

Document Version 4
Survey Date 04/11/2024
Suggested Review Date 04/11/2029

EXTERNAL WALL SURVEY

BIRCHCROFT

Birchcroft
Windmill Lane
Smethwick
West Midlands
B66 3LW

This report must be retained on the premises for inspection by statutory authorities.
Management is responsible for actions required in this report and should brief all staff on the report's findings.

Enforcement Officers are requested to note that this document is designed to inform the Lessee Tenant Manager of the existing Fire Safety Arrangements and any Significant Findings. Issues relating to the control and management of fire safety management for fire safety measures can be found in in-house documents such as:

Fire Policy and Testing and Maintenance records

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Summary

External Wall Survey

Assessment and Certificate Reference

RB-7DK53B

Assessed On, By

04/11/2024,

Alex Dodd EngTech MinstRE (Lead Facade Consultant)

Douglas Murray (Building Safety Consultant)

(BSc Building Surveying, ABBE DipFRA, AIFireE, AssocRICS, MFPA)

Produced For the Responsible Person

Sandwell Metropolitan Borough Council

Specification Conforms To

Our own internal quality system.

Assessment Scope

Assessment applies only to the building specified.

Recommended Review Date

04/11/2029

Assessed Property

Property Name

Birchcroft

Property Reference

RB-2ES1WE

Address

Birchcroft

Windmill Lane

Smethwick

West Midlands

B66 3LW

Assessing Organisation

Firntec Ltd

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

0345 646 1566 — www.firntec.com

Assessor Remarks

The development of Birchcroft was commissioned by Smethwick Council 1963, and building work was awarded to the contractors Five Oaks Ltd who completed building work on three similar buildings circa 1965. The building comprises of 15 floors including ground and houses 90 individual self contained flats. The present day authority is Sandwell Metropolitan Borough Council.

The original structure is of reinforced concrete frame with concrete staircores, lift core, floor slabs and foundations. The original external walls are formed from traditional cavity brick/concrete blockwork with projecting winter garden balconies on all occupied floors. Cladding systems and other improvement work went ahead in 2014 (planning reference DC/14/56775). The work focused on external refurbishments including refurbishment and environmental works to 3 high rise blocks including insulated cladding that comprises of stonewall rainscreen panels with mineral wool insulation, brick slips over XPS and PPC aluminium spandrel panels, replacement windows and balcony doors, glazed enclosure to balconies, new steel framed aluminium sheeted roof with photovoltaic panels, new front entrance porches and landscaping works with additional parking areas.

This report has been prepared for Sandwell Metropolitan Borough Council by Firntec Ltd Building Compliance. This survey has included consideration of the following pieces of legislation and other guidance relevant at the time of reporting:

The RRO (FSO) 2005

The Fire Safety Act 2021

The Building Safety Act 2022

Approved Document B of building regulations 2010

This report was prepared by Douglas Murray (BSc Building Surveying, ABBE DipFRA, AIFireE, AssocRICS, MFPA) who is a Building Surveyor with 25 years of fire related and construction experience in both new build and refurbishment projects on behalf of Firntec Ltd. Douglas is a member of the Royal Institute of Chartered Surveyors, the Institute of Fire Engineers, the Fire Protection Association, and an ABBE qualified Fire Risk Assessor. Douglas has specialised within Fire Safety and cladding investigations for eight years and has held senior posts with London and nationally based Registered Social Landlords. Douglas advises on and produces Building Safety Case Reports and has taken the lead for various clients securing, quality checking and completing Type 1-4 Fire Risk Assessments, completing Fire Risk Assessments of External Walls (FRAEW), leading on Intrusive investigative surveys, and preparing fire strategy documents. Part of the work Douglas completes, supports and evidence claims brought forward under the Defective Premises Act in the context of non-compliance and fire safety defects within multi occupancy buildings.

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 Borough Council

Client Address

Sandwell Council House
Freeth Street PO Box 2374
Oldbury
B69 3DE

Responsible Person

Sandwell Metropolitan Borough Council

Safety Assistance

Not Required

Contact Details

As provided by client

Fire Alarm System

Within Flats: Smoke alarms are installed to LD1, LD2, and LD3 standards.

LD1: Smoke detectors in all rooms except wet rooms.

LD2: Smoke detectors in all-risk rooms (Living Room, Kitchen, Hallway).

LD3: Smoke detectors in the Hallway only.

Void properties are being upgraded to an LD1 system.

No automatic fire detection in communal areas.

Emergency Lighting

Installed in communal parts

Emergency Lighting

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

Portable Fire Fighting Equipment

Portable Fire Fighting Equipment installed within staff only / Restricted areas of the building

Portable Fire Fighting Equipment

Extinguisher equipment is installed within staff only / Restricted access areas of the building.

Smoke Control

Natural smoke control, Mechanical smoke control

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

Bin Store: A deluge system is installed.

Fire Fighting Facilities

Dry Riser

Fire Fighting Facilities

Dry Riser: Installed in the entrance lobby.

Serves all floors up to the 14th floor.

Outlets are exposed and located in communal lobbies.

Secured with cable ties, which are checked regularly.

Maintained twice per year (April & October) with an annual hydraulic test in October to BS 9990 standards.

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

According to RICS hydrant map the fire hydrant is located within 20 metres south of Birchcroft toward the access road

Housekeeping

Good standard. Means of escape clear. Refuse stored appropriately

Secure Information Boxes

Secure information box (SIB) installed

Secure Information Boxes

A proprietary steel SIB is fitted within the main entrance lobby

Signage

Appropriate signage installed throughout premises

Signage

Good standard of signs was found for wayfinding, fire door, floor level and advisory notices

Property Type

Apartment Block, Residential Purpose-built

Building Era / Age

Known Build Date

Known Build Date

Birchcroft was developed circa 1963

Building Height

From lowest point at ground to the upper most finished floor, Birchcroft is approximately 45 metres in height.

Approx Floor Area Per Floor

The approximate footprint of Ashcroft is 400m²

Number of Storeys (Ground and above)

Birchcroft is 15 storeys including ground

Number of Basement Levels

None

Number of Flats

Birchcroft caters for 90 self contained flats

Flat Types

Single Storey

Structural Wall Material

The original structure appears to be of reinforced concrete frame with reinforced staircores, lift core, floor slabs and foundations, the original external walls are formed from solid brickwork with blockwork internal infill walls.

Structural Floor Material

Reinforced Concrete

Structural Stairs Material

Concrete

Construction (Details)

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

Exterior Cladding

FRAEW Completed on Exterior Cladding

Exterior Cladding (Details)

Following refurbishment in 2014, external wall finishes are now formed from brick slips over XPS insulation, high density stonewall cladding panels over mineral wool insulation and incidental polyester powder coated spandrel panels.

Electronic Entrance System

Yes

Carpark

External/Outdoor Carpark

Employees

None

Residents

Yes

Approx number of Residents

180

Residents (Extended)

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

People With Reduced Mobility

Other

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

The building is provided with a single escape stair

Number Of Final Exits

The building is provided with two individual escape exits

External Means Of Escape

None Present

Types Of Lifts Installed

Passenger

Evacuation Chairs Installed

No

Refuge Points Present

No

Stairwells Protected / Lobbied

Yes

Flat Doors Open Onto Stairs

No

Current Evacuation Strategy

Stay Put

Current Stay Put Strategy Description

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

Current Evacuation Strategy for the property considered appropriate?

Yes

What is the recommended evacuation strategy for the property?

Stay Put

Aerial Perspective: Birchcroft building

Aerial image and surrounding area



Elevations

Photo	Name	No. of Storeys
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West Elevation

15 Storeys



East Elevation

15 Storeys



North Elevation

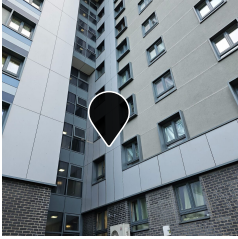
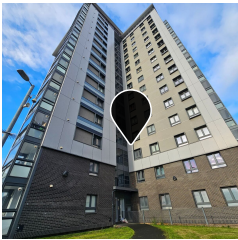
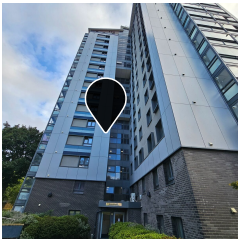
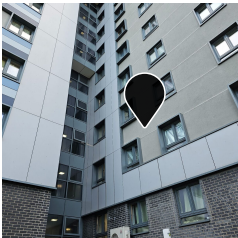
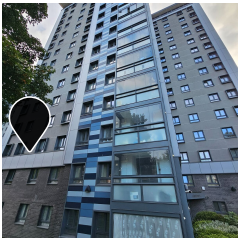
15 Storeys



South Elevation

15 Storeys

Inspections

Elevation Location	Inspection	Elements
	Inspection: EW36V1 Survey locations as tagged Accessible wall	• Surface Finish (Stonewall rainscreen panel) • Cavity • Insulation (Mineral Wool Insulation) • Inner Leaf Support (Backing Wall) (Original brickwork)
	Inspection: 3XDX8I Survey locations as tagged Accessible wall	• Surface Finish (Stonewall rainscreen panel) • Cavity • Insulation (Mineral Wool Insulation) • Inner Leaf Support (Backing Wall) (Original brickwork)
	Inspection: G3MCZ7 Survey locations as tagged Accessible wall	• Surface Finish (Stonewall rainscreen panel) • Cavity • Insulation (Mineral Wool Insulation) • Inner Leaf Support (Backing Wall) (Original brickwork)
	Inspection: 9WGFJK Survey locations as tagged Accessible wall	• Surface Finish (Render) • Insulation (Mineral Wool Insulation) • Inner Leaf Support (Backing Wall) (Original brickwork)
	Inspection: RYJDU6 Survey locations as tagged Accessible wall	• Surface Finish (Render) • Insulation (Mineral Wool Insulation) • Inner Leaf Support (Backing Wall) (Original brickwork)

Elevation Location	Inspection	Elements
	Inspection: KB6WRV Survey locations as tagged Accessible wall	• Surface Finish (Render) • Insulation (Mineral Wool Insulation) • Inner Leaf Support (Backing Wall) (Original brickwork)
	Inspection: TH1BRR Survey locations as tagged Accessible wall	• Surface Finish (Brick Slip / Brick Tile) • Insulation (XPS Insulation) • Inner Leaf Support (Backing Wall) (Original brickwork)
	Inspection: 6EUVAH Survey locations as tagged Accessible wall	• Surface Finish (Brick Slip / Brick Tile) • Insulation (XPS Insulation) • Inner Leaf Support (Backing Wall) (Original brickwork)

Inspection: EW36V1

Elevation • Location
Survey locations as tagged • Accessible wall



Name/Summary

Wall Type 1 - Stonewall panels over mineral wool insulation

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	9mm	Stonewall rainscreen panel Material Brand: Rockwool		A1 - Non-Combustible
Cavity	50mm			
Insulation	100mm	Mineral Wool Insulation Material Brand: Rockwool		A1 - Non-Combustible
Inner Leaf Support (Backing Wall)	102mm	Original brickwork		A1 - Non-Combustible

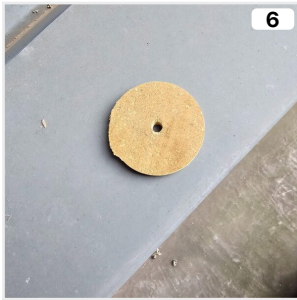
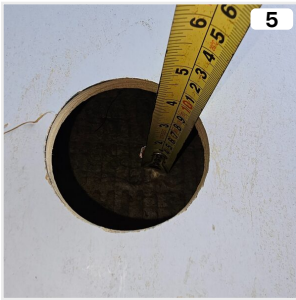
Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Horizontal Cavity Barrier	Open State Cavity Barrier	

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Inspection: 3XDX8I

Elevation • Location
Survey locations as tagged • Accessible wall



Name/Summary

Wall Type 1 - Stonewall panels over mineral wool insulation

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	9mm	Stonewall rainscreen panel Material Brand: Rockwool		A1 - Non-Combustible
Cavity	50mm			
Insulation	100mm	Mineral Wool Insulation Material Brand: Rockwool		A1 - Non-Combustible
Inner Leaf Support (Backing Wall)	102mm	Original brickwork		A1 - Non-Combustible

Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Horizontal Cavity Barrier	Open State Cavity Barrier	

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection: G3MCZ7

Elevation • Location
Survey locations as tagged • Accessible wall



Name/Summary

Wall Type 1 - Stonewall panels over mineral wool insulation

Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	9mm	Stonewall rainscreen panel Material Brand: Rockwool		A1 - Non-Combustible
Cavity	50mm			
Insulation	100mm	Mineral Wool Insulation Material Brand: Rockwool		A1 - Non-Combustible
Inner Leaf Support (Backing Wall)	102mm	Original brickwork		A1 - Non-Combustible

Cavity Barriers

1 Cavity Barrier	Material	Photo Ref.
Horizontal Cavity Barrier	Open State Cavity Barrier	

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection: 9WGFIK

Elevation • Location
Survey locations as tagged • Accessible wall



Name/Summary

Wall Type 2 - render over mineral wool insulation

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	6mm	Render		A1 - Non-Combustible
Insulation	100mm	Mineral Wool Insulation		A1 - Non-Combustible
Inner Leaf Support (Backing Wall)	102mm	Original brickwork		A1 - Non-Combustible

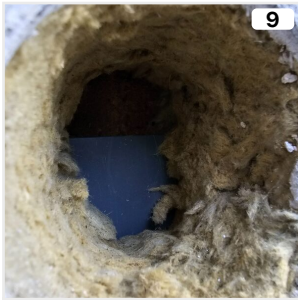
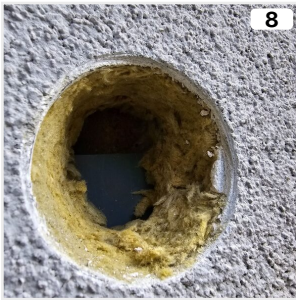
Cavity Barriers

There is no external wall cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Inspection: RYJDU6

Elevation • Location
Survey locations as tagged • Accessible wall



Name/Summary

Wall Type 2 - render over mineral wool insulation

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	6mm	Render		A1 - Non-Combustible
Insulation	100mm	Mineral Wool Insulation		A1 - Non-Combustible
Inner Leaf Support (Backing Wall)	102mm	Original brickwork		A1 - Non-Combustible

Cavity Barriers

There is no external wall cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection: KB6WRV

Elevation • Location
Survey locations as tagged • Accessible wall



Name/Summary

Wall Type 2 - render over mineral wool insulation

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	6mm	Render		A1 - Non-Combustible
Insulation	100mm	Mineral Wool Insulation		A1 - Non-Combustible
Inner Leaf Support (Backing Wall)	102mm	Original brickwork		A1 - Non-Combustible

Cavity Barriers

There is no external wall cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Inspection: TH1BRR

Elevation • Location
Survey locations as tagged • Accessible wall



Name/Summary

Wall Type 3 - brick slip over XPS insulation

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	15mm	Brick Slip / Brick Tile		A1 - Non-Combustible
Insulation	100mm	XPS Insulation		D - Highly Combustible
Inner Leaf Support (Backing Wall)	102mm	Original brickwork		A1 - Non-Combustible

Cavity Barriers

There is no external wall cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Inspection: 6EUVAH

Elevation • Location
Survey locations as tagged • Accessible wall



Name/Summary

Wall Type 3 - brick slip over XPS insulation

Build-Up

3 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	15mm	Brick Slip / Brick Tile		A1 - Non-Combustible
Insulation	100mm	XPS Insulation		D - Highly Combustible
Inner Leaf Support (Backing Wall)	102mm	Original brickwork		A1 - Non-Combustible

Cavity Barriers

There is no external wall cavity

Floor Slab

Backing Wall Sits On The Floor Slab

Inspection Photos



Penetrations

Photo

Penetration

No Image

Ventilation (LVK93P)
Inspection Type: Visual

Penetration: Ventilation

Penetration Reference
LVK93P

Details

Photo

1 Image

Inspection Type

Visual

Duct Pipework Material

PVC

External Windows

Photo

External Window



Top, Mid, Side Hung Casements (FSRVBN)

External Window: Top, Mid, Side Hung Casements

External Window Reference
FSRVBN

Details

Surface Material

Aluminium

Frame Material

Timber

Infill / Panel Material

Toughened Glass

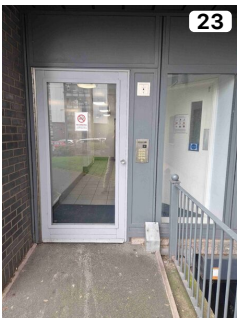
Photos



External Doors

Photo

External Door



Single Leaf Entrance Doors (DFNWUV)

External Door: Single Leaf Entrance Doors

External Door Reference
DFNWUV

Details

Surface Material

Aluminium

Infill / Panel Material

Toughened Glass

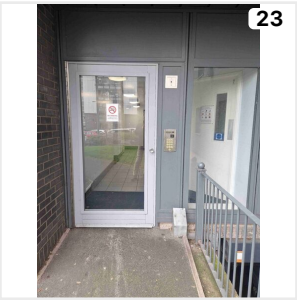
Frame Material

Aluminium

Details

EN 14449

Photos



General Observations

Fireman's override entrance switch is faulty.



Plan: Survey locations as tagged



Plan: Survey locations as tagged



Plan: Survey locations as tagged



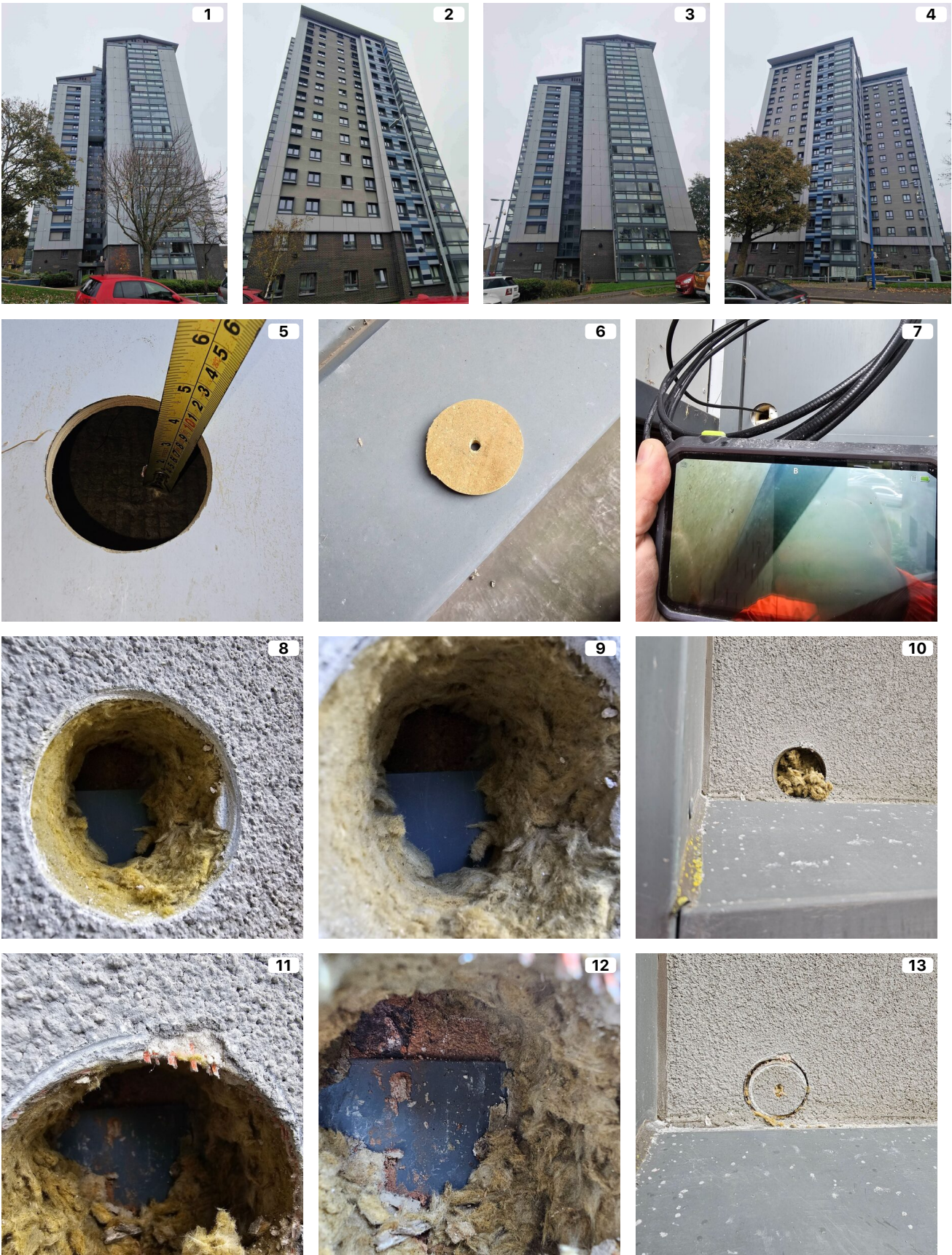
Plan: Survey locations as tagged



Plan: Survey locations as tagged



Photos



Photos Continued...



Birchcroft		
14th Floor.....	85 - 90	
13th Floor.....	79 - 84	
12th Floor.....	73 - 78	
11th Floor.....	67 - 72	
10th Floor.....	61 - 66	
9th Floor.....	55 - 60	
8th Floor.....	49 - 54	
7th Floor.....	43 - 48	
6th Floor.....	37 - 42	
5th Floor.....	31 - 36	
4th Floor.....	25 - 30	
3rd Floor.....	19 - 24	
2nd Floor.....	13 - 18	
1st Floor.....	7 - 12	
Ground Floor.....	1 - 6	



FIRNTEC

BUILDING COMPLIANCE