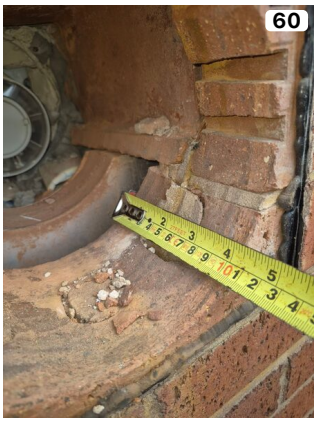
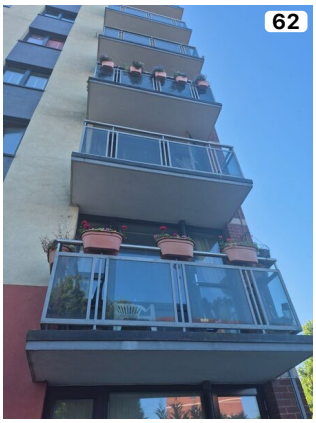
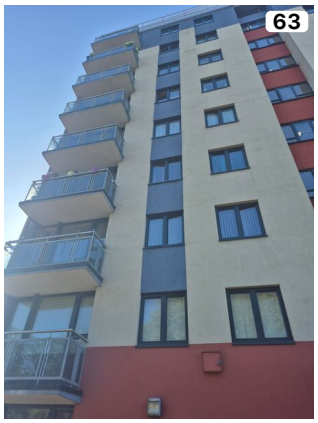
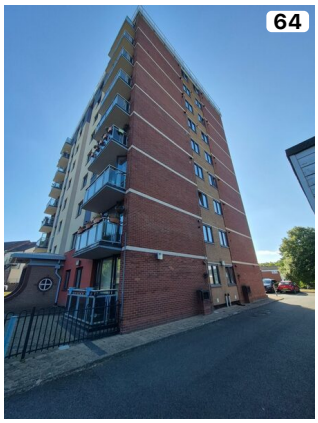
Photos Continued...

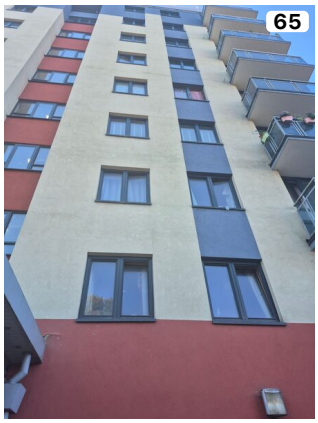
Photos Continued...

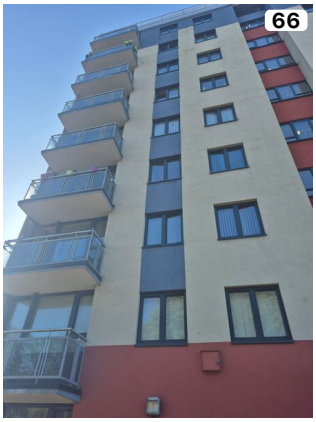


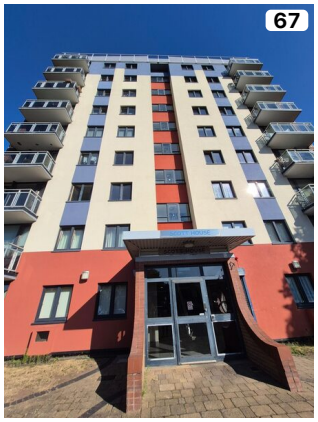




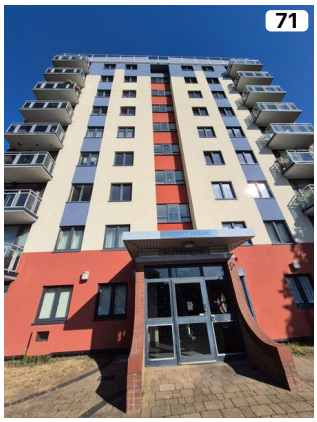








Photos Continued...



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