



FIRNTEC
BUILDING COMPLIANCE

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

Document Version 1

Survey Date 26/08/2025

Suggested Review Date 26/08/2030

FIRE RISK APPRAISAL EXTERNAL WALLS

ALLEN HOUSE

West Road
Hamstead
B43 5PS



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Summary

Fire Risk Appraisal External Walls

Assessment and Certificate Reference

RB-J7897U

Assessed On, By

26/08/2025, James Major (Facade Manager)

Approved / Validated On, By

05/09/2025, Alex Dodd EngTech MinstRE (Lead Facade Consultant)

Recommended Review Date

26/08/2030

Findings

1 Action

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

Allen House

Property Reference

RB-CLKLDR

Address

West Road

Hamstead

B43 5PS

Assessing Organisation

Firntec Ltd

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

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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 through site survey and inspection.
- c) the extent of the content and detail within the report; and
- d) the limitations at the time of the FRAEW of available knowledge on the fire performance of the materials, products and systems forming the external walls of the building.

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

Statement of Intent

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

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

Supporting Documents

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

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

Executive Summary

External Wall Systems and Attachments on the Building

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

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

5 Items	Effect	Risk
Wall Construction Masonry (Brickwork), Wool Insulation/No Insulation (4YQR1L)	Positive	Low
Wall Construction uPVC Infill Panels (32GDNZ)	Negative	Medium
Attachment Cantilever Balcony (JVWC6V)	Positive	Low
External Window Top, Mid, Side Hung Casements (FJSN6T)	Neutral	Low
External Door Single Leaf Door (PCQKBC)	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 **2ZTV** which includes wall construction **4YQR1L**.

Conclusion: This wall system is primarily comprised of a double-leaf masonry system that was observed to contain a retrofitted blown wool-type insulation (identified in the risk assessment as Rockwool Energy Saver). The outer leaf of masonry was identified to be 102mm brickwork, and the inner leaf was observed to be a 100mm blockwork. In some locations, the cavity was observed to contain no insulation.

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.

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.

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 was observed to form the external wall system of all 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 are adjacent to 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 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 good access for the fire service to the front and rear of the building. The nearest fire station is approximately 2.6 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, given the circumstances at the building in question; and/or
- b) fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or
- c) fire is unlikely to spread in such a way that the communal means of escape will be compromised before occupants can safely use them to escape; and/or
- d) the fire and rescue service are likely to be able to intervene effectively to enable occupants to reach safety in time.

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



Risk Factor Analysis 2

This analysis looks at façade configuration **9SF19P** which includes wall construction **32GDNZ**.

Conclusion: These infill panels are constructed of a uPVC outer and inner leaf, containing approximately 50mm of EPS insulation. These panels form the infill within the window fenestrations on the North and South elevations.

Despite being considered combustible when tested to EN13501, uPVC has relatively good fire performance compared to many other plastics, thanks to its high chlorine content, which acts as a flame retardant. It ignites at high temperatures, produces a moderate heat release rate, and tends to self-extinguish. However, when it does burn, uPVC produces dense, toxic smoke that can pose significant health hazards.

The EPS Expanded Polystyrene insulation is considered to be a highly combustible product. This presents a high contributor to fire spread and has the potential for rapid fire spread. The EPS as thermoplastic material has a softening point below 200°C and is highly susceptible to ignition. In the event of ignition, the heat given off will preheat other areas of the external wall. EPS typically ignites at temperatures around 350°C to 450°C. EPS is relatively easy to ignite when exposed to direct flames or sufficient heat sources. Once ignited, EPS burns vigorously with a high flame spread rate. The material melts and drips, potentially spreading the fire. EPS has a high heat release rate, which can contribute significantly to the intensity of a fire. Burning EPS produces large amounts of dense, black smoke. This smoke can reduce visibility and hinder evacuation efforts.

These panels form the infill within the window fenestrations on the North and South elevations. These windows open into the kitchens of the accommodation and, as such, are adjacent to the higher risk rooms of the building. They are present on every floor from the ground to the uppermost storey of the building. The panels themselves contain the flue outlets at every level. The window units are separated by double-leaf masonry on every level, providing a non-combustible barrier between storeys that would delay vertical fire spread for a short period. A fire venting from a kitchen window is likely to have a negative impact on the window of the storey above, regardless of the presence of these combustible infill panels. The adjacent non-combustible wall types would limit horizontal fire spread, and these panels are remote from the means of escape, ensuring that a fire involving these panels is unlikely to have a detrimental impact on occupants' ability to escape the building by containing the fire to a single elevation. It is accepted that a fire may travel horizontally to a single adjacent compartment, but it should not prevent the occupants of that compartment from escaping due to the internal layout of the flats.

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 good access for the fire service to the front and rear of the building. The nearest fire station is approximately 2.6 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 greater, but nevertheless, tolerable rate, given the circumstances at the building in question; and/or
 - b) fire spread is unlikely to give rise to 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. If at a later date these panels must be removed or replaced due to maintenance or repair they must be replaced with a material that achieves Euroclass A2,s1-d0 or better.



Overall Building Risk Rating



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

Recommended Remediations

No recommended remediations identified.

Recommended Interim Measures

No recommended interim measures identified.

1 Recommended Enhancement

General Recommended Enhancements

To further enhance occupant life safety, it is our recommendation that consideration be given to the installation of an evacuation alert system to support a potential change in evacuation policy at the discretion of the fire and rescue service during a fire scenario, ensuring adaptability to various fire safety strategies as required.

In the event of a fire within the building, the system should provide a means of initiating an evacuation of the building at the discretion of the emergency services.

It is our professional opinion that the cost, time and effort involved in this enhancement are not grossly disproportionate to the risk to which residents are currently exposed.

The installation of the system should be in development with a fire engineer, all stakeholders and be subject to approval by a building control body, in consultation with the fire service. This recommendation may also require other specialist engineer input.

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 away from combustible cladding; or that fire and smoke spread from the external envelope would be unlikely to compromise the effectiveness of the smoke control system or allow a route for fire spread back into the building

Positive

F.6 Fire Alarm & Detection

Domestic smoke and heat alarms within flats, Category LD2

Neutral

F.7 Fire Suppression

A fixed fire suppression system (deluge type) is installed in the bin store at Allen House. This system enhances fire risk control in a high-risk ancillary area

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

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	600 Seconds	10 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	1,385 Seconds	23 Minutes 5 Seconds

Nearest Fire Station

Handsworth Fire Station, 2.6 miles, approx 10 minute travel time in normal traffic conditions.

Wall Constructions

Wall Construction	Build-up
Masonry (Brickwork), Wool Insulation/No Insulation (4YQR1L)	• Outer leaf • Cavity • Insulation (Mineral Wool Insulation) • Inner Leaf (Blockwork)
uPVC Infill Panels (32GDNZ)	• External Surface Material (UPVC insulated panel) • Insulation (EPS Insulation)

Wall Construction: Masonry (Brickwork), Wool Insulation/No Insulation

Construction Reference
4YQR1L

This wall construction was identified by wall inspections 1B2GAF, Z1MLVW, 7N6585, VP6HS2, JDQ4TW, ZV51IS, 6F8SIB, 8V8IEY, and 7QT77J. The build-up, cavity barrier, and floor slab information is taken directly from inspection 1B2GAF. See the Inspections section of this report for full inspection details.

Construction	Effect	Risk
Masonry (Brickwork), Wool Insulation/No Insulation (4YQR1L)	Positive	Low

Build-Up

4 Elements	Thickness/Depth	Material	Rating (BS EN13501)
Outer leaf	100mm		A1 - Non-Combustible
External Leaf: 100 mm non-combustible facing brickwork, laid in stretcher bond, acting as the outer weather-resistant layer.			
Cavity	70mm		
Insulation	70mm	Mineral Wool Insulation	A1 - Non-Combustible
loose retrofitted blown mineral fibre found in the cavity			
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) of ≤ 3 MJ/kg

Positive

K.2 External Surfaces

Class A1

Positive

K.3 Facings/Cladding Panels

Low HRR

Positive

K.4 Panel Construction

Not Applicable

K.5 Cavities

Facings into the cavity at least Class A2

Positive

K.6 Insulation

Mineral 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

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: uPVC Infill Panels

Construction Reference
32GDNZ

This wall construction was identified by wall inspection 1W5VBM. The build-up, cavity barrier, and floor slab information is taken directly from inspection 1W5VBM. See the Inspections section of this report for full inspection details.

Construction	Effect	Risk
uPVC Infill Panels (32GDNZ)	Negative	Medium

Build-Up

2 Elements	Thickness/Depth	Material	Rating (BS EN13501)
External Surface Material	2mm	UPVC insulated panel	E - Highly Combustible
Insulation	50mm	EPS Insulation	E - Highly Combustible

Cavity Barriers

No external cavity

Fire Performance

K.1 General

Materials with a calorific value (gross heat of combustion) of >35 MJ/kg	Negative
--	----------

K.2 External Surfaces

Class E	Negative
---------	----------

K.3 Facings/Cladding Panels

High HRR

Negative

Mechanically fixed

Positive

K.4 Panel Construction

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

Neutral

K.5 Cavities

Cavities closed at least at compartment floors and walls but not:

- around windows and other openings*; or
- at ventilation ducts, grilles or other openings for services

Negative

K.6 Insulation

Thermoplastics that do not form a stable char on fire exposure (e.g. EPS/XPS)

Negative

K.7 Substrate

Masonry, >75 mm thick

Positive

K.8 Sheathing Boards

Not Applicable

K.9 Insulated Core Panels

Readily combustible insulation, but not fully encapsulated

Negative

K.10 ETICS

Not Applicable

K.11 Infill / Spandrel Panels

Panels with either combustible facing materials and/or thermoplastic cores not fully encapsulated by steel

Negative

PAS Standard Benchmark

L5 Benchmark

SPANDREL / IN-FILL PANELS

The terms "spandrel panel" and "infill panel" are used interchangeably throughout the industry to refer to panels which are normally fitted in lieu of glazing in either window fenestration systems or curtain wall units. The edges of these panels usually expose the insulating core and are normally only protected by the frame into which they are installed. They are sometimes protected with aluminium foil tape but this cannot be assumed.

Spandrel and infill panels are typically some form of composite, such as:

- metal skins with an insulating core;
- metal skins with an insulating and timber (typically plywood) core;
- metal external face with insulating core and timber (typically plywood) internal face;
- HPL skins with an insulating core; and
- solid HPL.

Their performance needs to be assessed in light of the materials involved in their construction (as described in this annex) and the manner in which they interact with compartmentation.

- Panels which are installed in such a way as to cross compartment lines (e.g. to conceal the edges of floor slabs) need to be considered in light of the potential route they provide for fire to spread from one compartment to another.
- Panels which are installed entirely within the confines of a compartment (as it meets the external wall) are unlikely to have a significant impact on fire spread, unless their performance is such that they are likely to contribute to substantial flame extension.

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: 2ZTVAL

Items in Façade

4 Items

	Effect	Risk
Wall Construction Masonry (Brickwork), Wool Insulation/No Insulation (4YQR1L)	Positive	Low
Attachment Cantilever Balcony (JVWC6V)	Positive	Low
External Door Single Leaf Door (PCQKBC)	Neutral	Low
External Window Top, Mid, Side Hung Casements (FJSN6T)	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 accidentally or deliberately) igniting the cladding is highly likely.

Negative

N.3 Extent of Cladding

Entire façade covered

Negative

N.4 Cavities & Openings

Continuous vertically running cavity without cavity barriers or fire stops.
The double-leaf masonry system accepts the absence of cavity barriers.

Neutral

N.5 Infill / Spandrel Panels

Not Applicable

N.6 Setbacks - Combustible Cladding Setback from Wall Edge

Not Applicable

N.7 Overhangs & Projections

Not Applicable

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

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

Negative

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

Not Applicable

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

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 is primarily comprised of a double-leaf masonry system that was observed to contain a retrofitted blown wool-type insulation (identified in the risk assessment as Rockwool Energy Saver). The outer leaf of masonry was identified to be 102mm brickwork, and the inner leaf was observed to be a 100mm blockwork. In some locations, the cavity was observed to contain no insulation.

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.

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.

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 was observed to form the external wall system of all 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 are adjacent to 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 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 good access for the fire service to the front and rear of the building. The nearest fire station is approximately 2.6 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, given the circumstances at the building in question; and/or
- b) fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or
- c) fire is unlikely to spread in such a way that the communal means of escape will be compromised before occupants can safely use them to escape; and/or
- d) the fire and rescue service are likely to be able to intervene effectively to enable occupants to reach safety in time.

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



Façade Configuration: 9SF19P

Items in Façade

2 Items

Effect

Risk

Wall Construction
uPVC Infill Panels (32GDNZ)

Negative

Medium

External Window
Top, Mid, Side Hung Casements (FJSN6T)

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 accidentally or deliberately) igniting the cladding is considered possible, but not likely at an early stage in the development of the fire.

Neutral

N.3 Extent of Cladding

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

Neutral

N.4 Cavities & Openings

Cavity not continuous, due to façade being only partially clad or broken by 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)

Neutral

N.5 Infill / Spandrel Panels

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

Neutral

N.6 Setbacks - Combustible Cladding Setback from Wall Edge

Not Applicable

N.7 Overhangs & Projections

Not Applicable

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

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

Neutral

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

Where vent passes through a cavity that contains combustible elements with no identified proprietary means of fire stopping

Negative

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: These infill panels are constructed of a uPVC outer and inner leaf, containing approximately 50mm of EPS insulation. These panels form the infill within the window fenestrations on the North and South elevations.

Despite being considered combustible when tested to EN13501, uPVC has relatively good fire performance compared to many other plastics, thanks to its high chlorine content, which acts as a flame retardant. It ignites at high temperatures, produces a moderate heat release rate, and tends to self-extinguish. However, when it does burn, uPVC produces dense, toxic smoke that can pose significant health hazards.

The EPS Expanded Polystyrene insulation is considered to be a highly combustible product. This presents a high contributor to fire spread and has the potential for rapid fire spread. The EPS as thermoplastic material has a softening point below 200°C and is highly susceptible to ignition. In the event of ignition, the heat given off will preheat other areas of the external wall. EPS typically ignites at temperatures around 350°C to 450°C. EPS is relatively easy to ignite when exposed to direct flames or sufficient heat sources. Once ignited, EPS burns vigorously with a high flame spread rate. The material melts and drips, potentially spreading the fire. EPS has a high heat release rate, which can contribute significantly to the intensity of a fire. Burning EPS produces large amounts of dense, black smoke. This smoke can reduce visibility and hinder evacuation efforts.

These panels form the infill within the window fenestrations on the North and South elevations. These windows open into the kitchens of the accommodation and, as such, are adjacent to the higher risk rooms of the building. They are present on every floor from the ground to the uppermost storey of the building. The panels themselves contain the flue outlets at every level. The window units are separated by double-leaf masonry on every level, providing a non-combustible barrier between storeys that would delay vertical fire spread for a short period. A fire venting from a kitchen window is likely to have a negative impact on the window of the storey above, regardless of the presence of these combustible infill panels. The adjacent non-combustible wall types would limit horizontal fire spread, and these panels are remote from the means of escape, ensuring that a fire involving these panels is unlikely to have a detrimental impact on occupants' ability to escape the building by containing the fire to a single elevation. It is accepted that a fire may travel horizontally to a single adjacent compartment, but it should not prevent the occupants of that compartment from escaping due to the internal layout of the flats.

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 good access for the fire service to the front and rear of the building. The nearest fire station is approximately 2.6 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 greater, but nevertheless, tolerable rate, given the circumstances at the building in question; and/or
- b) fire spread is unlikely to give rise to 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. If at a later date these panels must be removed or replaced due to maintenance or repair they must be replaced with a material that achieves Euroclass A2,s1-d0 or better.



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

Contact Details

As Provided by Client

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 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

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

Smoke Control

Natural smoke control, Smoke control installed

Smoke Control

Automatic smoke ventilation system to the front staircase, natural ventilation to the rear

Suppression Systems

Partial sprinkler system installed (Detailed in Description)

Suppression System

Bin store protected by deluge system; biannual servicing .

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. There is a fire hydrant adjacent the front main entrance at a distance of 1m, as denoted within the provided FRA.

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

Gerda PIB at rear GF lobby; white box at front door .

Signage

Appropriate signage installed throughout premises

Signage

Generally adequate throughout

Property Type

Apartment Block, Residential Purpose-built

Building Era / Age

Known Build Date

Known Build Date

1965

Guidance Applicable At Time Of Construction

CP3: Chapter IV (1962) – Precautions against fire (Code of Practice for means of escape)

Building Regulations 1965 (post-construction, but indicative of practices being adopted in late 1950s–early 60s)

Byelaws of Local Authorities (pre-Building Regs): likely Sandwell/Tipton area-specific fire precautions and structural standards

Joint Fire Code and Ministry of Housing Circulars (influence on staircase protection and early compartmentation norms)

BS 476 Parts 4 and 5 (1953 & 1959 editions) – classification of materials and fire doors used at the time

Building Height

Overall Building Height Approximately 24.6m

Highest Occupied Floor Level 21.6m

As per client provided FRA.

Number of Storeys (Ground and above)

9

Number of Basement Levels

Not applicable

Number of Flats

36 self-contained residential flats.

Flat Types

Single Storey

Structural Wall Material

Traditional build with concrete floor slab

Structural Floor Material

Reinforced Concrete

Structural Stairs Material

Concrete

Construction (Details)

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

Exterior Cladding

FRAEW Completed on Exterior Cladding

Electronic Entrance System

Yes

Carpark

External/Outdoor Carpark

Employees

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 the 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)

External Means Of Escape

None Present

Types Of Lifts Installed

Passenger

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: Allen House

Aerial Perspective (picture sourced from Google Earth)



Elevations

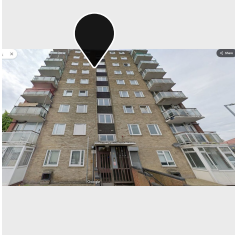
Photo	Name	No. of Storeys	Features
 A photograph of the west elevation of a nine-story brick apartment building. The building has a symmetrical facade with a central entrance and multiple windows. A small white box with the number '1' is in the top right corner of the photo.	West Elevation	9 Storeys	• Escape Route Exit • Private Balconies Stacked
 A photograph of the north elevation of the building, showing a side view with a red brick facade and a series of balconies. A small white box with the number '2' is in the top right corner of the photo.	North Elevation	9 Storeys	
 A photograph of the east elevation of the building, showing a side view with a light-colored facade and multiple windows. A small white box with the number '3' is in the top right corner of the photo.	East Elevation	9 Storeys	• Escape Route Exit
 A photograph of the south elevation of the building, showing a side view with a red brick facade and multiple windows. A small white box with the number '4' is in the top right corner of the photo.	South Elevation	9 Storeys	

Inspections

Elevation Location

Inspection

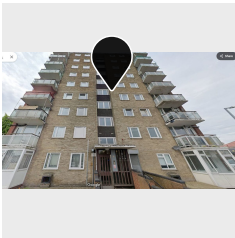
Elements



Inspection: 1B2GAF

East Elevation
Compartment Floor and Wall Junction
Interface

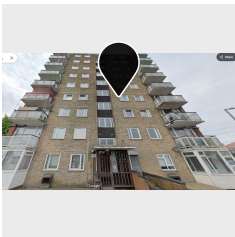
- Outer leaf
- Cavity
- Insulation (Mineral Wool Insulation)
- Inner Leaf (Blockwork)



Inspection: J8ALMT

East Elevation
Compartment Floor and Wall Junction
Interface

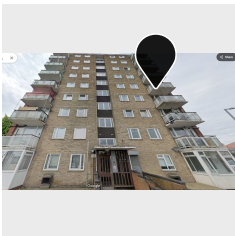
No elements identified



Inspection: 6NM2KS

East Elevation
Aperture Opening

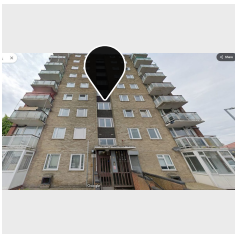
No elements identified



Inspection: 75Y5Z6

East Elevation
Balcony Inspection

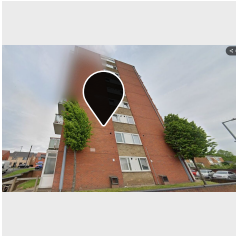
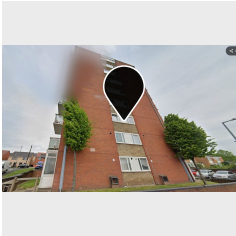
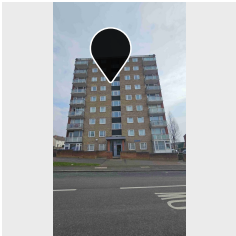
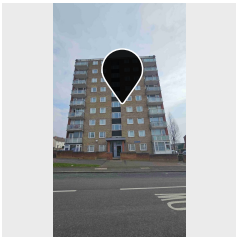
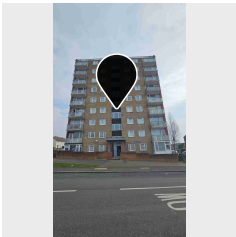
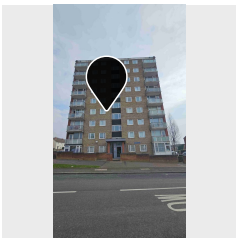
- External Surface Material (Concrete)
- Waterproof Membrane

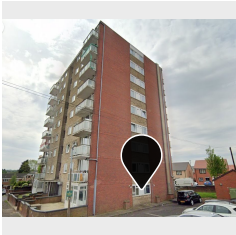


Inspection: Z1MLVW

East Elevation
Compartment Floor Junction

- Outer leaf
- Cavity
- Inner Leaf (Blockwork)

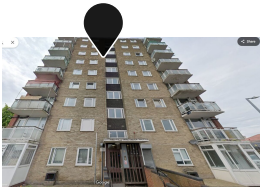
Elevation Location	Inspection	Elements
	Inspection: GRF17I South Elevation Compartment Floor Junction	No elements identified
	Inspection: TN1ZE9 South Elevation Compartment Wall Junction	No elements identified
	Inspection: S274ZM West Elevation Compartment Floor and Wall Junction Interface	No elements identified
	Inspection: TH7FQF West Elevation Compartment Floor and Wall Junction Interface	No elements identified
	Inspection: 4RCHZX West Elevation Compartment Floor Junction	No elements identified
	Inspection: GPFPJP West Elevation Aperture Opening	No elements identified

Elevation Location	Inspection	Elements
	Inspection: 1W5VBM North Elevation Compartment Wall Junction	• External Surface Material (UPVC insulated panel) • Insulation (EPS Insulation)
	Inspection: 4GJZVF North Elevation Aperture Opening	No elements identified
	Inspection: 7N6585 Compartment Floor and Wall Junction Interface	• Outer leaf • Cavity • Insulation (Mineral Wool Insulation) • Inner Leaf (Blockwork)
	Inspection: VP6HS2 Aperture Opening	• Outer leaf • Cavity • Insulation (Mineral Wool Insulation) • Inner Leaf (Blockwork)
	Inspection: JDQ4TW Brickwork Compartment Wall	• Outer leaf • Cavity • Insulation (Mineral Wool Insulation) • Inner Leaf (Blockwork)
	Inspection: ZV51IS Compartment Floor and Wall Junction Interface	• Outer leaf • Cavity • Insulation (Mineral Wool Insulation) • Inner Leaf (Blockwork)
	Inspection: 6F8SIB Aperture Opening	• Outer leaf • Cavity • Insulation (Mineral Wool Insulation) • Inner Leaf (Blockwork)
	Inspection: 8V8IEY Compartment Floor and Wall Junction Interface	• Outer leaf • Cavity • Insulation (Mineral Wool Insulation) • Inner Leaf (Blockwork)
	Inspection: 7QT77J Compartment Floor and Wall Junction Interface	• Outer leaf • Cavity • Insulation (Mineral Wool Insulation) • Inner Leaf (Blockwork)

Elevation Location	Inspection	Elements
	Inspection: Y6XJ5D Balcony Inspection	• External Surface Material (Concrete) • Waterproof Membrane

Inspection: 1B2GAF

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



Name/Summary

Masonry (Brickwork)

Proposed Inspection

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

The Engineer will be looking to determine the:

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

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

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

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Outer leaf	100mm			A1 - Non-Combustible
External Leaf: 100 mm non-combustible facing brickwork, laid in stretcher bond, acting as the outer weather-resistant layer.				
Cavity	70mm			

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Insulation	70mm	Mineral Wool Insulation		A1 - Non-Combustible
loose retrofitted blown mineral fibre found in the cavity				
Inner Leaf	100mm	Blockwork		A1 - Non-Combustible

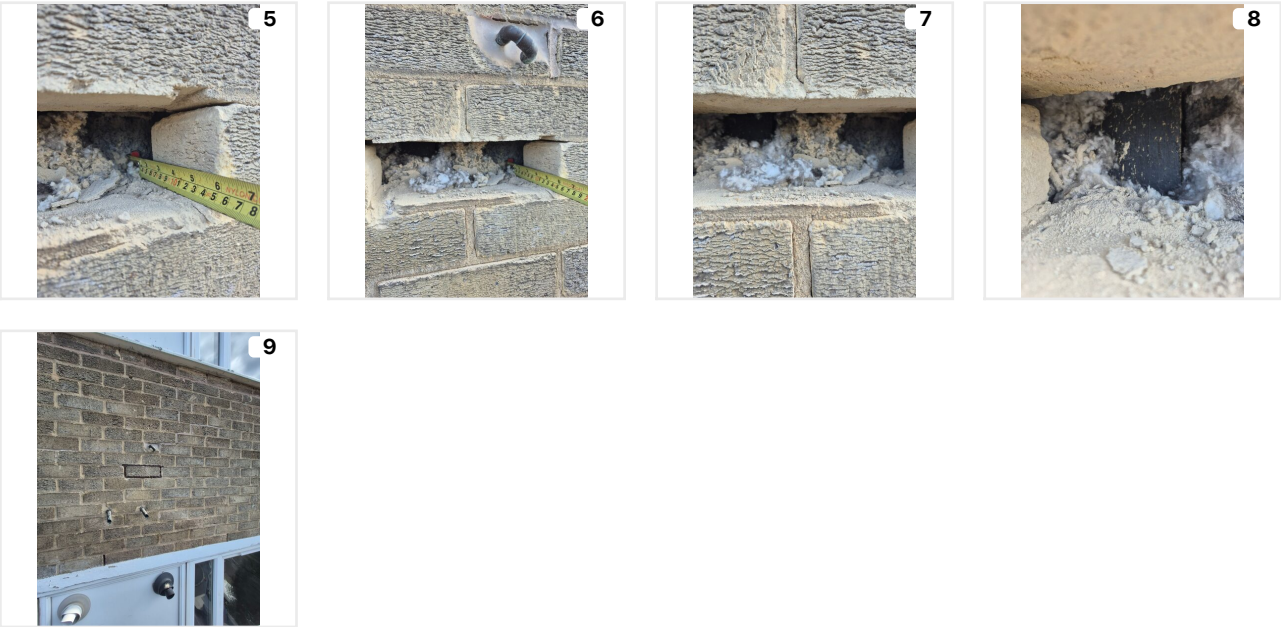
Cavity Barriers

No cavity barrier identified at this inspection location

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Inspection: J8ALMT

Elevation • Location

East Elevation • Compartment Floor and Wall Junction Interface



Name/Summary

Masonry (Brickwork)

Proposed Inspection

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

The Engineer will be looking to determine the:

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

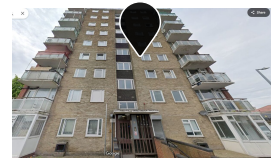
The external inspection is undertaken by either using an approximate 25mm – 150mm bore in a discreet location or the removal of the external surface material. The engineer will then gather the external walls construction from external to internal.

The materials are then measured and observed in there construction along with photographic evidence.

Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

Inspection: 6NM2KS

Elevation • Location
East Elevation • Aperture Opening



Name/Summary

Masonry (Brickwork)

Proposed Inspection

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

The Engineer will be looking to determine the:

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

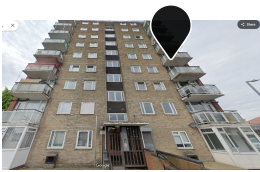
The external inspection is undertaken by either using an approximate 25mm – 150mm bore in a discreet location or the removal of the external surface material. The engineer will then gather the external walls construction from external to internal.

The materials are then measured and observed in there construction along with photographic evidence.

Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

Inspection: 75Y5Z6

Elevation • Location
East Elevation • Balcony Inspection



Name/Summary

Balcony

Proposed Inspection

The purpose of the balcony inspection will consist of visual and intrusive inspections to identify the attachment types material configuration.

The Engineer will be looking to determine the:

- a) Surface material (Identify the material and Euroclass)
- b) Cavities (if a cavity is present and if so the depth and extent)
- c) Insulation (identify any material and Euroclass)
- d) Membranes (identify their presence and where possible manufacturer)
- e) Substrates (the means in which the façade is attached to the building)
- f) Cavity Barriers (Horizontally, Vertically, Around Openings)

The materials are then measured and observed in there construction along with photographic evidence.
Upon completion any removed material is placed back.

Build-Up

2 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	190mm	Concrete		A1 - Non-Combustible
Waterproof Membrane				B - Combustible

Cavity Barriers

No cavity barrier identified at this inspection location

Floor Slab

Reinforced concrete

Inspection Photos



Inspection: Z1MLVW

Elevation • Location
East Elevation • Compartment Floor Junction



Name/Summary

Masonry (Brickwork Dark)

Proposed Inspection

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

The Engineer will be looking to determine the:

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

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

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

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Outer leaf	100mm			A1 - Non-Combustible
Cavity	70mm			
Inner Leaf	100mm	Blockwork		A1 - Non-Combustible

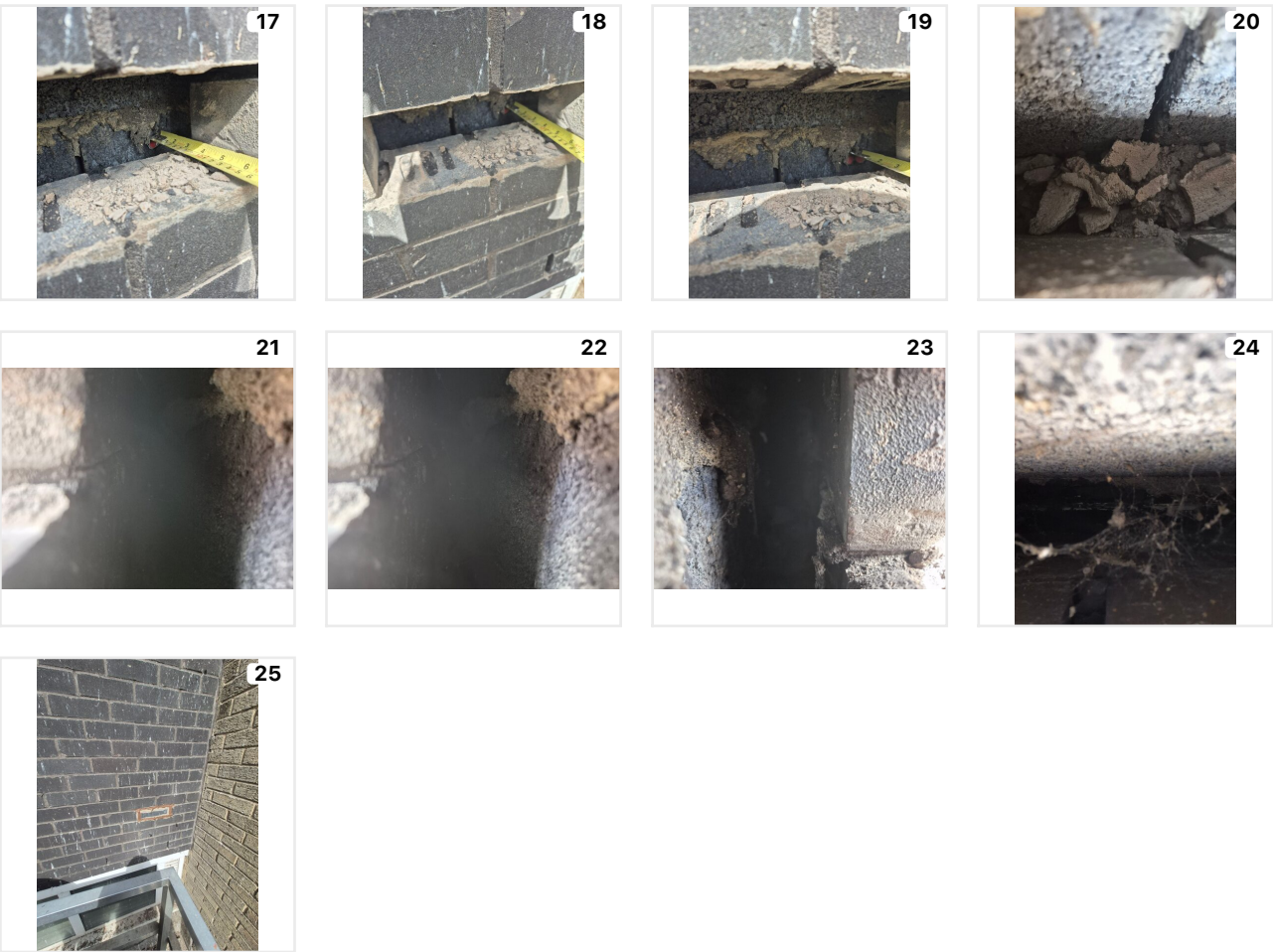
Cavity Barriers

No cavity barrier identified at this inspection location

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Inspection: GRF17I

Elevation • Location

South Elevation • Compartment Floor Junction



Name/Summary

Masonry (Brickwork)

Proposed Inspection

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

The Engineer will be looking to determine the:

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

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

The materials are then measured and observed in there construction along with photographic evidence.

Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

Inspection: TN1ZE9

Elevation • Location

South Elevation • Compartment Wall Junction



Name/Summary

Infill Panel

Proposed Inspection

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

The Engineer will be looking to determine the:

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

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

The materials are then measured and observed in there construction along with photographic evidence.

Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

Inspection: S274ZM



Elevation • Location

West Elevation • Compartment Floor and Wall Junction Interface

Name/Summary

Masonry (Brickwork)

Proposed Inspection

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

The Engineer will be looking to determine the:

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

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

The materials are then measured and observed in there construction along with photographic evidence.

Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

Inspection: TH7FQF



Elevation • Location

West Elevation • Compartment Floor and Wall Junction Interface

Name/Summary

Masonry (Brickwork)

Proposed Inspection

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

The Engineer will be looking to determine the:

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

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

The materials are then measured and observed in there construction along with photographic evidence.

Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

Inspection: 4RCHZX

Elevation • Location

West Elevation • Compartment Floor Junction



Name/Summary

Masonry (Brickwork Dark)

Proposed Inspection

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

The Engineer will be looking to determine the:

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

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

The materials are then measured and observed in there construction along with photographic evidence.

Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

Inspection: GPFPJP

Elevation • Location
West Elevation • Aperture Opening



Name/Summary

Masonry (Brickwork)

Proposed Inspection

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

The Engineer will be looking to determine the:

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

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

The materials are then measured and observed in there construction along with photographic evidence.

Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

Inspection: 1W5VBM

Elevation • Location
North Elevation • Compartment Wall Junction



Name/Summary

Infill Panel

Description

The panel is a composite infill unit, likely PVC-faced board with insulation core, commonly used to replace or infill former window openings. White PVC sheeting, forming the external face of the panel system. Visual inspection via the flue void shows expanded polystyrene (EPS) insulation core present within the panel.

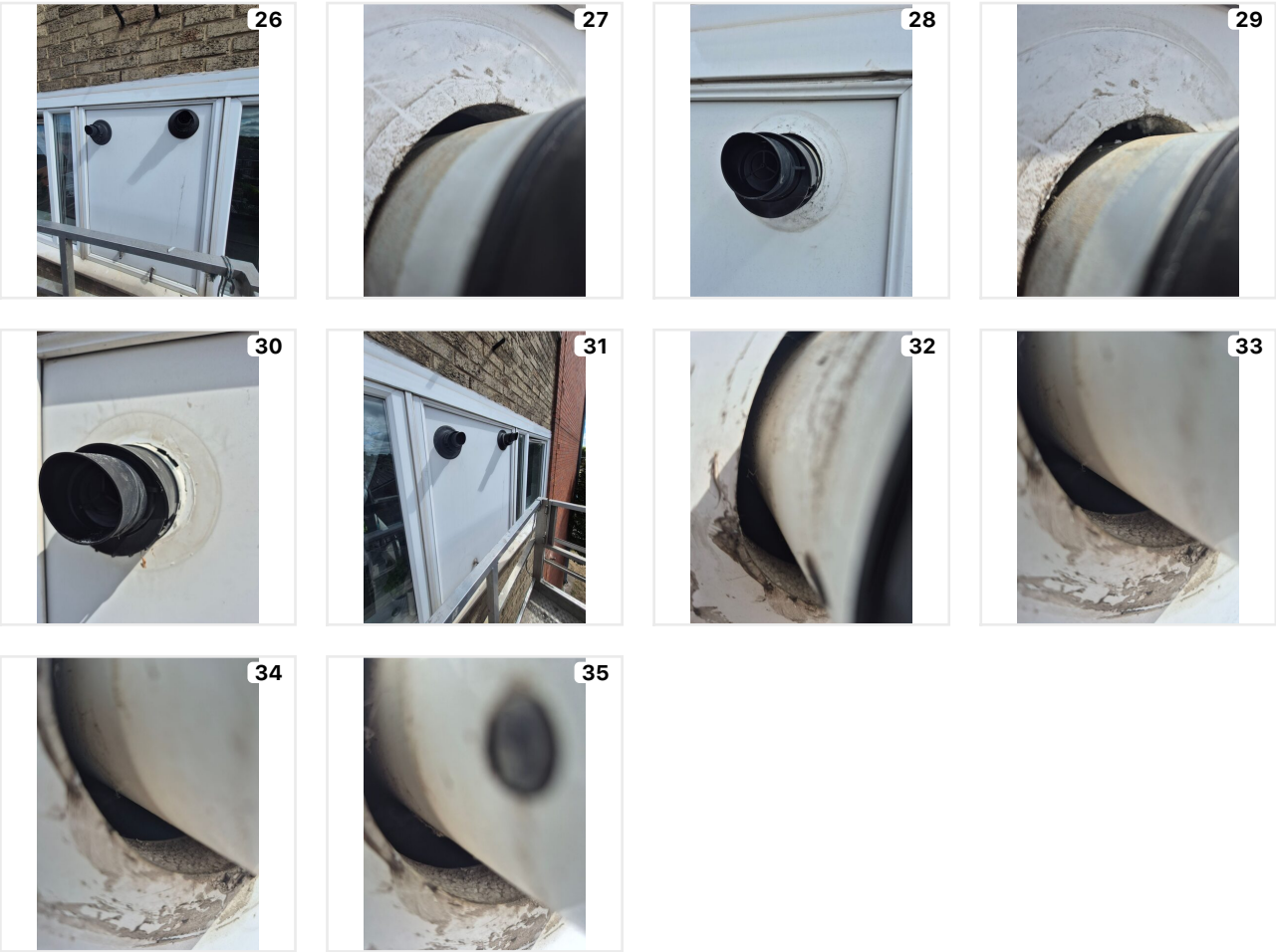
Build-Up

2 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	2mm	UPVC insulated panel		E - Highly Combustible
Insulation	50mm	EPS Insulation		E - Highly Combustible

Cavity Barriers

No external cavity

Inspection Photos



Inspection: 4GJZVF

Elevation • Location
North Elevation • Aperture Opening



Name/Summary

Masonry (Brickwork)

Proposed Inspection

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

The Engineer will be looking to determine the:

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

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

The materials are then measured and observed in there construction along with photographic evidence.

Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

Inspection: 7N6585

Location
Compartment Floor and Wall Junction Interface

Name/Summary

Masonry (Brickwork)

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Outer leaf	100mm			A1 - Non-Combustible
External Leaf: 100 mm non-combustible facing brickwork, laid in stretcher bond, acting as the outer weather-resistant layer.				
Cavity	70mm			
Insulation	70mm	Mineral Wool Insulation		A1 - Non-Combustible
loose retrofitted blown mineral fibre found in the cavity				
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: VP6HS2

Location
Aperture Opening

Name/Summary

Masonry (Brickwork)

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Outer leaf	100mm			A1 - Non-Combustible
External Leaf: 100 mm non-combustible facing brickwork, laid in stretcher bond, acting as the outer weather-resistant layer.				
Cavity	70mm			
Insulation	70mm	Mineral Wool Insulation		A1 - Non-Combustible
loose retrofitted blown mineral fibre found in the cavity				
Inner Leaf	100mm	Blockwork		A1 - Non-Combustible

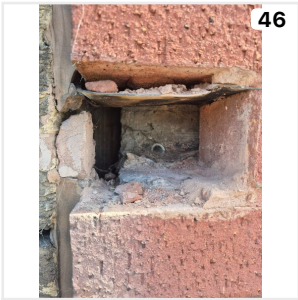
Cavity Barriers

No cavity barrier identified at this inspection location

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Inspection: JDQ4TW

Location
Brickwork Compartment Wall

Name/Summary

Masonry (Brickwork)

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Outer leaf	100mm			A1 - Non-Combustible
External Leaf: 100 mm non-combustible facing brickwork, laid in stretcher bond, acting as the outer weather-resistant layer.				
Cavity	70mm			
Insulation	70mm	Mineral Wool Insulation		A1 - Non-Combustible
loose retrofitted blown mineral fibre found in the cavity				
Inner Leaf	100mm	Blockwork		A1 - Non-Combustible

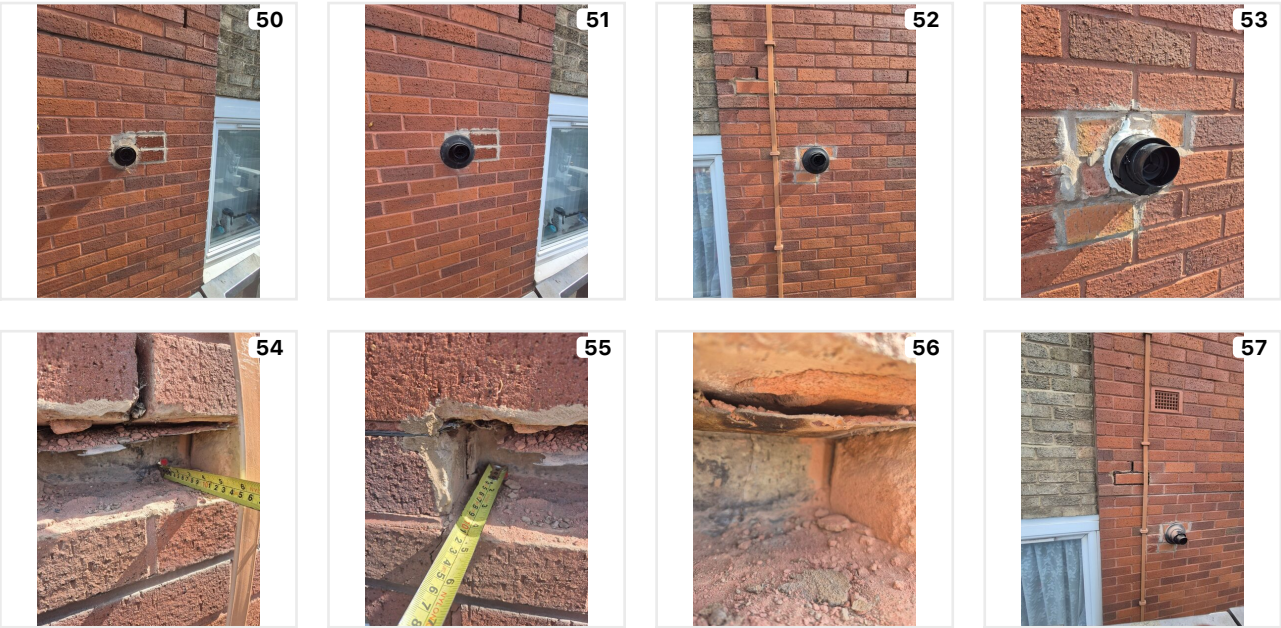
Cavity Barriers

No cavity barrier identified at this inspection location

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Inspection: ZV51IS

Location
Compartment Floor and Wall Junction Interface

Name/Summary

Masonry (Brickwork)

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Outer leaf	100mm			A1 - Non-Combustible
External Leaf: 100 mm non-combustible facing brickwork, laid in stretcher bond, acting as the outer weather-resistant layer.				
Cavity	70mm			
Insulation	70mm	Mineral Wool Insulation		A1 - Non-Combustible
loose retrofitted blown mineral fibre found in the cavity				
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: 6F8SIB

Location
Aperture Opening

Name/Summary

Masonry (Brickwork)

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
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Outer leaf	100mm			A1 - Non-Combustible
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External Leaf:
100 mm non-combustible facing brickwork, laid in stretcher bond, acting as the outer weather-resistant layer.

Cavity	70mm			
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Insulation	70mm	Mineral Wool Insulation		A1 - Non-Combustible
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loose retrofitted blown mineral fibre found in the cavity

Inner Leaf	100mm	Blockwork		A1 - Non-Combustible
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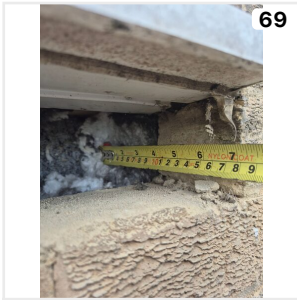
Cavity Barriers

No cavity barrier identified at this inspection location

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Inspection: 8V8IEY

Location
Compartment Floor and Wall Junction Interface

Name/Summary

Masonry (Brickwork)

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Outer leaf	100mm			A1 - Non-Combustible
External Leaf: 100 mm non-combustible facing brickwork, laid in stretcher bond, acting as the outer weather-resistant layer.				
Cavity	70mm			
Insulation	70mm	Mineral Wool Insulation		A1 - Non-Combustible
loose retrofitted blown mineral fibre found in the cavity				
Inner Leaf	100mm	Blockwork		A1 - Non-Combustible

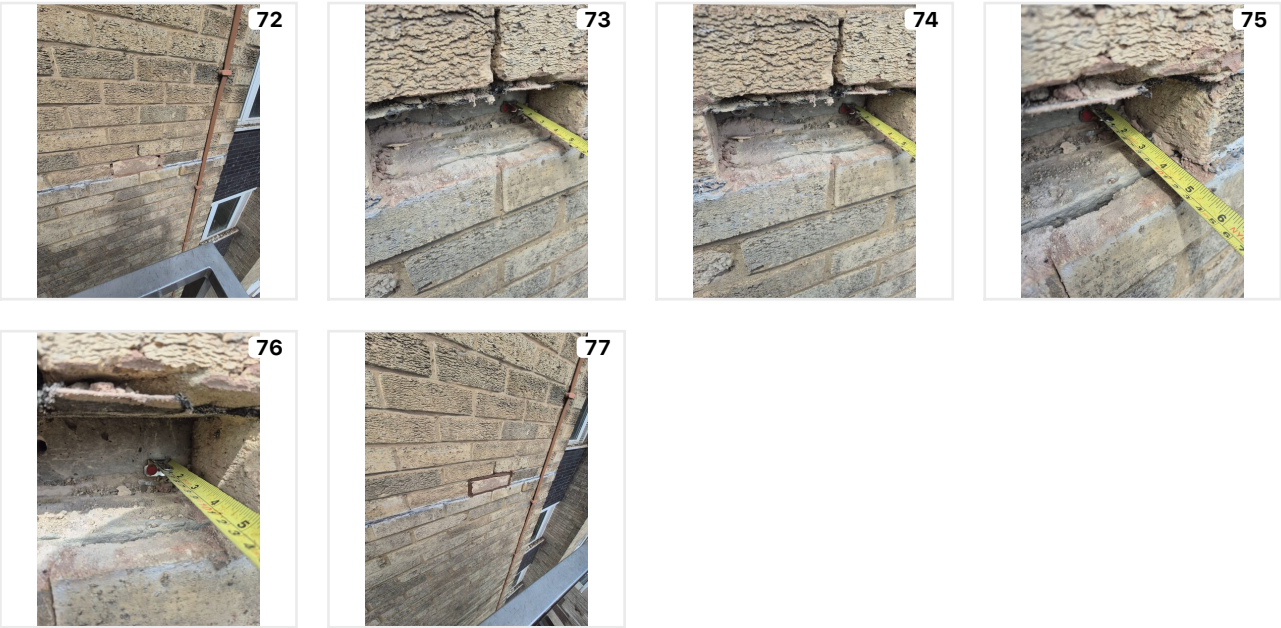
Cavity Barriers

No cavity barrier identified at this inspection location

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Inspection: 7QT77J

Location
Compartment Floor and Wall Junction Interface

Name/Summary

Masonry (Brickwork)

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Outer leaf	100mm			A1 - Non-Combustible
External Leaf: 100 mm non-combustible facing brickwork, laid in stretcher bond, acting as the outer weather-resistant layer.				
Cavity	70mm			
Insulation	70mm	Mineral Wool Insulation		A1 - Non-Combustible
loose retrofitted blown mineral fibre found in the cavity				
Inner Leaf	100mm	Blockwork		A1 - Non-Combustible

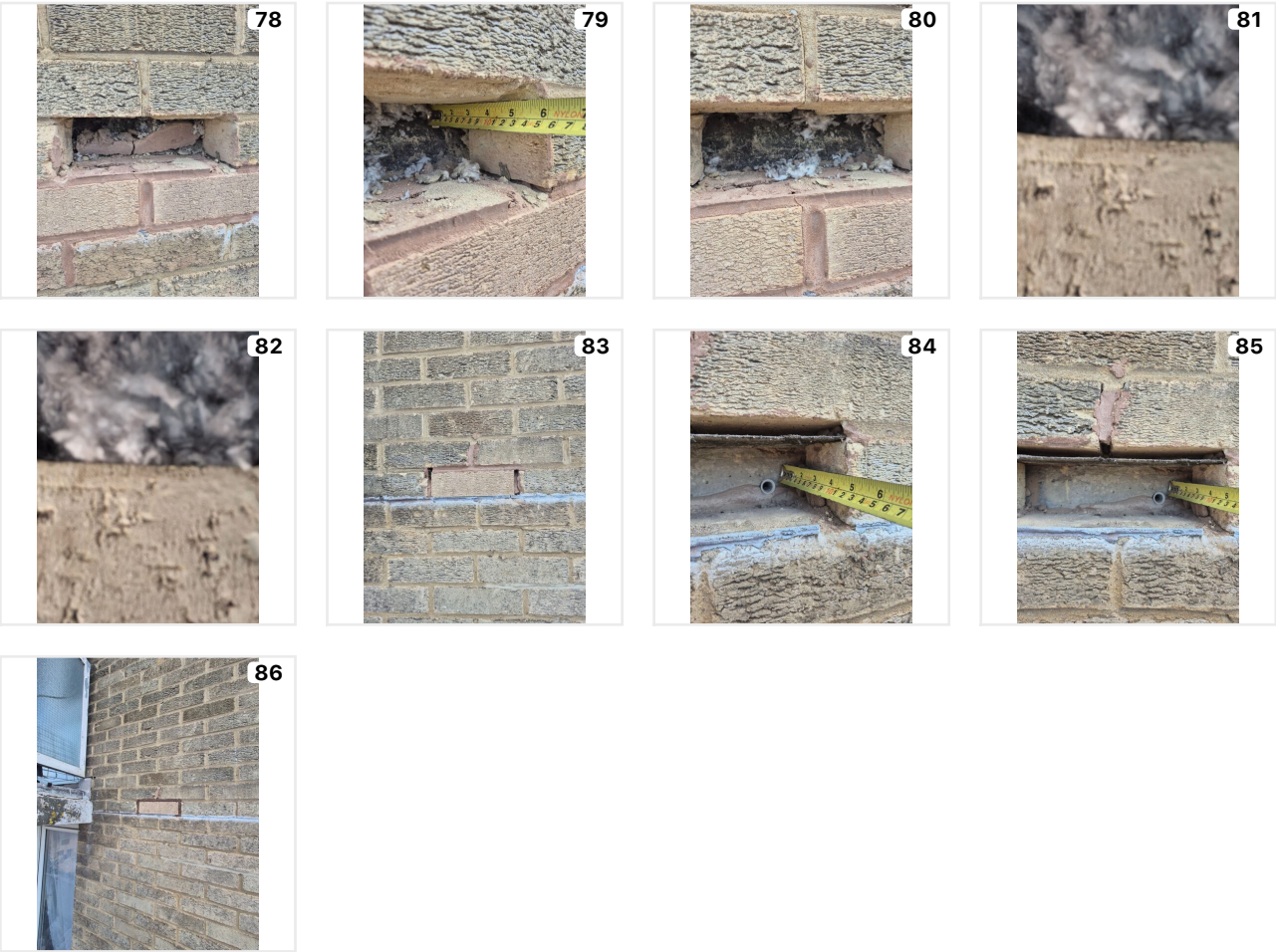
Cavity Barriers

No cavity barrier identified at this inspection location

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Inspection: Y6XJ5D

Location
Balcony Inspection

Name/Summary

Balcony

Build-Up

2 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	190mm	Concrete		A1 - Non-Combustible
Waterproof Membrane				B - Combustible

Cavity Barriers

No cavity barrier identified at this inspection location

Floor Slab

Reinforced concrete

Inspection Photos



Attachments & Balconies

Photo

Attachment



Cantilever Balcony (JVWC6V)

Configuration: Stacked

Size: Private balcony spanning only a single compartment

Attachment: Cantilever Balcony

Attachment Reference
JVWC6V

Details

Configuration

Stacked

Size

Private balcony spanning only a single compartment

Framework/Structure

Reinforced concrete framework extension of the floor slab

Handrail

Timber

Balustrade

Steel

Infill

Wired glass

L6 Benchmark

Balconies -

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

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

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

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

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

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

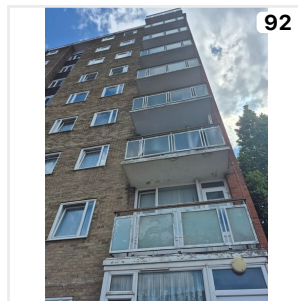
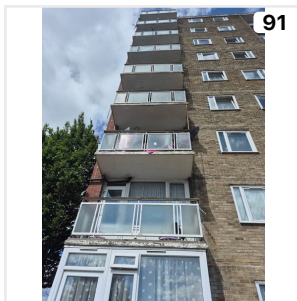
Fire Engineer Comments

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, with a limited timber handrail and Georgian wired glazing panels. 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 (FJSN6T)

External Window: Top, Mid, Side Hung Casements

External Window Reference
FJSN6T

Details

Surface Material

uPVC

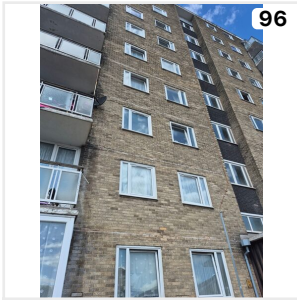
Frame Material

uPVC

Infill / Panel Material

Other

Photos



External Doors

Photo

External Door



Single Leaf Door (PCQKBC)

External Door: Single Leaf Door

External Door Reference
PCQKBC

Details

Surface Material

Aluminium

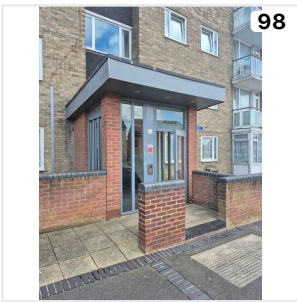
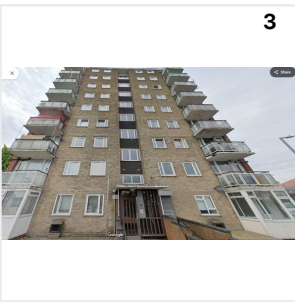
Frame Material

Aluminium

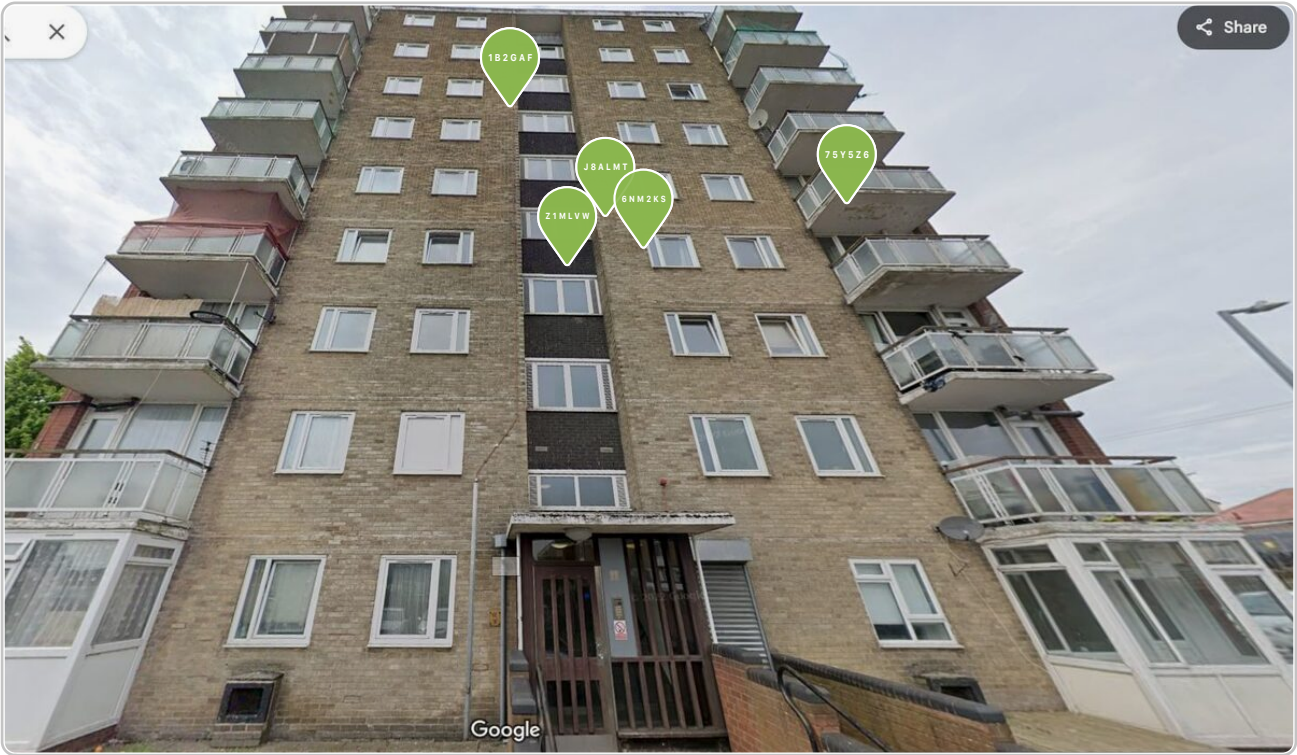
Infill / Panel Material

Glazing

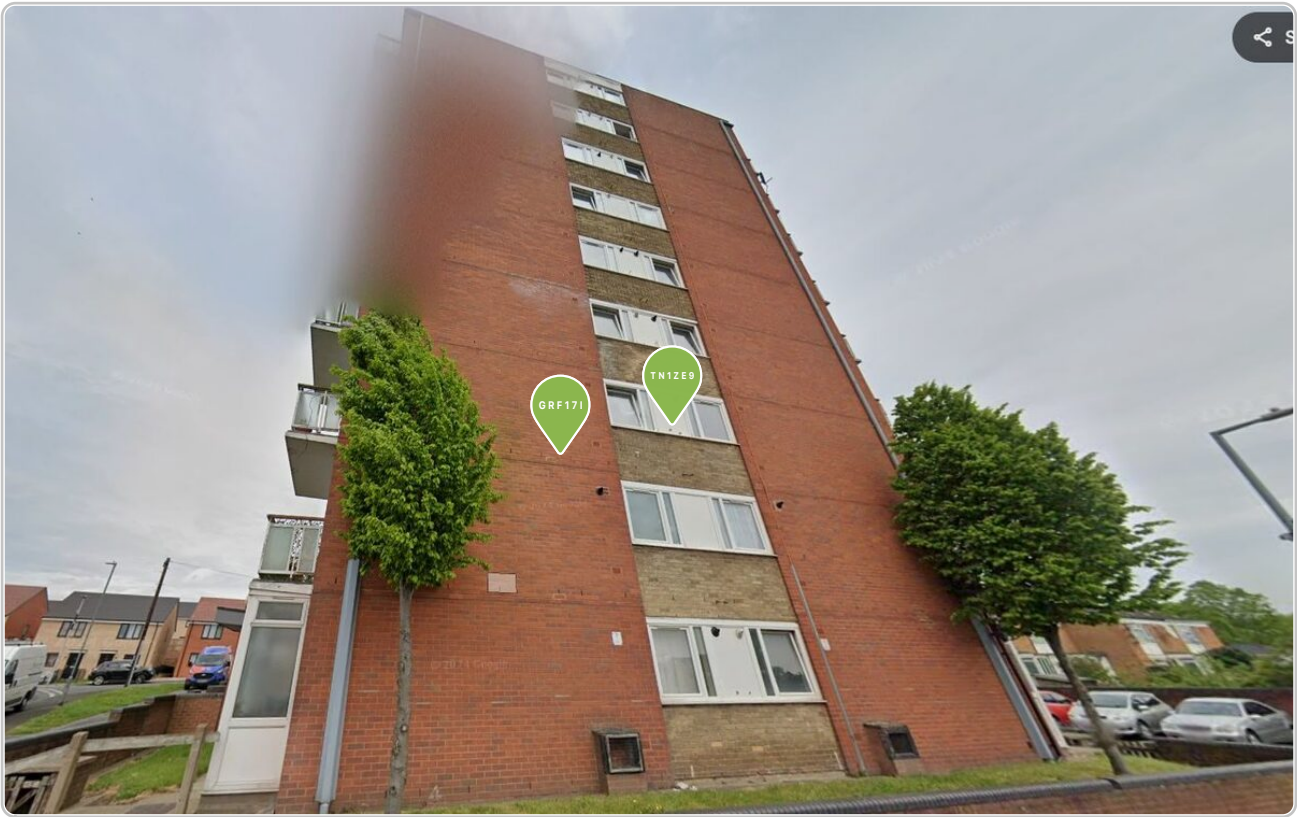
Photos



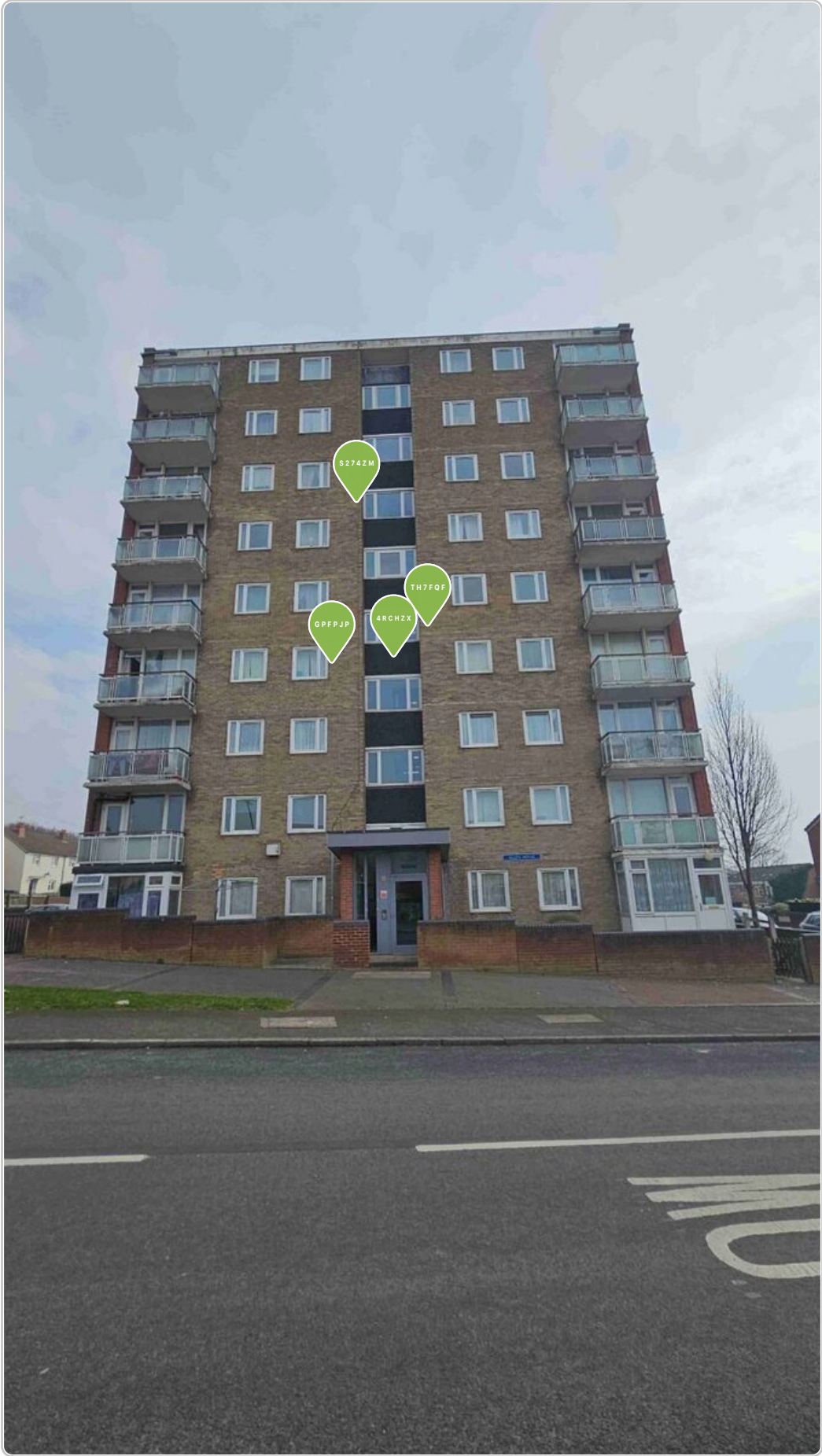
Plan: East Elevation



Plan: South Elevation



Plan: West Elevation



Plan: North Elevation



Photos



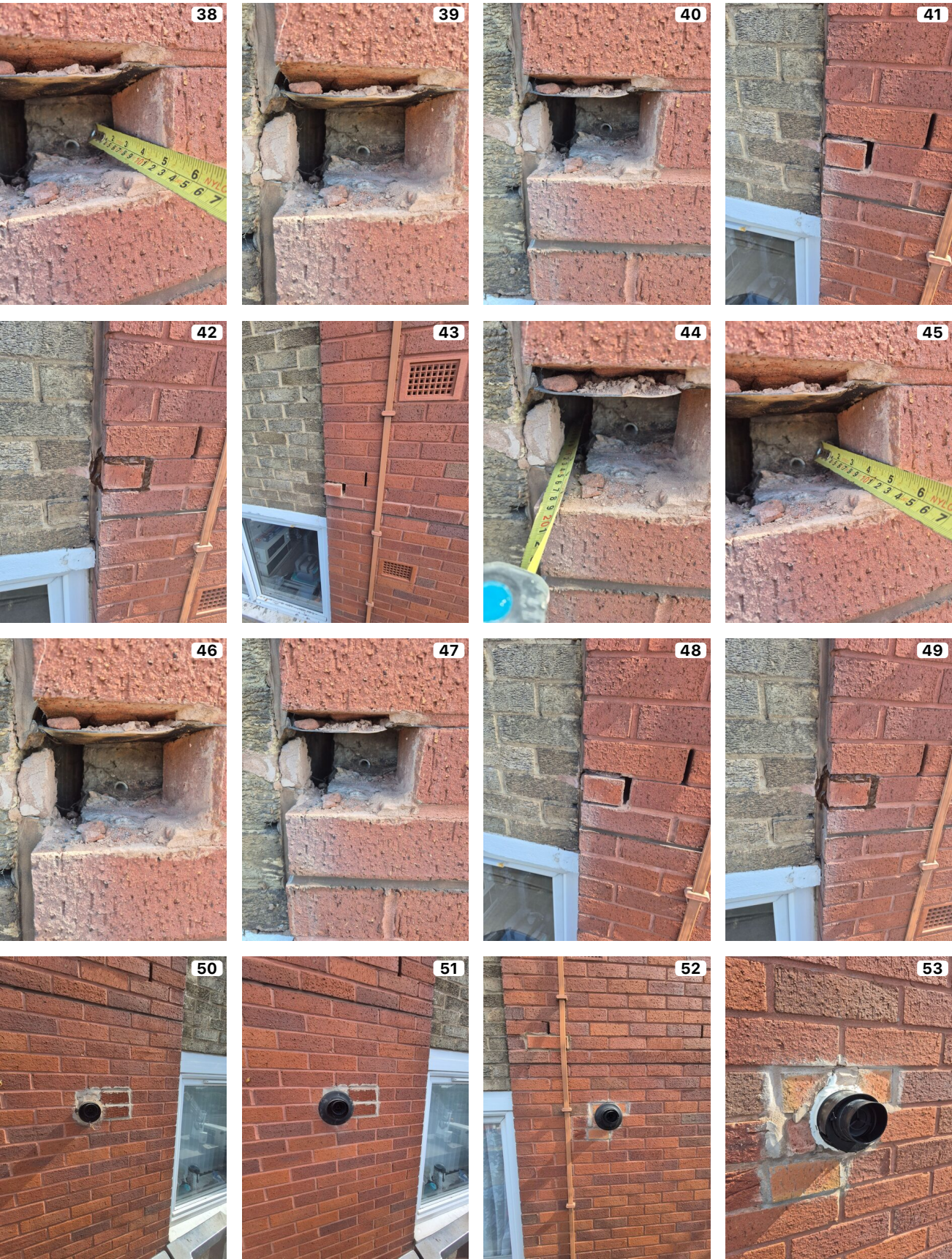
Photos Continued...



Photos Continued...



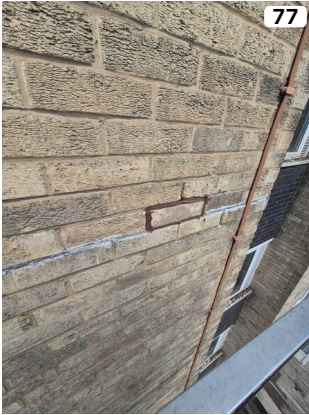
Photos Continued...



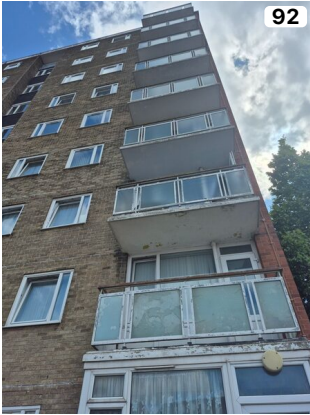
Photos Continued...



Photos Continued...



Photos Continued...





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