FIRNTEC
BUILDING COMPLIANCE

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

Document Version 1
Survey Date 05/06/2025
Suggested Review Date 05/06/2030

FIRE RISK APPRAISAL EXTERNAL WALLS

BEECH HOUSE

Meadow Avenue
West Brom
B71 3EJ

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Summary

Fire Risk Appraisal External Walls

Assessment and Certificate Reference
RB-QHRBPB

Assessed On, By
05/06/2025, Tom Barry CFPA-E Dip TC, TIFireE, MIFSM, AMIFPO, CFRAR

Approved / Validated On, By
08/07/2025, James Major (Facade Manager)

Recommended Review Date
05/06/2030

Findings
1 Control

Produced For the Responsible Person
Sandwell Metropolitan Council

Specification Conforms To
Our own internal quality system.

Assessment Scope
Assessment applies only to the building specified.

Assessed Property

Property Name
Beech House

Property Reference
RB-MDWX2K

Address
Meadow Avenue
West Brom
B71 3EJ

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

Abbreviation/ Term Definition

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

Statement of Competency

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

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

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

We confirm that they have:

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

b) Adequate and relevant competence to undertake the FRAEW;

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

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

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

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

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

Terms of Reference

Particulars

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

Limitations

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

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

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

The FRAEW report is to be reviewed:

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

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

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

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

Assumptions

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

a) the extent of sampling carried out.

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

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

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

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

Statement of Intent

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

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

Supporting Documents

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

Document	Received
Fire Risk Assessment (07/02/2025) Sandwell Fire Risk Assessment	Received

Executive Summary

External Wall Systems and Attachments on the Building

11 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.

4 Items	Effect	Risk
Wall Construction Masonry (R98N73)	Positive	Low
Wall Construction Render (N9M87A)	Positive	Low
Attachment Cantilever Balcony (9JND5V)	Neutral	Medium
External Window Top, Mid, Side Hung Casements (XRAUBJ)	Neutral	Medium

In accordance with the PAS 9980 Guidance, any items of construction which are considered as “Medium Risk” should be subject to periodic review, to ensure that conditions do not change, such that the risk may be upgraded to high, prompting the requirement for remediation.

Risk Factor Analysis

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

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

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

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

Risk Factor Analysis 1

This analysis looks at façade configuration **8RSE2Y** which includes wall construction **R98N73**.

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

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

Beyond the brickwork is a cavity ahead of the insulating layer (90mm). The thermal insulation was identified to be mineral wool insulation, which is non-combustible and would restrict the spread of smoke/fire within the cavity in the event of a fire. The presence of mineral wool insulation is considered to have a positive impact in accordance with the recommendations of PAS 9980:2022.

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

Due to the external wall construction (double skin masonry), cavity barriers are not typically required in line with compartment walls and floors; however, existing mineral wool insulation will act as a suitable barrier.

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

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

It is accepted that the brickwork wall type begins at ground floor, however, the external facing construction provided is non-combustible as well as the insulation; therefore, the risk of external fire spread is sufficiently low that no remedial works are recommended.

It is accepted that the property height is considered to have a negative impact in accordance with PAS 9980:2022, however, multiple staircases are provided from all floors to aid relevant persons with a safe and quick escape. All

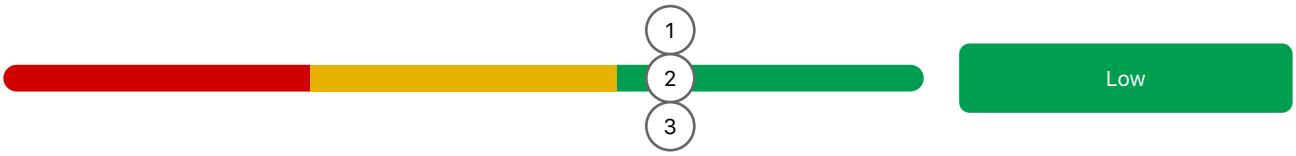
materials installed as part of this facade configuration are non-combustible, therefore, the risk of external fire spread is considered to be low.

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

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

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

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



Risk Factor Analysis 2

This analysis looks at façade configuration **YNAJIX** which includes wall construction **N9M87A**.

Conclusion: Cement render (9mm) has been adhesively applied to a dash coat which has been installed onto a render mesh. The render mesh is adhesively applied onto the mineral wool insulation (90mm). The mineral wool insulation appears to be mechanically fixed to the concrete substrate.

Cement render generally achieves a classification of at least Class A2 when tested in accordance with EN13501-1. The render was found to be in good condition, with no obvious signs of damage.

Beyond the render, thermal insulation is provided. The thermal insulation was identified to be mineral wool insulation (90mm), which is non-combustible and would restrict the spread of smoke/fire within the cavity in the event of a fire. The presence of mineral wool insulation is considered to have a positive impact in accordance with the recommendations of PAS 9980:2022.

Concrete is inherently resistant to fire and does not ignite, burn, or contribute fuel to a fire, making it excellent for containing flames and preventing fire spread.

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

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

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

Balconies are provided as attachments to the external wall system. The balconies are constructed via a non-combustible framework, which includes concrete decking and HPL balustrades. HPL consists of multiple layers of cellulose fibers, bonded with thermosetting resins such as melamine and phenolic. The layers are bonded together under high heat and pressure, resulting in a laminate sheet. HPLs formed of cellulose and resin typically behave in a charring manner analogous to timber, with similar flame spread, energy release and mechanical behaviour (charring until breaking apart). With treatment for enhanced fire performance (usually by the addition of chemical fire retardant), these behaviours can potentially be improved, but need to be known on a product-specific basis before they can be relied upon as providing better performance.

The provided FRA states that the HPL installed on the balconies is Trespa manufactured and achieves a Euroclass rating of B-s1, d0 when tested in accordance with BS EN 13501. No additional documentation has been provided regarding the specification of the HPL. This report assumes that the FRA information accurately reflects the material installed. This rating suggests that the material is likely to possess a degree of fire resistance but remains combustible due to its nature.

It is accepted that combustible materials are provided (HPL balustrade); however, the construction is sufficiently remote from internal and external ignition sources. Attachments begin at first floor level, therefore, the risk of external ignition, accidental or otherwise, is low. Residents should be reminded not to have BBQs, open fires etc on balconies to reduce the risk of external fire spread. In the event of a balcony fire, the existing construction is unlikely to result in rapid fire spread across the entire facade due to fire-resisting construction being provided (concrete soffit), and being adjacent to non-combustible wall materials.

It is accepted that the render wall type begins at first floor level and extends to the full height of the property, however, the external facing construction provided is non-combustible as well as the insulation provided; therefore, the risk posed is sufficiently low that no remedial works are recommended.

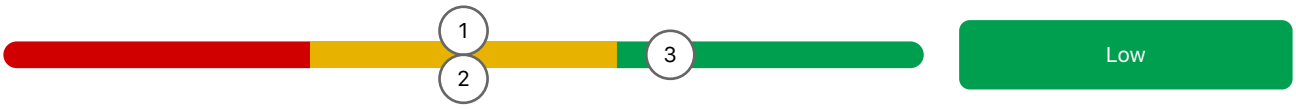
It is accepted that the property height is considered to have a negative impact in accordance with PAS 9980:2022, however, multiple staircases are provided from all floors to aid relevant persons with a safe and quick escape. All materials installed as part of this facade configuration are non-combustible, therefore, the risk of external fire spread is considered to be low.

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

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

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

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



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

Photo Ref. 1, 2, 3

F.3 Escape Route Design

Access to more than one staircase for escape

Positive

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

F.4 Compartmentation

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

Neutral

F.5 Smoke Control

Arrangements in which openable windows, AOVs or inlets and outlets of mechanical systems are of a satisfactory proximity aways from combustible cladding; or that fire and smoke spread from the external envelope would be unlikely to compromise the effectiveness of the smoke control system or allow a route for fire spread back into the building

Neutral

Photo Ref. 10

F.6 Fire Alarm & Detection

Smoke Vent system in communal areas.

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

Neutral

Photo Ref. 10, 11

F.7 Fire Suppression

Client details state suppression system within refuse room.

Neutral

F.8 - Firefighting Facilities

Fire fighter switches present at entrance to building.

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

Photo Ref. 12, 13

F.9 Rising Mains

Suitable rising main present

Neutral

Photo Ref. 14, 15

F.10 Lifts Used By Firefighters

Suitable firefighting lift present

Neutral

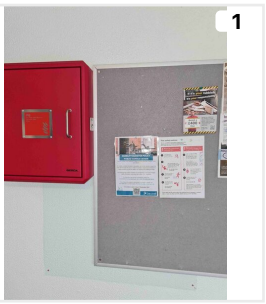
Photo Ref. 13

F.11 Specific Fire Hazards

Balconies that have combustible elements, and which are of such a size that it is foreseeable they will be used for significant items of furniture, for holding storage or waste, or for inherently hazardous activities such as holding barbecues

Negative

Photos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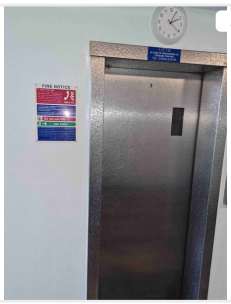
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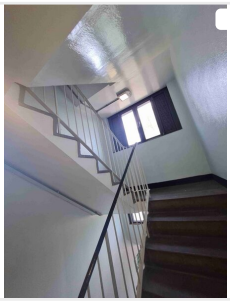
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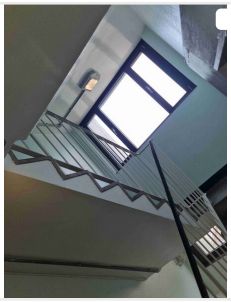
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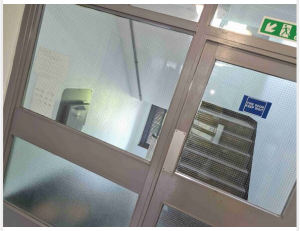
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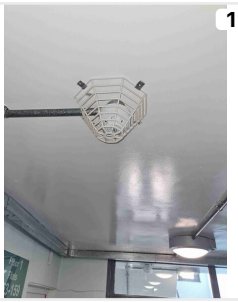
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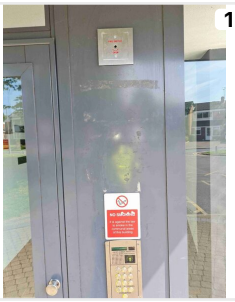
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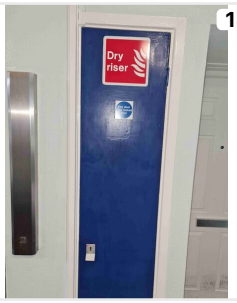

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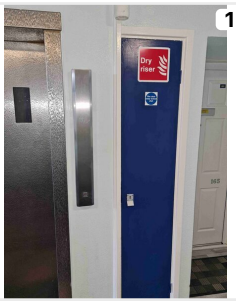

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Fire Service Intervention

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	360 Seconds	6 Minutes
Arrival Protocol And Entry Preparation Time	180 Seconds	3 Minutes
Firefighting Travel In Firefighting Lift	60 Seconds	1 Minute
Firefighter Travel Walking Up Two Flights Of Stairs To Fire Floor (75 Seconds)	75 Seconds	1 Minute 15 Seconds
Total Time	**935 Seconds**	**15 Minutes 35 Seconds**

Nearest Fire Station

West Bromwich Fire Station, 2.1 miles, approx 6 minute travel time under normal traffic conditions.

Wall Constructions

Wall Construction	Build-up
Masonry (R98N73)	• External Surface Material (Brickwork) • Insulation (Mineral wool) • Inner Leaf (Blockwork)
Render (N9M87A)	No elements identified

Wall Construction: Masonry

Construction Reference
R98N73

This wall construction was identified by wall inspection Q8W9CL. The build-up, cavity barrier, and floor slab information is taken directly from inspection Q8W9CL. See the Inspections section of this report for full inspection details.

Construction	Effect	Risk
Masonry (R98N73)	Positive	Low

Build-Up

3 Elements	Thickness/Depth	Material	Rating (BS EN13501)
External Surface Material	100mm	Brickwork	A1 - Non-Combustible
Insulation	90mm	Mineral wool	A1 - Non-Combustible
Inner Leaf		Blockwork	A1 - Non-Combustible

Black membrane around window

Cavity Barriers

None

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: Render

Construction Reference
N9M87A

This wall construction was not identified by any wall inspections. The build-up, cavity barrier, and floor slab information is taken directly from inspection . See the Inspections section of this report for full inspection details.

Construction	Effect	Risk
Render (N9M87A)	Positive	Low

Fire Performance

K.1 General

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

K.2 External Surfaces

Class A2	Positive

K.3 Facings/Cladding Panels

Low HRR	Positive

K.4 Panel Construction

Not Applicable

K.5 Cavities

Facings into the cavity at least Class A2	Positive

K.6 Insulation

Mineral wool insulation — Positive

K.7 Substrate

Masonry, >75 mm thick — Positive

K.8 Sheathing Boards

Not Applicable

K.9 Insulated Core Panels

Not Applicable

K.10 ETICS

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

K.11 Infill / Spandrel Panels

Not Applicable

K.12 Internal Finishes

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

PAS Standard Benchmark

L10 Benchmark

ETICS -

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

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

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

BR135 Benchmark

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

Façade Configuration: 8RSE2Y

Items in Façade

2 Items	Effect	Risk
Wall Construction Masonry (R98N73)	Positive	Low
External Window Top, Mid, Side Hung Casements (XRAUBJ)	Neutral	Medium

Façade Configuration Risk Factors

N.1 Building Height/Cladding Height

18 m to 30 m — Negative

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

<2 m
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 — Neutral

N.4 Cavities & Openings

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

N.5 Infill / Spandrel Panels

Not Applicable

N.6 Setbacks - Combustible Cladding Setback from Wall Edge

Not Applicable

N.7 Overhangs & Projections

Not Applicable

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

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

Negative

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

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

Positive

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

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

Neutral

N.11 Attachments

Not Applicable

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

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

Neutral

Risk Factor Analysis

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

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

Beyond the brickwork is a cavity ahead of the insulating layer (90mm). The thermal insulation was identified to be mineral wool insulation, which is non-combustible and would restrict the spread of smoke/fire within the cavity in the event of a fire. The presence of mineral wool insulation is considered to have a positive impact in accordance with the recommendations of PAS 9980:2022.

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

Due to the external wall construction (double skin masonry), cavity barriers are not typically required in line with compartment walls and floors; however, existing mineral wool insulation will act as a suitable barrier.

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

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

It is accepted that the brickwork wall type begins at ground floor, however, the external facing construction provided is non-combustible as well as the insulation; therefore, the risk of external fire spread is sufficiently low that no remedial works are recommended.

It is accepted that the property height is considered to have a negative impact in accordance with PAS 9980:2022, however, multiple staircases are provided from all floors to aid relevant persons with a safe and quick escape. All materials installed as part of this facade configuration are non-combustible, therefore, the risk of external fire spread is considered to be low.

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

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

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

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

Low

Façade Configuration: YNAJIX

Items in Façade

3 Items	Effect	Risk
Wall Construction Render (N9M87A)	Positive	Low
Attachment Cantilever Balcony (9JND5V)	Neutral	Medium
External Window Top, Mid, Side Hung Casements (XRAUBJ)	Neutral	Medium

Façade Configuration Risk Factors

N.1 Building Height/Cladding Height

18 m to 30 m

Negative

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

2 m to 5 m
NOTE At this height, the scope for a fire originating externally (e.g. involving a parked vehicle or waste skip started either accidently or deliberately) igniting the cladding is considered possible, but not likely at an early stage in the development of the fire.

Neutral

N.3 Extent of Cladding

Entire façade covered

Negative

N.4 Cavities & Openings

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

Positive

N.5 Infill / Spandrel Panels

Not Applicable

N.6 Setbacks - Combustible Cladding Setback from Wall Edge

Not Applicable

N.7 Overhangs & Projections

Not Applicable

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

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

Neutral

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

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

Positive

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

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

No combustible elements

Neutral

N.11 Attachments

Timber (or other combustible) balconies of limited extent

Negative

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

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

Neutral

Risk Factor Analysis

Conclusion: Cement render (9mm) has been adhesively applied to a dash coat which has been installed onto a render mesh. The render mesh is adhesively applied onto the mineral wool insulation (90mm). The mineral wool insulation appears to be mechanically fixed to the concrete substrate.

Cement render generally achieves a classification of at least Class A2 when tested in accordance with EN13501-1. The render was found to be in good condition, with no obvious signs of damage.

Beyond the render, thermal insulation is provided. The thermal insulation was identified to be mineral wool insulation (90mm), which is non-combustible and would restrict the spread of smoke/fire within the cavity in the event of a fire. The presence of mineral wool insulation is considered to have a positive impact in accordance with the recommendations of PAS 9980:2022.

Concrete is inherently resistant to fire and does not ignite, burn, or contribute fuel to a fire, making it excellent for containing flames and preventing fire spread.

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

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

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

Balconies are provided as attachments to the external wall system. The balconies are constructed via a non-combustible framework, which includes concrete decking and HPL balustrades. HPL consists of multiple layers of cellulose fibers, bonded with thermosetting resins such as melamine and phenolic. The layers are bonded together under high heat and pressure, resulting in a laminate sheet. HPLs formed of cellulose and resin typically behave in a charring manner analogous to timber, with similar flame spread, energy release and mechanical behaviour (charring until breaking apart). With treatment for enhanced fire performance (usually by the addition of chemical fire retardant), these behaviours can potentially be improved, but need to be known on a product-specific basis before they can be relied upon as providing better performance.

The provided FRA states that the HPL installed on the balconies is Trespa manufactured and achieves a Euroclass rating of B-s1, d0 when tested in accordance with BS EN 13501. No additional documentation has been provided regarding the specification of the HPL. This report assumes that the FRA information accurately reflects the material installed. This rating suggests that the material is likely to possess a degree of fire resistance but remains combustible due to its nature.

It is accepted that combustible materials are provided (HPL balustrade); however, the construction is sufficiently remote from internal and external ignition sources. Attachments begin at first floor level, therefore, the risk of external ignition, accidental or otherwise, is low. Residents should be reminded not to have BBQs, open fires etc on balconies to reduce the risk of external fire spread. In the event of a balcony fire, the existing construction is unlikely to result in rapid fire spread across the entire facade due to fire-resisting construction being provided (concrete

soffit), and being adjacent to non-combustible wall materials.

It is accepted that the render wall type begins at first floor level and extends to the full height of the property, however, the external facing construction provided is non-combustible as well as the insulation provided; therefore, the risk posed is sufficiently low that no remedial works are recommended.

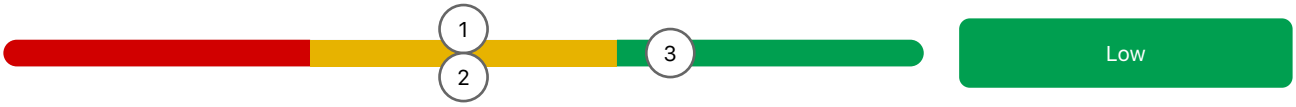
It is accepted that the property height is considered to have a negative impact in accordance with PAS 9980:2022, however, multiple staircases are provided from all floors to aid relevant persons with a safe and quick escape. All materials installed as part of this facade configuration are non-combustible, therefore, the risk of external fire spread is considered to be low.

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

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

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

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



APPENDIX

Asset Information

Client Name

Sandwell Metropolitan Council

Client Address

Sandwell Council House, Freeth St, Oldbury B69 3DE

Responsible Person

Sandwell Metropolitan Council

Fire Alarm System

Detection and alarm system installed in accordance with BS 5839 Part 6: 2019. British Standard that provides guidance and recommendations for the design, installation, commissioning, and maintenance of fire detection and fire alarm systems in domestic premises.

Early warning is limited to hard wire or battery smoke alarms within each of the resident's flats. The equipment is subjected to a cyclical test. 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 (as confirmed by residents).

Emergency Lighting

Installed in communal parts

Emergency Lighting

Emergency lighting is provided to communal landings and stairs. Checks are done on a monthly basis by Sandwell MBC in house electrical team or approved contractor.

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

Automatic smoke ventilation is employed to the front staircase on floors: 1,5 and 7.

Suppression Systems

Partial sprinkler system installed (Detailed in Description)

Suppression System

A deluge system is provided to the refuse chute bin store. An approved contractor maintains the system.

Fire Fighting Facilities

Dry Riser

Fire Fighting Facilities

The dry riser inlet is located within the ground floor dry riser cupboard (twin valve) secured with a type 54 suited mortice lock.

Access for fire-fighting vehicles

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

Fire Hydrant Location/ Water Supply

Public fire hydrant are available. Located at the front of the building, approximately 2m from the entrance. The position is detailed within the on arrival information.
Public fire hydrants can be located: https://dataservices.riscauthority.co.uk/map/index

Housekeeping

Good standard. Means of escape clear. Refuse stored appropriately

Housekeeping

Communal areas are kept free of flammable items. The communal areas are checked on a regular basis by Caretaking / Cleaning teams 365 days per year and all items of rubbish are immediately removed. There is also an out of hour's service that allows combustible items of furniture / rubbish to be removed

Secure Information Boxes

Secure information box (SIB) installed

Signage

Appropriate signage installed throughout premises

Property Type

Apartment Block, Residential Purpose-built

Building Era / Age

Known Build Date

Known Build Date

1962

Guidance Applicable At Time Of Construction

Model Byelaws 1953

Building Height

Overall building height is approximately 27m

Approximately 25m to the highest occupied floor level.

(calculated at 3m per floor as per PAS 9980-2022 section 3.1.22)

Number of Storeys (Ground and above)

9

Number of Flats

36

Flat Types

Single Storey

Structural Wall Material

Concrete / Brick

Structural Floor Material

Reinforced Concrete

Structural Stairs Material

Concrete

Electronic Entrance System

Yes

Carpark

External/Outdoor Carpark

Residents

Yes

Approx number of Residents

72

Residents (Extended)

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

Escapes & Exits

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

Number Of Internal Escape Stairs

2

Number Of Final Exits

2

External Means Of Escape

None Present

Types Of Lifts Installed

Passenger + Fireman's Control

Evacuation Chairs Installed

No

Stairwells Protected / Lobbied

Yes

Current Evacuation Strategy

Stay Put

Current Evacuation Strategy for the property considered appropriate?

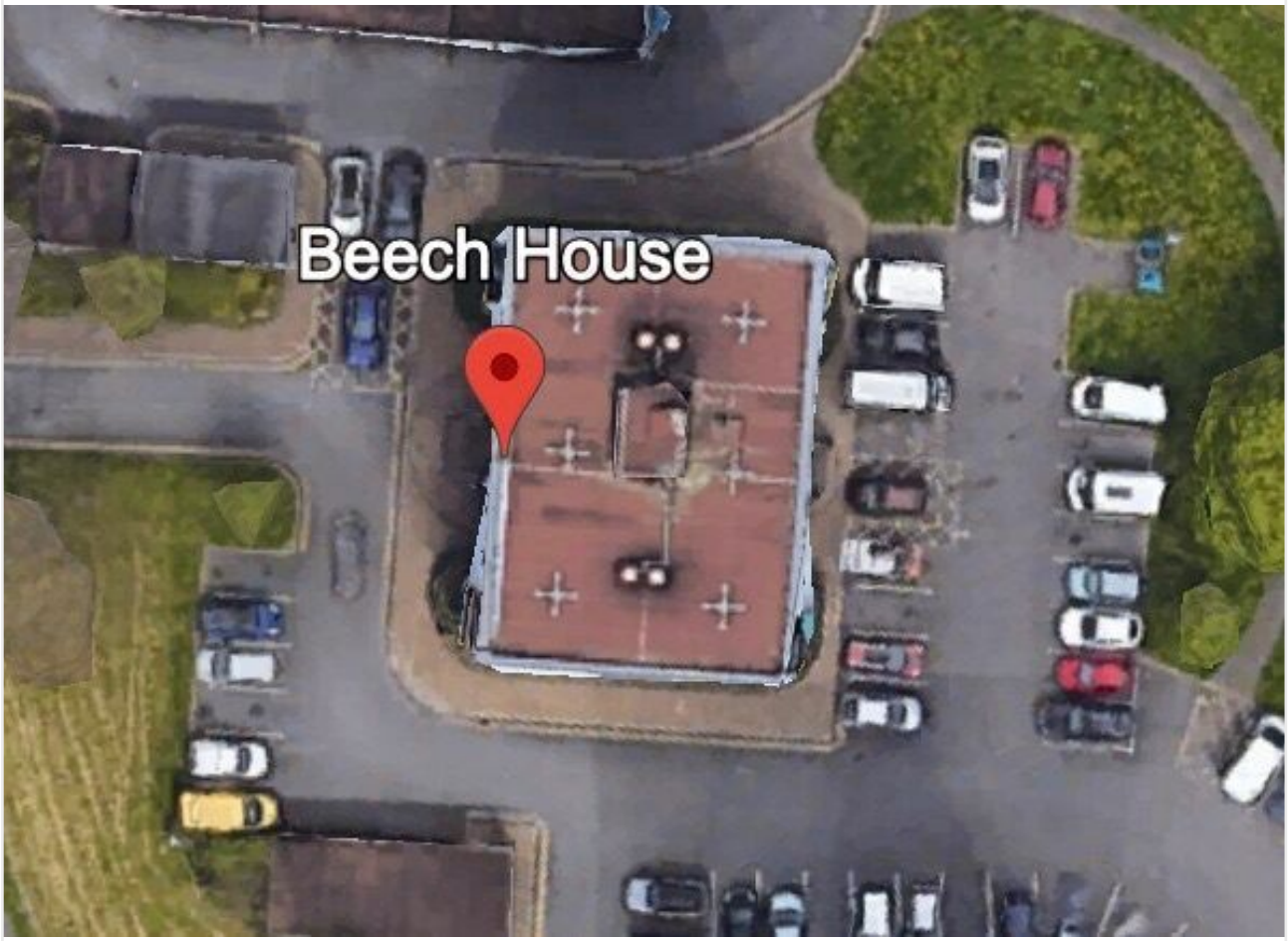
Yes

What is the recommended evacuation strategy for the property?

Stay Put

Aerial Perspective: Aerial image

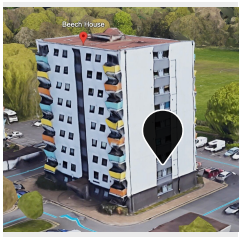
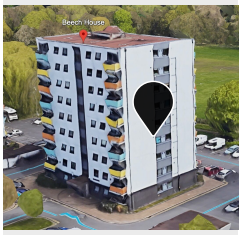
Image sourced from Google Earth

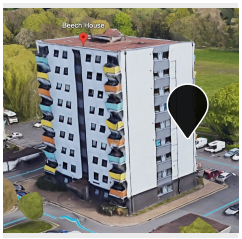


Elevations

Photo	Name	No. of Storeys
	NORTH	9 Storeys
	SOUTH	9 Storeys
	EAST	9 Storeys
	WEST	9 Storeys

Inspections

Elevation Location	Inspection	Elements
	**Inspection: SL3J17** Wall Inspection Compartment Wall Junction	• External Surface Material (Sto render) • Insulation (Mineral wool) • Inner Leaf (Concrete wall)
	**Inspection: 7PCVP1** Wall Inspection Compartment Floor Junction	• External Surface Material (Sto render) • Insulation (Mineral wool) • Inner Leaf (Concrete wall)
	**Inspection: S2KCQR** Wall Inspection Compartment Floor Junction	• External Surface Material (Sto render) • Insulation (Mineral wool) • Inner Leaf (Concrete wall)
	**Inspection: 5IHYD6** Wall Inspection Compartment Floor Junction	• External Surface Material (Sto render) • Insulation (Mineral wool) • Inner Leaf (Concrete wall)
	**Inspection: TRQA6K** Wall Inspection Ventilation Outlet	• External Surface Material (Sto render) • Insulation (Mineral wool) • Inner Leaf (Concrete wall)

Elevation Location	Inspection	Elements
	**Inspection: JZ5U7G** Wall Inspection Compartment Floor Junction	• External Surface Material (Sto render) • Insulation (Mineral wool) • Inner Leaf (Concrete wall)
	**Inspection: MW8XHL** Wall Inspection	• External Surface Material (Sto render) • Insulation (Mineral wool) • Inner Leaf (Concrete wall)
	**Inspection: Q8W9CL** Wall Inspection Aperture Opening	• External Surface Material (Brickwork) • Insulation (Mineral wool) • Inner Leaf (Blockwork)
	**Inspection: E4ZV52** Wall Inspection Balcony	• External Surface Material (HPL)
	**Inspection: 1I9RT3** Wall Inspection Compartment Wall Junction	• External Surface Material (Sto render) • Insulation (Mineral wool) • Inner Leaf (Concrete wall)
	**Inspection: XJ5ANA** Wall Inspection Compartment Floor and Wall Junction Interface	• External Surface Material (Sto render) • Insulation (Mineral wool) • Inner Leaf (Concrete wall)

Inspection: SL3J17

Elevation • Location
Wall Inspection • Compartment Wall Junction

Name/Summary

Render

Proposed Inspection

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

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

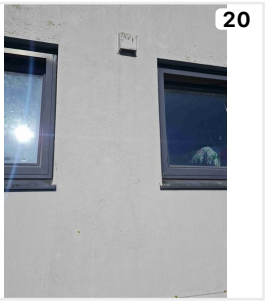
The external inspection is undertaken by either using an approximate 25mm – 150mm bore in a discreet location or the removal of the external surface material. The engineer will then gather the external walls construction from external to internal.

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

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	9mm	Sto render	20, 21, 22	A2 - Limited Combustibility
Insulation	90mm	Mineral wool	23, 24	A1 - Non-Combustible
Inner Leaf		Concrete wall	25, 26	A1 - Non-Combustible

Build-up Photos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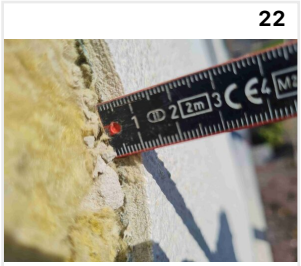
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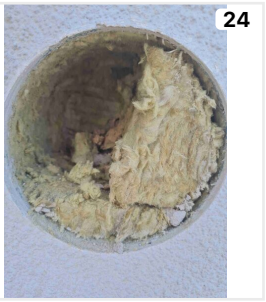
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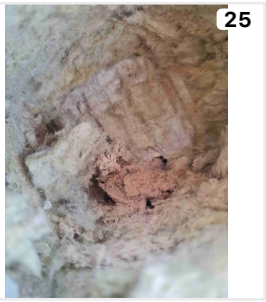
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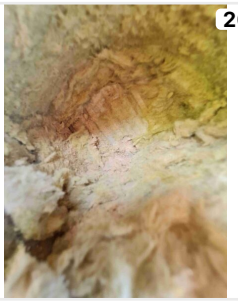
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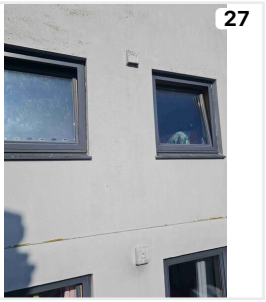
Inspection Photos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Inspection: 7PCVP1

Elevation • Location
Wall Inspection • Compartment Floor Junction

Name/Summary

Render

Proposed Inspection

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

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

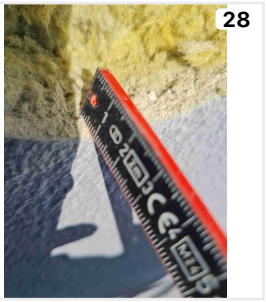
The external inspection is undertaken by either using an approximate 25mm – 150mm bore in a discreet location or the removal of the external surface material. The engineer will then gather the external walls construction from external to internal.

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

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	9mm	Sto render	28, 29	A2 - Limited Combustibility
Insulation	90mm	Mineral wool	30, 31	A1 - Non-Combustible
Inner Leaf		Concrete wall	32, 33	A1 - Non-Combustible

Build-up Photos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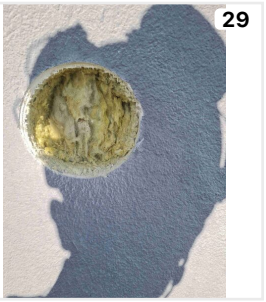
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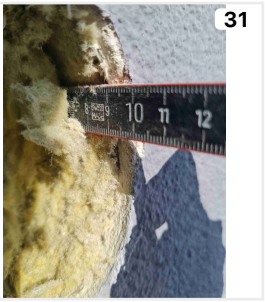
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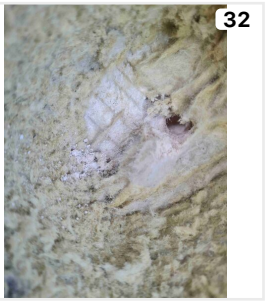
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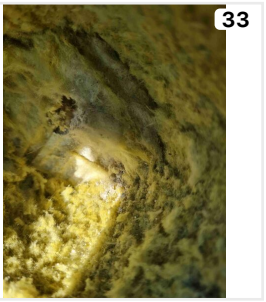

33

Inspection Photos


34


35

Inspection: S2KCQR

Elevation • Location
Wall Inspection • Compartment Floor Junction

Name/Summary

Render

Proposed Inspection

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

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

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

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

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	9mm	Sto render	36, 37	A2 - Limited Combustibility
Insulation	90mm	Mineral wool	38, 39	A1 - Non-Combustible
Inner Leaf		Concrete wall	40, 41	A1 - Non-Combustible

Build-up Photos

36

37

38

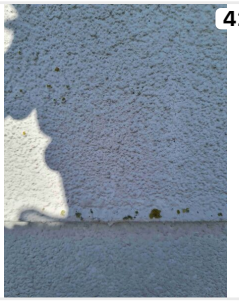
39

40

41

Inspection Photos

42



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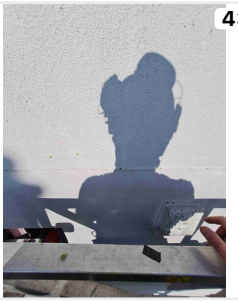


44

Inspection: 5IHYD6

Elevation • Location
Wall Inspection • Compartment Floor Junction

Name/Summary

Rainscreen

Proposed Inspection

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

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

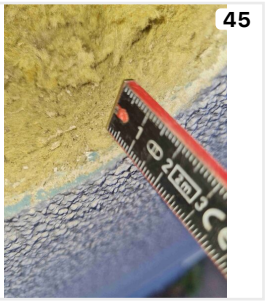
The external inspection is undertaken by either using an approximate 25mm – 150mm bore in a discreet location or the removal of the external surface material. The engineer will then gather the external walls construction from external to internal.

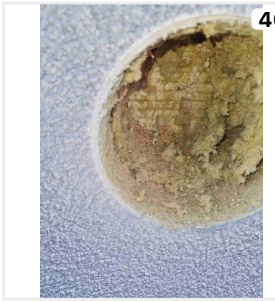
The materials are then measured and observed in there construction along with photographic evidence.
Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

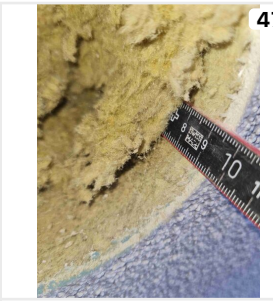
Build-Up

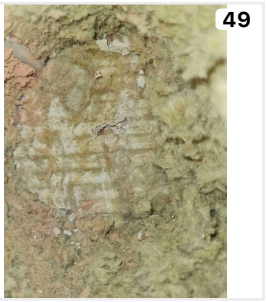
3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	9mm	Sto render	45, 46	A2 - Limited Combustibility
Insulation	90mm	Mineral wool	47, 48	A1 - Non-Combustible
Inner Leaf		Concrete wall	49, 50	A1 - Non-Combustible

Build-up Photos

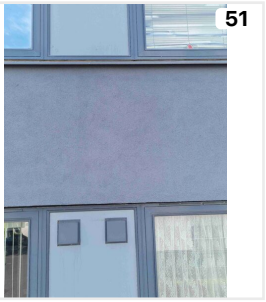








Inspection Photos



Inspection: TRQA6K

Elevation • Location
Wall Inspection • Ventilation Outlet

Name/Summary

Render

Description

Vent and compartment floor done in one opening

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	9mm	Sto render	53, 54	A2 - Limited Combustibility
Insulation	90mm	Mineral wool	55, 56	A1 - Non-Combustible
Inner Leaf		Concrete wall	57, 58	A1 - Non-Combustible

Build-up Photos

Inspection Photos

Inspection: JZ5U7G

Elevation • Location
Wall Inspection • Compartment Floor Junction

Name/Summary

Render

Description

Vent and compartment floor done as one opening

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	9mm	Sto render	61, 62	A2 - Limited Combustibility
Insulation	90mm	Mineral wool	63, 64	A1 - Non-Combustible
Inner Leaf		Concrete wall	65, 66	A1 - Non-Combustible

Build-up Photos

Inspection Photos

Inspection: MW8XHL

Elevation
Wall Inspection

Name/Summary

Render

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.

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

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

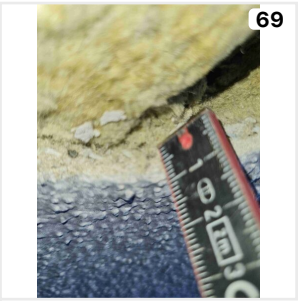
The materials are then measured and observed in there construction along with photographic evidence.
Upon completion the removed material is placed back into the opening and sealed to a fire safe condition but will not conduct any decorative repairs.

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	9mm	Sto render	68, 69	A2 - Limited Combustibility
Insulation	90mm	Mineral wool	70, 71	A1 - Non-Combustible
Inner Leaf		Concrete wall	72, 73	A1 - Non-Combustible

Build-up Photos


68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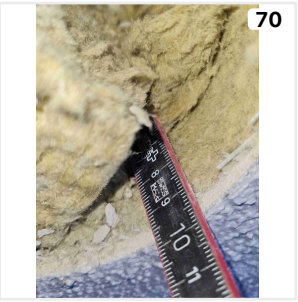
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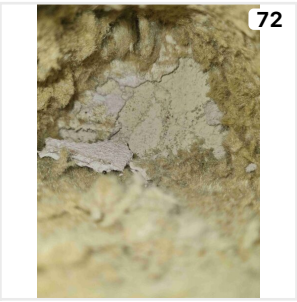
72


73

Inspection Photos


74

Inspection: Q8W9CL

Elevation • Location
Wall Inspection • Aperture Opening

Name/Summary

Masonry

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.

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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)

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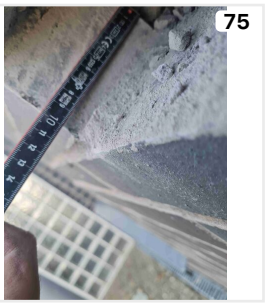
Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	100mm	Brickwork	75, 76	A1 - Non-Combustible
Insulation	90mm	Mineral wool	77, 78	A1 - Non-Combustible
Inner Leaf		Blockwork	79, 80, 81	A1 - Non-Combustible

Black membrane around window

Build-up Photos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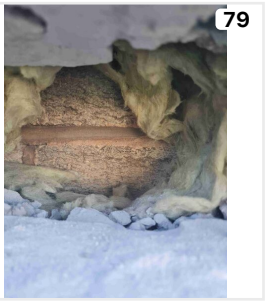
76


77


78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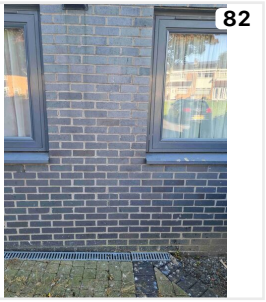
80


81

Inspection Photos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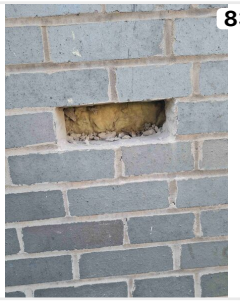
83

Inspection: E4ZV52

Elevation • Location
Wall Inspection • Balcony

Name/Summary

Attachment

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.

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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)

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Build-Up

1 Element	Thickness/Depth	Material	Photo Ref.
External Surface Material	9mm	HPL	84, 85

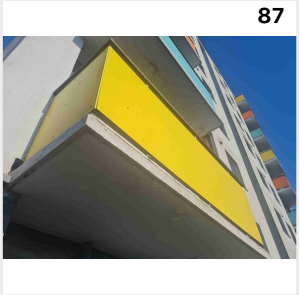
Build-up Photos


84


85

Inspection Photos


86


87


88


89


90


91

Inspection: 1I9RT3

Elevation • Location
Wall Inspection • Compartment Wall Junction

Name/Summary

Render

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:
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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)

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Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material	9mm	Sto render	92, 93	A2 - Limited Combustibility
Insulation	90mm	Mineral wool	94, 95	A1 - Non-Combustible
Inner Leaf		Concrete wall	96, 97	A1 - Non-Combustible

Build-up Photos


92


93


94


95


96


97

Inspection Photos


98


99


100

Inspection: XJ5ANA

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

Name/Summary

Render

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)
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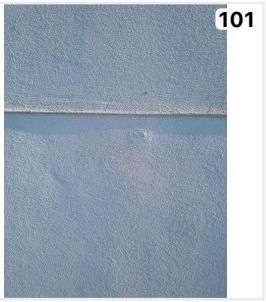
Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
External Surface Material		Sto render	101, 102, 103	A2 - Limited Combustibility
Insulation	90mm	Mineral wool	104, 105	A1 - Non-Combustible
Inner Leaf		Concrete wall	106, 107	A1 - Non-Combustible

Build-up Photos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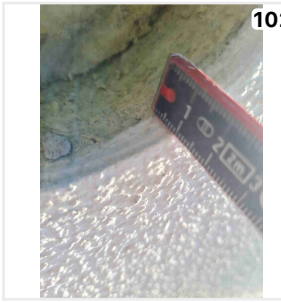
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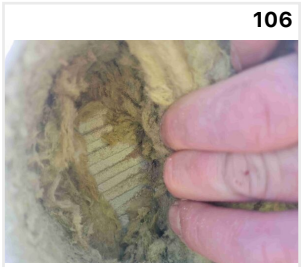
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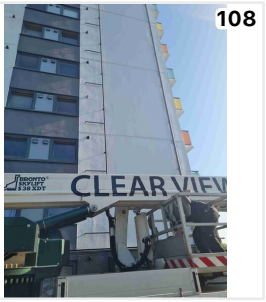
107

Inspection Photos



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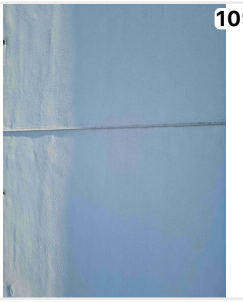

109

Attachments & Balconies

Photo	Attachment
No Image	**Cantilever Balcony (9JND5V)** Configuration: Stacked Size: Private balcony spanning only a single compartment

Attachment: Cantilever Balcony

Attachment Reference
9JND5V

Details

Configuration

Stacked

Size

Private balcony spanning only a single compartment

Framework/Structure

Reinforced concrete framework extension of the floor slab

Handrail

Timber

Soffit

Concrete

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 present on the front and rear elevations of the building. They are configured in a vertically stacked configuration, beginning on the 1st floor and extending the full height of the building. The balconies are constructed as an extension of the concrete floor slab and, as such, are considered to be non-combustible. The balustrades were identified to be of an HPL construction.

No material-specific information has been provided or available to determine the surface's combustibility however, the balustrade was identified in the provided FRA to be a Trespa HPL (high pressure laminate) that achieves a Euroclass B-s1, d0 rating. This suggests that the material will achieve a limited degree of resistance to the spread of fire across the external surface of the building. HPL consists of multiple layers of cellulose fibres, bonded with thermosetting resins such as melamine and phenolic. The layers are bonded together under high heat and pressure, resulting in a laminate sheet.

The HPL panels have been mechanically fixed to a supporting metal framework. There also appears to be a timber handrail, that given its limited quantity is unlikely to contribute significantly to the spread of fire across the external surface of the building.

Responsible persons should inform residents about the risks arising from the presence of combustible materials on balconies. They should make clear that smoking, the use of combustible appliances such as barbecues and storage of flammable property on balconies and roof terraces can increase that risk. Advice from fire and rescue authorities is clear that barbecues should not be used on balconies and roof terraces.

Building owners should have policies in place detailing what can and cannot be stored and used on balconies and roof terraces by residents, and should review these in light of the materials used in the balcony construction. They should also communicate with residents to develop their understanding of these risks.

It is strongly recommended that an immediate ban on the use of barbecues, smoking and the storage of flammable materials and any other source of ignition on apartment balconies is enacted.

Given their location, remote from the means of escape, and the anticipated fire service intervention time, it is our opinion that at the time of writing, there is no requirement for remediation to these attachments. However, if at a later date the HPL must undergo repair or maintenance then it should be replaced with a material that achieves a Euroclass A2 or better.

External Windows

Photo	External Window
No Image	**Top, Mid, Side Hung Casements (XRAUBJ)**

External Window: Top, Mid, Side Hung Casements

External Window Reference
XRAUBJ

Details

Surface Material

Aluminium

Frame Material

Aluminium

Infill / Panel Material

Toughened Safety Glass

Details

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

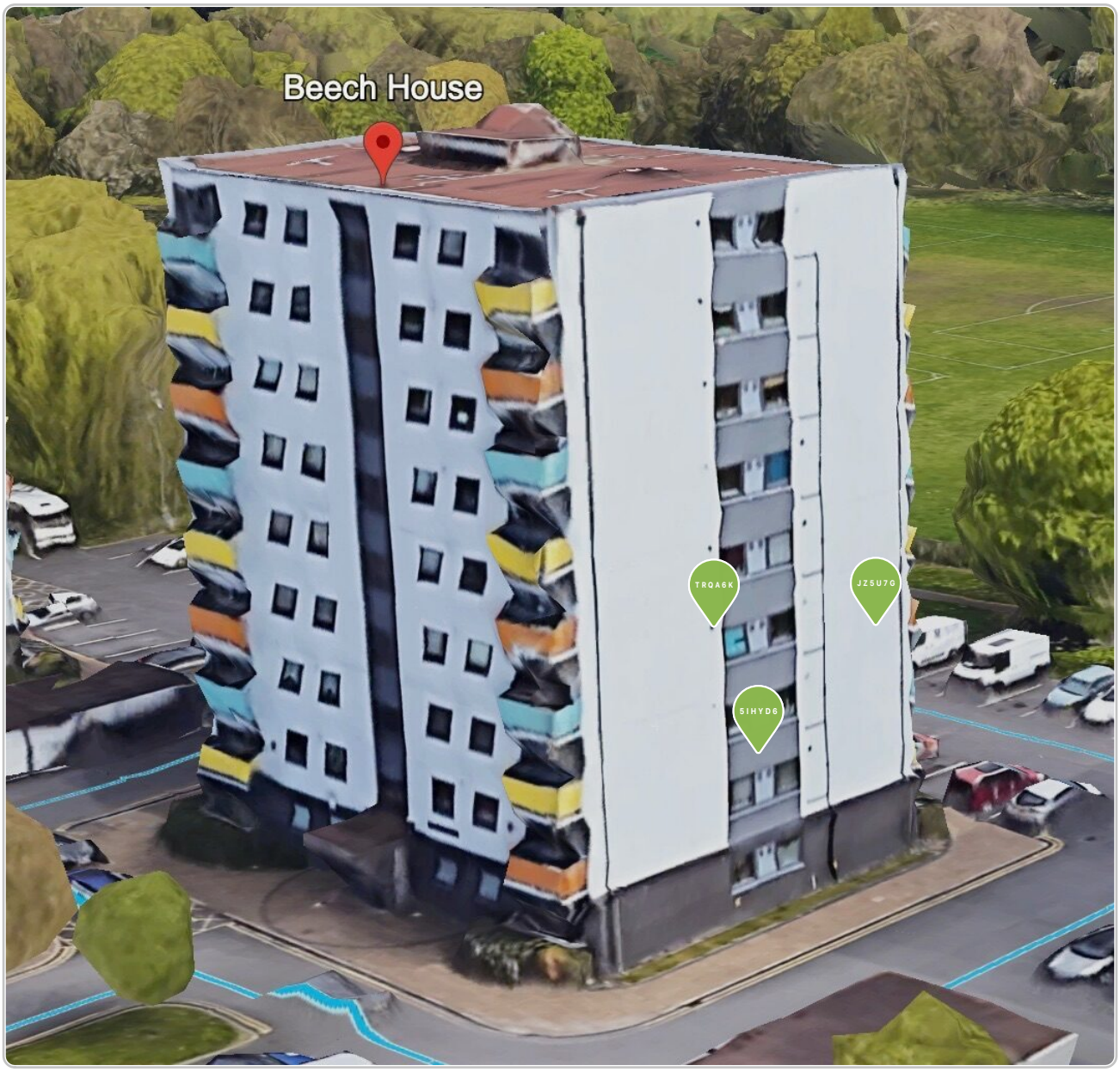
The windows are vertically aligned with less than 2 metres of separation between openings, which could create a potential pathway for vertical fire spread.

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

Plan: Wall Inspection

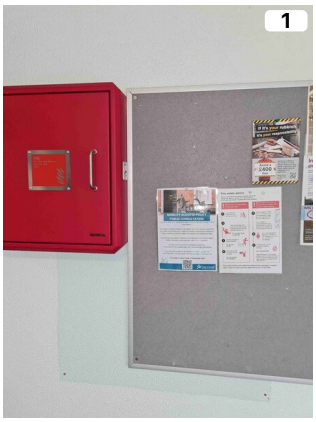
Plan: Wall Inspection

Plan: Wall Inspection



Plan: Wall Inspection

Photos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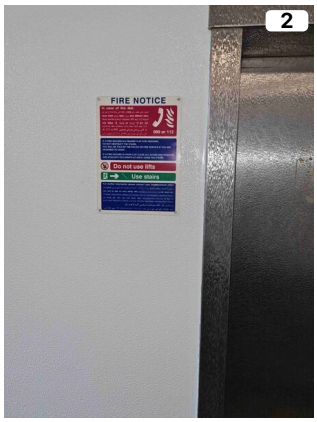
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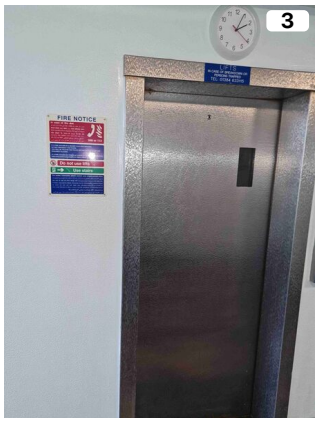
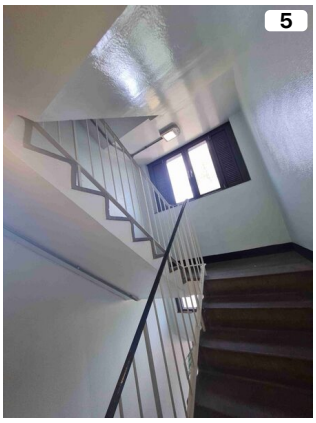
FIRE NOTICE
Do not use lifts
Use stairs


3
FIRE NOTICE


4
Floor 1
Flats
153-159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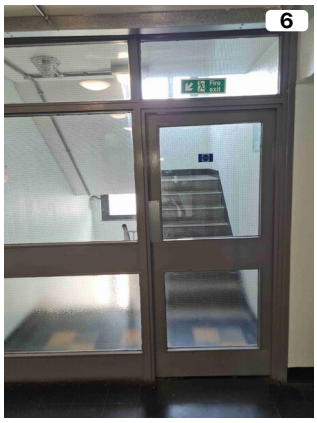
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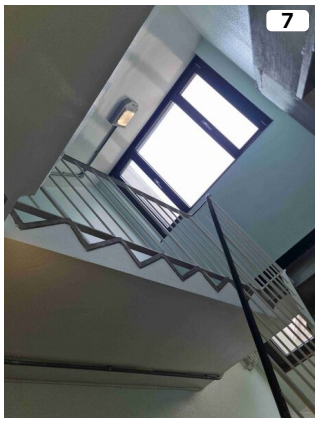
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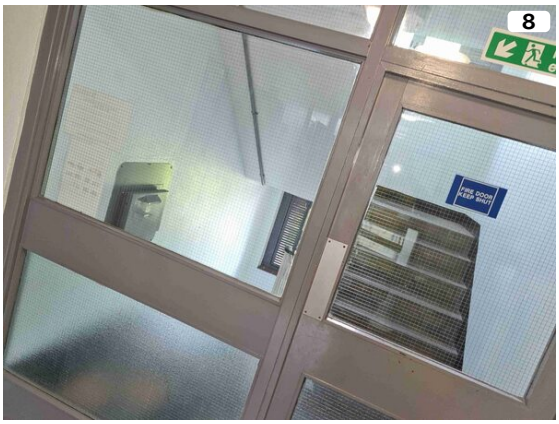
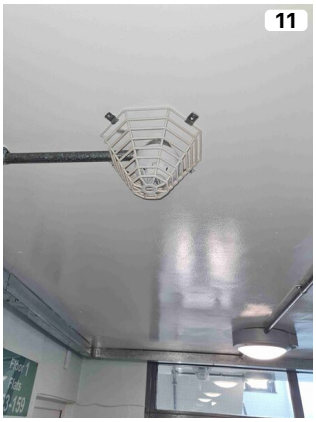

8


9
Cancel
F.3 Escape Route Design
Save
Comment
Suggestions
BEECH HOUSE
GROUND FLOOR 5
FLATS 73-79
FLATS 113-119
FLOOR 1
FLATS 81-87
FLOOR 6
FLATS 121-127
FLOOR 2
FLATS 89-95
FLOOR 7
FLATS 129-135
FLOOR 3
FLATS 97-103
FLOOR 8
FLATS 137-143
FLOOR 4
FLATS 105-111


10
NO SMOKING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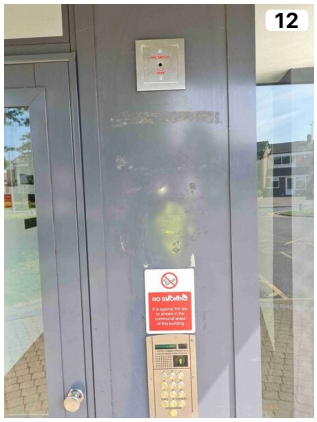
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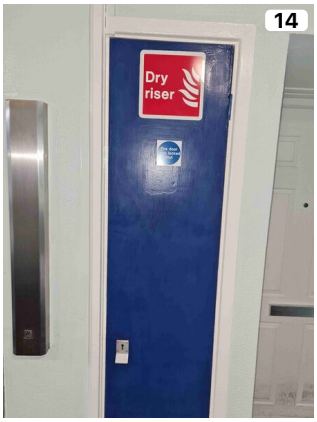
13


14
Dry
riser

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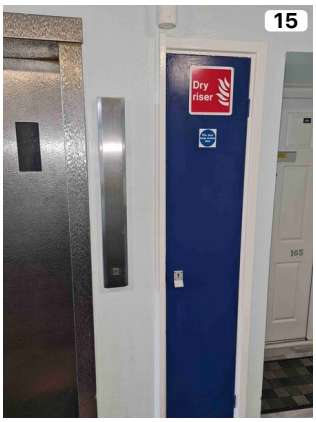

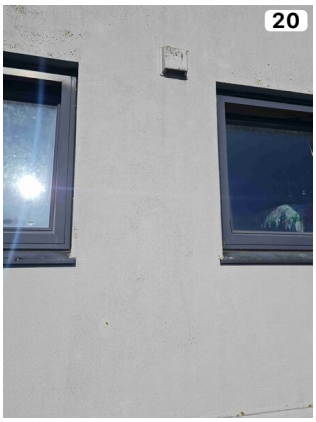

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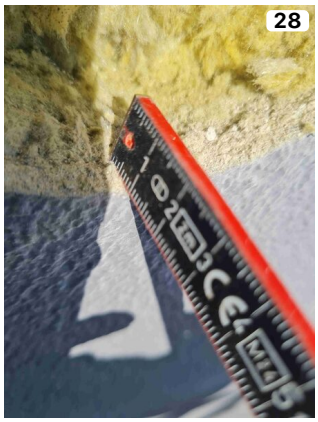

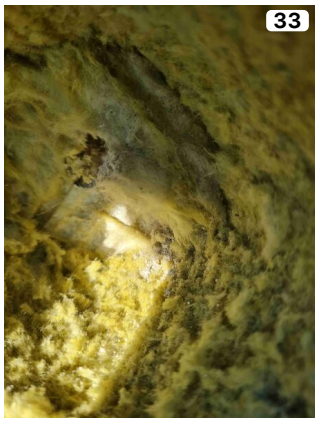

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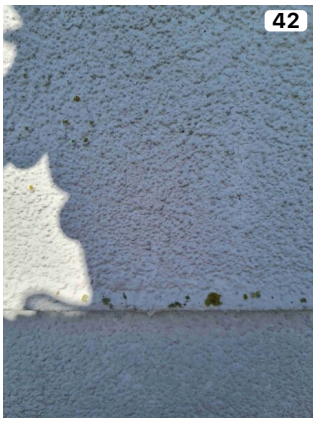

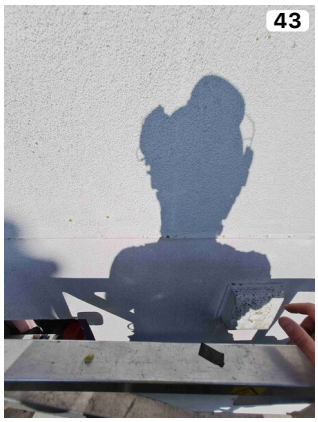

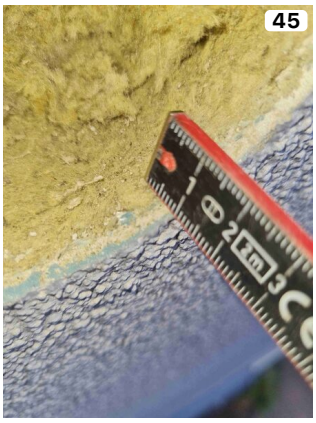

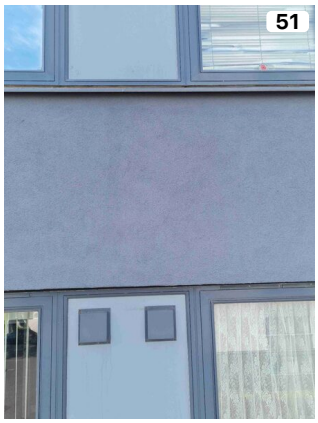

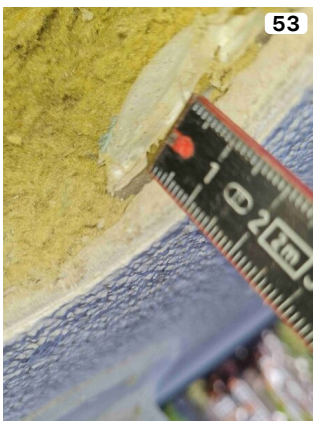

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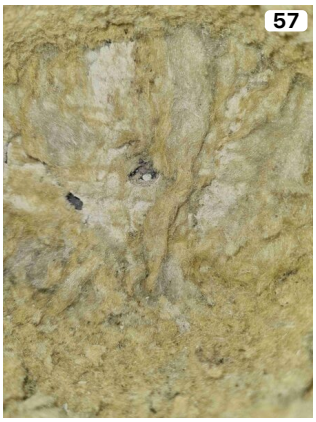

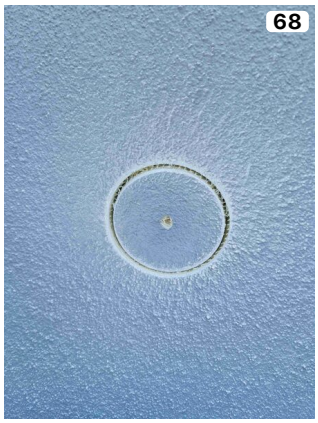

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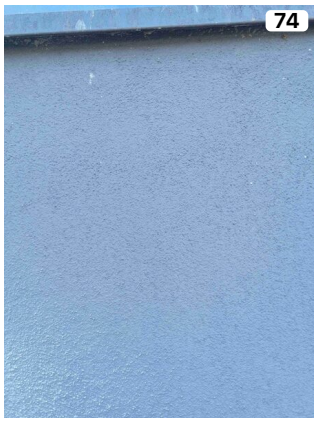

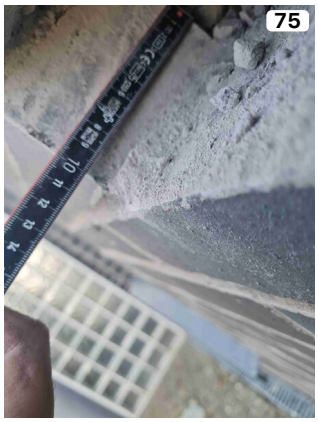

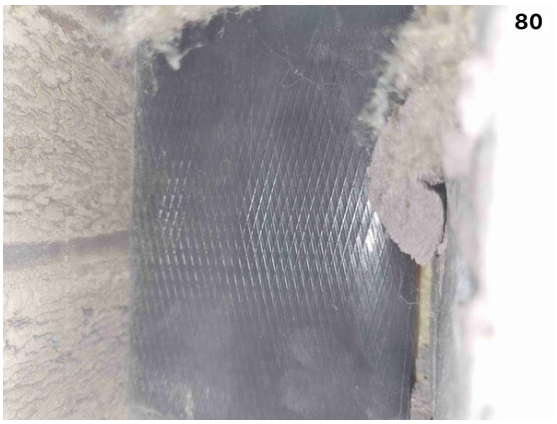

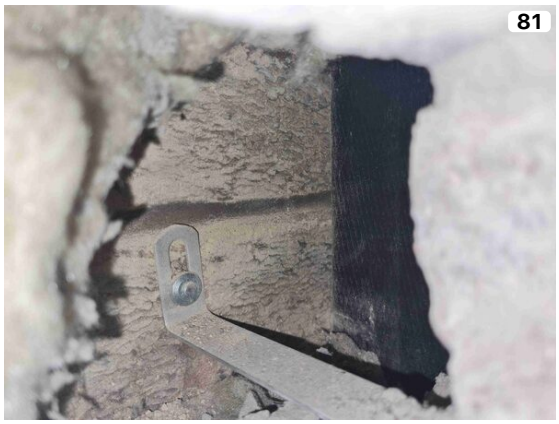

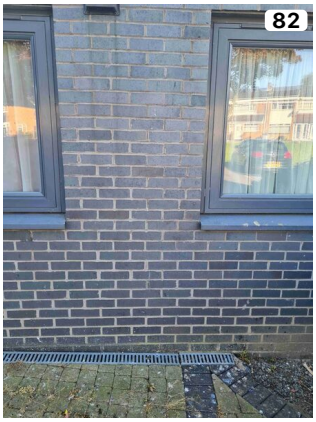

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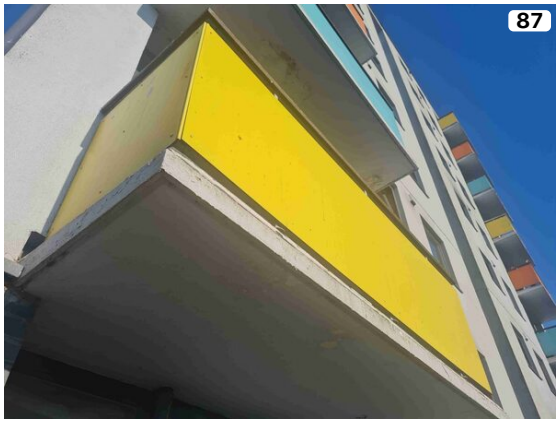

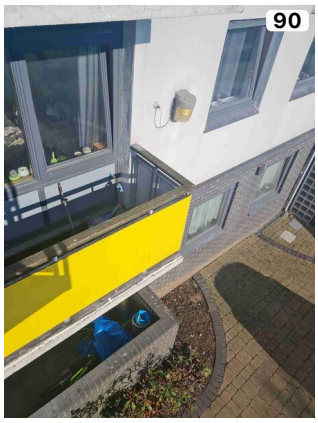

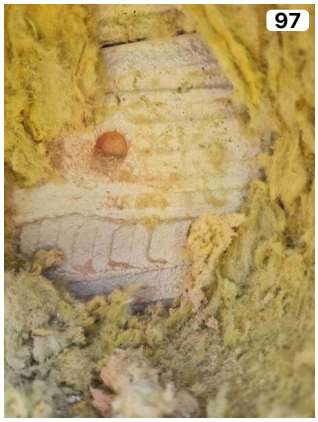

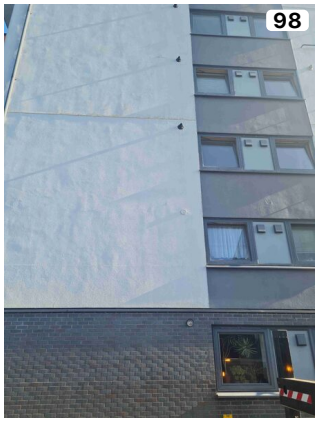

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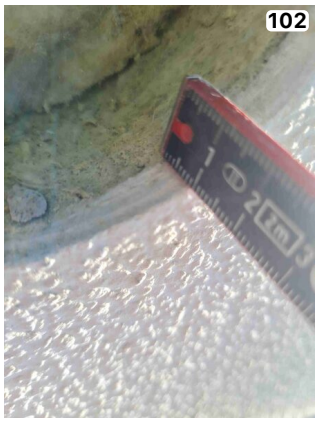

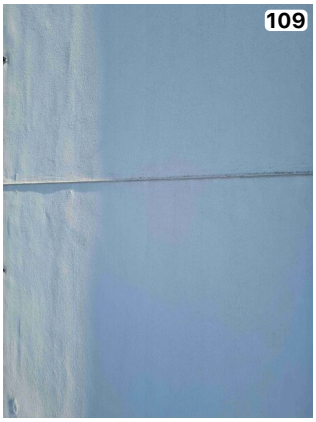

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