

Job No: G8705  
Client: HMH Clyde One Ltd

## Oswald Chambers, Glasgow Structural Survey



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**Title:** Oswald Chambers, Glasgow

## 1.0 EXECUTIVE SUMMARY

Will Rudd Davidson were instructed by HMM Clyde One Ltd to provide a structural survey of the B-listed Oswald Chambers and 9 Oswald Street, and input to the feasibility of preserving the structure through repurposing as part of a wider development.

External and internal visual non-intrusive surveys were carried out on 3<sup>rd</sup> December 2020, 29<sup>th</sup> January 2021 and 29<sup>th</sup> April 2021 to inform this structural condition report.

The structural condition of the brick vaulted, mixed cast iron, timber and steel frame and timber floors of Oswald Chambers and 9 Oswald Street are generally considered to be in **GOOD** condition where observed.

The façades of Oswald Chambers and 9 Oswald Street generally appear to be in **GOOD** condition as viewed from street level. Some areas of the façade appear to be in **POOR** condition with spalling of the dressed ashlar, cill and cornice. This is a risk due to potential for further spalling onto the street below - the extent of which is subject to closer inspection and testing.

The basements of Oswald Chambers and 9 Oswald Street appears to be generally in **GOOD** condition with some evidence of water ingress. The cast iron beams supporting the brick vaults are in **POOR** condition indicating corrosion and loss of cross-sectional area. This should be verified through testing of the cast iron beams.

Additional recommendations including intrusive investigation works have been advised to verify and conclude observations recorded in this report and to inform existing structural capacity for development proposals. These works have been scoped to minimise the impact on the listed structure, minimising intervention but ascertain the chemical, physical and environmental condition of various areas of interest. The recommendations are covered in Section 6.0 Recommendation Summary and included within the appendix.

## 2.0 INTRODUCTION AND PURPOSE OF REPORT

### 2.1 Brief

Will Rudd were instructed by HMH Clyde One Ltd to provide a structural appraisal of the existing buildings' structure and input to the feasibility of preserving the structure through repurposing as part of a wider development.



Figure 1. Project Roadmap, current stage of plan

The scope follows 'The Institute of Structural Engineers Appraisal of Existing Structures' and 'Conservation Compendium' series which initially sets out the baseline as limited to the investigation and factual reporting of the building condition both presently and historically through a desktop study supported by visual non-intrusive surveys.

The purpose of this report is to establish the baseline condition of the building's structural condition through observations, conclusions and recommendations with corroborations from the desktop study. This report will provide a description of the properties followed by a condition survey of the external elevations and internal structure from basement to roof level. Additional investigations, targeted exploratory works and testing will be discussed where necessary to verify key structural information.

### 2.2 Planning Context

The Scottish Planning Policy, through the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997, and Glasgow City Council Supplementary Guidance 9: Historic Environment 'acknowledges the important role that planning has in 'maintaining and enhancing the distinctive and high-quality, irreplaceable historic places which enrich lives, contribute to the sense of identify and play an important resource for tourism and leisure industry.' In conjunction, the Historic Environment Policy for Scotland 2019 delegates the delivery of the SPP to the local authorities and states various principles to follow.

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The Civic Amenities Act 1967 provides the legislative framework for designation of Conservation Areas. The buildings lie within the Conservation Area of Glasgow Central, specifically the Character Area 3: Broomielaw, St Enoch & River Clyde and the Conservation Area Appraisal provides a historical context, character and appearance to the district.

## **2.3 Limitations of Survey and Desktop Study**

Throughout the investigation of these buildings, it is a priority to conserve the existing structure and the internal and external fabric without detriment to its listing and special features. Therefore, this condition survey at this stage is non-intrusive and observations of any visual feature are limited by the appearance or lack of at the time of record. Attendance on site was made on three separate occasions: December 2020, January and April 2021.

The desktop study is limited by availability of public digital records and equally the content is not conclusive and referenced only with a view to corroborating the condition survey.

Due to the current pandemic, access to local building archives is restricted and background research has been with the following-

- Historic Environment Scotland
- Canmore
- National Library of Scotland
- West of Scotland Archaeology Service
- Glasgow Central Conservation Area Appraisal

A number of locations internally were not available for survey:

### **Oswald Chambers**

- Second Floor, West Suite only
- Fourth Floor, East and West suites

### **9 Oswald St**

- First Floor [Inaccessible due to lack of tenant access]
- Roof



### 3.0 Description of Property

The Category B listed Classical Style Oswald Chambers (Designation LB32988), also known as 5 Oswald Street, and 'B' listed bonded warehouse to rear hereon referenced as 9 Oswald Street was built mid to late 19<sup>th</sup> Century for 'J and P Hutchison, shipowners' where historically the Broomielaw was part of the Clyde Steamer Quay/Broomielaw Quay. These buildings are located on the corner of the Broomielaw and Oswald Street on the northern bank of the River Clyde within the Glasgow Central Conservation Area. They neighbour, to the West, the existing Italianate Beaux Arts style 'A' listed Clyde Navigation Trust, built in 1883-1886 with the corner extension added in 1905-1908. To the north of 9 Oswald Street, across the lane, is the unlisted 11 Oswald Street which is currently on the Buildings at Risk Register for Scotland.

The derelict gap site 66-74 Broomielaw between Oswald Chambers and Clyde Navigation Trust was historically a public house since mid 19<sup>th</sup> Century until a fire partially burned down the building. It is unclear if the remains represent the original construction.

Whilst several modifications have been made to the buildings, it is presumed from historical photos that the original structure of Oswald Chambers remains today. It is unclear if 9 Oswald Street remains the original construction however given the relationship of the buildings, it is presumed.

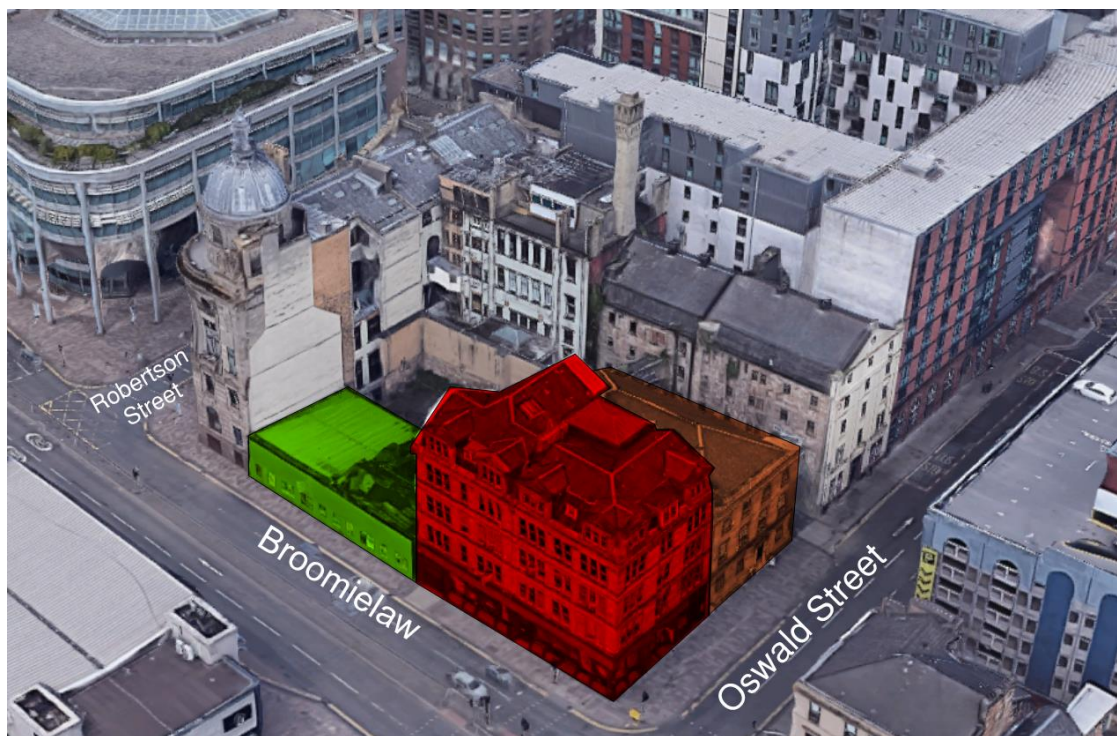


Figure 2. Aerial view of proposed site – (green) Old Public House (red) Oswald Chambers (orange) 9 Oswald Street

### **3.1 Oswald Chambers**

Oswald Chambers is a four-storey building with a single storey basement and attic including a lightwell on the north elevation. The building is rectangular in plan with a tapered southern footprint which follows the street geometry of Broomielaw.

The South elevation is a six by three unequal bay of polished ashlar with full height separate glazed bays separated by ashlar pilasters above first floor. The ground floor frontage appears to be polished granite tiles with traditional double glazing with a metal roller shutter located to the west bay.

The architraved windows to the first, second, third floor and dormers appear to be glass, sash and case with ashlar pilaster mullions, ashlar cill bands and plain entablature. The attic is punctured by four three light arcaded dormers with antae pilasters, pediments with antefixae and acroteria. Two additional dormers, a double and single bay window are located between the ashlar arcaded dormers. It is presumed these are not from the original construction due to the dissimilar construction material which appears to be timber.

The East elevation is a three by three unequal bay of similar construction to the South elevation. Notably the ground floor entrance appears to be formed from polished black granite tiles.

The North elevation abuts 9 Oswald Street up to the third floor thereafter the gable appears rendered with a painted finish. Between the two hipped returns is a glass extended pyramid rooflight which caps the top of the central stair and lift core. An extension understood to be a fire escape projects from the Northwest hip and is finished in a light coloured vertically laid standing seam zinc cladding. The cladding continues up and over the roof abutting the existing roof eaves.

The West elevation historically abutted a public house which has since partially burnt down in a fire. The exposed West gable has been clad, as the same material as the Northwest, in light coloured vertically laid standing seam zinc cladding, starting at first floor where it extends up to roof level.

The roof is hipped and finished with slates however it is not known whether this remains from the original construction. A rooflight has been installed to the inside pitch of the Northwest hip.

The surrounding street is finished in a mix of coloured granite setts delineated by conservation kerbs.

Internally, the building appears to be constructed from a mix of brick and ashlar stone columns on concrete plinth foundations at basement level supporting cast-iron columns up to ground, first, second and third floor. Some steel columns and steel and concrete beams have been installed later within the cast-iron beam and columns frame at basement level. The basement slab appears to be in-situ concrete.

The floors, whilst not fully inspected throughout the building, were, where exposed, formed from timber joists supporting timber board. The original timber joists remain in place and have been stiffened with additional dwangs at a later stage, indicated by a different colour of timber.

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The combination of timber floors, cast-iron columns and vaulted brickwork was a common form of construction for warehouses built in 19<sup>th</sup> Century - particularly in Broomielaw Quay and corroborates with observations on the construction of this building.

The loading or service bay accessed at ground floor appears to be floored with an in-situ concrete slab supported by steel beams which appears to have replaced the timber flooring generally found elsewhere.

The perimeter walls appear to be formed from random uncoursed ashlar stone with a dressed external finish.

The foundations were not exposed, however, for the age of the building it can be assumed that the foundations are constructed using random rubble to a suitable bearing.

### **3.2 9 Oswald Street**

9 Oswald Street is a three-storey building with a single storey basement of similar construction to 5 Oswald Street which, abuts and projects above the South elevation – it is presumed the building was built at the same time as 5 Oswald Street. A lane provides access from Oswald Street along the North elevation and returns into the West elevation through a gate into a car park.

The East elevation is a four by three equal bay of polished ashlar with modern aluminium framed window glazing. The windows appear fixed with three lights and a top transom within a reveal. The upper floor windows are architraved with the first floor lugged. The ground floor frontage is channelled with two courses of ashlar basecourse without channel, plain windows and an arcaded entrance doorway with entablature. Given the difference in colour, projection and material, it is presumed this entrance was not part of the original building. A low parapet extends above the eaves cornice with a galvanised steel ball and tube handrail.

The North elevation is rendered with a painted finish and five modern aluminium framed windows at first floor and six at second floor. There are no windows at ground floor however existing window cills which project from the rendered finish suggest there had been historically. The Northeast corner returns the ashlar frontage with quoins at first and second floor with a plain channelled return at ground floor. A series of steps projects from the basecourse, a hinge and lintel on the Northeast corner suggests a doorway may have been present historically and has been removed.

Two small link bridges connect from 11 Oswald Street to the North elevation at first and second floor. These appear to be constructed from brick finished with a render and assumed to be supported by either cast-iron or steel beams spanning between the buildings.

The West elevation is partially rendered from first floor to eaves with the ground floor finish exposed showing a random uncoursed ashlar stone.

The roof is a duopitch spanning from North to South with hips to the East and West and finished in slate. The parapet on the East elevation terminates beyond the Northeast corner. The roof structure appears to be a duopitch truss formed with steel angle sections connected via bolts.



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The pend access is finished in granite cobble delineated by a steel lipped kerb on the North edge and a single course of granite paving on the south edge in front of collapsible steel bollards.

Internally, the building appears to be constructed from brick columns supporting double-barrel vaulted arches on the ground and first floor with cast-iron columns to second floor and a steel roof truss spanning north to south. The beam construction of the second floor is unknown but presumed cast-iron beams. The double-barrel vaulted arches have a plaster finish, however, where exposed, indicated a brickwork finish. At ground floor, both directions of vaults are restrained with tie rods presumed as cast iron.

At basement level, brick vaults supported by cast-iron beams were noted beyond the building line under the pavement of Oswald St. In one location a stone vault was expressed directly below the building line to Oswald St. The basement slab appears to be cast in-situ concrete.

The foundations were not exposed, however, for the age of the building it can be assumed that the foundations are constructed using random rubble to a suitable bearing.

The floors, whilst not fully inspected throughout the building, were, where exposed, formed from timber joists supporting timber chipboard. The original timber joists remain in place and have been stiffened with additional dwangs at a later stage, indicated by a brighter colour of timber. The timber joists appear to span continuously over the top of the floor beams. The end bearing detail to perimeter walls appears to be a mix of pockets or stone corbels.

The combination of timber floors, cast-iron columns and vaulted brickwork was a common form of construction for warehouses built in 19<sup>th</sup> Century particularly in Broomielaw Quay and corroborates with observations on the construction of this building.

The perimeter and internal walls appear to be formed from brickwork, as viewed internally, and given the external ashlar finish, it is presumed the walls are block-bonded together, a technique common in the 18<sup>th</sup> and 19<sup>th</sup> Century.

The introduction of a fire escape stair to the north elevation appears to be formed from a steel frame with full height concrete blockwork restrained at floor level. The stair stringer, treads and handrails are formed from steel with a painted finish.

### **3.3 66-74 Broomielaw**

Whilst unlisted, it is relevant to consider the sites 66-74 Broomielaw which historically abutted the Oswald Chambers West gable. Inspection of these sites was not available due to the derelict nature and potential safety concerns within the building, lack of access and hoarding to the site however it was observed the building appeared constructed in brickwork with a roughcast finish above ground floor.

From street level, the roof has partially collapsed and vegetation can be seen growing from within. The remainder of the building abutting the Clyde Navigation Trust has been clad in a profiled metal roof sheeting.

## **4.0 RELEVANT DOCUMENTATION AND STANDARDS AND TERMINOLOGY**

### **4.1 Crack Severity**

The description of crack severity is taken from BRE Digest 251, summarised as follows:

- Negligible Less than 0.1mm (commonly referred to as 'hairline')
- Very slight 0.1mm to 1.0mm
- Slight 1.0mm to 5.0mm
- Moderate 5.0mm to 15.0mm
- Severe Above 15.0mm to 25mm
- Very severe Above 25mm

### **4.2 Time-frames**

Reference to time-frames is made on a broad conjectured basis. For guidance, the following definitions are made:

- Very short term Urgent with minimum delay. Immediate.
- Short term 1 to 5 years
- Medium term 5 to 10 years
- Long term 10 to 20 years

### **4.3 Definitions of Structural Condition**

These are general definitions and repairs timescales. The repairs timescales and exact condition will be set out in the Conclusion and Recommendation sections of this report:

Good:	Structurally acceptable, but not necessarily aesthetically acceptable. Minor issues associated with flaking paintwork and surface rusting.
Poor:	Evidence of structural faults developing but currently structurally acceptable. Generally requiring short to medium term maintenance action addressing faults such as delaminating steelwork.
Very Poor:	Structural faults evident, not structurally acceptable. Generally requiring immediate/short term maintenance actions addressing faults such as significant delamination of steelwork and material loss which could potentially lead to instability of the member/structure as a whole.
Unsafe:	Serious faults evident which are creating structural instability issues and/or public safety issues. The structure is deemed not safe to use and should be closed for access immediately.

## **5.0 STRUCTURAL SURVEY, OBSERVATIONS AND RECOMMENDATIONS**

Will Rudd Davidson carried out a non-intrusive visual survey of Oswald Chambers and 9 Oswald Street on December 3<sup>rd</sup> 2020, January 29<sup>th</sup> 2021 and April 29<sup>th</sup> 2021. The survey is itemised below, providing observations, conclusions and recommendations supported by photographs included in the appendices.

### **5.1 External Observations**

#### **5.1.1 Oswald Chambers – South Elevation**

The South elevation generally appeared in **GOOD** structural condition with no visual indications of building distress, as can be seen in figures 1 and 5.

The surfaces of several blocks of ashlar are in **POOR** condition and have spalled likely due to repeated exposure to atmospheric moisture and chemicals. The pattern appears random and not systemic suggesting a degradation of surface veneer to blocks over time. This can be seen in figures 2 and 6.

Given the ashlar will be block bonded, consideration should be given to whether replacement of the block is necessary in the **MEDIUM** term - on the principle of minimal intervention. When access is available, these stones and adjacent areas should be inspected and hammer tested via MEWP in the **SHORT** term for other defects or potential for further spalling.

Staining and small surface biological growth to the moulded cills, eaves cornice and arched dormers was evident.

Cleaning of the ashlar stone should be carried out in the **SHORT** term with a stiff non-ferrous bristle brush and defective joints re-pointed. Once cleared, the area should be followed up with a closer visual inspection via MEWP for other defects in the **MEDIUM** term.

#### **5.1.2 Oswald Chambers – East Elevation**

The East elevation generally appeared in **GOOD** structural condition with no visual indications of building distress.

The second and third floor moulded cills are in **POOR** condition where it has spalled at various locations – refer to figure 5.

The nature of surrounding discolouration would infer the ingress of moisture and chemicals has over time deteriorated these panels.

When access is available these cills and adjacent areas should be inspected via MEWP in the **SHORT** term for other defects and hammer tested for potential for further spalling.

There is some discolouration generally to the façade which is likely to be a patina formed over time from pollutants and surface grime, particularly to the moulded cills. This is non-structural however should be closer inspected via MEWP in the **MEDIUM** term to confirm there is no potential of salts and moisture to accumulate and deteriorate.

### 5.1.3 Oswald Chambers – North Elevation

The North elevation is only exposed above third floor which is partially obscured by 9 Oswald Street when viewed from street level and could not be surveyed at level access for visual defects.

### 5.1.4 Oswald Chambers – West Elevation

The standing seam zinc overcladding to the West elevation is in **GOOD** condition and does not appear to indicate signs of defect, however, it is unclear as to the condition of the existing Oswald Chambers gable behind the overcladding.

It is noted during the internal survey, on the third floor to the southwest corner, through a damaged ceiling tile, visual discoloration of the floor joists and surrounding finishes abutting the West gable appears to suggest possible fire; heat or smoke damage indicating one area of **POOR** condition. Refer to figures 53 and 54. Therefore, intrusive investigations are recommended in the **SHORT** term to conclude the condition of the gable façade and structure.

The roof was unable to be accessed and either a point cloud survey, drone or MEWP will be required to assess its external condition within the **SHORT** term to confirm the roof condition.

### 5.1.5 9 Oswald Street – East Elevation

The East elevation generally appeared in **GOOD** structural condition with no visual indications of building distress, as shown by figures 3 and 4.

Extents of discolouration are visible throughout the upper floors to the cill band, eaves cornice, lugs, architraves and to both edges of the elevation. The source of discolouration is likely to be a patina formed over time from pollutants and surface grime.

The surfaces of several blocks of ashlar are in **POOR** condition in various locations.

This is likely due to exposure to atmospheric moisture and chemicals over time. The pattern appears random and not systemic suggesting a degradation of surface veneer to blocks over time.

Some **HAIRLINE** and **VERY SLIGHT** cracks were evident at ground floor but appear shallow and limited to the ashlar dressing only.

Given the ashlar may be block bonded, consideration should be given to whether replacement of the block is necessary in the **MEDIUM** term - on the principle of minimal intervention. When access is available, these stones and adjacent areas should be inspected and hammer tested via MEWP in the **SHORT** term for other defects or potential for further spalling.

Staining and small surface biological growth can be seen along the first floor cill band, the Northeast corner and Southeast abutment to Oswald Chambers. The latter appears to be a result of an outlet at high level, below the eaves cornice, with other areas attributed to rainwater from the eaves or roof.

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Cleaning of the ashlar stone should be carried out in the **SHORT** term with a stiff non-ferrous bristle brush and defective joints re-pointed. Once cleared, the area should be followed up with a closer visual inspection via MEWP for other defects in the **MEDIUM** term.

#### **5.1.6 9 Oswald Street – North Elevation**

The North elevation generally appeared in **GOOD** structural condition with no visual indications of building distress – refer to figure 8.

The rendered finish has **VERY SLIGHT** cracking between windows on the first floor. Whilst the cause of the cracking is not known, given the small and limited area, it is presumed limited to the render finish.

A closer inspection in the **MEDIUM** term internally to corroborate if the crack extends through the wall structure.

Some biological growth is noted around the Northeast corner adjacent to the downpipe. Evidence of this can be seen in figure 10.

This should be cleared and roots checked to ensure they do not expose the mortar joints of the façade in the **MEDIUM** term.

#### **5.1.7 9 Oswald Street – West Elevation**

The West elevation generally it appeared in **GOOD** structural condition with no visual indications of building distress as indicated in Figure 9. Areas of the rendered finish have spalled particularly along the Northwest corner.

Given similar defects at corners of the building façades, it is likely deterioration is a result of weathering over time. The render should be inspected and hammer tested via MEWP in the **SHORT** term for other defects or potential for further spalling.

### **5.2 Internal Observations**

A management asbestos survey has been commissioned, however a general Refurbishment and Demolition Asbestos Survey should be carried out throughout the property prior to any of the following recommendations being put into place. It is recommended that this is done in the **VERY SHORT TERM**.

#### **5.2.1 Oswald Chambers – Basement**

The basement generally appeared in **GOOD** structural condition however the perimeter ashlar stone walls were stained with efflorescence.

Whilst the efflorescence is not a structural concern, the presence of moisture indicates potential vulnerability to adjacent timber floors and steel and cast-iron frame structures within the basement.

The moisture levels of the structure should be investigated in the **SHORT** term to identify if it is historic or an ongoing issue and determine source of moisture.



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In several areas, cast-iron beams embedded within the ashlar stone, have been cut away leaving the profile exposed. The circular cuts suggest the cast-iron was removed with a drill machine as opposed to a cutting machine.

Some cast-iron beams and columns, and steel beams have surface corrosion however no notable loss of cross-sectional area was found. This should be monitored on a **MEDIUM** term.

The addition of steel framing appears to be from more than one construction period given difference in connections; finish and location. Some of these columns are boarded with plasterboard however areas of exposed steel columns appear to be in **GOOD** condition with no visual indications of distress.

In one area, a steel channel column has been riveted and bolted to an existing cast-iron circular column. The difference in metal and any paint system will require investigation to determine likelihood of bimetallic corrosion. At the time of survey, neither of the columns indicated signs of corrosion. An inspection by a specialist contractor is recommended in the **MEDIUM** term to determine if there is any **LONG** term risk.

#### **5.2.2 9 Oswald Street – Basement**

The basement structure appears to be in **GOOD** condition with no visual indications of building distress, however there are areas of **POOR** condition due to water ingress in several locations – refer to figure 14.

This is along the Eastern boundary with Oswald Street and along the Northern boundary to the lane. The source of this water ingress is unknown but presumed to be a combination of **POOR** or lack of tanking and weaknesses in mortar or interface with external construction.

At the elevation to Oswald Street, extending beyond the building line, below the public footpath are shallow brick vaults supported by cast-iron beams. Recent and historic signs of water ingress and ponding are noted throughout this area.

Corrosion of the cast-iron bottom flange was evident as shown in figure 18 and loss of thickness by approximately 5-10% was noted. These beams should be monitored in the **SHORT** term to determine whether repairs are necessary.

A substation is located along the north of the external perimeter where ponding water was identified raising concern over electrical damage – refer to figure 14. This risk should be evaluated by a competent contractor in the **SHORT** term.

Subdivision of rooms appears to be formed with brick or concrete blockwork walls which appear to be in **GOOD** condition with no visual indications of building distress. The ceilings are formed from double barrel vaulted brick and generally are finished with a plaster directly applied. Where exposed, the bricks appear to be in **GOOD** condition.

One vault in line with the east façade was expressed in stone and appears to be in **GOOD** condition.

### 5.2.3 Oswald Chambers – Ground Floor

The ground floor is generally a boarded timber joist floor, supported by cast iron, steel or timber beams where exposed appeared in **GOOD** condition.

In one location to the West gable, the timber beams bear into a pocket in the stone or brick and some rot has occurred as indicated by figure 46.

The rot should be investigated in the **SHORT** term and moisture ingress determined to conclude if it is a local or wider defect of water ingress.

The floor to the service bay is formed as an in-situ concrete slab and appeared in **GOOD** condition with no visual indications of distress.

### 5.2.4 9 Oswald St – Ground Floor

The ground floor is formed from double barrel brick vaults which are finished in plaster – refer to figure 43. Where exposed, the bricks appear to be in **GOOD** condition.

Several service and structural penetrations have made been through some of these vaults. Whilst no indication of distress was evident, these should be monitored in the **MEDIUM** term for any movement.

### 5.2.5 Oswald Chambers - First, Second, Third and Fourth Floors

Throughout the upper floors, the existing structure and walls are painted, plastered or covered by finishes obscuring the structure from survey.

Symmetry of the structure vertically appears to confirm the structure is consistent throughout the floors with no apparent change in structural load path.

Some columns are expressed and detailing of the head suggests a cast-iron construction, refer to figure 52, commensurate with exposed columns surveyed elsewhere and appeared in **GOOD** condition.

The structure generally appeared to be in **GOOD** structural condition with no visual indications of building distress. One area of delaminated and cracked plaster to the ceiling was noted however it is unclear the cause of this defect. Refer to figure 55.

Given it is likely a water ingress concern and the vulnerability of the masonry, timber and cast-iron material in the building, it is advised the defective finishes in this area are cleared for further survey of the structure in the **SHORT** term.

On the third floor, to the Southwest, an area of ceiling was exposed through damaged and collapsed ceiling tiles. The exposed timber floor was significantly blackened however it is unclear if this was from a fire; thermal or smoke possibly from the adjacent building fire – refer to figure 53.

Whilst the structure appeared in **GOOD** condition, a closer inspection of the floor condition and connections into primary structure should be made in the **SHORT** term.

### 5.2.6 9 Oswald Street – First and Second Floors

Throughout the upper floors, the existing structure and walls are painted, plastered or covered by finishes obscuring the structure from survey.

Symmetry of the structure vertically appears to confirm the structure is consistent throughout the floors with no apparent change in structural load path.

Some columns are expressed and detailing of the head suggests a cast-iron construction commensurate with exposed columns surveyed elsewhere and appeared in **GOOD** condition.

The structure generally appeared to be in **GOOD** structural condition with no visual indications of building distress.

Within the curtilage of the West elevation, a stairwell comprising steel columns, beams, stringers, treads and handrails has been introduced. The stairwell is infilled with concrete blockwork walls with restraints at floor level. Some steel beams appear to penetrate the existing structure which has been broken open and left in-situ. Refer to figure 65.

The steel structure has been painted however it is not evident if this is a corrosion protection coating, intumescent paint or painted finish. The paint appeared to be in **GOOD** condition with no indications of deterioration.

The inside face of the existing walls within the stairwell has significant spalling of the plaster finish. This sign of water ingress should be investigated in the **SHORT** term to determine moisture levels and condition.

The zinc wall cladding was not exposed internally confirming the existing ashlar wall has been overclad however the zinc roof cladding was exposed and appeared to be in **GOOD** condition with no visual indication of structural distress.

Some white rust was observed to the underside of the galvanised liner suggesting presence of moisture in the form of water ingress or condensation. It is recommended that this area be surveyed to determine extent of rust and if remedial/ repairs are required to ensure area is weathertight.

## 6.0 RECOMMENDATION SUMMARY

Area	Report Ref	Recommendation	Timescale
Full Property	Various	Full asbestos survey by specialist contractor.	Short term
Full Property	Various	Specialist rot survey to be conducted by competent contractor to determine condition of timber elements.	Short term
Façade	5.1	Survey to elevations to assess extent of spalling and vegetation growth in and around windows and damaged stones pieces.	Short term
Various	Various	Investigations to determine areas of water ingress.	Short term
Basement	5.2.2	Water ingress around substation. Risk should be examined.	Short term
Ground Floor	5.2.3	Undertake rot/damp survey of ground floor timbers and surrounding elements within area. Introduce protection.	Short term
Stairwell	5.2.6	Spalling to finishes at stairwell. Should be stripped and behind surveyed to determine if damage to existing is present.	Short term
Various	5.2.5	Review areas of damaged ceiling finishes. Strip back to existing structural elements. Determine cause of delamination to finishes.	Short/ Medium term
Upper floor	5.2.5	Survey to blackened floor area with aim to determine root cause.	Medium term
Ground floor	5.2.4	Monitoring to vaults with modern service penetrations.	Medium term
Upper floors	5.2.6	Rust over liner to be surveyed to determine extent/ if repairs are required to weatherproof or otherwise.	Medium term
Basement	5.2.1 5.2.2	Sample testing to existing elements to determine condition.	Medium term

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**Title:** Oswald Chambers, Glasgow

## **7.0 REPORT LIMITATIONS**

This report has been prepared for the sole benefit of HMH Clyde One Ltd. This report shall not be relied upon or transferred to any other party without the written authorisation of Will Rudd Davidson Ltd.

- 7.1 This report is based on a visual, non-intrusive survey, viewed externally from ground level only. No finishes were removed to expose the underlying building fabric/structure, unless already exposed by a third party.
- 7.2 No advice is given or implied regarding the presence or otherwise of any asbestos in any shape or form within the property. Should any areas be suspected, the Client is advised to follow Health and Safety Executive guidelines.
- 7.3 No detailed inspection of any parts of the structure which are unexposed or inaccessible has been carried out and we are therefore unable to report that any such part of the property is free from defect.
- 7.4 The presence or otherwise of timber decay or infestation is considered to rest solely within the remit of a specialist survey and not within the scope of this report.
- 7.5 No investigations or calculative checks were carried out as to the strength of individual structural members nor was any site investigation works in respect of foundations or drainage undertaken.