Marlsbro House, Manchester: Masonry moisture survey

Site note 2 for 21-29 October 2025, job no. 213-34

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1 INTRODUCTION

1.1 AUTHORITY AND REFERENCES

Hutton + Rostron (A SOCOTEC COMPANY) carried out a site visit to Marlsbro House, Manchester between the 21-29 October in accordance with the Order Form received from Barney Cook on behalf of Aclo Assets Ltd. Drawings provided by ArchitectureM, reference 519 were used for the identification of structures. For purpose of orientation in this report, the elevation facing onto Newton Street was taken as facing north-west

1.2 AIM

The aim of this survey was to investigate the building for areas vulnerable to water penetration and to undertake masonry moisture profiling of the masonry walls

2 STAFF ON SITE AND CONTACTS

2.1 H+R STAFF ON SITE

Chris Whitfield | Associate Building Pathologist
Ethan Silvey | Intern Building Pathologist

2.2 PERSONNEL CONTACTED

James Bruce | Director | Civic Engineers

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3 OBSERVATIONS

3.1 EXTERIORS

See Figures 1-26 in the Schedule of Photographs at Attachment A. Photograph locations are identified on the Plans at Attachment B

1 Limitations: The exteriors were visually inspected from street level. It was not possible to fly the H+R mini drone during the survey due to wind speed and rain restrictions. This service will be attempted when H+R return to undertake the timber condition survey of the roof structure. The gate which provided access to the yard behind the south-east elevation was locked so survey here was limited

2 Chimneys: There was a single chimneystack to the south-east elevation. The brick chimney was rendered and terminated into a glazed terracotta crown pot. The chimney provided a potential route for water penetration. Additional chimney flues may exist in the masonry walls where chimneystacks had been removed

3 Roof finishes: The slate roof coverings to the central pitched roof and secondary roof slopes to either side of the clerestory had been overclad with torch-on bituminous felt. This over cladding has presumably been undertaken in response to water penetration and as temporary alternative to re-roofing

4 Roof drainage: The central pitched roof was served by black uPVC eaves gutters and downpipes which discharged onto the secondary roof slopes. The parapet gutter drained via chutes through the parapet wall and into black uPVC hoppers and downpipes which discharged directly into drains. Rainwater drainage pipes to the south-east elevation were convoluted with numerous bends and shared rainwater and soil vent pipes. There was some staining, biological growth, and plant growth to the façade which indicated a history of defect in the rainwater drainage systems particularly to the south-east elevation

5 Gables and parapets: The concrete copings were largely overclad with bituminous felt but, where exposed, mortar joints between abutting copings were eroded. There was no evidence of a damp-proof course (DPC) beneath the coping stones. Therefore, the wall head was vulnerable to water penetration. Lead flashings to the parapet had also separated from the brickwork and plant growth indicated the damp conditions to the masonry

6 Render: The sand-cement render applied to the front and side elevations was approximately 20-25mm thick and coloured in two-tone chequerboard pattern. The use of a cement-based render will restrict normal evaporation through the brickwork. There was localised cracking in the render at high-level to the north and south corners but, where tap-tested at low-level, render appeared to have good adhesion. However, there was widespread cracking to the plain render to the south-east elevation and numerous patch repairs. The render generally extended down to ground/footpath level except for the south-west elevation where an expanding metal lath (EML) bellcast bead had been retrofitted. The EML had corroded and the render was defective in this area. Corrosion in the lintels spanning the basement windows had also caused cracking and debonding of the rendered soffits

7 Windows: The non-original softwood timber windows to the elevations were in poor condition with extensive decay particularly in the sills. This had reduced the windows' ability to effectively shed rainwater from the façade and increased the risk of water penetrating behind the render

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8 Entrance: Corrosion of the rebar (reinforcing bar) within the granite terrazzo precast panels had caused oxide jacking, resulting in cracking and displacement of the panels. Rebar had a nominal cover of ~20mm. Where visible, the panels appeared to be fixed to the brick substrate by twisted wire ties which were also vulnerable to corrosion. There was a void of ~10mm between the panels and brick substrate

9 Ground levels and surface drainage: No original or subsequent physical or injected damp-proof course (DPM) was identified. The external hardstanding was built directly against the external walls, but footpaths were angled towards the road which encouraged surface water drainage away from the building. The lightwells to the north-west elevation could not nit be inspected in detail but were susceptible to water penetration into the basement. Inspection of the drain gullies and surface water drainage system was not undertaken

3.2 INTERIORS

See Figures 27-42 in the Schedule of Photographs at Attachment A. Photograph locations are identified on the Plans at Attachment B

1 External walls: External walls were constructed of solid red brick with a lime-based mortar. Wall thickness varied from level to level and elevation to level (as shown on the Plans) and were between 3 bricks thick (~720mm) and 2 bricks thick (~480mm) from Ground floor to Third floor level. Walls were generally decorated with numerous layers of non-original film-forming paint finishes with some localised use of modern lime and gypsum plasters

2 Basement walls: The thickness of the basement walls could not be determined. As the lower 2-2.5m of the basement walls were earth-retaining, they were susceptible to damp. These walls had been finished with a hard 20mm thick sand-cement ‘tanking’ plaster from basement floor level to the underside of the ground floor. The plaster was entrapping moisture and inhibiting evaporation through the brickwork. This will be exacerbating the rate of deterioration in the exterior brick masonry walls where moisture has accumulated

3 Masonry moisture profiling: Samples of mortar were drilled from the solid brick walls in areas vulnerable to water penetration to establish a ‘moisture profile’ of the building. Samples were typically taken at 1-1.5m above floor level. At basement level samples were taken 0.5m, 1m and 2m above floor level in order to establish a more detailed profile of moisture distribution. Mortar samples were taken from a depth of at least 100mm in the wall. The masonry samples were placed in sealed containers and tested at the H+R laboratory in accordance with the procedure for gravimetric measurement of moisture content as described in the appendix to BRE Digest 245

4 Results: External walls were generally dry but there were localised areas of concentrated water penetration where sampling was concentrated. Where tested, the majority of samples identified elevated levels of moisture and these areas generally correlated with where external moisture sources were identified. Samples with the highest levels of elevated moisture were generally to the south-east/rear elevation. All samples taken at Basement level were ‘saturated’ and this is typical of below ground earth-retaining walls. See laboratory data in the Table of Material Moisture Contents at Attachment C. Sample locations are identified on the Plans at Attachment B

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4 RECOMMENDATIONS

4.1 EXTERIORS

4.1.1 Temporary repairs

Prior to refurbishment works commencing, it is essential that water penetration is effectively managed. This should include routine planned inspections and maintenance of rainwater drainage goods. All debris should be removed from the parapet gutters, hoppers and downpipes. Where downpipes are damaged or missing, they should be replaced with a temporary plastic downpipe. This early intervention would reduce water penetration, further damp, and additional decay prior to redevelopment of the building

4.1.2 Roof coverings

Allowance should be made for recovering the roofs and a temporary roof is advised during re-roofing works. Existing slates and ridge tiles should be carefully removed and set aside for inspection to determine their condition, probable service-life, and suitability for reinstatement. H+R could undertake this survey or provide further guidance, if required. All leadwork should be renewed following Lead Sheet Training Academy best practice and all flat roof coverings should be renewed with a suitably specified material

4.1.3 Parapet gutters and box gutter

Allowance should be made for renewal in full of the parapet gutter timbers and coverings. The timber gutter to the south-east elevation should also be replaced at this had reached the end of its useful service-life. H+R advise that overflows are provided to the parapet in case of blockage in the rainwater outlets

4.1.4 Rainwater drainage goods

On refurbishment, allow for replacement of all rainwater drainage systems with a suitably specified conservation sensitive material, informed by rainwater drainage calculations. H+R can undertake rainwater drainage calculations, if required

4.1.5 Chimneystacks

Allowance should be made for high-level access and for detailed inspection of construction and condition of all chimneys. H+R can undertake this inspection, if required. On refurbishment, pots should be capped to minimise water penetration but allow continued through-ventilation of the flues. All flues including redundant flues should be cleared and cleaned to remove blockages and ventilated from the interior to the exterior

4.1.6 Render

Allowance should be made for high-level access and for detailed inspection of render condition. Alternatively, allow for removal of the render and conservation sensitive repairs to the brick substrate. H+R could provide further consultancy, if required

4.1.7 Gables and parapets

Allowance should be made for high-level access and for detailed inspection of construction and condition. H+R can undertake this inspection, if required. At this stage, allowance should be made for carefully removing the existing copings, repairing the upper courses of parapet and gable and re-bedding the copings on a DPC. Damaged copings should be repaired/replaced as necessary

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4.1.8 Windows

Allow for replacement of all windows with windows of a suitably specified material and type. Windows should project and adequately shed rainwater from the façade. Any timber windows built in contact with the masonry should be separated from the masonry with damp-proof materials and ventilated airgaps

4.1.9 Ground levels and surface water drainage

Existing ground and surface drainage should be inspected in detail by a CCTV Drainage Engineer. Drainage should be maintained as necessary throughout the duration of the refurbishment to drain water clear from the base of the walls and foundations. On refurbishment, allowance should be made for replacing all existing ground and surface drainage with new throughout. No remedial injected damp-proof course is required

4.1.10 Pavement lightwells

Repairs should be carried out to prevent further water ingress. It would be preferable, and beneficial, to restore or renew the pavement lightwells to maintain natural daylight into the basement. Such works should consider weatherproof details of the perimeter and the interfaces. Architect to detail any external waterproofing required

4.2 INTERIORS

4.2.1 Existing finishes

All non-original plaster should be carefully removed from the masonry walls to promote evaporation and drying in areas subject to water penetration. Film-forming paint finishes should also be carefully removed from the brick using appropriate methods, as determined by trial cleaning

4.2.2 Natural drying

Once water ingress has been controlled, the walls should be dried-out to acceptable levels before finishes are applied. Moisture content should be monitored by H+R by carrying out further gravimetric testing until the walls are classified as ‘dry’. The walls could be left to dry naturally, or dependant on programme requirements accelerated drying may be required (see below). It should be noted that hygroscopic salts may remain in the wall following the drying-out process. Hygroscopic salts can absorb water vapour from the air and cause consequential damage of the finishes through cycles of deliquescence and crystallisation of the salts (efflorescence). The gravimetric sampling identified only slightly elevated levels of hygroscopic salts in localised areas and therefore hygroscopic salts are unlikely to be a significant factor

4.2.3 Accelerated drying

Depending on the project programme, there may be a need for the targeted accelerated drying of the masonry to decrease the risk of progressive timber decay, corrosion of metal and the deterioration of proposed finishes and services, and the manifestation of damp and efflorescent salts on the brickwork. The localised use of electric infrared (IR) material heaters and air movers is effective for the targeted heating and drying of damp masonry structures during refurbishment works as the structures are heated in preference to the air. If correctly specified and managed, appropriate means of accelerated drying could achieve dry conditions within approximately 12 months whereas 3 years might otherwise be anticipated for natural drying of masonry identified as ‘saturated’. Targeted drying should be applied to all areas identified on the drawings as ‘moist’, ‘wet’ or ‘saturated’ i.e.,

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>2 per cent w/w available moisture content, until <2 per cent w/w available moisture content is achieved. The promotion of ventilation is required alongside the accelerated drying measures and H+R recommend desiccant dehumidifiers are installed to reduce the vapour pressure

4.2.4 Basement

The existing cementitious ‘tanking’ should be carefully removed. If there are any proposals for the basement to be used as habitable space then waterproofing will be required to meet the requirement of the Building Regulations and to ensure dry internal finishes on refurbishment. For historic and listed buildings, cavity drainage systems are most appropriate as they cause little damage to existing fabric. All waterproofing to basement walls and floors should be fully in accordance with the requirements of BS 8102:2009 and H+R advise that a Type C internal drained cavity system is designed and installed by a specialist qualified contractor. H+R specialists will be able to provide the necessary support consultancy on further instruction. H+R advise against the installation of a Type A internal barrier waterproofing system. Allowance should be made for heating and ventilation measures along with over-cladding the drained cavity system with insulated dry-linings as required for future occupancy

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Attachment A



Fig 1:

North-west elevation; showing the principal elevation to Newton Street. A cementitious checkerboard render had been applied to a depth of 20-25mm

There was plant growth and defective render to the north-east gable at high-level



Fig 2:

North-west elevation; showing a minimal window sill projection of approximately 20mm. Many timber window sills were partially decayed and this increased the vulnerability of rainwater penetrating behind the render

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Fig 3:

North-west elevation; showing cast pavement lightwells which without restoration can often be a cause of water ingress into buildings



Fig 4:

North-west elevation; showing one of the uPVC downpipes which serve the north-west parapet gutter

The vertical line in the render indicates the location of an earlier downpipe which was in-situ during rendering i.e. this is not a crack

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Fig 5

North-west elevation; showing failure of the rendered soffit at basement level caused by corrosion of a steel lintel. High-level rendered soffits may also be vulnerable to detachment



Fig 6

North-west elevation; showing the entrance doorway that was clad in panels of precast granite terrazzo. Numerous panels were displaced and cracked

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Fig 7

North-west elevation; showing cracking in a granite terrazzo panel, attributed to corrosion of the reinforcement bar. Where visible, rebar had a nominal 20mm cover



Fig 8

North-west elevation; showing staining to the render attributed to water penetration via the eroded coping stone joints. This also suggests there was no effective damp-proof course beneath the coping stones in this location

Also note the numerous areas of defective render that had previously been marked-up with white chalk

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Fig 9

South-west elevation; showing the side elevation to Hilton Street. The mortar joints between the parapet copings had eroded and these areas were subject to water penetration



Fig 10

South-west elevation; showing area of detached render. Also note the water staining concentrated at the eroded joints between the coping stones

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Fig 11

South-west elevation; showing granite terrazzo panels to the entrance door



Fig 12

South-west elevation; showing cracking through a panel caused by corrosion of a reinforcing bar

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Fig 13

South-west elevation; showing panel fixed to the brick substrate with a twisted wire tie. The void between the panel and substrate measured approximately 10mm



Fig 14

South-west elevation; showing an area of repaired render at low-level. Render was applied to an expanding metal lath (EML) bellcast bead retaining a 100mm space above ground level. Elsewhere, render generally continued down to ground/ footpath level

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Fig 15

South-west elevation; showing corrosion in the EML and failure of the render



Fig 16

South-east elevation; showing the rear elevation which faces onto the back of buildings on Port Street. Access to the southern portion of this elevation was limited

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Fig 17

South-east elevation; showing the downpipe which serves the southern flat roof. Biological growth beneath the hopper and plant growth to the masonry indicated leaks and damp conditions



Fig 18

South-east elevation; showing the downpipe serving the southern flat roof which discharges at ground level

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Fig 19

South-east elevation; showing a general view of the rear elevation. There were a total of 4 no. downpipes which serve the south-east parapet gutter

This area could not be accessed during the survey



Fig 20

South-east elevation; showing staining to the render to the centre of the elevation. This area correlated with water penetration to the interiors, presumably caused by defects in the parapet gutter

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Fig 21

South-east elevation; showing staining to the render to the east of the elevation. This area had previously been subject to water penetration but dry conditions were identified internally



Fig 22

South-east elevation; showing cracking through the render caused by corrosion of a projecting steel beam

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Fig 23

North-east elevation; showing the side elevation to Faraday Street. There was defective render and plant growth at high level



Fig 24

North-east elevation; showing missing render to the corner of the building. The brick substrate was damaged where visible

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Fig 25

North-east elevation; showing evidence of water penetration through the eroded mortar joints to the gable copings



Fig 26

North-east elevation; showing the principal elevation to Newton Street. There was defective render to the north-east gable at high-level

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Fig 27

Third floor; showing central area to the north-west elevation. This area was subject to water penetration due to suspected defects in the parapet gutter



Fig 28

Third floor; showing central area to the south-east elevation. This area was subject to water penetration due to suspected defects in the parapet gutter

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Fig 29

Third floor; showing south corner of the south-east elevation. This area was subject to water penetration through the flat roof over the stairwell



Fig 30

Second floor; showing two courses of new brick that concealed the stone window sill

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Fig 31

Second floor; showing the exposed stone window sill



Fig 32

Second floor; showing water pooling on the screed. This was caused by water penetration through the north-west parapet gutter

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Fig 33

Second floor; showing water pooling on the screed. This was caused by water penetration through the south-east parapet gutter

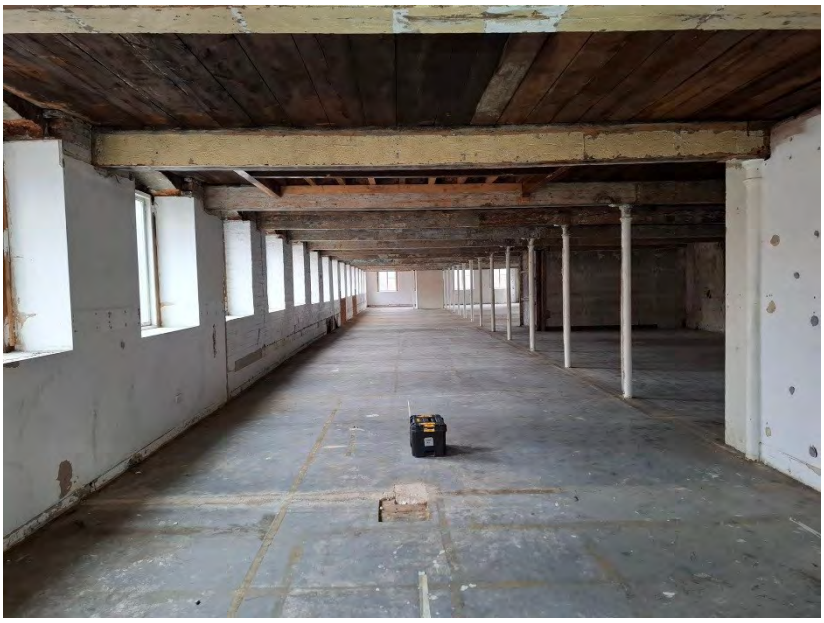


Fig 34

First floor; showing little evidence of water penetration to the north-west wall. The second floor screed prevented water from penetrating through the timber floor

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Fig 35

First floor; showing H+R surveyor undertaking masonry moisture sampling to the centre of the north-west wall



Fig 36

First floor; showing little evidence of water penetration to the south-east wall. The second floor screed prevented water from penetrating through the timber floor

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Fig 37

First floor; showing Peziza fungi growing from the masonry to the south -east elevation. This non-wood rotting fungi is evidence of very damp conditions within the masonry

Note that the masonry moisture sample 23 taken at this location was ‘saturated’



Fig 38

Ground floor; showing water penetration through the floor towards the centre of the south-east elevation

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Fig 39

Ground floor; showing the rear entrance extension to the centre of the south-east elevation. This area was subject to water penetration



Fig 40

Basement; showing location where masonry sample 33, 34 and 35 were taken from the north-west elevation.

All samples were ‘saturated’ and 33 and 34 were highly hygroscopic. Hygroscopic salt contamination was attributed to absorption of soluble salts present in the ground. The external wall is believed to be earth-retaining

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Fig 41

Basement; showing H+R surveyor undertaking masonry moisture sampling to the centre of the south-east elevation

Sample no. 40 taken at 1m above floor level was 'saturated' and highly hygroscopic

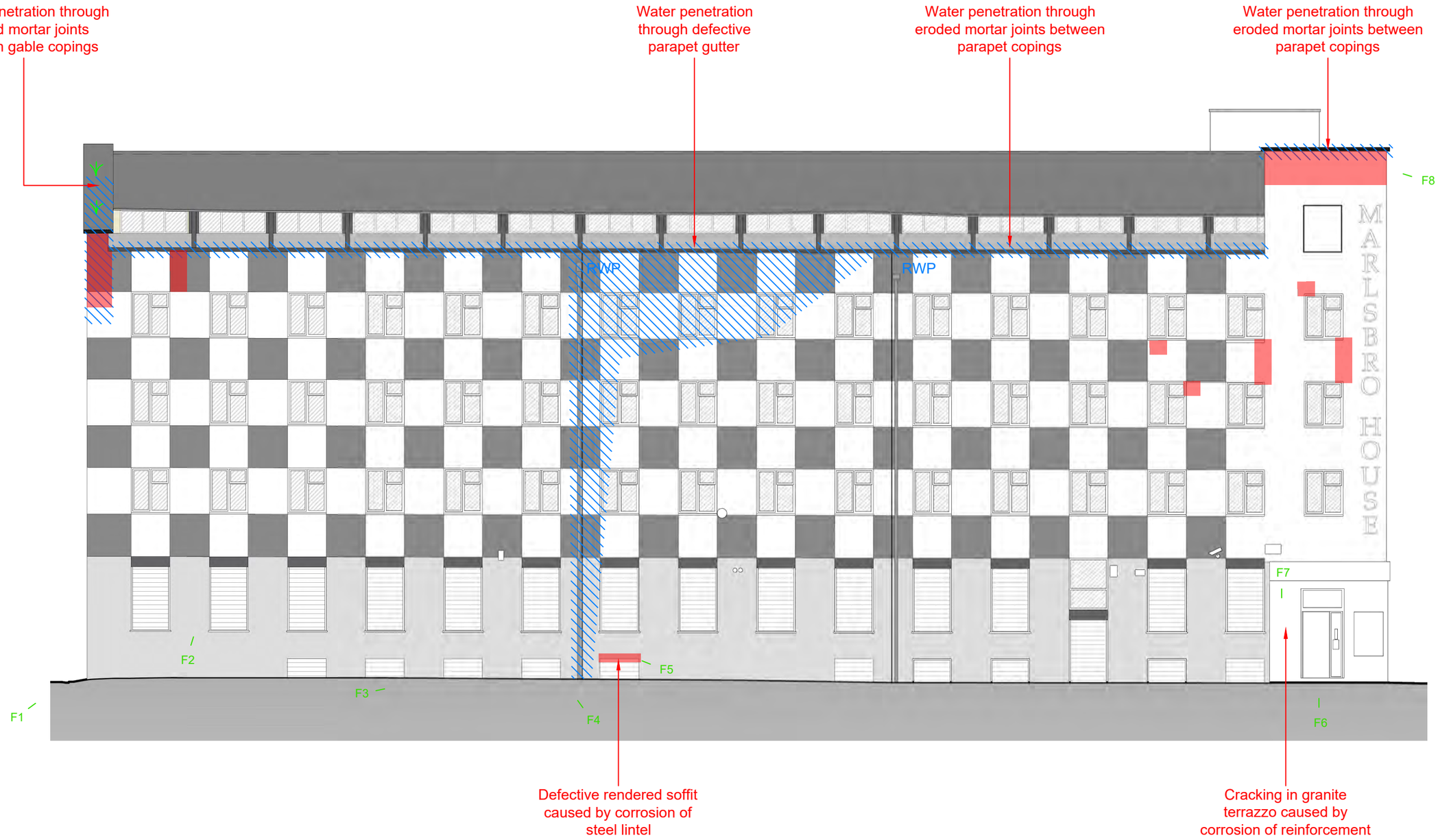


Fig 42

Basement; showing extracted mortar from sample no. 40. The condensation within the bag was a good indicator of excess moisture within the sample

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Attachment B



NEWTON STREET

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Marlsbro House, Manchester - North-west elevation

MASONRY MOISTURE SURVEY

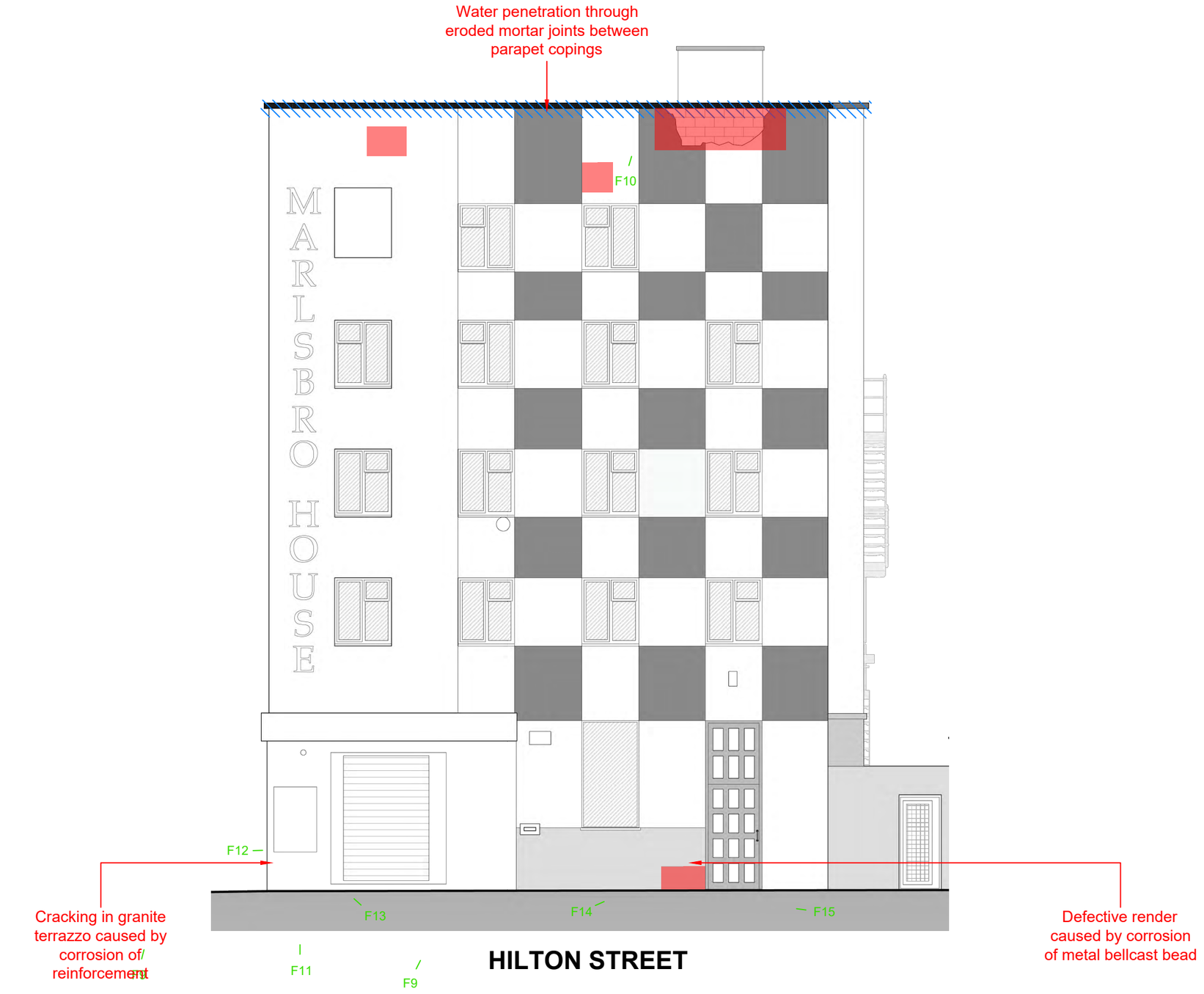
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Key:

RWP	Rainwater downpipe
	Area subject to water penetration
	Area of defective render
F1-8	Photograph location
	Plant growth



Key:

- Area subject to water penetration
- Area of defective render
- F9-15 Photograph location

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Marlsbro House, Manchester - South-west elevation

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Note: Area was inaccessible during the survey

Key:

RWP	Rainwater downpipe
	Area subject to water penetration
	Area of defective render
F16-22	Photograph location
	Plant growth

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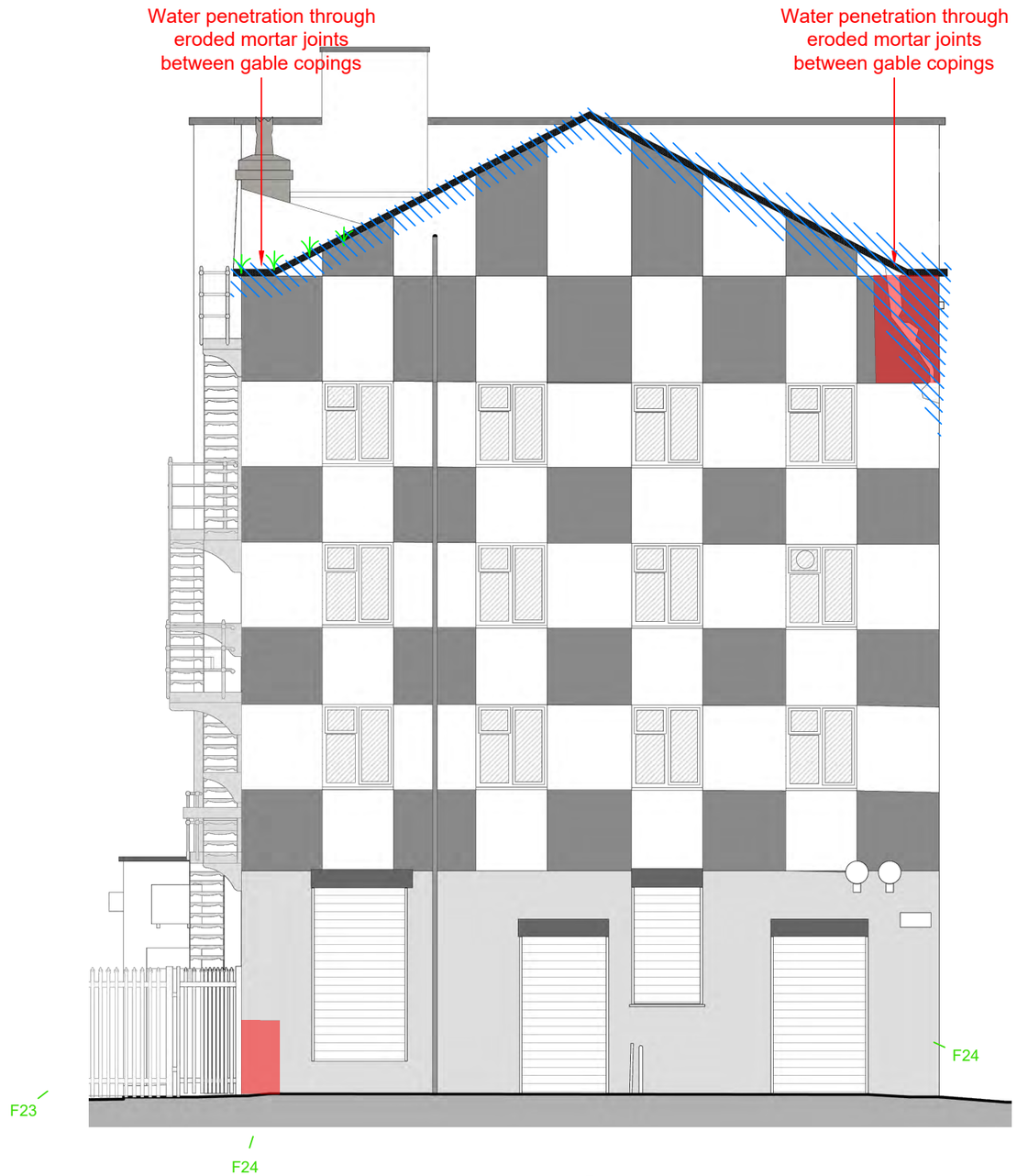
Marlsbro House, Manchester - South-east elevation

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FARADAY STREET

Key:

- Area subject to water penetration
- Area of defective render
- F23-26 Photograph location
- Plant growth

Marlsbro House, Manchester - North-east elevation

MASONRY MOISTURE SURVEY

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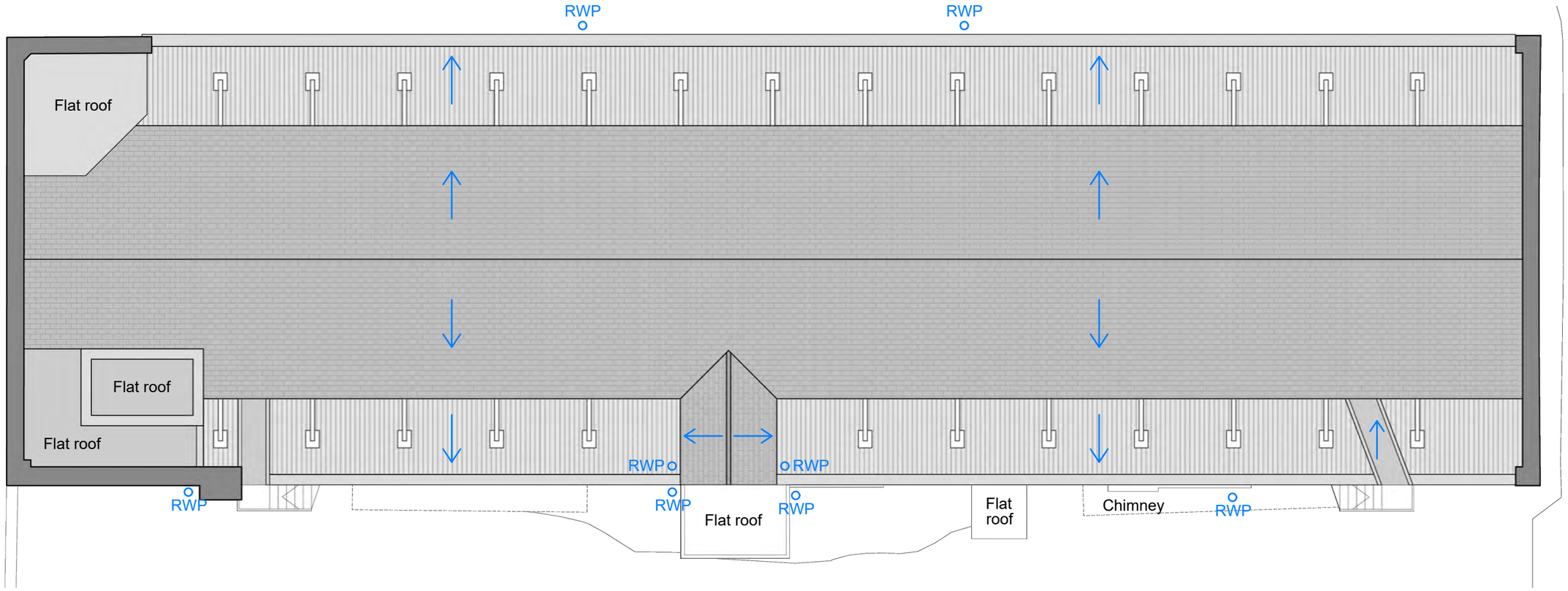
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NEWTON STREET

HILTON STREET

FARADAY STREET



Marlsbro House, Manchester - Roof

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Key: RWP Rainwater downpipe

Rainwater drainage

NEWTON STREET

HILTON STREET

FARADAY STREET

External wall thickness
~480mm (2 bricks)

External wall thickness
~480mm (2 bricks)

External wall thickness
~605mm (2.5 bricks)

External wall thickness
~480mm (2 bricks)

External wall thickness
~480mm (2 bricks)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

RWP RWP

1 D

2 D

3 S

4 M

5 D

6 S

7 S

8 W

F27

F28

F29

Ceiling Ceiling Timber brace Ceiling Timber brace Ceiling

Timber post

Lift

Timber post

Timber post

Not accessed

Lift

Concrete

RWP RWP RWP

Flat roof

Flat roof

Ceiling Ceiling Ceiling

External wall thickness
~480mm (2 bricks)

Marlsbro House, Manchester - Third floor

MASONRY MOISTURE SURVEY

21-29 October 2025

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Key:

RWP	Rainwater downpipe	1	Masonry sample location
	Area subject to water penetration		
F27-29	Photograph location		

	High salt content	Low salt content	
Dry	D	D	0-2% w/w available moisture content
Moist	M	M	2-5% w/w available moisture content
Wet	W	W	5-8% w/w available moisture content
Saturated	S	S	8+% w/w available moisture content

NEWTON STREET

External wall thickness ~480mm (2 bricks)

External wall thickness ~480mm (2 bricks)

External wall thickness ~605mm (2.5 bricks)

External wall thickness ~480mm (2 bricks)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

RWP RWP

F30-31

10 D

11 M

F32

12 D

HILTON STREET

9 D

Lift

FARADAY STREET

Lift

Concrete

Not accessed

F33

Ceiling

Ceiling

13 D

RWP RWP RWP RWP

Flat roof

Flat roof

16 M

15 S

14 M

External wall thickness ~480mm (2 bricks)

Key:

RWP — Rainwater downpipe

Area subject to water penetration

F30-33 — Photograph location

1 — Masonry sample location

	High salt content	Low salt content	
Dry	D	D	0-2% w/w available moisture content
Moist	M	M	2-5% w/w available moisture content
Wet	W	W	5-8% w/w available moisture content
Saturated	S	S	8+% w/w available moisture content

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Marlsbro House, Manchester - Second floor

MASONRY MOISTURE SURVEY

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NEWTON STREET

External wall thickness ~605mm (2.5 bricks)

External wall thickness ~605mm (2.5 bricks)

External wall thickness ~720mm (3 bricks)

External wall thickness ~480mm (2 bricks)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

RWP RWP

18 D

19 M

20 D

21 D

17 D

F34

F35

F36

F37

Lift

Lift

Concrete

Not accessed

Ceiling

Flat roof

Flat roof

RWP RWP RWP RWP

24 S

23 S

22 D

HILTON STREET

FARADAY STREET

Marlsbro House, Manchester - First floor

MASONRY MOISTURE SURVEY

21-29 October 2025

Hutton + Rostron
A SOCOTEC COMPANY

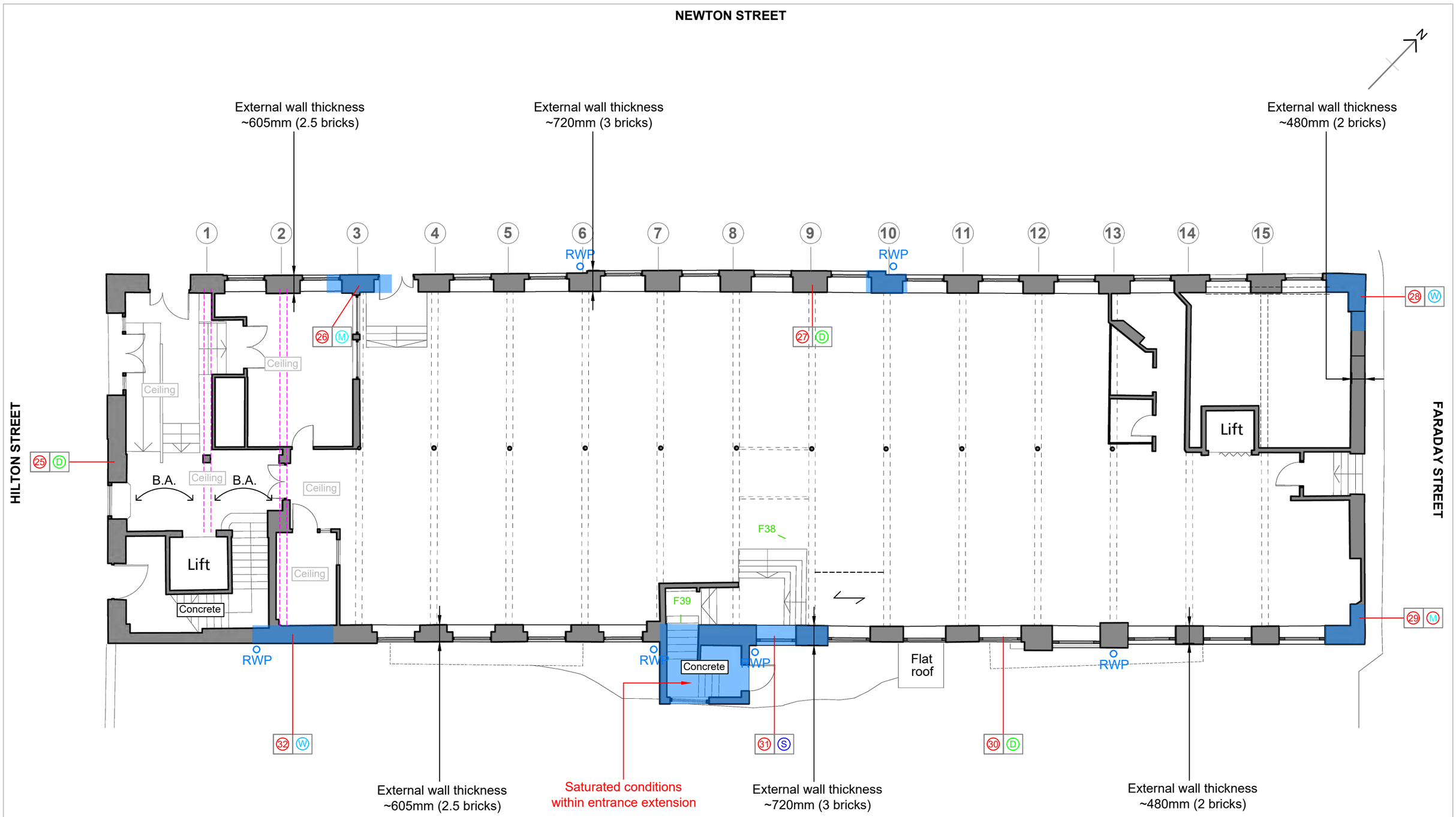
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Key:

RWP	Rainwater downpipe	1	Masonry sample location
	Area subject to water penetration		
F34-37	Photograph location		

	High salt content	Low salt content	
Dry	D	D	0-2% w/w available moisture content
Moist	M	M	2-5% w/w available moisture content
Wet	W	W	5-8% w/w available moisture content
Saturated	S	S	8+% w/w available moisture content



Marlsbro House, Manchester - Ground floor

MASONRY MOISTURE SURVEY

21-29 October 2025

Hutton + Rostron
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Key:

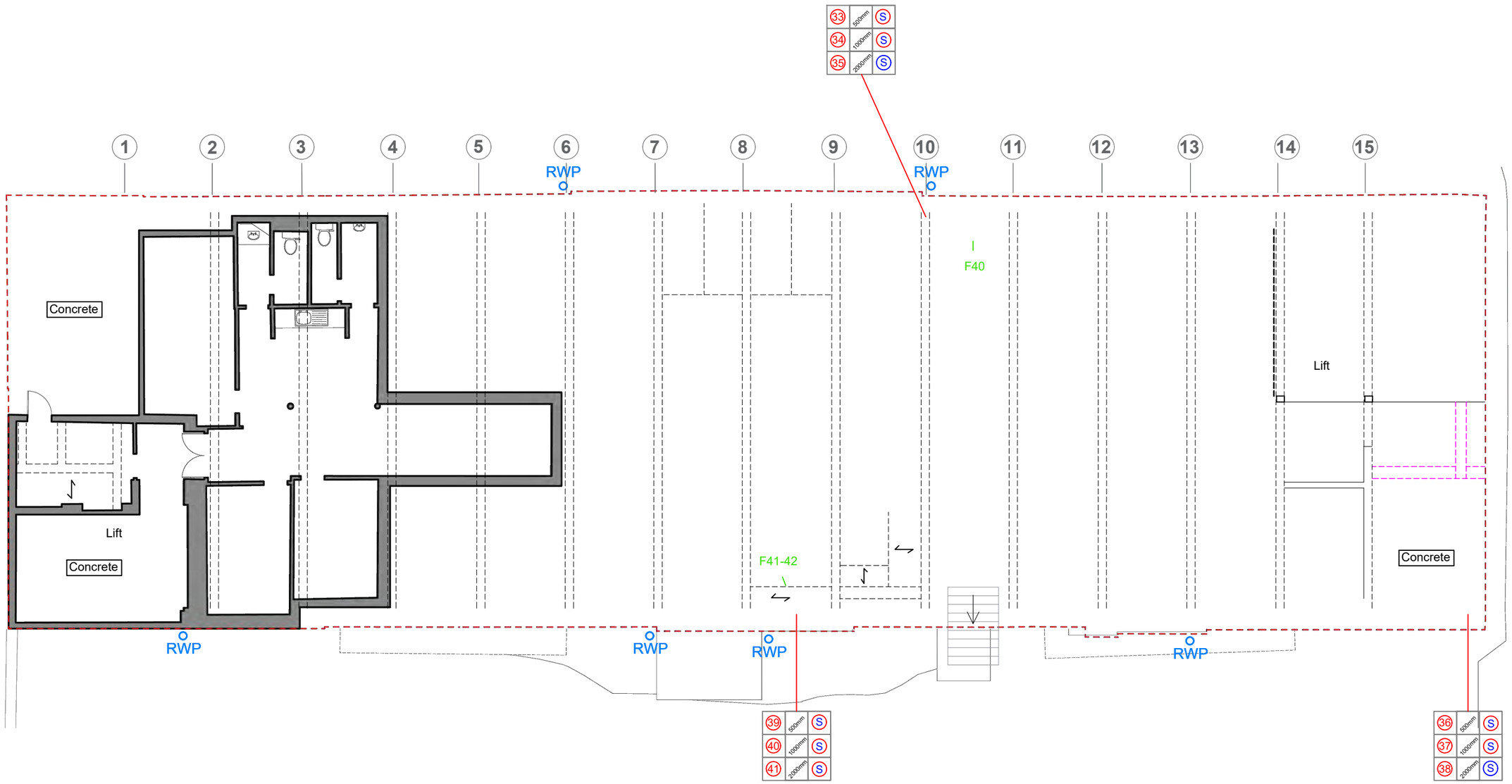
RWP	Rainwater downpipe	1	Masonry sample location
	Area subject to water penetration		
F38-39	Photograph location		
	Steel beam		
B.A.	Brick arch ceiling		

	High salt content	Low salt content	
Dry	D	D	0-2% w/w available moisture content
Moist	M	M	2-5% w/w available moisture content
Wet	W	W	5-8% w/w available moisture content
Saturated	S	S	8+% w/w available moisture content

NEWTON STREET

HILTON STREET

FARADAY STREET



Note: All external walls subject to water penetration

Key:

RWP	Rainwater downpipe
F40-42	Photograph location
	Steel beam
1	Masonry sample location

	High salt content	Low salt content	
Dry	D	D	0-2% w/w available moisture content
Moist	M	M	2-5% w/w available moisture content
Wet	W	W	5-8% w/w available moisture content
Saturated	S	S	8+% w/w available moisture content

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Marlsbro House, Manchester - Basement

MASONRY MOISTURE SURVEY

21-29 October 2025

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Attachment C

TABLE OF MATERIAL MOISTURE CONTENTS **Attachment C**

Samples of masonry were drilled from the walls in areas subject to water penetration and representative areas. The masonry samples were placed in sealed containers and tested at the H+R laboratory in accordance with the procedure for gravimetric measurement of moisture content as described in the appendix to BRE Digest 245. The results of which are set out on the Plans at Appendix F and in the table beneath

Notes on the table

Where the 'available moisture content' of the sample is higher than the 'hygroscopic moisture content', there is excess water and a 'damp' condition exists

For ease of interpretation, we have characterised 'damp' materials into:

M=Moist (2-5% available moisture content)
W=Wet (5-8% available moisture content)
S=Saturated (8+% available moisture content)

Dry materials are characterised as:

D=Dry (0-2% available moisture content)

Hygroscopic moisture content is the moisture content of the sample equilibrated with an atmosphere of 75 per cent relative humidity. This is moisture associated with the surface of a porous material by adhesion of water molecules from water vapour

H = Hygroscopic indicates a relatively high degree of hygroscopicity and can be attributable to salt contamination

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Sample ID/Location	Moisture content % w/w			Hygroscopic moisture content % w/w	Available moisture content % w/w
Third floor					
1	0.55	D		0.57	-0.03
2	0.75	D		0.72	0.03
3	9.83	S		0.85	8.98
4	5.27	M		0.80	4.46
5	3.73	D	H	3.96	-0.24
6	12.86	S		0.82	12.04
7	9.52	S		0.63	8.90
8	6.72	W		0.89	5.83
Second floor					
9	0.27	D		0.36	-0.09
10	0.70	D		0.55	0.16
11	3.35	M		0.76	2.59
12	2.38	D		1.19	1.19
13	2.11	D	H	2.27	-0.16
14	3.91	M		0.62	3.29
15	13.41	S		0.55	12.86
16	4.02	M		1.76	2.26
First floor					
17	0.25	D		0.30	-0.04
18	1.15	D		0.27	0.88
19	2.98	M		0.62	2.37
20	1.02	D		0.22	0.80
21	0.92	D		1.27	-0.35
22	-0.18	D		0.65	-0.83
23	13.05	S		0.34	12.71
24	33.90	SS	H	4.54	29.36
Ground floor					
25	-12.54	D		1.07	-13.61
26	5.44	M		0.78	4.65
27	-0.87	D		1.20	-2.08
28	6.50	W		0.97	5.53
29	5.00	M	H	2.91	2.10
30	2.99	D		1.45	1.55
31	11.96	S		0.48	11.48
32	7.02	W		1.25	5.77
Basement					
33	23.91	SS	H	2.78	21.13

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34	17.80	S	H	2.10	15.71
35	12.30	S		0.81	11.49
36	20.34	S	H	2.11	18.22
37	16.06	S	H	2.14	13.92
38	14.17	S		1.23	12.94
39	25.63	SS	H	2.08	23.55
40	18.24	S	H	3.48	14.76
41	36.87	S	H	22.07	14.79

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