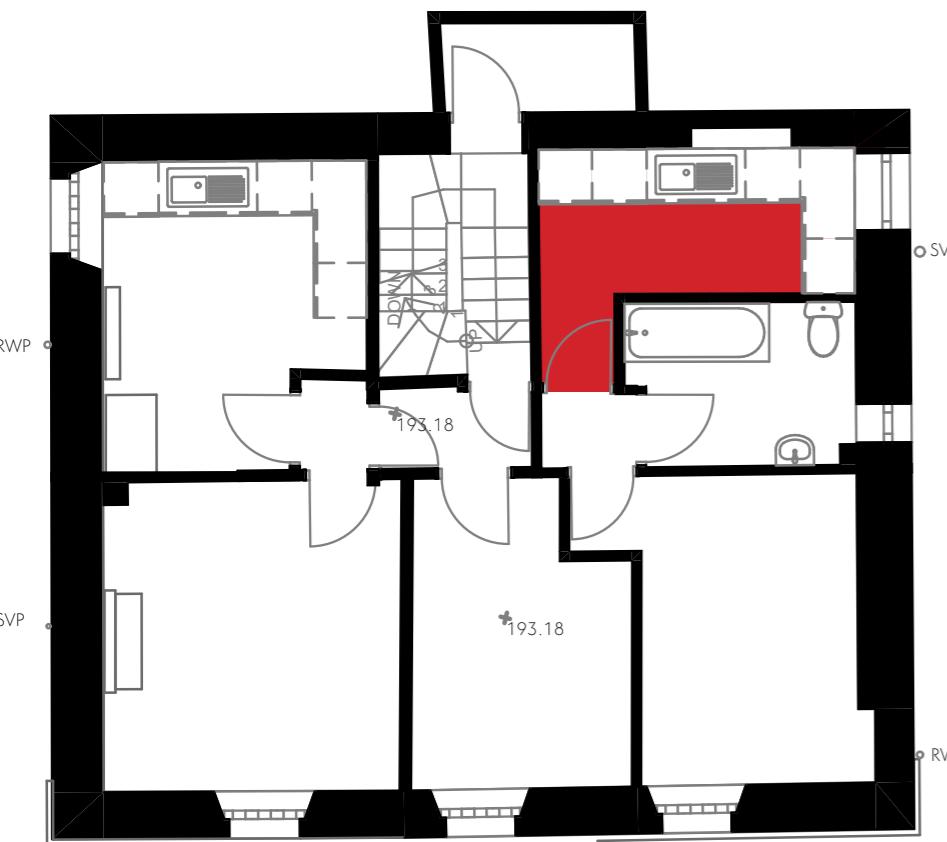


## 11.0 Interior - First Floor - Rear East Room

This rear room is also of painted plastered walls and ceiling with a no cornice. The floor is carpeted; the door is a painted four-panelled timber door and the window a painted timber top-hung casement window with double glazing. The internal partitioning appears to be of plasterboarded timber studwork.

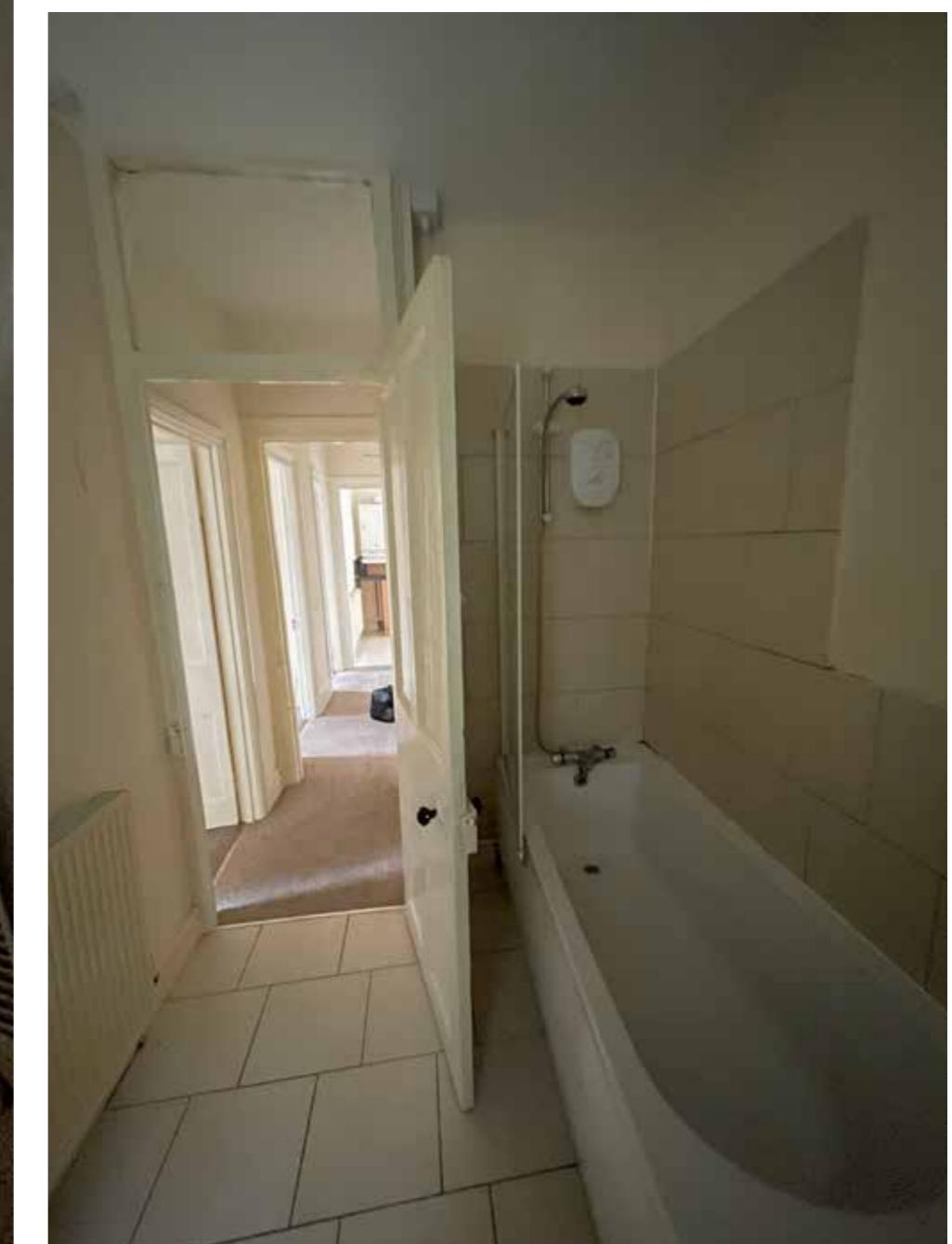
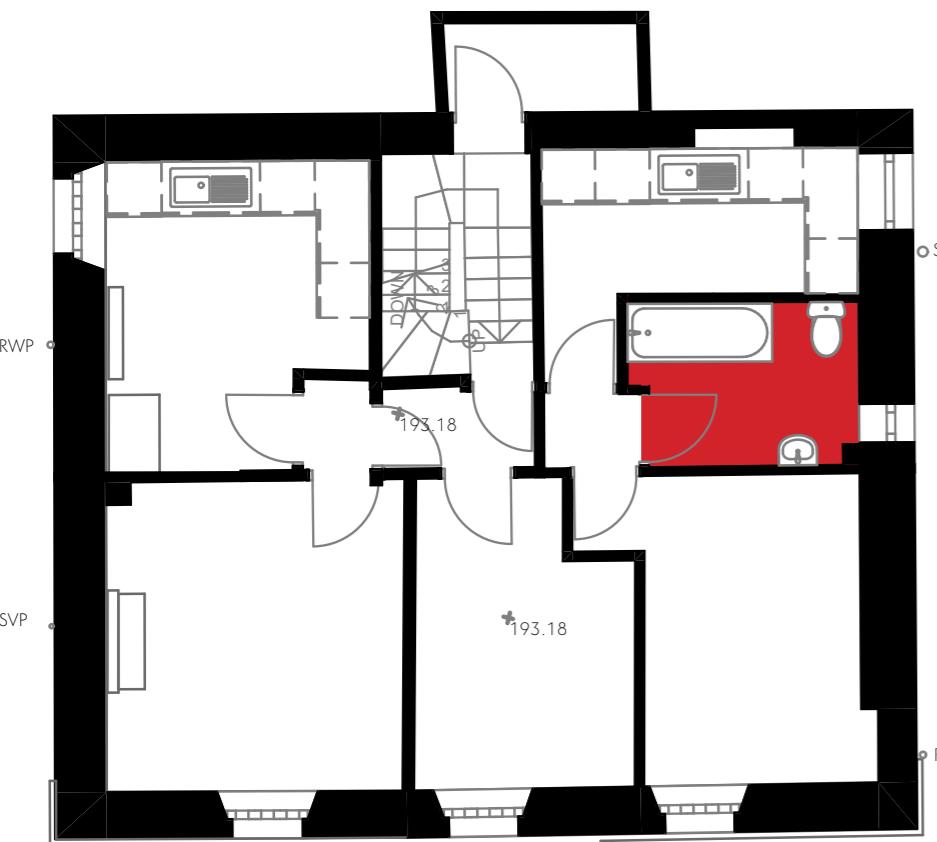
The condition of the room is reasonable; however, it was noted that there was a bit of a slope to the timber floor. A more detailed inspection of this, and all floors, is recommended in due course, when the carpet can be taken up.



## 11.0 Interior - First Floor - Bathroom

The bathroom is also of painted plastered walls and ceiling with a no cornice. The floor is ceramic tiled; the door is a painted four-panelled timber door and the window a painted timber top-hung casement window with double glazing. The internal partitioning appears to be of plasterboarded timber studwork.

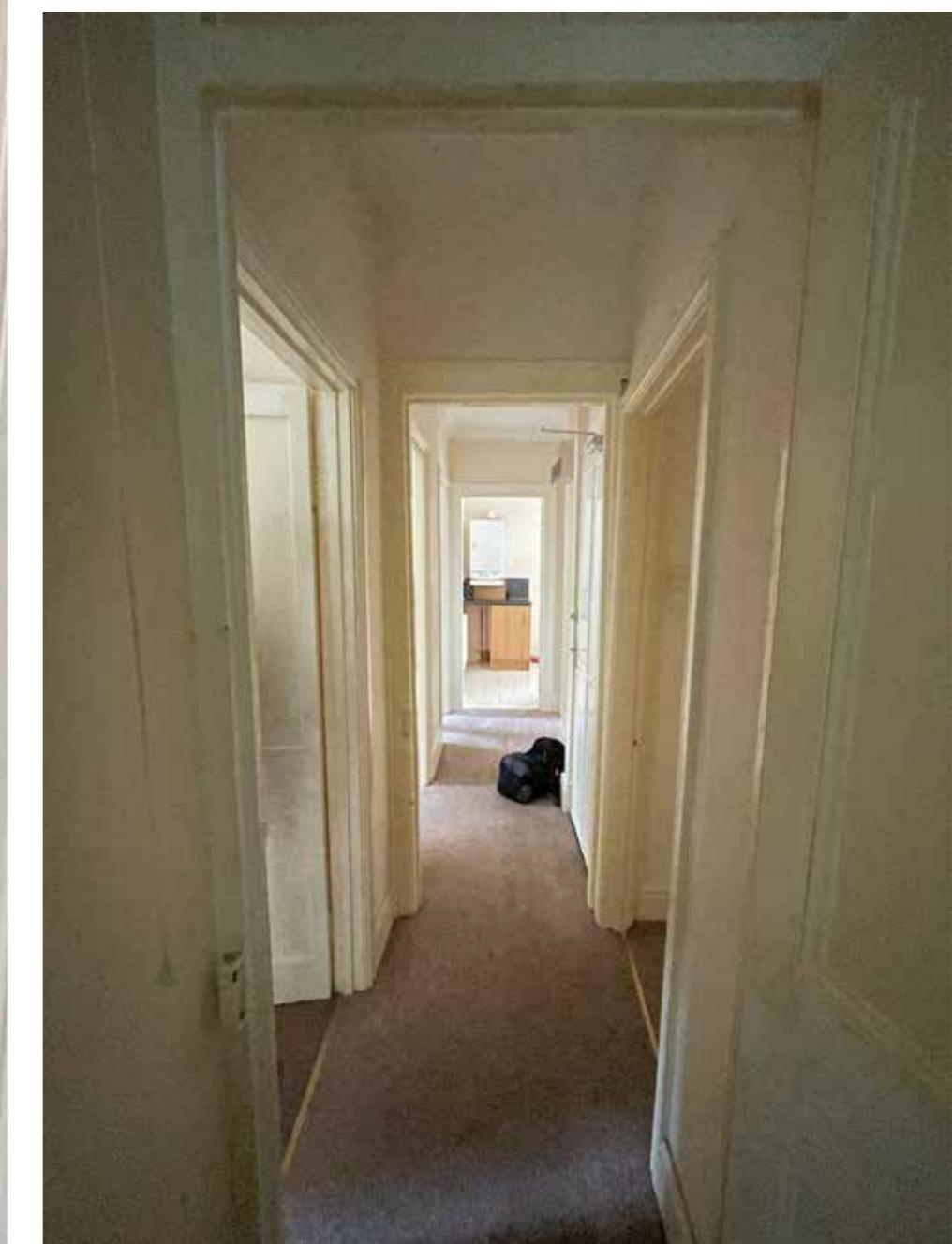
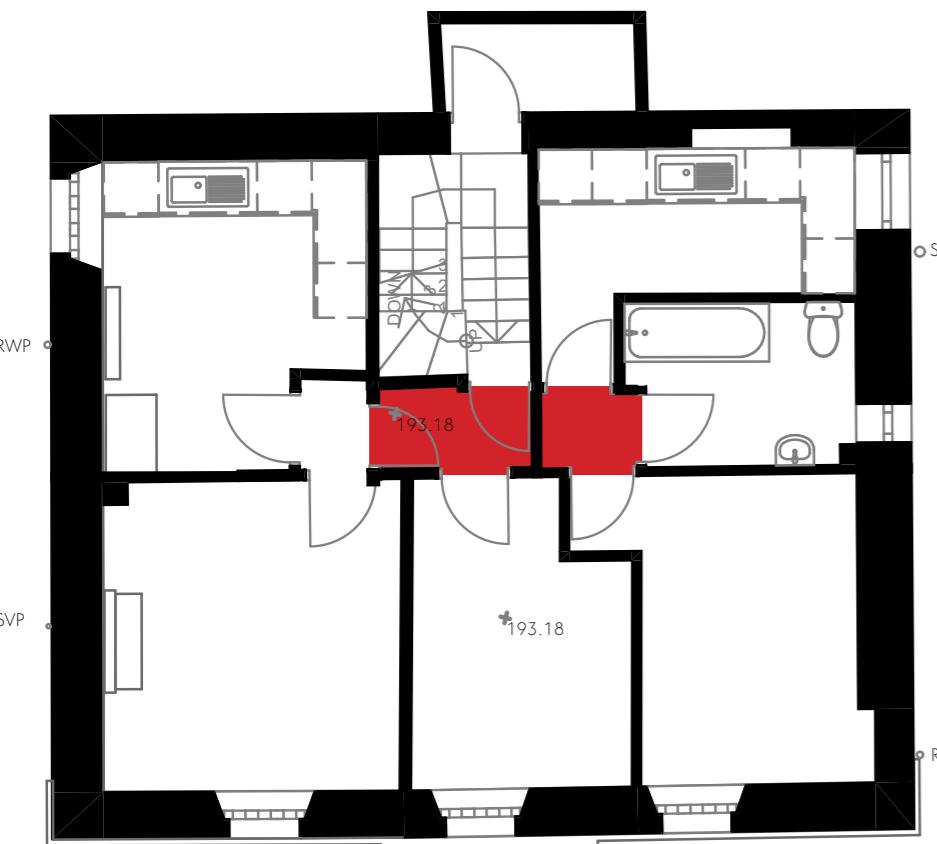
The condition of the room is reasonable.



## 11.0 Interior - First Floor - Hall

This hall space is also of painted plastered walls and ceiling with a moulded cornice and a ceiling rose. The floor is carpeted; the doors are painted four-panelled timber door. The internal partitioning appears to be of plasterboarded timber studwork.

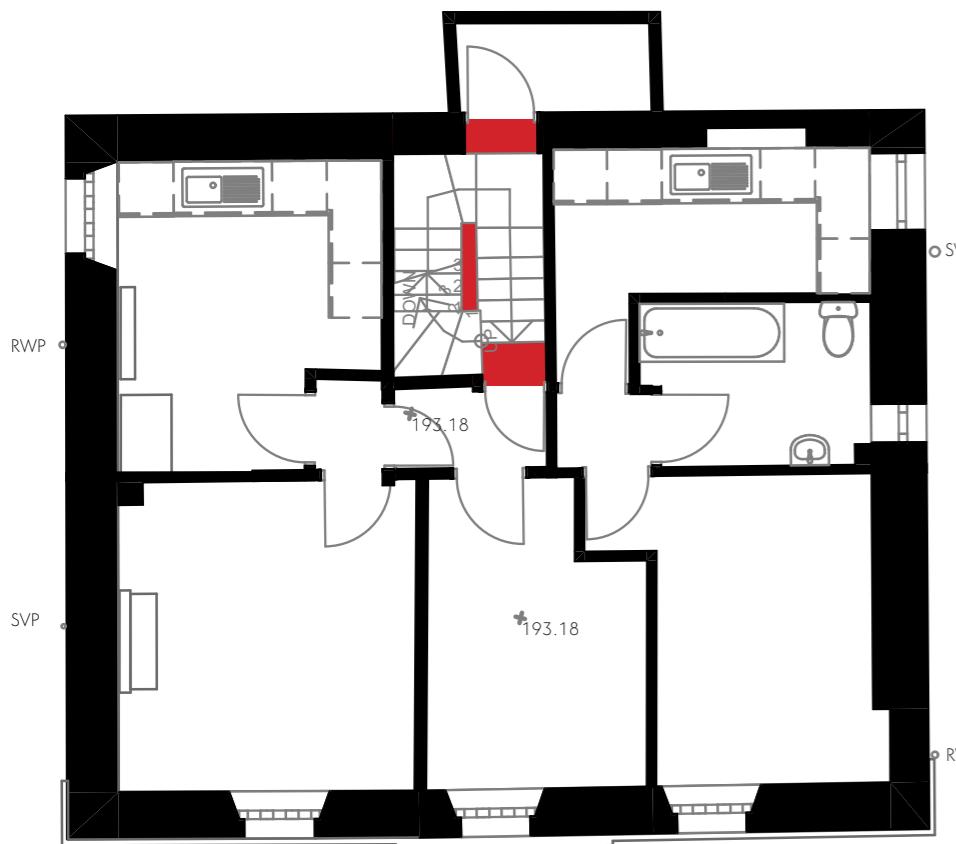
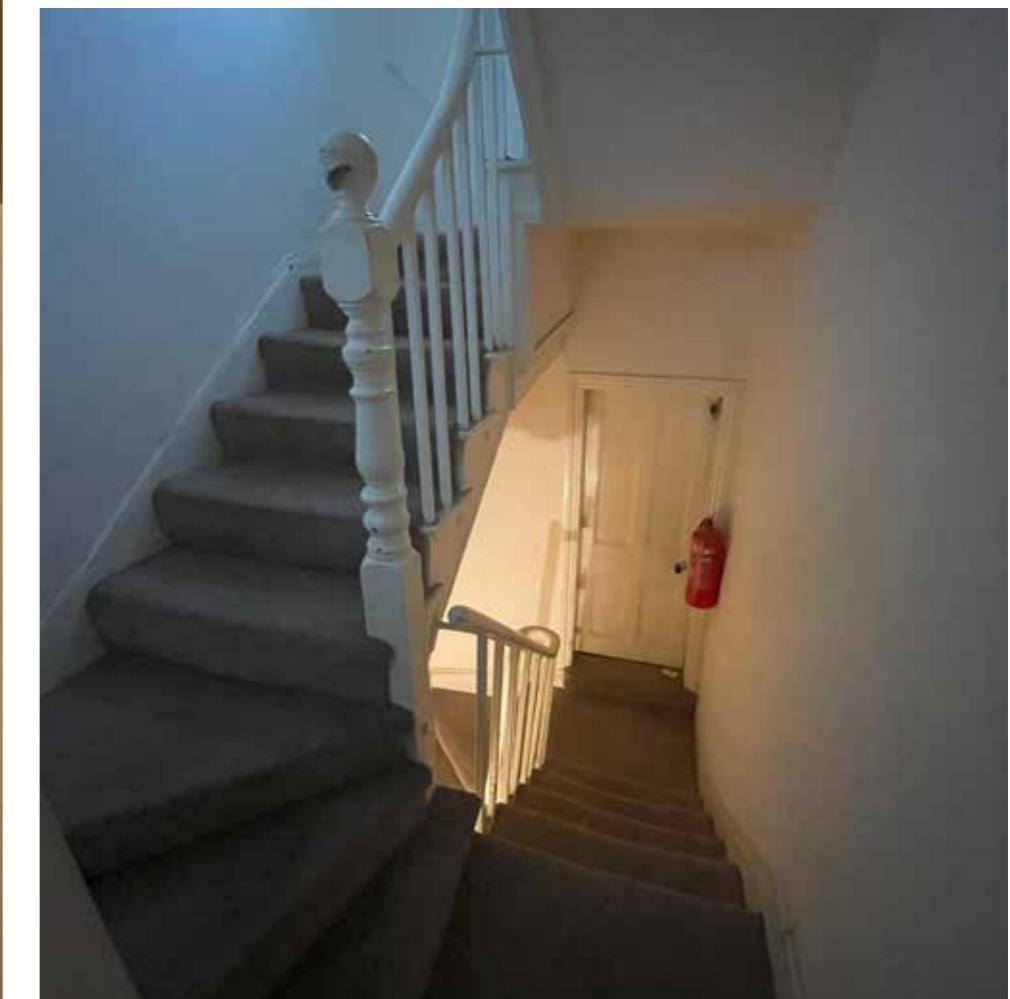
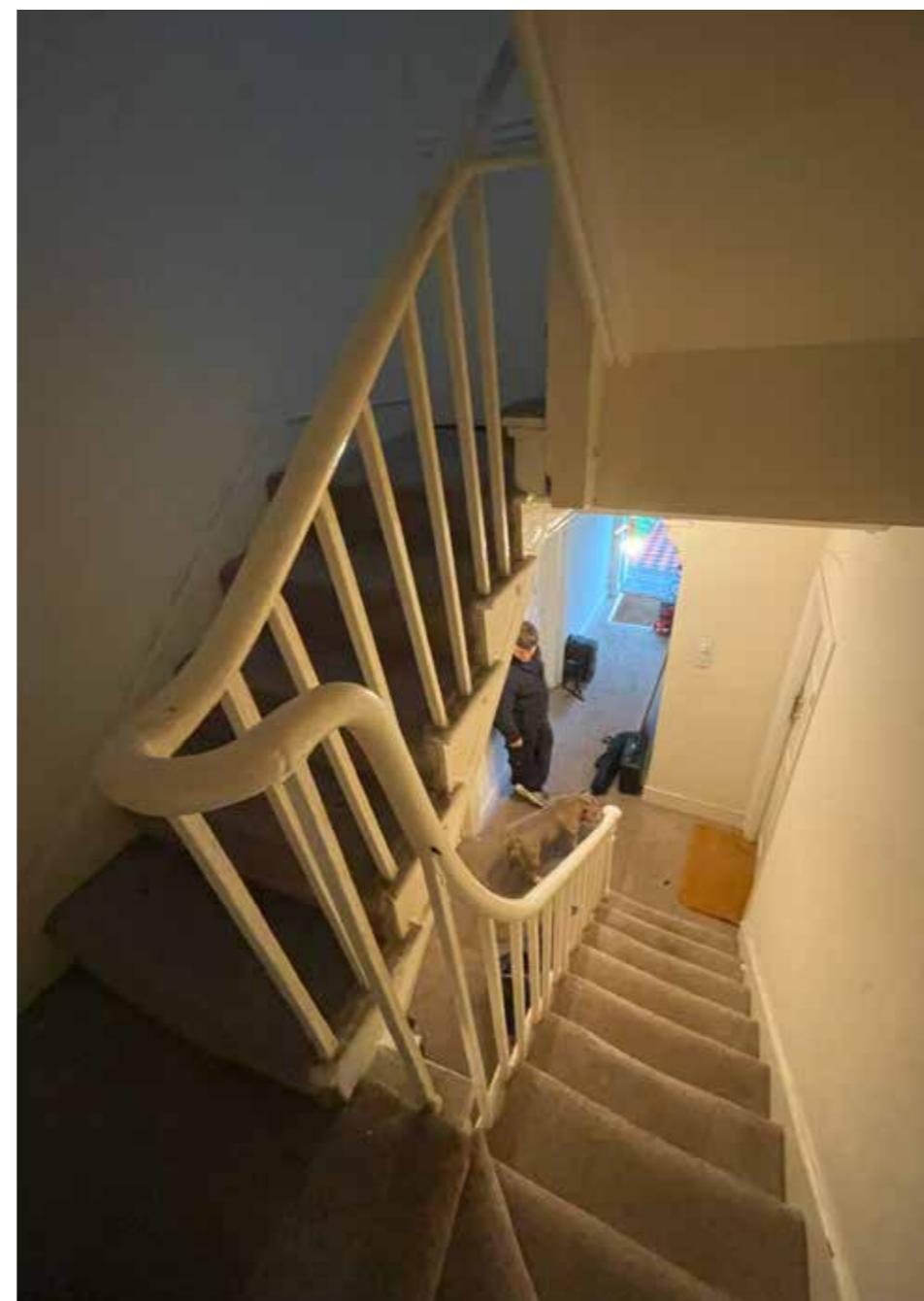
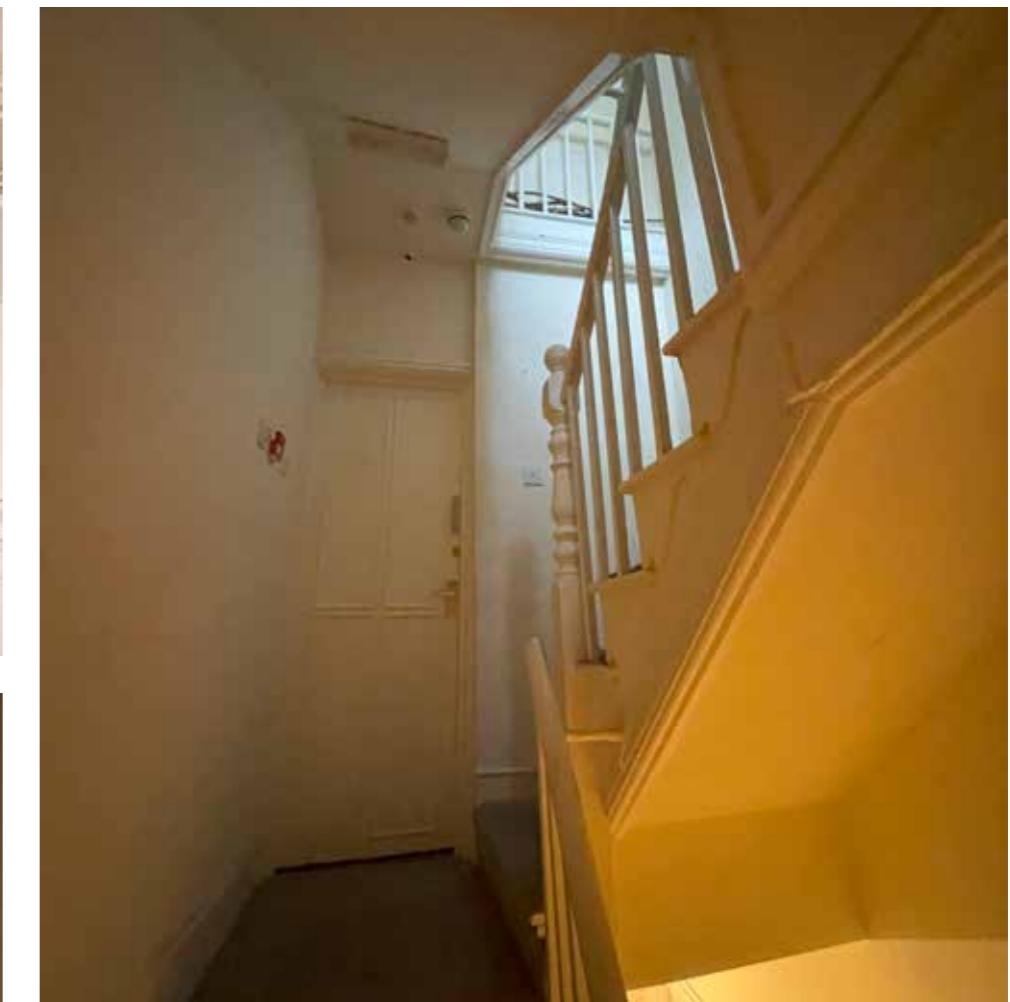
The condition of the space is reasonable.



## 11.0 Interior - First Floor - Staircase

This staircase space is also of painted plastered walls and ceiling. The steps and landing are carpeted; the doors are painted four-panelled timber door. The internal walls around the staircase appear to be of masonry.

The single staircase is a timber staircase, carpeted; with an ovular handrail, square balusters and a turned round newel post; all painted white. Aside from the wear on the carpet, this appears all to be in reasonable condition

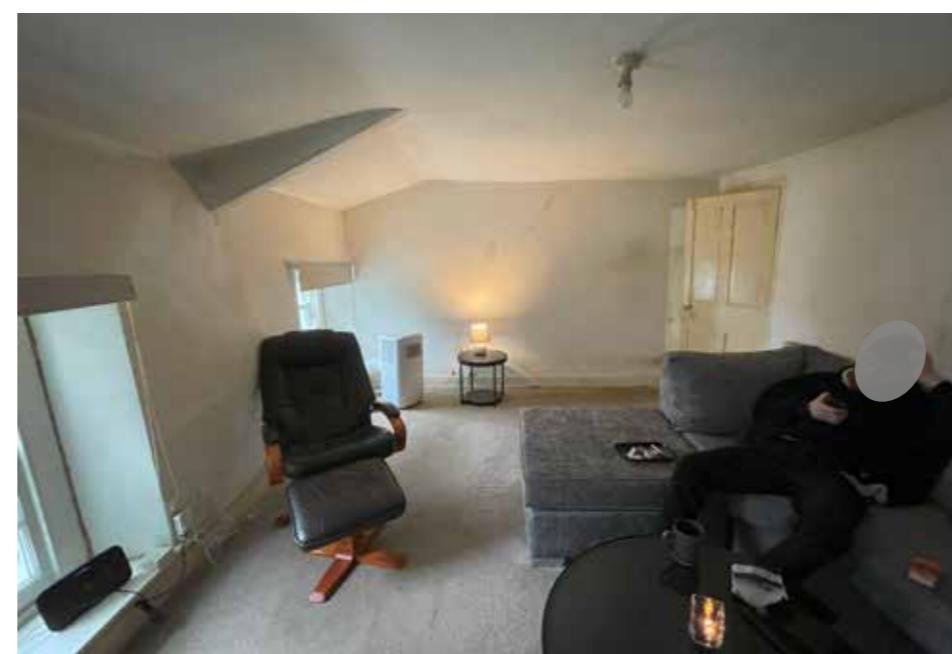
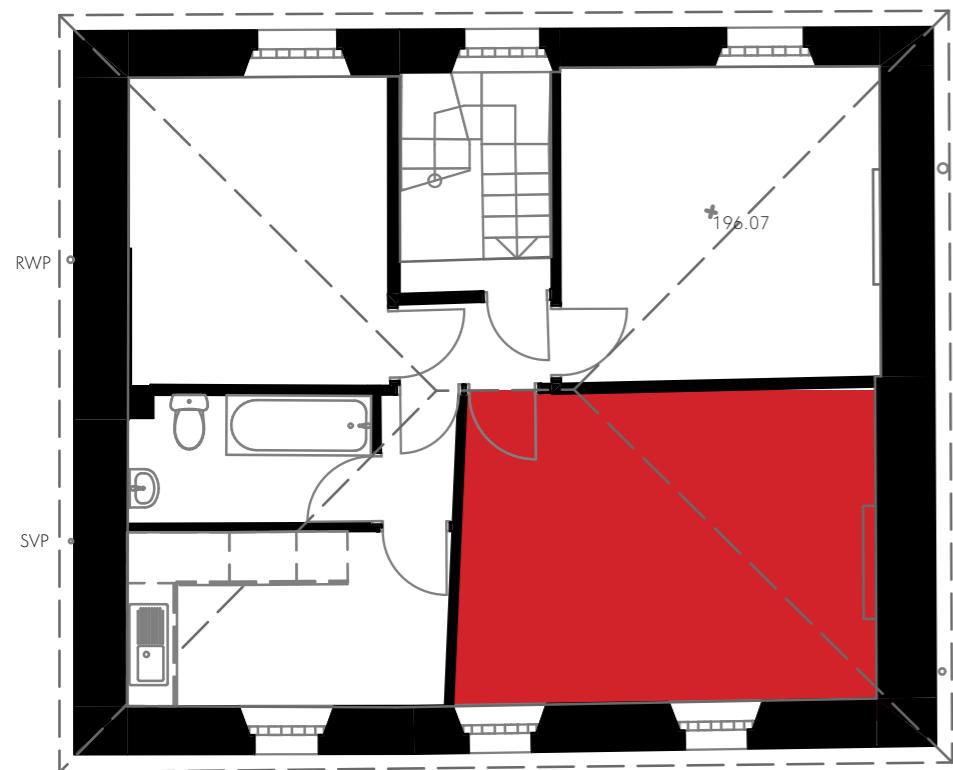
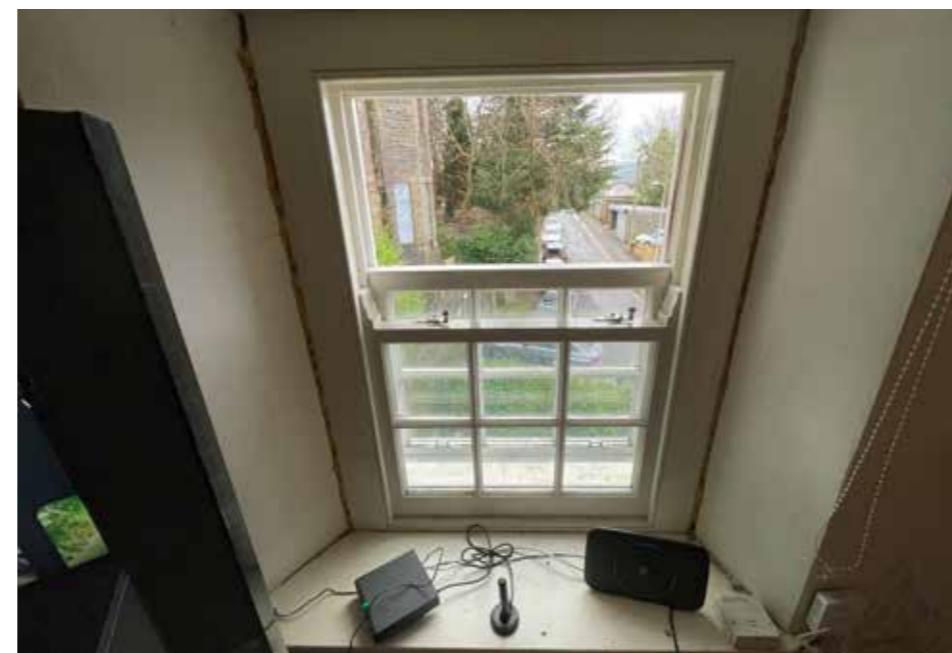


## 12.0 Interior - Second Floor - Front South East Room

This front room is of painted plastered walls and ceiling. The ceiling slopes around the external edge, with the roof pitch, and the timber principal rafter and hip rafter are partially exposed below the line of the ceiling, and painted. There is no cornice.

The floor is carpeted; the door is a painted four-panelled timber door and the windows are painted timber sash windows with double glazing. It is notable that the windows have been recently inserted and/or sealed around the edges with piped insulation, as this insulation is still on view and has not been covered. The internal partitioning appears to be of plasterboarded timber studwork. There is a timber and metal fireplace surround and marble hearth to the east external wall.

There is some staining on the walls and ceiling, albeit not significant or of too much concern; and there appears to have been some areas of crack repair, fairly recently, to some of the plasterwork on the walls.



## 12.0 Interior - Second Floor - Rear North East Room

This rear room is also of painted plastered walls and ceiling. The ceiling slopes around the external edge, with the roof pitch, and the timber principal rafter and hip rafter are partially exposed below the line of the ceiling, and painted. Also exposed in this room are the interconnecting purlins. There is no cornice.

The floor is carpeted; the door is a painted four-panelled timber door and the window is a painted timber sash window. It is not clear whether this is single or double-glazed, as it was not possible to see. The internal partitioning appears to be of plasterboarded timber studwork. There is a timber and metal fireplace surround and marble hearth to the east external wall.

There is some cracking and staining on the walls and ceiling, particularly on the external east wall; albeit not significant or of too much concern.

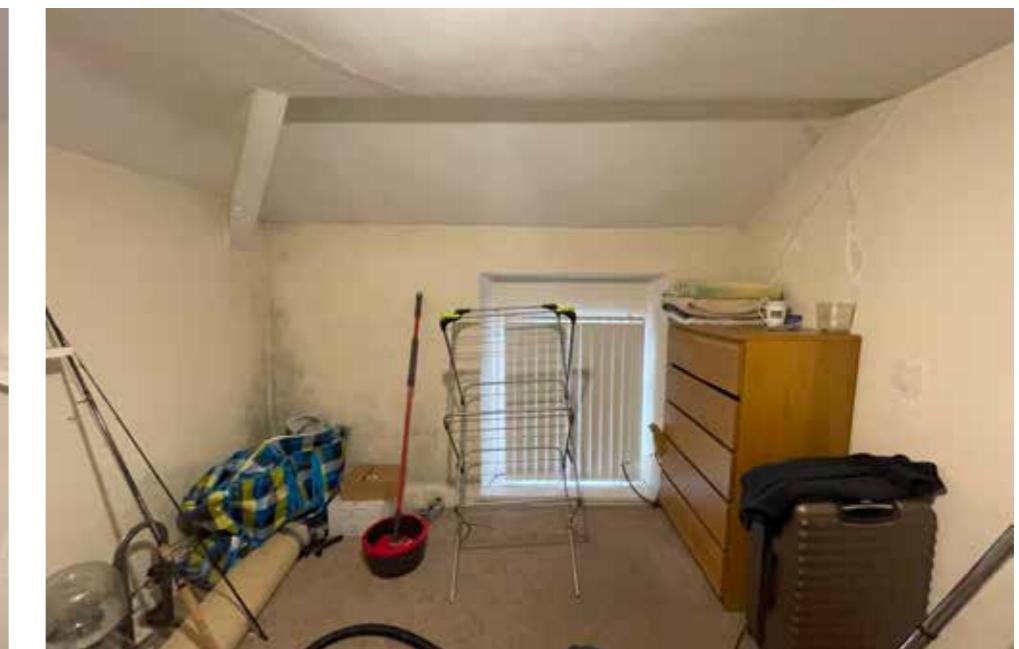
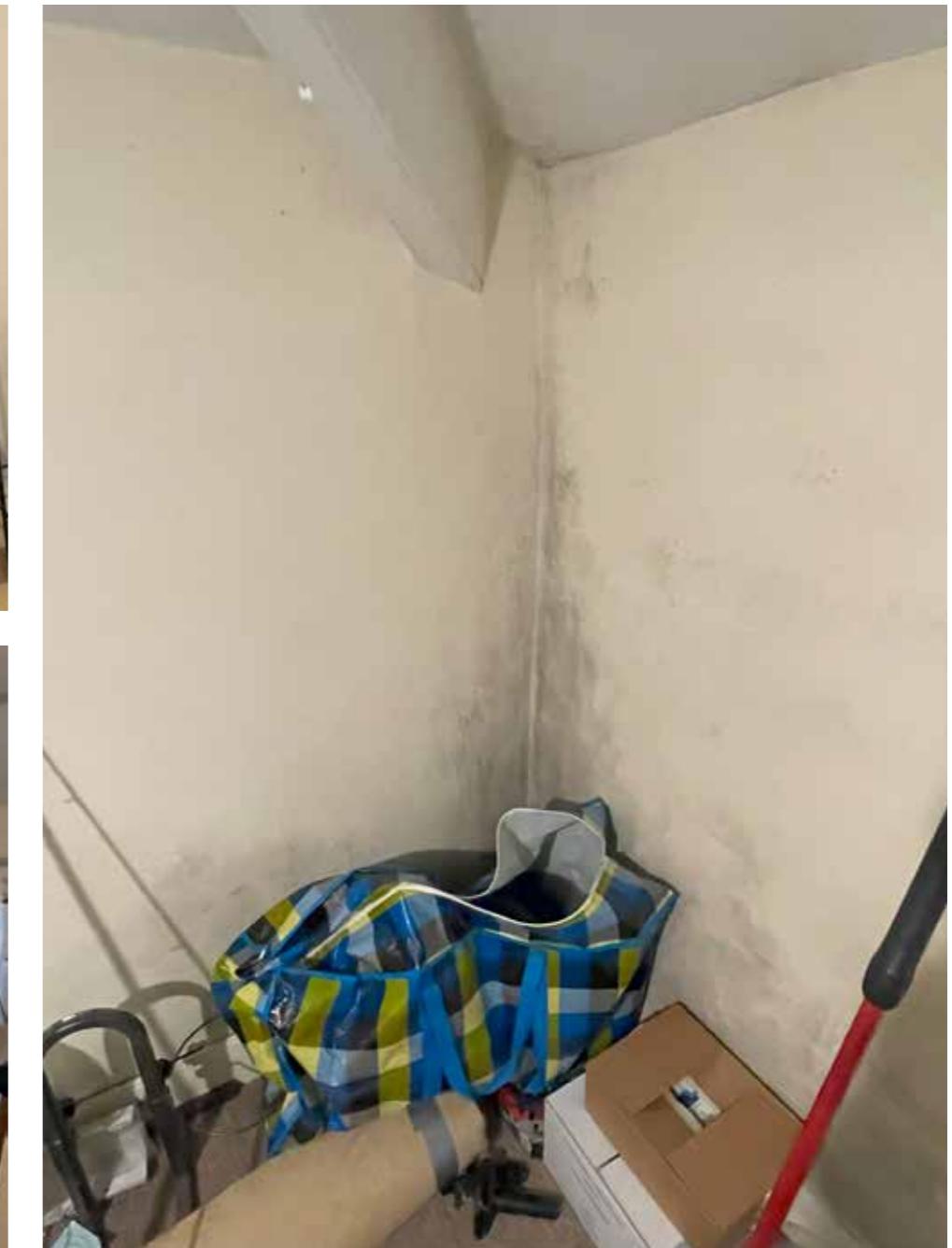
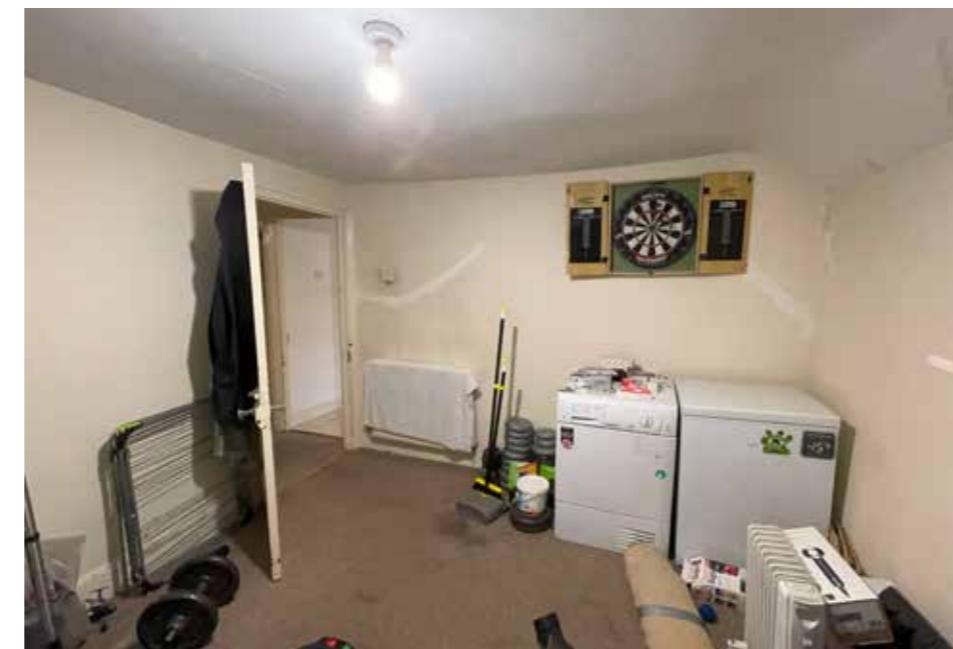
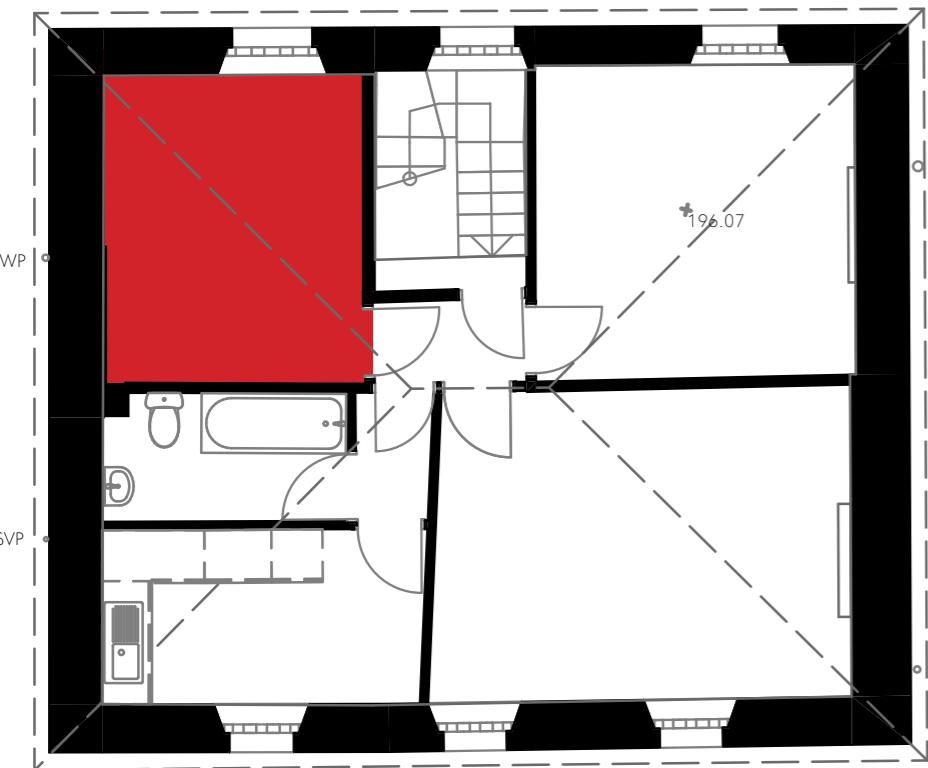


## 12.0 Interior - Second Floor - Rear North West Room

This rear room is also of painted plastered walls and ceiling. The ceiling slopes around the external edge, with the roof pitch, and the timber principal rafter and hip rafter are partially exposed below the line of the ceiling, and painted. There is no cornice.

The floor is carpeted; the door is a painted four-panelled timber door and the window is a painted timber sash window. It is not clear whether this is single or double-glazed. The internal partitioning appears to be of plasterboarded timber studwork. There is a timber and metal fireplace surround and marble hearth to the west external wall.

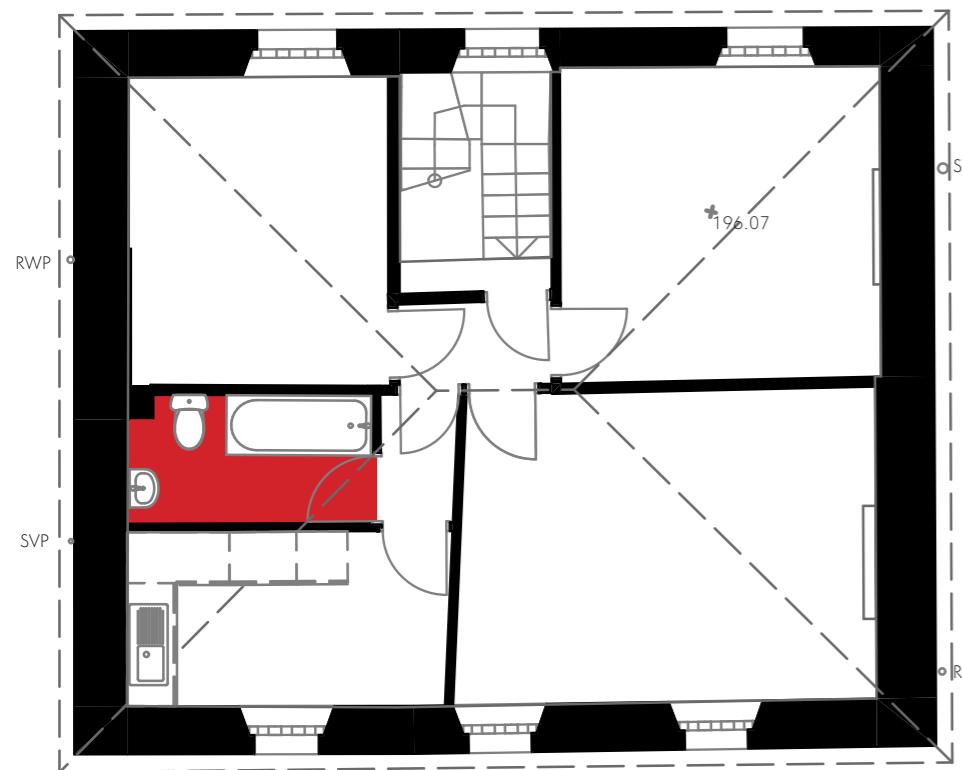
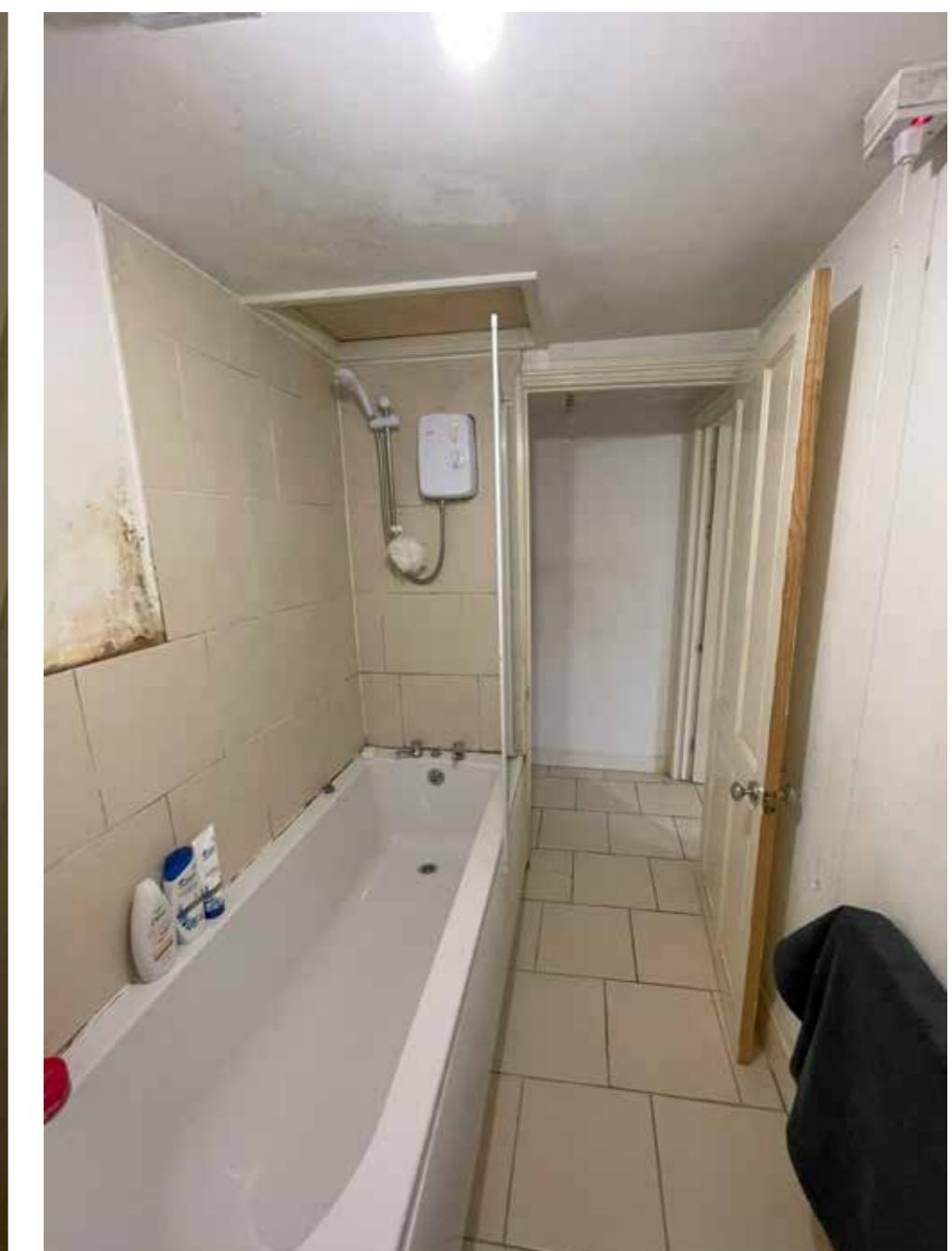
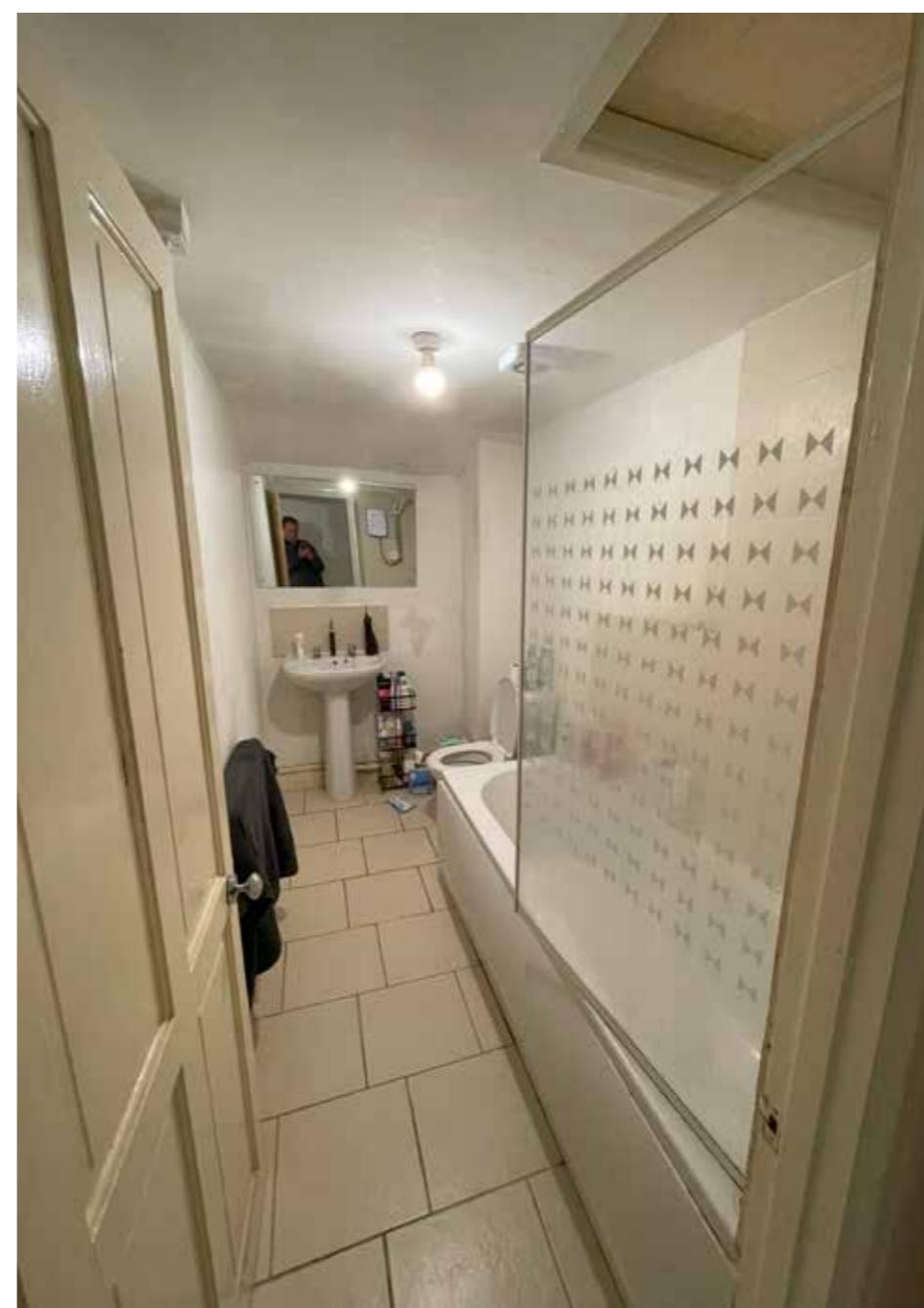
There is some staining on the walls and ceiling; and there appears to have been some areas of crack repair, fairly recently, to some of the plasterwork on the walls. The worst area of staining is to the external north west corner. This will require the plaster to be removed to see what is causing this.



## 12.0 Interior - Second Floor - Bathroom

The bathroom is also of painted plastered walls and ceiling with no cornice. The floor is of ceramic tiling. The door is a painted four-panelled timber door. The internal partitioning appears to be of plasterboarded timber studwork.

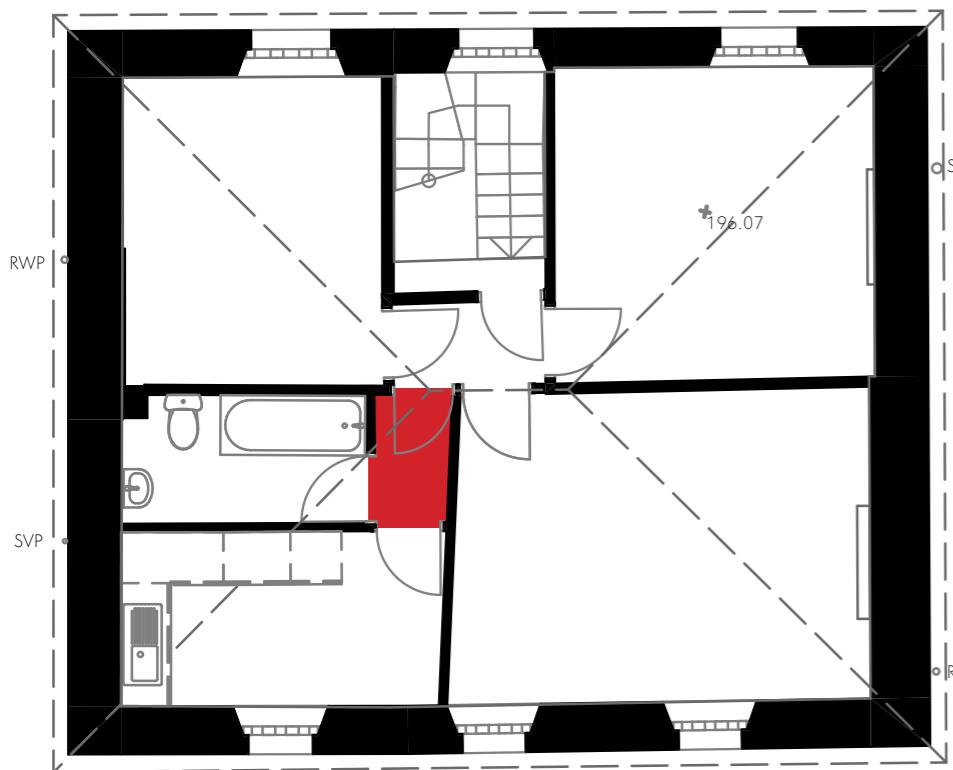
There is mould on one part of an internal wall; however, this is likely to be a case of moisture build-up and insufficient ventilation.



## 12.0 Interior - Second Floor - Lobby

The lobby is also of painted plastered walls and ceiling with no cornice. The floor is of ceramic tiling. The doors are painted four-panelled timber door. The internal partitioning appears to be of plasterboarded timber studwork.

The condition of this space appears to be reasonable.

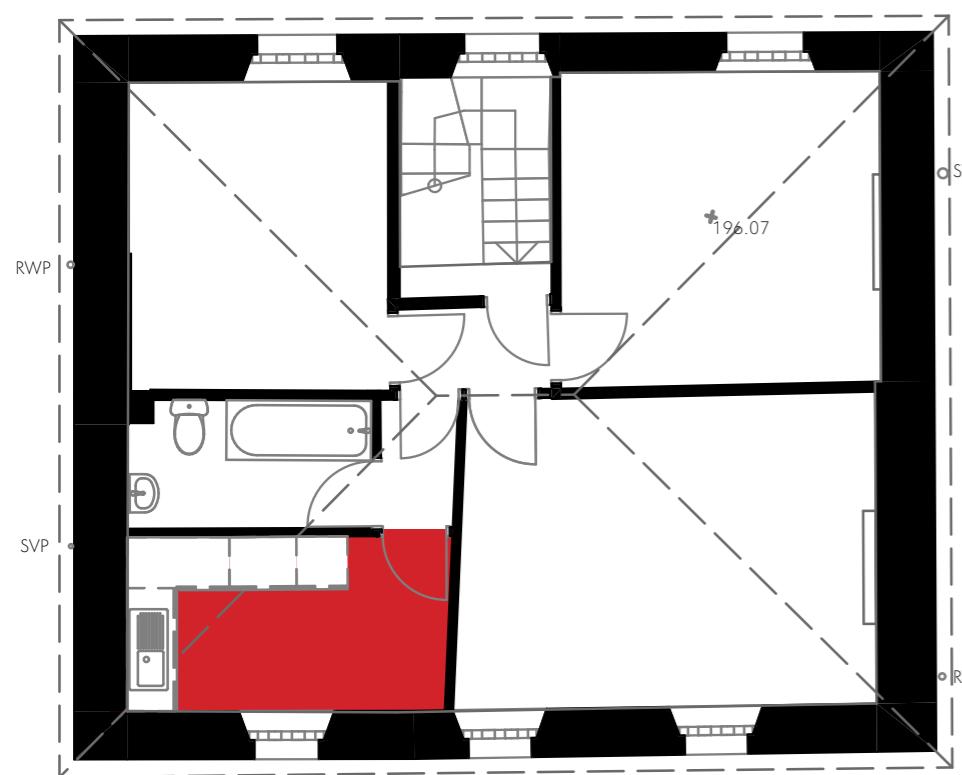


## 12.0 Interior - Second Floor - Front Kitchen

This front room is also of painted plastered walls and ceiling. The ceiling slopes around the external edge, with the roof pitch, and the timber principal rafter and hip rafter are partially exposed below the line of the ceiling, and painted. There is no cornice.

The floor is ceramic tiled; the door is a painted four-panelled timber door and the windows are painted timber sash windows with double glazing. It is notable that the windows have been recently inserted and/or sealed around the edges with piped insulation, as this insulation is still on view and has not been covered. The internal partitioning appears to be of plasterboarded timber studwork.

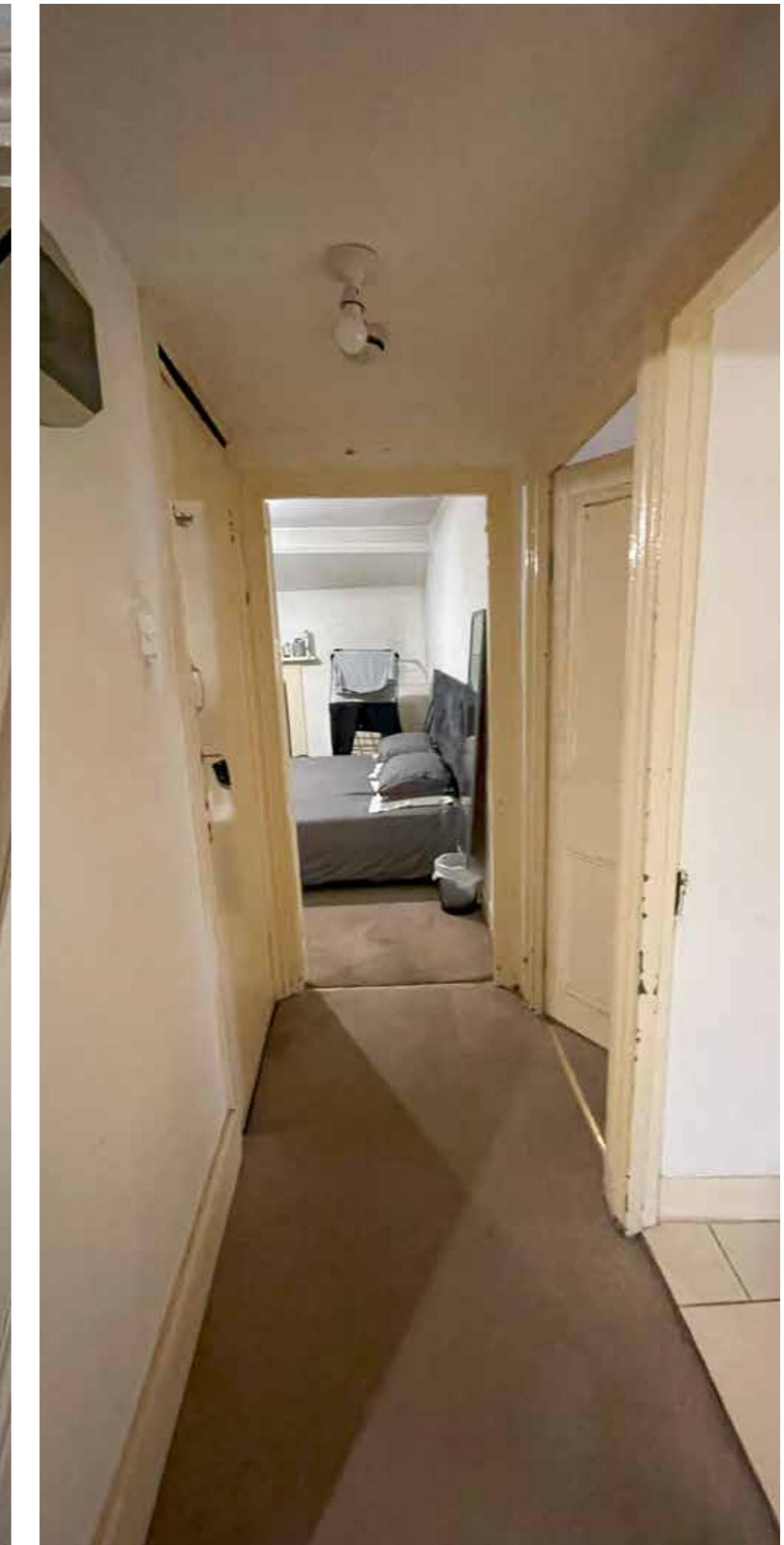
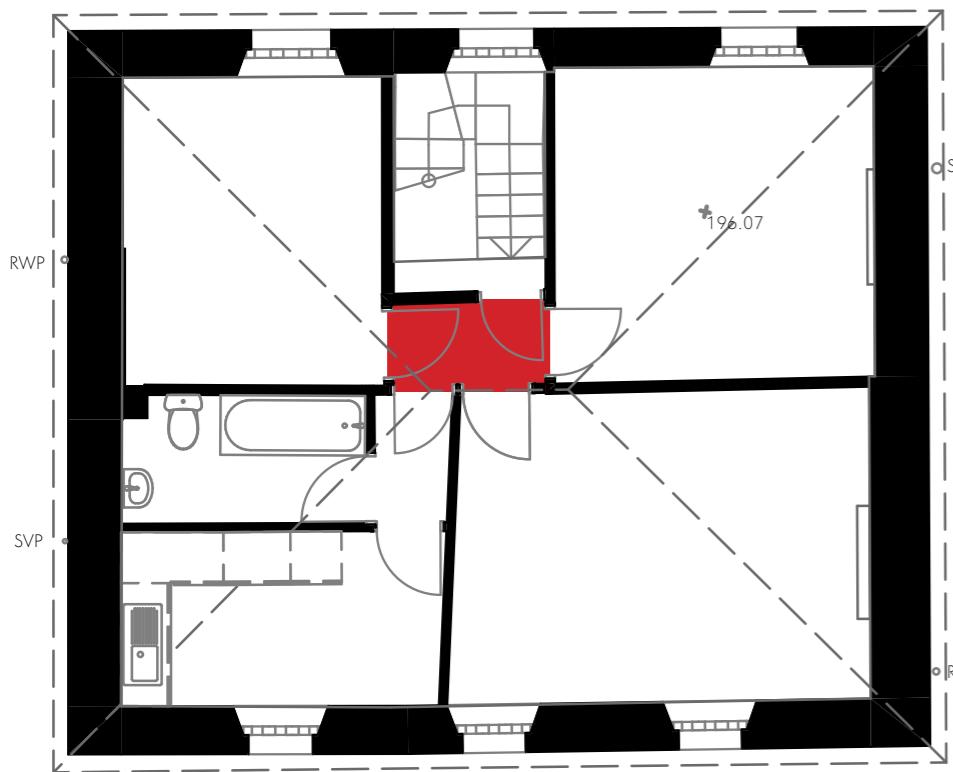
The condition of this room appears to be reasonable.



## 12.0 Interior - Second Floor - Corridor

This corridor is also of painted plastered walls and ceiling with no cornice. The floor is carpeted. The doors are painted four-panelled timber doors.

The condition of this area appears to be reasonable.



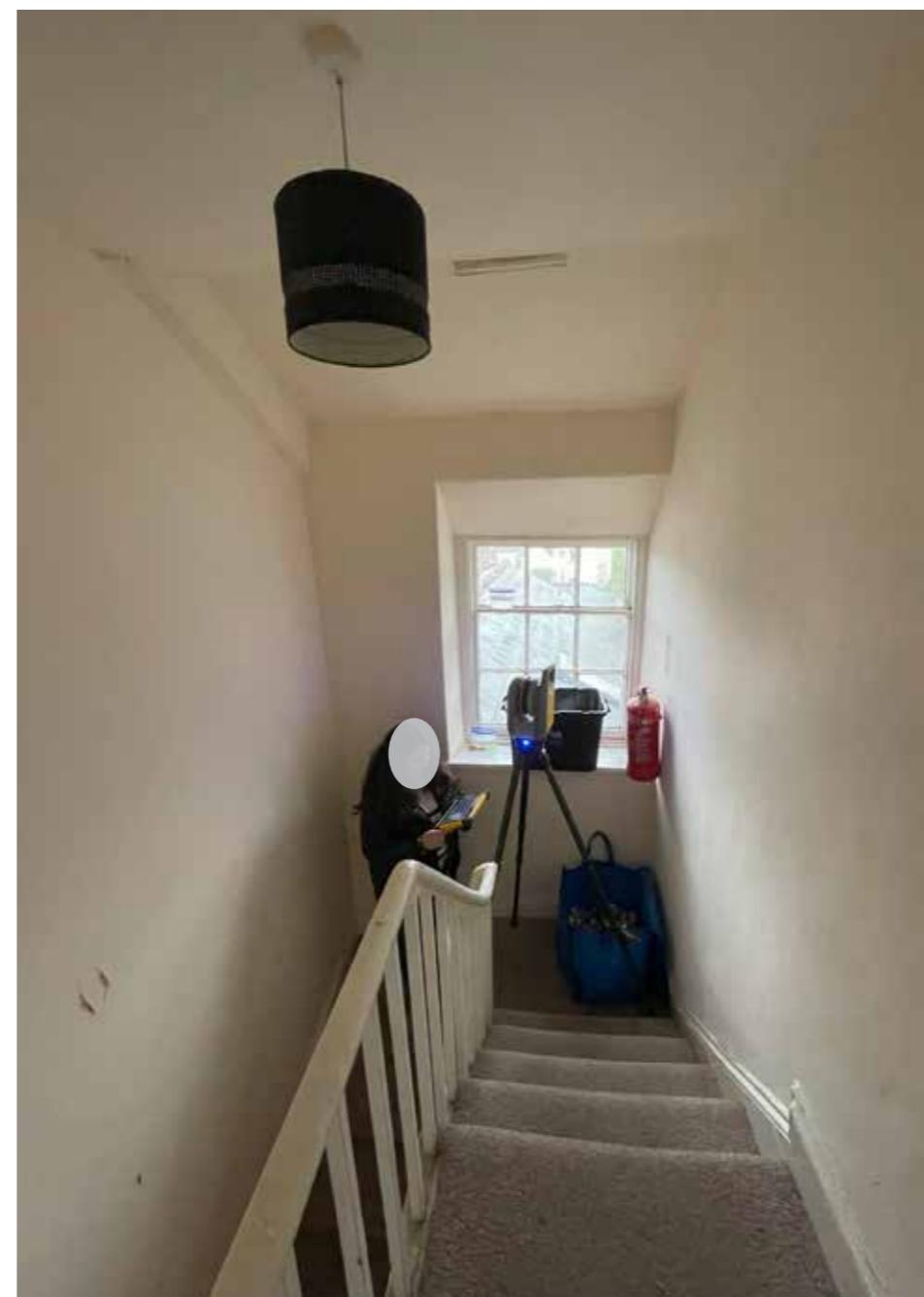
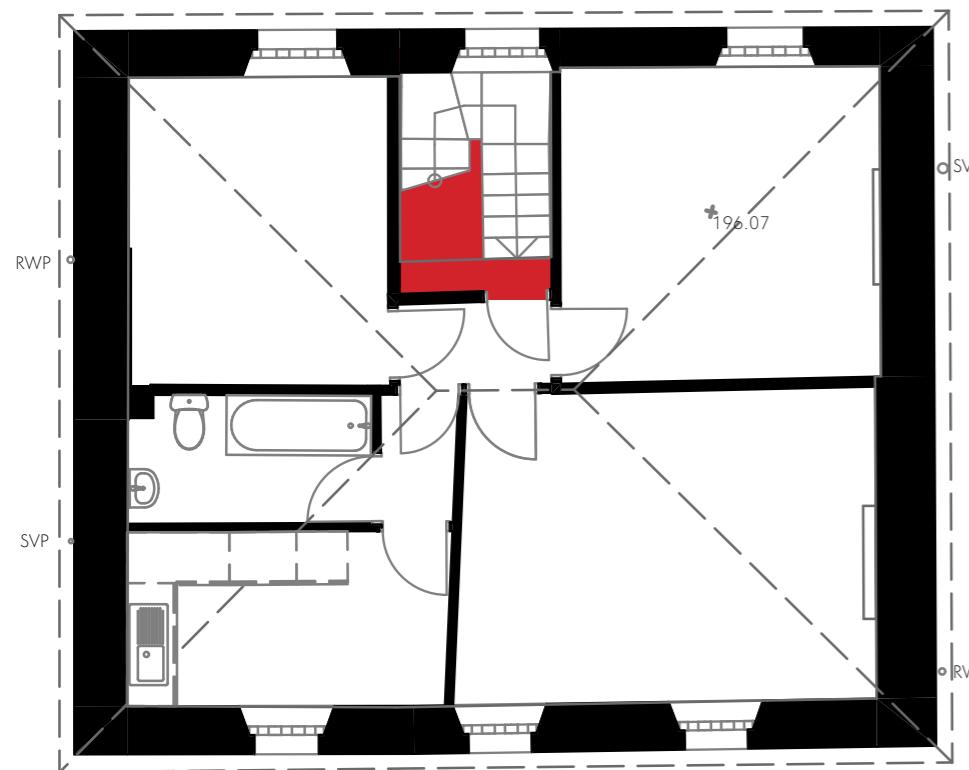
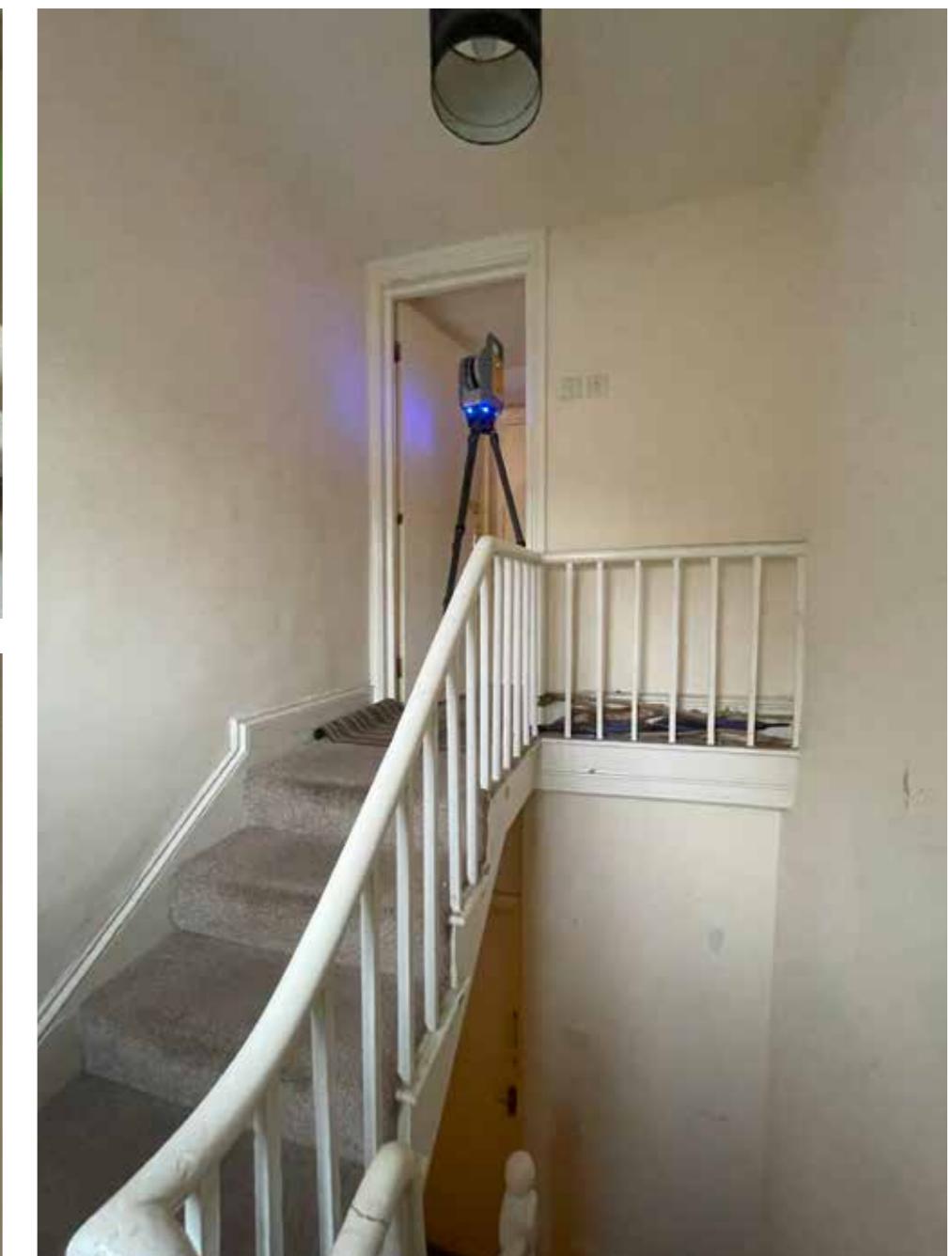
## 12.0 Interior - Second Floor - Staircase

This staircase space is also of painted plastered walls and ceiling. The steps and landing are carpeted; the doors are painted four-panelled timber door. The internal walls around the staircase appear to be of masonry.

The single staircase is a timber staircase, carpeted; with an ovular handrail, square balusters and a turned round newel posts; all painted white. Aside from the wear on the carpet, this appears all to be in reasonable condition.

There is a timber sash window to the north elevation with single-glazed panes.

The condition of this area appears to be reasonable.

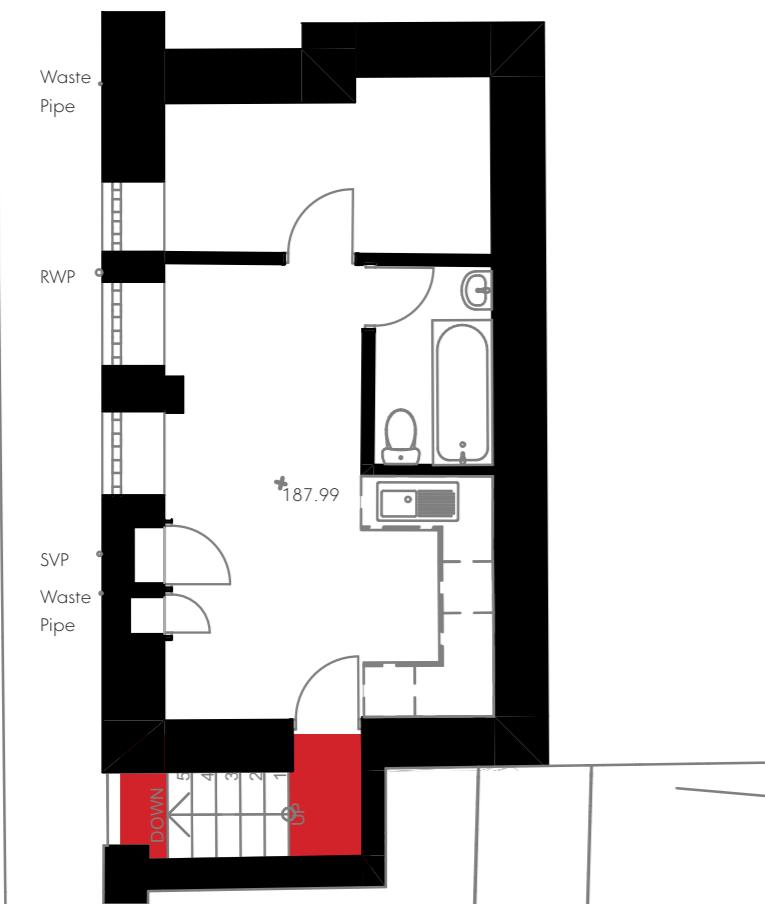


### 13.0 Interior - Lower Ground Floor Flat Entrance

The lower ground floor flat is entered from the side lane, down a series of four concrete steps, with cement rendered walls either side. An attractive metal gate is at the top of the steps.

The proposals involve a good clean of the steps and the application of safety nosings to each step, as they are currently potentially slippery.

The outer wall is proposed to be cleaned of the organic staining and repainted. The inner wall is proposed - as with the rest of this elevation - to be hacked off and a new, lime render applied.

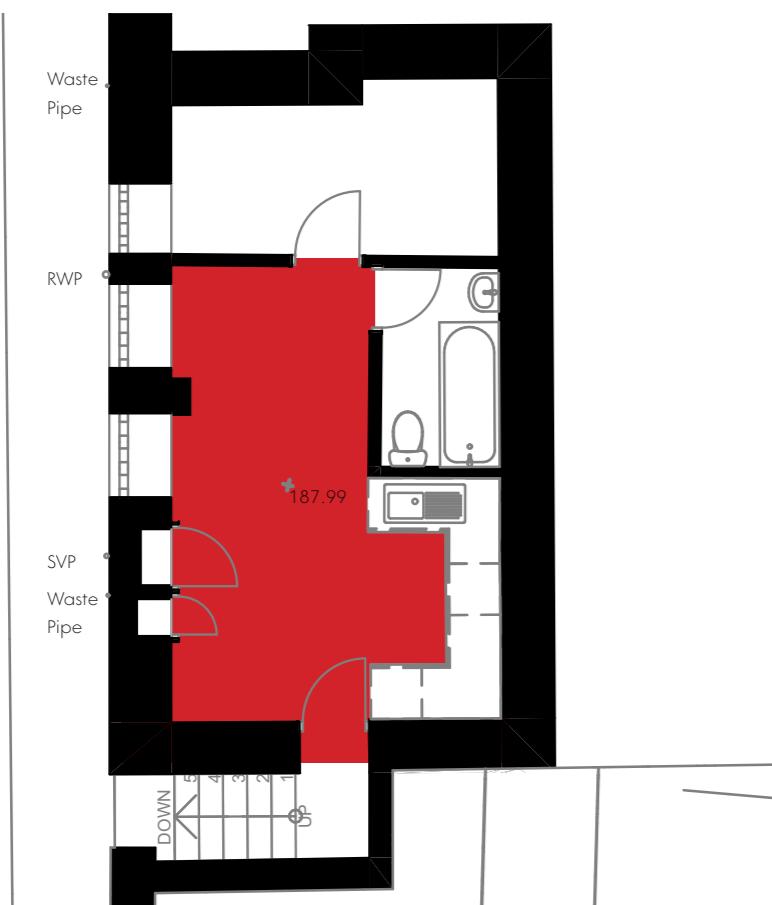


### 13.0 Interior - Lower Ground Floor - Main Space

On entry to the flat, the main space is an open-plan kitchen / dining room / lounge, with painted plaster walls and ceiling, with no cornice but with recessed light fittings, and a stained timber skirting. The flooring is ceramic tiled. The doors are stained six-panelled timber doors with stained timber frames. The windows are single-glazed small pane 6-over-6 timber sashes.

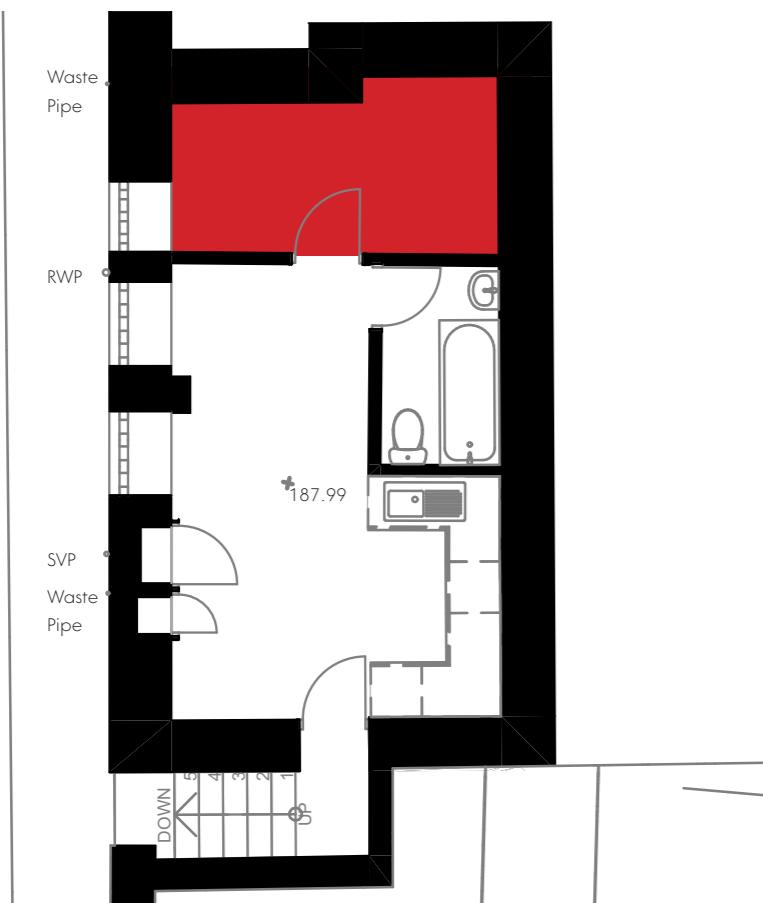
The external wall to the east is retaining. That to the west is part retaining, as is the one to the north.

The condition of the space is reasonable; however, in order to make this flat suitable for lease, the proposals seek to install new kitchen and bathroom and provide the interior with a full refurbishment, without any re-planning. It is also proposed that the small pane windows are all upgraded with Slimline double glazed units.



### 13.0 Interior - Lower Ground Floor - Bedroom

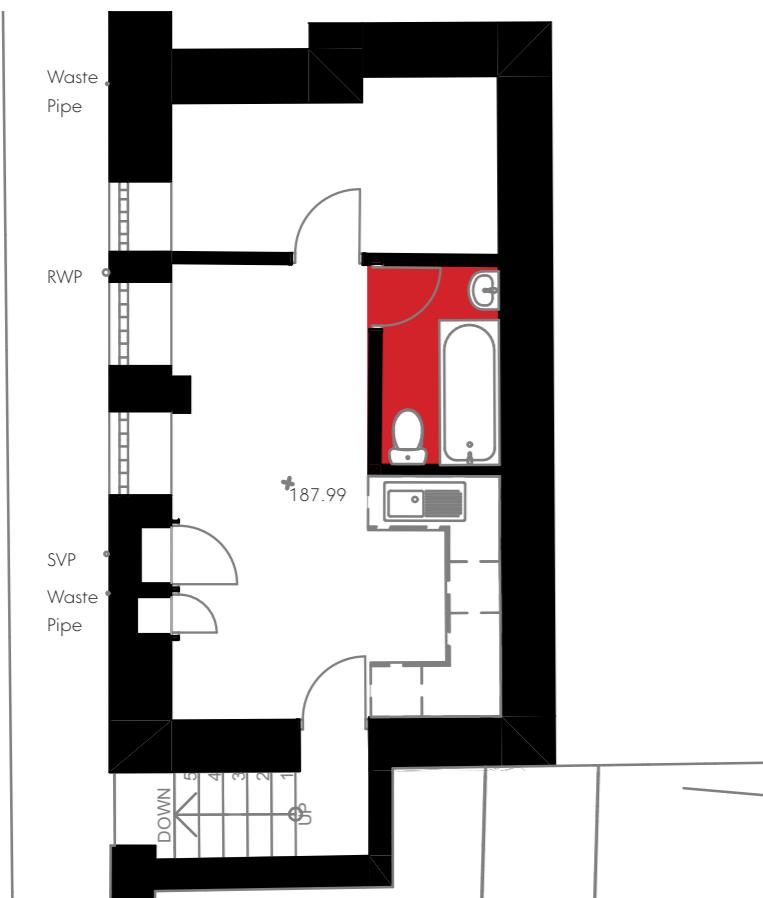
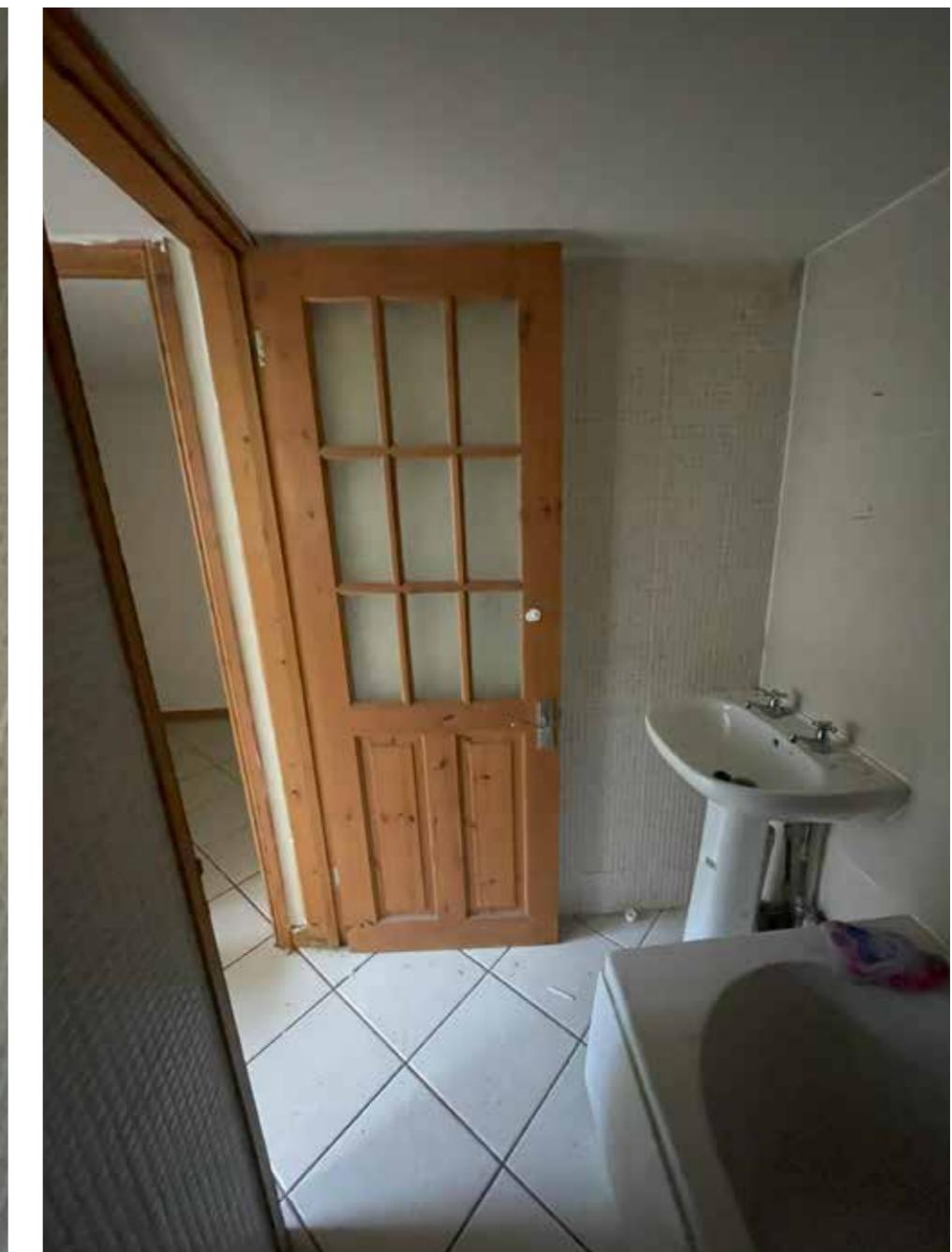
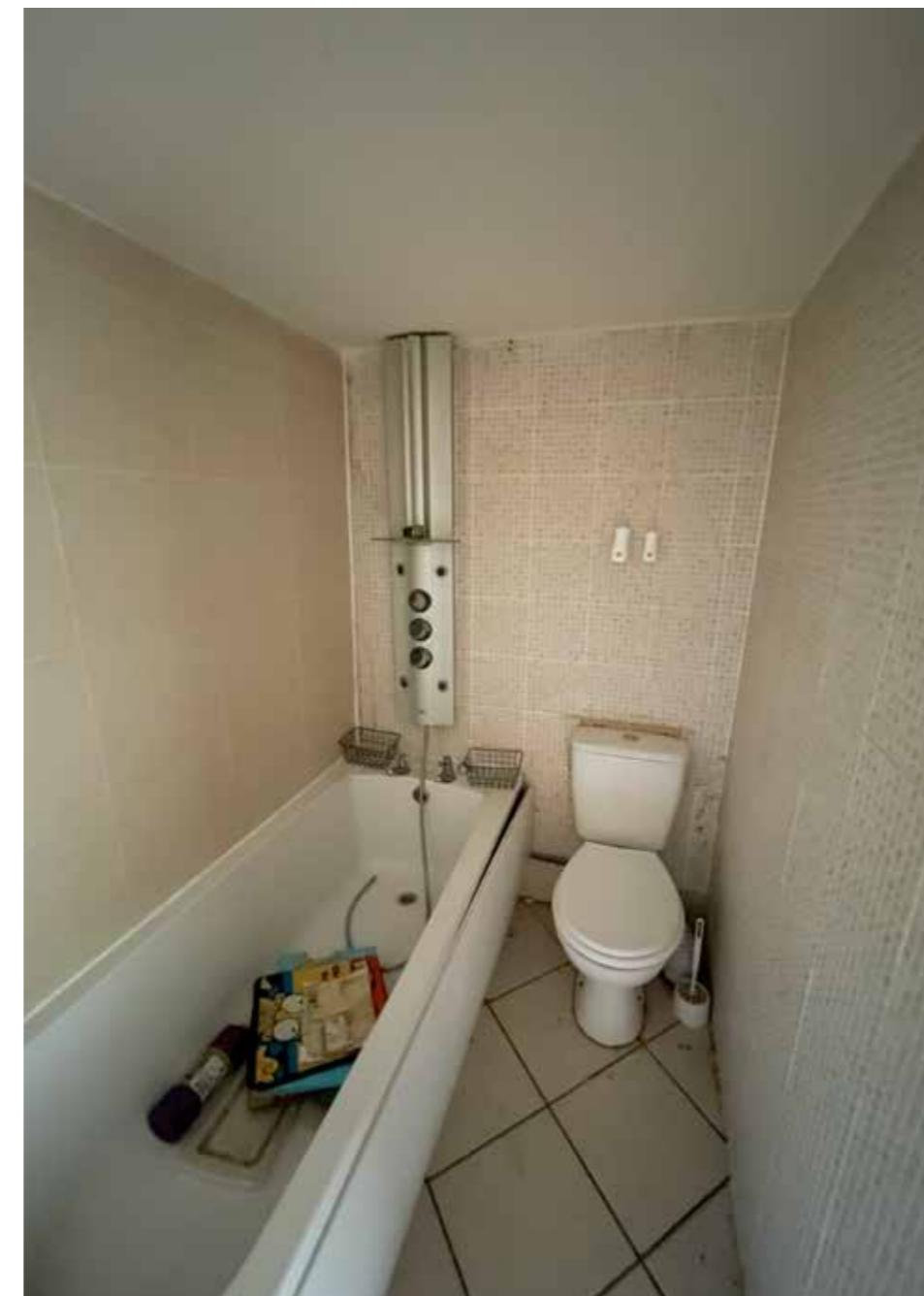
This room is the same as the main room in terms of nature and condition and proposals.



### 13.0 Interior - Lower Ground Floor - Bathroom

The bathroom is ceramic tiled to the walls and plastered on the ceiling, with no cornice or skirting. There is a partially glazed stained timber panelled door, a bath, toilet and pedestal basin.

The proposals seek to replace this bathroom suite.



**14.0 Structural Engineer's Condition Report**

**Mann Williams Consulting Civil and Structural Engineers**  
53 Mount Stuart Square, Cardiff, CF10 5LR T 02920 480333

**Mann Williams Consulting Civil and Structural Engineers**  
53 Mount Stuart Square, Cardiff, CF10 5LR T 02920 480333



## Primrose Hill, Merthyr Tydfil

### Structural Condition and Appraisal Report

for

**Foundation for Jewish Heritage**

Project Number: 9684

Date: 16/01/25

Rev: A

## Content/Quality Assurance

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<b>Prepared</b>	<b>Checked</b>	<b>Approved</b>	<b>Date</b>
JB	PR	PR	10/02/2025

## 1.0 Introduction

- 1.1 Mann Williams were appointed by Neil Richardson from the Foundation for Jewish Heritage to provide structural engineering services for the proposed refurbishment of Primrose Hill in Merthyr Tydfil.
- 1.2 Primrose Hill is a Grade II Listed Building (Cadw Ref: 11425) and is located immediately adjacent to the similarly Grade II listed Former Merthyr Synagogue.



- 1.3 The client is in the process of purchasing the property as part of the wider project which also includes the regeneration of the neighbouring former synagogue. Mann Williams were instructed to undertake a preliminary site walk over and structural appraisal of the property to establish the feasibility of undertaking the architects proposed alterations and assess the overall structural condition of the building for the refurbishment.
- 1.4 Pat Ruddock (CARE Accredited Engineer) and Joshua Bird of Mann Williams undertook a structural inspection of the building on Tuesday 14<sup>th</sup> January 2025. The weather during the visit was overcast and dry.
- 1.5 The inspection was predominantly visual in nature and Mann Williams were able to gain access into all of the contained flats apart from 1No. flat at ground floor level. No access was available into the roof void therefore the roof structure was not inspected. It should also be noted that three of the five flats within the building are occupied at the time of inspection and opening up works were deemed not possible or appropriate prior to the visit, therefore Mann Williams were unable to confirm exact floor buildups / span directions, wall constructions etc. None of the timber structures were visible during the inspection with regards to their condition.
- 1.6 Externally, a drone was utilised to provide visuals of the roof finishes, rainwater goods and elevations to help establish potential causes for any internal defects identified. The drone footage has been passed onto the architect for review.

## 2.0 Structural Form

- 2.1 The building is 3 storeys high above ground and comprises external walls of 400-500mm thick solid masonry construction. The walls are rendered externally and plastered internally so their general condition is not known. Given the period of construction and location, it seems likely the external walls are of stone masonry.
- 2.2 There is a basement beneath the western half of the building with masonry retaining wall on the east and north and a partially buried retaining walls on the west and south.
- 2.3 The internal walls at basement and ground floor level are of solid masonry construction. From first floor upwards the walls appear to be generally of timber stud construction. Walls on all sides of the stairwell are of masonry construction at all levels.
- 2.4 The central spine wall spanning east to west is anticipated to be load bearing.



- 2.5 Suspended floors at all levels are of timber construction which is typical of a building of this age.
- 2.6 We were able to lift the carpet in 1No. room (Room 1F) at first floor which showed the floorboards spanning East to West (on plan), therefore floor joists are generally assumed to span north to south onto the spine wall.



- 2.7 The hipped style roof is of timber construction and supports a traditional slate tile roof buildup. There are 2No. raised tie timber trusses located centrally within the roof area, with principal hip rafters in each corner to form the hipped shape, and interconnecting purlins (Assumed 2No. per pitch) to support the roof finishes.



## 2.8 Externals

- 2.8.1 To the east of the building is an approx. 3m tall stone masonry retaining wall which is fully retaining an upper garden. The wall appears to comprise rubble stone masonry likely bound and originally pointed in lime mortar similar to the walls of the neighbouring Synagogue. The wall is currently covered with vegetation (ivy) and there is extensive vegetation / shrubs growing out of the head of the masonry therefore the wall was generally not inspectable.
- 2.8.2 The front elevation of the wall is heavily pointed in cement which is assumed to be a more recent repair.



## 3.0 Condition

- 3.1 Generally, the structure of Primrose Hill is in reasonable condition overall. The flats appear to be in good decorative order which has the potential to mask underlying structural defects.

### 3.2 Walls

- 3.2.1 The external walls generally appear to be in reasonable condition with no significant evidence of cracking or movement observed during the inspection.

- 3.2.2 Minor but extensive cracking was observed to the plaster through the wallpaper in the rear bedroom 2F and there are signs that the walls have been replastered. This is not of immediate structural concern but warrants further investigation to confirm the condition of the underlying masonry fabric.



- 3.2.3 At basement level we anticipate that part of the masonry spine wall has been removed with an assumed steel lintel built into the ceiling / ground floor. The arrangement and condition of this beam are unknown.



### 3.3 Floors

- 3.3.1 Floors were generally not inspectable as no opening up works were permitted prior or during the inspection. However, floors generally felt robust underfoot with no obvious defects identified during the walkover.

- 3.3.2 The floor joists in the front rooms (1F) were noticeably livelier than in the rest of the building the reasons of which were not confirmed on site.

- 3.3.3 In room 1F where the floorboards were uncovered, there is localised evidence of minor decay to the floorboards in the southeast corner of the room. It is possible that this may also have affected the floor joists which are assumed to be built into the external wall in this location.



#### 3.4 Roof

- 3.4.1 The roof structure was generally not inspectable as no access was available into the roof void. Externally there was no obvious evidence of bows or bulges in the roof shape. Where the roof structure was exposed in the second floor rooms there were no obvious defects.

#### 3.5 Externals

- 3.5.1 The eastern retaining wall appears to be in reasonable condition and seems reasonably plumb where locally visible through the vegetation, however the elevation is generally covered with vegetation. The exact extent of distress / deterioration is unknown.

## 4.0 Conclusions

- 4.1 Given the age and style of Primrose Hill (early 19C, formal 'villa'), one would expect it to be well built and from what could be observed during the inspection, this appears to be the case.
- 4.2 It is clear that the building has been altered in its history, as evidenced by its division into multiple flats, which has resulted in localised alterations to the internal masonry walls and the introduction of modern partitions. Generally, the alterations appear to have been well built with no obvious signs of distress observed.
- 4.3 We would expect the floor joists to be suitably sized for the spans for domestic use. To facilitate the flats, it is likely that new services within and through the existing timber floors could have resulted in reduced capacities as a result of notching / creating service holes through the existing joists. Furthermore, given the obvious damp issues there is an ongoing risk that there will be decay to the floor joists, in particular where they rest against or bear into the external walls therefore further investigations will be required to confirm size, condition and requirements for replacement or strengthening of the existing joists.
- 4.4 There are no obvious structural issues with the roof structure and timber sizes where exposed below ceiling levels appear appropriate for the shape and span of the roof. However, the full roof structure has generally not been seen and is of generally unknown condition subject to further inspections.
- 4.5 For the existing retaining wall, ongoing vegetation growth puts the masonry fabric at risk of further deterioration if left unaddressed with the potential to cause structurally significant harm to the existing fabric. The shrubs growing out of the head of the wall have the potential to accelerate degradation and risk localised loss of masonry which could fall from height unpredictably. The wall is also heavily pointed in cement which has the potential to trap water and accelerate degradation particularly considering the wall is fully retaining the upper garden which naturally drains towards the rear of the wall.

## 5.0 Recommendations

- 5.1 In the short term, we recommend undertaking further investigations within the building to help confirm the structural form and the condition of elements not inspectable during this preliminary inspection. These further investigations would comprise the following:
- Inspection of the existing timber floor buildups at all levels, in particular along the internal faces of the external walls where damp is most significant. This would require floorboards to be lifted in a couple of the rooms at each level by a contractor which would permit inspections by the structural engineer to confirm condition (degradation of the joists and bearings) and capacity of the existing joists to help inform future uses. Floorboards would then be reinstated following the works.
  - Inspection of the assumed steel beam in the basement where we suspect the historic spine wall was removed to inform details, specification and condition of the beam.
  - Inspection of roof void and structure. The existing roof hatch is located over the bath in the second floor flat however the suitability of this hatch for general access is to be confirmed. We would recommend allowing for the installation of a new hatch to permit access into the roof void for an inspection of the roof structure to be carried out.
  - Inspection of internal and external masonry walls. For the external walls, we recommend removing localised patches of existing plaster to expose the face of the masonry walls to help confirm construction and condition of the underlying masonry. We also recommend undertaking removal of finishes or localised opening up works to several of the internal walls
  - For the external retaining wall, allow for removing the full face of vegetation and all shrubs along the wall head including their roots. Removal of shrubs may require the localised dismantling of the upper say 400mm of the wall heads to allow full root growth therefore allow for dismantling and rebuilding the upper 400mm of masonry.
- 5.2 As part of the refurbishment, we recommend allowing for localised repair and replacement of timber joists if found to be in a decayed state.

## 15.0 Services Engineer's Condition Report



MEP

# Primrose Hill, Merthyr Tydfill Mechanical Conditioning Report



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## 1.0 INTRODUCTION

### 1.1 Role & purpose of this document

This document is to provide consultancy study on the condition of the existing mechanical services. This report informs members of the key findings of the study and the recommendations to be taken.

### 1.2 Background

The Study was commissioned by GWP Architecture and was carried out in January 2025. The report was based on a non-intrusive visual study.

### 1.3 The Building

Primrose Hill is located at the end of Church Street, Merthyr Tydfil. It is a Grade II listed building dating back to the 19<sup>th</sup> century. It comprises of three stories plus half basement. The property comprises of residential apartments.

## 2.0 Mechanical Services

### 2.1 INCOMING COLD-WATER MAIN

#### 2.1.1 Description of Installation

Each apartment is provided with a single cold water mains supply with stop taps being located within chambers in the pavement to the side and front of the property. The incoming water main pipe size was not visible at the time of the survey, but it is assumed that it will be in the region of 25 - 32mm MDPE

The distribution pipework for the cold-water services (CWS) are installed using copper pipework and fittings.

#### 2.1.2 Design Analysis

The cold-water service system and associated ancillaries appears sufficient to satisfy the needs of the property.

#### 2.1.3 Condition of Installation

Overall, the condition of installation was found to be in a fair condition throughout.

## 2.2 INCOMING GAS MAIN

### 2.2.1 Description of Installation

Each apartment is provided with an internal single E6 electronic gas smart meters providing a maximum flow rate of 6m<sup>3</sup>/hr. The meters are currently supplying commercial gas fired combi boilers.

The distribution pipework for the gas services are installed using a combination mild steel and copper pipework and fittings.

### 2.2.2 Design Analysis

The gas service main appears sufficient to satisfy the needs of the property. No ventilation was visible within meter cupboards, internal gas pipe runs are not visible so it is unknown if adequate ventilation is in place where pipework could run in confined spaces.

### 2.2.3 Condition of Installation

Overall, the condition of the installation was found to be fair.

## 2.3 HOT WATER GENERATION

### 2.3.1 Description of Installation

Hot water generation for the apartments is via Baxi 200 combi boilers located in the kitchens. The product of combustion are discharged to atmosphere through horizontal flues to the sides of the building.

### 2.3.2 Design Analysis

The hot water service system and associated controls appears sufficient to satisfy the needs of the property.

### 2.3.3 Condition of Installation

The distribution pipework for the Hot Water Services (HWS) is installed using a combination copper pipework and fittings. The HWS distribution was in a fair condition throughout.

## 2.4 LOW PRESSURE HOT WATER (LPHW) HEATING

### 2.4.1 Description of Installation

Heating to the building is provided by via Baxi 200 combi boilers located in the kitchens.

The heating system serves primarily T22 steel panel radiators located throughout the apartments. The distribution pipework for the radiator circuit is installed as a two-pipe flow and return system.

The heating distribution pipework is installed using a combination mild steel and copper pipework and fittings.

Radiators are fitted with thermostatic radiator valves (TRV), and lock shield valves.

### 2.4.2 Design Analysis

The heating system and associated controls appears in the most part sufficient to satisfy the needs of the apartments. There are some areas that do not have radiators installed, additional radiators are recommended to avoid cold spots.

### 2.4.3 Condition of Installation

The distribution pipework installed using a combination copper pipework and fittings and there were no signs of leaks or corrosion at the time of the survey.

The steel panel radiators were generally in fair condition.

There were reports of intermittent issues with the boilers.

## 2.5 PUBLIC HEALTH

### 2.5.1 Description of Installation

Above ground soil waste system for the building comprises primarily vented soil waste systems collecting discharge from each of the WC's, sink and baths / showers. Soil waste systems are installed mainly using upvc, cast iron pipework and fittings.

### 2.5.2 Condition of Installation

The domestic installation was in fair condition throughout.

### 2.5.3 Design Analysis

Both soil and waste systems appear satisfactory to satisfy maximum system discharges.

## 2.6 VENTILATION

### 2.6.1 Description of Installation

Ventilation to the building is provided by both mechanical and natural means.

Mechanical ventilation is provided to kitchens and bathrooms via wall and ceiling mounted extractor fans. There are recirculation extract hoods above hobs. Natural ventilation is provided via openable windows.

### 2.6.2 Design Analysis

The mechanical ventilation is insufficient for the needs of the building.

### 2.6.3 Condition of Installation

Mechanical ventilation generally is in very poor condition.

### 2.6.4 Recommendations

Replace all mechanical ventilation.

## 3.0 CONCLUSION

We estimate that a large amount of the mechanical infrastructure is in a fair condition. The main items of plant are nearing or past their working life expectancy and recommend they be replaced.

## 5.0 SITE PICTURES



Cold Water Mains Stop Cocks



Baxi Combi Boiler



Gas Meters



Steel Panel Radiators



Bathroom Extractor Fan



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## Electrical Services Condition Survey

Primrose Hill House

Primrose Hill

Merthyr Tydfil

**MEP Building Services Consultants Ltd**

**Carmarthen Office,**

**Tir Eglwys, Henfwlch Rd**

**Carmarthen SA33 6AF.**

**Report No – E7847/ELEC/REP/E05**

**February 2025**

**Produced by Keith Jones MIET**

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## SECTION 1 - INTRODUCTION

MEP Building Services Consultants Ltd (MEPBSC) have been commissioned to carry out a survey and prepare a report on the electrical services at Primrose Hill House, Primrose Hill, Merthyr Tydfil.

This survey and report are based on a visual inspection and was carried out during the 14<sup>th</sup> of January 2025. At the time of our survey the weather conditions were dry and cool with an approximate temperature of 7°C. Also, at the time of our survey the property was occupied with most of the electrical services being in operation. The information contained within this Report is compiled under the brief to visually inspect and comment on the condition and the quality of the electrical distribution system relating to normal good standards in the building services industry as dictated by CIBSE, IET's and British Standard current recommendations and standards.

We have not inspected parts of the Electrical Services which are built into the building structure, covered up, or otherwise made inaccessible in a normal course of construction, alteration, or fitting out. Internal inspection of equipment has not been conducted, and nowhere plant strip down would have been required. No definitive calculations have been undertaken to determine the capacity of the plant items, nor have performance tests been carried out on any of the systems or plant items. Design analysis of the systems has been undertaken using generally accepted design criteria both past and present, primarily to establish the principles of design. We have specifically excluded electrical tests. The omission of such tests might give rise to the fact that certain problems could exist which are not reflected in this report.

We would point out that during our Condition Survey we did not carry out a detailed inspection of any underground services. This report excludes any investigation into structural engineering design, compliance with legislation relating to buildings, or the unsuitable use of high alumina cement or calcium chloride, calcium silicate brickwork, alkali-silicate reaction in concrete, cavity wall tie failure, radon gas seepage, woodwork slab permanent shuttering, asbestos or PCB's or other materials considered as deleterious in construction, except insofar as such matters may come to knowledge in the normal course inspecting the materials and state of repair..

## SECTION 2 – ELECTRICAL INSTALLATION

### 2.1 Main House Incoming Mains and Metering

#### 2.1.1 Description of the System

The main house is supplied by an underground National Grid service cable which terminates in a Three Phase and Neutral Cut Out unit as shown in the image below:



A main DNO service head is directly connected to four digital energy meters one for each flat which is located within the Main Electrical Cupboard as shown in the image below:



The electrical supply is a 60 Ampere three phase 4-wire TN-S 400/230-volt 50Hz. PME (TN-C-S) and although installed in an untidy ad-hoc method there are no visual signs of any thermal damage or stress to the conductors.

#### 2.1.2 Design Analysis

Based upon the visual condition of the main supply tails and the extent of the electrical loads connected to the electrical distribution equipment it would be safe to assume that the supply rated at 60 amps is sufficient to serve the current installation.

#### 2.1.3 Condition of System

The despite being more than 25 years old incoming DNO service cut out is in a satisfactory condition, the Energy meters are in a good condition and a future life span of 15– 20 years can be expected from this equipment.

#### 2.1.4 Comments

The existing supply capacity and arrangement is sufficient to serve the facility maximum electrical demand as it stands.

#### 2.1.5 Recommendations

If the use of the building is to be changed it will be necessary to reassess the maximum demand requirements of the facility which may affect the capacity of the supply and the metering arrangement which will necessitate a change in the metering strategy.

## 2.2 Basement Flat Incoming Mains and Metering

The basement flat is supplied by an underground National Grid service cable which terminates in a Single Phase and Neutral Cut Out unit as shown in the image below:



The electrical supply is a 60 Ampere single phase 2-wire TN-S 230-volt 50Hz. PME (TN-C-S) and there are no visual signs of any thermal damage or stress to the conductors.

#### 2.1.2 Design Analysis

Based upon the visual condition of the main supply tails and the extent of the electrical load connected to the electrical distribution equipment it would be safe to assume that the supply rated at 60 amps is sufficient to serve the current installation.

#### 2.1.3 Condition of System

The despite being more than 25 years old incoming DNO service cut out is in a satisfactory condition, the Energy meters are in a good condition and a future life span of 10– 15 years can be expected from this equipment.