

FIRE RISK APPRAISAL OF THE EXTERNAL WALLS (PAS 9980:2022)



HORSHAM GATE TWO

NORTH STREET, HORSHAM,
RH13 5TU

CLIENT NAME

ADRIATIC LAND 7 LTD
C/O PRINCIPLE ESTATE
MANAGEMENT

FRC REPORT NO.

RB-EX8IGM

PREPARED BY

FR CONSULTANTS

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Abbreviations and Defined Terms

The meanings of the abbreviations and defined terms used in this report are listed below.

- **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** A cavity Barrier is designed to be fitted under compression/friction between the inner and outer surfaces of a cavity to seal it
- **CLT** Cross Laminated Timber
- **Open State Cavity Barrier** Cavity Barrier that is open to allow ventilation/drainage of the cavity in an 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
- **ETICS** External Thermal Insulation Composite System
- **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
- **FRC** FR Consultants
- **FRS** Fire and Rescue Services
- **FSA** Fire Safety Act 2021
- **FSE** Fire Safety (England) Regulations 2022
- **HPL** High-Pressure Laminate
- **HRR** Heat Release Rate
- **MCM** Metal Composite Material
- **MDF** Medium Density Fibre Board (a type of manufactured timber)
- **O&M** Operation and Maintenance Manuals
- **OSB** Oriented Strand Board
- **PIR** Polyisocyanurate Rigid Foam
- **PPC** Polyester Powder Coated
- **PUR** Polyurethane Foam
- **RP** Responsible Person
- **RRFSO** Regulatory Reform (Fire Safety) Order 2005
- **SFS** Steel Framing System
- **Stay Put Strategy** The strategy adopted that when a fire occurs, the occupants of that dwelling evacuate, but other occupants in other dwellings can remain safely in their dwellings unless feel threatened when they can escape, or otherwise directed by fire and rescue services
- **UPVC** Unplasticised polyvinyl chloride
- **VCL** Vapour Control Layer
- **Waking Watch** A system where suitably trained persons patrol the building in order to detect a fire, raise the alarm, and carry out the role of evacuation management

Terms of Reference

Particulars

This FRAEW has been commissioned by the Building Owner, in response to PAS9980:2022, Fire Risk Appraisal and Assessment of External Wall construction and cladding of existing blocks of flats - Code of practice, which covers residential buildings of all heights, to ensure the safety of residents in multi-occupancy buildings.

Limitations

- The data obtained in the investigation is limited to the findings in each precise location of inspection and cannot be used to confirm the absolute consistency of the façade in its entirety.
- Product manufacturers cannot be confirmed with absolute certainty unless the sampled materials viewed show evidence of product branding. Where product branding is absent or ambiguous, FRC will refer to as built drawings and specifications contained in the O&M manuals, if supplied, but this will not constitute confirmation of the brands of the products used in construction. Where a product's branding is absent, FRC will assume the expected combustibility-rating based on the known characteristics of the materials in use.
- The supporting evidence provided in this Report has been selected to substantiate the statements made within its content.
- An individual duty of care or responsibility does not extend, on a personal level, to any of our employees, signatories, partners, consultants, or directors. As such, any queries or amendments will be addressed on behalf of FRC rather than any individual involved in the undertaking of our services.
- Plasterboard sampling has been undertaken for completeness in accordance with the PAS Guidance. Where the plasterboard information has been collected, we will assume that the installation is consistent with all external wall systems.
- Where the inner leaf has been identified to be Block-work, we will assume this is standard 100mm Concrete Block-work and a plasterboard finish has been applied via dot and dab application to the inner face. Where the inner leaf has been identified to be plasterboard, we will assume the thickness to be consistent with the findings of the plasterboard inspection.
- Plasterboard will not be listed as an Inner Leaf in our Wall Build-ups.
- Our Report intends to only provide guidance against the relevant guidance and legislation in force at the time of publication as a reference point. 3.3.6 This Report has been drawn up in accordance with PAS 9980 and is dedicated to the evaluation of life safety only. 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.
- This Report will not confirm compliance with building regulations, either at time of construction or currently: (PAS 9980 S.15.4) states that a FRAEW 'is not to be used as a means of audit on design or construction of buildings against any applicable regulations or guidance' or 'to support litigation, in relation to compliance with Building Regulations'.
- Where specific concerns relating to structural elements are observed through our areas of inspection, comment on these areas of concern will be provided within the relevant inspection element of our report. However, full structural performance could only be confirmed by completion of a full structural survey. An absence of identification of any structural issues from our areas of inspection cannot be taken as confirmation that the building is structurally sound.

Scope of Works

- Investigate each type of facade construction in previously agreed sample areas, having regard to access restrictions.
- To comment, where possible, on the external wall make up including, where possible, type and combustibility of cladding, insulation, membrane, sub-base materials and fixings / retainers used etc..
- Where possible, to comment on the construction and presence of Cavity Barriers to inspection locations where they have been opened up in limited sample areas. To aim to comment on any other fire risks identified to the external facades.
- To aim to comment on the general workmanship of the construction of the façade where concerns are noted.
- To review and comment on façade attachments, where possible.
- To conduct a review of the O & M manuals, if available and provided prior to report writing.

- To review and comment on the internal active and passive fire safety systems from information provided, the layout of the building internally, the means of escape and compartmentation of the common parts, and to advise on where more detailed investigations or remedial works may be required.
- To arrive at a conclusion on the fire safety of the property, having proportionately assessed all risks covered in the above, in line with PAS 9980:2022.
- To inform the building's FRA, and to be interpreted in the context of the ongoing legislative control over the building, under the Fire Safety Order.

The FRAEW is to be reviewed in the event that:

- 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, that suggest review is appropriate. In these cases, the report should include a clear explanation as to why periodic review is necessary and include a suggested review date.
- d) 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.

PAS 9980 – Objectives

- The objectives as noted below are set out by PAS 9980:2022 'Fire Risk Appraisal of External Wall Construction and Cladding of Existing Blocks of Flats – Code of Practice ('PAS 9980'), which came in effect from 31st January 2022.
- The objectives of PAS 9980 are:
- To provide competent fire engineers and other competent building professionals with a methodology for appraising and assessing the scope for, and risk from, fire spread via external wall construction and cladding, such that the outcome can be used to inform a building's Fire Risk Assessment ('FRA').
- To assist external wall assessors in clearly communicating the results of a Fire Risk Appraisal of External Wall ('FRAEW'), such that recipients can understand the process and methodology applied, and to understand the findings.
- To assist other professionals in reviewing an FRAEW and in understanding the risk of external fire spread in the context of the building's fire strategy and fire safety arrangements.
- To promote better understanding of fire risks associated with external walls and the limitations of what can, and cannot, be achieved in any FRAEW.
- To enable common relevant terminology to be adopted by those who carry out FRAEWs.
- To promote consistency in FRAEWs, and to provide a pragmatic and risk-proportionate approach in an FRAEW; To enable consistent training in carrying out an FRAEW and thus facilitate more entrants into the profession of carrying out FRAEWs.
- The risk-based methodology outlined in PAS is intended to provide a structured approach to the FRAEW. The outcome of the FRAEW is a determination of whether the external wall construction is acceptable or whether remedial action is necessary to replace some or all the components of the external wall build-up, or to address shortcomings, such as the absence of cavity barriers.

Risk Factors

- As part of our assessment in association with the risk factors as noted below, we start at the highest point on the scale, which is the worst-case position. Each risk factor will be assessed to determine the influence it has on the overall risk associated with the external wall system (EWS) and attachments. The assessment process is outlined below:
- Fire Safety: Strategy & Hazards Risk Factors: These are considered for the property as a whole in Section
- Materials Performance Risk Factors: These are considered for each External Wall Type / Attachment in the relevant Sections of this Report.
- Façade Configuration Risk Factors: These are considered for the property as a whole.

Statement of Competency

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

PAS 9980:2022 requires that persons conducting the FRAEW are competent to do so and sets out in Annex H the expected skill sets of competent external wall assessors. This is our Statement of Competence to carry out a Fire Risk Appraisal of the External Wall construction. We explicitly confirm that they have:

- Read and understood the commentary and provisions relating to the competence of external wall assessors set out in Section 8 of Annex H of PAS 9980:2022,
- Adequate and relevant competence to undertake the FRAEW,
- Sufficient knowledge, skills and experience in relation to fire safety of external walls to be able to complete an assessment at the level required,
- The relevant skill, knowledge, and experience to manage and interpret the results of intrusive inspections,
- The competence to appraise and assess the nature of external wall construction in terms of fire performance and provide an opinion on the risk.
- No conflicts of interest of any kind, other than any which are disclosed in the report.
- 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.

Assessor Details

Steve Evans has the required training, knowledge and experience to be recognised as a Senior Fire Engineer with the appropriate skill set as indicated in Annex H to PAS 9980:2022.



Steve Evans MIFSM MIFPO AIIRSM MIFireE
Senior Fire Engineer

Level of Assessment

This is a Basic Level Assessment as set out in Clause 13 of the PAS9980:2022, and was reviewed and approved by an individual who through their professional qualifications and memberships held, demonstrates the required competence to assess fire performance in relation to external walls.

Professional Indemnity Insurance

FR Consultants Ltd holds an appropriate level of Professional Indemnity Insurance (PII) that covers the scope of this FRAEW. For full details of the PI Insurance please see overleaf.

Professional Indemnity Insurance Certificate



Verification of Insurance

17 January 2025

To Whom it May Concern

As at the date of this letter, we act as insurance brokers to the below Insured and in this capacity can provide brief details of the Insured's current **Professional Indemnity Insurance**:

NAME OF INSURED:	FR Consultants Limited
PRIMARY POLICY NUMBER:	B0808LON25081347A
PERIOD:	20 January 2025 to 19 January 2026 Both days inclusive local standard time
LIMIT OF INDEMNITY:	GBP 2,000,000 any one claim and in the aggregate inclusive of Costs and Expenses
PRIMARY LEAD INSURER:	DUAL Corporate Risks Limited

This letter is provided for information only and the confirmation given in respect of the insurance policies noted in this letter is given solely as at the date of this letter. Cover is subject to Insurer's policy terms, conditions, limitations and exclusions, and may also be subject to cancellation provisions and warranties.

The issuance of this letter does not make the person or organisation to whom it has been issued an additional insured and confers no rights upon the recipient, nor does it modify in any manner the contract of insurance between the Insured and Insurers.

Without prejudice to the foregoing no assurance is given by us to the adequacy or otherwise of the sums insured / limit of liability / indemnity (as the case may be) under the insurance policies. Nor do we express any view or assume any liability as to the solvency or future ability to pay of any of the insurance companies with whom the insurance policies have been placed. In each case you must rely upon your own assessment of such matters. We cannot comment as to whether the Insured has done or omitted to do anything which has rendered or may render any policy of insurance (including the insurance policies noted in this letter) taken out by it or by any other person in relation to any of the Insured's assets or liabilities void or voidable and you must similarly rely upon your own enquiries in this respect. Where more than one insurer is involved in the placement of cover, not all such insurers may have the same credit rating and the credit ratings of each of such insurers may differ.

Lockton does not accept any liability or responsibility to any third party (including, but not limited to, any person to whom this letter is addressed) in respect of the information provided nor does Lockton have any obligation to advise any changes to or cancellation of the insurances described.

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This letter shall be governed by and shall be construed in accordance with English law and the courts of England and Wales shall have exclusive jurisdiction.

We trust that this information is sufficient for your purposes. However, should you require additional detail this can be provided upon agreement from the Insured.

Yours faithfully

SIGNED:

DATED: 17 January 2025

PRINT NAME: Jordan Dodd
For and on behalf of Lockton Companies LLP

SIGNED:

DATED: 17 January 2025

PRINT NAME: Robert Riches
For and on behalf of Lockton Companies LLP

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22/10/2025

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24/10/2025

Document History

Date	Version	Issued By	Details
31/10/2025	1	Rachel Southin	1st issue
06/11/2025	2	Ross Willoughby	Remediation to balconies added.

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	Relevant
Fire Risk Assessment (22/04/2022)Tri Fire	Received	Relevant
Fire Strategy Report	Not Received	
Building / Floor Plans (16/06/2015)Electrical Services Fire & Access Control Layout C2611-E11/E10/E09/E12/E13 MVS Building Services	Received	Relevant
Evacuation Plans	Not Received	
Personal Emergency Evacuation Plans (PEEPs)	Not Received	
Operations and Maintenance Manuals detailing Fire Doors, Emergency Lighting etc.	Not Received	
Site Plans (27/04/2016)WCEC Architects 15-120 Parking Plan	Received	Relevant
As-Built Drawings	Not Received	
Elevation Drawings	Not Received	
Section Drawings	Not Received	
Product Datasheets	Not Received	
Material Specifications (External Wall Construction)	Not Received	
BR135 (BS8414) Certificate	Not Received	
Fire Door Survey	Not Received	
FRA Type 4 / Compartmentation Survey	Not Received	
Asbestos Register (21/11/2014)Certificate of Asbestos Fibre Identification TVS Analysis	Received	Relevant
Fire Safety Manuals	Not Received	
External Facade Review, Horsham Gate 2 (11/01/2021)Tri Fire	Received	Relevant
Combined Fire/Health & Safety Risk Assessment (17/01/2024)Cardinus Risk Management	Received	Relevant

Executive Summary

External Wall Systems and Attachments on the Building

6 areas were inspected on the 19 May 2025 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.

13 Items	Effect	Risk
Wall Construction Brickwork (5ZRKE4) Covers 8% of the building 0 m proximity to ground	Positive	Low
Wall Construction Aluminium Spandrel Panel (IZDE91) Covers 27% of the building > 2 m proximity to ground	Neutral	Low
Wall Construction Render to masonry (QKVHNC) Covers 20% of the building 0 m proximity to ground	Neutral	Low
Wall Construction Render system with EPS Insulation (VF9VA9) Covers 45% of the building 0 m proximity to ground	Neutral	Medium
Attachment Canopy (ACMXE5)	Neutral	Low
Attachment Inset Balcony (CLP2CI)	Neutral	Low
Attachment Juliet Balcony (HCXCZL)	Positive	Low
Attachment Bolt-On Balcony (M28C37)	Negative	High
Attachment Inset Balcony (FMXQH5)	Negative	High
Plasterboard HURDI7		

13 Items

Effect

Risk

External Window
Top, Mid, Side Hung Casements (SLZG6S)

Neutral

Low

External Door
Single Leaf Entrance Doors (18F6V3)

Neutral

Low

External Door
Balcony sliding door (3UIR5L)

Neutral

Low

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

Risk Factor Analysis

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

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

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

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

Risk Factor Analysis 1

This analysis looks at façade configuration **EJ7V8F** which includes wall construction **5ZRKE4**.

1) Impact of Risk from Fire Performance: Brickwork: This external wall system consisted of a cavity wall with two leaves of masonry, each with a thickness greater than 75mm. The outer leaf was made of brick, followed by an empty cavity. The inner leaf was made of blockwork.

The brick external leaf and the block inner leaf are non-combustible and will not ignite or sustain fire. Both the external surface and the cavity are unlikely to form a route for the spread of fire.

The fire spread is likely to be at a rate within expectations for a building of this height, or at a greater, but nevertheless, tolerable rate, given the circumstances at the building in question.

2) Impact of Risk from Façade Configuration: There were no cavity barriers or closers around most door and window openings, and timber frames could be seen in the cavity. However 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.

There are no combustible materials within this external wall construction. Therefore the risk of fire spread is low.

The 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.

The fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.

3) Impact of Risk from Fire Strategy / Fire Hazards: Building Classification and Strategy

The premises are classified as general needs housing and operate under a Stay Put policy. This strategy aligns with national guidance for purpose-built blocks of flats, where a fire is expected to remain contained within the flat of origin through effective compartmentation measures.

Means of Escape

The building is served by two staircases with a lobby approach, which provides the principal means of escape for residents and access for firefighting personnel.

Compartmentation

Compartmentation is generally in line with the expectations for a block of this type, providing an adequate level of separation between flats and communal areas to contain fire and smoke.

Smoke Control

A smoke vent is located within the means of escape and smoke vents are present in communal areas on subsequent floors to assist with smoke extraction and ventilation in the event of a fire.

Detection and Alarm Systems

Within individual flats, domestic smoke and heat alarms are installed to Category LD2 or LD3 standard, in accordance with BS 5839-6.

Firefighting Access and Facilities

Adequate access for firefighting vehicles was observed at the front of the premises, providing suitable approach routes for emergency response.

Rising Mains:

A dry rising main is available throughout the building with outlets all on storey levels and externally.

Specific Fire Risks

There is open-sided car parking directly below the building in line with the external wall and balconies that have combustible cladding.

Refuse was stored in close proximity to the external wall.

Nearest Fire Station

The nearest fire station is Horsham Fire Station, approximately 2.8 miles from the premises, with an estimated response time of 9 minutes under normal traffic conditions (Google Maps).

The fire and rescue service is likely to be able to intervene effectively to enable occupants to reach safety in time.

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

- a) Extremely rapid external fire spread is unlikely to occur; and/or
- b) Fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or
- c) Fire is unlikely to spread in such a way that the communal means of escape will be compromised before occupants can safely use them to escape; and/or
- d) Fire and rescue services are likely to be able to intervene effectively to enable occupants to reach safety in time.

Therefore, this wall type is a tolerable, Low risk.



Risk Factor Analysis 2

This analysis looks at façade configuration 2RYU1W which includes wall construction IZDE91.

1) Impact of Risk from Fire Performance: Aluminium Spandrel Panel: The spandrel panels comprised aluminium (PPC) skins sandwiching a PUR core. They were followed by a cavity filled with glass wool insulation leading to a plasterboard.

There were no cavity barriers at the compartment walls and at the window opening.

The fire spread is likely to be at a rate within expectations for a building of this height, or at a greater, but nevertheless, tolerable rate, given the circumstances at the building in question.

2) Impact of Risk from Façade Configuration: The external surface of the spandrel panels is made of materials of limited combustibility or better with a low potential to ignite and sustain fires or contribute to the spread of fire. The PUR core within the spandrel panels is combustible. This being said the PUR core is encapsulated by the inner and outer panel of aluminium and situated within a framing system ensuring that none of the combustible insulation is exposed.

All other materials within this external wall system are non-combustible therefore the risk of fire spread is low.

The 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.

The fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.

3) Impact of Risk from Fire Strategy / Fire Hazards: Building Classification and Strategy

The premises are classified as general needs housing and operate under a Stay Put policy. This strategy aligns with national guidance for purpose-built blocks of flats, where a fire is expected to remain contained within the flat of origin through effective compartmentation measures.

Means of Escape

The building is served by two staircases with a lobby approach, which provides the principal means of escape for residents and access for firefighting personnel.

Compartmentation

Compartmentation is generally in line with the expectations for a block of this type, providing an adequate level of separation between flats and communal areas to contain fire and smoke.

Smoke Control

A smoke vent is located within the means of escape and smoke vents are present in communal areas on subsequent floors to assist with smoke extraction and ventilation in the event of a fire.

Detection and Alarm Systems

Within individual flats, domestic smoke and heat alarms are installed to Category LD2 or LD3 standard, in accordance with BS 5839-6.

Firefighting Access and Facilities

Adequate access for firefighting vehicles was observed at the front of the premises, providing suitable approach routes for emergency response.

Rising Mains:

A dry rising main is available throughout the building with outlets all on storey levels and externally.

Specific Fire Risks

There is open-sided car parking directly below the building in line with the external wall and balconies that have combustible cladding.

Refuse was stored in close proximity to the external wall.

Nearest Fire Station

The nearest fire station is Horsham Fire Station, approximately 2.8 miles from the premises, with an estimated response time of 9 minutes under normal traffic conditions (Google Maps).

The fire and rescue service is likely to be able to intervene effectively to enable occupants to reach safety in time.

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

a) Extremely rapid external fire spread is unlikely to occur; and/or

b) Fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or

c) Fire is unlikely to spread in such a way that the communal means of escape will be compromised before occupants can safely use them to escape; and/or

d) Fire and rescue services are likely to be able to intervene effectively to enable occupants to reach safety in time.

Therefore, this wall type is a tolerable, Low risk.



Risk Factor Analysis 3

This analysis looks at façade configuration **DA7TR9** which includes wall construction **QKVHNC**.

1) Impact of Risk from Fire Performance: Render to masonry: This external wall system was a double-leaf masonry wall comprising a layer of cementitious render applied to an outer brickwork leaf. The inner leaf was made of blockwork.

There was PUR insulation noted around the concrete column with the cavity.

All materials within this external wall system are non-combustible and will not ignite or sustain fire within its surface and the cavity, apart from the PUR insulation that is encapsulated by two leaves of non-combustible masonry.

The fire spread is likely to be at a rate within expectations for a building of this height, or at a greater, but nevertheless, tolerable rate, given the circumstances at the building in question.

2) Impact of Risk from Façade Configuration: 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.

It is expected that this construction will not contribute to the development or spread of any fires.

The 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.

The fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.

3) Impact of Risk from Fire Strategy / Fire Hazards: Building Classification and Strategy

The premises are classified as general needs housing and operate under a Stay Put policy. This strategy aligns with national guidance for purpose-built blocks of flats, where a fire is expected to remain contained within the flat of origin through effective compartmentation measures.

Means of Escape

The building is served by two staircases with a lobby approach, which provides the principal means of escape for residents and access for firefighting personnel.

Compartmentation

Compartmentation is generally in line with the expectations for a block of this type, providing an adequate level of separation between flats and communal areas to contain fire and smoke.

Smoke Control

A smoke vent is located within the means of escape and smoke vents are present in communal areas on subsequent floors to assist with smoke extraction and ventilation in the event of a fire.

Detection and Alarm Systems

Within individual flats, domestic smoke and heat alarms are installed to Category LD2 or LD3 standard, in accordance with BS 5839-6.

Firefighting Access and Facilities

Adequate access for firefighting vehicles was observed at the front of the premises, providing suitable approach routes for emergency response.

Rising Mains:

A dry rising main is available throughout the building with outlets all on storey levels and externally.

Specific Fire Risks

There is open-sided car parking directly below the building in line with the external wall and balconies that have combustible cladding.

Refuse was stored in close proximity to the external wall.

Nearest Fire Station

The nearest fire station is Horsham Fire Station, approximately 2.8 miles from the premises, with an estimated response time of 9 minutes under normal traffic conditions (Google Maps).

The fire and rescue service is likely to be able to intervene effectively to enable occupants to reach safety in time.

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

- a) Extremely rapid external fire spread is unlikely to occur; and/or
- b) Fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or
- c) Fire is unlikely to spread in such a way that the communal means of escape will be compromised before occupants can safely use them to escape; and/or
- d) Fire and rescue services are likely to be able to intervene effectively to enable occupants to reach safety in time.

Therefore, this wall type is a tolerable, Low risk.



Risk Factor Analysis 4

This analysis looks at façade configuration 6LE3ZB which includes wall construction VF9VA9.

1) Impact of Risk from Fire Performance: Render system with EPS Insulation: An insulated render system forms the majority of the façade on all elevations. It consisted of a silicone based render applied to EPS insulation which was affixed to a solid double skinned blockwork inner leaf.

The fire spread is likely to be at a rate within expectations for a building of this height, or at a greater, but nevertheless, tolerable rate, given the circumstances at the building in question.

2) Impact of Risk from Façade Configuration: The render surface is made of materials of limited combustibility with a low potential to ignite and sustain fires or contribute to the spread of fire. However, the EPS insulation it is applied to is combustible. The EPS is located between materials that are of limited combustibility and non-combustible.

The other combustible material is PUR insulation but again this is located between two non combustible materials reducing the risk of fire spread.

This external wall system did have a mineral wool fire break in the location surveyed preventing vertical fire spread across compartment lines.

The fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.

3) Impact of Risk from Fire Strategy / Fire Hazards: Building Classification and Strategy

The premises are classified as general needs housing and operate under a Stay Put policy. This strategy aligns with national guidance for purpose-built blocks of flats, where a fire is expected to remain contained within the flat of origin through effective compartmentation measures.

Means of Escape

The building is served by two staircases with a lobby approach, which provides the principal means of escape for residents and access for firefighting personnel.

Compartmentation

Compartmentation is generally in line with the expectations for a block of this type, providing an adequate level of

separation between flats and communal areas to contain fire and smoke.

Smoke Control

A smoke vent is located within the means of escape and smoke vents are present in communal areas on subsequent floors to assist with smoke extraction and ventilation in the event of a fire.

Detection and Alarm Systems

Within individual flats, domestic smoke and heat alarms are installed to Category LD2 or LD3 standard, in accordance with BS 5839-6.

Firefighting Access and Facilities

Adequate access for firefighting vehicles was observed at the front of the premises, providing suitable approach routes for emergency response.

Rising Mains:

A dry rising main is available throughout the building with outlets all on storey levels and externally.

Specific Fire Risks

There is open-sided car parking directly below the building in line with the external wall and balconies that have combustible cladding.

Refuse was stored in close proximity to the external wall.

Nearest Fire Station

The nearest fire station is Horsham Fire Station, approximately 2.8 miles from the premises, with an estimated response time of 9 minutes under normal traffic conditions (Google Maps).

The fire and rescue service is likely to be able to intervene effectively to enable occupants to reach safety in time.

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

- a) Extremely rapid external fire spread is unlikely to occur; and/or
- b) Fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or
- c) Fire is unlikely to spread in such a way that the communal means of escape will be compromised before occupants can safely use them to escape; and/or
- d) Fire and rescue services are likely to be able to intervene effectively to enable occupants to reach safety in time.

Therefore, this wall type is a tolerable, medium risk.



Overall Building Risk Rating



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

1 Recommended Remediation

General Remediations

We recommend that the decorative timber be removed and replaced with a material that achieves an A2-s1, d0 Euroclass rating or better to prevent fire spread across the balconies and to the external wall. Or an alternative option would be to restrict parking in areas where the balconies overhang car parking spaces.

To prevent fire spread from one balcony to another.

1 Recommended Interim Measure

We recommend that any interim measures are commenced within three months of receipt of this report.

General Interim Measures

Instruct a competent person to undertake a fire door survey to the building in its entirety.

Excessive gaps between door leaf and frame were observed.

Premises Description

Address

Horsham Gate Two , North Street, Horsham, RH13 5TU

Location Postcodes

RH13 5TU

The Building

Building Over 18 Metres

No

Total Building Height (Metres)

12 (based on number of storeys)

Height to Uppermost Building Level (Metres)

9 (based on number of storeys)

Number of Storeys

4

Number of Apartments

100 - total of all three blocks

Type of Occupancy

General residential

Age of Building Construction

Original office buildings built in 1980's converted in 2015 to residential Planning Application DC/14/2415 for 45 flats

Applicable Edition of Approved Document B at Time of Construction or Renovation

Approved Document B 2006 with 2013 Amendments

The maximum height of the building was measured to be approximately 12 (based on number of storeys) metres, with a habitable top storey level calculated to be approximately 9 (based on number of storeys) metres to the slab level of the uppermost floor.

Wall Constructions

Photo	Wall Construction	Build-up
	Brickwork (5ZRKE4) Covers 8% of the building 0 m proximity to ground	• Surface Finish (Brickwork) • Cavity • Inner Leaf (Brickwork) • Internal Surface Finish (Skimmed Surface)
	Aluminium Spandrel Panel (IZDE91) Covers 27% of the building > 2 m proximity to ground	• Panel Outer Skin (Aluminium) • Panel Core (PUR Insulation) • Panel Inner Skin (Aluminium) • Cavity • Plasterboard Fixing Method (Metal stud) • Insulation (Glass Wool) • Internal Surface Finish
	Render to masonry (QKVHNC) Covers 20% of the building 0 m proximity to ground	• Surface Finish (Render) • Outer Leaf (with applied surface finish) (Brickwork) • Cavity • Insulation (PUR Insulation) • Inner Leaf Support (Backing Wall) (Reinforced Concrete)
	Render system with EPS Insulation (VF9VA9) Covers 45% of the building 0 m proximity to ground	• Surface Finish (Render) • Outer Leaf (with applied surface finish) (EPS Insulation) • Cavity • Inner Leaf (Brickwork) • Cavity • Fixing Method • Inner Leaf (Blockwork) • Insulation (PUR Insulation) • Floor Slab (Reinforced Concrete)

Wall Construction: Brickwork

Construction Reference
5ZRKE4

This wall construction covers 8% of the building. It was identified by wall inspection NZD3LU. The build-up, cavity barrier, and floor slab information is taken directly from inspection NZD3LU. See the Inspections section of this report for full inspection details.

Construction

Brickwork (5ZRKE4)
Covers 8% of the building
0 m proximity to ground

Effect

Positive

Risk

Low

Build-Up

4 Elements

Thickness/Depth

Material

Rating (BS EN13501)

Surface Finish

104mm

Brickwork

A1 - Non-Combustible

See plasterboard area for the rest of the information.

Cavity

70mm

Inner Leaf

102mm

Brickwork

A1 - Non-Combustible

Internal Surface
Finish

1mm

Skimmed Surface

A1 - Non-Combustible

Cavity Barriers

1 Cavity Barrier

Photo Ref.

Window Aperture

5, 6, 7, 8, 9, 10,
11, 12

Brickwork closes beside the window frame, the window frame itself is timber at 60mm thickness.

Fire Performance

K.1 General

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

NOTE - Calorific values are to be based on BS EN ISO 1716 test results.

Positive

K.2 External Surfaces

Class A1/ A2

Note - This is a broad indicator only, and needs to be seen in the context of the particular component to which it relates and where it is within the wall build-up. It is likely that a more in-depth technical assessment would be needed to fully utilise the values for individual components and their contribution to the wall build-up as a whole.

Positive

K.3 Facings/Cladding Panels

Other rigid non-combustible facings (Typically:

- Brick;
- Ceramic;
- Stone;
- Clay tile;
- Concrete;
- Stone wool cladding boards; and
- Cement fibre boards)

Masonry or concrete at least 75 mm thick*

Positive

K.4 Panel Construction

No gaps between panels.

Note - Gap sizes can be highly influential in terms of performance in large-scale tests, and the values given above are only intended to be indicative of their possible influence as a factor in a risk-based assessment. Panels can take different forms: flat sheets and cassettes. Different methods of fixing are possible, including hook-on, rivet fixed and adhesive bonded. These variations can result in differences in fire performance in certain fire tests.

Note - Gaps might result from loss of integrity of sealant during fire exposure.

Positive

K.5 Cavities

Facings into the cavity at least Class A2.

Positive

K.7 Substrate

Masonry, <75 mm thick.

Positive

K.12 Internal Finishes

It is not anticipated that internal finishes of external walls would be a notable risk factor, especially if they comprise a paint or wallpaper finish. However, it is possible that there might be finishes that, in the context of the overall wall build up, might influence fire spread to the extent that they constitute a negative risk factor and would need to be considered.

Neutral

Material Build-up Observations

This external wall system consisted of a cavity wall with two leaves of masonry, each with a thickness greater than 75mm. The outer leaf was made of brick, followed by an empty cavity. The inner leaf was made of blockwork.

There were no cavity barriers or closers around most door and window openings, and timber frames could be seen in the cavity.

The brick external leaf and the block inner leaf are non-combustible and will not ignite or sustain fire. Both the external surface and the cavity are unlikely to form a route for the spread of fire.

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 recognised that this form of wall construction might be mixed with other forms of wall construction.

This form of construction constitutes the lowest risk form of construction that might be used for external walls, for the following reasons:

- Each leaf of the wall, provided it is formed of masonry/concrete at least 75 mm thick and is generally well constructed, is likely to provide at least 30 minutes of 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.

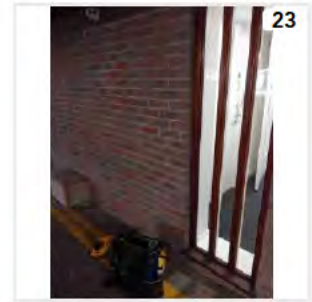
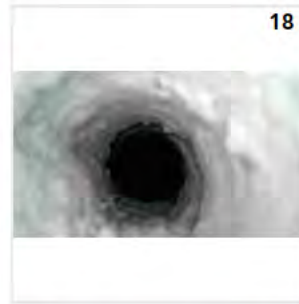
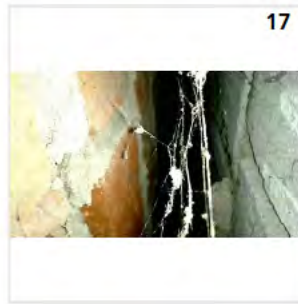
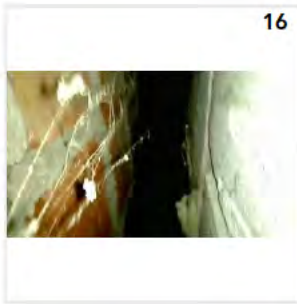
This is illustrated in Diagram 8.2 in ADB Volume 1:2019 [8]. The equivalent diagram in Volume 2:2019 [9] is Diagram 9.2.

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.

Photos





Wall Construction: Aluminium Spandrel Panel

Construction Reference
IZDE91

This wall construction covers 27% of the building. It was identified by wall inspection WGBMPE. The build-up, cavity barrier, and floor slab information is taken directly from inspection WGBMPE. See the Inspections section of this report for full inspection details.

Construction	Effect	Risk
Aluminium Spandrel Panel (IZDE91) Covers 27% of the building > 2 m proximity to ground	Neutral	Low

Build-Up

7 Elements	Thickness/Depth	Material	Rating (BS EN13501)
Panel Outer Skin	1mm	Aluminium	A2 - Limited Combustibility
Panel Core	24mm	PUR Insulation	F - Highly Combustible
Panel Inner Skin	1mm	Aluminium	A2 - Limited Combustibility
Cavity			
No measurement as this was the returning wall between apartments			
Plasterboard Fixing Method		Metal stud	A2 - Limited Combustibility
Insulation		Glass Wool	A1 - Non-Combustible
Glasswool insulation is not fully filling the cavity.			
Internal Surface Finish			A2 - Limited Combustibility
Rear of plasterboard			

Cavity Barriers

1 Cavity Barrier

Photo Ref.

Vertical Cavity Barrier	24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40
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Glass wool insulation partially fills the cavity behind the aluminium spandrel panel.

Fire Performance

K.1 General

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

NOTE - Calorific values are to be based on BS EN ISO 1716 test results.

Positive

K.2 External Surfaces

Class A1/ A2

Note - This is a broad indicator only, and needs to be seen in the context of the particular component to which it relates and where it is within the wall build-up. It is likely that a more in-depth technical assessment would be needed to fully utilise the values for individual components and their contribution to the wall build-up as a whole.

Positive

K.3 Facings/Cladding Panels

Metal-faced panels with a combustible backing (Typically, aluminium on plywood).

Negative

K.4 Panel Construction

No gaps between panels.

Note - Gap sizes can be highly influential in terms of performance in large-scale tests, and the values given above are only intended to be indicative of their possible influence as a factor in a risk-based assessment. Panels can take different forms: flat sheets and cassettes. Different methods of fixing are possible, including hook-on, rivet fixed and adhesive bonded. These variations can result in differences in fire performance in certain fire tests.

Note - Gaps might result from loss of integrity of sealant during fire exposure.

Positive

K.5 Cavities

Facings into the cavity at least Class A2.

Positive

K.6 Insulation

Thermoplastics (e.g. EPS/XPS) or thermoset polymeric foams that do not form a stable char on fire exposure (e.g. PUR).

Note - Consideration of the thickness of such insulation cannot be taken into account here, but is highly relevant in a more in-depth technical assessment when considering the contribution of the burning insulation to the heat generated in the fire and heat transfer to the rest of the wall build-up.

Negative

Class A1/ A2, Class B Insulation.

Note - This is a broad indicator only. It is likely that a more in-depth technical assessment would be needed to fully utilise the values within the context of the particular wall build-up.

Positive

K.9 Insulated Core Panels

Readily combustible insulation, but only encapsulated in aluminium or other low-melting-point metal.

Negative

K.11 Infill / Spandrel Panels

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

NOTE: Consideration of the thickness and sizes of such panels cannot be taken into account here, but is highly relevant in a more in-depth technical assessment when considering the contribution of burning panels to the heat generated in the fire and heat transfer to the rest of the wall build-up.

Negative

K.12 Internal Finishes

It is not anticipated that internal finishes of external walls would be a notable risk factor, especially if they comprise a paint or wallpaper finish. However, it is possible that there might be finishes that, in the context of the overall wall build up, might influence fire spread to the extent that they constitute a negative risk factor and would need to be considered.

Neutral

Material Build-up Observations

The spandrel panels comprised aluminium (PPC) skins sandwiching a PUR core. They were followed by a cavity filled with glass wool insulation leading to a plasterboard. There were no cavity barriers at the compartment walls and at the window opening.

The external surface of the spandrel panels is made of materials of limited combustibility or better with a low potential to ignite and sustain fires or contribute to the spread of fire. The PUR core within the spandrel panels is highly combustible. The spandrel panels thus form a potential route for the spread of fire and smoke and also present a scope for secondary fires.

PAS Standard Benchmark

L3 Benchmark

Rigid (thermoset) foam insulation

- Polyurethane (PUR)
- Polyisocyanurate (PIR)
- Phenolic

Thermoset foam insulations are combustible, but can offer a wide range of fire performance, depending upon the specific product in question.

Both PUR and PIR can be formulated in a wide variety of ways, so where possible, the assessor needs to identify the product in question. PUR and PIR foams are based upon similar underlying chemistry, but PIR foam generally performs better than PUR due to its having greater thermal stability (more likely to char and less likely to break down into flammable substances).

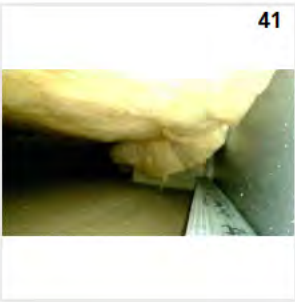
Phenolic foams are generally similar to PIR foams in terms of their fire performance, though their underlying chemistry is different. Where a rigid foam has been engineered for improved fire performance, a foil facing is commonly employed to improve performance further by protecting the foam from direct flame attack. Where a foil-faced foam is used, it is typically necessary to use foil tape to seal any joints so that the underlying foam is not left exposed. The extent to which tape failure that can be accepted needs to be considered in the context of the overall wall construction.

While cavity barriers need to be fixed to substrates offering the same period of fire resistance as the cavity barrier, rigid foams might, in practice, remain in place for long enough to afford a satisfactory delay to fire spread, provided the cavity barrier is not reliant upon the foam itself for support.

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.

Photos



Wall Construction: Render to masonry

Construction Reference
QKVHNC

This wall construction covers 20% of the building. It was identified by wall inspections JBUDD3 and ECZZTK. The build-up, cavity barrier, and floor slab information is taken directly from inspection JBUDD3. See the Inspections section of this report for full inspection details.

Construction	Effect	Risk
Render to masonry (QKVHNC) Covers 20% of the building 0 m proximity to ground	Neutral	Low

Build-Up

5 Elements	Thickness/Depth	Material	Rating (BS EN13501)
Surface Finish	6mm	Render	A2 - Limited Combustibility
Outer Leaf (with applied surface finish)	102mm	Brickwork	A1 - Non-Combustible
Forms part of the original 1980s construction, assumed 102.5mm Brick depth			
Cavity	77mm		
Insulation	20mm	PUR Insulation	F - Highly Combustible
Blue PUR insulation 143mm to PUR 163mm to rear			
Inner Leaf Support (Backing Wall)		Reinforced Concrete	A1 - Non-Combustible

Cavity Barriers

Not required to this Inspection location

Fire Performance

K.1 General

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

NOTE - Calorific values are to be based on BS EN ISO 1716 test results.

Positive

K.2 External Surfaces

Class A1/ A2

Note - This is a broad indicator only, and needs to be seen in the context of the particular component to which it relates and where it is within the wall build-up. It is likely that a more in-depth technical assessment would be needed to fully utilise the values for individual components and their contribution to the wall build-up as a whole.

Positive

K.3 Facings/Cladding Panels

Low HRR

Note - Heat release rate (HRR) is an important indicator of performance, given that it indicates how rapidly heat energy is released in the process of combustion. It is not currently possible to state values here, but studies that compare the HRR of different materials, components and systems in similar conditions can be useful references to enable this factor to be considered.

Positive

K.4 Panel Construction

No gaps between panels.

Note - Gap sizes can be highly influential in terms of performance in large-scale tests, and the values given above are only intended to be indicative of their possible influence as a factor in a risk-based assessment. Panels can take different forms: flat sheets and cassettes. Different methods of fixing are possible, including hook-on, rivet fixed and adhesive bonded. These variations can result in differences in fire performance in certain fire tests.

Note - Gaps might result from loss of integrity of sealant during fire exposure.

Positive

K.5 Cavities

Facings into the cavity at least Class A2.

Positive

K.6 Insulation

Thermoplastics (e.g. EPS/XPS) or thermoset polymeric foams that do not form a stable char on fire exposure (e.g. PUR).

Note - Consideration of the thickness of such insulation cannot be taken into account here, but is highly relevant in a more in-depth technical assessment when considering the contribution of the burning insulation to the heat generated in the fire and heat transfer to the rest of the wall build-up.

Negative

K.7 Substrate

Masonry, <75 mm thick.

Positive

Material Build-up Observations

This external wall system was a double-leaf masonry wall comprising a layer of cementitious render applied to an outer brickwork leaf. The inner leaf was made of blockwork.

There was PUR insulation noted around the concrete column with the cavity.

All materials within this external wall system are non-combustible and will not ignite or sustain fire within its surface and the cavity. It is expected that this construction will not contribute to the development or spread of any fires.

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 recognised that this form of wall construction might be mixed with other forms of wall construction.

This form of construction constitutes the lowest risk form of construction that might be used for external walls, for the following reasons:

- Each leaf of the wall, provided it is formed of masonry/concrete at least 75 mm thick and is generally well constructed, is likely to provide at least 30 minutes of 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.

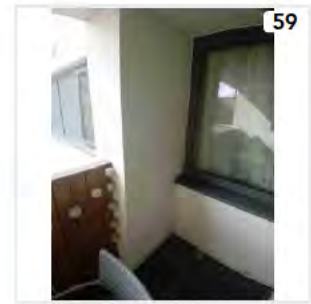
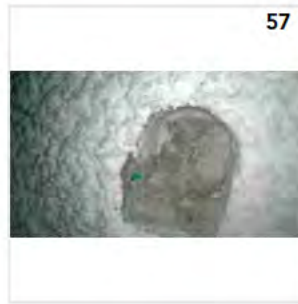
This is illustrated in Diagram 8.2 in ADB Volume 1:2019 [8]. The equivalent diagram in Volume 2:2019 [9] is Diagram 9.2.

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.

Photos





Wall Construction: Render system with EPS Insulation

Construction Reference
VF9VA9

This wall construction covers 45% of the building. It was identified by wall inspection 7B2ALH. The build-up, cavity barrier, and floor slab information is taken directly from inspection 7B2ALH. See the Inspections section of this report for full inspection details.

Construction	Effect	Risk
Render system with EPS Insulation (VF9VA9) Covers 45% of the building 0 m proximity to ground	Neutral	Medium

Build-Up

9 Elements	Thickness/Depth	Material	Rating (BS EN13501)
Surface Finish	4mm	Render	A2 - Limited Combustibility
Outer Leaf (with applied surface finish)	60mm	EPS Insulation	F - Highly Combustible
Grey EPS			
Cavity	60mm		
Inner Leaf	104mm	Brickwork	A2 - Limited Combustibility
Forms part of the original 1980's construction			
Cavity	111mm		
Fixing Method		Fixing Methodology and Material: Brick Ties & nylon fixings	
Inner Leaf	100mm	Blockwork	A1 - Non-Combustible
Forms part of the original 1980's construction			

9 Elements	Thickness/Depth	Material	Rating (BS EN13501)
Insulation	40mm	PUR Insulation	A1 - Non-Combustible
Blue PUR insulation 235 to face - 275mm to rear - floor slab.			
Floor Slab		Reinforced Concrete	
Slab set back at 275mm			

Cavity Barriers

2 Cavity Barriers	Photo Ref.
Horizontal Cavity Barrier	60, 61, 62, 63, 64, 65, 66, 67
Solid state mineral is seen running horizontally through the EPS Zone fully filling the cavity.	
Vertical Cavity Barrier	68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78
Nothing seen closing the cavity at the compartment wall.	

Fire Performance

K.1 General

External wall materials, components/systems and configurations that are combustible, but with the potential to provide adequate fire performance in certain circumstances [Knowledge of fire behaviour from only limited fire tests. For example:

- subject to intermediate-scale tests (e.g. ISO 13785-1, NFPA 285) and/or ad-hoc fire tests, but not large-scale tests; or
- components classified to BS EN 13501-1 but not complete system/configuration.]

Neutral

K.2 External Surfaces

Class E

Note - This is a broad indicator only, and needs to be seen in the context of the particular component to which it relates and where it is within the wall build-up. It is likely that a more in-depth technical assessment would be needed to fully utilise the values for individual components and their contribution to the wall build-up as a whole.

Negative

K.3 Facings/Cladding Panels

Other combustible facing or panel with combustible content (Class C or lower).

Negative

K.4 Panel Construction

No gaps between panels.

Note - Gap sizes can be highly influential in terms of performance in large-scale tests, and the values given above are only intended to be indicative of their possible influence as a factor in a risk-based assessment. Panels can take different forms: flat sheets and cassettes. Different methods of fixing are possible, including hook-on, rivet fixed and adhesive bonded. These variations can result in differences in fire performance in certain fire tests.

Positive

Note - Gaps might result from loss of integrity of sealant during fire exposure.

K.5 Cavities

No cavity barriers present, or cavity barriers are ineffective through poor installation/maintenance.

Note - The minimum fire resistance for a cavity barrier/stop is 30 min integrity/15 min insulation. Proprietary products are made for this purpose, but suitable protection will be provided if the following are present:

- steel at least 0.5 mm thick;
- timber at least 38 mm thick;
- polythene-sleeved mineral wool, or mineral wool slab, installed under compression in the cavity; or
- calcium silicate, cement-based or gypsum-based boards at least 12 mm thick.

Negative

Fire stopping that is present to close gaps in compartmentation provides a higher standard of fire resistance than a cavity barrier/stop.

K.6 Insulation

Thermoplastics (e.g. EPS/XPS) or thermoset polymeric foams that do not form a stable char on fire exposure (e.g. PUR).

Note - Consideration of the thickness of such insulation cannot be taken into account here, but is highly relevant in a more in-depth technical assessment when considering the contribution of the burning insulation to the heat generated in the fire and heat transfer to the rest of the wall build-up.

Negative

K.7 Substrate

Masonry, <75 mm thick.

Positive

K.10 ETICS

Any other render system.

Note - The fire performance of ETICS is a specialist area requiring external wall assessors to have relevant expertise. ETICS with specifically formulated renders can achieve classification to BR 135 [15] even with polymeric foam insulation. However, in-depth technical assessment might be necessary where there is reliance on information suggesting that the ETICS on the building is one classified to BR 135 [15] and intrusive inspection has revealed potential installation issues, for example, that could be critical to performance in the particular application.

Negative

K.12 Internal Finishes

It is not anticipated that internal finishes of external walls would be a notable risk factor, especially if they comprise a paint or wallpaper finish. However, it is possible that there might be finishes that, in the context of the overall wall build up, might influence fire spread to the extent that they constitute a negative risk factor and would need to be considered.

Neutral

Material Build-up Observations

An insulated render system forms the majority of the façade on all elevations. It consisted of a silicone-based render applied to EPS insulation, which was affixed to a solid double-skinned blockwork inner leaf.

This external wall system did not have fire breaks in the location surveyed.

The render surface is made of materials of limited combustibility, with a low potential to ignite and sustain fires or contribute to the spread of fire. However, the EPS insulation it is applied to is highly combustible and will assist in the spread of fire and smoke.

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.

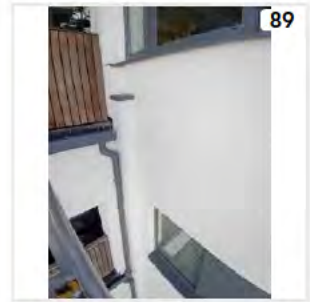
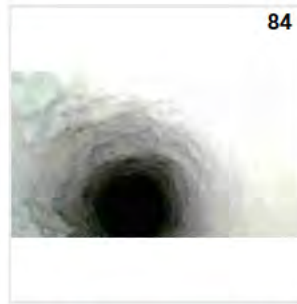
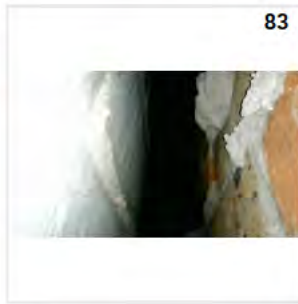
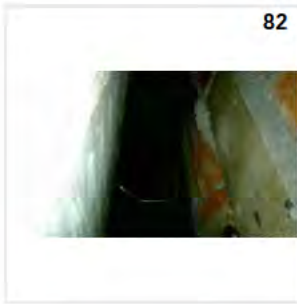
In particular regard to thermoplastic systems, there are historic systems which are known to have had approximately 20 mm thick slivers of EPS insulation passing across the front of fire barriers, providing a route for fire to rapidly circumvent the barriers. It needs to be confirmed by inspection whether 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.

Photos





Attachments & Balconies

Photo

Attachment



Canopy (ACMXE5)
Configuration: Single Unit
Size: Above main entrance



Inset Balcony (CLP2CI)
Configuration: Single Unit
Size: Private balcony spanning only a single compartment



Juliet Balcony (HCXCZL)
Configuration: Single Unit
Size: Private balcony spanning only a single compartment



Bolt-On Balcony (M28C37)
Configuration: Stacked
Size: Private balcony spanning only a single compartment

Photo

Attachment



Inset Balcony (FMXQH5)

Configuration: Single Unit

Size: Private balcony spanning only a single compartment

Attachment: Canopy

Attachment Reference
ACMXE5

Details

Configuration

Single Unit

Framework/Structure

Steel struts

Size

Above main entrance

Balustrade/Handrail

Rendered with stainless steel handrail with aluminium capping

Decking & Supports

Paving slab stairs to front door

Soffit

uPVC and grey painted timber

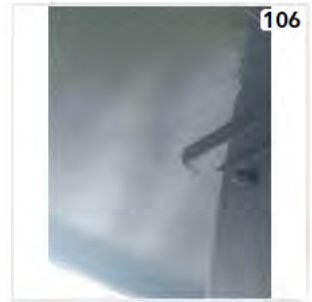
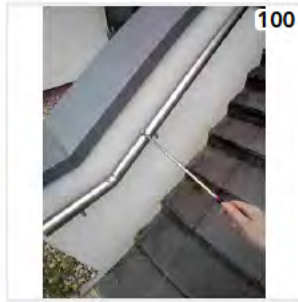
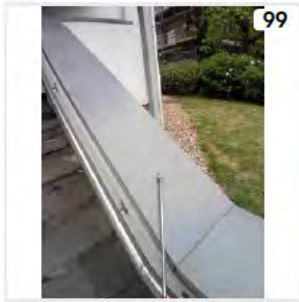
Fire Engineer Comments

The canopy located at the front entrance door spans a small percentage of the external wall. As this area forms part of the escape from the premises it should remain sterile at all times reducing the fire loading and risk of fire spread. The only combustible materials in its construction is the uPVC and timber soffit.

Neutral

Photos





Attachment: Inset Balcony

Attachment Reference
CLP2CI

Details

Configuration

Single Unit

Size

Private balcony spanning only a single compartment

Decking & Supports

Brickwork

Framework/Structure

Rendered with a brickwork deck

Balustrade/Handrail

Render with aluminium capping

Soffit

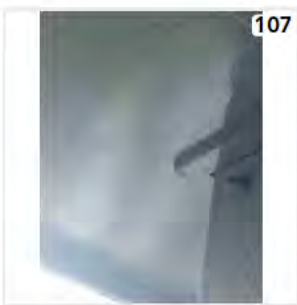
uPVC

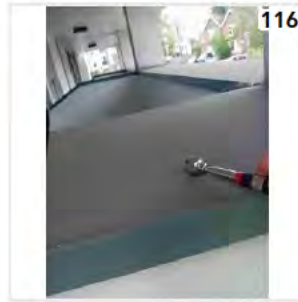
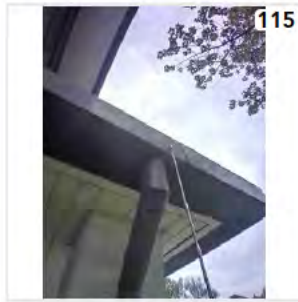
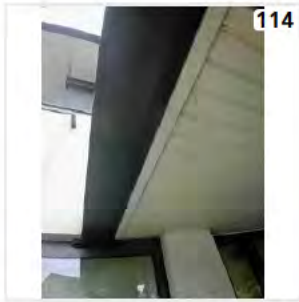
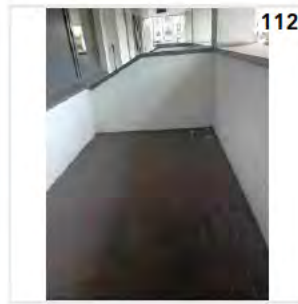
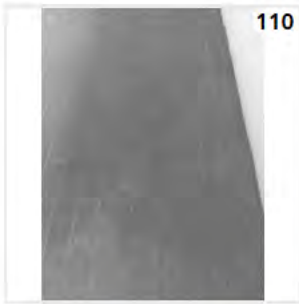
Fire Engineer Comments

The balcony located at the front entrance door spans a small percentage of the external wall. As this area forms part of the escape from the premises, it should remain sterile at all times, reducing the fire loading and risk of fire spread. The only combustible materials in its construction is the uPVC soffit.

Neutral

Photos





Attachment: Juliet Balcony

Attachment Reference
HCXCZL

Details

Configuration

Single Unit

Framework/Structure

Steel

Size

Private balcony spanning only a single compartment

Balustrade/Handrail

Glass balustrade

Decking & Supports

Boted on

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.

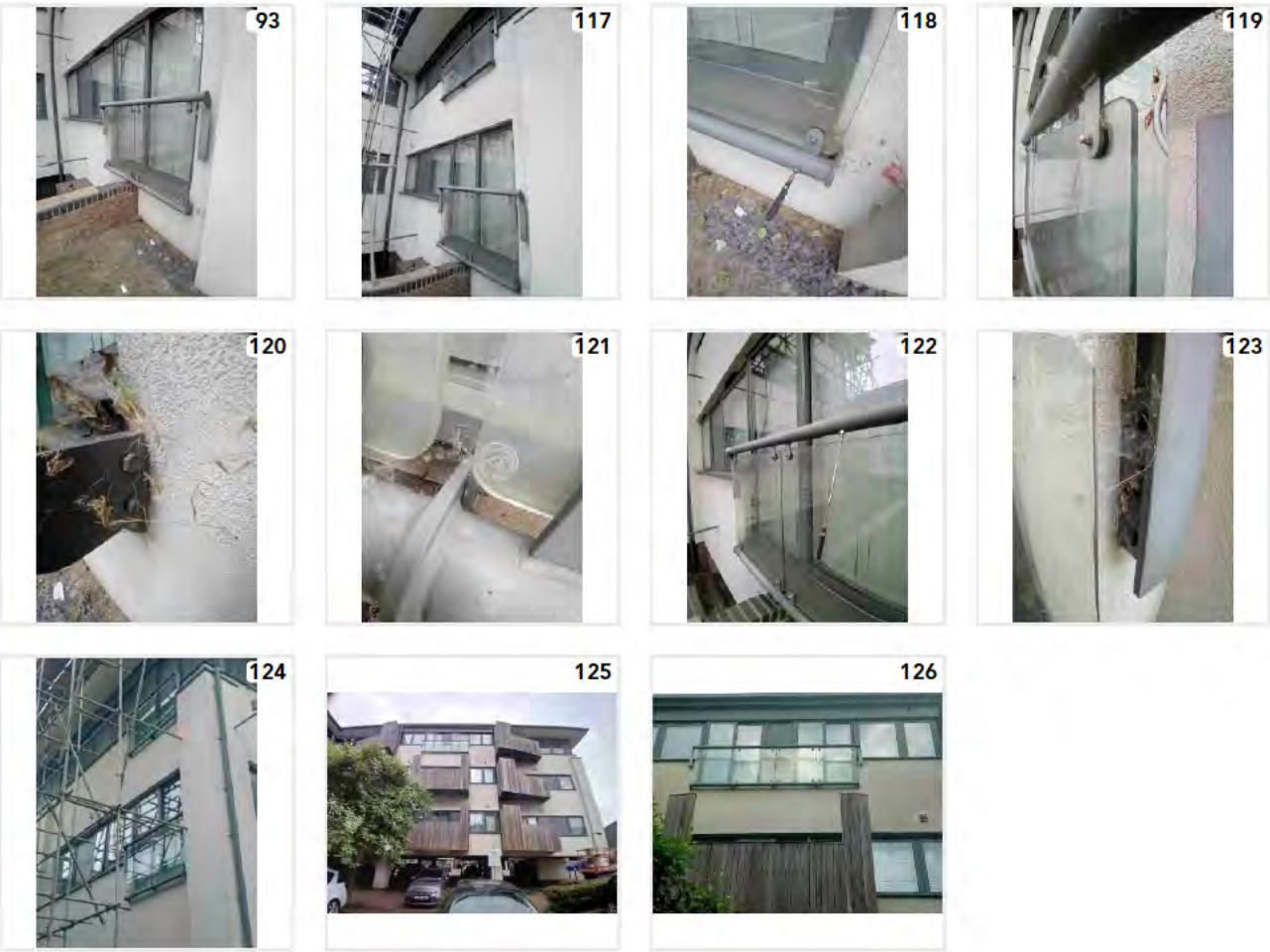
Aside from the above, means of escape external walkways (a form of balcony) are not within the scope of this PAS, as any risk associated with these would need to be considered as part of the overarching FRA.

Fire Engineer Comments

The Juliet balconies are of limited extent that no personal items or furniture can be stored on them reducing their fire loading and the risk of fire spread. There are no combustibile materials within their construction. Therefore, the risk of fire spread is low.

Positive

Photos



Attachment: Bolt-On Balcony

Attachment Reference
M28C37

Details

Configuration	Framework/Structure
Stacked	Steel and timber
Size	Balustrade/Handrail
Private balcony spanning only a single compartment	Timber
Decking & Supports	Soffit
Composite decking	Timber

Details

Vast areas of vertical decorative timber surrounding each balcony in stacked configuration, EPS render adjacent to timber planks.

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:

- 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);
- 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
- 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.

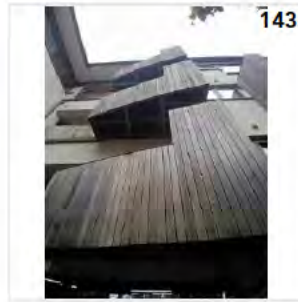
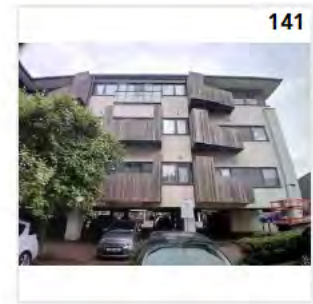
Fire Engineer Comments

The balconies are vertically aligned and are clad in combustible timber on their exterior. There is open side car parking directly below that presents a risk of fire spread. The balconies are fixed to the external facade, that is a EPS render system. If the decorative timber on the balcony were to become ignited, it could spread to the external wall. Whilst the deck of the balconies are composite decking, no information has been supplied on the fire rating of the composite deck. Therefore in our opinion, there is a risk of fire spreading from one balcony to another and spreading to the external wall. We recommend an immediate ban on the use of all cooking appliances and smoking across all balconies. We would also recommend that the decorative timber be removed and replaced with a material that achieves an Euroclass A2-s1, d0 or better to prevent fire spread across the balconies and to the external wall.

Negative

Photos





Attachment: Inset Balcony

Attachment Reference
FMXQH5

Details

Configuration

Single Unit

Framework/Structure

Timber

Size

Private balcony spanning only a single compartment

Balustrade/Handrail

Timber

Details

Vast areas of vertical decorative timber surrounding each balcony in stacked configuration, EPS render adjacent to timber planks.

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.

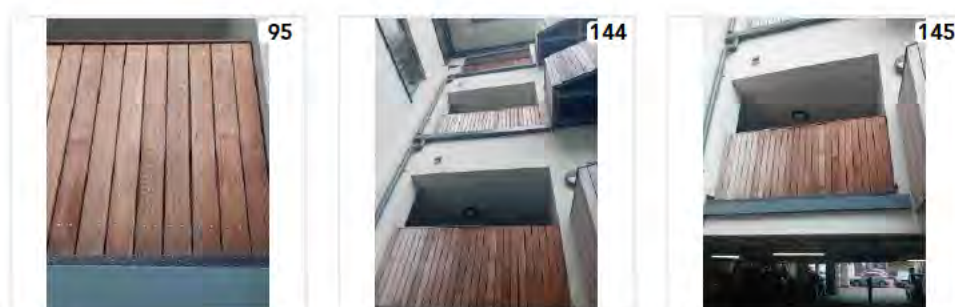
Aside from the above, means of escape external walkways (a form of balcony) are not within the scope of this PAS, as any risk associated with these would need to be considered as part of the overarching FRA.

Fire Engineer Comments

The balconies are vertically aligned and are clad in combustible timber to their exterior. There is open side car parking directly below that presents a risk of fire spread. The balconies are fixed to the external façade that is a EPS render system. The inset balconies are in close proximity to the bolt on balconies so that fire spread from one could negatively impact the other. If the decorative timber on the balcony was to become ignited it could spread to the external wall. Whilst the deck of the balconies are composite decking no information has been supplied to the fire rating of the composite deck. Therefore, in our opinion there is a risk of fire spread leap frogging from one balcony to another and spreading to the external wall. We would recommend an immediate ban on the use of all cooking appliances and smoking across all balconies. We would also recommend that the decorative timber be removed and replaced with a material that achieves an A2-s1, d0 euro class rating or better to prevent fire spread across the balconies and to the external wall.

Negative

Photos



Plasterboard

Photo Plasterboard



HURDI7

Plasterboard: HURDI7

Plasterboard Reference
HURDI7

Details

Inspection Height

Under 18m (Sixth Storey or below)

Thickness (mm)

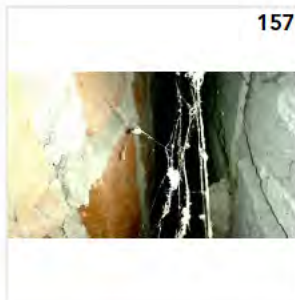
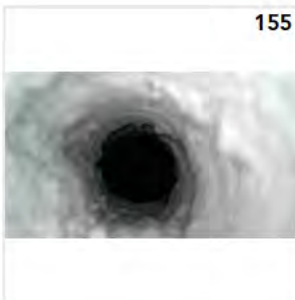
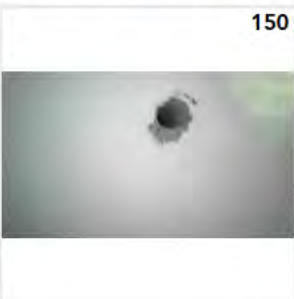
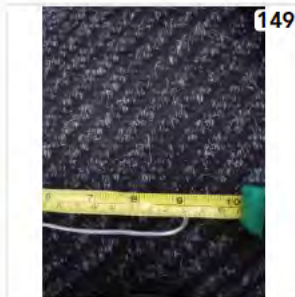
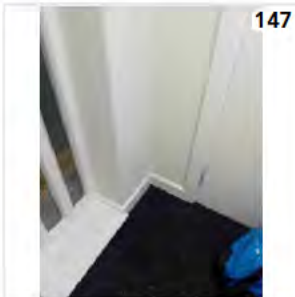
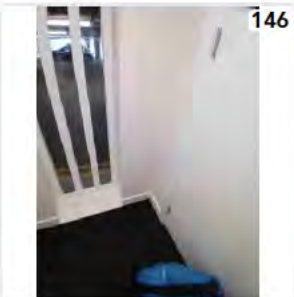
160

Details

Car park entrance - Out to Brickwork.

1mm painted finish, 160mm blockwork , 70mm cavity, brickwork.

Additional Photos



158



159



160



161



162



163



164



165



166



External Windows

Photo

External Window



Top, Mid, Side Hung Casements (SLZG6S)

External Window: Top, Mid, Side Hung Casements

External Window Reference
SLZG6S

Details

Surface Material

Aluminium

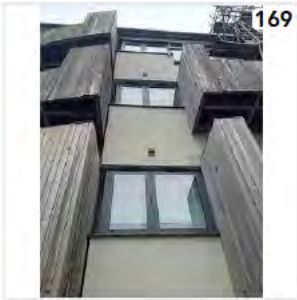
Frame Material

Aluminium

Infill / Panel Material

Toughened Glass

Photos



External Doors

Photo

External Door



Single Leaf Entrance Doors (18F6V3)



Balcony sliding door (3UIR5L)

External Door: Single Leaf Entrance Doors

External Door Reference
18F6V3

Details

Surface Material

Aluminium

Frame Material

Aluminium

Infill / Panel Material

Toughened Glass

Photos



External Door: Balcony sliding door

External Door Reference
3UIR5L

Details

Surface Material

Aluminium

Frame Material

Aluminium

Infill / Panel Material

Toughened Glass

Photos



Specific Fire Observations

We recommend an immediate ban on the use of all cooking appliances and smoking across all balconies. We also recommend that the decorative timber be removed and replaced with a material that achieves an A2 Euroclass rating or better to prevent fire spread across the balconies and to the external wall. Or an alternative option would be to restrict parking in areas where the balconies overhang car parking spaces.

Fire Strategy

Strategy & Hazard Risk Factors

F.1 Occupancy

General needs housing

NOTE - In general needs housing, there might well be occupants with varying degrees of physical disability in line with the general population. Unless the accommodation is predominantly occupied by people requiring assistance to escape in a fire, it would remain a neutral risk factor.

Neutral

F.2 Evacuation

Stay put

Photo Ref. 174, 175

Neutral

F.3 Escape Route Design

Access to more than one staircase for escape

Photo Ref. 176, 177, 178

Positive

F.4 Compartmentation

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

Photo Ref. 179, 180, 181

Neutral

F.5 Smoke Control

AOV in staircase and smoke vents on subsequent floors

Photo Ref. 182, 183, 184, 185, 186, 187, 188, 189, 190

Neutral

F.6 Fire Alarm & Detection

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

NOTE - LD1, LD2, and LD3 are categories of fire detection and fire alarm systems in domestic premises defined in BS 5839-6. ADB ([8], [9]) guidance for new flats recommends at least Category LD3 for any flat, but a higher category in some circumstances, with LD2 being the minimum recommended for existing flats in BS 5839-6.

LD1 has the benefit that fire is detected within any room (other than bathrooms and toilets) with openings onto the external façades of the building, thus giving the early warning of fire to occupants and, potentially, an early summoning of the fire and rescue service.

MCP at all storey exits.

Photo Ref. 191, 192, 193, 194, 195, 196

F.8 - Firefighting Facilities

Adequate access for firefighting vehicles

NOTE - This is where access is possible in line with 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.

Height restriction to undercroft car park at 1.85m.

Neutral

Photo Ref. 197, 198, 199, 200

F.9 Rising Mains

Suitable rising main present

NOTE - While rising mains have been a requirement for new buildings above 18 m in height for many years, their role in terms of the effectiveness of intervention by the fire and rescue service is a significant factor.

NOTE - "Suitable" refers to a main meeting current standards. It is recognised that there will be a variety of standards of rising main present depending upon the age of the building, including dry rising mains in very tall buildings that would currently be required to be fitted with wet rising mains.

Dry rising mains in these situations could be considered as potentially negative unless pressure tests can demonstrate that their performance is satisfactory.

Neutral

Photo Ref. 201, 202, 203, 204, 205

F.11 Specific Fire Hazards

Electric charging points in undercroft car park

Neutral

Photo Ref. 206, 207

Vehicle parking under overhangs.

Negative

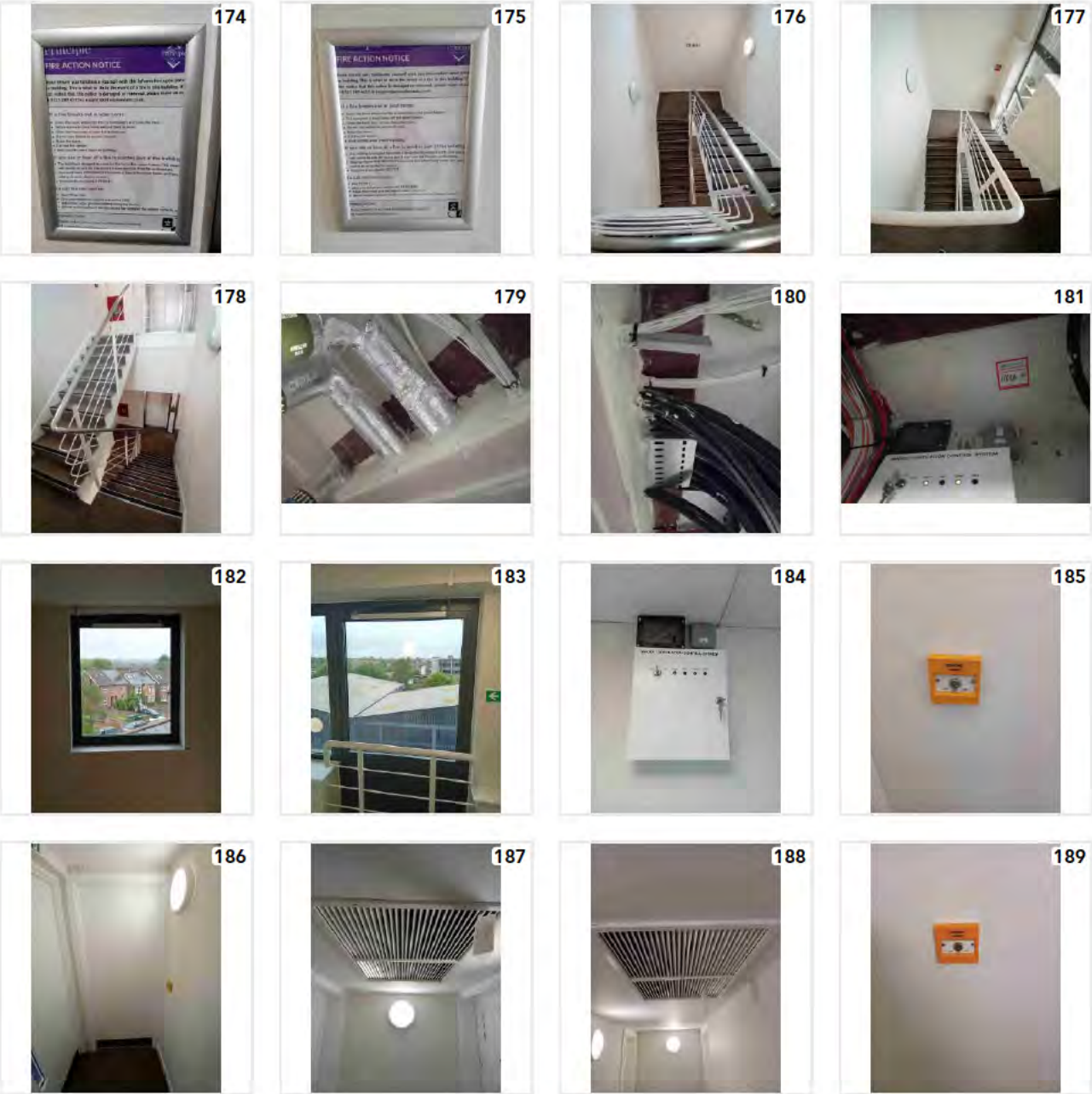
Photo Ref. 208, 209, 210

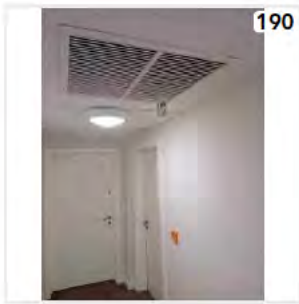
Permanent refuse storage in close proximity to the external walls. This should be moved away from the external wall.

Negative

Photo Ref. 211, 212

Photos

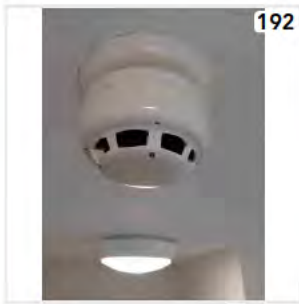




190



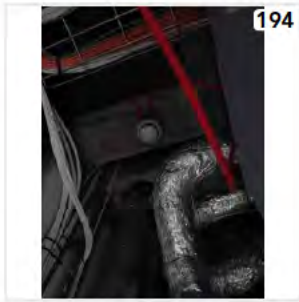
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192



193



194



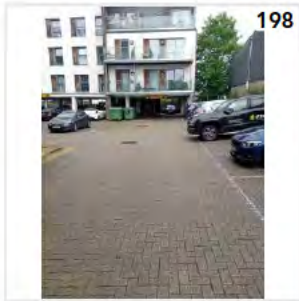
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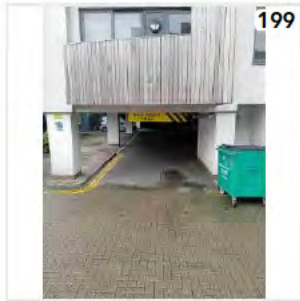
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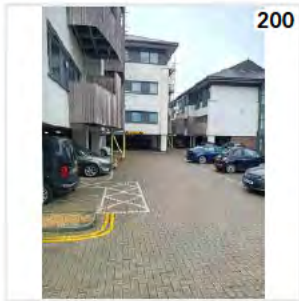
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198



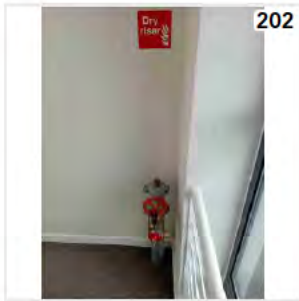
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200



201



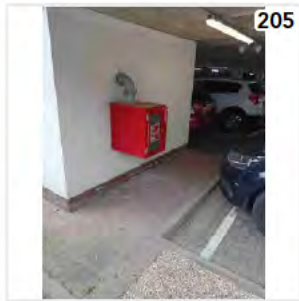
202



203



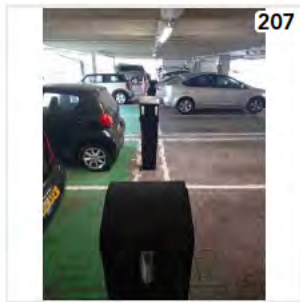
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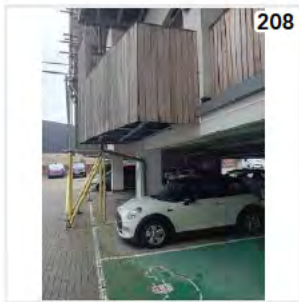
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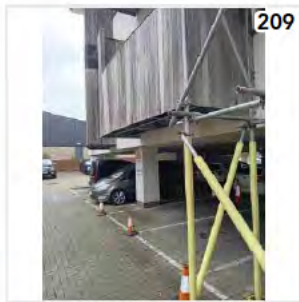
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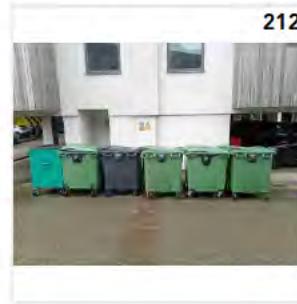
207



208



209



Nearest Fire Station

Horsham fire station RH12 1EP is 2.8 miles with a travel time of 9 minutes in current traffic at 9:30am 22/10/25 (Google Maps)

Façade Configuration: EJ7V8F

Items in Façade

3 Items

Effect

Risk

Wall Construction
Brickwork (5ZRKE4)
Covers 8% of the building
0 m proximity to ground

Positive

Low

Plasterboard
HURDI7

External Door
Single Leaf Entrance Doors (18F6V3)

Neutral

Low

Façade Configuration Risk Factors

N.1 Building Height/Cladding Height

< 11m

Note - These are commonly used trigger heights, but it is important that these are considered, along with all other pertinent factors in the round. Indeed, in risk terms, there is a reducing gradation in risk for heights below 18 m.

On buildings below 18 m in height, the extent of cladding is inherently limited by virtue of the number of storeys. For such buildings, traditionally, there have been no explicit restrictions on the combustibility of the external wall construction and, only in limited circumstances, any requirements relating to the reaction to fire classification of surfaces; it has still been necessary to provide cavity barrier protection, where applicable. It is therefore possible, and indeed likely, that rapid external fire spread would occur in buildings where elements of the external walls are combustible.

It is reasonable to expect that an assessment of the fire risk posed by external walls of low-rise blocks of flats (buildings below 18 m in height) ought normally to place the building in the low-risk category. However, with current knowledge of the burning behaviour of certain materials and how the configuration of these on the building can promote rapid fire spread at a rate much greater than previously anticipated for low-rise buildings, it is possible that an external wall assessor might place the risk in the medium risk category, albeit still considering the risk tolerable.

Where extremely rapid fire spread is likely (e.g. where Category 3 ACM is present or there is excessive use of timber or other combustible materials configured in such a way as to promote unusually rapid and extensive fire spread), this would suggest that fire spread would be at a rate far greater than previously considered acceptable for a low-rise building, with the conclusion that the risk is unacceptably high. Issues around deficiencies in the construction of the walls might also lead an external wall assessor to conclude that further and more in-depth technical assessment might be necessary to refine the risk.

Concerns regarding effective intervention by the fire and rescue service might also lead to this conclusion; even in low rise buildings the difficulties of tackling a fire involving external wall construction when operating at ground level using typically available equipment need to be recognised (see Annex E).

Positive

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

<2m.

NOTE At this height, the likelihood of a fire originating externally (e.g. involving a parked vehicle or waste skip started either accidentally or deliberately) igniting the cladding is highly likely.

Negative

N.3 Extent of Cladding

Limited in extent and not vertically aligned, such as to delay significantly fire spread to windows and other openings on upper levels.

Note - In the case of a high-rise building with only partial cladding, the limited extent of combustible cladding might not be materially different, in terms of external fire spread, from the same extent of cladding on a low-rise building. However, its location could lead to a situation that is very different in terms of overall risk because of the difficulty of fighting a fire involving the cladding at that height. This exemplifies the need for consideration of the potential for firefighting by the fire and rescue service. Also, in this situation, even when a high-rise building only has combustible cladding on a limited number of lower floors, a fire involving that cladding could impact on fire protection measures, such as smoke control systems, required to protect the upper floors (see also Annex F).

Positive

N.4 Cavities & Openings

Cavity limited in extent and running horizontally only.

Neutral

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

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

Adjacent to windows and openings onto escape routes, but the same fire could not spread to affect more than one escape route.

(Typically, where there are two or more escape routes which can be used by occupants who all have access to multiple routes).

Neutral

Risk Factor Analysis

1) **Impact of Risk from Fire Performance:** Brickwork: This external wall system consisted of a cavity wall with two leaves of masonry, each with a thickness greater than 75mm. The outer leaf was made of brick, followed by an empty cavity. The inner leaf was made of blockwork.

The brick external leaf and the block inner leaf are non-combustible and will not ignite or sustain fire. Both the external surface and the cavity are unlikely to form a route for the spread of fire.

The fire spread is likely to be at a rate within expectations for a building of this height, or at a greater, but nevertheless, tolerable rate, given the circumstances at the building in question.

2) Impact of Risk from Façade Configuration: There were no cavity barriers or closers around most door and window openings, and timber frames could be seen in the cavity. However 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.

There are no combustible materials within this external wall construction. Therefore the risk of fire spread is low.

The 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.

The fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.

3) Impact of Risk from Fire Strategy / Fire Hazards: Building Classification and Strategy

The premises are classified as general needs housing and operate under a Stay Put policy. This strategy aligns with national guidance for purpose-built blocks of flats, where a fire is expected to remain contained within the flat of origin through effective compartmentation measures.

Means of Escape

The building is served by two staircases with a lobby approach, which provides the principal means of escape for residents and access for firefighting personnel.

Compartmentation

Compartmentation is generally in line with the expectations for a block of this type, providing an adequate level of separation between flats and communal areas to contain fire and smoke.

Smoke Control

A smoke vent is located within the means of escape and smoke vents are present in communal areas on subsequent floors to assist with smoke extraction and ventilation in the event of a fire.

Detection and Alarm Systems

Within individual flats, domestic smoke and heat alarms are installed to Category LD2 or LD3 standard, in accordance with BS 5839-6.

Firefighting Access and Facilities

Adequate access for firefighting vehicles was observed at the front of the premises, providing suitable approach routes for emergency response.

Rising Mains:

A dry rising main is available throughout the building with outlets all on storey levels and externally.

Specific Fire Risks

There is open-sided car parking directly below the building in line with the external wall and balconies that have combustible cladding.

Refuse was stored in close proximity to the external wall.

Nearest Fire Station

The nearest fire station is Horsham Fire Station, approximately 2.8 miles from the premises, with an estimated response time of 9 minutes under normal traffic conditions (Google Maps).

The fire and rescue service is likely to be able to intervene effectively to enable occupants to reach safety in time.

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

- a) Extremely rapid external fire spread is unlikely to occur; and/or
- b) Fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or
- c) Fire is unlikely to spread in such a way that the communal means of escape will be compromised before occupants can safely use them to escape; and/or
- d) Fire and rescue services are likely to be able to intervene effectively to enable occupants to reach safety in time.

Therefore, this wall type is a tolerable, Low risk.



Façade Configuration: 2RYU1W

Items in Façade

4 Items

Effect

Risk

Wall Construction
Aluminium Spandrel Panel (IZDE91)
Covers 27% of the building
> 2 m proximity to ground

Neutral

Low

Attachment
Bolt-On Balcony (M28C37)

Negative

High

Attachment
Inset Balcony (FMXQH5)

Negative

High

External Window
Top, Mid, Side Hung Casements (SLZG6S)

Neutral

Low

Façade Configuration Risk Factors

N.1 Building Height/Cladding Height

< 11m

Note - These are commonly used trigger heights, but it is important that these are considered, along with all other pertinent factors in the round. Indeed, in risk terms, there is a reducing gradation in risk for heights below 18 m.

On buildings below 18 m in height, the extent of cladding is inherently limited by virtue of the number of storeys. For such buildings, traditionally, there have been no explicit restrictions on the combustibility of the external wall construction and, only in limited circumstances, any requirements relating to the reaction to fire classification of surfaces; it has still been necessary to provide cavity barrier protection, where applicable. It is therefore possible, and indeed likely, that rapid external fire spread would occur in buildings where elements of the external walls are combustible.

It is reasonable to expect that an assessment of the fire risk posed by external walls of low-rise blocks of flats (buildings below 18 m in height) ought normally to place the building in the low-risk category. However, with current knowledge of the burning behaviour of certain materials and how the configuration of these on the building can promote rapid fire spread at a rate much greater than previously anticipated for low-rise buildings, it is possible that an external wall assessor might place the risk in the medium risk category, albeit still considering the risk tolerable.

Where extremely rapid fire spread is likely (e.g. where Category 3 ACM is present or there is excessive use of timber or other combustible materials configured in such a way as to promote unusually rapid and extensive fire spread), this would suggest that fire spread would be at a rate far greater than previously considered acceptable for a low-rise building, with the conclusion that the risk is unacceptably high. Issues around deficiencies in the construction of the walls might also lead an external wall assessor to conclude that further and more in-depth technical assessment might be necessary to refine the risk.

Concerns regarding effective intervention by the fire and rescue service might also lead to this conclusion; even in low rise buildings the difficulties of tackling a fire involving external wall construction when operating at ground level using typically available equipment need to be recognised (see Annex E).

Positive

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

2m to 5m.

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

Neutral

N.3 Extent of Cladding

Limited in extent and not vertically aligned, such as to delay significantly fire spread to windows and other openings on upper levels.

Note - In the case of a high-rise building with only partial cladding, the limited extent of combustible cladding might not be materially different, in terms of external fire spread, from the same extent of cladding on a low-rise building. However, its location could lead to a situation that is very different in terms of overall risk because of the difficulty of fighting a fire involving the cladding at that height. This exemplifies the need for consideration of the potential for firefighting by the fire and rescue service. Also, in this situation, even when a high-rise building only has combustible cladding on a limited number of lower floors, a fire involving that cladding could impact on fire protection measures, such as smoke control systems, required to protect the upper floors (see also Annex F).

Positive

N.4 Cavities & Openings

Cavity limited in extent and running horizontally only.

Neutral

N.5 Infill / Spandrel Panels

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

Note - The above relates to panels that could, due to their combustible facing or content, contribute to fire spread. Non-combustible panels might serve to divide a façade and positively reduce the scope for fire spread where other parts of the walls are combustible. Spandrel and infill panels are terms often used interchangeably for panels within a window or curtain wall framing system. However, spandrel can denote a panel that, by virtue of being between the sill of a window and the head of a window below it, spans a floor of the building.

Thus, where floors are compartment floors, the significance of such panels lies in the potential for fire spread to bypass the compartment floor.

Note - The above is only indicative of some of the considerations relating to infill/spandrel panels. It does not address all potential situations where panels are present, such as in curtain wall systems also incorporating glazing.

Neutral

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

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

Adjacent to windows and openings onto escape routes, but the same fire could not spread to affect more than one escape route.

(Typically, where there are two or more escape routes which can be used by occupants who all have access to multiple routes).

Neutral

N.11 Attachments

Timber (or other combustible) balconies, with aggravating features. (For example:

- without protection from the underside; and
- adjacent to timber or other combustible wall panelling).

Negative

Risk Factor Analysis

1) Impact of Risk from Fire Performance: Aluminium Spandrel Panel: The spandrel panels comprised aluminium (PPC) skins sandwiching a PUR core. They were followed by a cavity filled with glass wool insulation leading to a plasterboard.

There were no cavity barriers at the compartment walls and at the window opening.

The fire spread is likely to be at a rate within expectations for a building of this height, or at a greater, but nevertheless, tolerable rate, given the circumstances at the building in question.

2) Impact of Risk from Façade Configuration: The external surface of the spandrel panels is made of materials of limited combustibility or better with a low potential to ignite and sustain fires or contribute to the spread of fire. The PUR core within the spandrel panels is combustible. This being said the PUR core is encapsulated by the inner and outer panel of aluminium and situated within a framing system ensuring that none of the combustible insulation is exposed.

All other materials within this external wall system are non-combustible therefore the risk of fire spread is low.

The 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.

The fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.

3) Impact of Risk from Fire Strategy / Fire Hazards: Building Classification and Strategy

The premises are classified as general needs housing and operate under a Stay Put policy. This strategy aligns with national guidance for purpose-built blocks of flats, where a fire is expected to remain contained within the flat of origin through effective compartmentation measures.

Means of Escape

The building is served by two staircases with a lobby approach, which provides the principal means of escape for residents and access for firefighting personnel.

Compartmentation

Compartmentation is generally in line with the expectations for a block of this type, providing an adequate level of separation between flats and communal areas to contain fire and smoke.

Smoke Control

A smoke vent is located within the means of escape and smoke vents are present in communal areas on subsequent floors to assist with smoke extraction and ventilation in the event of a fire.

Detection and Alarm Systems

Within individual flats, domestic smoke and heat alarms are installed to Category LD2 or LD3 standard, in accordance with BS 5839-6.

Firefighting Access and Facilities

Adequate access for firefighting vehicles was observed at the front of the premises, providing suitable approach routes for emergency response.

Rising Mains:

A dry rising main is available throughout the building with outlets all on storey levels and externally.

Specific Fire Risks

There is open-sided car parking directly below the building in line with the external wall and balconies that have combustible cladding.

Refuse was stored in close proximity to the external wall.

Nearest Fire Station

The nearest fire station is Horsham Fire Station, approximately 2.8 miles from the premises, with an estimated response time of 9 minutes under normal traffic conditions (Google Maps).

The fire and rescue service is likely to be able to intervene effectively to enable occupants to reach safety in time.

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

- a) Extremely rapid external fire spread is unlikely to occur; and/or
- b) Fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or
- c) Fire is unlikely to spread in such a way that the communal means of escape will be compromised before occupants can safely use them to escape; and/or
- d) Fire and rescue services are likely to be able to intervene effectively to enable occupants to reach safety in time.

Therefore, this wall type is a tolerable, Low risk.



Façade Configuration: DA7TR9

Items in Façade

5 Items

Effect

Risk

Wall Construction
Render to masonry (QKVHNC)
Covers 20% of the building
0 m proximity to ground

Neutral

Low

Attachment
Bolt-On Balcony (M28C37)

Negative

High

Attachment
Inset Balcony (FMXQH5)

Negative

High

External Door
Single Leaf Entrance Doors (18F6V3)

Neutral

Low

External Door
Balcony sliding door (3UIR5L)

Neutral

Low

Façade Configuration Risk Factors

N.1 Building Height/Cladding Height

< 11m

Note - These are commonly used trigger heights, but it is important that these are considered, along with all other pertinent factors in the round. Indeed, in risk terms, there is a reducing gradation in risk for heights below 18 m.

On buildings below 18 m in height, the extent of cladding is inherently limited by virtue of the number of storeys. For such buildings, traditionally, there have been no explicit restrictions on the combustibility of the external wall construction and, only in limited circumstances, any requirements relating to the reaction to fire classification of surfaces; it has still been necessary to provide cavity barrier protection, where applicable. It is therefore possible, and indeed likely, that rapid external fire spread would occur in buildings where elements of the external walls are combustible.

It is reasonable to expect that an assessment of the fire risk posed by external walls of low-rise blocks of flats (buildings below 18 m in height) ought normally to place the building in the low-risk category. However, with current knowledge of the burning behaviour of certain materials and how the configuration of these on the building can promote rapid fire spread at a rate much greater than previously anticipated for low-rise buildings, it is possible that an external wall assessor might place the risk in the medium risk category, albeit still considering the risk tolerable.

Where extremely rapid fire spread is likely (e.g. where Category 3 ACM is present or there is excessive use of timber or other combustible materials configured in such a way as to promote unusually rapid and extensive fire spread), this would suggest that fire spread would be at a rate far greater than previously considered acceptable for a low-rise building, with the conclusion that the risk is unacceptably high. Issues around deficiencies in the construction of the walls might also lead an external wall assessor to conclude that further and more in-depth technical assessment might be necessary to refine the risk.

Concerns regarding effective intervention by the fire and rescue service might also lead to this conclusion; even in low rise buildings the difficulties of tackling a fire involving external wall construction when operating at ground level using typically available equipment need to be recognised (see Annex E).

Positive

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

<2m.

NOTE At this height, the likelihood of a fire originating externally (e.g. involving a parked vehicle or waste skip started either accidentally or deliberately) igniting the cladding is highly likely.

Negative

N.3 Extent of Cladding

Limited in extent and not vertically aligned, such as to delay significantly fire spread to windows and other openings on upper levels.

Note - In the case of a high-rise building with only partial cladding, the limited extent of combustible cladding might not be materially different, in terms of external fire spread, from the same extent of cladding on a low-rise building. However, its location could lead to a situation that is very different in terms of overall risk because of the difficulty of fighting a fire involving the cladding at that height. This exemplifies the need for consideration of the potential for firefighting by the fire and rescue service. Also, in this situation, even when a high-rise building only has combustible cladding on a limited number of lower floors, a fire involving that cladding could impact on fire protection measures, such as smoke control systems, required to protect the upper floors (see also Annex F).

Positive

N.4 Cavities & Openings

Continuous vertically running cavity without cavity barriers or fire stops.

Negative

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

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

Adjacent to windows and openings onto escape routes, but the same fire could not spread to affect more than one escape route.

(Typically, where there are two or more escape routes which can be used by occupants who all have access to multiple routes).

Neutral

N.11 Attachments

Timber (or other combustible) balconies, with aggravating features. (For example:

- without protection from the underside; and
- adjacent to timber or other combustible wall panelling).

Negative

Risk Factor Analysis

1) Impact of Risk from Fire Performance: Render to masonry: This external wall system was a double-leaf masonry wall comprising a layer of cementitious render applied to an outer brickwork leaf. The inner leaf was made of blockwork.

There was PUR insulation noted around the concrete column with the cavity.

All materials within this external wall system are non-combustible and will not ignite or sustain fire within its surface and the cavity, apart from the PUR insulation that is encapsulated by two leaves of non-combustible masonry.

The fire spread is likely to be at a rate within expectations for a building of this height, or at a greater, but nevertheless, tolerable rate, given the circumstances at the building in question.

2) Impact of Risk from Façade Configuration: 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.

It is expected that this construction will not contribute to the development or spread of any fires.

The 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.

The fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.

3) Impact of Risk from Fire Strategy / Fire Hazards: Building Classification and Strategy

The premises are classified as general needs housing and operate under a Stay Put policy. This strategy aligns with national guidance for purpose-built blocks of flats, where a fire is expected to remain contained within the flat of origin through effective compartmentation measures.

Means of Escape

The building is served by two staircases with a lobby approach, which provides the principal means of escape for residents and access for firefighting personnel.

Compartmentation

Compartmentation is generally in line with the expectations for a block of this type, providing an adequate level of separation between flats and communal areas to contain fire and smoke.

Smoke Control

A smoke vent is located within the means of escape and smoke vents are present in communal areas on subsequent floors to assist with smoke extraction and ventilation in the event of a fire.

Detection and Alarm Systems

Within individual flats, domestic smoke and heat alarms are installed to Category LD2 or LD3 standard, in accordance with BS 5839-6.

Firefighting Access and Facilities

Adequate access for firefighting vehicles was observed at the front of the premises, providing suitable approach routes for emergency response.

Rising Mains:

A dry rising main is available throughout the building with outlets all on storey levels and externally.

Specific Fire Risks

There is open-sided car parking directly below the building in line with the external wall and balconies that have combustible cladding.

Refuse was stored in close proximity to the external wall.

Nearest Fire Station

The nearest fire station is Horsham Fire Station, approximately 2.8 miles from the premises, with an estimated response time of 9 minutes under normal traffic conditions (Google Maps).

The fire and rescue service is likely to be able to intervene effectively to enable occupants to reach safety in time.

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

- a) Extremely rapid external fire spread is unlikely to occur; and/or
- b) Fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or
- c) Fire is unlikely to spread in such a way that the communal means of escape will be compromised before occupants can safely use them to escape; and/or
- d) Fire and rescue services are likely to be able to intervene effectively to enable occupants to reach safety in time.

Therefore, this wall type is a tolerable, Low risk.



Façade Configuration: 6LE3ZB

Items in Façade

7 Items	Effect	Risk
Wall Construction Render system with EPS Insulation (VF9VA9) Covers 45% of the building 0 m proximity to ground	Neutral	Medium
Attachment Inset Balcony (CLP2CI)	Neutral	Low
Attachment Juliet Balcony (HCXCZL)	Positive	Low
Attachment Bolt-On Balcony (M28C37)	Negative	High
Attachment Inset Balcony (FMXQH5)	Negative	High
External Door Balcony sliding door (3UIR5L)	Neutral	Low
External Window Top, Mid, Side Hung Casements (SLZG6S)	Neutral	Low

Façade Configuration Risk Factors

N.1 Building Height/Cladding Height

< 11m

Note - These are commonly used trigger heights, but it is important that these are considered, along with all other pertinent factors in the round. Indeed, in risk terms, there is a reducing gradation in risk for heights below 18 m.

On buildings below 18 m in height, the extent of cladding is inherently limited by virtue of the number of storeys. For such buildings, traditionally, there have been no explicit restrictions on the combustibility of the external wall construction and, only in limited circumstances, any requirements relating to the reaction to fire classification of surfaces; it has still been necessary to provide cavity barrier protection, where applicable. It is therefore possible, and indeed likely, that rapid external fire spread would occur in buildings where elements of the external walls are combustible.

It is reasonable to expect that an assessment of the fire risk posed by external walls of low-rise blocks of flats (buildings below 18 m in height) ought normally to place the building in the low-risk category. However, with current knowledge of the burning behaviour of certain materials and how the configuration of these on the building can promote rapid fire spread at a rate much greater than previously anticipated for low-rise buildings, it is possible that an external wall assessor might place the risk in the medium risk category, albeit still considering the risk tolerable.

Where extremely rapid fire spread is likely (e.g. where Category 3 ACM is present or there is excessive use of timber or other combustible materials configured in such a way as to promote unusually rapid and extensive fire spread), this would suggest that fire spread would be at a rate far greater than previously considered acceptable for a low-rise building, with the conclusion that the risk is unacceptably high. Issues around deficiencies in the construction of the walls might also lead an external wall assessor to conclude that further and more in-depth technical assessment might be necessary to refine the risk.

Concerns regarding effective intervention by the fire and rescue service might also lead to this conclusion; even in low rise buildings the difficulties of tackling a fire involving external wall construction when operating at ground level using typically available equipment need to be recognised (see Annex E).

Positive

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

<2m.

NOTE At this height, the likelihood of a fire originating externally (e.g. involving a parked vehicle or waste skip started either accidentally or deliberately) igniting the cladding is highly likely.

Negative

N.3 Extent of Cladding

Entire façade covered.

Note - In the case of a high-rise building with only partial cladding, the limited extent of combustible cladding might not be materially different, in terms of external fire spread, from the same extent of cladding on a low-rise building. However, its location could lead to a situation that is very different in terms of overall risk because of the difficulty of fighting a fire involving the cladding at that height. This exemplifies the need for consideration of the potential for firefighting by the fire and rescue service. Also, in this situation, even when a high-rise building only has combustible cladding on a limited number of lower floors, a fire involving that cladding could impact on fire protection measures, such as smoke control systems, required to protect the upper floors (see also Annex F).

Negative

N.4 Cavities & Openings

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

Positive

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

Any other circumstances where vents pass through a cavity.

Negative

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

Adjacent to windows and openings onto escape routes, but the same fire could not spread to affect more than one escape route.

(Typically, where there are two or more escape routes which can be used by occupants who all have access to multiple routes).

Neutral

N.11 Attachments

Timber (or other combustible) balconies, with aggravating features. (For example:

- without protection from the underside; and
- adjacent to timber or other combustible wall panelling).

Negative

Risk Factor Analysis

1) Impact of Risk from Fire Performance: Render system with EPS Insulation: An insulated render system forms the majority of the façade on all elevations. It consisted of a silicone based render applied to EPS insulation which was affixed to a solid double skinned blockwork inner leaf.

The fire spread is likely to be at a rate within expectations for a building of this height, or at a greater, but nevertheless, tolerable rate, given the circumstances at the building in question.

2) Impact of Risk from Façade Configuration: The render surface is made of materials of limited combustibility with a low potential to ignite and sustain fires or contribute to the spread of fire. However, the EPS insulation it is applied to is combustible. The EPS is located between materials that are of limited combustibility and non-combustible.

The other combustible material is PUR insulation but again this is located between two non combustible materials reducing the risk of fire spread.

This external wall system did have a mineral wool fire break in the location surveyed preventing vertical fire spread across compartment lines.

The fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping.

3) Impact of Risk from Fire Strategy / Fire Hazards: Building Classification and Strategy

The premises are classified as general needs housing and operate under a Stay Put policy. This strategy aligns with national guidance for purpose-built blocks of flats, where a fire is expected to remain contained within the flat of origin through effective compartmentation measures.

Means of Escape

The building is served by two staircases with a lobby approach, which provides the principal means of escape for residents and access for firefighting personnel.

Compartmentation

Compartmentation is generally in line with the expectations for a block of this type, providing an adequate level of separation between flats and communal areas to contain fire and smoke.

Smoke Control

A smoke vent is located within the means of escape and smoke vents are present in communal areas on subsequent floors to assist with smoke extraction and ventilation in the event of a fire.

Detection and Alarm Systems

Within individual flats, domestic smoke and heat alarms are installed to Category LD2 or LD3 standard, in accordance with BS 5839-6.

Firefighting Access and Facilities

Adequate access for firefighting vehicles was observed at the front of the premises, providing suitable approach routes for emergency response.

Rising Mains:

A dry rising main is available throughout the building with outlets all on storey levels and externally.

Specific Fire Risks

There is open-sided car parking directly below the building in line with the external wall and balconies that have combustible cladding.

Refuse was stored in close proximity to the external wall.

Nearest Fire Station

The nearest fire station is Horsham Fire Station, approximately 2.8 miles from the premises, with an estimated response time of 9 minutes under normal traffic conditions (Google Maps).

The fire and rescue service is likely to be able to intervene effectively to enable occupants to reach safety in time.

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

- a) Extremely rapid external fire spread is unlikely to occur; and/or
- b) Fire spread is unlikely to give rise to widespread secondary fires resulting in occupants being significantly harmed or prevented from escaping; and/or
- c) Fire is unlikely to spread in such a way that the communal means of escape will be compromised before occupants can safely use them to escape; and/or
- d) Fire and rescue services are likely to be able to intervene effectively to enable occupants to reach safety in time.

Therefore, this wall type is a tolerable, medium risk.



Plan View



Elevations

Photo

Name

No. of Storeys

213



North Elevation

4 Storeys

214



East Elevation A

4 Storeys

215



North Elevation B

4 Storeys

216



East Elevation B

4 Storeys

217



West Elevation A

4 Storeys

Photo	Name	No. of Storeys
	North Elevation C	4 Storeys
	West Elevation B	4 Storeys
	South Elevation A	3 Storeys

Inspections

Elevation Location

Inspection

Elements



Inspection: ECZZTK
East Elevation A
Area 1
1st floor level - Apartment 231 Balcony -
Compartment Wall

- Surface Finish (Render)
- Outer Leaf (with applied surface finish) (Blockwork)
- Fixing Method
- Cavity
- Inner Leaf Support (Backing Wall) (Red brickwork)



Inspection: N8WQHU
North Elevation A
Aluminium Curtain Walling
Area 2 - Spanning ground floor to 2nd floor level

- Glazed Panels (Glass)
- Frame (Aluminium)



Inspection: 7B2ALH
North Elevation C
Area 3 - Between 1st and 2nd floor level -
Compartment floor and wall

- Surface Finish (Render)
- Outer Leaf (with applied surface finish) (EPS Insulation)
- Cavity
- Inner Leaf (Brickwork)
- Cavity
- Fixing Method
- Inner Leaf (Blockwork)
- Insulation (PUR Insulation)
- Floor Slab (Reinforced Concrete)



Inspection: WGBMPE
West Elevation A
Aluminium Spandrel Panel
Area 4 - 2nd floor level - Aluminium Spandrel
Panel - Compartment Wall

- Panel Outer Skin (Aluminium)
- Panel Core (PUR Insulation)
- Panel Inner Skin (Aluminium)
- Cavity
- Plasterboard Fixing Method (Metal stud)
- Insulation (Glass Wool)
- Internal Surface Finish



Inspection: NZD3LU
West Facing - Carpaek level
Brickwork
Area 5 - Lower ground floor level - Car Park -
Window Aperture

- Surface Finish (Brickwork)
- Cavity
- Inner Leaf (Brickwork)
- Internal Surface Finish (Skimmed Surface)

Elevation Location	Inspection	Elements
	Inspection: JBUDD3 North Elevation A Render Area 6 - Lower ground floor level - Through wall test	• Surface Finish (Render) • Outer Leaf (with applied surface finish) (Brickwork) • Cavity • Insulation (PUR Insulation) • Inner Leaf Support (Backing Wall) (Reinforced Concrete)

Inspection: ECZZTK

Elevation • Location
East Elevation A • Area 1
1st floor level - Apartment 231 Balcony - Compartment Wall



Build-Up

5 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	10mm	Render	221, 222, 223, 224	A2 - Limited Combustibility
Outer Leaf (with applied surface finish)	155mm	Blockwork	225, 226, 227, 228, 229	A1 - Non-Combustible
Fixing Method		Fixing Methodology and Material: Brick Ties	230	
Cavity	100mm		231, 232, 233, 234	
Inner Leaf Support (Backing Wall)	102mm	Red brickwork	235, 236, 237	A1 - Non-Combustible

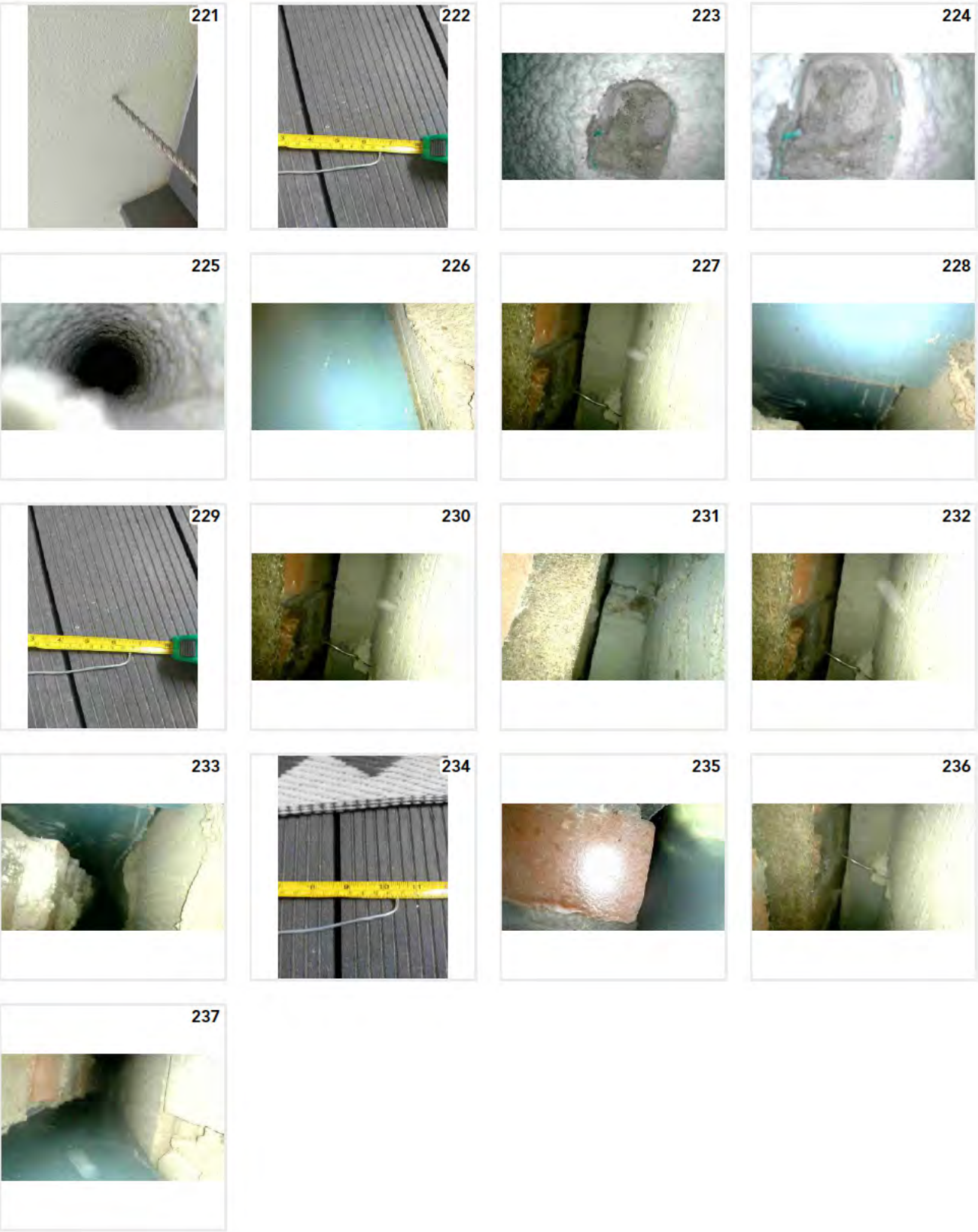
Forms part of the original 1980's construction, assumed 102.5mm Brick depth

Cavity Barriers

1 Cavity Barrier	Photo Ref.
Vertical Cavity Barrier	238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264

Concrete column junction at Compartment Wall location. A concrete column is wrapped with blue rigid PUR insulation. Masonry closes the cavity at the compartment wall.

Build-up Photos



Cavity Barrier Photos





Inspection Photos



Inspection: N8WQHU

Elevation • Location
North Elevation A • Aluminium Curtain Walling
Area 2 - Spanning ground floor to 2nd floor level



Build-Up

2 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Glazed Panels		Glass	267, 268, 269	A1 - Non-Combustible
Frame	65mm	Aluminium	270, 271, 272, 273	A2 - Limited Combustibility

65mm transoms and 50mm millions

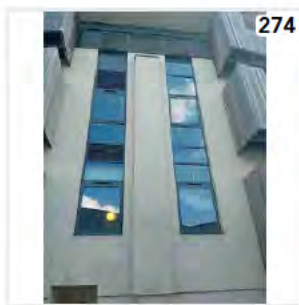
Cavity Barriers

None

Build-up Photos



Inspection Photos



Inspection: 7B2ALH



Elevation • Location

North Elevation C • Area 3 - Between 1st and 2nd floor level - Compartment floor and wall

Build-Up

9 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	4mm	Render	276, 277, 278, 279	A2 - Limited Combustibility
Outer Leaf (with applied surface finish)	60mm	EPS Insulation	280, 281, 282, 283	F - Highly Combustible
Grey EPS				
Cavity	60mm		284, 285, 286	
Inner Leaf	104mm	Brickwork	287, 288, 289, 290, 291	A2 - Limited Combustibility
Forms part of the original 1980's construction				
Cavity	111mm		292, 293, 294, 295	
Fixing Method		Fixing Methodology and Material: Brick Ties & nylon fixings	296, 297, 298	
Inner Leaf	100mm	Blockwork	299, 300, 301, 302	A1 - Non-Combustible
Forms part of the original 1980's construction				
Insulation	40mm	PUR Insulation	303, 304, 305, 306, 307	
Blue PUR insulation 235 to face - 275mm to rear - floor slab.				
Floor Slab		Reinforced Concrete	303, 306	A1 - Non-Combustible
Slab set back at 275mm				

Cavity Barriers

2 Cavity Barriers

Photo Ref.

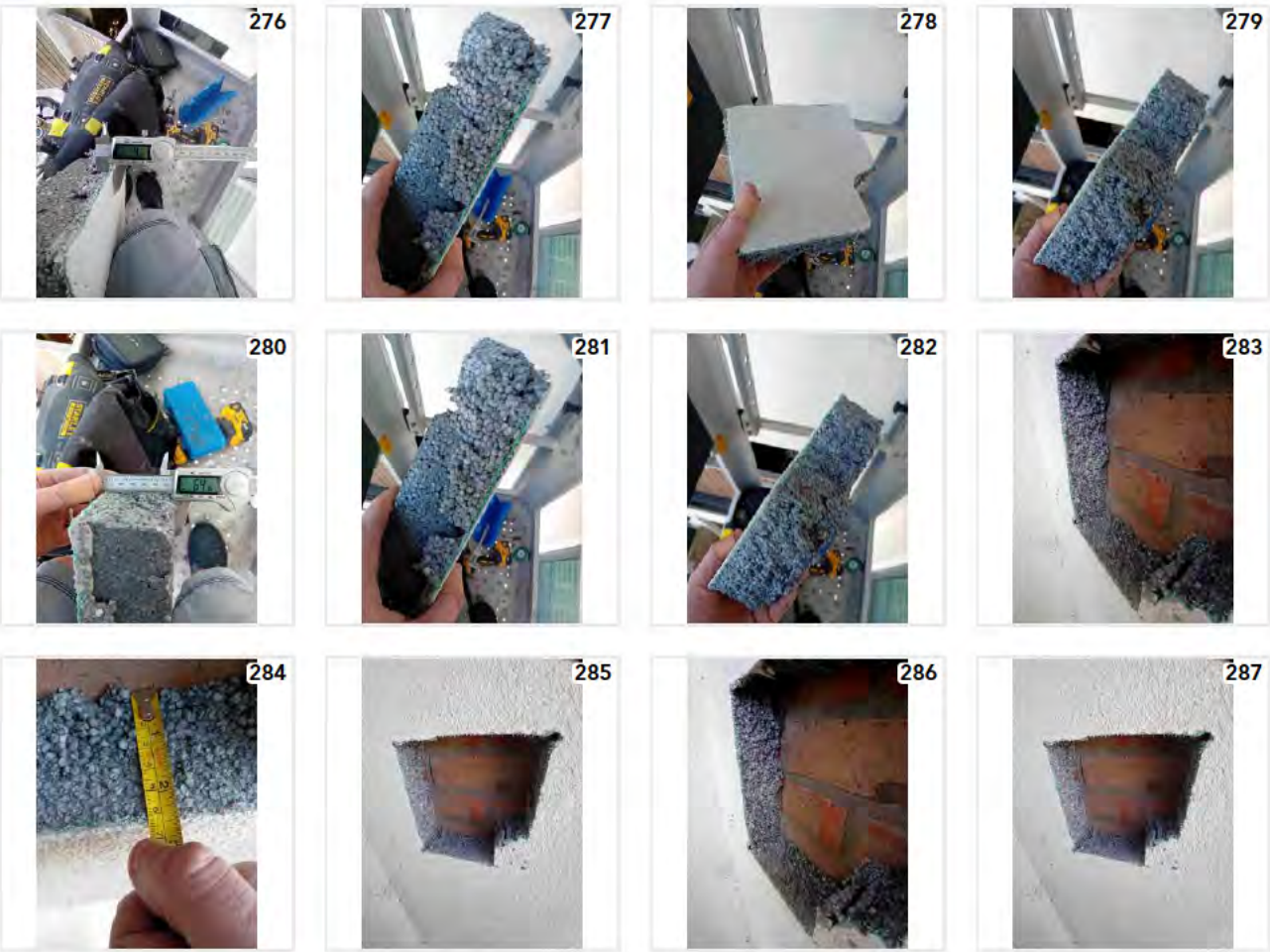
Horizontal Cavity Barrier 60, 61, 62, 63,
64, 65, 66, 67

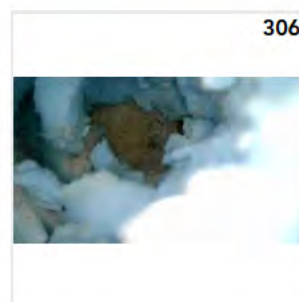
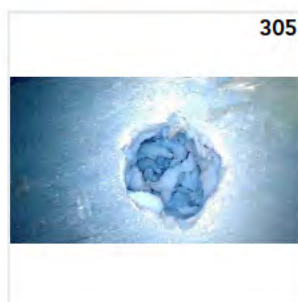
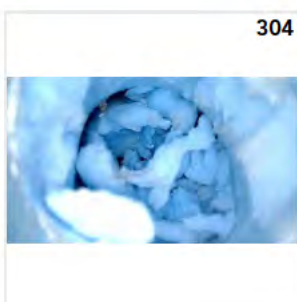
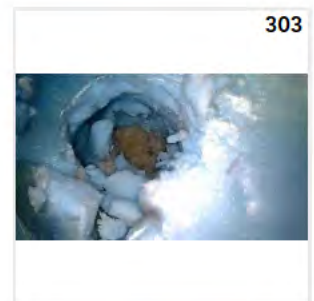
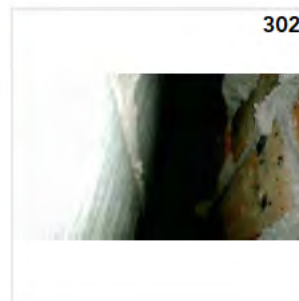
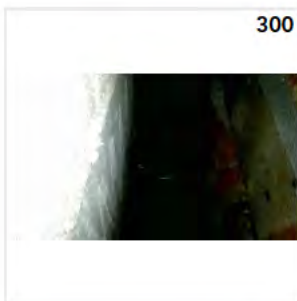
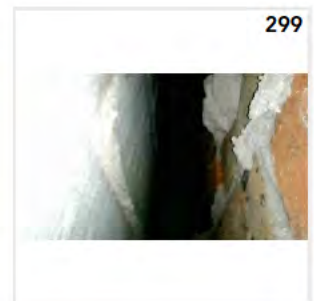
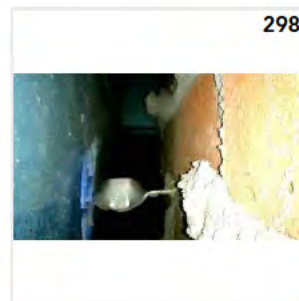
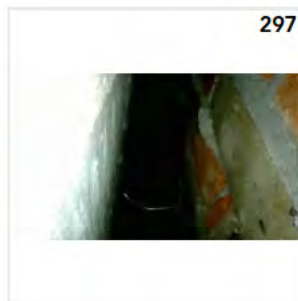
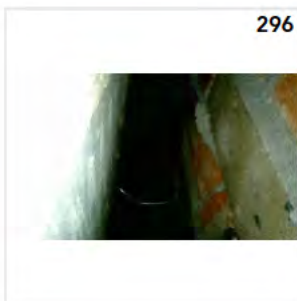
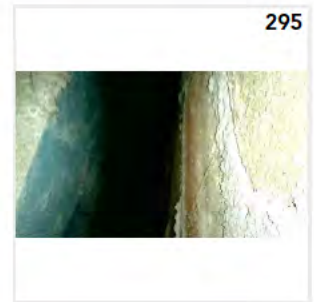
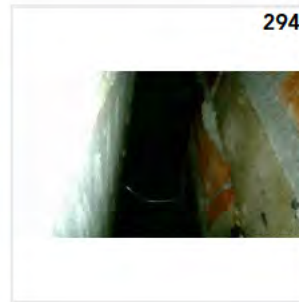
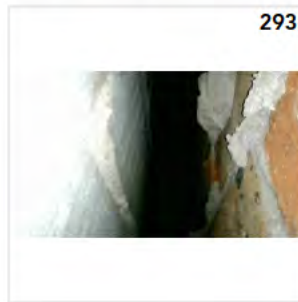
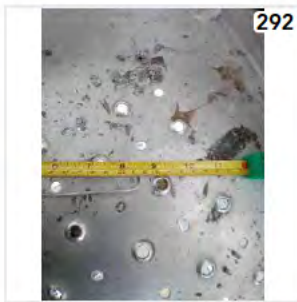
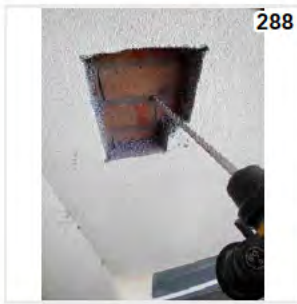
Solid state mineral is seen running horizontally through the EPS Zone fully filling the cavity.

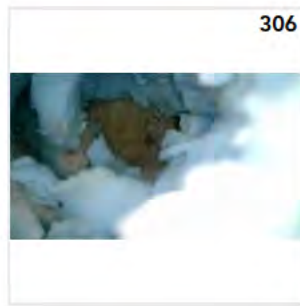
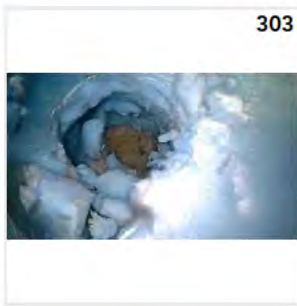
Vertical Cavity Barrier 68, 69, 70, 71,
72, 73, 74, 75,
76, 77, 78

Nothing seen closing the cavity at the compartment wall.

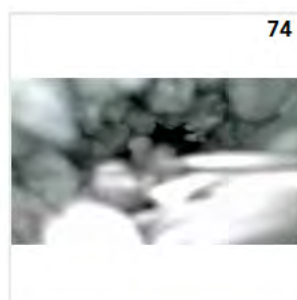
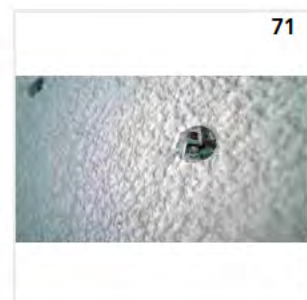
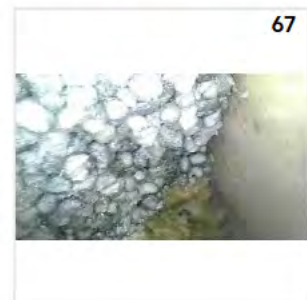
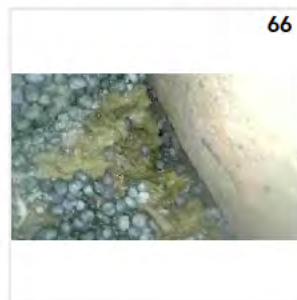
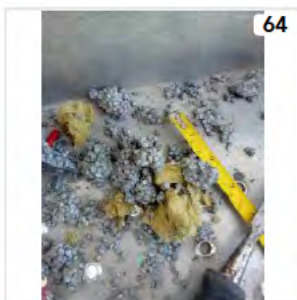
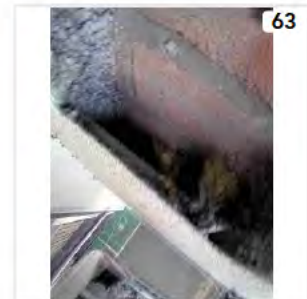
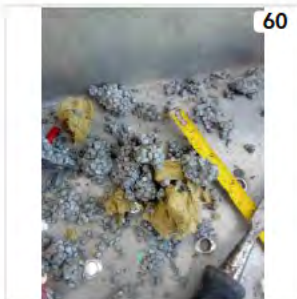
Build-up Photos





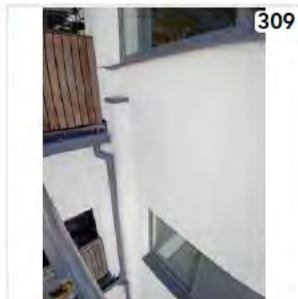
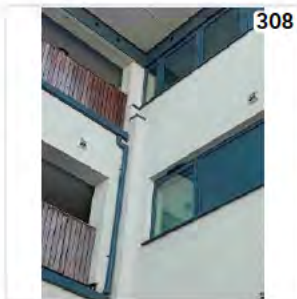


Cavity Barrier Photos





Inspection Photos



Inspection: WGBMPE

Elevation • Location

West Elevation A • Aluminium Spandrel Panel

Area 4 - 2nd floor level - Aluminium Spandrel Panel - Compartment Wall



Build-Up

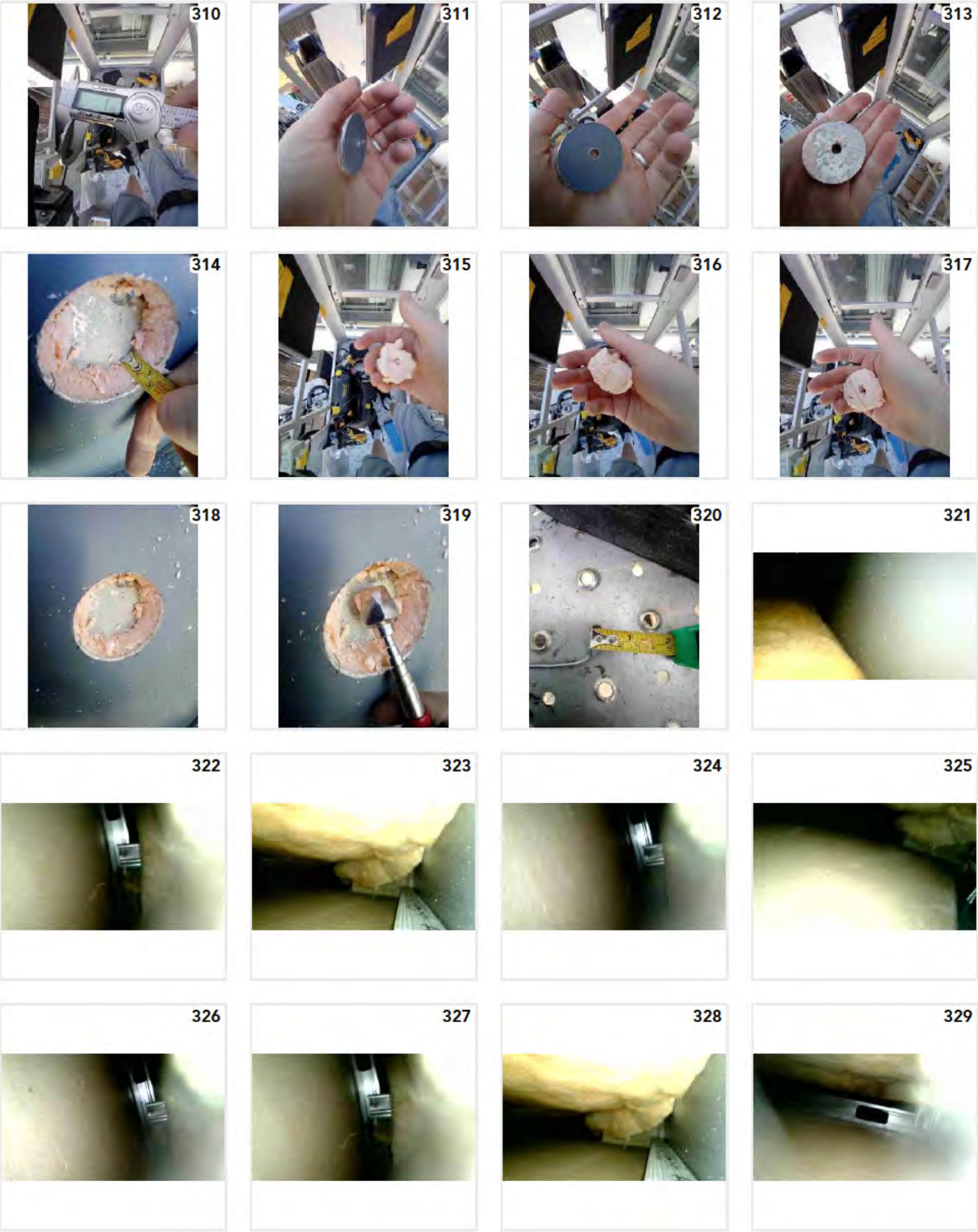
7 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Panel Outer Skin	1mm	Aluminium	310, 311, 312, 313	A2 - Limited Combustibility
Panel Core	24mm	PUR Insulation	314, 315, 316, 317	F - Highly Combustible
Panel Inner Skin	1mm	Aluminium	318, 319, 320, 321	A2 - Limited Combustibility
Cavity			322, 323, 324, 325	
No measurement as this was the returning wall between apartments				
Plasterboard Fixing Method		Metal stud	326, 327, 328, 329	A2 - Limited Combustibility
Insulation		Glass Wool	330, 331, 332, 333	A1 - Non-Combustible
Glasswool insulation is not fully filling the cavity.				
Internal Surface Finish			334, 335, 336	A2 - Limited Combustibility
Rear of plasterboard				

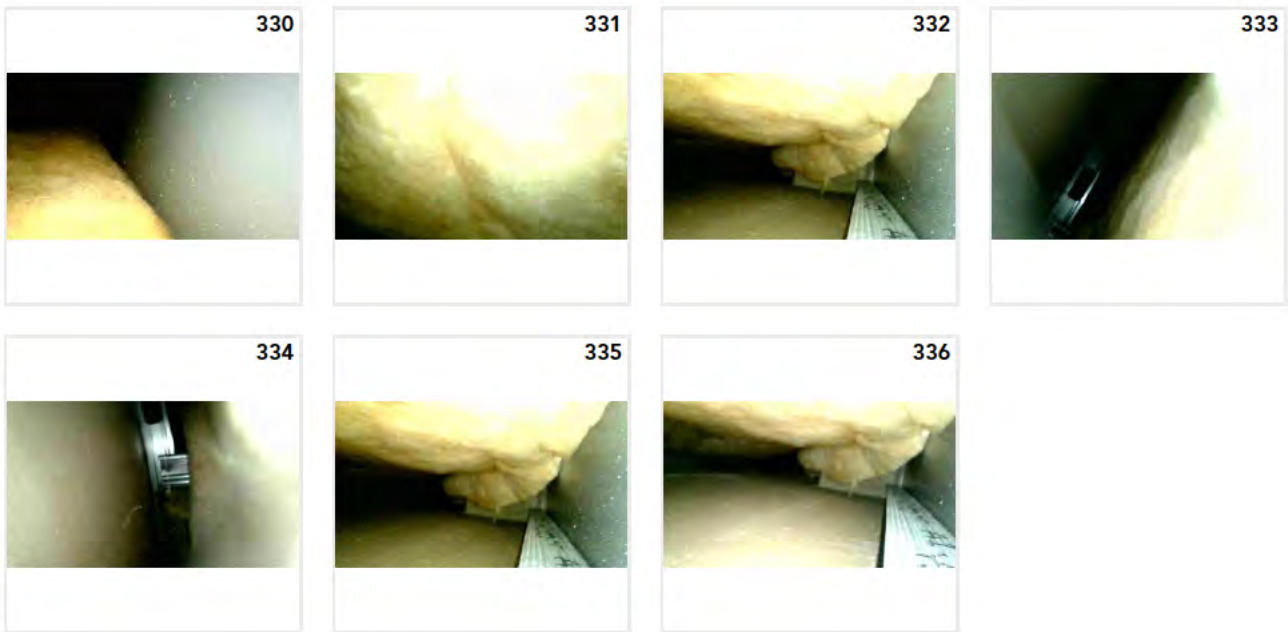
Cavity Barriers

1 Cavity Barrier	Photo Ref.
Vertical Cavity Barrier	24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40

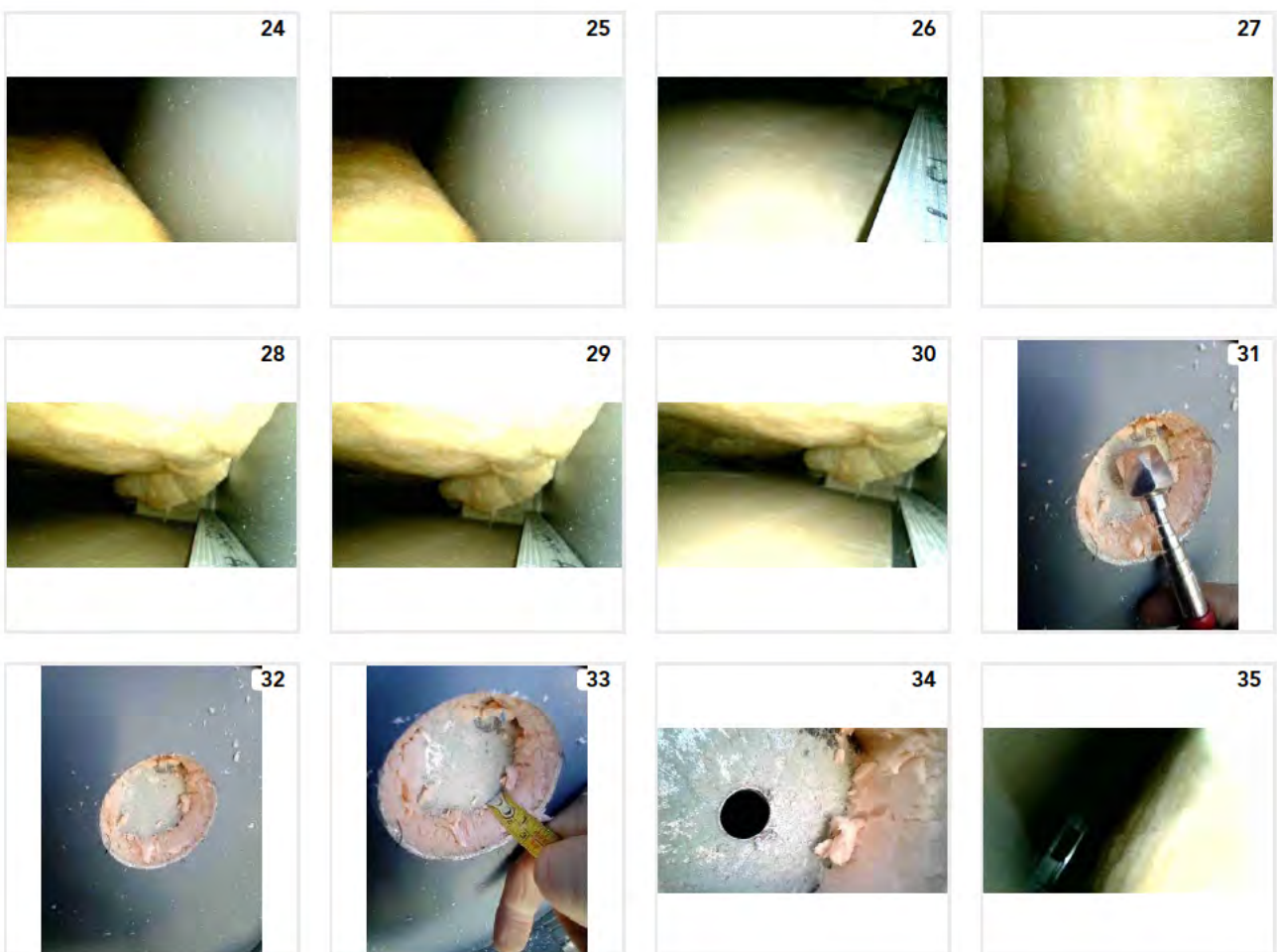
Glass wool insulation partially fills the cavity behind the aluminium spandrel panel.

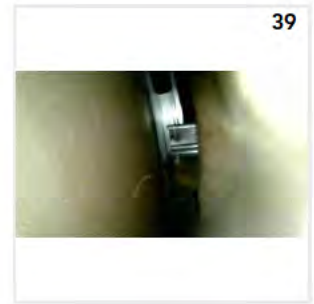
Build-up Photos



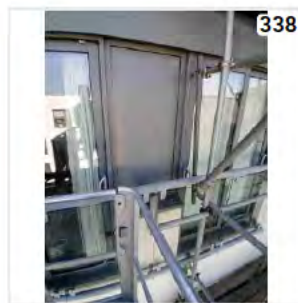


Cavity Barrier Photos





Inspection Photos



Inspection: NZD3LU

Elevation • Location
West Facing - Carpaek level • Brickwork
Area 5 - Lower ground floor level - Car Park - Window Aperture



Build-Up

4 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	104mm	Brickwork	339, 340, 341, 342	A1 - Non-Combustible
See plasterboard area for the rest of the information.				
Cavity	70mm		343, 344, 345, 346, 347	
Inner Leaf	102mm	Brickwork	348, 349, 350	A1 - Non-Combustible
Internal Surface Finish	1mm	Skimmed Surface	351, 352, 353	A1 - Non-Combustible

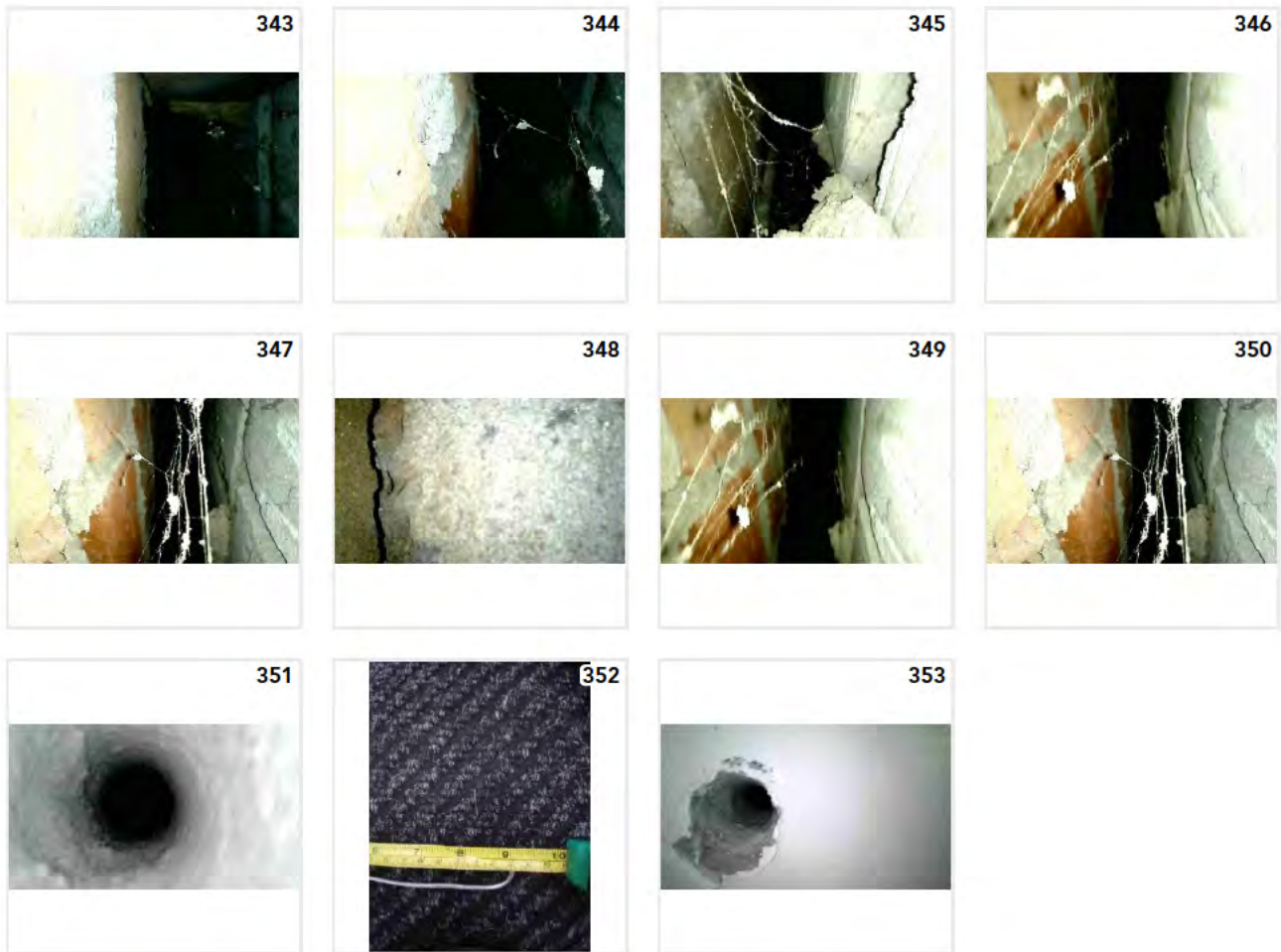
Cavity Barriers

1 Cavity Barrier	Photo Ref.
Window Aperture	5, 6, 7, 8, 9, 10, 11, 12

Brickwork closes beside the window frame, the window frame itself is timber at 60mm thickness.

Build-up Photos

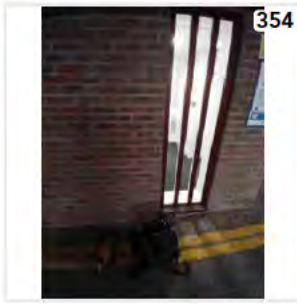




Cavity Barrier Photos



Inspection Photos



Inspection: JBUDD3

Elevation • Location
North Elevation A • Render
Area 6 - Lower ground floor level - Through wall test



Build-Up

5 Elements	Thickness/Depth	Material	Photo Ref.	Rating (BS EN13501)
Surface Finish	6mm	Render	356, 357, 358, 359, 360	A2 - Limited Combustibility
Outer Leaf (with applied surface finish)	102mm	Brickwork	361, 362, 363, 364, 365	A1 - Non-Combustible
Forms part of the original 1980s construction, assumed 102.5mm Brick depth				
Cavity	77mm		366, 367, 368, 369	
Insulation	20mm	PUR Insulation	370, 371, 372, 373	F - Highly Combustible
Blue PUR insulation 143mm to PUR 163mm to rear				
Inner Leaf Support (Backing Wall)		Reinforced Concrete	374, 375	A1 - Non-Combustible

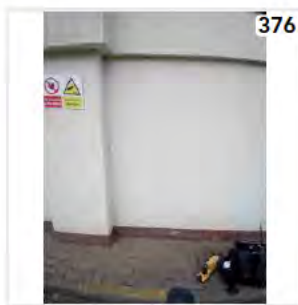
Cavity Barriers

Not required to this Inspection location

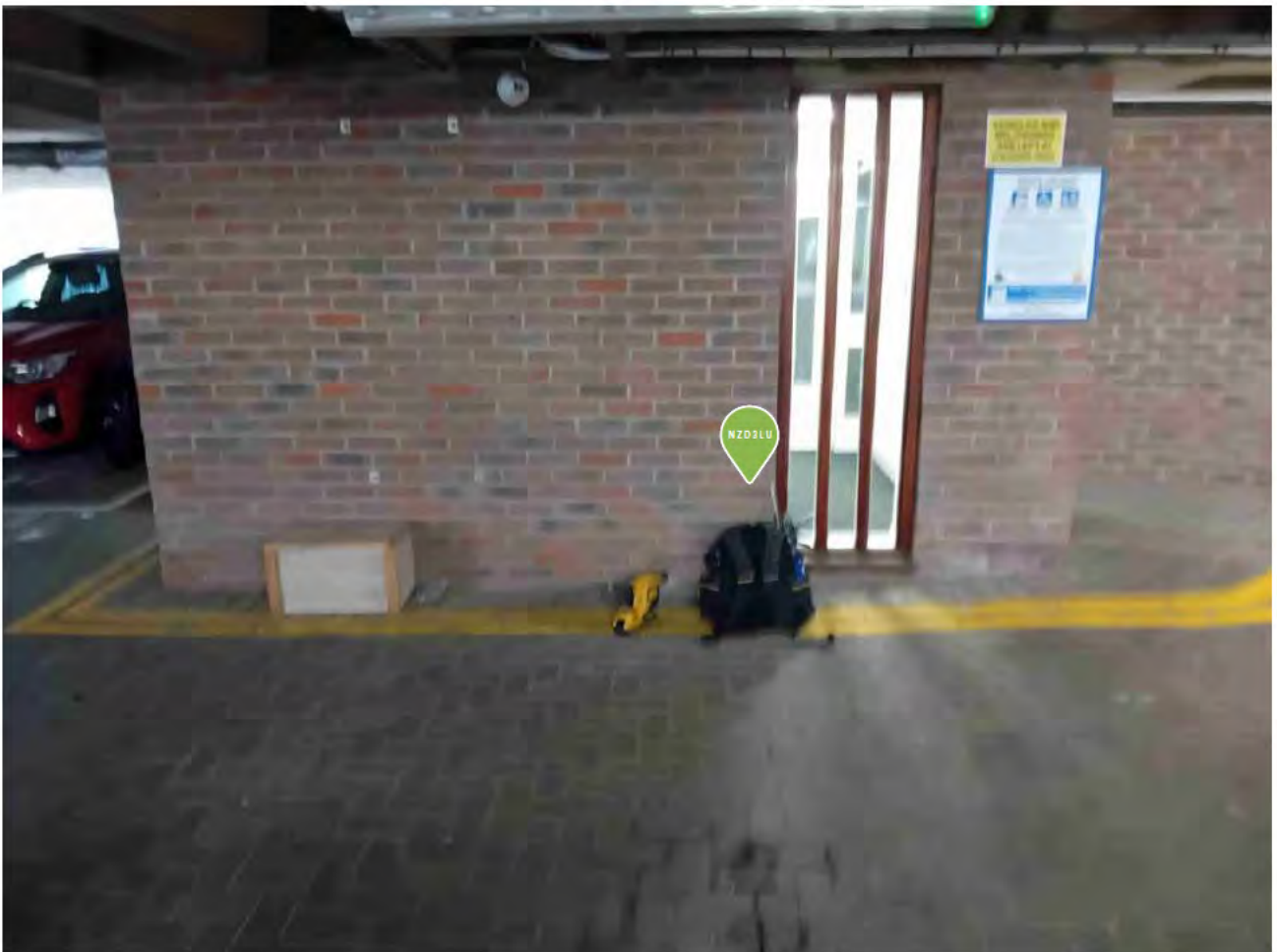
Build-up Photos



Inspection Photos



Plan: West Facing - Carpaek level



Plan: North Elevation A



Plan: East Elevation A



Plan: West Elevation A



Plan: North Elevation C



Photos



Photos Continued...



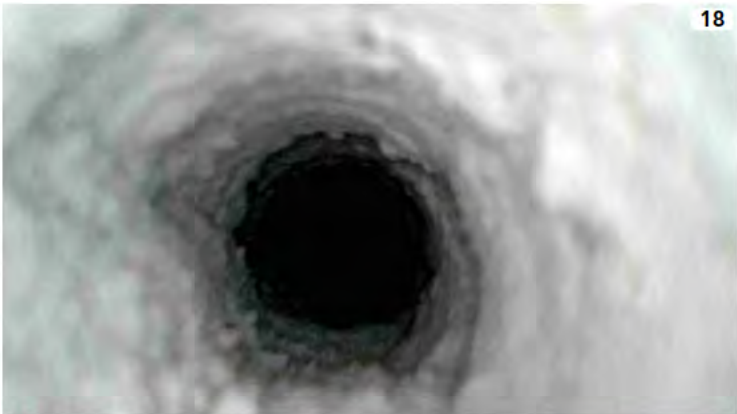
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Photos Continued...



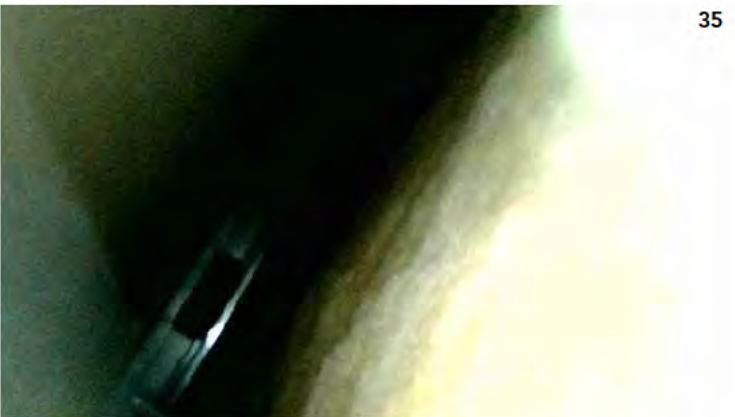
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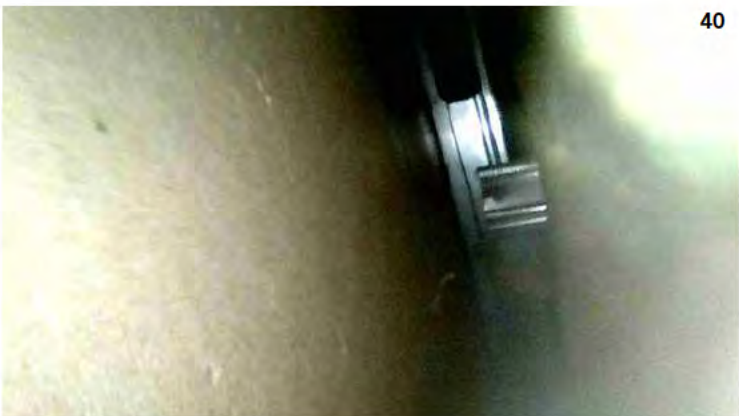
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38



39

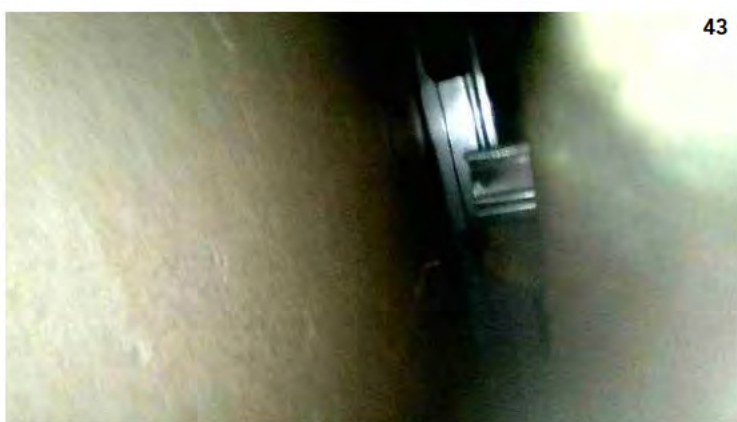


40



41

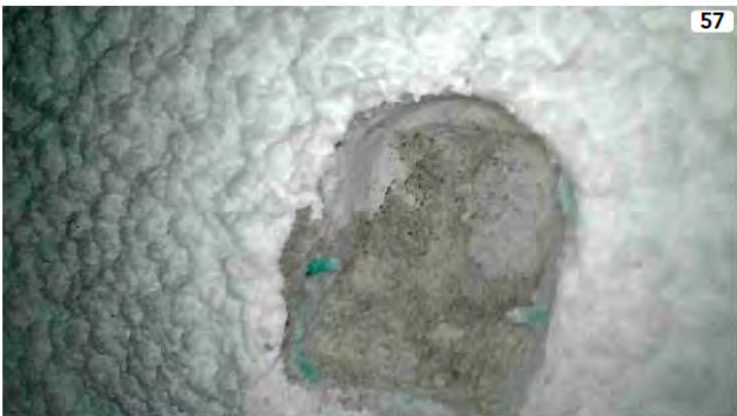
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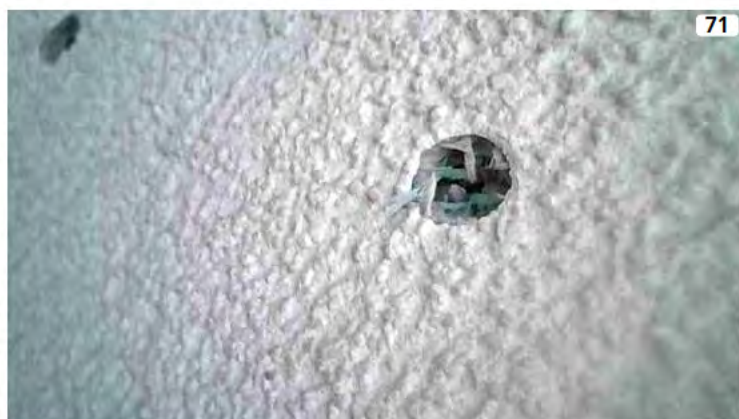
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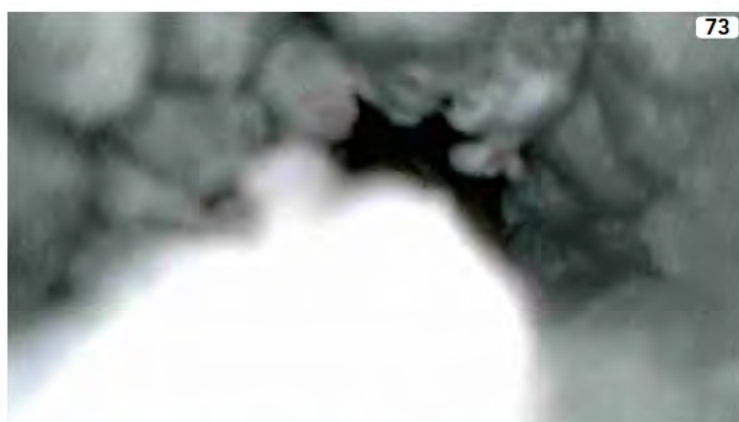
Photos Continued...



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Photos Continued...



84



85



86



87



88



89



90



91



92



93



94



95

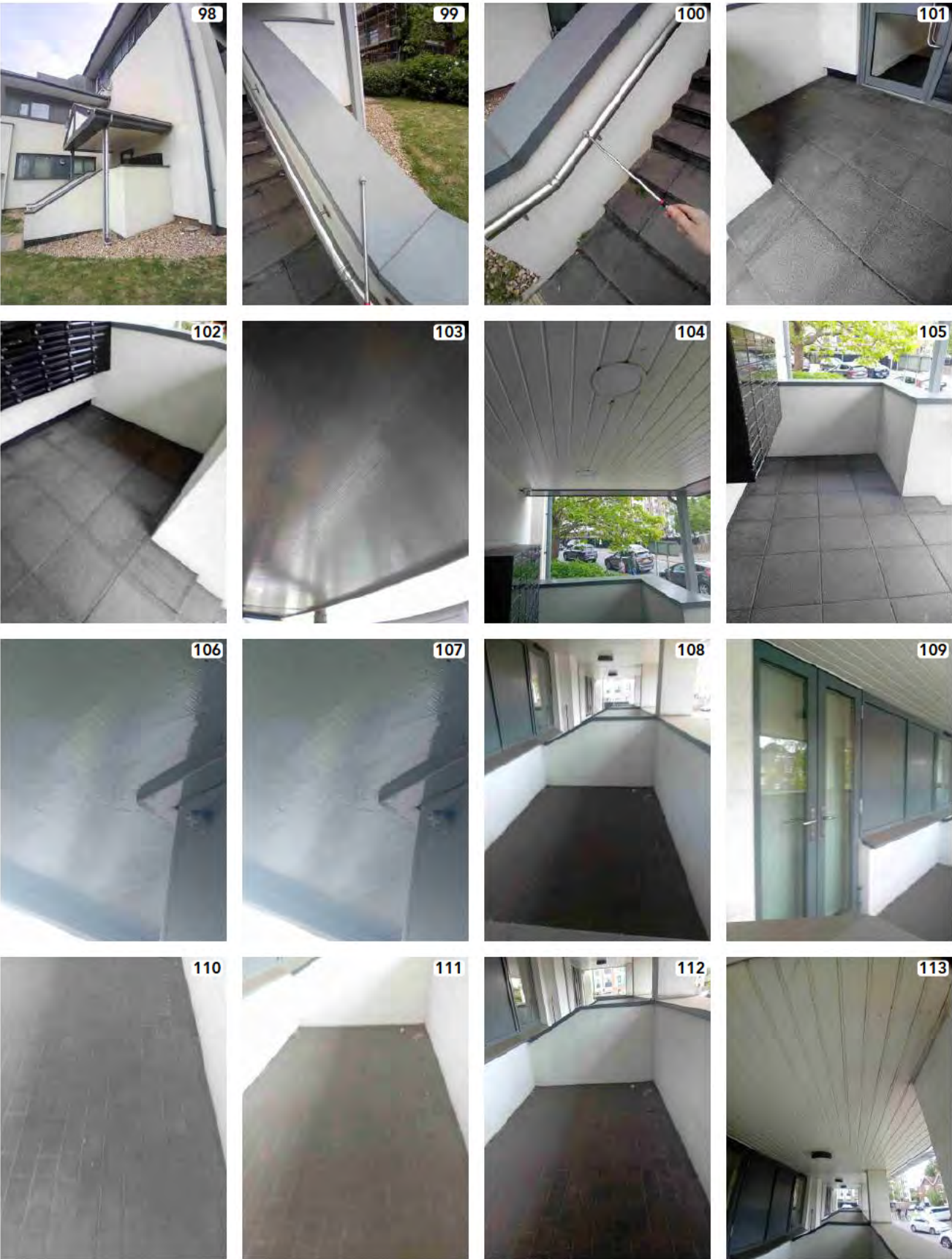


96



97

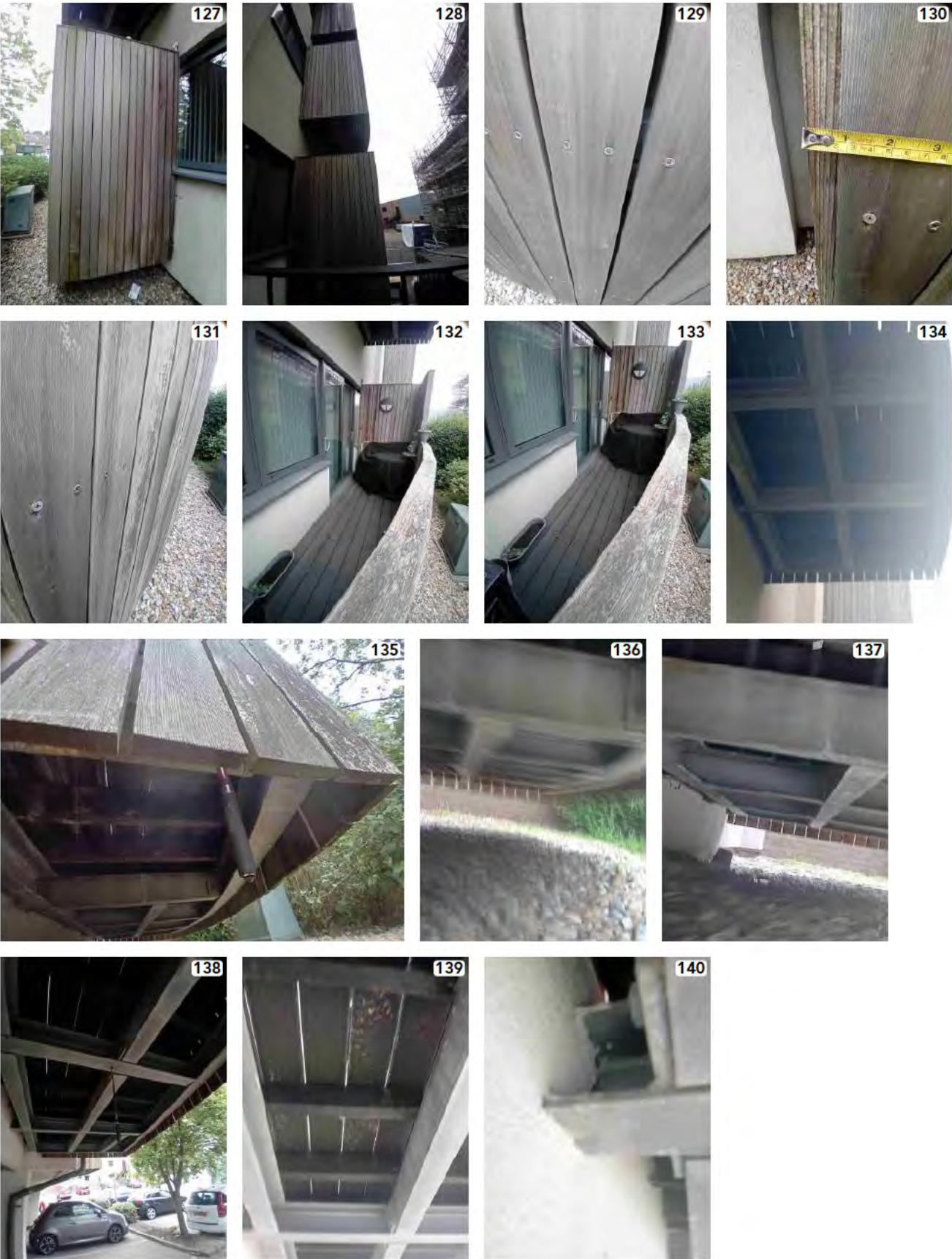
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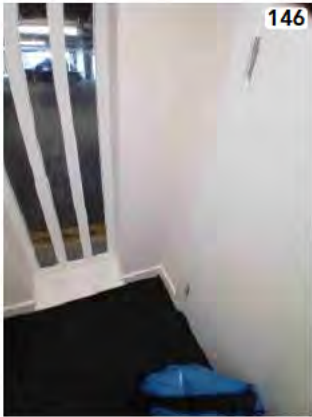
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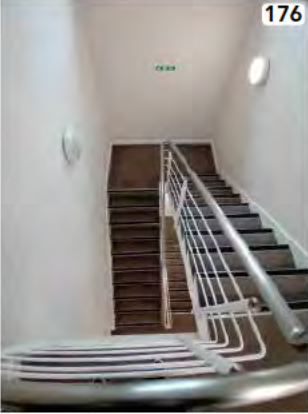
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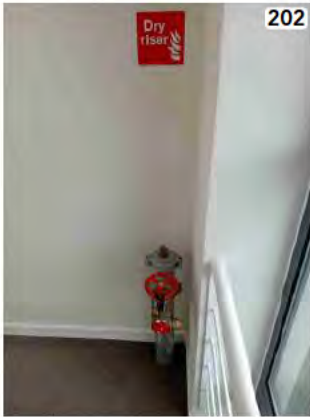
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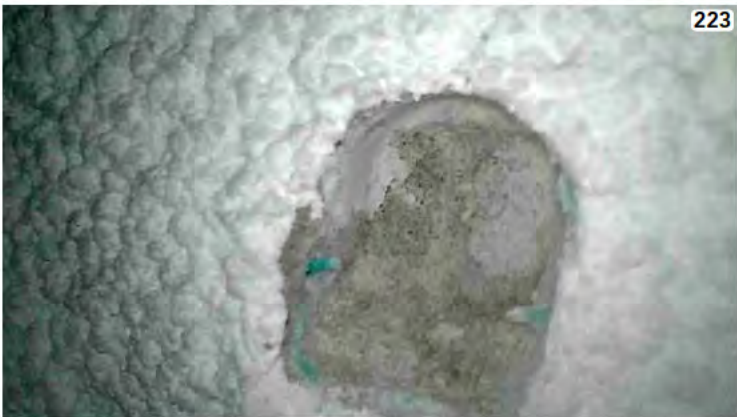
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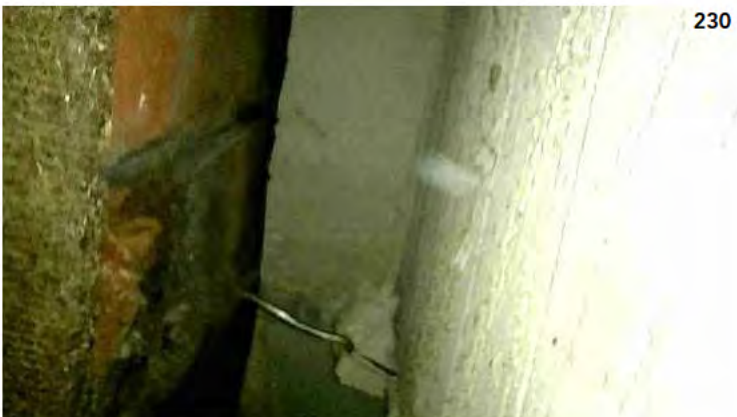
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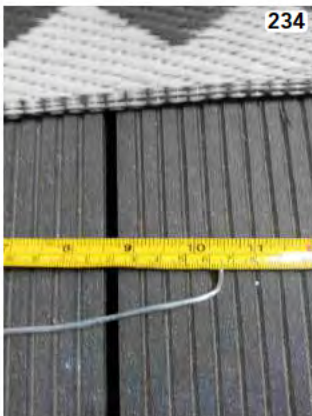
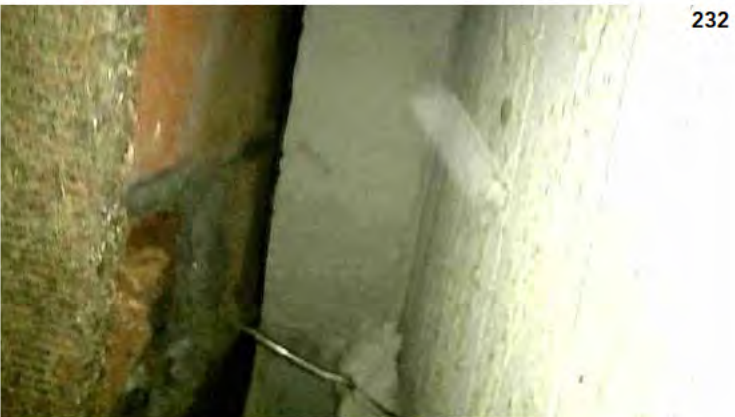
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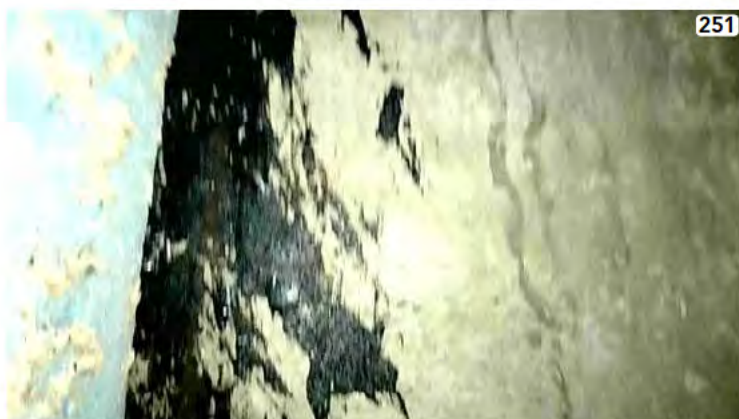
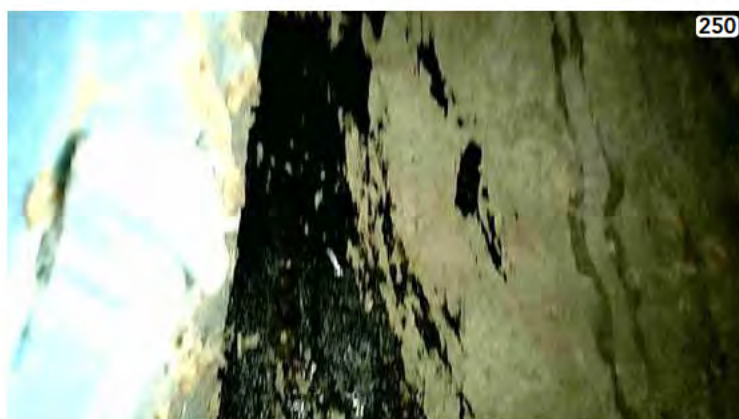
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Photos Continued...



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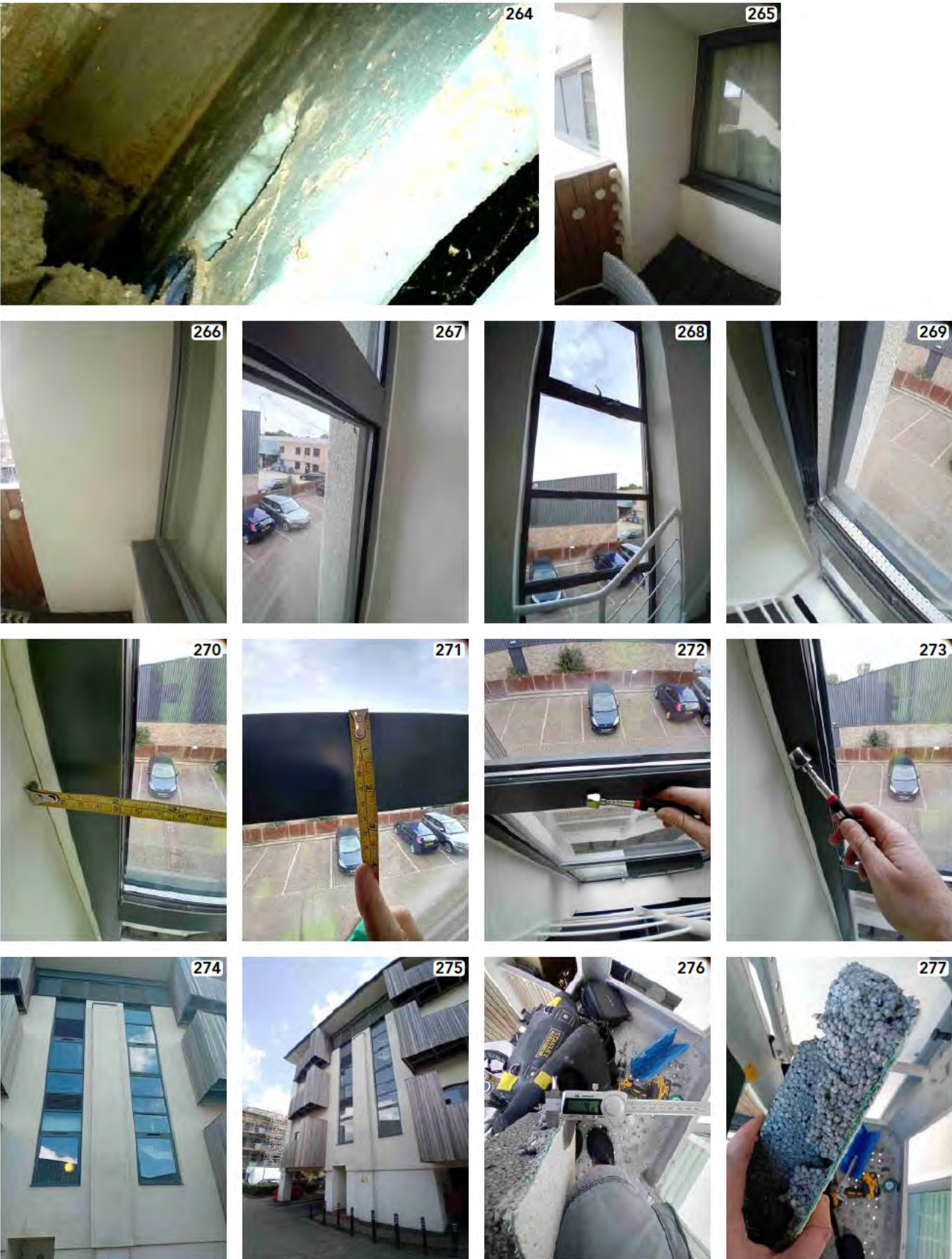
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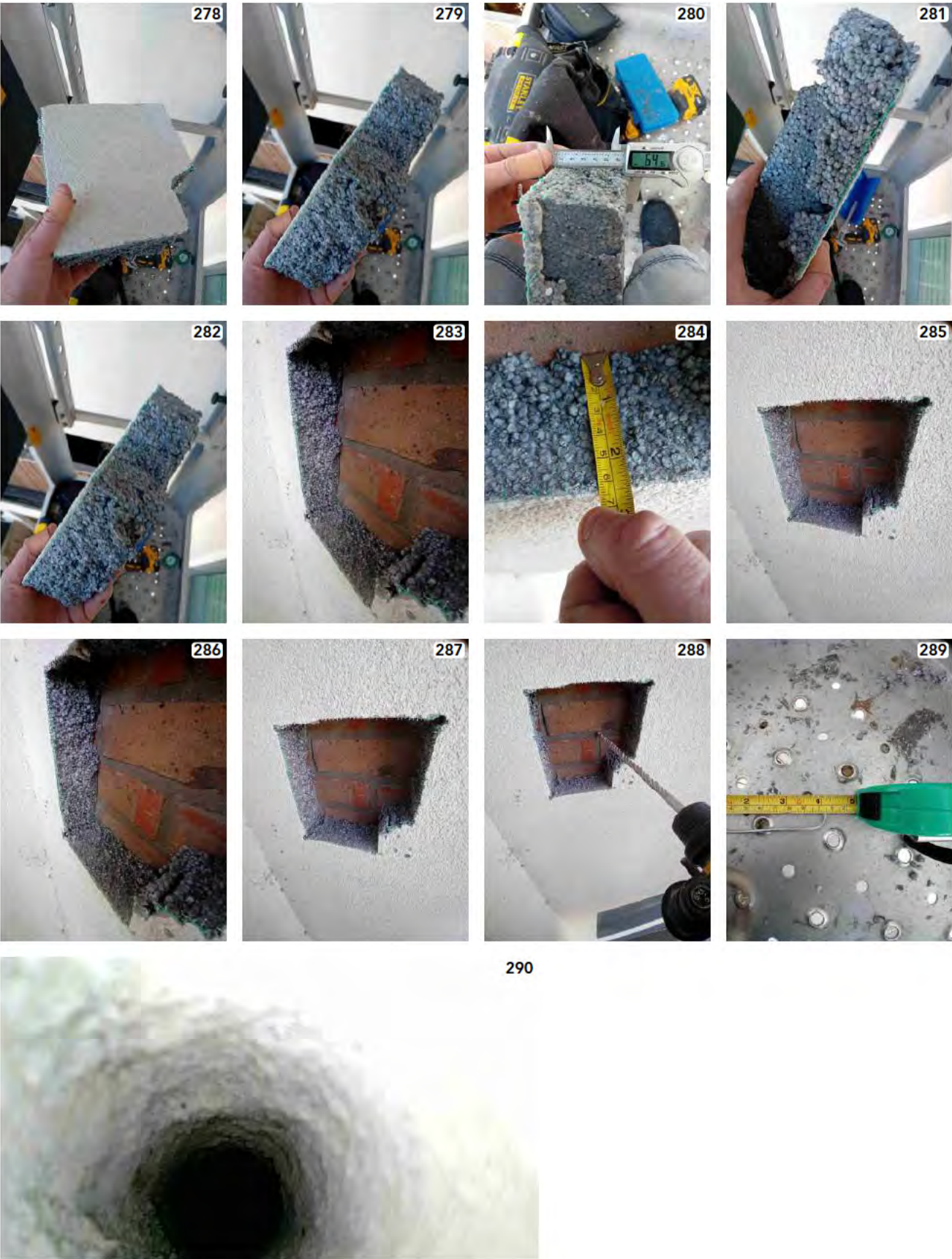
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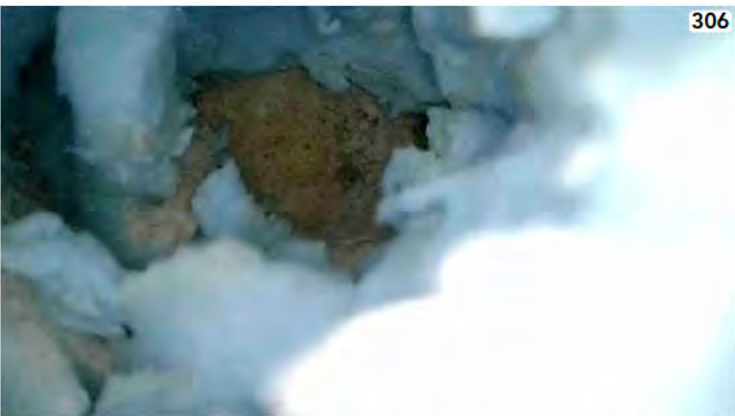
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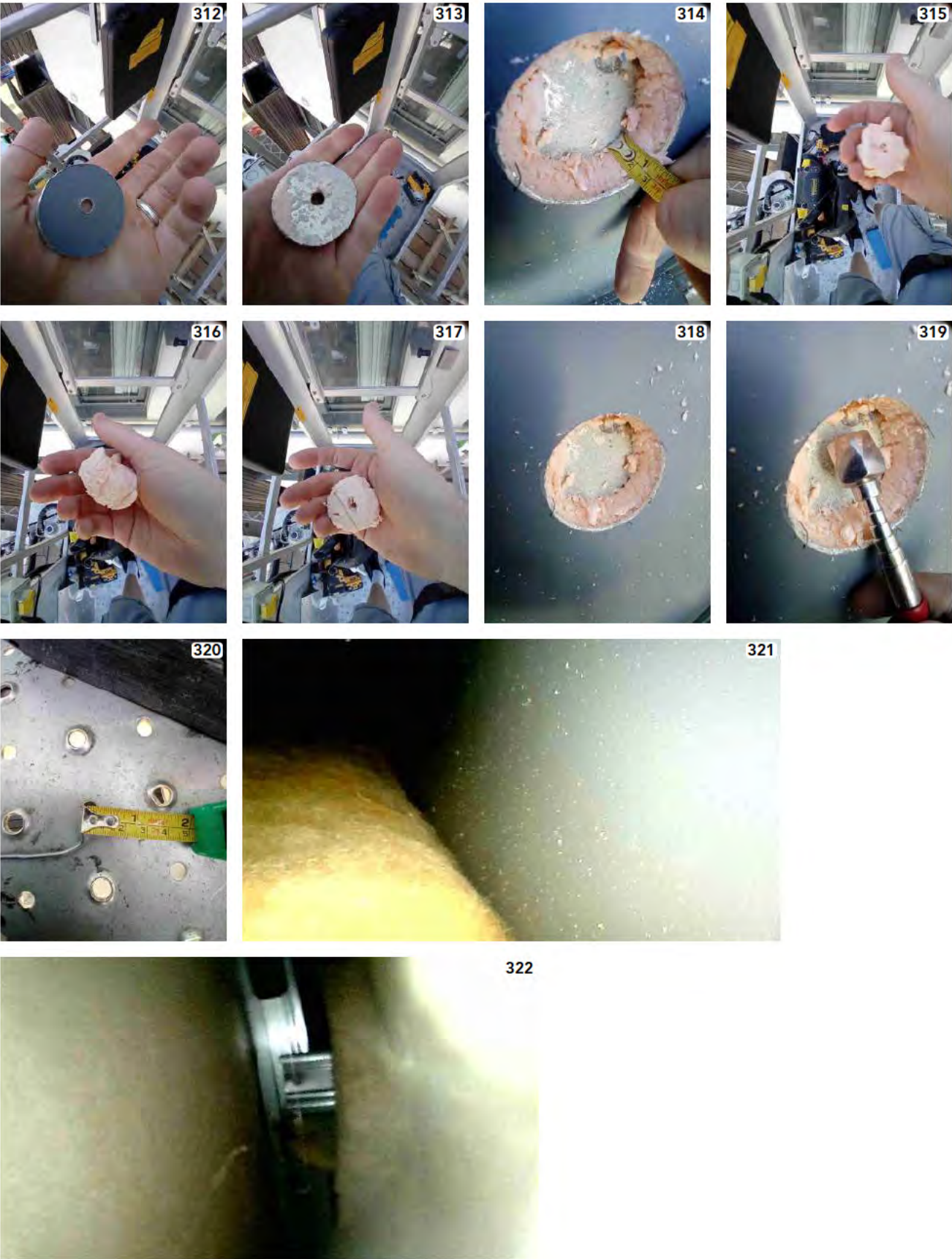
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Photos Continued...



Photos Continued...



327



328



329



330

Photos Continued...



331



332



333



334

Photos Continued...



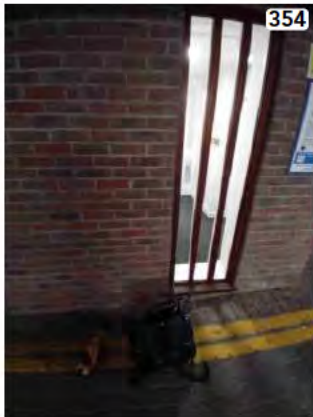
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