Wheatley Group

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Review of likelihood of RAAC in Wheatley Group Properties

December 2023

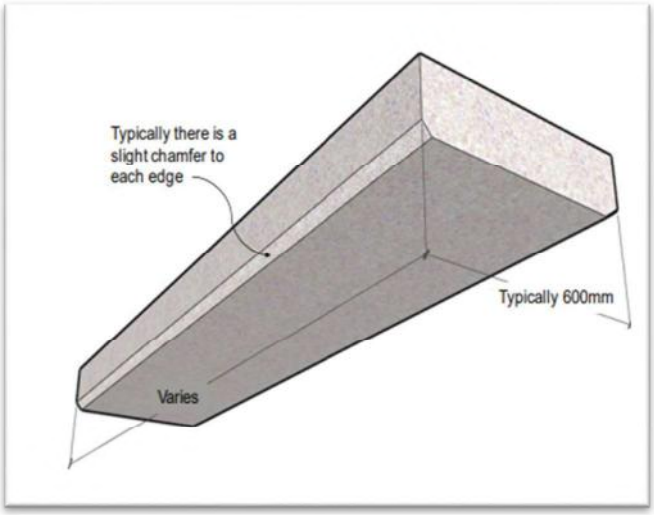
Summary findings

What is RAAC?

There has been widespread discussion in the media and elsewhere on RAAC - Reinforced Autoclaved Aerated Concrete. There are also various information sources on what RAAC is and how it was used in buildings. The information that follows is from SPICE (Scottish Parliament Information Centre) briefing on RAAC.

The briefing makes clear it is important to understand RAAC is very different from traditional concrete, which is a mix of water, cement, sand and aggregate (small stones), which is typically mixed, poured and set in-situ on building sites. RAAC is prefabricated in a factory and delivered to building sites in the form of panels, which can be used in roofs, walls and floors.

Profile of a RAAC panel:

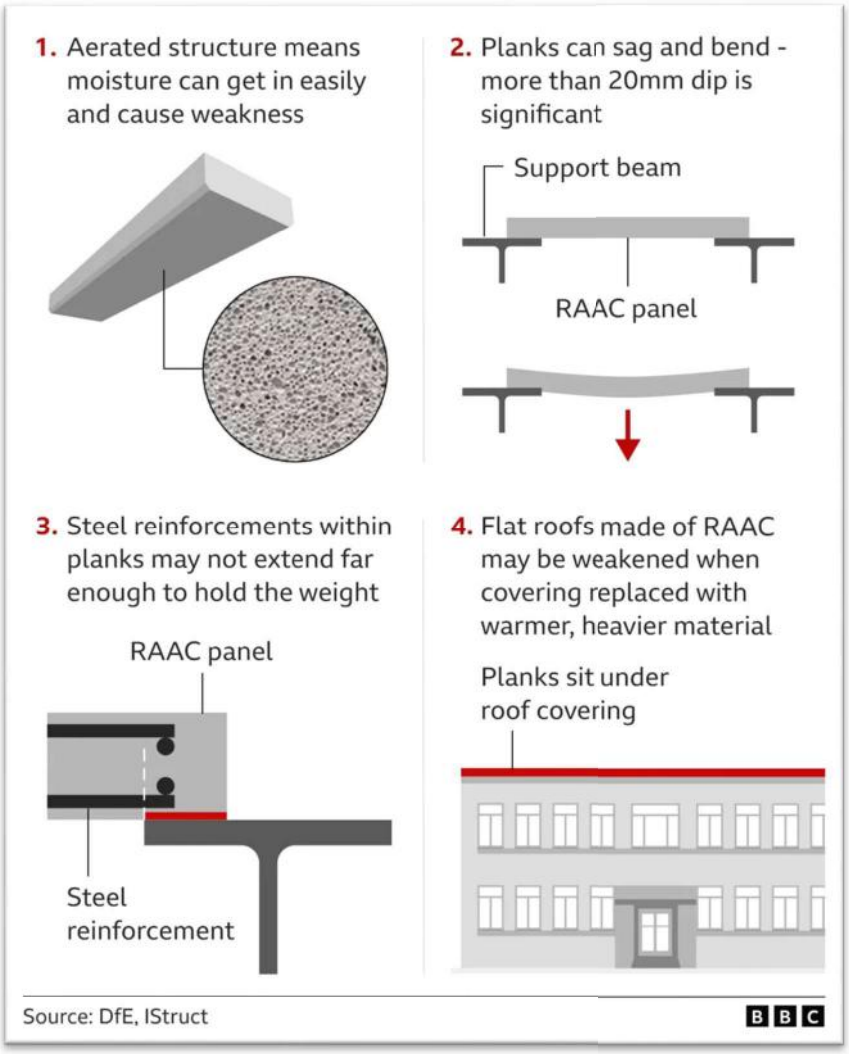


Source: UK Government

RAAC panels have two key elements:

1. **Aerated concrete:** This is made by adding aluminium powder to a lime or cement-based concrete mix, which does not contain any aggregate larger than sand. This mix is cast in a mould. The aluminium powder reacts with the lime/cement and water to produce millions of tiny gas bubbles, substantially increasing the volume of the material. The product is then cured in an autoclave for between eight and 15 hours at high temperature and pressure to control shrinking and encourage the formation of strongly binding molecules within the concrete.
2. **Reinforcing:** RAAC panels are given added strength by lattices of steel reinforcing rods, which are covered in an anti-corrosion coating. Reinforcement is placed into the mould before the concrete mix is added.

The way RAAC is typically used is shown below.



Why use RAAC?

In the UK, RAAC was used as a building material between the late 1950s and late 1990s, often in the construction of flat roof decks, which were then coated with waterproof roofing material. RAAC was used as it is lightweight, has good thermal insulating properties, is relatively cheap, and quick and easy to install.

Potential RAAC defects:

RAAC, if it is manufactured, installed, and maintained correctly, poses no more danger to building users than most other construction products. However, concerns that RAAC elements of some buildings could be liable to fail under certain circumstances and the product has a relatively limited lifespan have been recognised for decades. The BRE (Building Research Establishment) explored these issues in a paper published in 1996 which estimated the usual lifespan of RAAC panels to be around 30 years. An alert issued by the Standing Committee on

Structural Safety in May 2019 advised that all pre-1980 RAAC panels in UK buildings had significantly exceeded their expected service life and should be considered for replacement.

The Institution of Structural Engineers categorise potential RAAC defects under three headings: performance, manufacturing and construction. The list is extensive and the description of defects technical. The key possible RAAC defects identified by the Institute are briefly described below:

Performance defects:

- deflection of panels, in effect they begin to sag over time;
- cracking on the underside of panels, known as spalling;
- corrosion of steel reinforcement and/or reduction in the integrity of the concrete due to water ingress;
- overloading, which can be caused by water ponding in deflections on flat roofs;
- and panels acting independently rather than as a single unit, limiting load sharing across a structure.

Manufacturing defects:

- poor quality manufacture and placement of the steel reinforcement within RAAC panels may leave them susceptible to failure. A particular concern is where steel reinforcing does not extend along the full length of a panel, leaving the load bearing end section weaker than it should be, meaning it is more likely to fail;
- small gaps (voids) in the aerated concrete caused by gas bubbles coalescing around the steel reinforcement during manufacture;
- and incorrect or poorly applied anti-corrosion treatment of steel reinforcement.

Construction defects:

- builders have cut RAAC panels post-manufacture to fit the required size, compromising their strength and integrity;
- RAAC panels resting on very short sections of supporting beams, increasing stresses on panel ends. This is a particular problem where there are manufacturing defects, such as the incorrect placing (or lack) of steel reinforcement near panel ends;
- missing reinforcement such as links between the ends of panels that have been butted together;
- and structurally damaging maintenance or building conversion work, such as holes being drilled or cut through panels, reducing their structural integrity. Another maintenance issue is where a RAAC roof has been re-surfaced since original construction – particularly if this increases the load on the roof or where a black finish has been used when the original was another colour, as it will likely retain more heat.

A more general concern is the manufacture of panels was highly inconsistent and the quality control poor, meaning there can be quite wide variations in the quality and physical characteristics of panels used within a single building.

Potential for RAAC in social housing:

As discussed above, RAAC is most likely to be in buildings with flat roof construction. Wider discussion and examples of where RAAC has been identified also indicates this is most likely in buildings with long spans such as schools, hospitals and other similarly constructed buildings.

The Scottish Social Housing Regulator (SHR) has surveyed landlords in Scotland on the presence of RAAC in their properties.

To date, the Regulator's survey has found that nine landlords have identified the presence of RAAC in some of the homes they provide to tenants, with 953 homes affected. Also, 94 landlords have confirmed there is no RAAC present in the homes they provide to tenants, and 62 continue to investigate whether RAAC is present in any of their homes.

The level of homes identified in the Regulator's survey as having RAAC corresponds to roughly 0.17% of social housing properties in Scotland. The finding that RAAC is not widespread in social housing aligns with views from other experts and commentators, including Professor Sean Smith who indicated:

> *"Recent media articles have stated there is between 5%-10% of social housing in Scotland containing RAAC. This is highly misleading and no evidence has been provided to support such claims. When RAAC was constructed it was primarily utilised for large span constructions in non-domestic buildings, such as found in schools, hospitals etc."*
>
> *"Scottish Special Housing Association built and managed over 100,000 homes in Scotland during the period when RAAC was used in public buildings. These homes were later transferred to Registered Social Landlords across Scotland. Having contacted retired senior staff involved in these major previous public housing projects, I can confirm that RAAC material was not generally used in these buildings."*

Professor Smith is one of the country's leading authorities on construction technology. He is the Professor of Future Construction at the School of Engineering at the University of Edinburgh and the Director of the Centre for Future Infrastructure at the Edinburgh Futures Institute.

While there is nothing to suggest a high likelihood of RAAC in social housing more generally or Wheatley Group properties in particular, it is necessary to consider the possibility of its presence in our properties in more detail.

As mentioned above, the Scottish Housing Regulator wrote to landlords in October 2023 requesting information on RAAC in social housing, and advising this should be considered using Scottish Government guidance on the identification and risk management of RAAC. The process advised by Scottish Government for this is as follows:

Scottish Government gGuidance on identification and risk management of RAAC	
Stage 1 Discovery – establish presence of RAAC through desk-based review	A. Check drawings and specifications from the time of construction or subsequent works, photographs from site dating back to construction or during maintenance works. Where possible seek input from building professionals and estates teams who have worked on the building B. If the building owner is satisfied there is no evidence of RAAC on: • building records; • construction period (including extensions and conversion work) does not fit the risk profile of RAAC; and there are no other relevant criteria, and that visual survey is not necessary then the process can be exited. Record evidence and decision-making for future reference. C. Stage 1 can be undertaken by an appointed chartered engineer, surveyor construction consultant, or where relevant by a suitably qualified in-house construction professional.

Stage 2 Discovery – verify presence of RAAC through visual inspection	A. Involving visiting the site and confirming its presence or not. B. If there is no evidence of RAAC then the process can be exited. Record evidence and decision-making for future reference. C. If RAAC is identified, or there is still uncertainty, then a detailed site survey (Stage 3) should be undertaken. D. Stage 2 can be undertaken by an appointed chartered engineer, surveyor construction consultant or where relevant by a suitably qualified in-house construction professional.
Stage 3 Assessment – Detailed site survey to identify risk and response	A. All information gathered to date should be provided to the appointed chartered engineer or surveyor. Where necessary, they may carry out further desk study or visual inspection. B. A plan should be prepared to carry out the work, including access requirements and the extent of sampling necessary. C. Information on survey, risk factors, assessment of risk, and remediation or management of risk are set out in the April 2023 IStructE document 'Reinforced Autoclaved Aerated Concrete (RAAC) Investigation and Assessment – Further Guidance'. D. Assess the risk in accordance with the IStructE guidance. E. This stage should be undertaken by a qualified chartered engineer or chartered building surveyor with experience of RAAC using the published IStructE guidance. F. The findings and conclusions on risks should be fully reported and provided to the building owner or party commissioning the work
Stage 4 – Implement RAAC Risk Management	A. Deliver actions to manage the risk set out by the construction professional, this covers: • immediate or short-term actions, including physical mitigation such as propping the roof and closing parts of buildings; • longer-term actions, may include a monitoring programme, long term physical mitigation, or remediation and removal of the risk through replacement of the structural element (which in some cases may be achieved through a broader programme of building replacement). B. Commission work through contractors andset in place an action plan for monitoring as required.

Desktop assessments have been undertaken covering all Wheatley Group properties in line with Stage 1 discovery above. This included analysing when properties were built, reviewing

original as built drawings, where available, and discussions with staff who are familiar with the properties and/or who were involved in the original planning or construction.

Information from this analysis was supplemented by onsite inspections, in line with Stage 2 – discovery, including from independent surveyors to supplement and provide assurance on our desktop analysis.

AJ Balfour Associates, Consulting and Structural Engineers undertook a review of our approach and onsite visual inspections for Wheatley Homes Glasgow. Based on this, they concluded as follows:

> *"We have reviewed the desktop study completed by Wheatley Group and believe this is robust, and consistent with recommended practice, including from the Scottish Government, in considering the possibility of RAAC in social housing. We have also carried out on-site visual inspections of Wheatley properties in Glasgow, including all those that fit the profile for when and where RAAC might have been used and concluded there is nothing to suggest the use of RAAC in the construction of Wheatley Homes Glasgow stock."*
>
> ***AJ Balfour Associates, Consulting and Structural Engineers***

Asher Associates, a leading firm of structural and civil engineers based in Dumfries, undertook similar work for Wheatley Homes South stock with a particular focus on onsite inspection of properties with a profile that was consistent – in terms of age and construction method V with properties that could potentially have RAAC. Findings from these inspections are reflected in the Wheatley Homes South section of this report. Based on this Asher Associates concluded:

> *"Wheatley Homes South have undertaken a comprehensive review of its properties identifying those that were built between 1950 and 1990 when RAAC was used in construction of public buildings such as schools. Based on this assessment and our onsite examination of a representative sample of homes, we have found no indication of RAAC being used in the construction."*
>
> ***Asher Associates***

Wheatley Homes East properties were reviewed by suitably qualified in-house staff, with necessary building surveying and engineering expertise, reflecting their extensive knowledge of the stock and the relatively few properties identified from our desktop review as having been developed between 1950 and 1990. Based on the review, our Head of Investment for Wheatley Homes East concluded:

> *"Our analysis and review of information, combined with on-site inspection and extensive knowledge of the stock, including through undertaking comprehensive refurbishment works, means I can state with confidence there is nothing to suggest the use of RAAC in our properties."*
>
> ***Head of Investment, Wheatley Homes East***

Based on our assessment, which followed guidance provided by the Scottish Housing Regulator, and findings from expert third parties who have also reviewed our stock, we are confident that RAAC is not present in our homes.

Details from the desktop review and onsite surveys of properties are set out in this report. Our onsite surveys covered all built forms where guidance indicated the possibility RAAC might have been used for building homes, as well as a wider selection of houses and flats that were constructed between 1950 and 1990 based on discussions with structural engineers. Surveys were also undertaken of similar built forms in different geographic locations to ensure consistency.

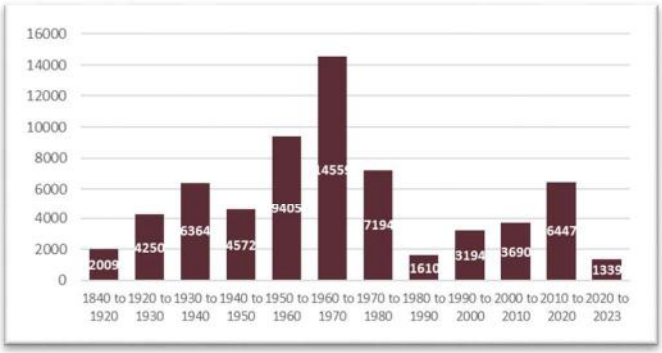
The structure of each section varies, reflecting the stock under consideration and approach to assessment.

Our Group properties

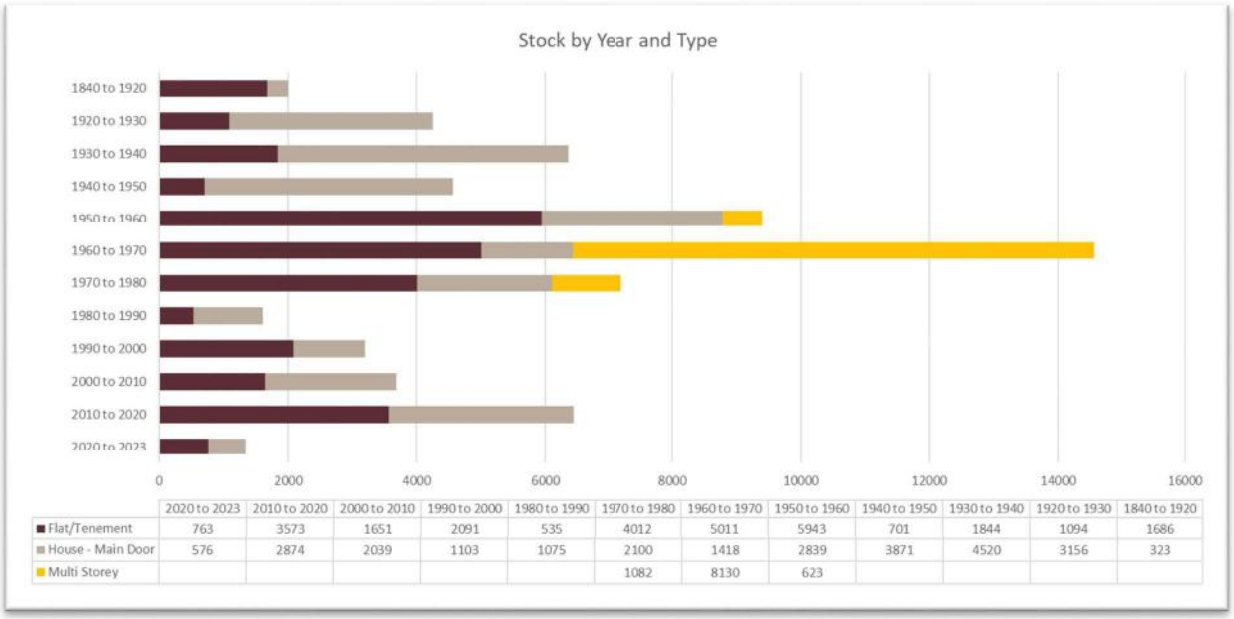
Wheatley Group owns 64,633 properties.

Our stock is spread across 19 local authority areas, with 94% concentrated in three areas; Glasgow (54%), Edinburgh and the Lothians (19%), and Dumfries and Galloway (21%).

The age profile of our stock is indicative of the housing stock transfers from local authorities where there was significant house building pre-1960, with newer homes being developed post-1990 as part of the housing association new-build programme.



Build year	Units	% of Stock
Pre-1950	17195	27%
1950 to 1990	32768	51%
1990 onwards	14670	23%



	2020 to 2023	2010 to 2020	2000 to 2010	1990 to 2000	1980 to 1990	1970 to 1980	1960 to 1970	1950 to 1960	1940 to 1950	1930 to 1940	1920 to 1930	1840 to 1920
Flat/Tenement	763	3573	1651	2091	535	4012	5011	5943	701	1844	1094	1686
House - Main Door	576	2874	2039	1103	1075	2100	1418	2839	3871	4520	3156	323
Multi Storey						1082	8130	623				

Wheatley Homes Glasgow

Wheatley Homes Glasgow housing stock consists of 14,180 individual property blocks. These blocks include individual homes with one property to multi-storey flats with over 100 individual properties. Of the 14,180 blocks 6341 were built between 1950 and 1990. 175 of these have flat roof construction.

Wheatley Homes Glasgow also has various properties that were built with non-traditional construction types. There are 1832 blocks of this type, comprising 177 blocks of flats and 1655 houses.

Flat roof construction:

The table below summarises Wheatley Homes Glasgow properties with flat roofs.

Type	Total	Breakdown
Houses	21 Blocks	• Glaive Road and Towerhill Road
Tenement Flats	21 Blocks	• 14 at Acre Drive and Acre Road • 7 at Brockburn / Dormanside Road
Deck access	1 Block	• 1 at Eastwood Avenue
Multi-storey	129 blocks	• 8 main construction types

Each of these has been reviewed.

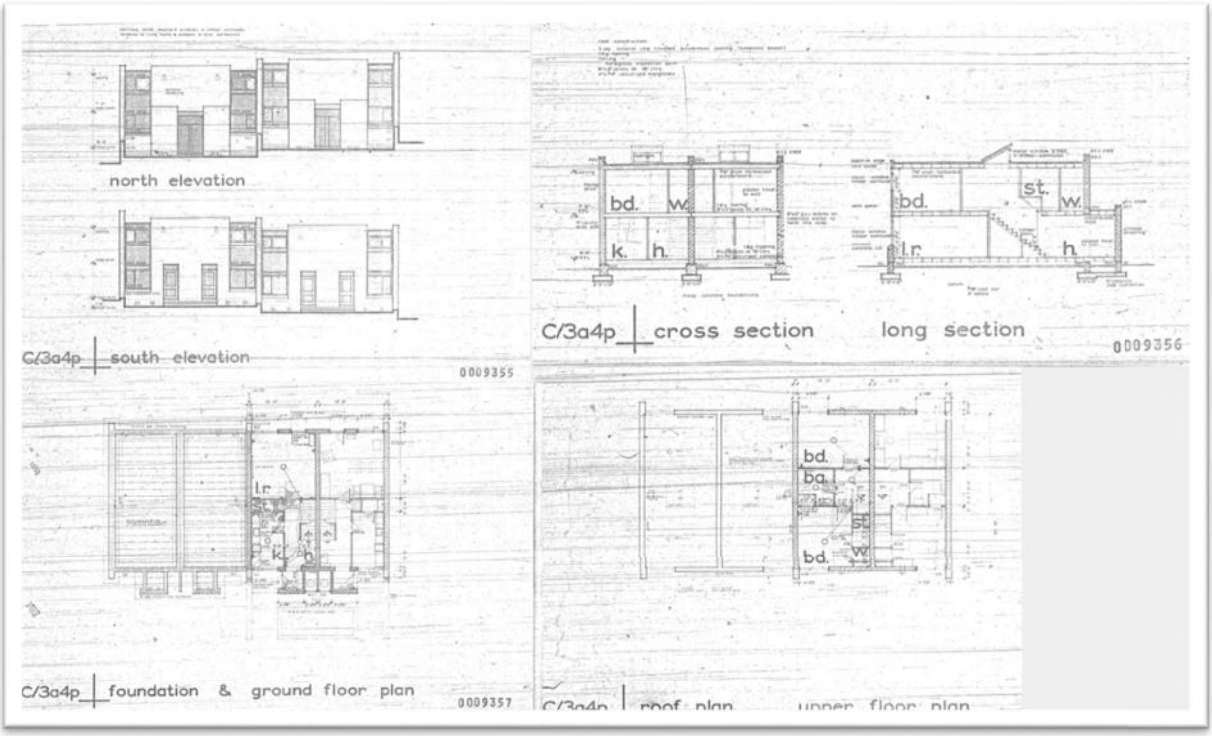
Glavie Road and Towerhill Road:

These properties were built in the west of Glasgow in 1971. This is the only development of its kind in the Wheatley portfolio.

These properties are flat roof, brick and block construction.

Roof construction 8” x 2” timber joists with an insulated bitumen felt finish, internally 3/8” aluminium backed plasterboard.

These properties were significantly upgraded in 2007, when a full package of external improvement was completed, including external wall insulation, renewal of original roof covering and renewal of rainwater goods.



1-101 Glaive Road & 1-39 Towerhill Road

Property Address	1-101 Glaive Road & 1-39 Towerhill Road, G13		
Archetype	Houses		
Architectural Type	C/3A4P		
Inspection details	D. Watson	3rd October 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Joists
Wall structure format	Rendered Masonry, EWI
Floor structure format	Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

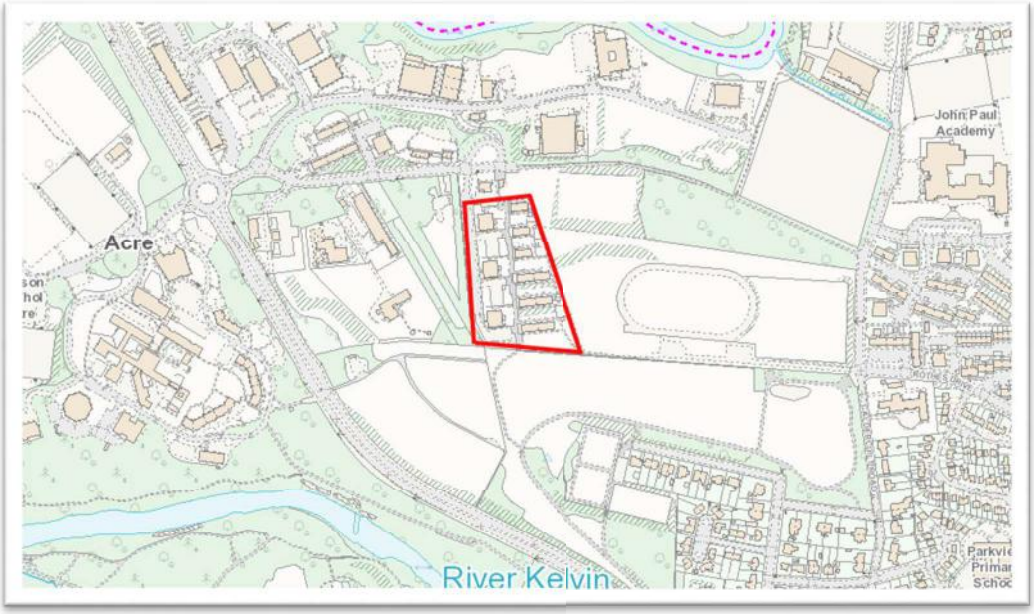
Inspection Report

General observations	The properties are 2-storey houses with a flat roof. The blocks are covered with an EWI system. Brick is noted below the EWI finish, vents suggesting timber joists at ground floor level. Roof is timber joists that consists of 8” x 2” timber joists at 18” crs in accordance to the historical drawings
Areas to inspect for possible use of concrete	1. External Elevations 2. Historical Drawings
Area 1 inspected	External elevations were visually inspected to look for any suspicions of concrete panels.

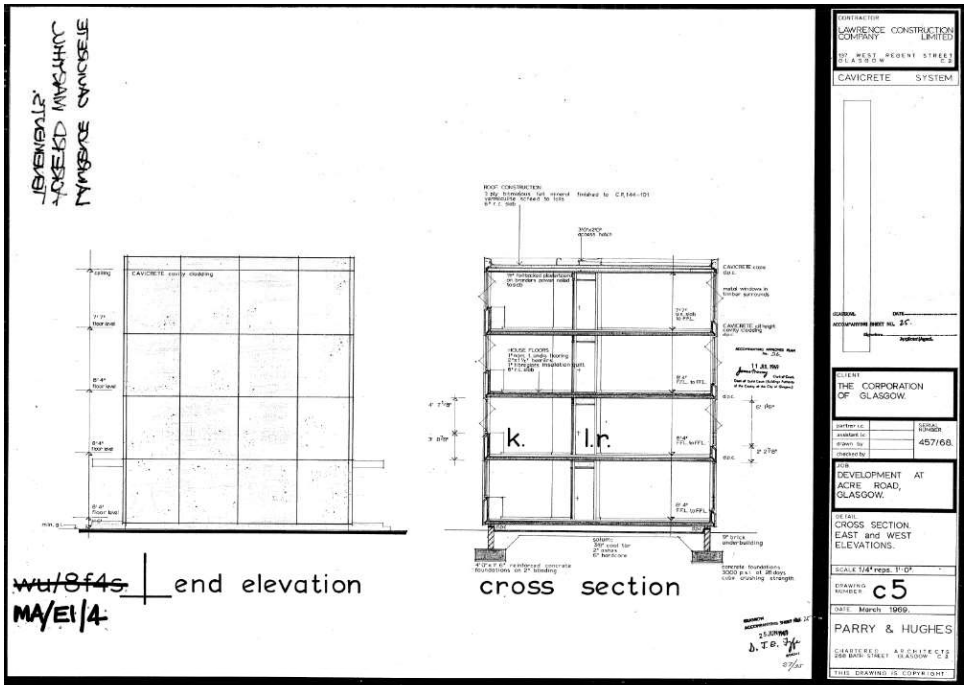
Methods used for area 1	External review from front and rear gardens. Review of gable wall where possible.
Conclusions for area 1	Brick vents were noted below the EWI render finish, which suggest a timber joist arrangement to ground floor level.
Area 2 inspected	Historical Drawings
Conclusions for area 2	Having reviewed the available construction drawing information provided by Wheatley Group these flat roofs appear to be constructed from timber. The drawings state that the roof construction consists of 8” x 2” timber joists at 18” crs. External walls are understood to be cavity brick construction.

Acre Drive and Acre Road:

These properties were built in the west of Glasgow between 1975 to 1978.



The blocks are 4-storey with a 6-inch reinforced concrete slab roof.



23-79 Acre Road & 1-15 Acre Drive

Property Address	23-79 Acre Road & 1-15 Acre Drive, Glasgow, G20		
Archetype	Post 1946 Ts		
Architectural Type	MA/E1/4		
Inspection details	D. Watson	3rd October 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Flat concrete roof
Wall structure format	Precast Cavicrete Panels, EWI finish.
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 4-storey block of flats with a flat roof deck above all areas. The blocks are covered with an EWI system. Precast cavicrete panels below EWI system. Brick below rendered finish, no vents, suggesting concrete slab at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor concrete ceiling. Roof is 6" concrete slab based on findings in historical drawings.
Areas to inspect for possible use of concrete	1. Common close areas 2. External Walls

Area 1 inspected	The ceiling of the upper landing area was inspected to underside of roof and found to have a solid concrete finish. Hammer test found solid “ping” and no hollow sections or indentations were made.
Methods used for area 1	Visual inspection undertaken from common close landing.
Evidence gathered for area 1	No Photogrpah taken, reference was made to the historical drawings ownbed by Wheatley which made reference to the 6” RC slab at all levels, and would explain the hammer test survey producing a solid “ping” and no hollow sounds or indenations being made.
Conclusions for area 1	Flat roof and intermittent floors likely to be 6” RC slabs as noted in the historical drawings.
Area 2 inspected	External Elevations.
Methods used for area 2	Visual inspection of sub brick below rendered EWI
Conclusions for area 2	No vents noted in the sub brick below the render suggesting a concrete slab finish, which is noted in the historical drawings for this construction type.

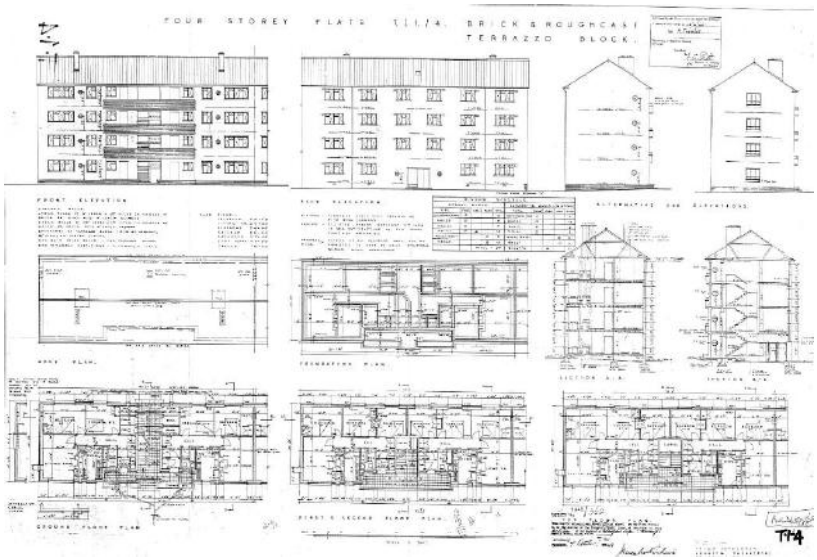
Brockburn / Dormanside Road

These properties were built in the west of Glasgow between 1950 to 1953 and were part of a wider development commencing in 1947.

This stock was subject to a 'Community renewal' improvement programme, including height reduction and remodelling.

These properties were originally flat roof and were 'over-roofed' as part of the community renewal improvement.

Construction is of brick and block with timber joists.



64-183 Dormanside Road

Property Address	64-183 Dormanside Road, Glasgow, G53		
Archetype	Post 1946 Ts		
Architectural Type	T-1/2-Y		
Inspection details	D. Watson	3rd October 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey block of flats with a duo pitched roof above all areas. The external walls are rendered, with a smooth band render below the dash render line. Vents are noted below the render line suggesting a timber floor at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling RC slab to roof level. Roof above flats and common close is timber trusses over roof directly on top of old slab area. It is understood these were formerly 4 storey blocks, reduced to 2 storey with a traditional timber roof used. Wheatley to comment.
Areas to inspect for possible use of concrete	1. Common close areas 2. External Walls

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a solid concrete finish.
Methods used for area 1	Access was gained to the common close at top floor level.
Evidence gathered for area 1	
Conclusions for area 1	Based on an inspection within the common close area to the underside of the concrete ceiling there was no evidence of chamfers to identify RAAC, and a test using a screwdriver did not produce any indentations as would be expected in RAAC panels. This would have been 2nd floor of former 4 storey block.
Area 2 inspected	Outer leaf rendered walls inspected.
Methods used for area 2	Review of the render finish and the location of vents
Conclusions for area 2	Vents noted below the render at ground floor level suggest that timber floor joists will be located at ground level. No sign of concrete noted.

Non-flat roof properties built between 1950 and 1990:

Over 6000 of Wheatley Homes Glasgow properties were built between 1950 and 1990 with a traditional build form. As discussed, homes with tiled, pitched roof are not expected to have RAAC. A representative sample of these properties was inspected to provide further assurance that RACC was not present. The results of this are set out below:

4 Brockburn Terrace

Property Address	4 Brockburn Terrace, Glasgow, G53 5JU		
Archetype	Post 1946 Ts		
Architectural Type	PO/A16/A		
Inspection details	D. Watson	3rd October 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Former Flat Roof, over roofed.
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	These addresses are 4 Storey, 4 Apartment Flats. Blocks are covered with EWI. Brick vents noted below render suggesting timber floors at ground and upper levels. These addresses are noted as containing flat roofs and are estimated to have been constructed in circa 1952. . It is noted that based on a visual assessment these roofs now have a pitched roof construction.
Areas to inspect for possible use of concrete	1. Common close areas 2. External Walls

Area 1 inspected	The ceiling of the upper landing area was inspected to underside of roof and found to have a solid concrete finish. Hammer test found solid “ping” and no hollow sections or indentations were made. The drawings state that the roof construction consists of a 6” precast concrete units. This would conform with the site findings
Methods used for area 1	Visual inspection undertaken from common close landing, review of historical drawings
Evidence gathered for area 1	No Photogrpah taken, reference was made to the historical drawings ownbed by Wheatley which made reference to the 6” precast units at roof level, and would explain the hammer test survey producing a solid “ping” and no hollow sounds or indenations being made.
Conclusions for area 1	Flat roof and intermittent floors likely to be 6” RC slabs as noted in the historical drawings.
Area 2 inspected	External Elevations.
Methods used for area 2	Visual inspection of sub brick below rendered EWI
Conclusions for area 2	Vents noted in the sub brick below the render suggesting a timber floor, which is noted in the historical drawings for this construction type.

10 Churchill Drive

Property Address	10 Churchill Drive, Glasgow, G11 7LS		
Archetype	APFS		
Architectural Type	AP7		
Inspection details	D. Watson	24th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing stone arrangement below the EWI finish, no vents suggesting concrete slab at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

11 Balmartin Road

Property Address	11 Balmartin Road, Glasgow, G23 5DU		
Archetype	Post 1946 TS		
Architectural Type	MA/E7/3		
Inspection details	D. Watson	22nd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Brick Masonry
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with duo pitched roofing above all sections of the top floor level. The blocks have a rendered brick finish. Vents are noted in the brickwork below the render finish suggesting a timber joisted floor arrangement to all flats. uPVC windows and panels noted at each elevation. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above all areas are timber trusses and timber ceiling ties, with inner leaf of blockwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Fink truss timber truss arrangement noted to the duo pitched roof section of the block. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space of pitched roof section.
Methods used for area 2	Visual inspection of rendered walls to the external elevations of the block
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present below the render finish. A RAAC panel is not present.

15 Bonnyton Lane

Property Address	15 Bonnyton Lane, Hamilton, ML3 8DU		
Archetype	APFS		
Architectural Type	Unknown		
Inspection details	D. Watson	3rd October 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	RC Concrete Slab
Wall structure format	Rendered Brick Masonry
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 4-storey block of flats with a flat roof above all areas. The blocks have a rendered brick finish to upper floor levels, with an exposed outer leaf of brickwork noted at ground floor level. Brick vents noted suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor concrete finish to ceiling. Roof above flats and common close is flat roof likely to be of RC concrete slab construction, there was no evidence of chamfers to identify RAAC, and a test using a screwdriver did not produce any indentations as would be expected in RAAC panels

Areas to inspect for possible use of concrete	1. Common close areas 2. External Walls
Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a solid concrete finish.
Methods used for area 1	Access was gained to the common close at top floor level.
Evidence gathered for area 1	
Conclusions for area 1	A test using a screwdriver did not produce any indentations as would be expected in RAAC panels, therefore likely construction finish is RC slabs to the roof.
Area 2 inspected	Outer leaf wall construction is visible from external elevation survey, brick at ground level and some small spalling of render at upper floor levels exposing brickwork.
Methods used for area 2	Visual inspection of External Elevations.
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the outer leaf of the main wall construction. RAAC panels are not present.

21 Well Green Court

Property Address	21 Well Green Court, Glasgow, G43 1RJ		
Archetype	Post 1946 TS		
Architectural Type	PS/T-2		
Inspection details	D. Watson	20th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Former concrete flat roof, now overpitched with a steel roof with corrugated panels.
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a shallow duo pitched roof above the former 6" concrete flat. The blocks are covered with an EWI system. Internal common close area RC concrete slabs and precast stairs. The top floor ceiling is a reinforced concrete slab, hammer testing confirmed no hollow sections and produced a solid "ping". The roof above former flat roof is steel purlins with corrugated sheeting roof panels. Brickwork noted to dividing walls. Flat roof is RC slab, and in accordance with historic drawings is 6" thick.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	The ceiling of the upper landing area inspected to underside of roof and found to be a solid ceiling, likely reinforced concrete slab. Roof space also accessed.
Methods used for area 1	Access was gained to the attic space of the roof section from the common close area at top floor level
Evidence gathered for area 1	
Conclusions for area 1	The former flat roof section above common close section is noted as an RC slab with an asphalt finish. Hammer testing to the ceiling below confirmed a solid RC slab, with no hollow sections and a solid “ping” produced. No indentations were made in the slab either. Historic drawings confirmed a 6” concrete roof.
Area 2 inspected	Common close to all floors.
Methods used for area 2	Hammer testing of all concrete elements.
Evidence gathered for area 2	
Conclusions for area 2	Solid concrete slabs noted throughout, precast stairs also note.

22 Crawford Lane

Property Address	22 Crawford Lane, Glasgow, G11 6TL		
Archetype	Post 1946 TS		
Architectural Type	CN/E3/C		
Inspection details	D. Watson	24th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Truss Arrangement
Wall structure format	Brick masonry external, Block inner
Floor structure format	Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey townhouse with a duo pitched roof. The house is finished with an external leaf of brickwork. No vents are noted in the brickwork below DPC level suggesting a concrete floor. Top floor ceiling plaster finishes to timber roof. Roof is a series of timber trusses and ceiling ties, with inner leaf of blockwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. External finishes
Area 1 inspected	Ceiling of upper most floor inspected and found to have a finished board material to the ceiling.

Methods used for area 1	Access was gained to the attic space of pitched roof section from the hatch available in the bathroom.
Evidence gathered for area 1	
Conclusions for area 1	Timber rafters and timber ceiling ties are noted to the duo pitched roof of the house. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space of pitched roof section.
Methods used for area 2	Visual inspection of blockwork in attic space
Evidence gathered for area 2	
Conclusions for area 2	Block is present as the inner leaf of the main wall construction. RAAC panels are not present.

31 Coxton Place

Property Address	31 Coxton Place, Glasgow, G33 5EL		
Archetype	Post 1946 TS		
Architectural Type	T-13A-3		
Inspection details	D. Watson	20th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof. The blocks are covered with an EWI system. Vents are noted in the brickwork below the render finish suggesting a timber joisted floor arrangement to all flats. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof is timber trusses and timber ceiling ties, with inner leaf of brick walls visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas and external walls
Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.

Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close hatch at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber rafters, timber struts and timber ceiling ties are noted to the duo pitched roof sections of the block. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Timber floors to all floors.
Methods used for area 2	External survey noting vents below render finish, and confirmation via historical drawings
Evidence gathered for area 2	
Conclusions for area 2	Clay brick vent is present below the EWI render finish. Concrete floors are not present.

42 Keal Avenue

Property Address	42 Keal Avenue, Glasgow, G15 6NU		
Archetype	Post 1946 TS		
Architectural Type	DRE23SLAB2		
Inspection details	D. Watson	23rd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses, Former Flat Concrete Roof
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Floor structure to ground level store areas below first floor flat precast concrete beams, no RAAC concrete noted in construction. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 4-storey block of flats with a duo pitched roof. The blocks are covered with an EWI system to the occupied flats, original render finish noted at ground level where store areas are. Blocks noted below render, no vents are noted suggesting a concrete floor arrangement at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor also concrete finish. Roof is a flat concrete roof with a new timber over pitched roof added post construction.

Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Ground floor store areas
Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a concrete finish
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close hatch at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Original flat concrete roof with a screed, asphalted, above flat areas. The roof has since been overpitched with a new timber roof supported on a series of steel beams from the flat roof deck. All concrete sections sounded appeared to be solid with no hollow elements noted and no indentations made in the concrete.
Area 2 inspected	Ground floor store areas and the upper floor construction for the first-floor flats.
Methods used for area 2	Visual inspection of store areas.
Evidence gathered for area 2	
Conclusions for area 2	A series of precast concrete beams which span front to rear, 3.3m, and approximately 150mm wide. No chamfers noted in joints. Hammer test resulted in a solid “ping” with no hollow elements or indentations made in

	the concrete.

47 Plantation Square

Property Address	47 Plantation Square, Glasgow, G51 1TQ		
Archetype	Post 1946 TS		
Architectural Type	3/315/3/M		
Inspection details	D. Watson	22nd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Rafters, Struts and ceiling ties.
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with mono pitched roofing above the flats at top floor level. The blocks are covered with an EWI system. Vents are noted in the brickwork below the render finish suggesting a timber joisted floor arrangement to all flats. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finish to timber roof. Roof above flats is timber rafters and ceiling ties, with inner leaf of brick walls visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from an individual flat at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber rafters, timber struts and timber ceiling ties are noted to the mono pitched roof sections of the block. This confirms the use of structural timbers forming the main roof structure. Flat roof section above common close section with plaster finish also noted as timber joists.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space of pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

54 Greenview Street

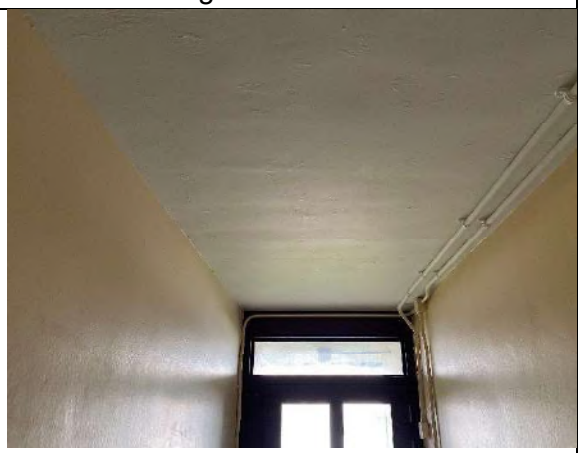
Property Address	54 Greenview Street, Glasgow, G43 1SN		
Archetype	Post 1946 TS		
Architectural Type	PS/PP7		
Inspection details	D. Watson	20th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Former concrete flat roof, now overpitched with a steel roof with corrugated panels.
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a shallow duo pitched roof above the former 6" concrete flat. The blocks are covered with an EWI system. Internal common close area RC concrete slabs and precast stairs. The top floor ceiling is a reinforced concrete slab, hammer testing confirmed no hollow sections and produced a solid "ping". The roof above former flat roof is steel purlins with corrugated sheeting roof panels. Brickwork noted to dividing walls. Flat roof is RC slab, and in accordance with historic drawings is 6" thick.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	The ceiling of the upper landing area inspected to underside of roof and found to be a solid ceiling, likely reinforced concrete slab. Roof space also accessed.
Methods used for area 1	Access was gained to the attic space of the roof section from the common close area at top floor level
Evidence gathered for area 1	
Conclusions for area 1	The former flat roof section above common close section is noted as an RC slab with an asphalt finish. Hammer testing to the ceiling below confirmed a solid RC slab, with no hollow sections and a solid “ping” produced. No indentations were made in the slab either. Historic drawings confirmed a 6” concrete roof.
Area 2 inspected	Common close to all floors.
Methods used for area 2	Hammer testing of all concrete elements.
Evidence gathered for area 2	
Conclusions for area 2	Solid concrete slabs noted throughout, precast stairs also note.

60 Tantallon Road

Property Address	60 Tantallon Road, Glasgow, G69 7BB		
Archetype	Post 1946 TS		
Architectural Type	3CF2		
Inspection details	D. Watson	23rd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rear Rendered Masonry, Front mixture of brick and timber panels below windows
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with mono pitched roofing above the flats at top floor level. The blocks are covered with an EWI system. Vents are noted in the brickwork below the render finish suggesting a timber joisted floor arrangement to all flats. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats is timber rafters and ceiling ties, with inner leaf of brick walls visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from an individual flat at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber rafters, timber struts and timber ceiling ties are noted to the duo pitched roof of the block. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	External rear render section of wall construction is visible from ground level.
Methods used for area 2	Visual inspection of external wall construction
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present below the render finish. A RAAC panel is not present.

70 Pinmore Street

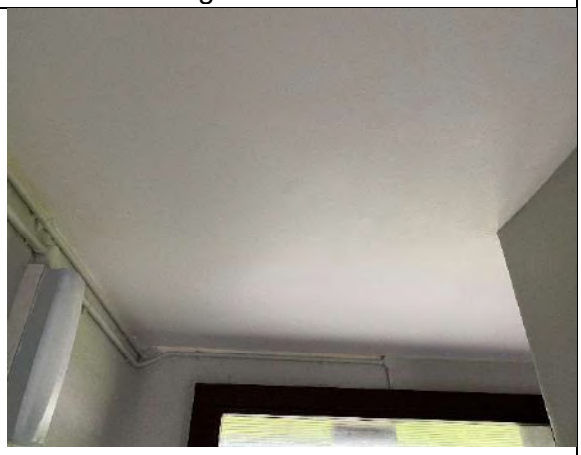
Property Address	70 Pinmore Street, Glasgow, G53 7PX		
Archetype	Post 1946 TS		
Architectural Type	PO/E4/A		
Inspection details	D. Watson	22nd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey block of flats with a hipped end pitched roof. The blocks are covered with an EWI system. Vents are noted in the brickwork below the render finish suggesting a timber joisted floor arrangement to all flats. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats is a fink truss timber trusses arrangement.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas
Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.

Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close area at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Fink Timber trusses are noted to the duo pitched roof sections of the block. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Common close to all floors.
Methods used for area 2	Hammer testing of all concrete elements.
Evidence gathered for area 2	
Conclusions for area 2	Solid concrete slabs noted at ground level, precast stairs also noted.

110 Brockburn Road

Property Address	110 Brockburn Road, Glasgow G53 5SA		
Archetype	Sheltered		
Architectural Type	APF/POB9		
Inspection details	D. Watson	3rd October 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Former Flat Roof, Timber Truss over roof
Wall structure format	Cavity Brick Masonry
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	This address is a 4 Storey, 1 Apartment Bedsits, 3 Apartment & 4 Apartment Flats. This address is noted as containing a flat roof and is estimated to have been constructed in circa 1952. It is noted that based on a visual assessment these roofs now have a pitched over roof construction.
Areas to inspect for possible use of concrete	1. External Elevations (Brick) 2. External Elevations (Concrete)
Area 1 inspected	External rendered walls to confirm the external wall construction.

Methods used for area 1	Historic access was gained via a scaffold, and a section of wall was exposed to review wall make-up
Evidence gathered for area 1	
Conclusions for area 1	Front and side walls of the property have a mixture of rendered brick and exposed brick. These areas were opened up to confirm the existence of cavity brick.
Area 2 inspected	Concrete perimeter beams to the block.
Methods used for area 2	Review of cracked sections of concrete prior to repair to confirm concrete type.
Evidence gathered for area 2	
Conclusions for area 2	Reinforced concrete beams visible, concrete is solid with a “ping” confirming solid RC concrete

120 Eastwood Avenue

Property Address	120 Eastwood Ave, Shawlands, Glasgow G41 3RT		
Archetype	Post 1946 Ts		
Architectural Type	PS/B33MA/B		
Inspection details	D. Watson	3rd October 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Original Flat Concrete Roof, now over roofed
Wall structure format	Precast concrete panels, timber panels below windows, EWI system
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	This address is a 4 Storey block of flats, containing 3 Apartment & 4 Apartment Maisonettes. This block is noted as containing a flat roof. It is noted that based on a visual assessment these roofs appear to now have a pitched roof construction. They have since been over roofed with a pitched roof detail. Based on historic surveys completed by A J Balfour Associates in 2015, the external walls are precast concrete panels fixed at floor levels. These have since been covered with an EWI system
Areas to inspect for possible use of concrete	1. Historic Disruptive Survey Records by AJB 2. Common close areas

Area 1 inspected	External gable walls.
Methods used for area 1	Core sample was taken as part of an exercise to confirm the structure of the block for suitability to receive an EWI system
Evidence gathered for area 1	
Conclusions for area 1	Precast concrete panels were noted and the core sample confirmed a precast concrete panel arrangement with solid concrete suitable for receiving an EWI system.
Area 2 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a solid concrete finish.
Methods used for area 2	Access was gained to the common close at top floor level
Evidence gathered for area 2	
Conclusions for area 2	The former flat roof section above common close section is noted as an RC slab. Hammer testing to the ceiling below confirmed a solid RC slab, with no hollow sections and a solid “ping” produced. No indentations were made in the slab either. Historic drawings confirmed a 4 ½” concrete roof.

25 Gilbertfield Place

Property Address	25 Gilbertfield Place, Glasgow, G33 3UF		
Archetype	Houses		
Architectural Type	2CB		
Inspection details	D. Watson	24th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey semi-detached house with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Timber floors also noted at top floor level. Top floor ceiling plaster finishes to timber roof. Roof is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements

Area 1 inspected	Ceiling of upper floor area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

33 Forglen Street

Property Address	33 Forglen Street, Glasgow, G34 0NH		
Archetype	Houses		
Architectural Type	2CB		
Inspection details	D. Watson	23rd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey semi-detached house with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Timber floors also noted at top floor level. Top floor ceiling plaster finishes to timber roof. Roof is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements

Area 1 inspected	Ceiling of upper floor area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

35 Carntyne Path

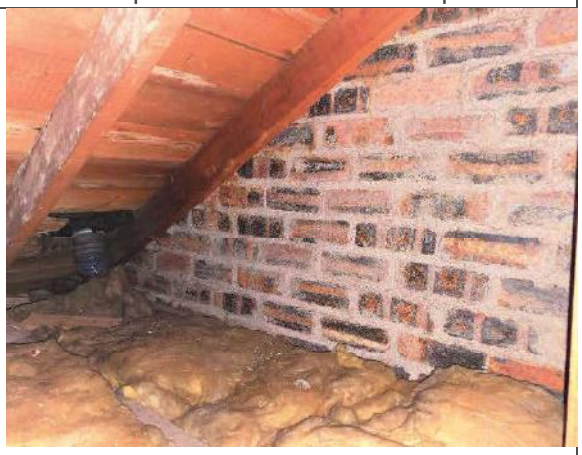
Property Address	35 Carntyne Path, Glasgow, G32 6JN		
Archetype	Houses		
Architectural Type	2CB		
Inspection details	D. Watson	24th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey semi-detached house with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Timber floors also noted at top floor level. Top floor ceiling plaster finishes to timber roof. Roof is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements

Area 1 inspected	Ceiling of upper floor area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

46 Dove Street

Property Address	46 Dove Street, Glasgow, G53 7BP		
Archetype	Houses		
Architectural Type	2CB		
Inspection details	D. Watson	24th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey semi-detached house with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Timber floors also noted at top floor level. Top floor ceiling plaster finishes to timber roof. Roof is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements

Area 1 inspected	Ceiling of upper floor area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

46 Shieldaig Road

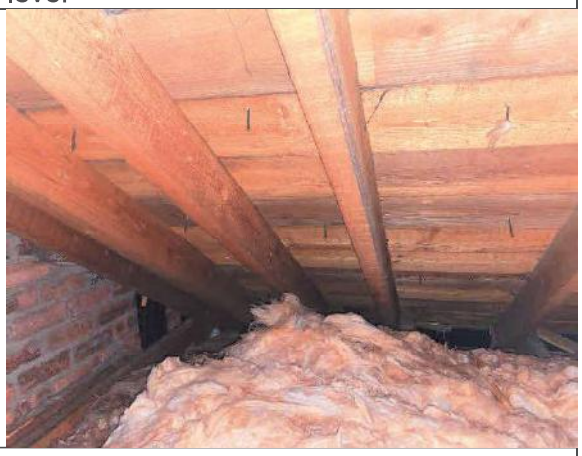
Property Address	46 Shieldaig Road, Glasgow, G22 7PN		
Archetype	Houses		
Architectural Type	2CB		
Inspection details	D. Watson	24th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey semi-detached house with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Timber floors also noted at top floor level. Top floor ceiling plaster finishes to timber roof. Roof is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements

Area 1 inspected	Ceiling of upper floor area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

88 Fluers Avenue

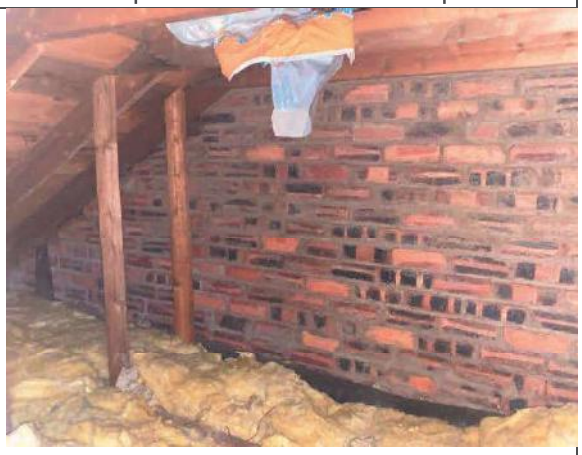
Property Address	88 Fleurs Avenue, Bellahouston, Glasgow, G41 5AS		
Archetype	Houses		
Architectural Type	2CB		
Inspection details	D. Watson	24th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey semi-detached house with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Timber floors also noted at top floor level. Top floor ceiling plaster finishes to timber roof. Roof is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements

Area 1 inspected	Ceiling of upper floor area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

289 Archerhill Road

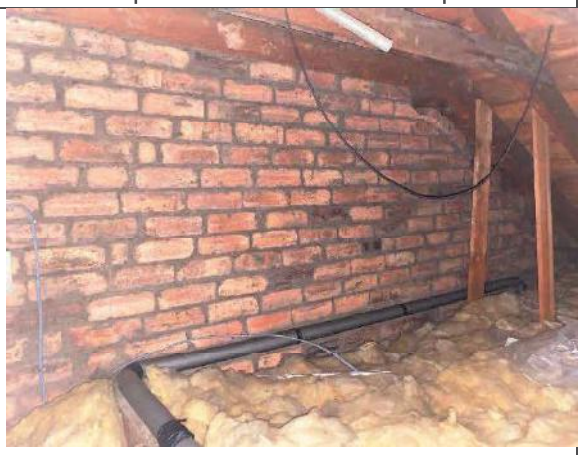
Property Address	289 Archerhill Road, Glasgow, G13 4PL		
Archetype	Houses		
Architectural Type	2CB		
Inspection details	D. Watson	23rd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey semi-detached house with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Timber floors also noted at top floor level. Top floor ceiling plaster finishes to timber roof. Roof is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements

Area 1 inspected	Ceiling of upper floor area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

15 Cairnhill Drive

Property Address	15 Cairnhill Drive, Glasgow, G52 3TX		
Archetype	Post 1946 TS		
Architectural Type	3/315/3/M		
Inspection details	D. Watson	22nd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Rafters, Struts and ceiling ties.
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with mono pitched roofing above the flats at top floor level. The blocks are covered with an EWI system. Vents are noted in the brickwork below the render finish suggesting a timber joisted floor arrangement to all flats. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finish to timber roof. Roof above flats is timber rafters and ceiling ties, with inner leaf of brick walls visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from an individual flat at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber rafters, timber struts and timber ceiling ties are noted to the mono pitched roof sections of the block. This confirms the use of structural timbers forming the main roof structure. Flat roof section above common close section with plaster finish also noted as timber joists.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space of pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

8 Fettes Street

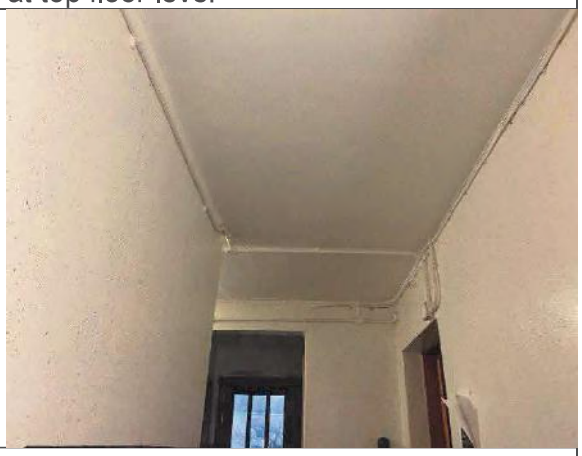
Property Address	8 Fettes Street, Glasgow, G33 3BQ		
Archetype	APFS		
Architectural Type	AP7		
Inspection details	D. Watson	24th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing stone arrangement below the EWI finish, no vents suggesting concrete slab at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

15 Barnton Street

Property Address	15 Barnton Street, Glasgow, G32 6HB		
Archetype	APFS		
Architectural Type	AP7		
Inspection details	D. Watson	23rd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing stone arrangement below the EWI finish, no vents suggesting concrete slab at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

30 Abbey Drive

Property Address	30 Abbey Drive, Glasgow, G14 9JX		
Archetype	APFS		
Architectural Type	AP7		
Inspection details	D. Watson	24th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing stone arrangement below the EWI finish, no vents suggesting concrete slab at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

35 Anniesland Crescent

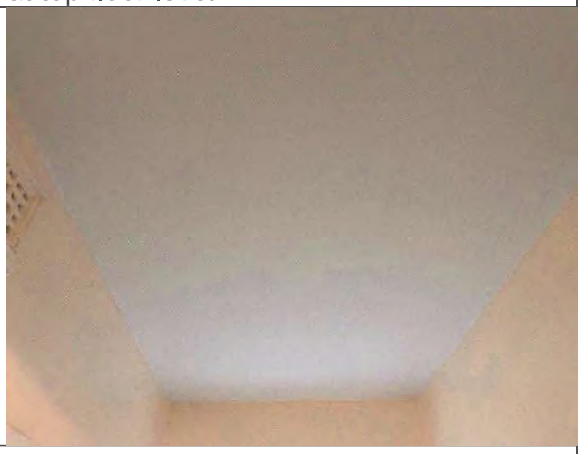
Property Address	35 Anniesland Crescent, Glasgow, G14 0YQ		
Archetype	APFS		
Architectural Type	AP7		
Inspection details	D. Watson	24th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing stone arrangement below the EWI finish, no vents suggesting concrete slab at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

161 Mossvale Road

Property Address	161 Mossvale Road, Glasgow G33 5QR		
Archetype	Houses		
Architectural Type	NC43		
Inspection details	D. Watson	23rd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey end-terraced house with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Timber floors also noted at top floor level. Top floor ceiling plaster finishes to timber roof. Roof is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements

Area 1 inspected	Ceiling of upper floor area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

183 Commonhead Road

Property Address	183 Commonhead Road, Glasgow, G34 0DS		
Archetype	Houses		
Architectural Type	NC43		
Inspection details	D. Watson	23rd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey end-terraced house with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Timber floors also noted at top floor level. Top floor ceiling plaster finishes to timber roof. Roof is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements

Area 1 inspected	Ceiling of upper floor area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

233 Corkerhill Place

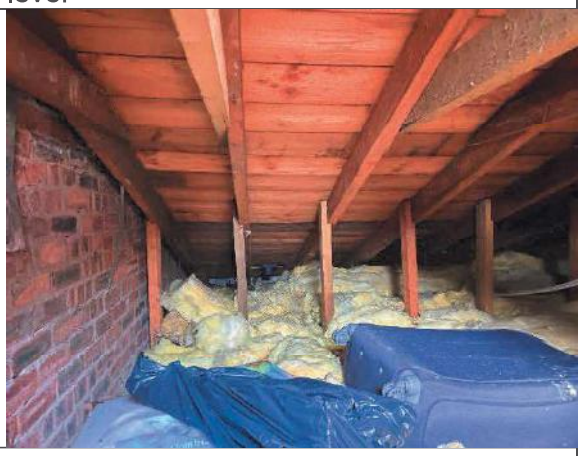
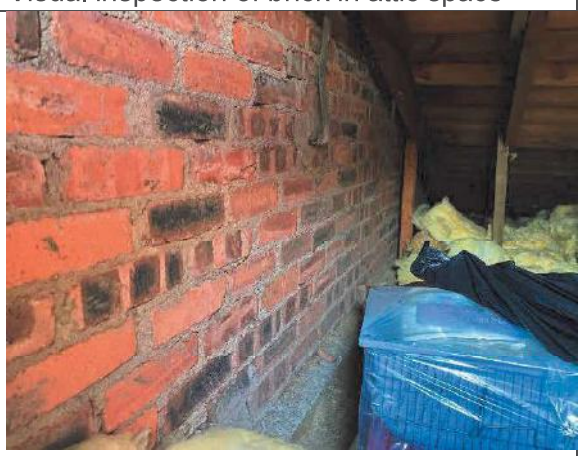
Property Address	233 Corkerhill Place, Bellahouston, Glasgow, G52 1RX		
Archetype	Houses		
Architectural Type	NC43		
Inspection details	D. Watson	23rd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey end-terraced house with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Timber floors also noted at top floor level. Top floor ceiling plaster finishes to timber roof. Roof is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements

Area 1 inspected	Ceiling of upper floor area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

5 Claythorn Park

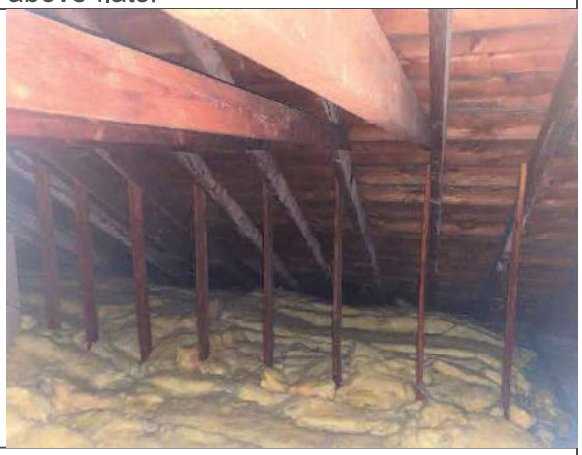
Property Address	5 Claythorn Park, Glasgow, G40 2HY		
Archetype	Post 1946 TS		
Architectural Type	T-20-3		
Inspection details	D. Watson	20th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor reinforced concrete beams to common close area. Timber ceiling ties above top floor flats. Full roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a reinforced concrete slab finish.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level. A series of reinforced concrete beams have been used above the common close area. Standard ceiling ties above flats.
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

7 Myrtle Place

Property Address	7 Myrtle Place, Glasgow, G42 8UL		
Archetype	Post 1946 TS		
Architectural Type	T-20-3		
Inspection details	D. Watson	20th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor reinforced concrete beams to common close area. Timber ceiling ties above top floor flats. Full roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a reinforced concrete slab finish.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level. A series of reinforced concrete beams have been used above the common close area. Standard ceiling ties above flats.
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.
Area 3 inspected	External canopy to rear store area

Methods used for area 3	Visual inspection of the underside of the canopy slab
Evidence gathered for area 3	
Conclusions for area 3	Precast beams in slab present. Solid “ping” and no indentations were made when pressure applied. No RAAC present.

112 Dundee Drive

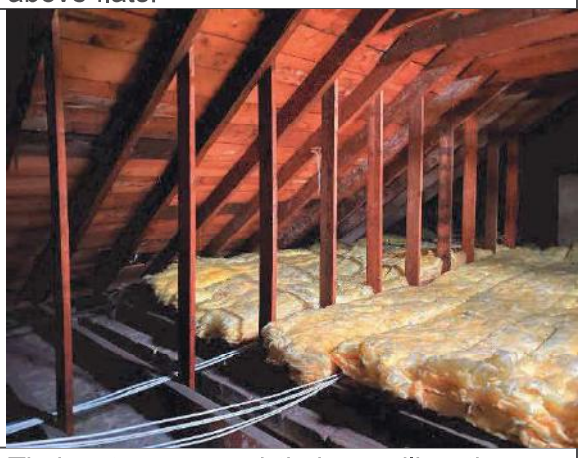
Property Address	112 Dundee Drive, Glasgow, G52 3HN		
Archetype	Post 1946 TS		
Architectural Type	T-20-3		
Inspection details	D. Watson	22nd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor reinforced concrete beams to common close area. Timber ceiling ties above top floor flats. Full roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a reinforced concrete slab finish.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level. A series of reinforced concrete beams have been used above the common close area. Standard ceiling ties above flats.
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.
Area 3 inspected	External canopy to rear store area

Methods used for area 3	Visual inspection of the underside of the canopy slab
Evidence gathered for area 3	
Conclusions for area 3	Reinforced concrete slab present. Solid “ping” and no indentations were made when pressure applied. No RAAC present.

189 Torogay Street

Property Address	189 Torogay Street, Glasgow, G22 7EE		
Archetype	Post 1946 TS		
Architectural Type	T-20-3		
Inspection details	D. Watson	22nd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor reinforced concrete beams to common close area. Timber ceiling ties above top floor flats. Full roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a reinforced concrete slab finish.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level. A series of reinforced concrete beams have been used above the common close area. Standard ceiling ties above flats.
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

220 Craigpark Drive

Property Address	220 Craigpark Drive, Glasgow G31 2SX		
Archetype	Post 1946 TS		
Architectural Type	T-20-3		
Inspection details	D. Watson	20th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor reinforced concrete beams to common close area. Timber ceiling ties above top floor flats. Full roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a reinforced concrete slab finish.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level. A series of reinforced concrete beams have been used above the common close area. Standard ceiling ties above flats.
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

934 Gartloch Road

Property Address	934 Gartloch Road, Glasgow G33 5AR		
Archetype	Post 1946 TS		
Architectural Type	T-20-3		
Inspection details	D. Watson	20th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor reinforced concrete beams to common close area. Timber ceiling ties above top floor flats. Full roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a reinforced concrete slab finish.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level. A series of reinforced concrete beams have been used above the common close area. Standard ceiling ties above flats.
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

36 Earnock Street

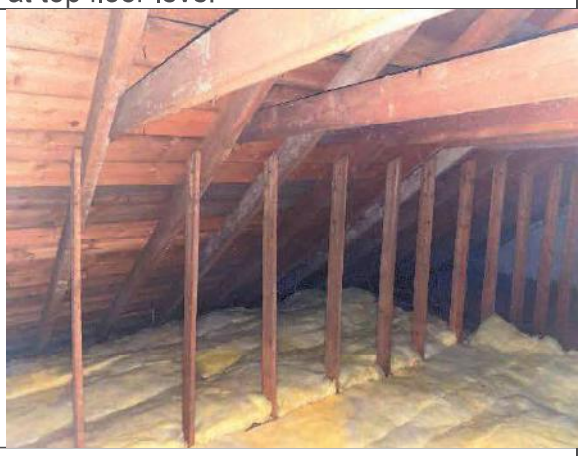
Property Address	36 Earnock Street, Glasgow, G33 1HL		
Archetype	Post 1946 TS		
Architectural Type	T-27-3		
Inspection details	D. Watson	20th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

49 Mosspark Square

Property Address	49 Mosspark Square, Glasgow, G52 1NE		
Archetype	Post 1946 TS		
Architectural Type	T-27-3		
Inspection details	D. Watson	20th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

61 Orleans Avenue

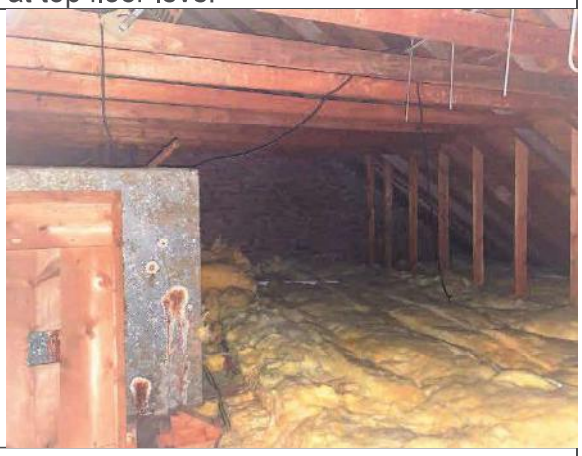
Property Address	61 Orleans Avenue, Glasgow, G14 9NG		
Archetype	Post 1946 TS		
Architectural Type	T-27-3		
Inspection details	D. Watson	22nd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are uncovered and have no EWI system. Facing stone arrangement below the render finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas 3. External canopies

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.
Area 3 inspected	External concrete canopies at front and rear entrances
Methods used for area 3	Visual inspection and hammer test of the soffit of the canopies.

Evidence gathered for area 3	
Conclusions for area 3	Reinforcement in RC slabs noted in the canopy where spalling has occurred, solid ping and no indentations noted. No RAAC concrete in the canopies.

71 Wilverton Road

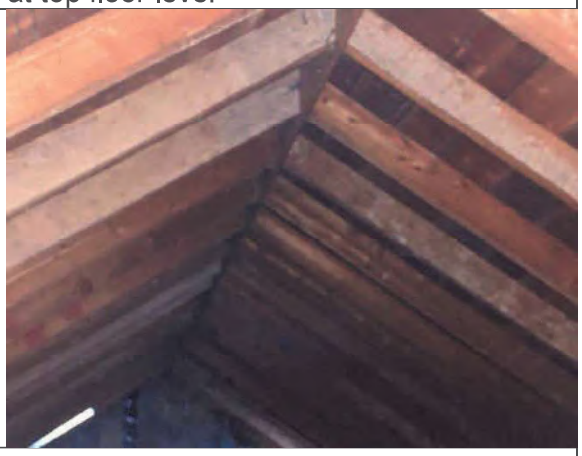
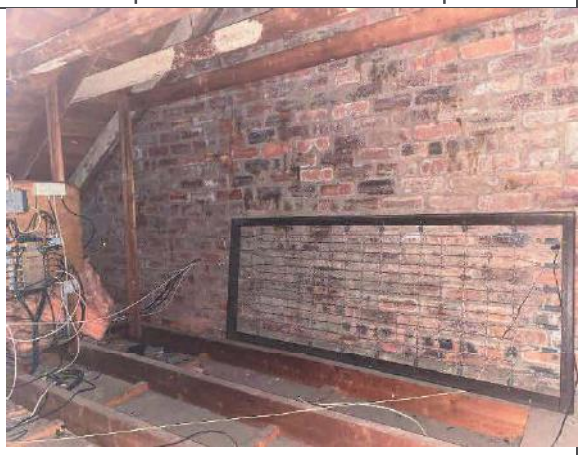
Property Address	71 Wilverton Road, Glasgow, G13 2NW		
Archetype	Post 1946 TS		
Architectural Type	T-27-3		
Inspection details	D. Watson	23rd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

8 Glenraith Square

Property Address	8 Glenraith Square, Glasgow, G33 5PD		
Archetype	Post 1946 TS		
Architectural Type	T-28-R3		
Inspection details	D. Watson	20th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space. Flat roof to rear bin stores is concrete slab, no RAAC suspected.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas 3. Rear flat roof bin store area

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.
Area 3 inspected	Rear single storey flat roof section at bin stores and storerooms
Methods used for area 3	Visual inspection of underside of the flat concrete roof slab

Evidence gathered for area 3	
Conclusions for area 3	Precast concrete beams noted, hammer test confirmed a solid ping with no indentations made while inspecting. No RAAC concrete present.

11 Broompark Drive

Property Address	11 Broompark Drive, Glasgow, G31 2DA		
Archetype	Post 1946 TS		
Architectural Type	T-28-R3		
Inspection details	D. Watson	20th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

16 Hopeman Avenue

Property Address	16 Hopeman Avenue, Glasgow, G46 8SG		
Archetype	Post 1946 TS		
Architectural Type	T-28-R3		
Inspection details	D. Watson	20th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space. Flat roof to rear bin stores is concrete slab, no RAAC suspected.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas 3. Rear flat roof bin store area

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.
Area 3 inspected	Rear single storey flat roof section at bin stores and storerooms
Methods used for area 3	Visual inspection of underside of the flat concrete roof slab

Conclusions for area 3	Precast concrete beams noted, hammer test confirmed a solid ping with no indentations made while inspecting. No RAAC concrete present.

24 Tarfside Gardens

Property Address	24 Tarfside Gardens, Glasgow, G52 3AA		
Archetype	Post 1946 TS		
Architectural Type	T-28-R3		
Inspection details	D. Watson	22nd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space. Flat roof to rear bin stores is concrete slab, no RAAC suspected.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas 3. Rear flat roof bin store area

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.
Area 3 inspected	Rear single storey flat roof section at bin stores and storerooms
Methods used for area 3	Visual inspection of underside of the flat concrete roof slab

Evidence gathered for area 3	
Conclusions for area 3	Reinforced concrete slab noted, hammer test confirmed a solid ping with no indentations made while inspecting. No RAAC concrete present.

38 Northland Drive

Property Address	38 Northland Drive, Glasgow, G14 9BB		
Archetype	Post 1946 TS		
Architectural Type	T-28-R3		
Inspection details	D. Watson	22nd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space. Flat roof to rear bin stores is concrete slab, no RAAC suspected.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas 3. Rear flat roof bin store area

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.
Area 3 inspected	Rear single storey flat roof section at bin stores and storerooms
Methods used for area 3	Visual inspection of underside of the flat concrete roof slab

Evidence gathered for area 3	
Conclusions for area 3	Precast concrete beams noted, hammer test confirmed a solid ping with no indentations made while inspecting. No RAAC concrete present.

52 Dumbreck Road

Property Address	52 Dumbreck Road, Bellahouston, Glasgow, G41 5NP		
Archetype	Post 1946 TS		
Architectural Type	T-28-R3		
Inspection details	D. Watson	20th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space. Flat roof to rear bin stores is concrete slab, no RAAC suspected.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas 3. Rear flat roof bin store area

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.
Area 3 inspected	Rear single storey flat roof section at bin stores and storerooms
Methods used for area 3	Visual inspection of underside of the flat concrete roof slab

Evidence gathered for area 3	
Conclusions for area 3	Precast concrete beams noted, hammer test confirmed a solid ping with no indentations made while inspecting. No RAAC concrete present.

67 Cornalee Gardens

Property Address	67 Cornalee Gardens, Glasgow, G53 7EW		
Archetype	Post 1946 TS		
Architectural Type	T-28-R3		
Inspection details	D. Watson	22nd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space. Flat roof to rear bin stores is concrete slab, no RAAC suspected.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas 3. Rear flat roof bin store area

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.
Area 3 inspected	Rear single storey flat roof section at bin stores and storerooms
Methods used for area 3	Visual inspection of underside of the flat concrete roof slab

Evidence gathered for area 3	
Conclusions for area 3	Reinforced concrete slab noted, hammer test confirmed a solid ping with no indentations made while inspecting. No RAAC concrete present.

244 Archerhill Road

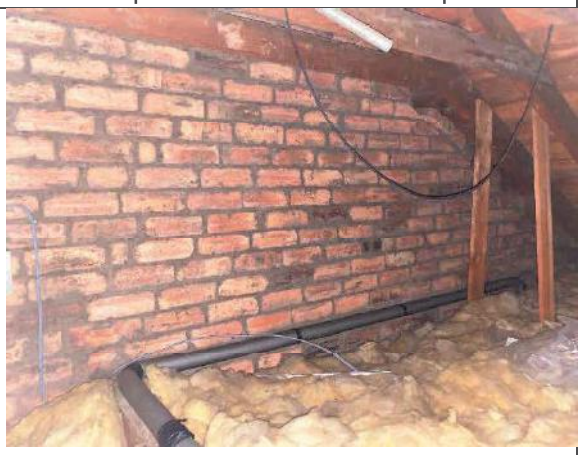
Property Address	244 Archerhill Road, Glasgow, G13 3YA		
Archetype	Post 1946 TS		
Architectural Type	T-28-R3		
Inspection details	D. Watson	23rd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space. Flat roof to rear bin stores is concrete slab, no RAAC suspected.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas 3. Rear flat roof bin store area

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.
Area 3 inspected	Rear single storey flat roof section at bin stores and storerooms
Methods used for area 3	Visual inspection of underside of the flat concrete roof slab

Evidence gathered for area 3	
Conclusions for area 3	Precast concrete beams noted, hammer test confirmed a solid ping with no indentations made while inspecting. No RAAC concrete present.

9 Brucefield Place

Property Address	9 Brucefield Place, Glasgow, G34 0DX		
Archetype	Post 1946's TS		
Architectural Type	F22/2		
Inspection details	D. Watson	20th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing stone arrangement below the EWI finish, vents below render suggesting timber floor construction at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

14 Tantallon Road

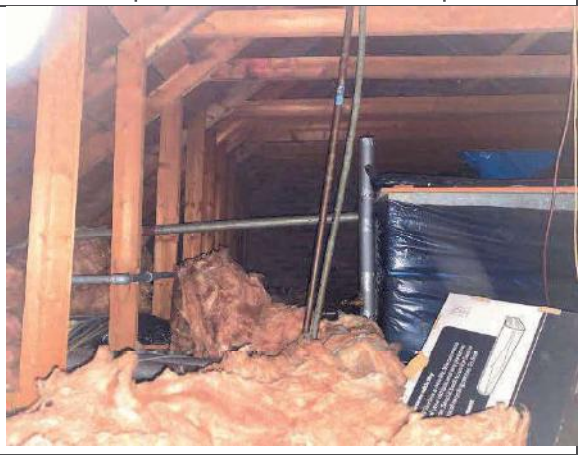
Property Address	14 Tantallon Road, Baillieston, Glasgow, G69 7AZ		
Archetype	Post 1946 TS		
Architectural Type	2F		
Inspection details	D. Watson	23rd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey block of flats with duo pitched roofing above the flats at top floor level. The blocks are covered with an EWI system. Brick piers at the party wall and common close areas. No vents are noted in the brickwork below the render finish suggesting a concrete floor arrangement to all flats. Protruding concrete slabs for central balconies are RC slabs, with exposed reinforcement noted in some areas. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats is timber rafters and ceiling ties, with inner leaf of brick walls visible from attic space.

Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas
Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from an individual flat at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber rafters, timber struts and timber ceiling ties are noted to the duo pitched roof of the block. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

17 Harris Road

Property Address	17 Harris Road, Glasgow, G23 5QH		
Archetype	Houses		
Architectural Type	MA/E8/2		
Inspection details	D. Watson	24th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey semi-detached house with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Timber floors also noted at top floor level. Top floor ceiling plaster finishes to timber roof. Roof is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements

Area 1 inspected	Ceiling of upper floor area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Party wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of blockwork in attic space
Evidence gathered for area 2	
Conclusions for area 2	Blockwork is present as the party wall of the main wall construction. RAAC panels are not present.

19 Whiteacres Path

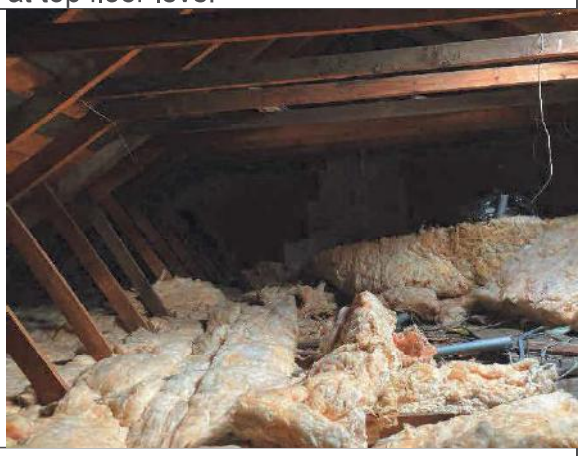
Property Address	19 Whitacres Path, Glasgow, G53 7LN		
Archetype	Post 1946 TS		
Architectural Type	T-9-2		
Inspection details	D. Watson	24th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing stone arrangement below the EWI finish, no vents suggesting concrete slab at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of block in attic space
Evidence gathered for area 2	
Conclusions for area 2	Blockwork is present as the inner leaf and party wall of the main wall construction. RAAC panels are not present.

33 Sandford Gardens

Property Address	33 Sandford Gardens, Baillieston, Glasgow, G69 6NA		
Archetype	Sheltered		
Architectural Type	LC79/B		
Inspection details	D. Watson	23rd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a single storey sheltered mid-terraced house with a duo pitched roof above all areas. The house is covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Ceiling plaster finishes to timber roof. Roof is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements
Area 1 inspected	Ceiling of roof area inspected to underside of roof and found to have a finished board material to the ceiling.

Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at ground floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Party wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick work in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the external walls of the main wall construction. RAAC panels are not present.

43 Cornalee Place

Property Address	43 Cornalee Place, Glasgow, G53 7EN		
Archetype	APFS		
Architectural Type	S-P-9/3		
Inspection details	D. Watson	22nd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 3-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space. Flat roof to rear bin stores is concrete slab, no RAAC suspected.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas 3. Rear flat roof bin store area

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

43 Kishorn Place

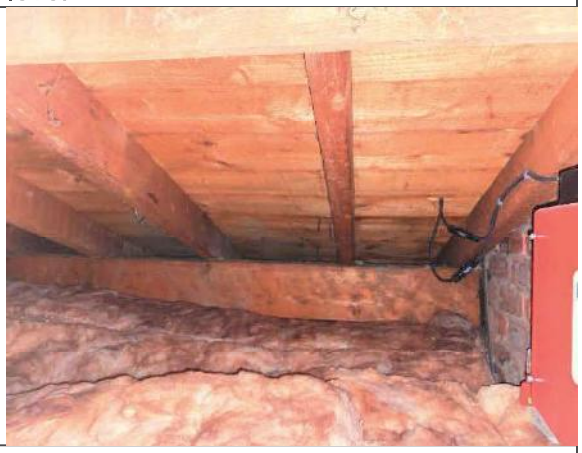
Property Address	43 Kishorn Place, Glasgow, G33 5QP		
Archetype	Houses		
Architectural Type	SL4/3		
Inspection details	D. Watson	24th November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey mid-terraced house with a duo pitched roof above all areas. The timber rafters extend further down on the front elevation. The house is covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Timber floors also noted at top floor level. Top floor ceiling plaster finishes to timber roof. Roof is timber rafters and timber purlins with ceiling ties, with inner leaf and party wall of brickwork visible from attic space. Roof access possible at 2 hatches, one on half landing and one at top floor level

Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements
Area 1 inspected	Ceiling of upper floor area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Party wall and inner leaf construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick work in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the party wall and inner leaf of the main wall construction. RAAC panels are not present.

65 Knapdale Street

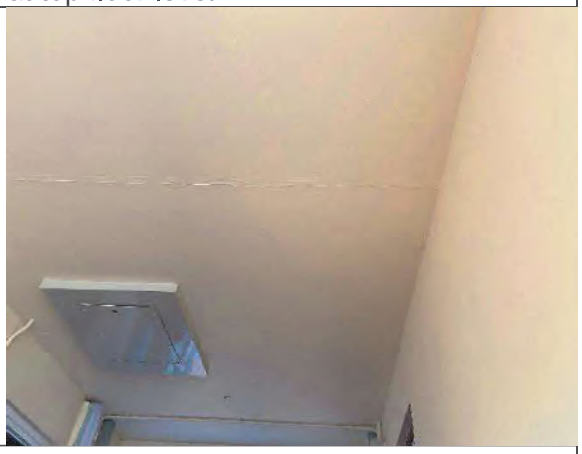
Property Address	65 Knapdale Street, Glasgow, G22 6PP		
Archetype	Post 1946 TS		
Architectural Type	F22/2		
Inspection details	D. Watson	22nd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Dense concrete to stairwells. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey block of flats with a duo pitched roof above all areas. The blocks are covered with an EWI system. Facing stone arrangement below the EWI finish, vents below render suggesting timber floor construction at ground floor level. Internal common close area RC concrete slabs and precast stairs. Top floor ceiling plaster finishes to timber roof. Roof above flats and common close is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Common close areas

Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the common close at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Inner leaf of wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the inner leaf of the main wall construction. RAAC panels are not present.

70 Broom Path

Property Address	70 Broom Path, Baillieston, Glasgow, G69 7DD		
Archetype	Houses		
Architectural Type	LC62/5/68		
Inspection details	D. Watson	23rd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey end-terraced house with a duo pitched roof above all areas. The house is covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Timber floors also noted at top floor level. Top floor ceiling plaster finishes to timber roof. Roof is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements

Area 1 inspected	Ceiling of upper floor area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Party wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick work in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the external walls of the main wall construction. RAAC panels are not present.

82 Crossbank Avenue

Property Address	82 Crossbank Avenue, Glasgow, G42 0HU		
Archetype	Houses		
Architectural Type	RU/NT/TER4		
Inspection details	D. Watson	22nd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2-storey semi-detached house with a duo pitched roof above all areas. The house is covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at ground floor level. Timber floors also noted at top floor level. Top floor ceiling plaster finishes to timber roof. Roof is timber trusses and timber ceiling ties, with inner leaf of brickwork visible from attic space.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements

Area 1 inspected	Ceiling of upper floor area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Party wall construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick work in attic space
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present as the external walls of the main wall construction. RAAC panels are not present.

203 Hillpark Drive

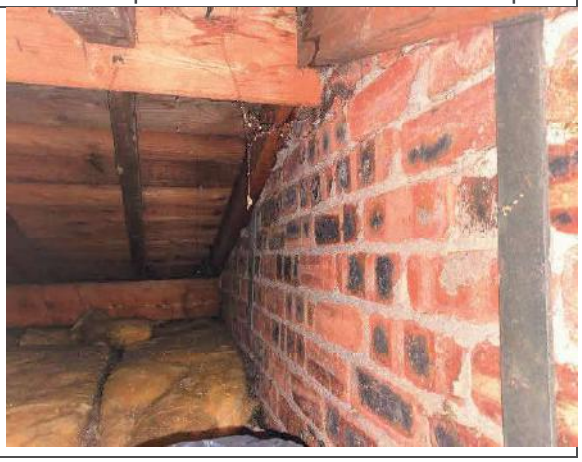
Property Address	203 Hillpark Drive, Glasgow, G43 2RJ		
Archetype	Houses		
Architectural Type	RSLO-4-3		
Inspection details	D. Watson	23rd November 2023	

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber Trusses
Wall structure format	Rendered Masonry, EWI
Floor structure format	Timber floor joists at ground and first floor level. Based on the construction type and review of approved building warrant drawings, no RAAC was identified in the floor zones.

Inspection Report

General observations	The property is a 2/3 storey mid-terraced house with a duo pitched roof above all areas. The timber rafters extend further down on the front elevation. The house is covered with an EWI system. Facing brick arrangement below the EWI finish, vents suggesting timber floor joists at first floor level. Timber floors also noted at top floor level. Top floor ceiling plaster finishes to timber roof. Roof is timber rafters and timber purlins with ceiling ties, with inner leaf and party wall of brickwork visible from attic space. Roof access possible at 2 hatches, one on half landing and one at top floor level. At ground floor on the road access elevation of the house, a concrete slab, beam and column arrangement is

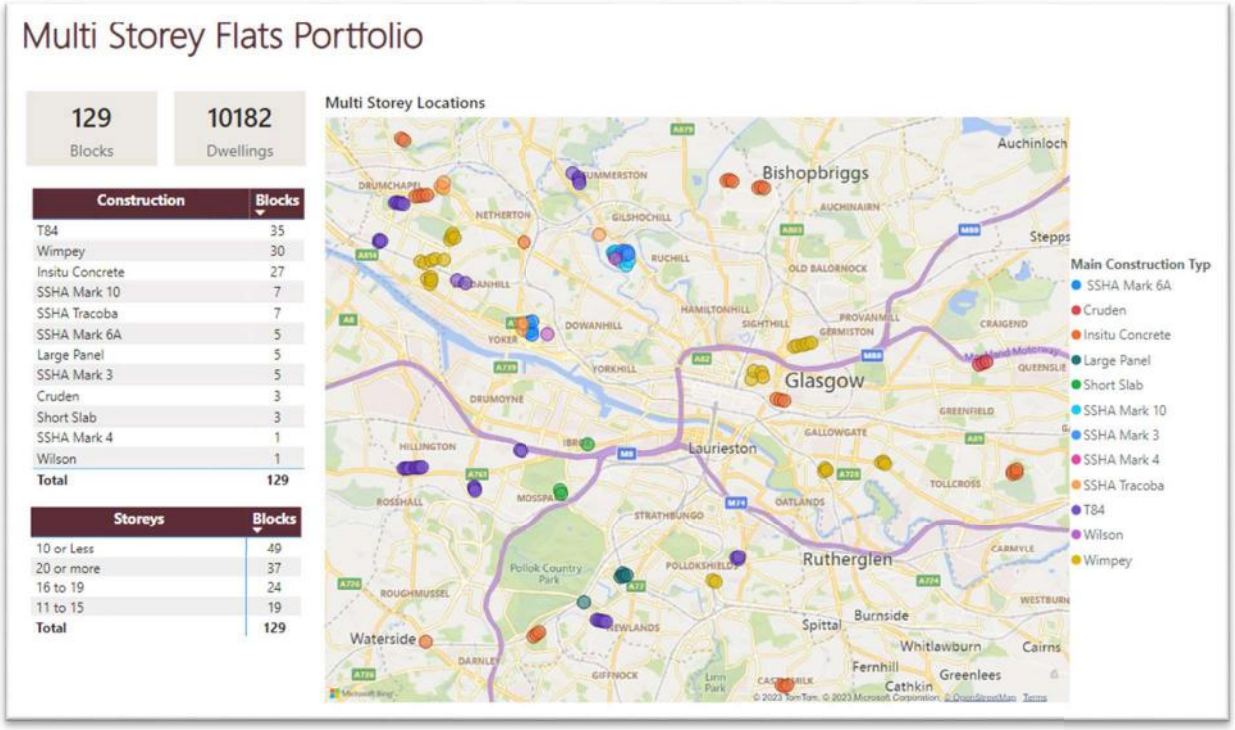
	noted in the area of the car port. These concrete elements have been inspected for chamfers and tested for robustness. Concrete is considered to be a mix of RC beams and columns with precast beams for the slabs. No RAAC present.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Internal elements 3. Underside of slab to car port
Area 1 inspected	Ceiling of upper floor area inspected to underside of roof and found to have a finished board material to the ceiling.
Methods used for area 1	Access was gained to the attic space of pitched roof section from the hall at top floor level
Evidence gathered for area 1	
Conclusions for area 1	Timber trusses, timber purlins and timber ceiling ties are noted to the duo pitched roof. This confirms the use of structural timbers forming the main roof structure.
Area 2 inspected	Party wall and inner leaf construction is visible from within attic space duo pitched roof section.
Methods used for area 2	Visual inspection of brick work in attic space
Evidence gathered for area 2	

Conclusions for area 2	Clay brick is present as the party wall and inner leaf of the main wall construction. RAAC panels are not present.
Area 3 inspected	Underside of property to front elevation at location of the car port where concrete slabs are present
Methods used for area 3	Visual inspection of car port and hammer test of the concrete elements
Evidence gathered for area 3	
Conclusions for area 3	The concrete slab below the property at the location of the car port is reinforced concrete beams and columns supporting a series of precast beams. Hammer test showed that concrete produced a solid “ping”, and no indentations of soft spots were encountered. No RAAC concrete present based on findings.

Multi-storey flats:

Wheatley Group has a large and varied multi-storey portfolio. Blocks range from under 10 storeys to over 20 storeys. All blocks were constructed between 1957 and 1973 at a time when there was significant high rise in council housing, particularly in Glasgow. The largest concentration of our multi-storey stock is in the Wyndford area of Maryhill and more widely across the west of the city. We do, however, have some form of multi-storey flats in the majority of communities where we currently provide social housing.

The tables below show the distribution of this stock type across Glasgow:



Construction	Blocks
T84	35
Wimpey	30
Insitu Concrete	27
SSHA Mark 10	7
SSHA Tracoba	7
SSHA Mark 6A	5
Large Panel	5
SSHA Mark 3	5
Cruden	3
Short Slab	3
SSHA Mark 4	1
Wilson	1
Total	**129**

Storeys	Blocks
10 or Less	49
20 or more	37
16 to 19	24
11 to 15	19
Total	**129**

Examples of our Multi Storey Types

As part of its review of our desk-top assessment, AJ Balfour commented in relation to multi-storey flats:

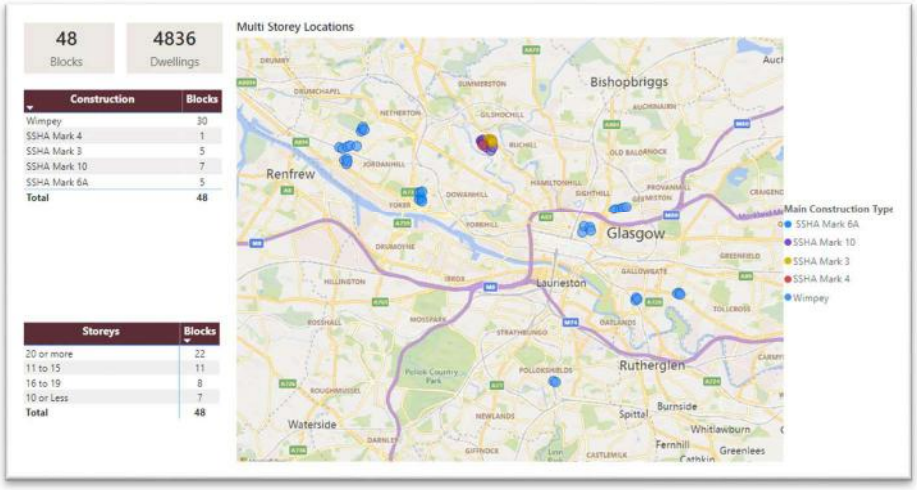
> *"It is generally considered that in multi storey construction, flat roofs will be constructed in reinforced concrete slabs. Based on A J Balfour Associates experience with multi storey construction in Scotland, any flat roofs encountered have always been constructed using traditional reinforced concrete."*
>
> ***AJ Balfour***

Further information on our multi- storey flats follows:

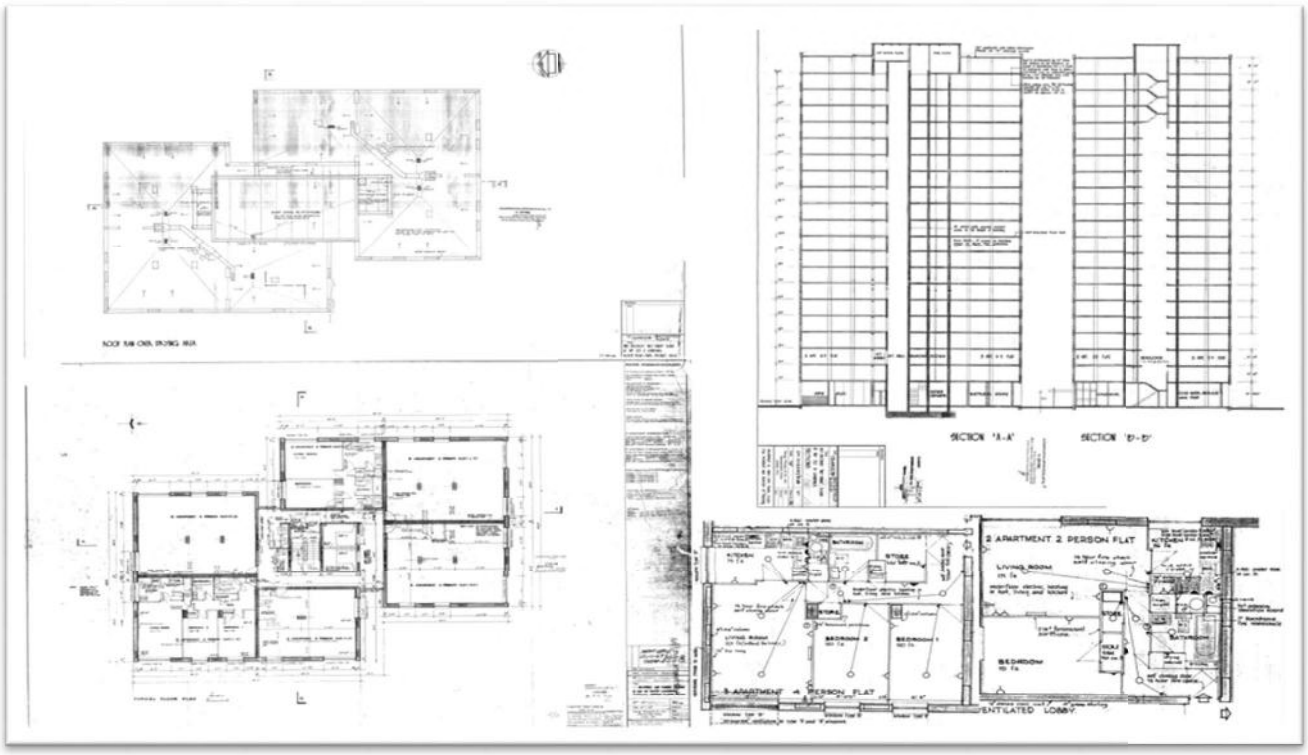
Wimpey No Fines Blocks (Structural Frame); 48 Blocks:

These blocks are named after the contractor who adopted this construction method, which consists of an insitu frame incorporating open textured concrete infill panels. The structure consists of insitu reinforced concrete floors, walls and columns. The roofs are asphalt or bituminous felt over screed laid to falls supported by an insitu concrete slab.

There are 48 blocks of this type in Glasgow, providing 4836 homes. These blocks were built between 1961 to 1971. All of these blocks have benefited from major improvements, including external wall insulation and roof renewal.



A detailed of review of as built drawings has been completed confirming materials used in the construction of these developments.

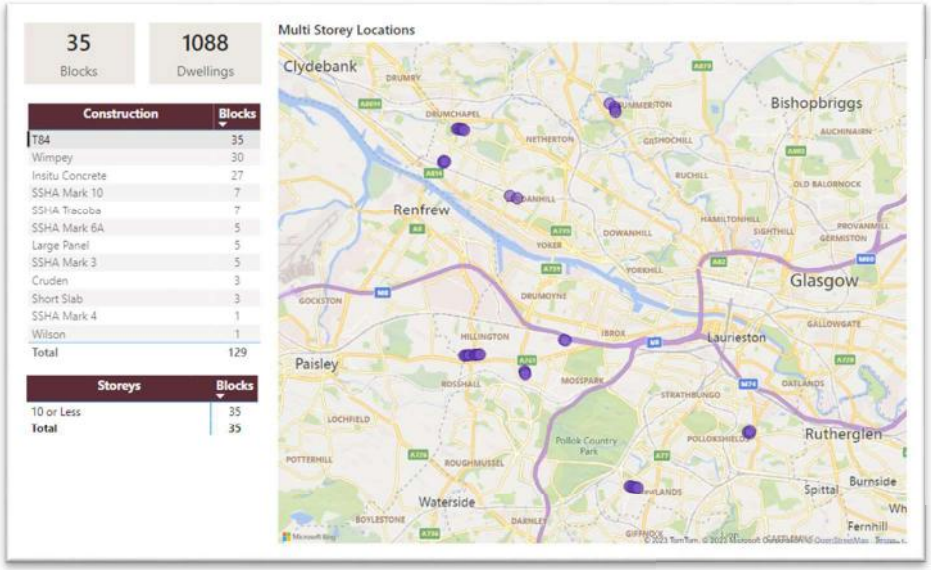


T84 BLOCKS (Loadbearing Brickwork): 35 Blocks:

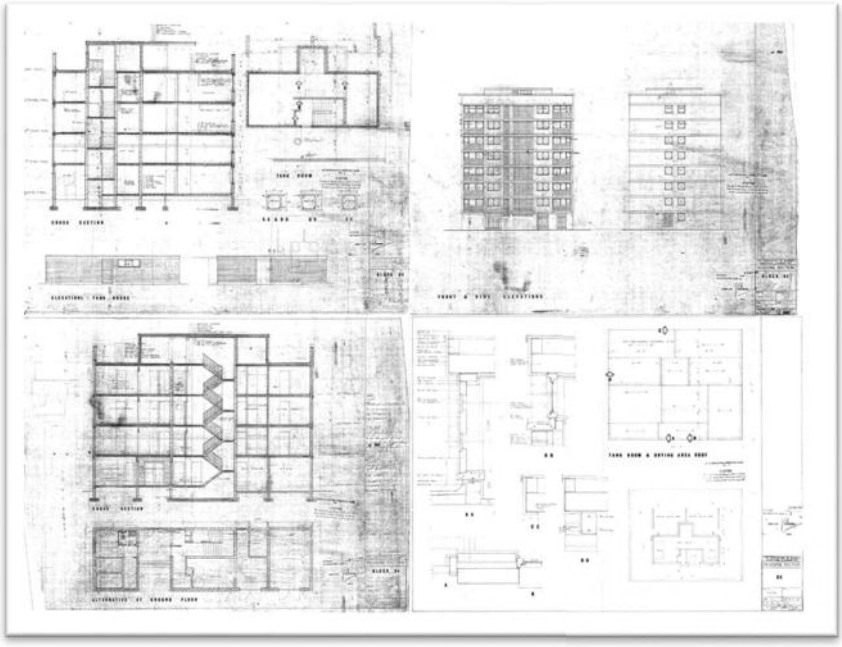
These are eight-storey high, with minor variations to accommodate sloping sites. In general, there are four4 flats per floor with a typical block on a level site having a total of 30 flats. The superstructure consists of loadbearing brickwork supporting precast concrete floor slabs. Stability and resistance to wind loading is provided by the relatively rigid cores around the lift shaft and stairwell. The flat roof is also constructed with precast slabs supporting screed and asphalt.

The roof parapet is constructed of cavity brickwork; common brick finished with roughcast on the roof face, and a facing brick to the outer external elevations.

There are 35 blocks of this type in Glasgow, providing 1088 homes. These blocks were built between 1968 to 1973. All of these blocks have benefited from major improvements including external wall insulation and roof renewal.



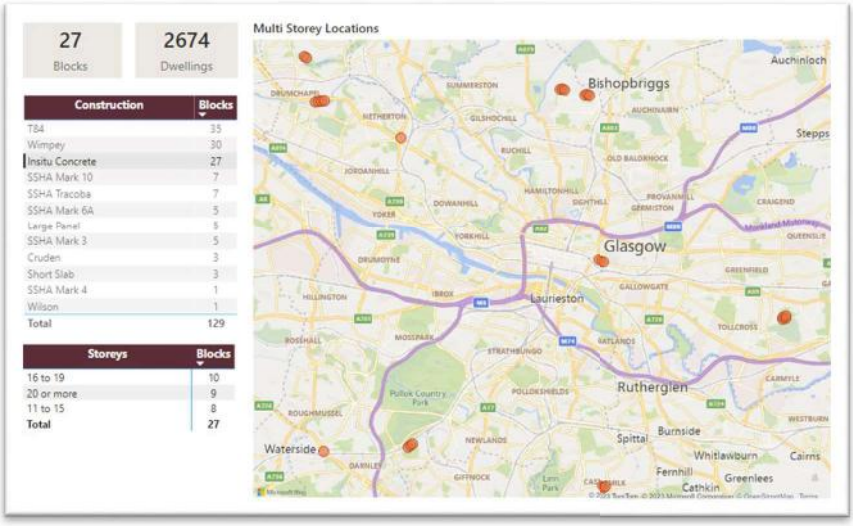
A detailed of review of as built drawings has been completed confirming materials used in the construction of these developments.



Insitu concrete frame blocks: 27 blocks:

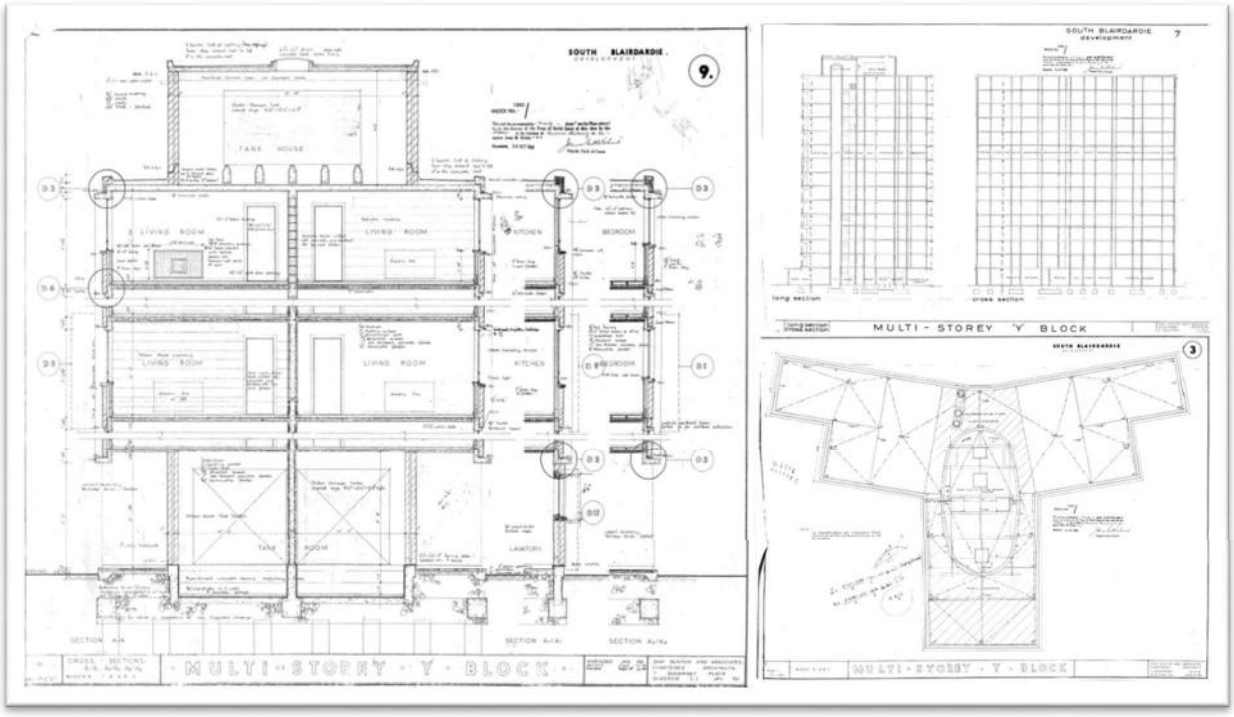
The blocks range from 10 - 24 storeys and the main loadbearing frame is provided by insitu reinforced concrete columns and walls. The construction method was used in a range of different sites. Concrete panels were poured on site, hence the definition ‘insitu’.

There are 27 blocks of this type in Glasgow, providing 2674 homes. These blocks were built between 1957 to 1973. All of these blocks have benefited from major improvements, including external wall insulation and roof renewal.



A detailed of review of as built drawings has been completed confirming materials used in the construction of these developments.

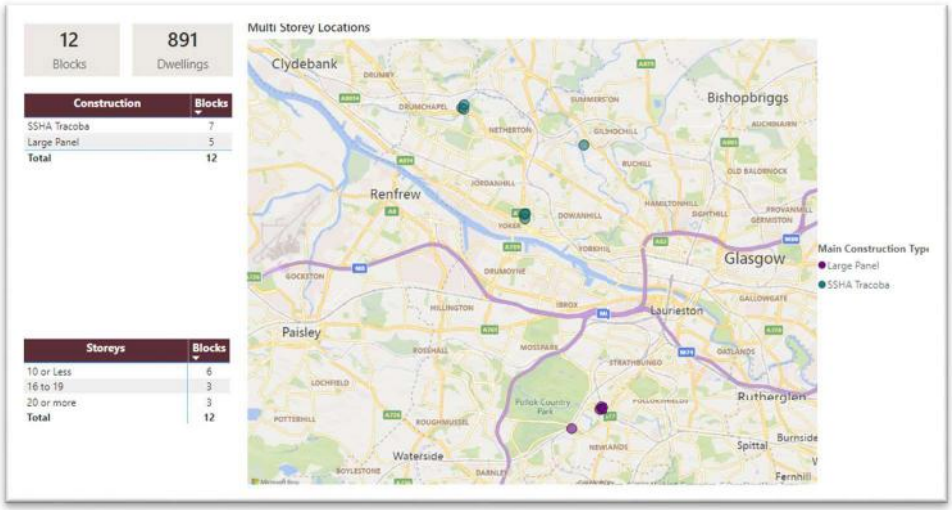
(Note - example below is one insitu development for reference)



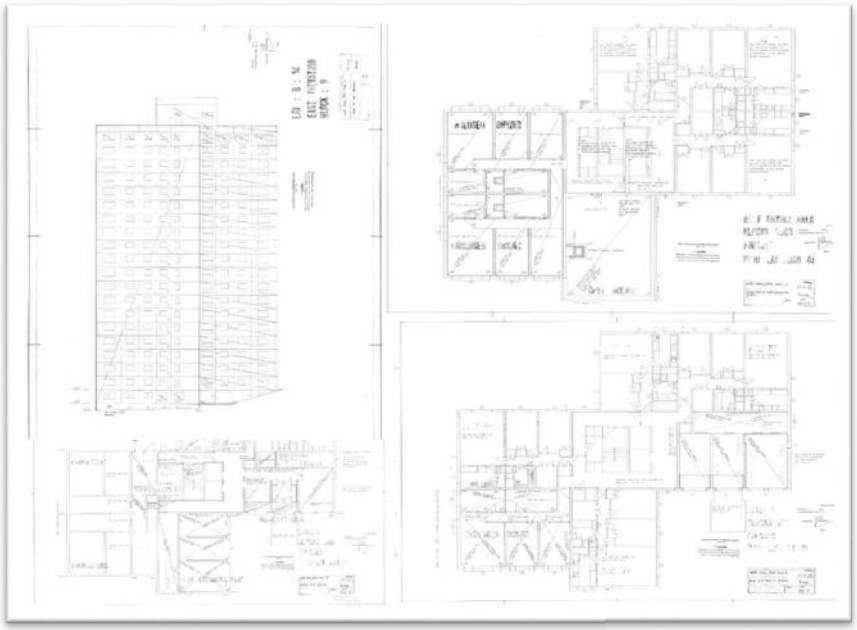
Large Panel System (LPS) – Bison, Reema and Tracoba Systems: 12 Blocks:

These three construction types were built from precast reinforced concrete units. Wall and floor units were erected on site and structural connections, both horizontally and vertically, made with insitu concrete often supplemented by lengths of site placed reinforcement. Walls and floors were connected in a cellular form to provide overall stability.

There are 12 blocks of this type in Glasgow, providing 891 homes. These blocks were built between 1969 to 1973. All of these blocks have benefited from major improvements, including external wall insulation and roof renewal.



A detailed of review of as built drawings has been completed confirming materials used in the construction of these developments.

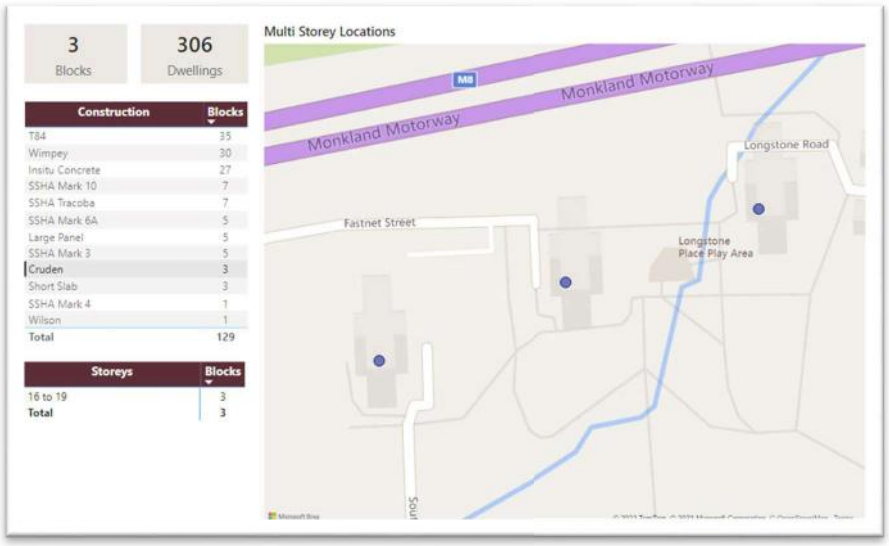


Cruden (structural frame): 3 blocks

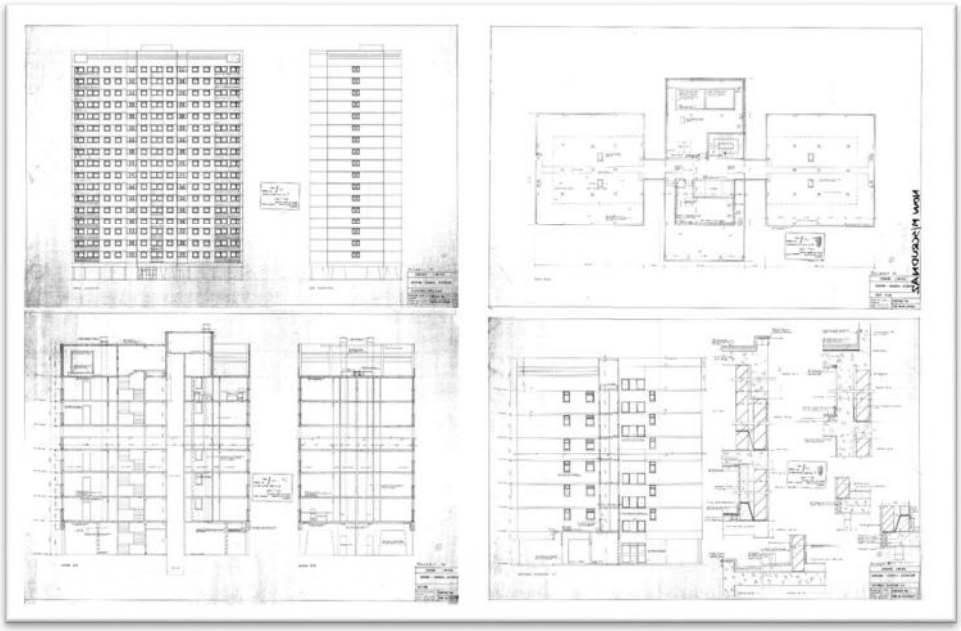
Named after the contractor who designed and built them, the structure consists of insitu reinforced concrete floor slabs supported by reinforced concrete walls and columns. The external walls sit on precast concrete edge units which have been incorporated into the floor slab construction.

The roofs are flat, being asphalt on screed laid to falls over a reinforced concrete slab.

There are three blocks of this type in Glasgow, providing 306 homes. These blocks were built in 1965. Roof replacement and the installation of a rainscreen cladding system was completed in the 1990s.



A detailed of review of as built drawings has been completed confirming materials used in the construction of these developments.

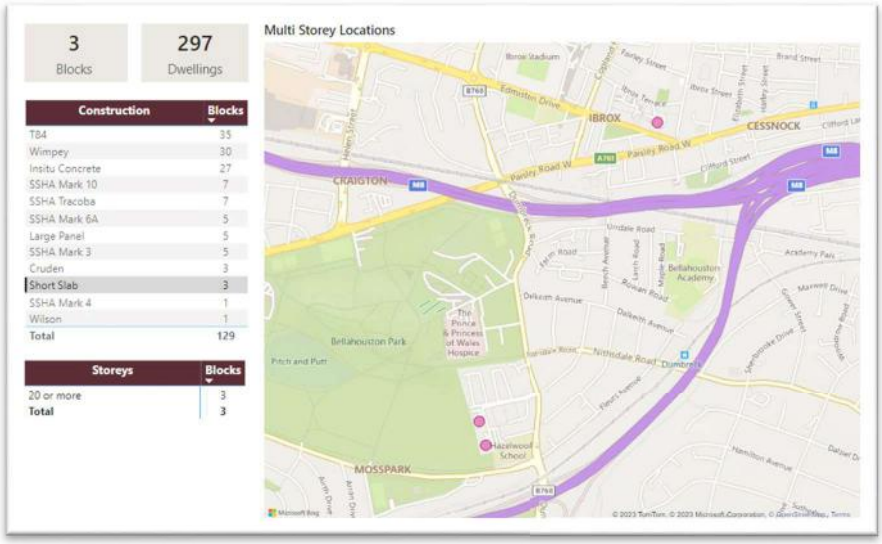


Standard short slab (structural frame) : 3 blocks

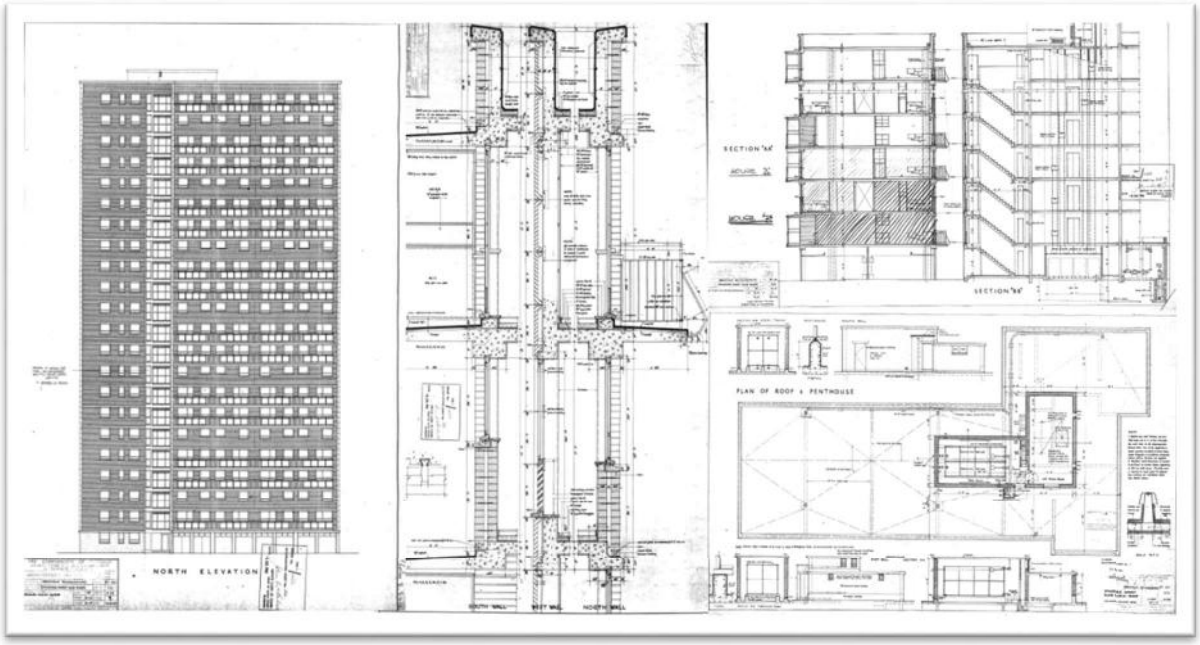
There are three multi-storey blocks of flats which are recorded as Standard Short Slab Block type construction within the scope of this report. The name is taken from the dimensionally small exposed aggregate precast concrete cladding panels situated on the gables of the blocks.

One elevation has a series of cantilever balconies and the opposite elevation has balconies that are recessed within the building line.

There are three blocks of this type in Glasgow, providing 297 homes. These blocks were built between 1965 and 1972. All of these blocks have benefited from major improvements, including external wall insulation and roof renewal.



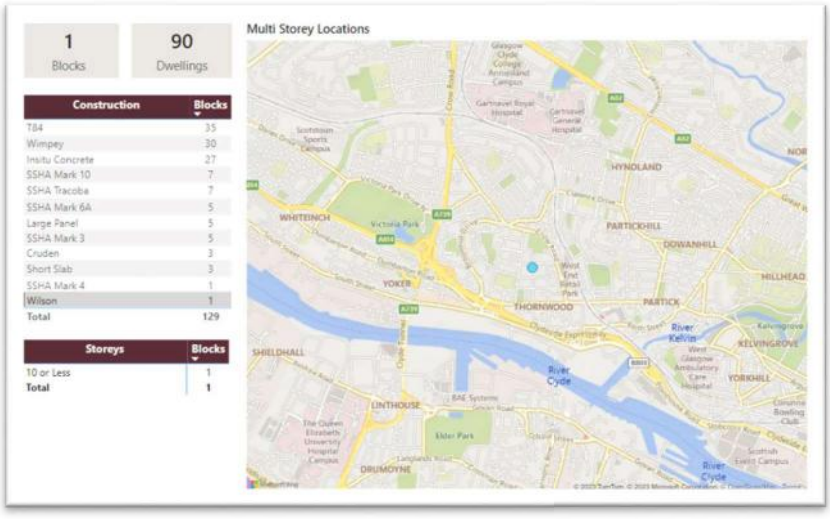
A detailed of review of as built drawings has been completed confirming materials used in the construction of these developments.



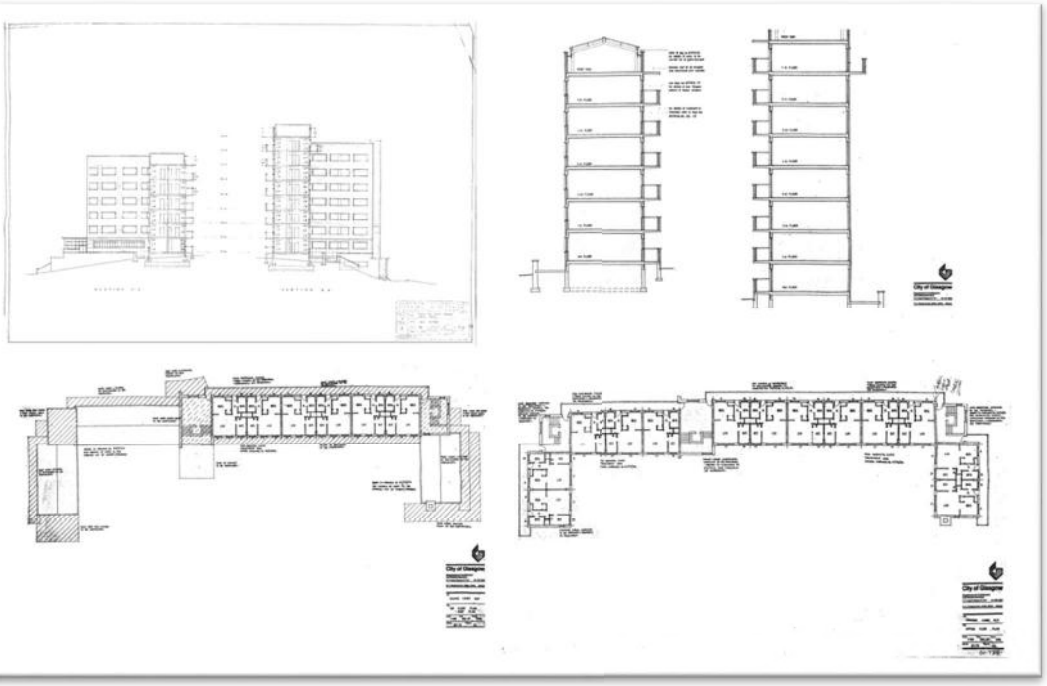
Wilson precast blocks (loadbearing brickwork): 1 block:

Structurally, these buildings are loadbearing brick with composite floors of 50mm precast concrete and 140mm of insitu concrete. Profiled insitu concrete edge beams are commonly finished in brick slips to maintain the appearance of the brickwork facade.

There is one block of this type in Glasgow, providing 90 homes. This block was built in 1957. This block has benefited from major improvements, including external wall insulation and roof renewal.



A detailed of review of as built drawings has been completed confirming materials used in the construction of this development.



Non-traditional construction types:

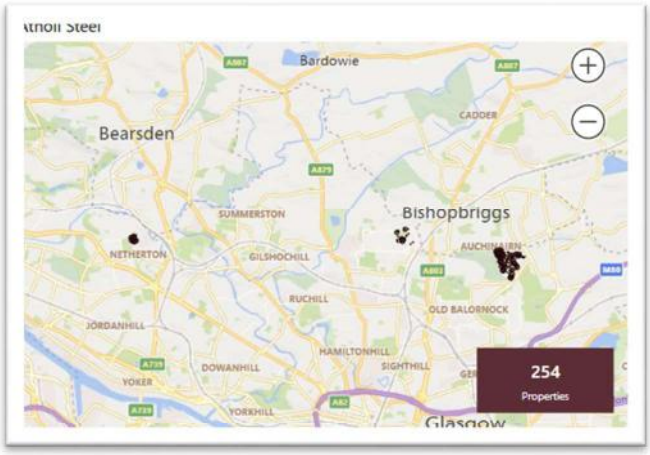
There is no suggestion that RAAC was used in non-traditional construction type homes. However, given the use of concrete in various property types of this nature, we undertook a desk-top review examining construction method for a range of non-traditional properties owned by Wheatley Homes Glasgow.

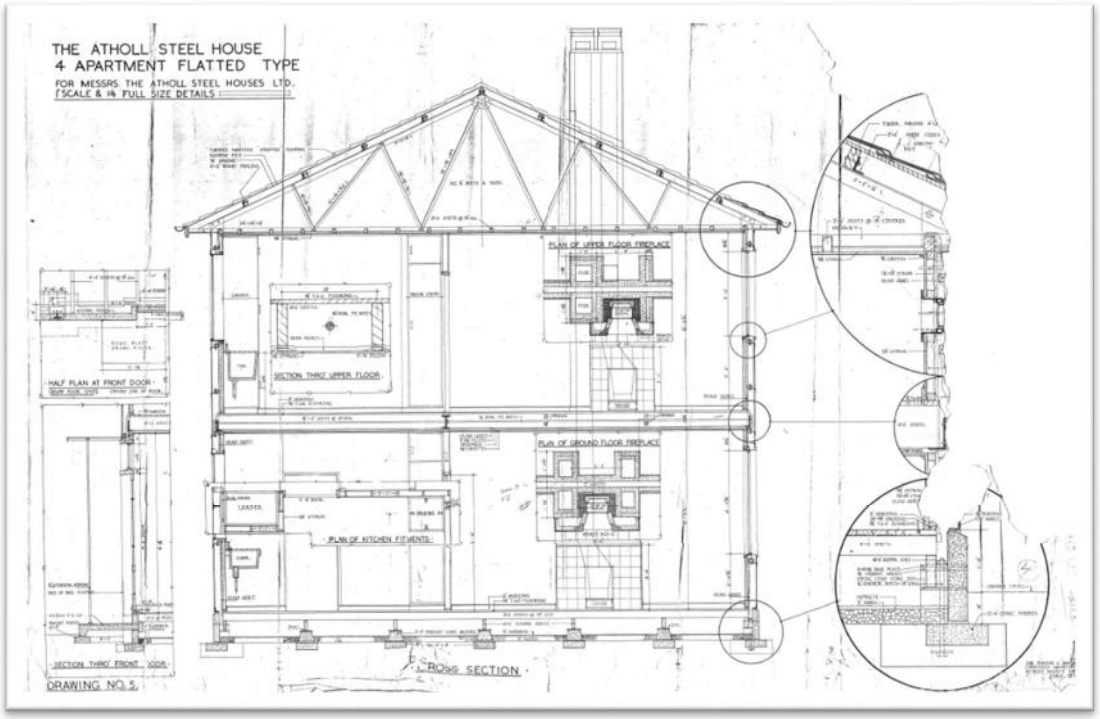
Atholl Steel:

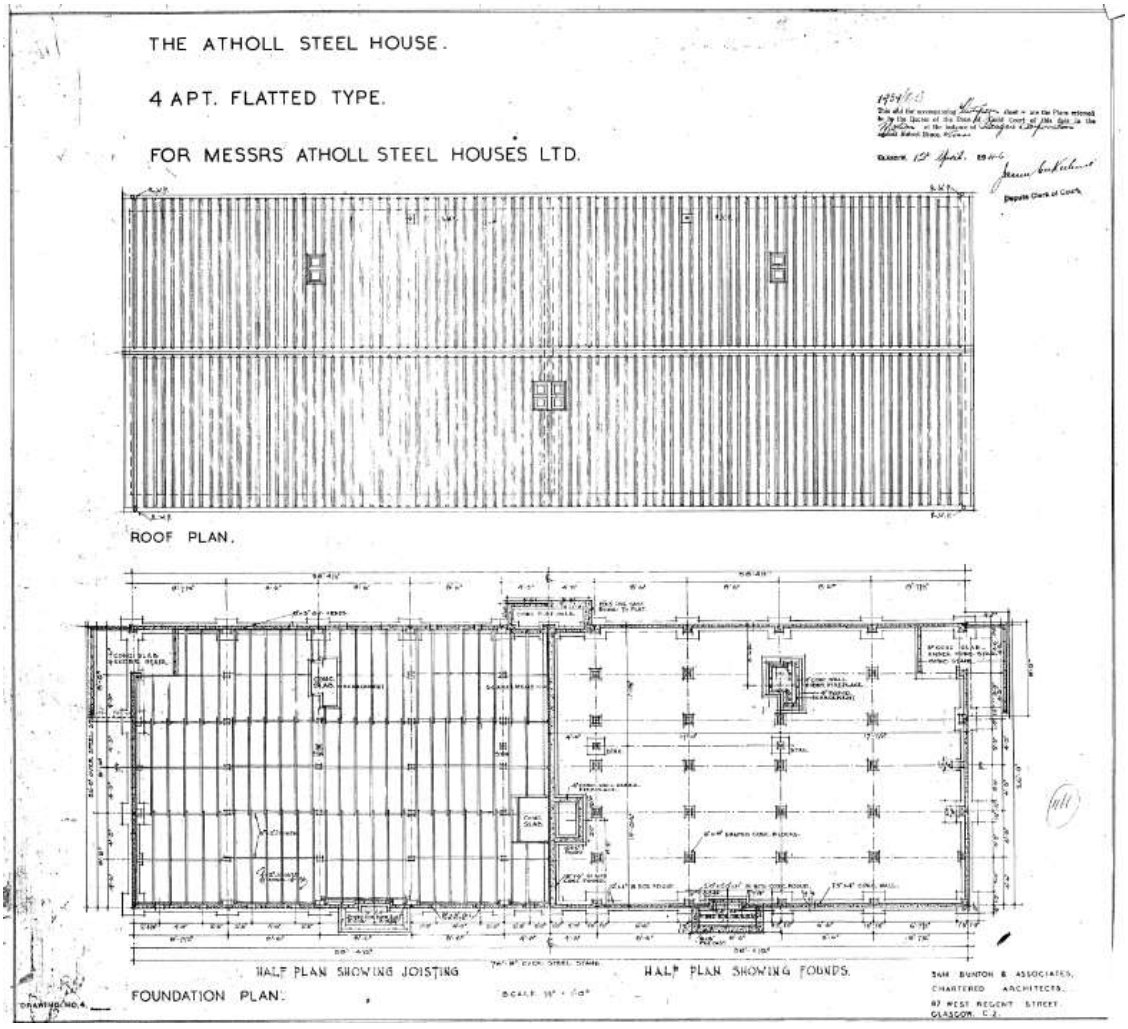
Wheatley Homes has this construction type as two-storey, semi-detached or block of four properties. These properties were built between 1946 and 1952. There are 254 homes in our ownership. All of which were subject to significant refurbishment in the 1990s.

Properties were constructed as follows:

- a 114mm brickwork outer leaf, roughcast externally, and an inner leaf consisting of plasterboard on timber studding prefabricated panels, with a damp and heat resisting inner membrane of sisalkraft building paper form the external walls. The steel frame is located within the cavity between the two leaves;
- the structural frame consists of rolled steel section columns and bracing members;
- the internal party wall between two attached properties is formed from two 114mm brick leaves with an 89mm cavity;
- partitions within the building consist of timber frames covered on both sides with plasterboard in prefabricated units;
- the first floor is constructed with 22mm tongue and groove flooring on 165 x 50mm joists at 460mm centres supported on gable and party walls and rolled steel joists;
- the roof is formed from steel trusses, steel bracing, timber purlins, sarking, felt and tiles;
- and ceilings are 10mm plasterboard. Chimneys are constructed from brickwork and the original windows were within steel casements.

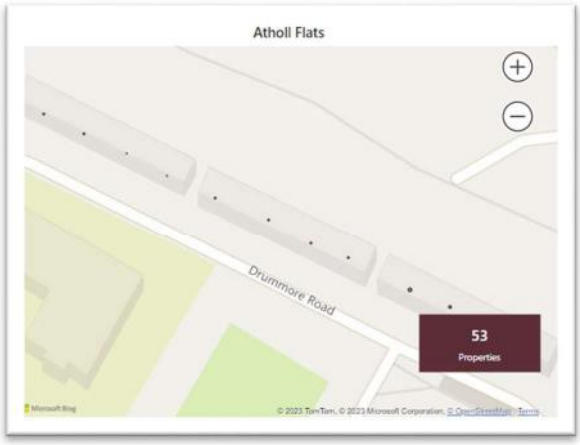



THE ATHOLL STEEL HOUSE
4 APARTMENT FLATTED TYPE
FOR MESSRS THE ATHOLL STEEL HOUSES LTD.
SCALE & ¼ FULL SIZE DETAILS
PLAN OF UPPER FLOOR FIREPLACE
SECTION THRO' UPPER FLOOR
PLAN OF GROUND FLOOR FIREPLACE
HALF PLAN AT FRONT DOOR
PLAN OF KITCHEN FITMENTS
SECTION THRO' FRONT DOOR
CROSS SECTION
DRAWING NO. 5.


THE ATHOLL STEEL HOUSE.
4 APT. FLATTED TYPE.
FOR MESSRS ATHOLL STEEL HOUSES LTD.
ROOF PLAN.
HALF PLAN SHOWING JOISTING
HALF PLAN SHOWING FOUNDS.
FOUNDATION PLAN.
DRAWING NO. 4.
SAM. BUNTON & ASSOCIATES,
CHARTERED ARCHITECTS,
87 WEST REGENT STREET,
GLASGOW, C.2.

Atholl Flats (1954):

The properties comprise three-storey flats in multiple units of six houses. These properties were built between 1946 and 1952. There are 53 homes in our ownership. All of which were subject to significant refurbishment in the late 1990s.



The properties were constructed as follows:

The 321mm thick cavity wall consists of 155mm brick; a 64mm cavity and an inner leaf of 102mm clinker blocks finished with roughcast externally and plaster internally. Party walls are 280mm thick brickwork with a plaster finish. Pre-fabricated timber frames finished with plasterboard form the partitions. The crosswalls are formed of 155mm high-strength brickwork at ground floor and 155mm clinker blocks on the upper floors.

The ground floor was constructed from timber joists with tongue and groove boarding. The upper floors were formed with precast concrete units, with timber battens, and tongue and groove boarding.

Roofs were constructed from timber purlins rafters and sarking, covered with felt and interlocking concrete tiles.

B.I.S.F:

These properties were built between 1949 and 1951. There are 187 homes in our ownership. All of which were subject to significant refurbishment in 2008.

The use of the British Iron and Steel and Steel Federation House type is widespread across the UK and has variations in detail, although they are all of a similar external appearance.

The properties were constructed as follows:

The lightweight frame of the two-storey semi-detached house was designed for rapid construction and consists of vertical channels (76mm x 38mm) at 1.067m centres in the front and back walls which carry horizontal angles (100mm x 76mm) at first floor level. These in turn carry steel floor joists that are given intermediary support by steel columns concealed within the internal partitions.

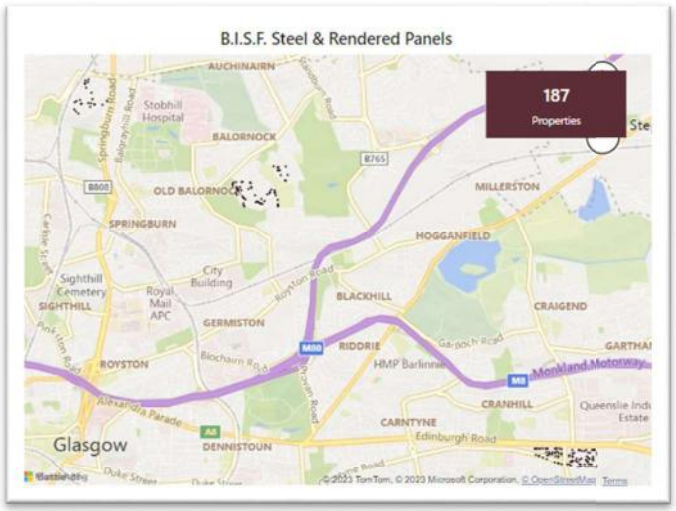
The external wall is of two sections. The ground floor wall consists of a cement render on ribbed metal lath that was in turn fixed to the vertical channels. The upper section of walling was constructed of steel corrugated sheeting panels fixed to rails that were bolted again to the vertical channels. This steel sheeting panel can suffer from corrosion resulting in loss of section and the steel lath to the lower concrete panels can corrode, leading to spalling of the render face.

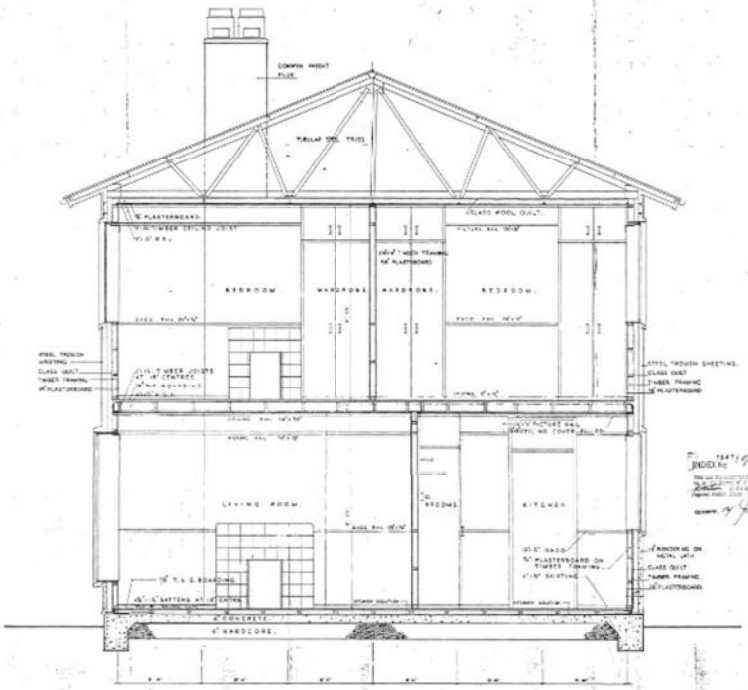
Party walls are of brick or concrete block construction and partitions of timber frame with normally fibreboard lining at 1st floor level and plasterboard at ground floor.

Ground floor is generally ground bearing, and first floor constructed with timber joists.

Foundations are generally in the form of concrete plinths of varying dimensions formed at the buildings' perimeter. Variants to this occurred when brick walls were built off concrete strip foundations to within 50-75mm off the finished ground level in order to create a seating for the concrete plinth, or brick walls were continued up to the underside of the concrete floor slab.

The roof is formed with tubular steel trusses with angle purlins and ceiling joists spanning between them. Diagonal members within the wall construction provided bracing of the structure.





CROSS SECTION.

CROSS SECTION.

	B.I.S.F. TYPE A2. 1. APT. HOUSES. 2. HOUSES IN A BLOCK.	SCOTTISH STEEL HOUSE.	SCALE OF FEET	100/4.

Blackburn Orlit:

The Blackburn Orlit properties in Glasgow are built in terraces of four or eight two-storey blocks. There are 90 homes in our ownership. All of which were subject to significant refurbishment in the 1990s.

Properties were constructed as follows:

The columns that form the structural frame to the buildings were supported off 460mm square concrete pier foundations. Brick walls independent of the structural frame supported the ground floor beams.

140mm x 140mm precast reinforced concrete columns (with standard Orlit column to column joints) spaced at approximately 3.35m and connected by precast reinforced concrete perimeter beams (127 x 191mm section) at both first floor and roof level form the structural frame.

75 x 75mm steel angle brackets bolted to the columns supported the first-floor beams. These beams had holes formed in the ends that were positioned on vertical pins welded to the angle brackets.

The beams at roof level were supported on top of the column heads. Continuity was achieved through steel reinforcement bars that extended from the notched beam ends and was tied to a vertical loop of reinforcement that was grouted into a 200mm deep hole in the column head. The whole joint was then filled with mortar.

The internal beams are similar in dimension to the perimeter beams and were supported at one end by the masonry chimney and at the outer ends to intermediate columns in the gable or party walls.

External walls comprised of two leaves forming a 150mm cavity that contained the structural frame. The external leaf was constructed with 50mm thick Orlit facing panels and the inner leaf with 64mm thick lightweight concrete blocks. Internally the walls are lined with plasterboard on timber battens. Galvanised mild steel wall ties were used in the construction of the external wall.

Two leaves of 64mm lightweight concrete blockwork formed the party walls.

The ground and first floors were of a suspended timber construction with T & G flooring on timber joists. At first floor level the joists were supported on the perimeter and internal beams, while at ground floor level the main beams span from chimney to front and back walls and are supported by sleeper walls that were constructed independently of the structural frame. There are also secondary beams that span from the main beams (primary beams) to the party or gable walls and in turn support the timber joists.

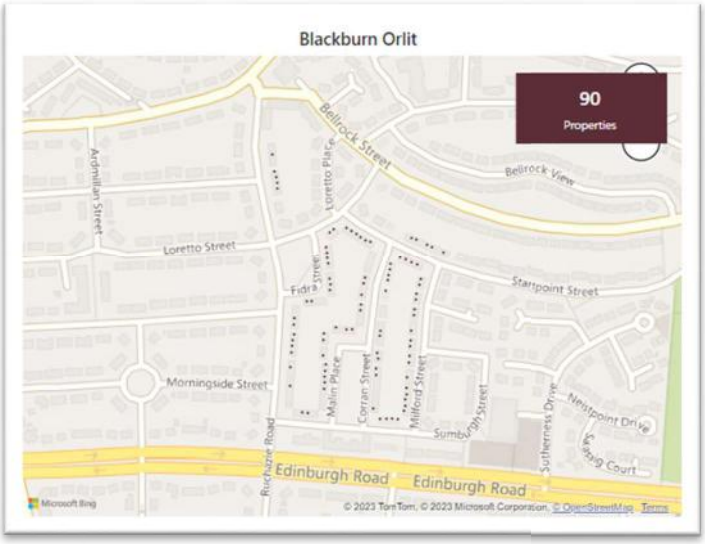
Variants to this sometimes include solid ground floors.

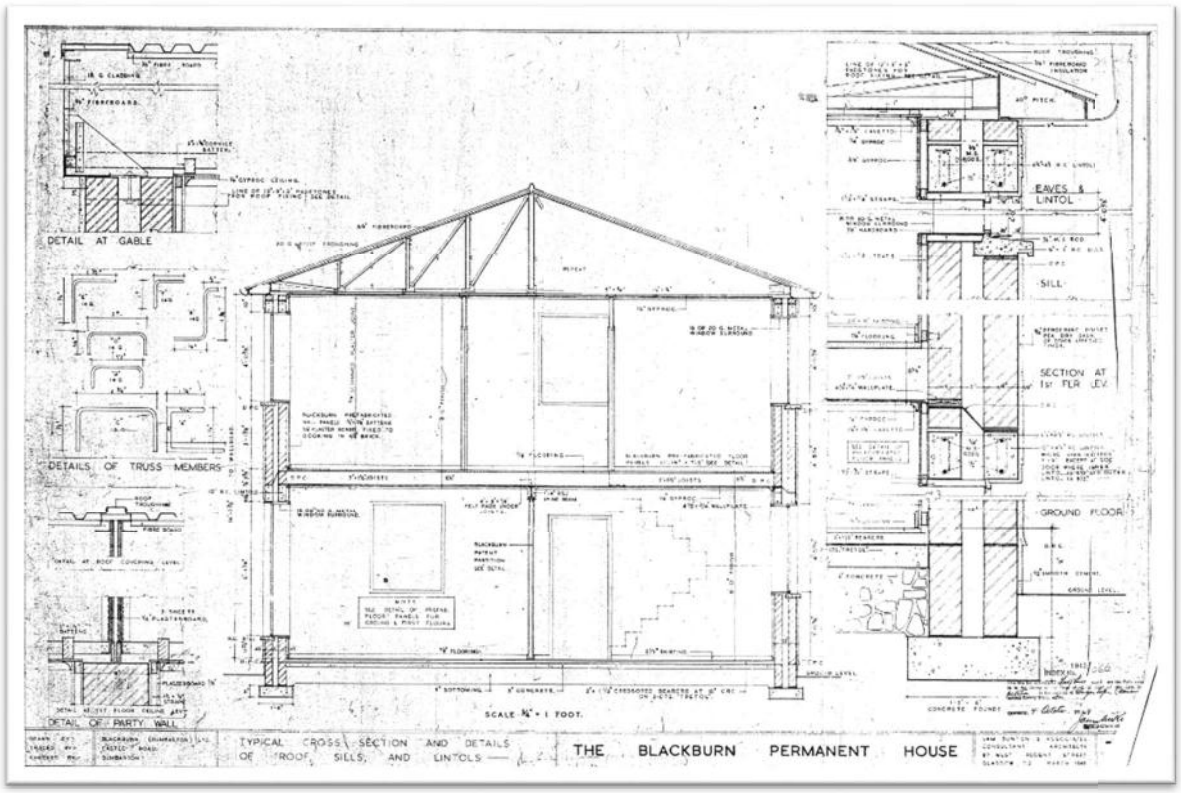
The original Blackburn Orlit design incorporated a flat roof; this was later replaced with the pitched roof. Some early properties had pitched roofs added later.

The roof structure is formed from steel trusses supported by the perimeter beams and tied down by 10mm diameter U-bolts. The trusses support fibreboard sarking and the rectangular form corrugated aluminium roof covering.

Ceilings are of plasterboard; stairs of timber and windows were originally in a steel encasement.

Visual inspection highlighted no evidence of the Blackburn Orlits in Glasgow having been built originally with flat roofs.





Canadian Timber:

Wheatley Group owns 44 properties of this type. All of which were subject to significant refurbishment in the 1990s.

Properties were constructed as follows:

The Canadian Timber house has a timber load-bearing frame with timber weather boarding and was constructed as pairs of semi-detached dwellings.

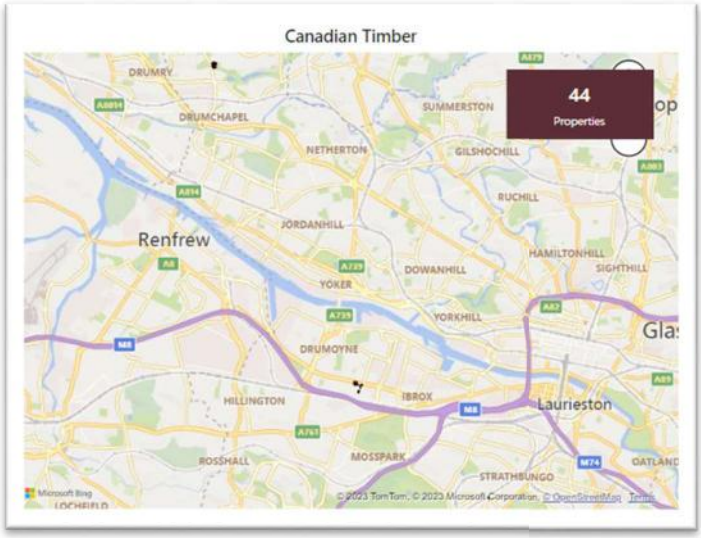
The 25mm thick horizontally spanning weather-boarding is fixed to 125mm x 50mm timber framing with 18mm fibreglass insulation. Walls are lined internally with plasterboard. Only the external walls and party walls are load-bearing.

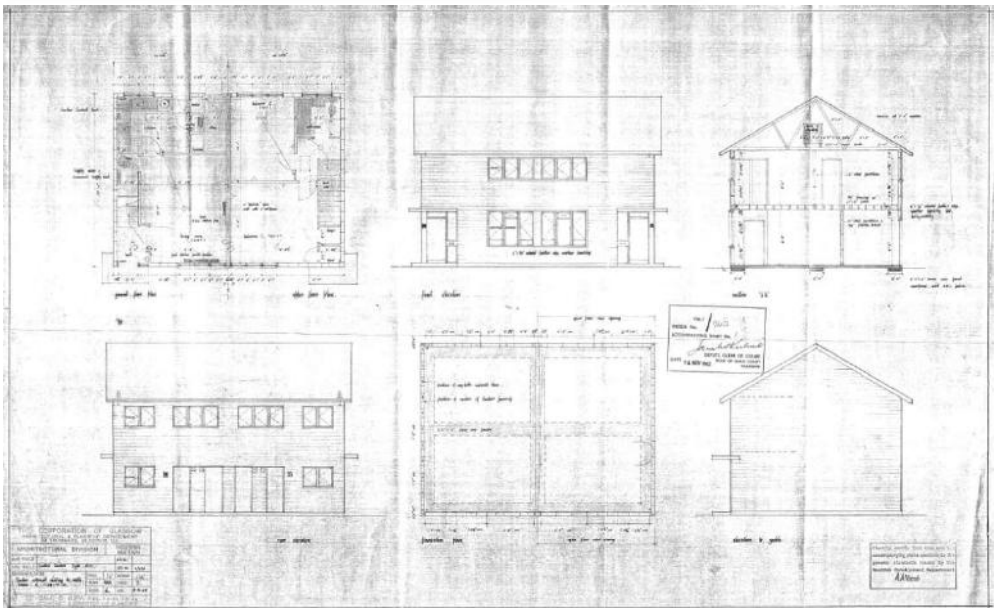
The first floor is constructed from timber joist with tongue and groove boarding, and the ground floor from a concrete slab covered with tiles.

All ceilings are plasterboard and the roof is formed from timber trusses, sarking and felt.

Internal partitions were built with 75mm timber stud framing with plasterboard.

Party walls were built with two skins of 75mm foamslag blocks incorporating a 75mm cavity.





Dennis Wilde:

Wheatley Group owns 53 properties of this type. All of which were subject to significant refurbishment in the 2006.

Properties were constructed as follows:

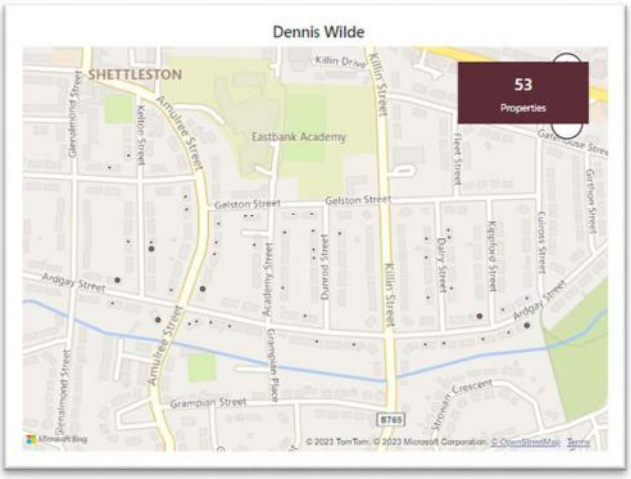
The Dennis Wilde house type was built as two-storey, semi-detached three apartment houses, and four-in-a-block flats.

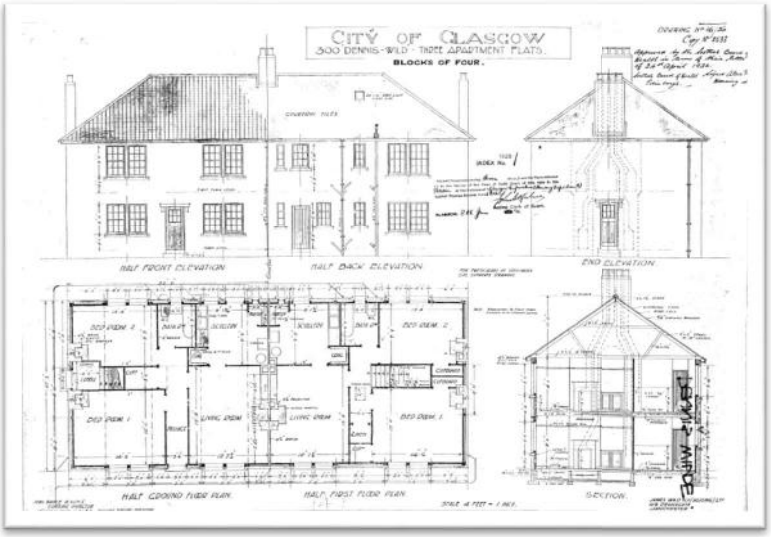
The structural frame was constructed of rolled steel members. The stanchions and beams were of heavier section than was incorporated in some other steel framed houses and were therefore at greater centres. In some cases, the stanchions were encased in concrete.

Floors were constructed from either steel or timber supported on steel edge beams that were located within the cavity construction.

The outer leaf is brickwork with an inner leaf of clinker block, plasterboard or fibreboard.

The remaining structure was of traditional construction with details varying from site to site.





Glasgow Foamslag:

Wheatley Group owns 157 properties of this type. All of which were subject to significant refurbishment in the 1980s.

The Foamslag houses were built as two-storey, four-in-ablock flats and two-storey cottages.

Properties were constructed as follows:

Foundations were formed using dense in-situ concrete.

Load bearing foamed slag concrete units 150mm thick of full storey height and up to 3050mm wide (including window openings of 2030mm x 1170mm) were used to form the external wall. The wall units were solid with no cavity. The walls also incorporated corner units (L-shaped on plan) and wall junction units (T-shaped on plan).

Two leaves of foamed slag concrete panels created a cavity party wall.

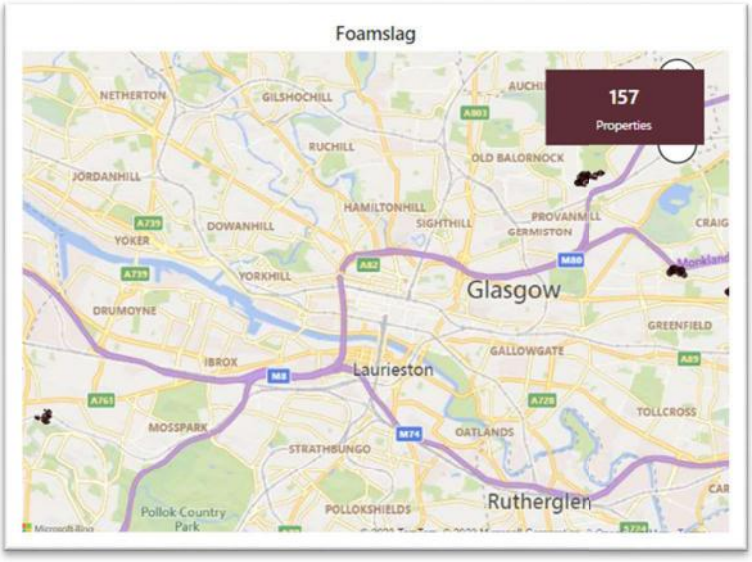
The internal partitions were similar to the external wall but only 100mm thick.

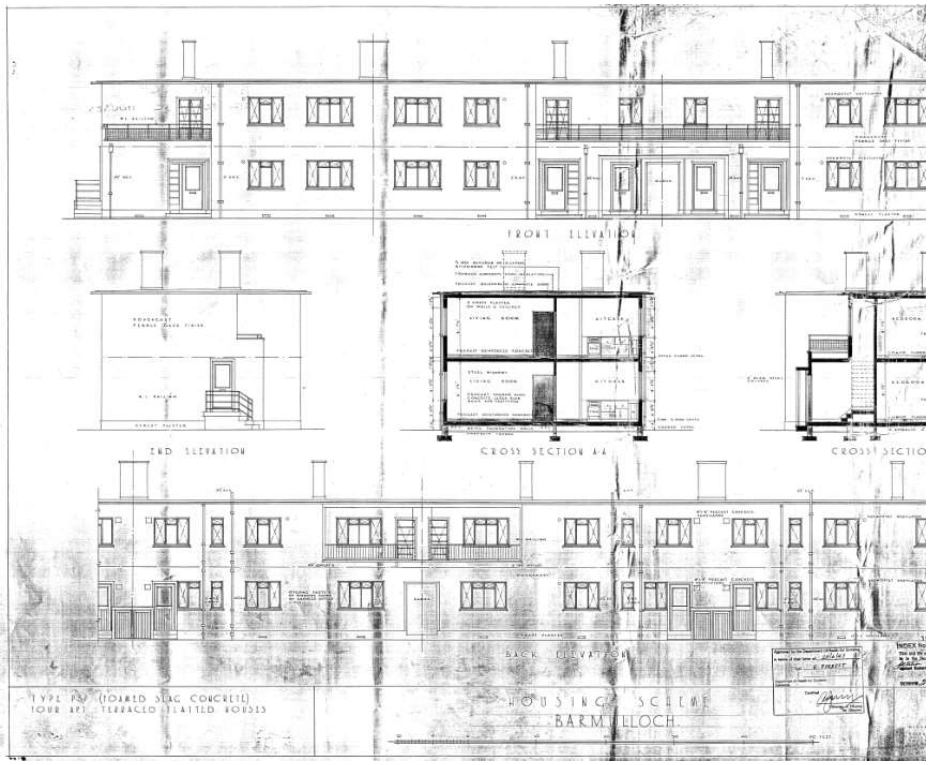
The ground and first floors were constructed with 'Siegwart' precast concrete beams, screeded and finishes with a cement, lime and sawdust composition.

Ceilings were plastered and the windows were originally installed in metal frames.

'Siegwart' precast concrete beams also form the original flat roof and were covered with a screed of foamed slab concrete that was laid to a fall and covered with three-ply bituminous felt.

Glasgow's Foamed slag properties have been re-roofed with pitched trusses and timber sarking, otherwise the structural details in the is consistent with the above description.




FRONT ELEVATION
END ELEVATION
CROSS SECTION AA
BACK ELEVATION
TYPE P3/ (TOURIE SLAG CONCRETE)
FOUR APT. TERRACED FLATTED HOUSES
HOUSING SCHEME
BARMILLOCH

Lawrence Cottages:

Wheatley Group owns 569 properties of this type. All of which were subject to significant refurbishment from 2003 to 2007.

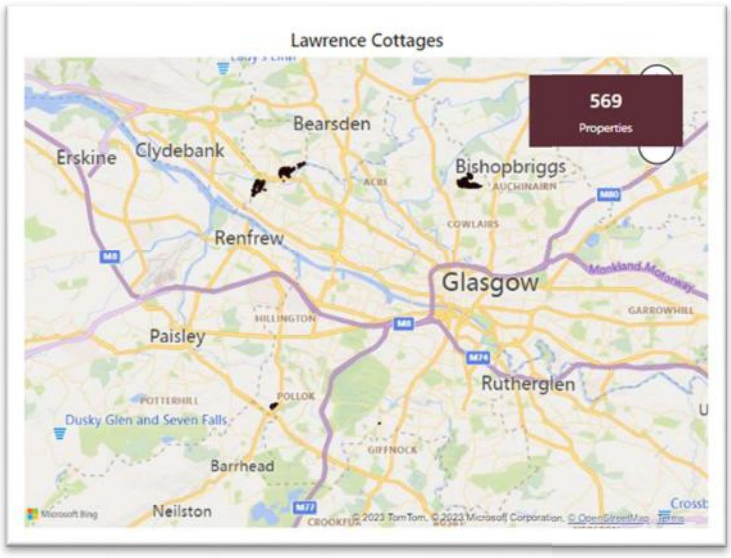
These properties described are similar in construction to the Lawrence Mark I houses.

Properties are constructed as follows:

These were built as semi-detached houses and four-in-a-block flats. They were built with concrete strip foundations that supported Wilson hollow blocks that had a stone-faced finish outside and a plasterboard lining internally.The internal and external leaf of the Wilson block were tied together by projecting galvanised steel wall ties (three per block) that were cast into the blocks in the production factory.

The ground floor was of concrete construction with a sand/cement screed floor finish, while the first floor was constructed with timber joists and flooring.

The roof was of traditional timber construction with insulation board sarking, felt and Marley or Lomond interlocking tiles fixed to battens.



Lawrence X-Wall

Wheatley Group owns 346 properties of this type. All of which were subject to significant refurbishment in 2005.

Properties are constructed as follows:

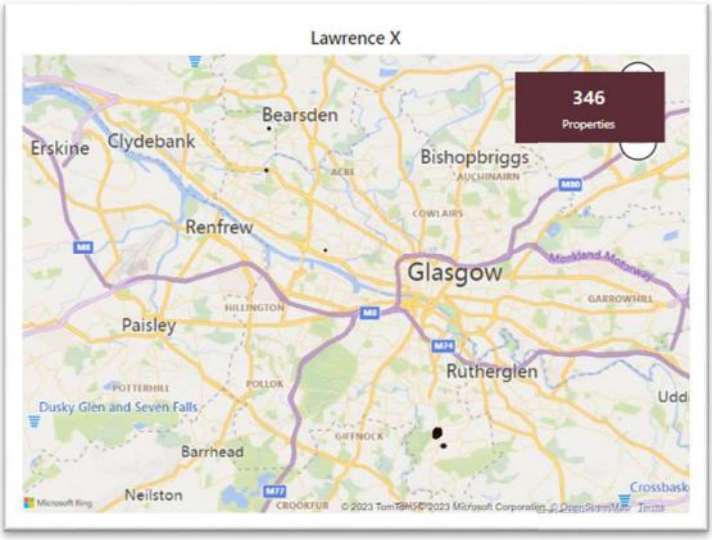
These three-storey tenements of flats were built with concrete strip foundations that supported Wilson hollow blocks that had a stone-faced finish outside and plasterboard inside. The internal and external leaf of the Wilson block were tied together by projecting galvanised steel wall ties (three per block) that were cast into the blocks in the production factory.

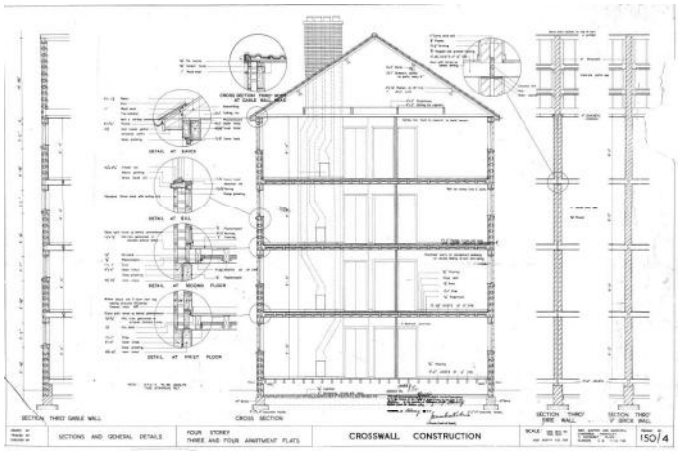
Party walls were constructed of 280mm thick cavity brickwork with a plaster finish.

In flats the cross-walls were 230mm thick cavity brick with a plaster finish.

Ground floors were of timber joist and tongue and groove flooring construction. The upper floors were similar but incorporated a double layer of plasterboard to the underside and mineral wool packing as the deafening material between the timber joists.

The roofs were constructed with traditional timber and insulation board sarking, felt and concrete interlocking tiles. The windows were originally constructed in timber frames and the ceilings were plastered.





Myton:

Wheatley Group owns 157 properties of this type. All of which were subject to significant refurbishment in the 1980s.

Properties are constructed as follows:

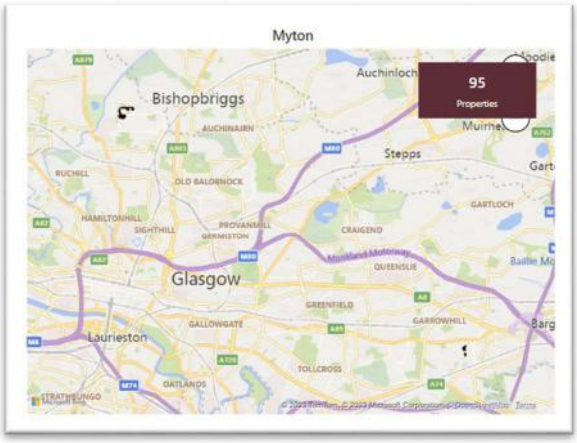
The external walls of the Myton house were factory made vibrated concrete panels of full storey height. There was an exposed aggregate finish on the lower wall panels, while the upper floor had decorative render or board finish specified by the architect. The walls were lined internally with plasterboard on timber wall straps and incorporated glasswool insulation.

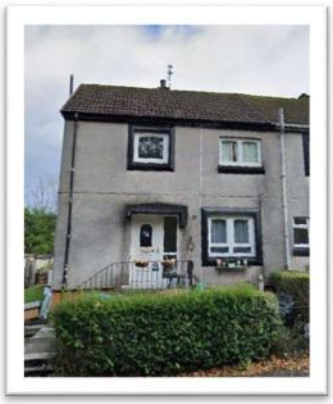
The party wall was of 230mm thick cavity construction that had a plasterboard finish on timber straps to both sides.

Plasterboard finished timber partitions were used internally.

The ground floor was concrete with sand/cement screed flooring. At first floor level composite steel and timber beams were supported on a steel spine beam. Traditional timber flooring was supported of these and the perimeter walls.

The roof was of traditional timber construction clad with insulating sarking boards, felt and tiles fixed to timber battens.





Stuart:

Wheatley Group owns 56 properties of this type. All of which were subject to significant refurbishment in 2012.

These properties were constructed as semi-detached and terraced, two-storey houses.

Properties are constructed as follows:

The Stuart, light steel load bearing frame house, is built on concrete strip foundations and has a roof constructed with steel trusses.

The outer leaf of the external walls was constructed of either foamed slag concrete blocks, bricks or standard concrete blocks. Externally they were finished with roughcasting. The inner

leaf was formed with timber uprights at 460mm centres that were fixed to the beams between the steel stanchions and stiffened with three rows of dwangs per floor, covered with expanded metal lathe that was either plastered or alternatively covered with plasterboard and finished with plaster. Waterproof insulating paper was fixed to the uprights and dwangs creating a double cavity between the inner and outer leaves.

The party wall was formed with two leaves of breeze block.

Internal partitions were created from timber frames covered with expanded metal lathe and plastered or alternatively covered with plasterboard and finished with plaster.

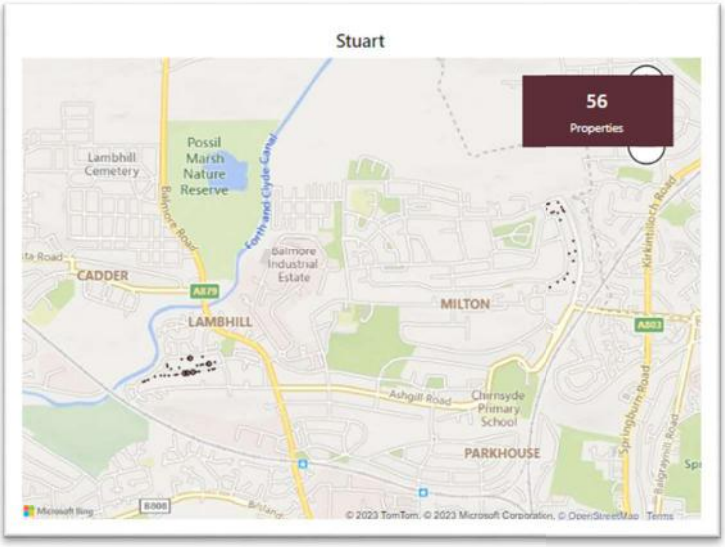
All floors were built with 'Truscon' latticed beams covered with T & G boarding. However, during the timber shortage some ground floors were built of concrete.

In the Stuart cottages the roof purlins were of 'Truscon' latticed beams and timber spars overlaid with sarking, felt and clay or concrete tiles. With the flatted roof houses the roof was low pitched but of similar construction, but finished with copper.

Ceilings are formed with plasterboard and hardwall plaster.

Stairs in the cottage type were constructed of timber, while in flatted properties the staircases were of precast concrete units.

Original windows were standard steel casements in timber surrounds.



Swedish Timber:

Wheatley Group owns 62 properties of this type. All of which were subject to significant refurbishment in 2012.

These properties were constructed as semi-detached and terraced two-storey houses.

Properties are constructed as follows:

This is a timber framed package system imported from Sweden after the Second World War. Since such timber boarded and framed houses are traditional in Scandinavia, this house type is less experimental than many of the other types classed as non-traditional construction.

The building substructure comprises brick or concrete block perimeter and dwarf walls, built on concrete strip foundations.

The external walls (approximately 100mm thick) consist of prefabricated floor to floor height panels of timber frame construction with an external lining of half checked and channelled 25mm sawn faced boarding, and an internal lining of 25mm or 18mm tongue and groove boarding. Generally the internal facing was hardboard that was treated with fire-retardant paint. Building paper was placed between the framing and external boarding. Insulation was provided by 12mm fibreboard within the cavity and located between struts of panels and the internal T & G boarding.

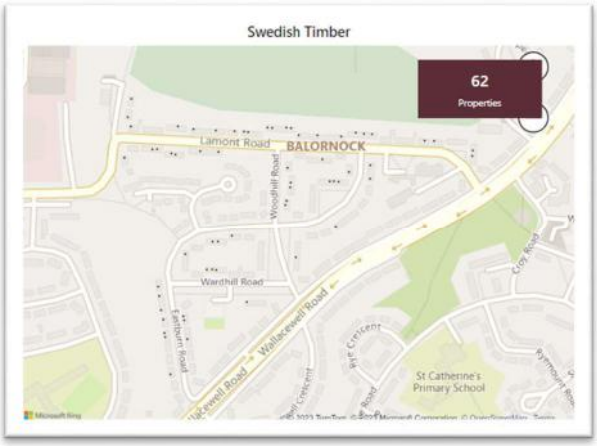
The party walls were constructed of 225mm brick and finished with plaster on 'the hard'. Later houses were built with 225mm brick party walls finished with cement render.

50mm tongue and groove vertical planking, lined and faced with T & G boarding and hardboard respectively, formed the structural or spine partitions. The other partitions were non-structural and were timber framed, lined and faced like the spine partitions.

The ground floor was constructed with 125 x 50mm timber joists with 25mm T & G floorboards. The first floor was constructed with 200 x 50mm timber joists and used the same floorboards.

12mm fibreboard lined both the ground and first floor ceilings.

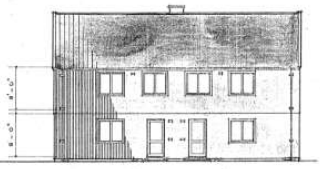
Stairs were constructed in timber and the window frames were originally timber.



BALORNOCK AND ROBROYSTON. 200 HOUSES.

FRONT ELEVATION

SIDE ELEVATION



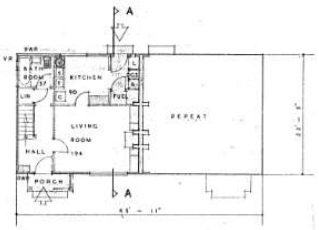
BACK ELEVATION

INDEX No. 1945/181

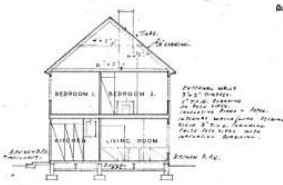
This and the accompanying Elevation sheet(s) are the Plans referred to in the Decree of the Lords of Council and Session of this date in the cause Robert Brand, Pursuer

Glasgow, 5th Oct, 1945

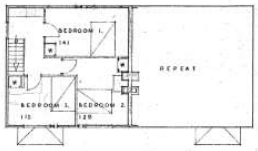
Deputy Clerk of Court



GROUND FLOOR PLAN



SECTION A-A



FIRST FLOOR PLAN

(1)

18th Sept. 1945.
W.H. CARRE.

SWEDISH HOUSES · SEMI-DETACHED · TYPE B [URBAN]

DEPT OF HEALTH FOR SCOTLAND
MINISTRY OF WORKS
JUNE 1945

Wimpey No-Fines Flats and Houses:

Wheatley Group owns 844 properties of this type. All of which were subject to significant refurbishment from the late 1990s up to 2014.

These exist in two-storey semi-detached houses; four-in-a-block flats, terraced houses and blocks of flats.

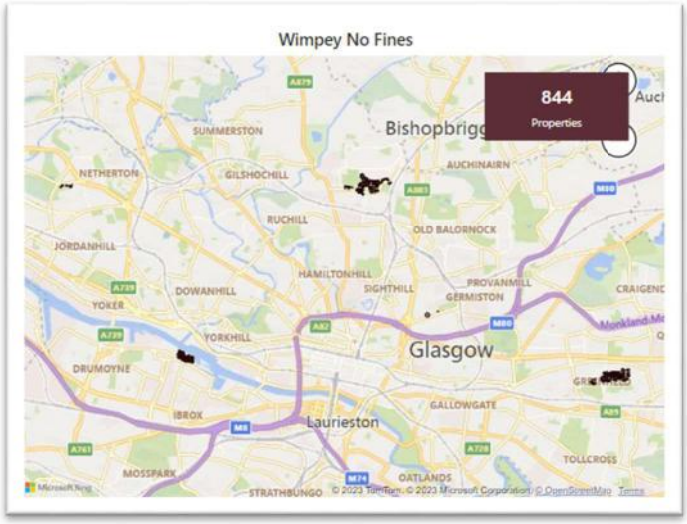
Properties are constructed as follows:

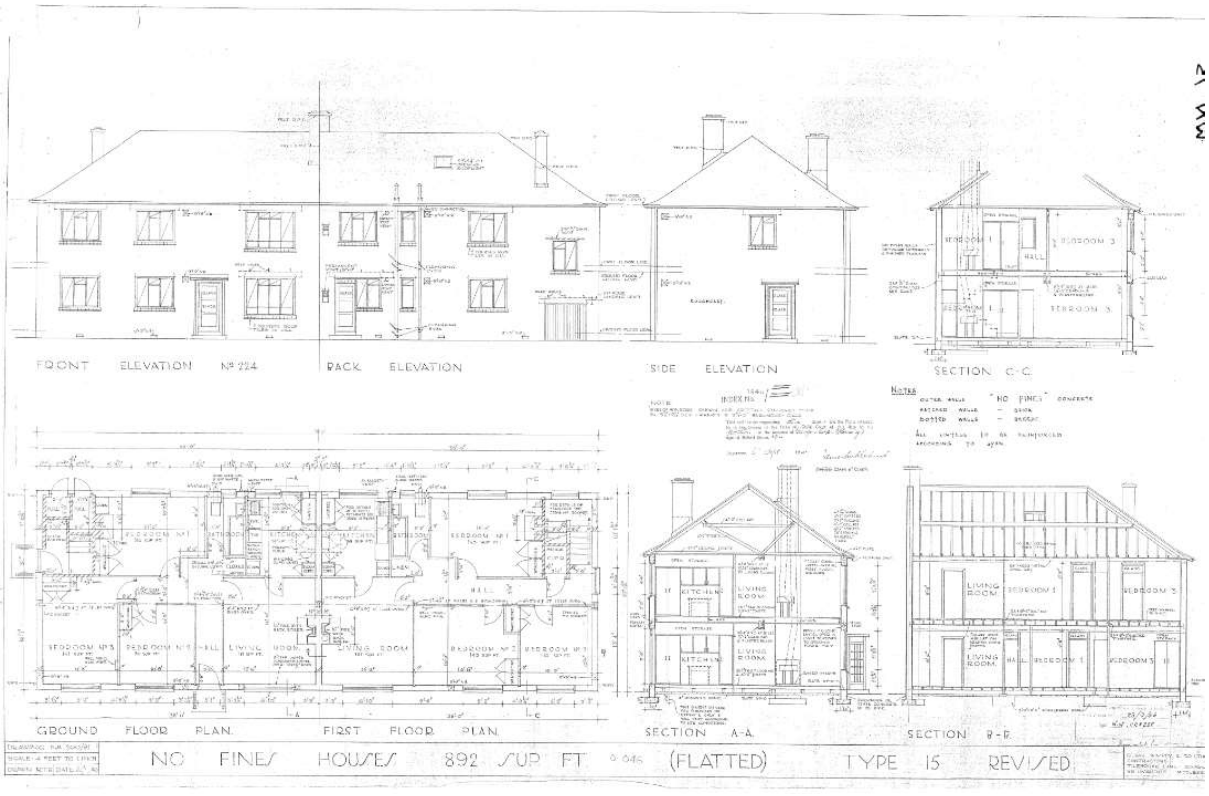
The Wimpey No Fines Flats are constructed on concrete strip foundations and have 255 - 305mm thick no fines concrete external walls finished externally with roughcasting and internally with plaster.

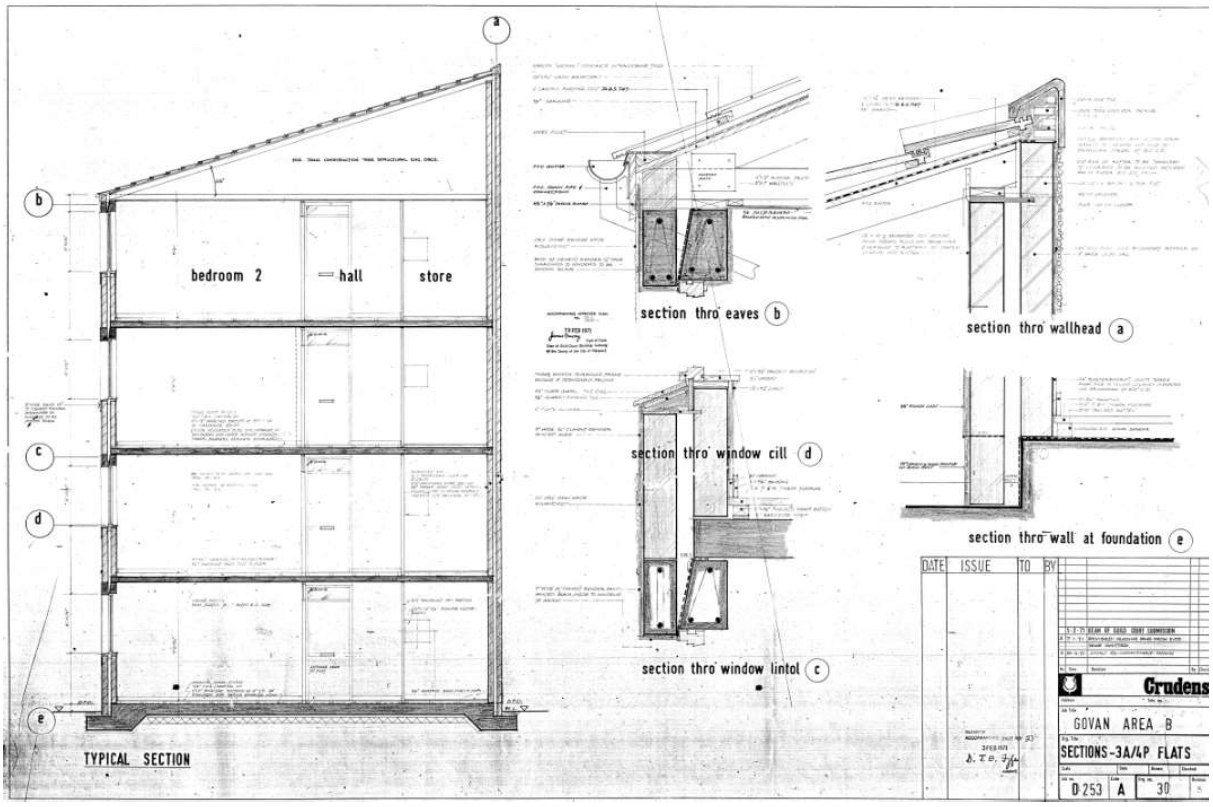
The party walls are of similar construction to the external walls but are finished both sides with plaster. Partitions are constructed of 114mm brickwork and 64mm breeze blocks finished with plaster.

Ground and upper floors in Glasgow are reinforced concrete with a sand/cement screed finish.

Timber framing or trusses, insulation board sarking, felt and interlocking tiles form the roof. Ceilings are plaster at all levels except for the top storey where it is plasterboard.




FRONT ELEVATION No 224
BACK ELEVATION
SIDE ELEVATION
SECTION C-C
GROUND FLOOR PLAN.
FIRST FLOOR PLAN.
SECTION A-A.
SECTION B-B.
NO FINES HOUSES 892 SUP FT 0·045 (FLATTED) TYPE 15 REVISED


bedroom 2
hall
store
TYPICAL SECTION
section thro' eaves b
section thro' wallhead a
section thro' window cill d
section thro' wall at foundation e
section thro' window lintol c
DATE ISSUE TO BY
Grudens
GOVAN AREA B
SECTIONS-3A/4P FLATS
D 253 A 30

Winget Pier and Panel:

Wheatley Group owns 642 properties of this type. All of which were subject to significant refurbishment from 2006 to 2020.

Properties are constructed as follows:

The Winget Pier and Panel system house was constructed on concrete strip foundations and had external walls that consisted of a reinforced concrete frame with infill clinker concrete slabs.

The structural frame consisted of reinforced concrete piers and beams poured in-situ. The piers were spaced at 914mm centres and occurred at the quoins, jambs of windows and doors and at the junction between the external and party walls.

The reinforced concrete beams were formed as first floor and roof level wall plates. Poured in-situ the beams were 102mm deep and 229mm wide.

Piers at the quoins were cast in hollow precast clinker concrete blocks, 229mm cube that formed the permanent shuttering. The piers were formed and poured as the walling rose.

Another special precast unit was used for permanent shuttering at the junction between the external and party walls. The slabs and strips of wood or building board shuttered the remaining piers. Slate strips were used to close the cavity where the beams were formed and wooden strips were used to shutter the sides.

The clinker concrete slabs that acted as infill panels in the walls were 914mm long (span between piers), 229mm high by 76mm thick. The two leaves of 76mm left a 76mm cavity.

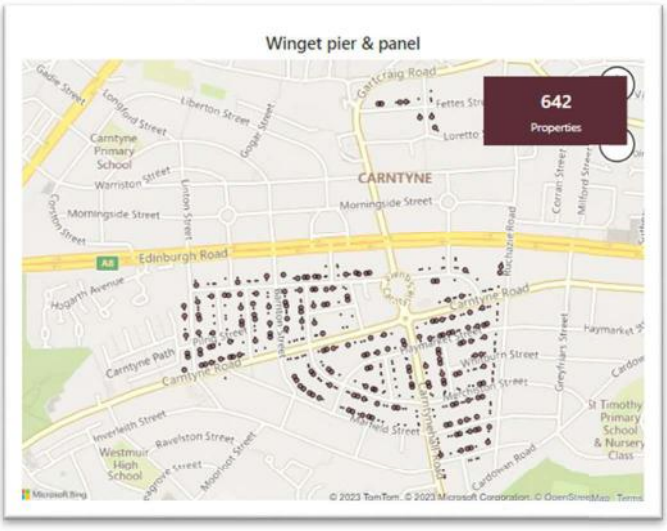
The party wall between properties was of a similar construction as the external walls.

Partitions are formed from clinker concrete slabs.

The ground floor is formed of 19mm timber flooring on 127 x 51mm timber joists at 457mm centres. The first floor uses the same flooring on 203 x 51mm joists at 457mm centres. Some areas of both floors were concrete (for example fire places).

Slates or tiles, sarking and timber rafters, ties, struts and joists form the roof.

The window frames were originally timber.



Wheatley Homes South

Wheatley Home South has 10,238 homes in Dumfries and Galloway. Of its homes, 764 were built between 1950 and 1990. 126 of these were identified as having flat roofs and were subject to inspections. The information that follows, covers these properties and a sample of other Wheatley Homes South homes from the same build period to ensure the construction approach to the properties was as expected.

1-15, 17-31 Darlison Avenue, Dumfries

Property Address	1-15, 17-31 Darlison Avenue		
DGHP Client UBRN	R281190001, R281190017		
Property Type	Tenement flat block		
Inspection details	R.J. Richmond	CEng M.I.C.E	13th September 2023

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber joists at regular centres
Wall structure format	Render finish over masonry or dense concrete
Floor structure format	Based on the construction type no RAAC was identified in the floor zones.

Inspection Report

General observations	The flat roof to the building comprises a lightweight/felt covering. Walls are expected to be of brick with render, although not confirmed. Walls do not have any panel finish and are thus not anticipated to be using RAAC.
Areas to inspect for possible use of concrete	1. Roof structure
Area 1 inspected	Void above upper landing, accessed via ceiling hatch.
Methods used for area 1	Visual inspection only.

Evidence gathered for area 1	
Conclusions for area 1	Timber joists confirmed by visual inspection. A dense concrete ceiling is present to the stairwell at a level below the roof. Aggregate was visible in this material which would not be present in RAAC.

Other buildings of the type

Additional addresses	The same flat block style is seen on Craigs road (1 block) and Gillbrae (2 blocks)
DGHP Client UBRN	R354130117, R340280033, R340280017
Comments	The above addresses were not inspected internally, however given the apparent identical format of the buildings it is assumed that similarly, RAAC is not present.

1-23 & 24-46 Alloway Avenue

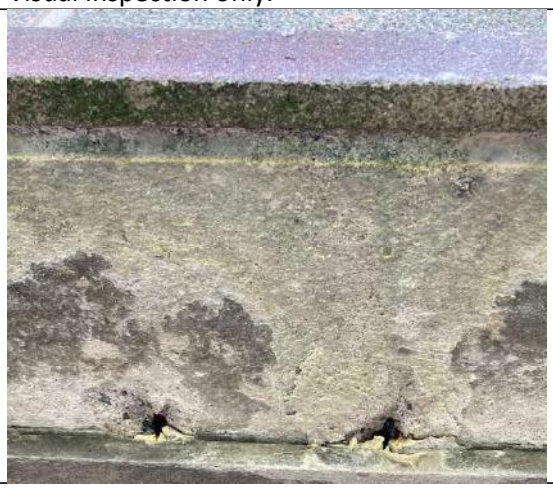
Property Address	1-23 & 24-46 Alloway Avenue		
DGHP Client UBRN	R241100001, R241100013, R241100024, R241100036		
Property Type	Flat block		
Inspection details	R.J. Richmond	CEng M.I.C.E	20th September 2023

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber joists at regular centres
Wall structure format	Masonry
Floor structure format	Based on the construction type no RAAC was identified in the floor zones.

Inspection Report

General observations	The flat roof comprises a lightweight/felt covering. Walls are a mix of sandstone and rendered brickwork with a rectangular plank pattern to some render panels
Areas to inspect for possible use of concrete	1. Roof structure 2. Wall panels with plank pattern to render
Area 1 inspected	Soffit board to roof is fixed at regular centres, indicating the presence of timber joists. Plasterboard lining is present to ceiling.
Methods used for area 1	Visual inspection only.

Evidence gathered for area 1	
Conclusions for area 1	The appearance of soffit boarding rather than exposed concrete planks, combined with the plasterboard lining to the stairwell ceiling indicate a timber joisted roof construction.
Area 2 inspected	Render panels with vertical lines
Methods used for area 2	Visual inspection only.
Evidence gathered for area 2	
Conclusion for area 2	Aggregate visible to concrete edging, and brick visible below render on various areas. No RAAC present.

1-24 Rosevale Road, Dumfries

Property Address	1-24 Rosevale Road, Dumfries		
DGHP Client UBRN	R281330001, R281330002, R281330003, R281330004, R281330005, R281330006, R281330007, R281330008, R281330009, R281330010, R281330011, R281330012, R281330013, R281330014, R281330015, R281330016, R281330017, R281330018, R281330019, R281330020, R281330021, R281330022, R281330023, R281330024		
Property Type	Terraced houses		
Inspection details	R.J. Richmond	CEng M.I.C.E	29th September 2023

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Dense concrete with felt covering
Wall structure format	Render finish over masonry
Floor structure format	Based on the construction type no RAAC was identified in the floor zones. Suspect timber joists.

Inspection Report

General observations	The flat roof to the houses comprises a lightweight/felt covering. Walls are expected to be of brick with render, although not confirmed. Walls do not have any panel finish and are thus not anticipated to be using RAAC.

Areas to inspect for possible use of concrete	1. Roof structure 2. Entrance canopy
Area 1 inspected	Ceiling above upper landing, accessed via service penetration.
Methods used for area 1	Visual inspection using endoscope camera and penetration test with sharp tool
Evidence gathered for area 1	
Conclusions for area 1	Dense concrete was discovered above a ceiling lining board. Confirmed with refusal of a sharp tool. RAAC not present.
Area 2 inspected	Underside of entrance canopy
Methods used for area 2	Visual inspection and penetration test
Evidence gathered for area 2	
Conclusions for area 2	Dense concrete was confirmed with aggregate visible and refusal of a sharp tool. RAAC not present.

2-8 & 10-16 Caul View

Property Address	2-8 & 10-16 Caul View		
DGHP Client UBRN	R262120002, R262120010		
Property Type	Flat block		
Inspection details	R.J. Richmond	CEng M.I.C.E	11th September 2023

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber joists
Wall structure format	Masonry
Floor structure format	Dense concrete to stairwells. Based on the construction type no RAAC was identified in the floor zones.

Inspection Report

General observations	The flat block has a flat roof over all areas, other than a small area of pitched roof over the stair landings. Sandstone masonry makes up part of the front and rear elevation wall construction, with rendered masonry to other areas. Storage areas to upper levels are partially open with spaced timber boarding. To the rear, the mid height stair landing is cantilevered out from the building and the render finish is broken in to regular panels to some areas.
Areas to inspect for possible use of concrete	1. Roof structure to main building 2. Rear and side elevation walls where render panel finish is used.
Area 1 inspected	Ceiling of upper landing area inspected to underside of roof and found to have a finished board material to the ceiling.

Methods used for area 1	The board was drilled to make one 12mm hole allowing access with an endoscope inspection camera
Evidence gathered for area 1	
Conclusions for area 1	Timber boarding above void and sides of joists visible via inspection hole, with associated void. This demonstrates that there are structural timber joists forming the stairwell roof structure. It is deemed unlikely that an alternative roof structure is in use over the flats, differing from that over the stairwell.
Area 2 inspected	Wall construction is visible to the corner of the rear wall within the stairwell where masonry is visible behind the render
Methods used for area 2	Visual inspection of brick edge
Evidence gathered for area 2	
Conclusions for area 2	Clay brick is present below the render finish to include areas with the panelled finish. A RAAC panel is not present.

2-16, 18-32, 34-48, 50-64 & 66-80 Osborne Crescent, Dumfries

Property Address	2-16, 18-32, 34-48, 50-64 & 66-80 Osborne Crescent		
DGHP Client UBRN	R251180002, R251180018, R251180034, R251180050, R251180066		
Property Type	Tenement flat block		
Inspection details	R.J. Richmond	CEng M.I.C.E	11th September 2023

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Dense concrete
Wall structure format	Render finish over masonry anticipated
Floor structure format	Based on the construction type no RAAC was identified in the floor zones.

Inspection Report

General observations	The flat roof to the building comprises a lightweight/felt covering. Walls are expected to be of brick with render, although not confirmed. Walls do not have any panel finish and are thus not anticipated to be using RAAC. Claddings are present above and below windows on feature panels.
Areas to inspect for possible use of concrete	1. Roof structure
Area 1 inspected	Roof penetration inspected in upper flat where finishes were removed for other works
Methods used for area 1	Visual inspection only.

Evidence gathered for area 1	
Conclusions for area 1	A dense concrete roof is present to the flat unit inspected. Aggregate was visible in this material which would not be present in RAAC.

Other buildings of the type

Additional addresses	The same flat block style is seen on Osborne Drive (4 blocks)
DGHP Client UBRN	R251190002, R251190018, R251190034, R251190050
Comments	The above addresses were not inspected internally, however given the apparent identical format of the buildings it is assumed that similarly, RAAC is not present.

129A - 153B St Michael Street, Dumfries

Property Address	10-16 Well Road, Moffat		
DGHP Client UBRN	R471730010		
Property Type	Flat block		
Inspection details	R.J. Richmond	CEng M.I.C.E	21st September 2023

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Pitched slate roof to main building, suspect timber trusses supporting. Access ways have a flat roof covering with lightweight waterproof covering. Dense concrete over
Wall structure format	Render finish over masonry (anticipated)
Floor structure format	Based on the construction type no RAAC was identified in the floor zones.

Inspection Report

General observations	Slate pitched roof to the main building and flat roofing to small access ways at either side of the building.
Areas to inspect for possible use of concrete	1. Roof structure over access ways
Area 1 inspected	Underside of roof
Methods used for area 1	Visual inspection and penetration test on underside of roof.

Evidence gathered for area 1	
Conclusions for area 1	A dense render is present to the underside of the roof. This was confirmed with a penetration test using a sharp tool. There is no evidence of precast panels being used in the roof construction in the forms typical of RAAC. i.e. Panel edges are not visible to suggest a precast plank is used. We conclude that RAAC is not present.

11-21, 27-49, 51-73 & 75-97 Church Street

Property Address	11-21, 27-49, 51-73 & 75-97 Church Street		
DGHP Client UBRN	R183090029, R183090033, R262140027, R262140075		
Property Type	Flat block		
Inspection details	R.J. Richmond	CEng M.I.C.E	11th September 2023

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber joists at regular centres
Wall structure format	Masonry with render
Floor structure format	Based on the construction type no RAAC was identified in the floor zones. Dense concrete to common stairs and landings

Inspection Report

General observations	The flat roof comprises a lightweight/felt covering. Walls are a mix of facing brick and rendered brickwork
Areas to inspect for possible use of concrete	1. Roof structure
Area 1 inspected	Ceiling to stairwell and access hatch to roof lifted for inspection of structure
Methods used for area 1	Visual inspection only.
Evidence gathered for area 1	

Conclusions for area 1	Timber joists confirmed by visual inspection. No concrete structure to roof.

14-25 Millbrae Street

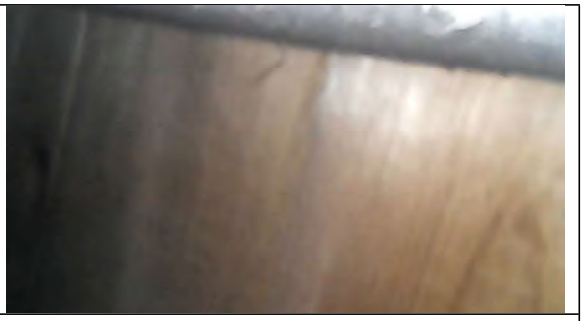
Property Address	14-25 Millbrae Street		
DGHP Client UBRN	R262400014		
Property Type	Flat block		
Inspection details	R.J. Richmond	CEng M.I.C.E	11th September 2023

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber joists at regular centres
Wall structure format	Masonry with render
Floor structure format	Floor structure within flats comprises timber joists with dense concrete to common stairwells and landings.

Inspection Report

General observations	The flat roof comprises a lightweight/felt covering. Walls are a mix of facing brick and rendered brickwork. Dense concrete landings stairs and columns are visible to the buildings stairwell.
Areas to inspect for possible use of concrete	1. Roof structure
Area 1 inspected	Ceiling to stairwell and access hatch to roof lifted for inspection of structure
Methods used for area 1	Visual inspection only.

Evidence gathered for area 1	
Conclusions for area 1	Timber joists confirmed by visual inspection. No concrete structure to roof.

18-32 Darlison Avenue, Dumfries

Property Address	18-32 Darlison Avenue		
DGHP Client UBRN	R281190018, R281190020, R281190022, R281190024, R281190026, R281190028, R281190030, R281190032		
Property Type	Terraced houses		
Inspection details	R.J. Richmond	CEng M.I.C.E	13th September 2023

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber joists at regular centres
Wall structure format	Render finish over masonry or dense concrete, sandstone masonry. Reder panel over timber frame (feature panels above/below wondows)
Floor structure format	Based on the construction type no RAAC was identified in the floor zones. Suspect timber joists.

Inspection Report

General observations	The flat roof to the houses comprises a lightweight/felt covering. Walls are expected to be of brick with render, although not confirmed. Areas of sandstone masonry are present. Walls do not have any panel finish and are thus not anticipated to be using RAAC.
Areas to inspect for possible use of concrete	1. Roof structure
Area 1 inspected	Ceiling above upper landing, accessed via service penetration.
Methods used for area 1	Visual inspection using endoscope camera

Evidence gathered for area 1	
Conclusions for area 1	Timber joists at regular spacing, confirmed by visual inspection, with roof boarding over. RAAC not present.

Other buildings of the type

Additional addresses	The same terraced house style is seen on Lockerbie road (3 units)
DGHP Client UBRN	R291410062
Comments	The above addresses were not inspected internally, however given the apparent identical format of the buildings it is assumed that similarly, RAAC is not present.

96-130 Kenilworth Road

Property Address	96-130 Kenilworth Road		
DGHP Client UBRN	R242240096 & R242240114		
Property Type	Flat block		
Inspection details	R.J. Richmond	CEng M.I.C.E	20th September 2023

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Dense concrete to stairwell
Wall structure format	Masonry
Floor structure format	Dense concrete to stairwells. Based on the construction type no RAAC was identified in the floor zones.

Inspection Report

General observations	The three storey flat block has a tiled pitched roof over all areas, other than a small area of mono pitched roof over the stair well. Sandstone masonry makes up part of the wall construction, with rendered masonry to other areas.
Areas to inspect for possible use of concrete	1. Roof structure to stair well
Area 1 inspected	Stairwell accessed for inspection of roof material from upper landing
Methods used for area 1	Visual inspection and penetration test of ceiling.

Evidence gathered for area 1	
Conclusions for area 1	It was possible to see aggregate in the concrete which indicates that a dense concrete is present. This was further confirmed with a penetration test on the concrete which resisted penetration from a sharp tool.

127 & 133 Whitesands, Dumfries

Property Address	127 & 133 Whitesands, Dumfries		
DGHP Client UBRN	R282620127, R282620133		
Property Type	Terraced houses		
Inspection details	R.J. Richmond	CEng M.I.C.E	13th September 2023

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Dense concrete with felt covering
Wall structure format	Render finish over masonry
Floor structure format	Based on the construction type no RAAC was identified in the floor zones. Suspect timber joists.

Inspection Report

General observations	The flat roof to the houses comprises a lightweight/felt covering. Walls are expected to be of brick with render, although not confirmed. Walls do not have any panel finish and are thus not anticipated to be using RAAC. Cladding boarding is present above and below windows to feature panels.
Areas to inspect for possible use of concrete	1. Roof structure
Area 1 inspected	Eaves of roof visible from ground level
Methods used for area 1	Visual inspection

Evidence gathered for area 1	
Conclusions for area 1	Dense concrete was confirmed at eaves with visible aggregate . RAAC not present.

129A - 153B St Michael Street, Dumfries

Property Address	129A - 153B St Michael Street, Dumfries		
DGHP Client UBRN	R354370129A		
Property Type	Flat block		
Inspection details	R.J. Richmond	CEng M.I.C.E	11th September 2023

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Flat roof with felt/lightweight covering over precast dense concrete planks
Wall structure format	Render finish over masonry (anticipated)
Floor structure format	Based on the construction type no RAAC was identified in the floor zones. Dense concrete is anticipated to lower level floors in units, with timber upper floors. External walkways are dense concrete.

Inspection Report

General observations	Dense reinforced concrete structure is present to walkways and balconies. Masonry wall construction to external wall panels and a loadbearing dense reinforced concrete frame make up the buildings structure. Feature panels above and below windows use a cladding board over timber framing. External insulated render systems have been applied to some units in this location.
Areas to inspect for possible use of concrete	1. Roof structure building
Area 1 inspected	Underside of roof soffits where accessible
Methods used for area 1	Visual inspection only.

Evidence gathered for area 1	
Conclusions for area 1	A dense concrete roof is present. Aggregate was visible in the concrete soffit which would not be present in RAAC.

96-130 Kenilworth Road

Property Address	96-130 Kenilworth Road		
DGHP Client UBRN	R242240144		
Property Type	Bungalow, semi detached		
Inspection details	R.J. Richmond	CEng M.I.C.E	20th September 2023

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber joists at regular centres
Wall structure format	Masonry
Floor structure format	Based on the construction type no RAAC was identified in the floor zones.

Inspection Report

General observations	The roof comprises a lightweight/felt covering at a low dual pitch over masonry walls. Walls are a mix of sandstone and rendered brickwork.
Areas to inspect for possible use of concrete	1. Roof structure
Area 1 inspected	Soffit board to roof drilled to access void with an endoscope inspection camera
Methods used for area 1	Inspection with camera to roof void
Evidence gathered for area 1	
Conclusions for area 1	Void found between timber joists with a timber boarding over. Confirms roof is formed with timber joists at regular centres.

Newton Road, Dumfries

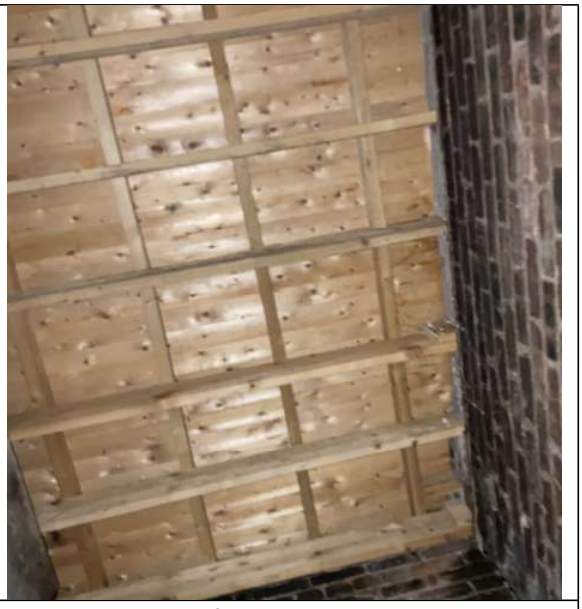
Property Address	Newton Road		
DGHP Client UBRN	R242270001		
Property Type	Tenement flat block		
Inspection details	R.J. Richmond	CEng M.I.C.E	20th September 2023

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Timber joists at regular centres
Wall structure format	Render finish over masonry
Floor structure format	Based on the construction type no RAAC was identified in the floor zones. Dense concrete is present to common stairs, landings and to the balconies.

Inspection Report

General observations	The flat roof to the building comprises a lightweight/felt covering. Walls are expected to be of brick with render, although not confirmed. Walls do not have any panel finish and are thus not anticipated to be using RAAC.
Areas to inspect for possible use of concrete	1. Roof structure
Area 1 inspected	Void above upper landing, accessed via ceiling hatch.
Methods used for area 1	Visual inspection only.

Evidence gathered for area 1	
Conclusions for area 1	Timber joists confirmed by visual inspection. A dense concrete ceiling is present to the stairwell at a level below the roof. Aggregate was visible in this material which would not be present in RAAC.

Nith Buildings, Kelloholm

Property Address	Nith Buildings, Kelloholm		
DGHP Client UBRN	R212300001A		
Property Type	Tenement flat block over retail units		
Inspection details	R.J. Richmond	CEng M.I.C.E	16th September 2023

Executive Summary

Is RAAC present in the construction	No
Further inspection required to assess condition of RAAC	None
Roof structure format	Pitched roof with profiled metal cladding
Wall structure format	Render finish over masonry (anticipated)
Floor structure format	Based on the construction type no RAAC was identified in the floor zones.

Inspection Report

General observations	Dense concrete structure is present around retail units, with columns and first floor anticipated to be reinforced concrete. Duo pitched roofing is clad with profiled metal sheeting and a render finish is applied to walls which are anticipated to be cavity masonry.
Areas to inspect for possible use of concrete	1. Roof structure to canopy at first floor level
Area 1 inspected	Canopy over retail areas was viewed along its extent.
Methods used for area 1	Visual inspection only.

Evidence gathered for area 1	
Conclusions for area 1	A dense concrete roof is present to the canopies. Aggregate was visible in this material which would not be present in RAAC.

WHEATLEY HOMES EAST

Wheatley Home East has 3661 blocks of properties ranging from individual homes to flats in Edinburgh and the Lothians. Of its blocks, 258 blocks were built between 1950 and 1990. 204 of the have traditional build with either pitched timber roofs (201) or metal standing seam roofs (3).

Wheatley Homes East also has 54 blocks with a non-traditional, system build form. These are at Brisbane Street and Darwin Street in West Lothian

Wheatley Homes East has no properties with a flat roof.

Brisbane and Darwin Street:

Property address	Brisbane and Darwin Street West Lothian	

Summary assessment:

Is RAAC present in the construction:	No
Further inspection required to assess condition ofRAAC:	None
Roof structure format:	Timber roof trusses and joists
Wall structure format:	Jesperson Construction
Floor structure format:	Jesperson Construction

These properties were built in West Lothian in the 1960s with prefabricated and precast concrete panels. Full refurbishment works were carried out during the 1990s. This included timber pitched roofs and rooms added at external balcony areas, external wall insulation and render.

The image below from the property shows the precast concrete and provides assurance that RAAC is not present.

Details on the roof structure are shown in image below.

As indicated, the only other Wheatley Homes East properties that were built between 1950 and 1990 are traditional blocks. The information that follows provides a summary review of these, to confirm the build is as expected and that there is no indication of RAAC.

Moredun/Hyvots:

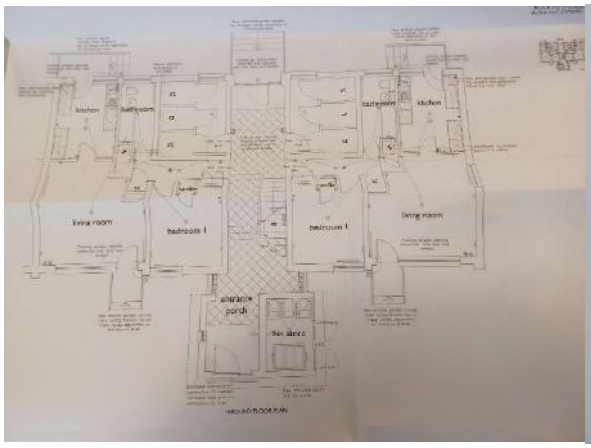
Property address	Moredun/Hyvots in the Gilmerton area of Edinburgh	

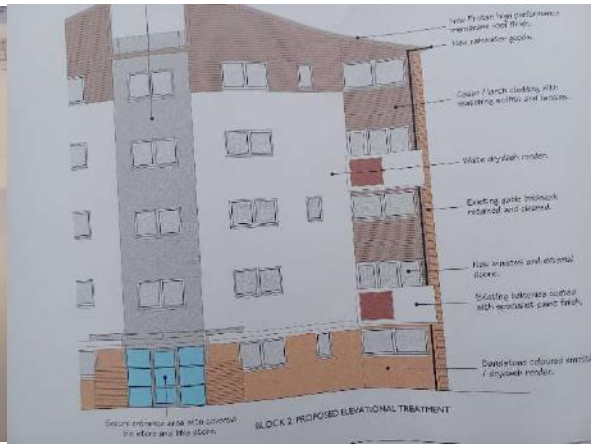
Summary assessment:

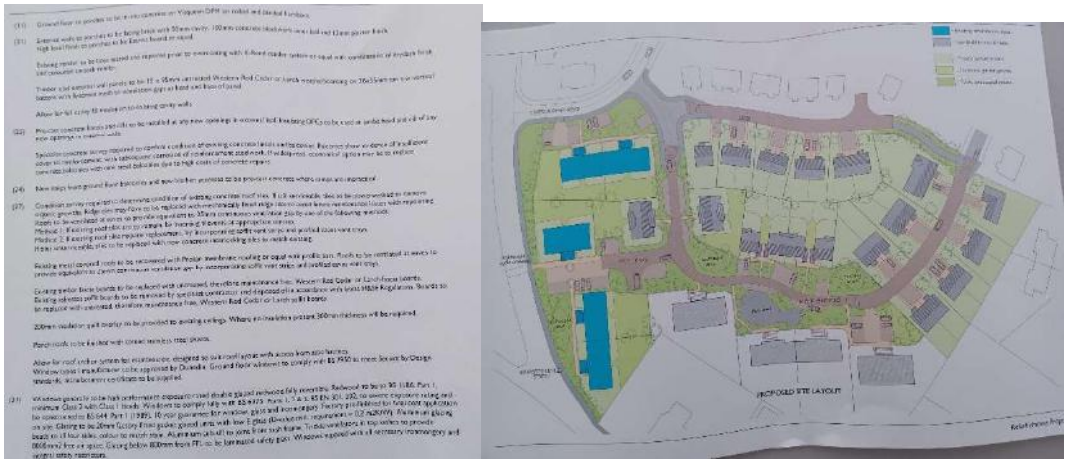
Is RAAC present in the construction:	No
Further inspection required to assess condition ofRAAC:	None
Roof structure format:	Timber roof trusses and joists
Wall structure format:	Brick and Block Cavity
Floor structure format:	In situ concrete ground floors and precast concrete floors.

These properties were built the Gilmerton area of Edinburgh in 1965, and were part of a full regeneration programme with the work being carried out between 2007-2012

A full desk top review was carried out on our paper-based file information relating to the properties. An extract of this is provided below confirming the traditional build nature and there is nothing to suggest use or presence of RAAC.







<u>Niddrie/Greendykes Road</u>:

Property address:	Niddrie/ Greendykes areas in Edinburgh	

Summary assessment:

Is RAAC present in the construction:	No
Further inspection required to assess condition ofRAAC:	None
Roof structure format:	Timber roof trusses and joists
Wall structure format:	Brick and Block Cavity
Floor structure format:	In situ concrete ground floors and precast concrete floors.

These properties were built the Niddrie and Greendykes areas of Edinburgh, and were part of a full regeneration programme, with the work being carried out between 2000-2005

A full desk top review was carried out on our paper-based file information relating to the properties. An extract of this is provided below confirming the traditional build nature and there is nothing to suggest use or presence of RAAC.

HEALTH AND SAFETY FILE - THE NIDDRIE STOCK TRANSFER, EDINBURGH.

DESIGN STATEMENT

Location:
Niddrie Mains Rd. Edinburgh as per drawing 003 01 BC A

Project Description:
The Project can be broken down into 2 sections:

1. **Tenant Rented Properties**
No. 57 Tenant Rented Properties. These properties have been refurbished externally and internally. The addresses of these properties are shown on our drawing 003 01 BC A. Works to properties vary as the Tenants could choose the scope of works to their properties.

2. **Owner Occupier**
No. 59 Owner Occupier Properties. These properties have been refurbished externally to individual Owner Occupier's requirements with each Owner acting as a separate Client, therefore no information regarding these works needs to be included in the Health and Safety file.

3. **Be Well Centre**
No. 2 Properties – 12 and 14 Niddrie House Park. Used as local drop in centre, the two properties are linked and will be received refurbishment externally and internally including a wet shower room downstairs.

General Description of Works to Properties – Internal

A. Limited alteration works, blocking off existing fireplaces.

B. New kitchen fitted and finished out complete.

C. New Bathroom fitted and finished out complete.

D. Window replacement and new window finishes.

E. Door and ironmongery replacement (all internal and external doors)

F. New gas central heating and hot/cold water installations.

G. New electrical and ventilation installations

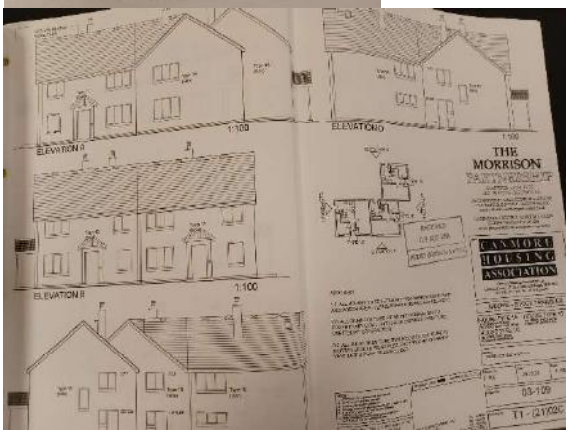
H. Replacement laminate flooring.

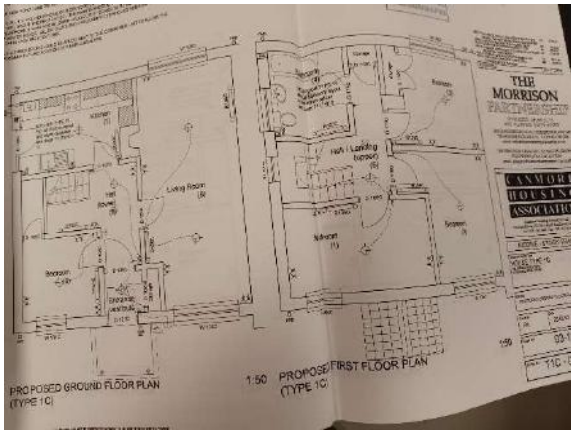
I. General plaster, timber finishing and metal work here necessary.

J. Redecoration

K. New composition flooring and door entry system in common stairs / flats only – house type 5)

L. Insulation placed within the attic spaces of the properties





Lowther Homes:

Lowther Homes has 696 blocks, 11 of which were built between 1950 and 1990, of these 11 blocks, six have a flat roof construction

Shawbridge Street:

Five of these blocks are at Shawbridge Street in Glasgow.

These were built in 1967 with a flat roof made of a concrete slab. The building was fully remodelled and refurbished in 2015. There is nothing to indicate the presence of RAAC.

Ibroxholm Oval

Ibroxholm Oval is a multi-storey flat in Glasgow. As discussed above in relation to the multi-storey flats which Wheatley Homes Glasgow owns, this block, which was built in 1965, has a concrete slab roof.

The building was fully remodelled and refurbished in 2013.

Loretto Housing

Loretto Housing has properties in 1208 blocks ranging from individual home to flats. 125 of these were built between 1950 and 1990, with only two having flat roof construction. Loretto owns two properties in the blocks identified with flat roofs.

10 Dorset Square, Glasgow:

Loretto only has one flat in the development, as such detailed plans are not available, although desktop assessment indicates that this is a Mansard style roof and as such would be timber construction with slate finish. As such there is no reason to suggest presence of RAAC.

15 Bonnyton Lane, Hamilton:

Loretto only has one flat in block, as such detailed plans are not available, although, Wheatley Homes Glasgow has similar properties, from same period, with 6" concrete slab roof. As such there is no reason to suggest presence of RAAC.

Appendix 1

AJ Balfour review of desk top assessment and on-site inspection

INTRODUCTION:

AJ Balfour Associates were instructed by Wheatley Group (verbal instruction dated 6/9/2023) to undertake a desktop study of the stock owned and controlled by Wheatley Group and confirm the likelihood of any of this stock containing reinforced autoclaved aerated concrete (RAAC). This was following an initial review conducted by Wheatley Group to identify which of their stock may be at risk of containing RAAC.

AJ Balfour Associates were asked to review this process and comment on the initial findings. We were also asked to review the available construction record drawings for each of the identified house types and confirm if these were likely to contain RAAC.

Upon completion of the desktop study, site visual inspections were completed to the addresses highlighted as requiring further investigation.

Following on from this initial review of stock more likely to contain RAAC (i.e. flat roof, 2/3/4 stories, constructed in the 1960s and 1970s), further instruction was issued by Wheatley Group to review a wider range of their stock to include pitched roof properties.

BACKGROUND:

In December 2018, the Department for Education (DfE) and the Local Government Association (LGA) made building owners aware of a recent building component failure in a property constructed using RAAC. In May 2019, the Standing Committee on Structural Safety (SCOSS) raised an alert to emphasise the potential risks from such construction, highlighting the failure of a RAAC panel roof construction within an operational school. This collapse was sudden with no apparent warning.

Since then, there have been further sudden collapses of RAAC panels in roofs that appeared to be in good condition. Prior to this, in the 1990s, there had been other concerns raised relating to structural deficiencies in RAAC by both the Building Research Establishment and SCOSS. It was recognised that the in-service performance was poor with cracking, excessive displacements and durability all being raised as concerns.

Based on the above issues arising the UK Government has since issued guidance local authorities, academy trusts, governing bodies, school/college leaders, and building professionals.

RAAC CONSTRUCTION DESCRIPTION:

Reinforced Autoclaved Aerated Concrete is a lightweight cementitious material. It is aerated and has no coarse aggregate, meaning the material properties and structural behaviour differ significantly from ‘traditional’ reinforced concrete. RAAC has been used in building structures in the UK and Europe since the late 1950s, most commonly as precast roof panels in flat roof construction but occasionally in pitched roofs, floors and wall panels in both loadbearing and non-loadbearing arrangements.

RAAC panels are distinguishable from traditional reinforced concrete members in a number of ways. The Autoclaved Aerated Concrete (AAC) material is aerated, hence having the benefit of being

considerably lighter than traditional concrete. Typically, AAC has a density of 600- 800kg/m³ compared to 2400kg/m³ for traditional concrete. This aerated nature and reduced density, influences other key material properties including:

Compressive strength:
Typically, in the range of 2-5N/mm² and therefore much lower than traditional concrete. Flexural, shear, and tensile strengths are also similarly reduced compared with traditional concrete.

Reinforcement anchorage:
Because of the aerated nature of the material the RAAC will not form adequate bond strength with the reinforcement. The reinforcement is also smooth and not ribbed. Tensile forces are therefore predominantly transferred to the reinforcement via transverse reinforcement bars being welded to the longitudinal reinforcement with bars over the bearings of the panels for end anchorage. The position and effectiveness of the transverse reinforcement over the bearing is critical to the shear capacity of the panels at their bearings.

Permeability:
The aerated material is highly permeable. As a result, cover to the reinforcement does not protect against environmental conditions as with traditional concrete and the cover zone can be expected to be highly carbonated. Prior to manufacture the reinforcement was covered with a coating to protect it against corrosion.

Elasticity and Creep:
The aerated nature and lack of coarse aggregate means that the elasticity and creep characteristics of AAC are substantially inferior to traditional concrete which has an impact on long term deflections of the RAAC panels.

IDENTIFYING RAAC CONSTRUCTION:
The following description of identifying RAAC concrete panels is taken from advice issued by the Government for owners of public buildings.

RAAC panels are most commonly found on flat roofs, they may also be found in floors or walls. They are light grey or white in appearance, the underside of the panels will appear smooth. The inside of the planks will appear bubbly, often described as looking like an Aero bar. Unlike traditional concrete, there will not be visible stones (aggregate) in the panels.

RAAC panels are typically 600mm (approximately 2 feet) wide although this has been known to vary. Their length will vary, typically up to six metres.

RAAC panels typically have a chamfer along their edge meaning there is a distinctive V-shaped groove every 600mm in the surface of the roof, floor or wall.

RAAC panels are very soft. If you press a screwdriver, screw or nail into the surface of a RAAC panel you will be able to make an indentation. They may also bow or deflect. From the underside of the roof or floor you may see a ‘gap’ between two adjacent panels.

DESKTOP STUDY:

A desktop study was completed in two parts, the first part focusing on flat roofed properties, with the second part focusing on a wider range of property types, including those with pitched roofs.

Wheatley Group are landlords of social housing properties in the Greater Glasgow area. Based on the records provided by Wheatley Group to A J Balfour Associates it is estimated there are some 14,811 addresses which come under their jurisdiction. In order to narrow down the number of properties which may have been constructed with RAAC, Wheatley has reviewed the information provided by the government in terms of when RAAC was more widely used in construction. RAAC was widely used in UK construction from the mid-1950s to the 1980s, and was most commonly used on flat roofs, although they may also be found in floors or walls.

Based on the above the Wheatley Group stock was then narrowed down from a list of 14,881 addresses to 176 addresses with flat roofs. Of these 176 addresses with flat roofs, 132 of these are multi-storey construction. It is generally considered that in multi-storey construction, flat roofs will be constructed in reinforced concrete slabs. Based on A J Balfour Associates experience with multi-storey construction in Scotland, any flat roofs encountered have always been constructed using traditional reinforced concrete.

This therefore left a total of 44 addresses, or six different house construction types which would qualify, having been built between the mid-1950s and the 1970s with a flat roof. In addition, one further address within the Loretto stock has been identified as possibly falling into this category also. These were the first batch of properties subject to an initial site inspection.

Further to this initial desk study and site investigation, Wheatley Group felt it was prudent to investigate additional properties to gain a wider ranging understanding of additional elements of their stock, including pitched roof blocks and properties. The date range was still similar in that blocks built from the 1960s to the late 1970s was investigated as part of this secondary desktop study.

Following consultation with the Housing Association, a list of 26 house types were selected for additional review. Of these 26 house types, a number of these were built in different postcode areas across the Glasgow area. Based on this, A J Balfour Associates recommended that one of each of the 26 house types be reviewed in each post code area to consider possible variances in construction methods in different areas of the city. This therefore brought the list of surveyable addresses up to 59. 59 random addresses were then selected for review, with historical drawing information provided where available. A series of nondisruptive inspections were then completed to external, common close and roof space areas.

A series of survey reports have been issued as an appendix to this summary report.

CONCLUSION:

We have reviewed the desktop study completed by Wheatley Group and believe this is robust, and consistent with recommended practice, including from the Scottish Government, in considering the possibility of RAAC in social housing. We have also carried out onsite visual inspections of Wheatley properties in Glasgow, including all those that fit the profile for when and where RAAC might have been used and concluded that there is nothing to suggest the use of RAAC in the construction of Wheatley Homes Glasgow stock.

Yours faithfully A J BALFOUR ASSOCIATES Ltd