



FIRNTEC
BUILDING COMPLIANCE

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

Document Version 5

Survey Date 06/01/2025

Suggested Review Date 06/01/2030

EXTERNAL WALL SURVEY

MACAULAY HOUSE

Macaulay House
Glover Street
West Brom
B70 6DY

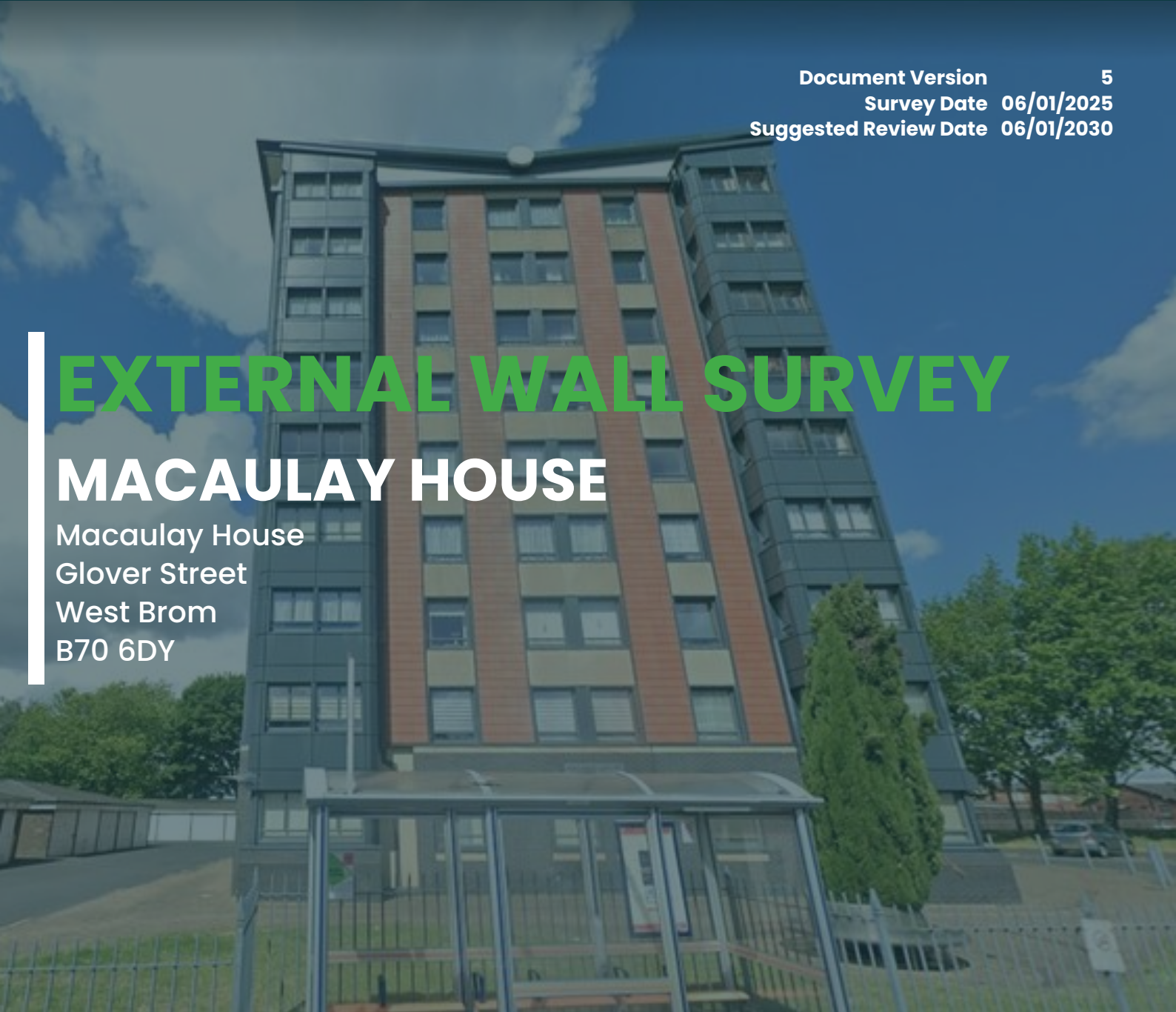


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Summary

External Wall Survey

Assessment and Certificate Reference

RB-M59KD9

Assessed On, By

06/01/2025, Haydn Roberts

Recommended Review Date

06/01/2030

Produced For the Responsible Person

Sandwell Metropolitan Council

Specification Conforms To

Our own internal quality system.

Assessment Scope

Assessment applies only to the building specified.

Assessed Property

Property Name

Macaulay House

Property Reference

RB-RZQ42D

Address

Macaulay House

Glover Street

West Brom

B70 6DY

Assessing Organisation

Firntec Ltd

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

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Abbreviation/ Term Definition

- **ACM** Aluminium Composite Material
- **ADB** Approved Document B
- **AOV** Automatic Opening Vent
- **BSA** Building Safety Act
- **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
- **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
- **SFS** Steel Framing System
- **SIB** Secure Information Box # Overview

Terms of Reference

Overview

Firntec have been instructed by the client to undertake an intrusive inspection of the external walls, attachments, windows and doors to the appointed building as addressed on the cover page.

The purpose of the report is to identify the construction, make-up and materials used within each external wall type and attachment on the building as required under the Fire Safety Act 2021.

Scope of Works

The client has requested Firntec to undertake an intrusive inspection of the external walls, attachments, windows and doors.

The purpose of this survey report is to assess the external walls and attachments construction to identify the materials used, installation method, presence of any cavity barriers or fire stopping and the configuration on the building.

For any identified materials within the construction of the sample, a euro-classification rating in accordance with BS EN 13501-1 will be assigned where applicable.

Within the findings of each wall type and attachment, where applicable, detailed comments will be provided on the findings, with reference to quality of workmanship or other identified factors within the construction.

The intent of the report is not to assign any level of risk, conclusion or recommendations, but should it be identified during the intrusive investigation that there is an immediate risk to life safety, interim measures may be recommended.

Limitations

The inspection of any external wall types or attachments are undertaken by the defined terms as described in Approved Document B:

- External Wall: Includes all of the following.
 - Anything located within any space forming part of the wall.
 - Any decoration or other finish applied to any external (but not internal) surface forming part of the wall.
 - Any windows and doors in the wall.
 - Any part of a roof pitched at an angle of more than 70 degrees to the horizontal if that part of the roof adjoins a space within the building to which persons have access, but not access only for the purpose of carrying out repairs or maintenance
- Specific Attachment Includes any of the following.
 - A balcony attached to an external wall.
 - A device for reducing heat gain within a building by deflecting sunlight which is attached to an external wall.
 - A solar panel attached to an external wall.

The findings within the report will not state any areas of compliance with advisory sub-clauses of the relevant Approved Document B, nor does it aim to guarantee compliance with the mandatory clause of B4(1) and our comments cannot be interpreted as such.

We endeavour to undertake intrusive inspections at various elevations and varying heights, however, this may not always be achievable due to mitigating factors out of our control such as access or weather conditions.

The findings of the investigation are limited to each precise inspection location and cannot be used to confirm absolute consistency of the façade in its entirety.

The manufacturer of a product cannot be confirmed with absolute certainty unless the sampled materials carry the product branding inclusive of the product number.

Where product branding is absent or ambiguous, we will where provided, refer to as-built drawings and

specification contained in the O&M manuals, However, this does not guarantee or confirm the products used in construction.

Assumptions

It is understood that the absence of evidence, is not evidence of the absence; therefore, Where a products branding is absent we will use our professional engineering judgment, and any assumptions made with regards to the materials combustibility should be submitted for further testing to verify this.

It has been assumed that documentation regarding the buildings fire safety, fire strategy, construction details and O&M manuals have been provided for our reference within the report.

Outcomes

The findings within this report do not assign any level of risk, conclusion or recommendations, nor does it confirm any compliance with applicable building regulations at the time of construction.

The findings of this report may form part of the gathered information to form such reports as:

- PAS9980:2022 Fire risk appraisal of external wall construction and cladding of existing blocks of flats – Code of practice or;
- External Wall Compliance at Time of Construction Report.

If during the intrusive survey any ACM is identified to be present, this will be reflected within the report and evidence requested to determine its calorific value, if this evidence is not available a request of sample testing may be recommended separate to this report.

Asset Information

Client Name

Sandwell Metropolitan Council

Responsible Person

Sandwell Metropolitan Council

Contact Details

Lisa Ellis

Fire Alarm System

There is no BS5839 (Part 6 or Part 1) Fire detection/alarm system provided in the common areas of the building. The smoke detection provided is part of the smoke ventilation system, and as per the building's FRA, ' The information panel is in the front entrance foyer and there's a reset switch next to the ground floor service cupboard in the lift lobby.'

Emergency Lighting

Installed in communal parts

Emergency Lighting

Emergency lighting appears to conform to the requirements of BS5266-1 design standard. The system appears to provide adequate coverage and be in good working order (indicator lights active on luminaires). Luminaires appear to be correctly sited and appear to provide adequate lighting.

Smoke Control

Natural smoke control, Smoke control installed

Smoke Control

The stairs and/or lobbies are provided with adequate permanent or manually operated ventilation openings for the control of smoke. Manual openable windows within the stairwell and the stairs and lobbies are provided with an automatic smoke ventilation system

Suppression Systems

Partial sprinkler system installed (Detailed in Description)

Suppression System

A suppression system is installed within high risk areas such as the refuse/bin store

Fire Fighting Facilities

Dry Riser

Fire Fighting Facilities

Dry riser outlets were located on each floor within the firefighting lobby area, ensuring accessible water supply for firefighting operations. This placement allows for efficient connection of firefighting hoses, providing vital water access to emergency services during fire incidents across all floor levels.

Access for fire-fighting vehicles

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

Fire Hydrant Location/ Water Supply

Public fire hydrant are available, and is adjacent the front entrance as detailed in the On Arrival Information.
Public fire hydrants can be located: <https://dataservices.riscauthority.co.uk/map/index>

Housekeeping

Good standard. Means of escape clear. Refuse stored appropriately

Secure Information Boxes

Secure information box (SIB) installed

Signage

Appropriate signage installed throughout premises

Property Type

Residential

Building Era / Age

Known Build Date

Known Build Date

1964

Building Height

Approximately 24m to the highest occupied floor level. (calculated at 3m per floor as per PAS 9980-2022 section 3.1.22)

Number of Storeys (Ground and above)

9

Number of Flats

36

Flat Types

Single Storey

Structural Wall Material

Concrete / Brick

Structural Floor Material

Reinforced Concrete

Structural Stairs Material

Concrete

Construction (Details)

Traditional concrete frame and brick construction

Exterior Cladding

FRAEW Completed on Exterior Cladding

Exterior Cladding (Details)

H&H Aluminium panels (A1), Rockwool insulated Wetherby Render (A2) - Lockclad ceramic (A1) tiles, brick

Electronic Entrance System

Yes

Carpark

External/Outdoor Carpark

Employees

Day staff

Employees (Extended)

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

Residents

Yes

Approx number of Residents

72

Residents (Extended)

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

Visitors

Day

Visitors (Extended)

Residential block - low number of visitors expected at any one time

People With Reduced Mobility

None

People with Reduced Mobility (Extended)

General Needs - No information however, General Needs premises so occupants are typical of the general population

Lone Workers

None

Young Persons Employed in the Premises

None

Escapes & Exits

There are sufficient fire exits from the premises of suitable width and within acceptable travel distances. These will allow all persons in the premises to evacuate safely in the event of fire. Emergency exits open outwards in escape direction.

Number Of Internal Escape Stairs

1

Number Of Final Exits

2

External Means Of Escape

None Present

Types Of Lifts Installed

Passenger

Evacuation Chairs Installed

No

Stairwells Protected / Lobbied

Yes

Flat Doors Open Onto Stairs

No

Current Evacuation Strategy

Stay Put

Current Stay Put Strategy Description

The current evacuation strategy is Stay Put as denoted by the fire action notices displayed in the common area.

Current Evacuation Strategy for the property considered appropriate?

Yes

Description

The premises is purpose-built with an adequate standard of compartmentation. The current Stay Put evacuation strategy is considered appropriate.

What is the recommended evacuation strategy for the property?

Stay Put

Aerial Perspective: Macaulay House

Aerial Perspective (picture sourced from Google Earth)



Elevations

Photo	Name	No. of Storeys
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North Elevation

9 Storeys



East Elevation

9 Storeys



South Elevation

9 Storeys



West Elevation

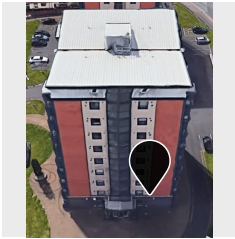
9 Storeys

Inspections

Elevation Location

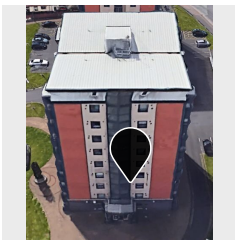
Inspection

Elements



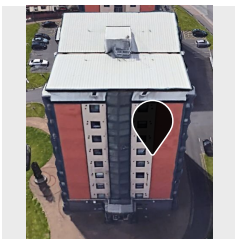
Inspection: GEFEB A
North Elevation
Compartment Floor Junction

- Surface Finish (Brickwork)
- Cavity
- Insulation (Mineral Wool Insulation)
- Inner Leaf (Blockwork)



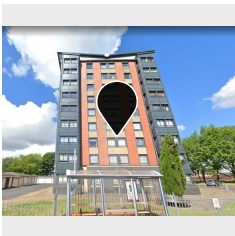
Inspection: QW1JA2
North Elevation
Vertical Compartment Junction

- Surface Finish (Sto render)
- Insulation (Mineral Wool Insulation)
- Inner Leaf (Reinforced concrete)



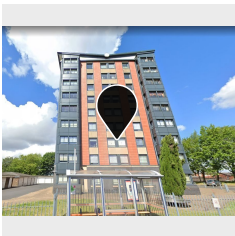
Inspection: UXYJJZ
North Elevation
Compartment Floor Junction & System Interface

- Surface Finish (Terracotta tile)
- Cavity
- Insulation (Mineral Wool Insulation)
- Inner Leaf (Blockwork)



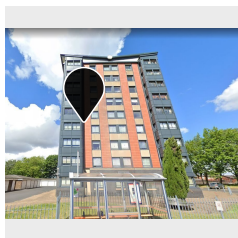
Inspection: YRKR2E
East Elevation
Compartment Floor & Compartment Wall Junction

- Surface Finish (Sto render)
- Insulation (Mineral Wool Insulation)
- Inner Leaf (Reinforced concrete)



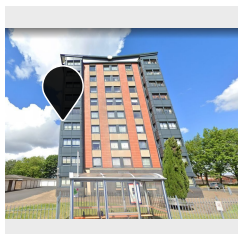
Inspection: M63WCY
East Elevation
Vertical Compartment Junction

- Surface Finish (Aluminium panel)
- Insulation (Mineral Wool Insulation)
- Inner Leaf (Reinforced concrete)

Elevation Location**Inspection****Elements****Inspection: I6795V**

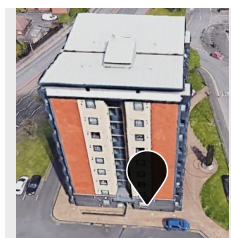
East Elevation
Compartment Floor Junction & System Interface

- Surface Finish (Terracotta tile)
- Cavity
- Insulation (Mineral Wool Insulation)
- Inner Leaf (Reinforced concrete)

**Inspection: 2WJ26W**

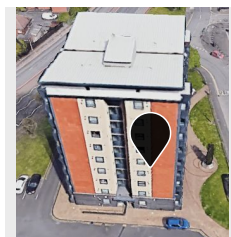
East Elevation
Compartment Floor Junction

- Surface Finish (Aluminium panel)
- Insulation (Mineral Wool Insulation)
- Inner Leaf (Reinforced concrete)

**Inspection: QJJYRS**

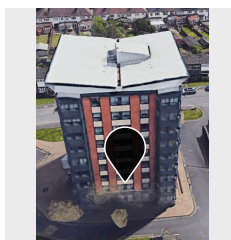
South Elevation
Window Aperture Junction

- Surface Finish (Brickwork)
- Insulation (Mineral Wool Insulation)
- Cavity
- Inner Leaf (Blockwork)

**Inspection: FRJ7M9**

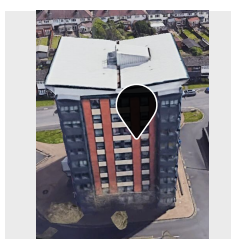
South Elevation
Compartment Floor Junction & System Interface

- Surface Finish (Sto render)
- Insulation (Mineral Wool Insulation)
- Inner Leaf (Blockwork)

**Inspection: HIEDS5**

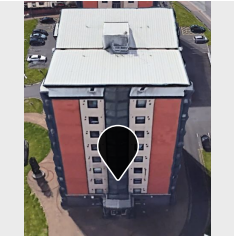
West Elevation
Compartment Floor & Compartment Wall Junction

- Surface Finish (Sto render)
- Insulation (Mineral Wool Insulation)
- Sheathing Board
- Inner Leaf (Reinforced concrete)
- Cavity

**Inspection: 2RHJT8**

West Elevation
Compartment Floor Junction

- Surface Finish (Terracotta tile)
- Insulation (Mineral Wool Insulation)
- Inner Leaf (Brickwork)



Inspection: F7B8US
North Elevation
Curtain Glazing wall

No elements identified

Inspection: GEFEB A

Elevation • Location
North Elevation • Compartment Floor Junction



Name/Summary

Sample Area 1

Description

Floor level no cavity barrier

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	100mm	Brickwork	5, 6	A1 - Non-Combustible
Cavity	135mm		7	
Insulation	75mm	Mineral Wool Insulation Material Brand: Rockwool slab	8	A1 - Non-Combustible
Inner Leaf	100mm	Blockwork	9	A1 - Non-Combustible

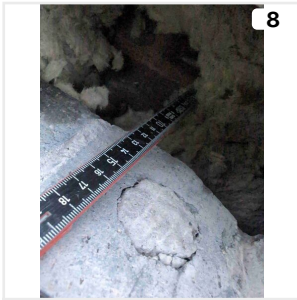
Cavity Barriers

None

Floor Slab

Floor Slab Abuts The Backing Wall

Build-up Photos



Inspection Photos



Inspection: QW1JA2

Elevation • Location
North Elevation • Vertical Compartment Junction



Name/Summary

Sample Area 2

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	4mm	Sto render	11	A1 - Non-Combustible
Insulation	90mm	Mineral Wool Insulation	12	A1 - Non-Combustible
Render onto rockwool slab				
Inner Leaf		Reinforced concrete	13	A1 - Non-Combustible

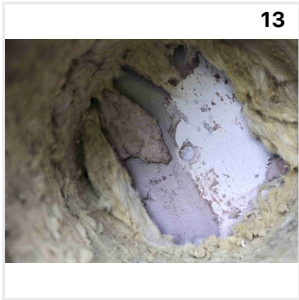
Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Horizontal Cavity Barrier	Solid State Mineral Wool	11

Floor Slab

Reinforced concrete

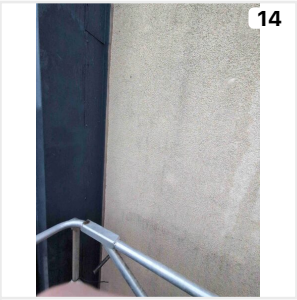
Build-up Photos



Cavity Barrier Photos



Inspection Photos



Inspection: UXYJJZ

Elevation • Location
North Elevation • Compartment Floor Junction & System Interface



Name/Summary

Sample Area 3

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	16mm	Terracotta tile	15	A1 - Non-Combustible
Cavity	210mm		16, 17	
Insulation	100mm	Mineral Wool Insulation	18, 19	A1 - Non-Combustible
Mesh foil on one side				
Inner Leaf		Blockwork Material Brand: Block work	20	A1 - Non-Combustible

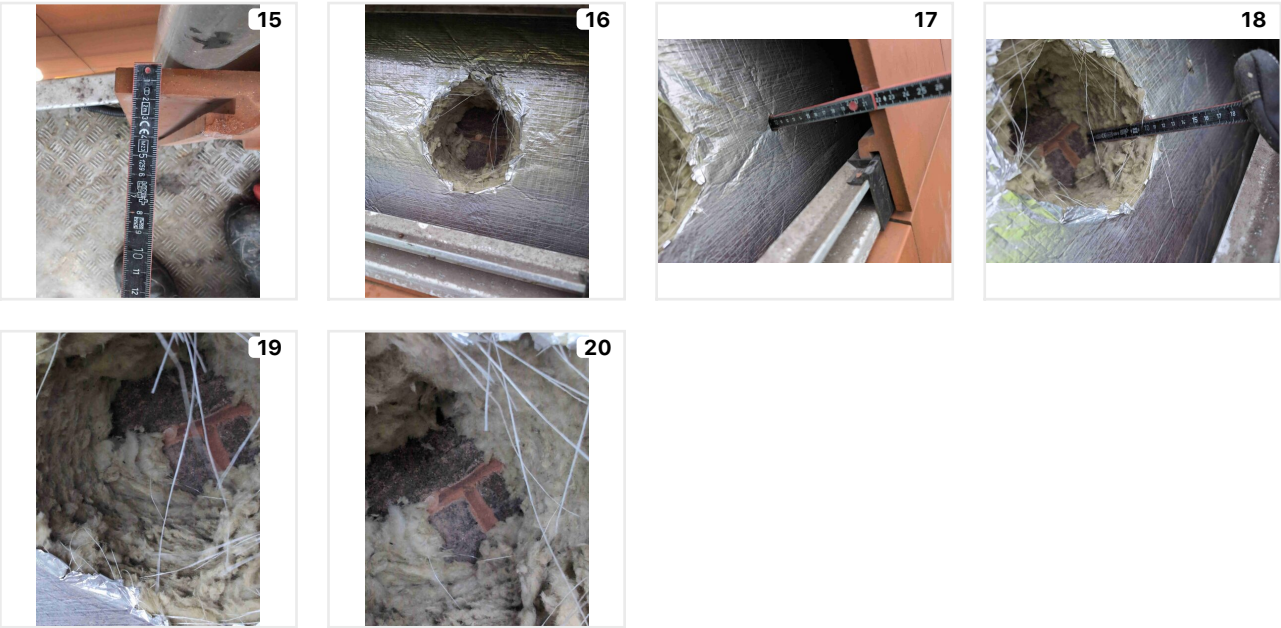
Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Horizontal Cavity Barrier	Stonewool core, aluminium foil faces	16

Floor Slab

Reinforced concrete

Build-up Photos



Cavity Barrier Photos



Inspection Photos



Inspection: YRKR2E

Elevation • Location
East Elevation • Compartment Floor & Compartment Wall Junction



Name/Summary

Sample Area 4

Description

Render on to slab

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	4mm	Sto render	22, 23	A1 - Non-Combustible
Insulation	90mm	Mineral Wool Insulation	24, 25	A1 - Non-Combustible
Inner Leaf		Reinforced concrete Material Brand: Concrete	26, 27	A1 - Non-Combustible

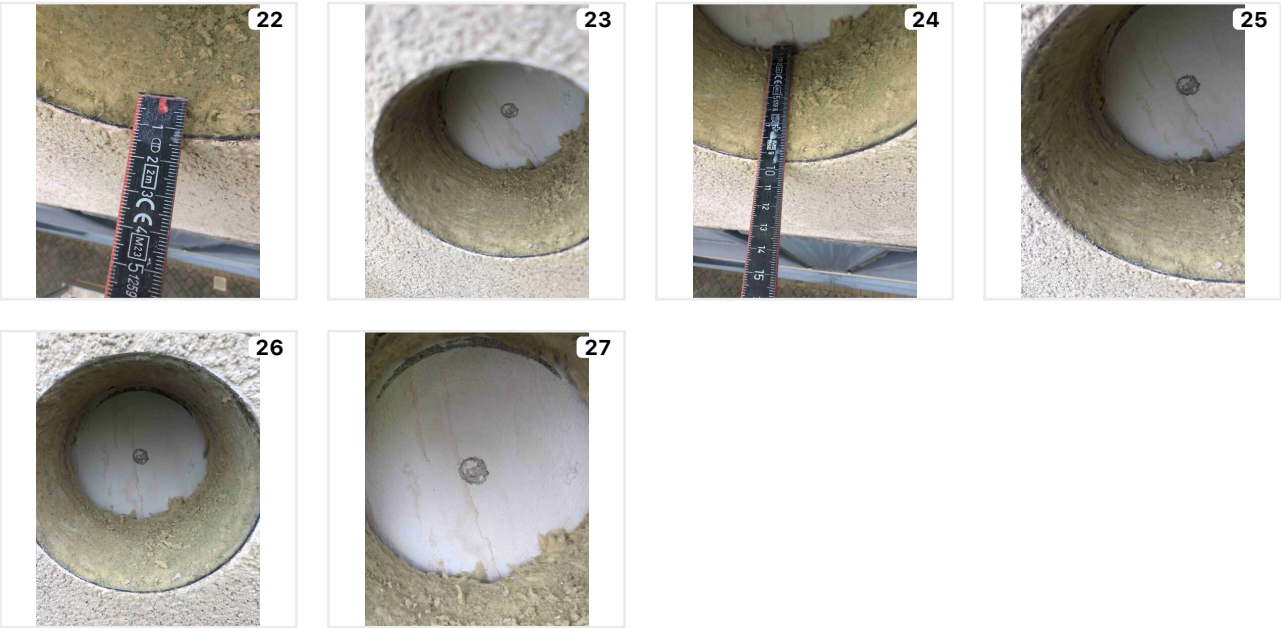
Cavity Barriers

Installed

Floor Slab

Reinforced concrete

Build-up Photos



Inspection Photos



Inspection: M63WCY

Elevation • Location
East Elevation • Vertical Compartment Junction



Name/Summary

Sample Area 5

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	4mm	Aluminium panel	29, 30	A1 - Non-Combustible
Insulation	60mm	Mineral Wool Insulation	31, 32	A1 - Non-Combustible
Inner Leaf		Reinforced concrete	33, 34	A1 - Non-Combustible

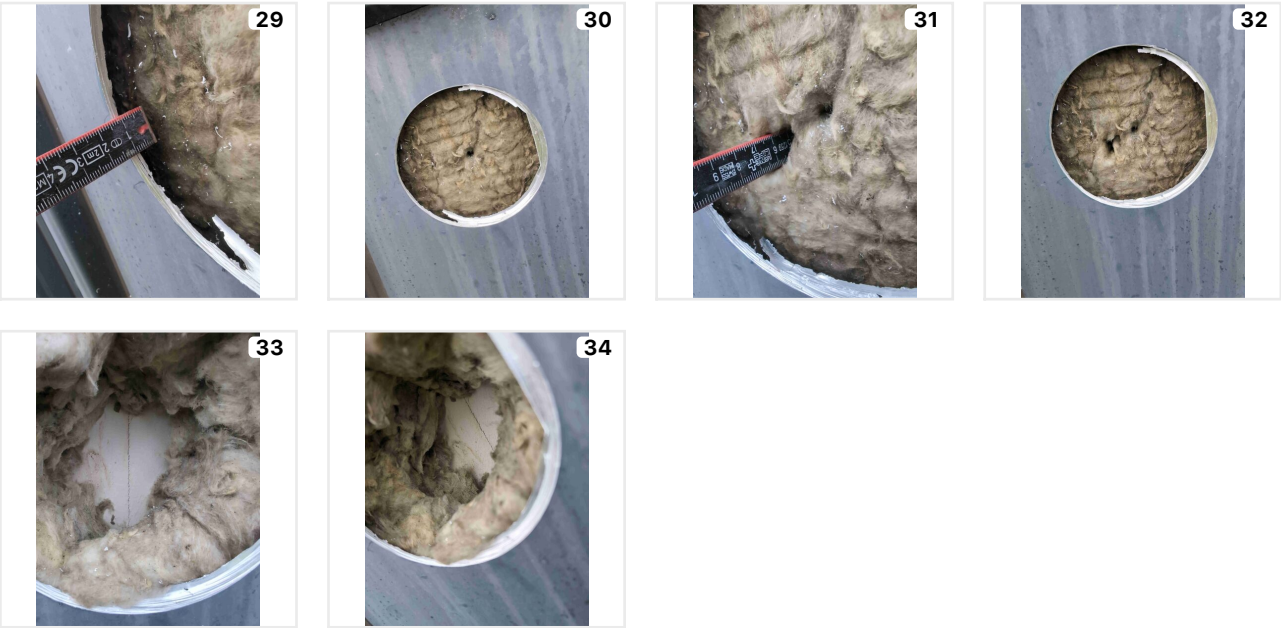
Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Horizontal Cavity Barrier	Solid State Mineral Wool	30

Floor Slab

Reinforced concrete

Build-up Photos



Cavity Barrier Photos



Inspection Photos



Inspection: I6795V

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



Name/Summary

Sample Area 6

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	16mm	Terracotta tile	36	A1 - Non-Combustible
Cavity	120mm		37, 38, 39	
Insulation	90mm	Mineral Wool Insulation	40, 41, 42	A1 - Non-Combustible
Inner Leaf		Reinforced concrete	43, 44	A1 - Non-Combustible

Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Horizontal Cavity Barrier	Stonewool core, aluminium foil faces	45

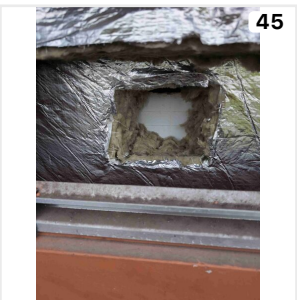
Floor Slab

Reinforced concrete

Build-up Photos



Cavity Barrier Photos



Inspection Photos



Inspection: 2WJ26W

Elevation • Location
East Elevation • Compartment Floor Junction



Name/Summary

Sample Area 7

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	3mm	Aluminium panel	47, 48	A1 - Non-Combustible
Insulation	40mm	Mineral Wool Insulation	49, 50	A1 - Non-Combustible
Inner Leaf	10mm	Reinforced concrete	51, 52, 53	A1 - Non-Combustible

Concrete wall with steel beam.

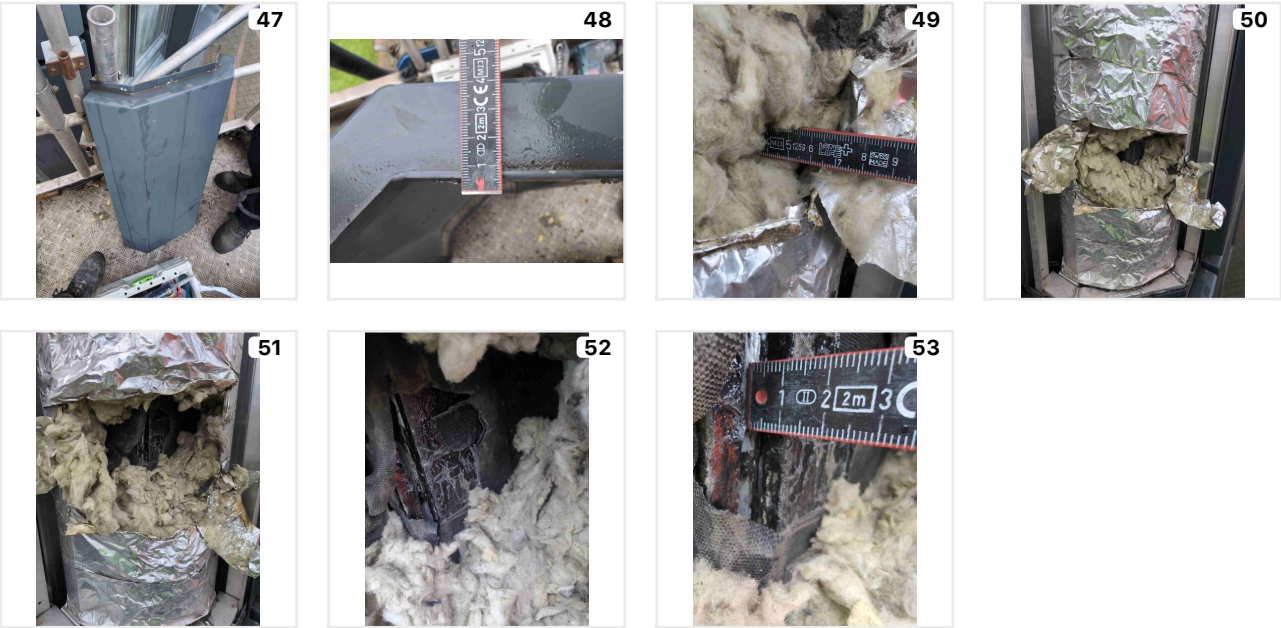
Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Horizontal Cavity Barrier	Stonewool core, aluminium foil faces	

Floor Slab

Reinforced concrete

Build-up Photos



Inspection Photos



Inspection: QJJYRS

Elevation • Location
South Elevation • Window Aperture Junction



Name/Summary

Sample Area 8

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	100mm	Brickwork	55, 56	A1 - Non-Combustible
Insulation	80mm	Mineral Wool Insulation	57, 58, 59	A1 - Non-Combustible
Window jam window closed by plastic cavity closer				
Cavity	140mm		60	
Inner Leaf		Blockwork Material Brand: Block work	61	A1 - Non-Combustible

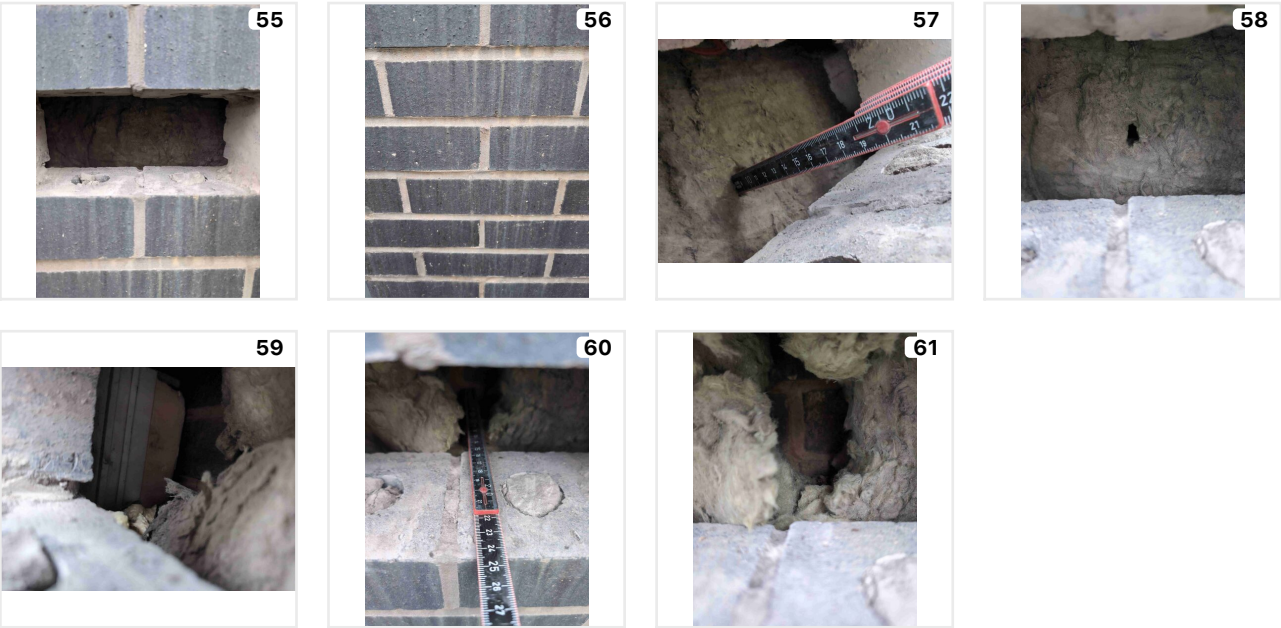
Cavity Barriers

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

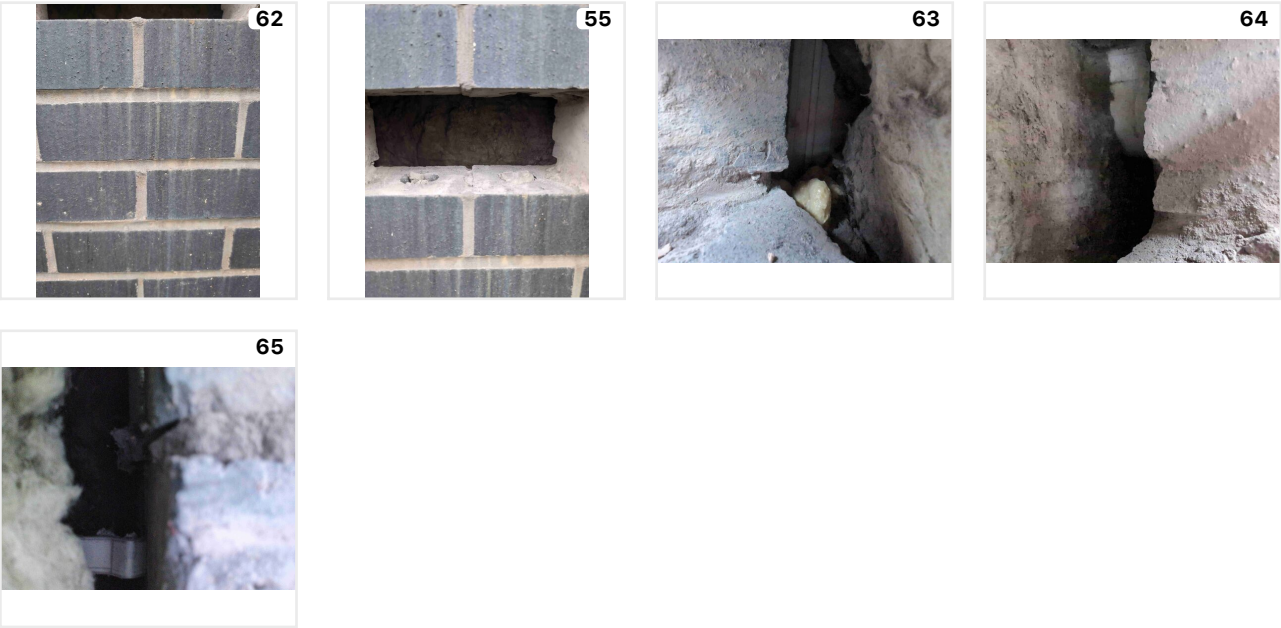
Floor Slab

Reinforced concrete

Build-up Photos



Inspection Photos



Inspection: FRJ7M9

Elevation • Location
South Elevation • Compartment Floor Junction & System Interface



Name/Summary

Sample Area 9

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	4mm	Sto render	66, 67	A1 - Non-Combustible
Render onto rockwool slab				
Insulation	90mm	Mineral Wool Insulation	68, 69	A1 - Non-Combustible
Inner Leaf		Blockwork	70, 71	A1 - Non-Combustible
Block work				

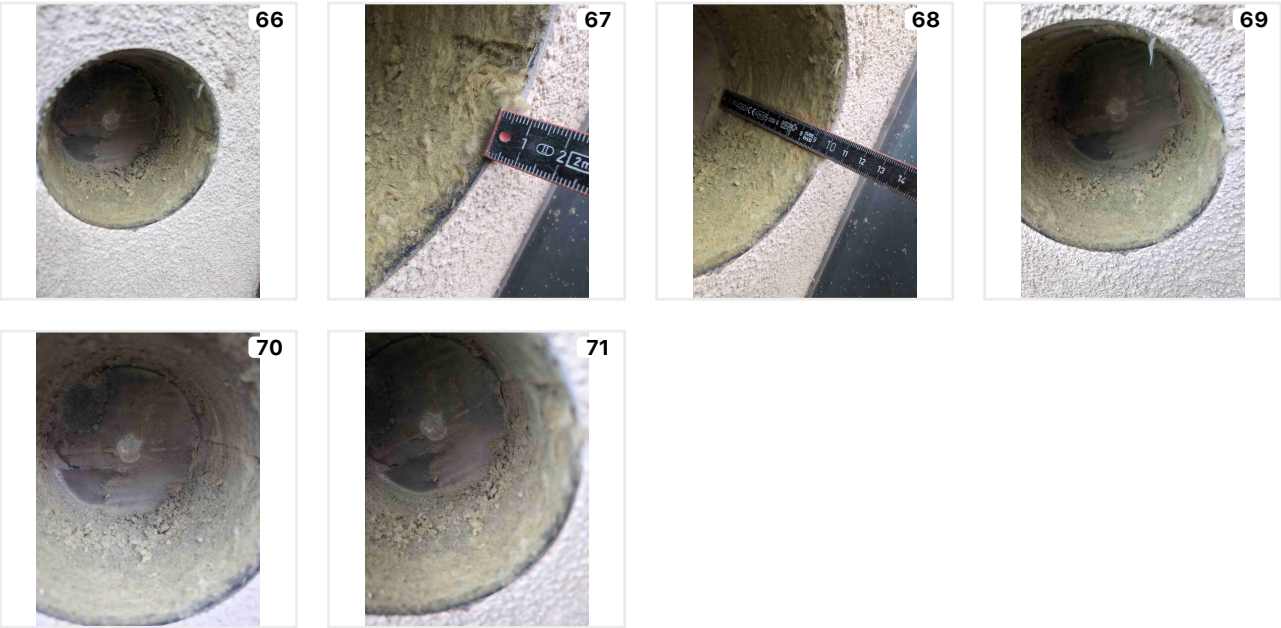
Cavity Barriers

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

Floor Slab

Reinforced concrete

Build-up Photos



Inspection Photos



Inspection: HIEDS5

Elevation • Location
West Elevation • Compartment Floor & Compartment Wall Junction



Name/Summary

Sample Area 10

Build-Up

5 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	4mm	Sto render	73, 74, 75	A1 - Non-Combustible
Insulation	90mm	Mineral Wool Insulation	76	A1 - Non-Combustible
Render onto rockwool slab				
Sheathing Board	30mm		77, 78	D - Highly Combustible
Marine plywood				
Inner Leaf		Reinforced concrete	79	A1 - Non-Combustible
30mm cavity				
Cavity	30mm			

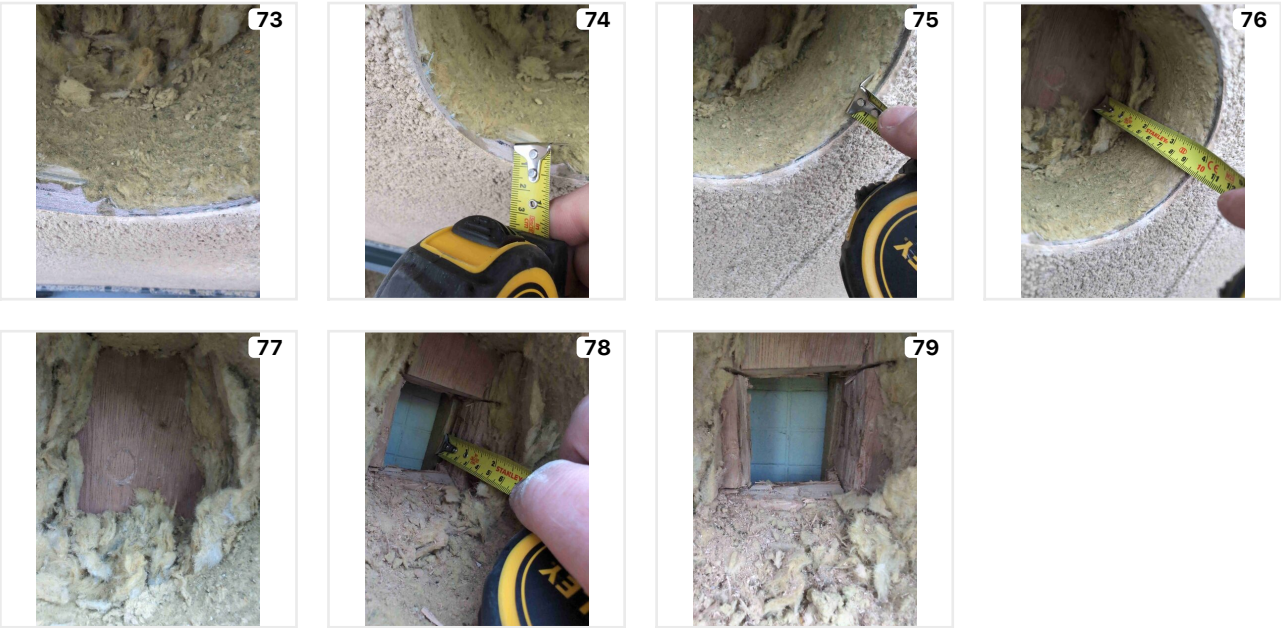
Cavity Barriers

None

Floor Slab

Reinforced concrete

Build-up Photos



Inspection Photos



Inspection: 2RHJT8

Elevation • Location
West Elevation • Compartment Floor Junction



Name/Summary

Sample Area 11

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	16mm	Terracotta tile	81	A1 - Non-Combustible
Insulation	100mm	Mineral Wool Insulation	82, 83, 84	A1 - Non-Combustible
Inner Leaf	100mm	Brickwork	85	A1 - Non-Combustible

Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Horizontal Cavity Barrier	Stonewool core, aluminium foil faces	

Floor Slab

Reinforced concrete

Build-up Photos



Inspection Photos



Inspection: F7B8US

Elevation • Location
North Elevation • Curtain Glazing wall



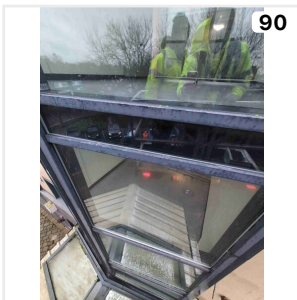
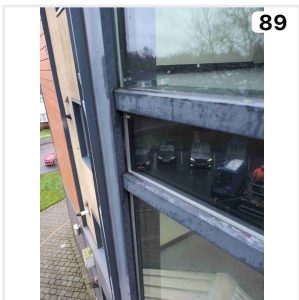
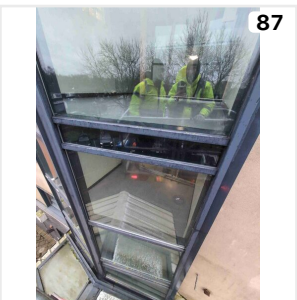
Name/Summary

Sample Area 12

Description

Glass panel on aluminium frame

Inspection Photos



External Windows

Photo

External Window



Other (M4DSDQ)

External Window: Other

External Window Reference
M4DSDQ

Details

Surface Material

Aluminium

Infill / Panel Material

Toughened Glass

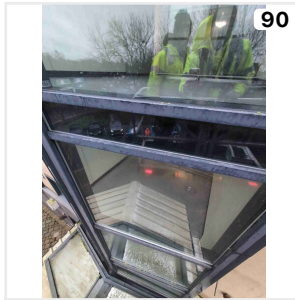
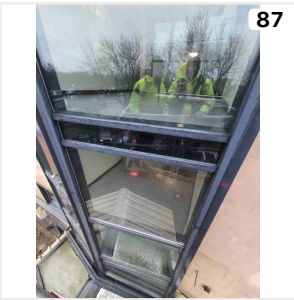
Frame Material

Aluminium

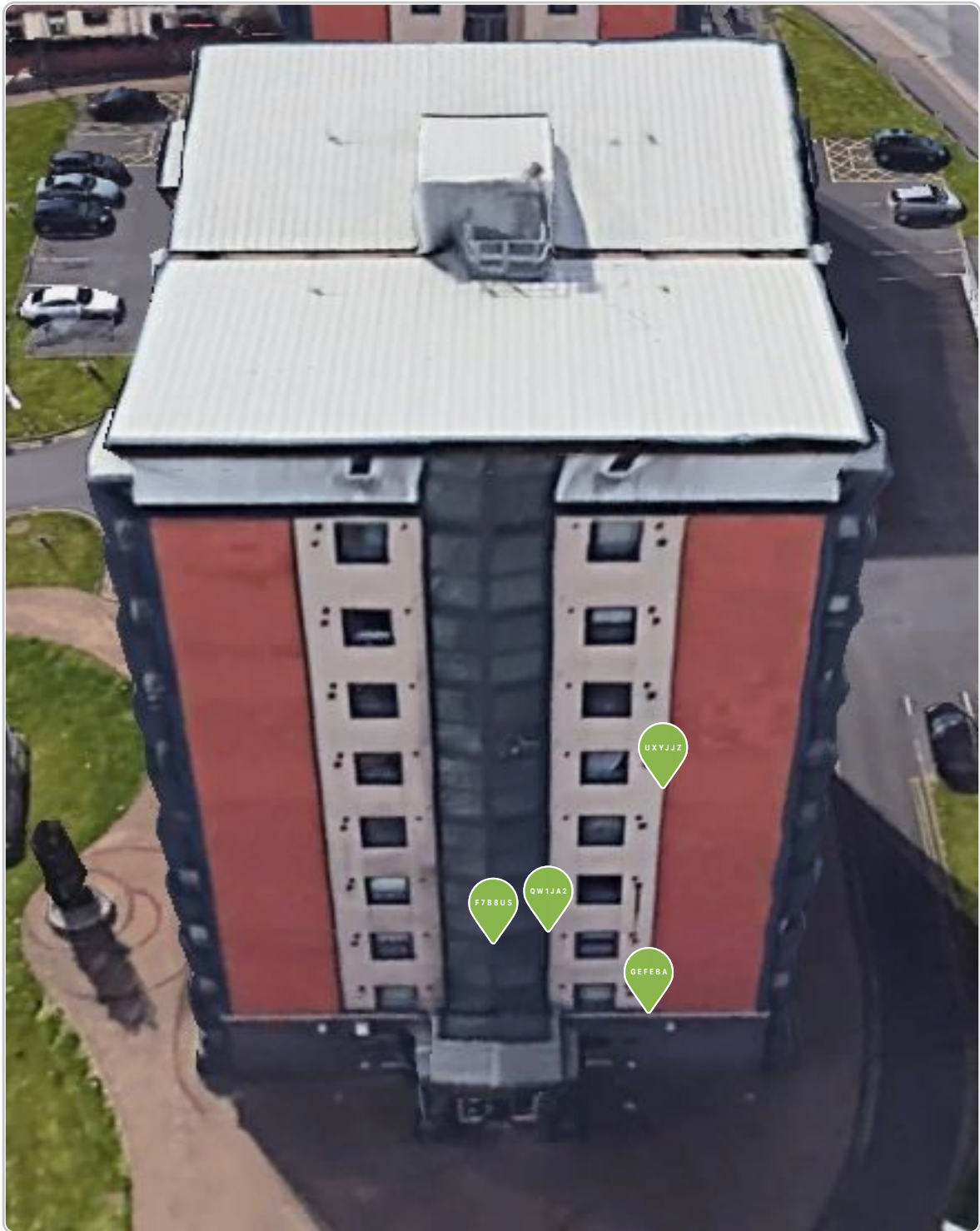
Details

Curtain Glazing wall

Photos



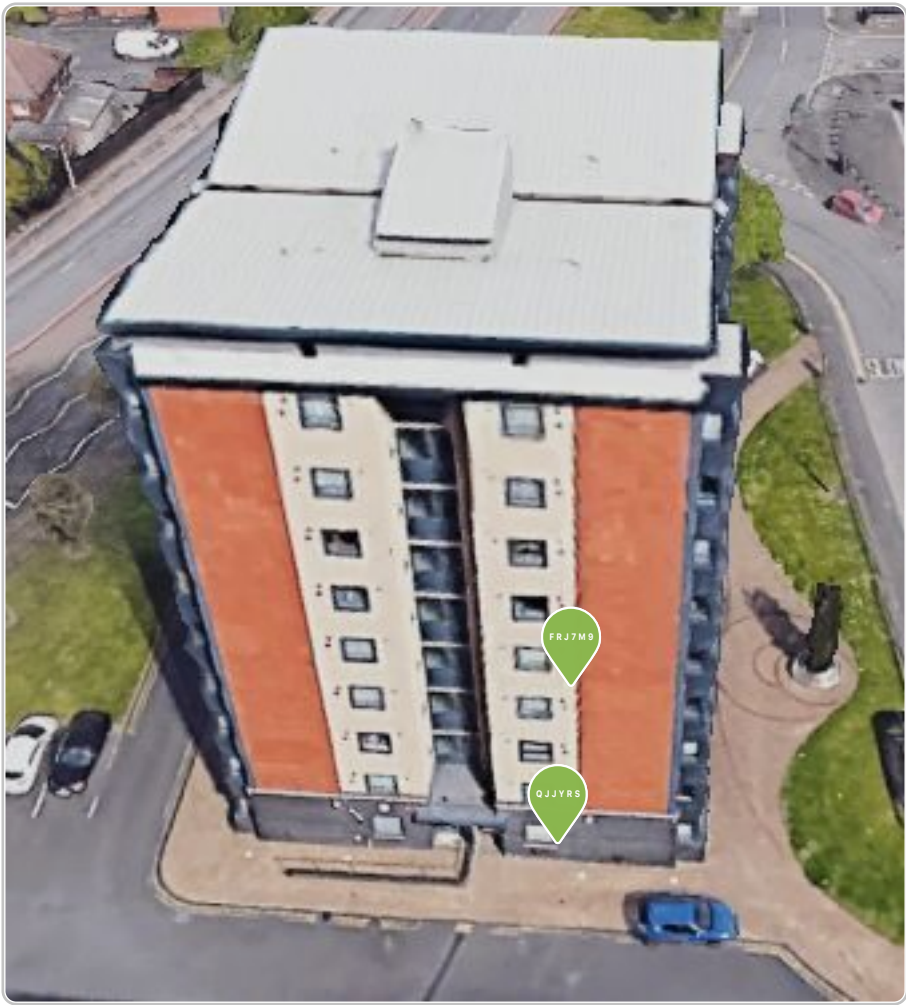
Plan: North Elevation



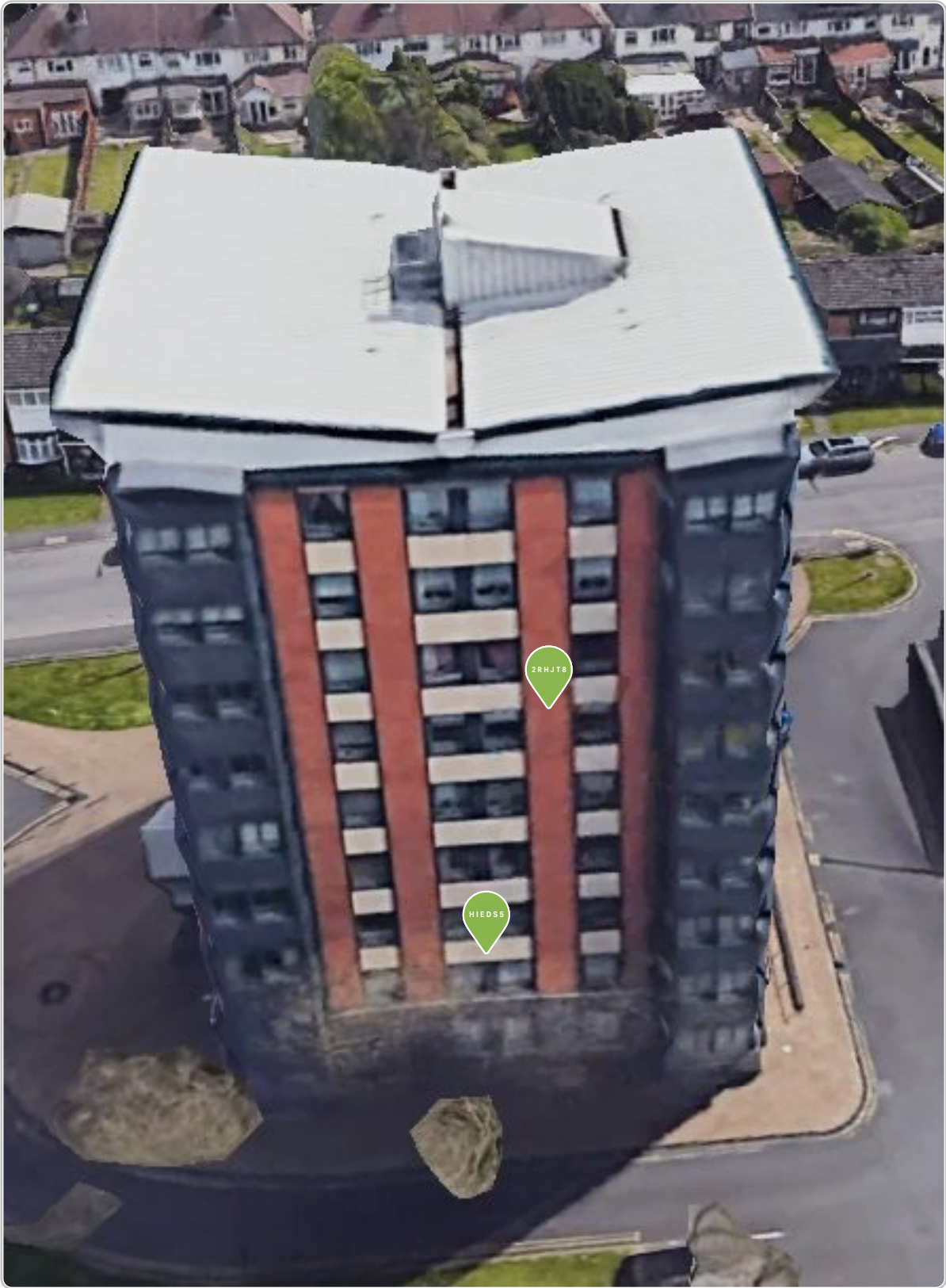
Plan: East Elevation



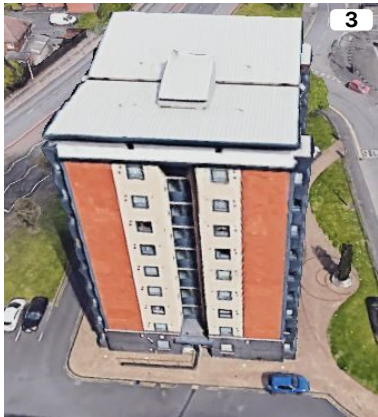
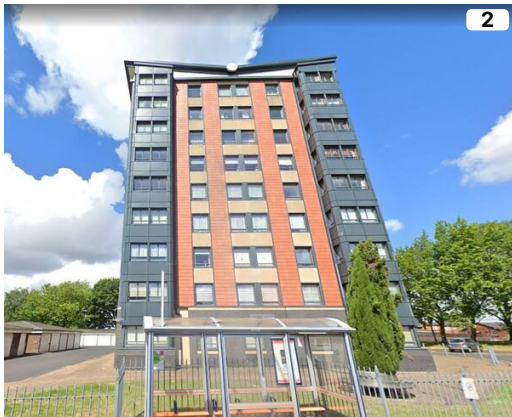
Plan: South Elevation



Plan: West Elevation



Photos



Photos Continued...



Photos Continued...



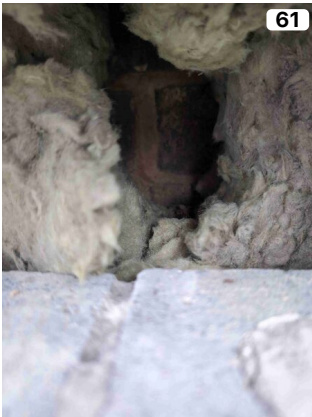
Photos Continued...



Photos Continued...



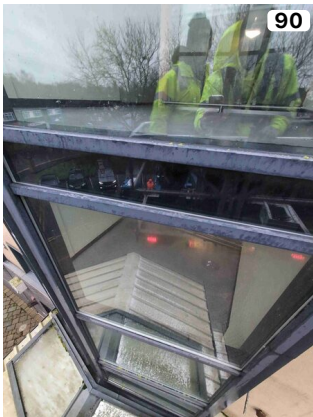
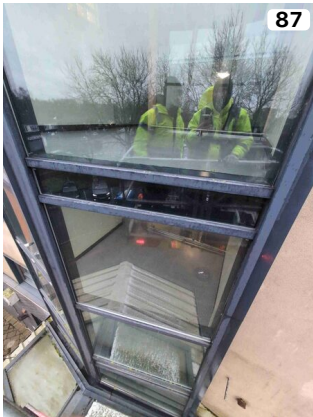
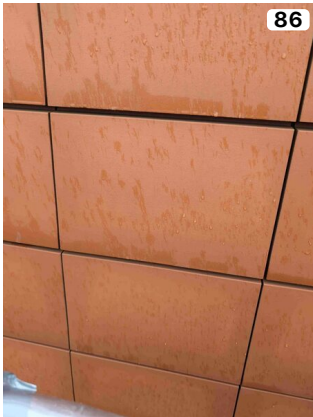
Photos Continued...



Photos Continued...



Photos Continued...





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BUILDING COMPLIANCE