



STRUCTURAL INSPECTION

THE DIRTY BOTTLES
28 NARROWGATE
ALNWICK
NORTHUMBERLAND
NE66 1JG

S4510-R02

for

GREENE KING BREWING & RETAILING LTD

PSA Design
The Old Bank House
6 Berry Lane
Longridge
Preston
PR3 3JA

Tel. 01772 786066

STRUCTURAL INSPECTION

THE DIRTY BOTTLES

28 NARROWGATE

ALNWICK

NORTHUMBERLAND

NE66 1JG

S4510-R02

Contents

- 1.0 Introduction
- 2.0 Description
- 3.0 Observations
- 4.0 Opinion & Recommendations

Appendices

- A Inspection photographs
- B Diagrammatic location plan
- C Diagrammatic floor plans (as existing) – 28 Narrowgate
- D Diagrammatic layout (as existing) – external pergola

1.0 INTRODUCTION

Further to instructions received from Greene King Brewing & Retailing Ltd, PSA Design Ltd were requested to visit 'The Dirty Bottles' restaurant, bar and hotel, 28-34 Narrowgate, Alnwick, Northumberland NE66 1JG.

The purpose of our visit was to inspect 28 Narrowgate, Alnwick, following the recent acquisition of the property (by GK Brewing and Retailing Ltd) and following concerns raised with regards to the structural condition of the building.

During our inspection we were also requested to inspect and comment upon the condition of a timber framed pergola within the rear beer garden of No. 30 Narrowgate and to comment on the condition of a high-level chimney stack above the party wall of 30-32 Narrowgate.

Our inspection was undertaken on Wednesday 8th January 2025.

We understand that the properties are located within a Local Authority Conservation Area and that the buildings may have been granted Listed Status by historic England.

2.0 DESCRIPTION

2.1 28 NARROWGATE - ALNWICK

The terrace property is located to the north of Narrowgate, Alnwick. The front elevation (shopfront) of the building is located directly adjacent to the public footpath and highway. Refer photographs P4 to P9, Appendix A and diagrammatic location plan Appendix B.

The building is of three storey (plus partial basement) load bearing masonry construction with substantial masonry walls to the front and rear of the property and an internal load bearing spine wall, parallel to the front and rear walls, dividing the property into two sections (front and rear) at all levels. Openings through the internal spine wall allow access between the front and rear of the property at all levels. Refer photograph P23, Appendix A.

At ground floor level there is a full width glazed shopfront to the front, south elevation, the upper floors, roof and walls being supported on shopfront beams which are supported on load bearing masonry piers (each end) and internally by three circular cast iron columns. Refer photographs P8, P9, P18 + P19, Appendix A.

The front (south) elevation wall has an external render finish and includes three window openings at each upper floor level (1st and 2nd). Refer photographs P5 to P7, Appendix A.

Viewed from external ground level, the southern roof slope is not visible, being hidden behind a masonry parapet. Two lines of rainwater pipes, located between the front elevation windows, appear to drain the southern roof slope via a gutter behind the parapet. Refer photograph P7, Appendix A.

The rear elevation wall of the property is only partially visible for inspection due to obstructions, external canopies and boundary walls. Where visible, the rear elevation wall has a smooth render finish, which appears to have been (fairly) recently applied. Refer photograph P14, Appendix A.

Viewed externally (from beyond the property boundary), the rear section of the building has a mono-pitch roof which extends up to abut the central spine wall. The pitched roof is clad in grey slate. Two dormers have been constructed within the rear roof slope of the building. Refer to photograph P14, Appendix A.

The property has a partial basement at the rear eastern corner. The basement is accessed via a small hatch within the external floor decking of the beer garden. No other areas of basement were discovered during our inspection. The full extent of basement areas beneath the building were not confirmed. Refer to layout 002, Appendix C. Refer photographs P15 to P17, Appendix A.

The ground floor of the property is of suspended timber construction. Floor decking and finishes prevent a detailed inspection of the floor construction.

A timber staircase to the rear of the building provides access from ground to first and second floor levels. Refer to photographs P46 to P51, Appendix A and diagrammatic building layouts, Appendix C.

The first and second floors of the building are of timber construction with timber boards supported on timber joists which span north to south within the property supported by the internal spine wall and external front and rear elevation walls. Refer photographs P24 - P27, Appendix A.

Chimney breasts are visible to the internal face of both party walls at first and second floor levels.

The roof of the building is formed of two mono-pitches one to the front and one to the rear. The front roof appears to have a low pitch (only visible internally) with timber roof joists spanning from the front elevation wall of the building to the central spine wall. Refer photographs P37 to P41, Appendix A. The rear roof appears to have been partially reconstructed with some elements of the original timber roof structure being retained. Two dormers have been constructed within the rear roof structure. Refer to photographs P42 to P45, Appendix A.

2.2 CHIMNEY STACK – 30/32 NARROWGATE

The red/brown clay brickwork chimney stack projects above the roofs and party wall lines of Nos. 30 and 32, Narrowgate, Alnwick.

The chimney stack has an approximate plan area of 1.4m x 0.6m and an approximate height of 1.50m above the roof of No. 32 and approximately 4.50m above the roof of No. 30.

The chimney stack abuts the external gable wall of No. 32.

Refer to photographs P52 to P56, Appendix A.

2.3 EXTERNAL TIMBER PERGOLA

The external timber pergola is located within the rear beer garden of No. 30 Narrowgate, refer to diagrammatic location plan, Appendix B.

The pergola has a clear, corrugated PVC roof covering supported on 95x47mm softwood timber purlins at approx 400mm centres which span between longitudinal timber edge and central spine beams (145x45mm softwood), supported by primary timber roof beams (2No. 145x45 s.w) and 100x100 s.w. timber posts.

The pergola is approximately rectangular on plan (slightly tapered) with approximate plan dimensions of 11.5 x 4.5m and height of approximately 3m.

Timber knee braces (145x45mm s.w) connect the timber outer edge beams to the timber posts in some locations.

The timber posts at the northern end of the pergola are bolted to and supported by the stone boundary wall.

Refer photographs P57 to P67, Appendix A and layout drawings 005, Appendix D.

3.0 STRUCTURAL APPRAISAL

3.1 28 NARROWGATE

3.1.1 Front (south) elevation wall

The front elevation wall of the property appears to be of stone masonry construction (approx. 500-600mm in thickness) with a rough external render finish.

Viewed externally, the wall was noted to have poor vertical alignment at first and second floor levels, the head of the wall leaning (and bowing) inwards towards the north. Refer photograph P7, Appendix A.

The external roof rainwater drainage appears to be defective and water damage and vegetation growth were evident within the wall and above the shopfront fascia. Refer photographs P7 to P9, Appendix A.

The beams supporting the front elevation wall, above the shopfront, appear to have failed locally, this is evident in the misalignment observed within the shopfront fascia signage and the cracking within the first-floor masonry wall above. Refer photographs P8 to P12, Appendix A. The shopfront beams were not visible for inspection during our visit.

The two outer cast iron columns, supporting the shopfront beams at ground floor level, were noted to lean outwards approx. 20mm over 1.0m level length, towards the road (south). Refer photographs P20 + P21, Appendix A.

Where visible internally, the timber lintels above first and second floor window openings were noted to have suffered timber decay. Refer photographs P37 to P40, Appendix A.

3.12 Rear (north) elevation wall

The rear elevation wall of the property is of load bearing masonry (stone) construction and is of substantial thickness (estimate 500-600mm). The rear elevation of the property has a (recent) smooth render finish, although the elevation is only partially visible due to the presence of external canopies, outbuildings and boundary walls.

Where visible internally, timber lintels above external window openings were noted to have suffered timber decay. Refer photographs P31 and P47, Appendix A.

3.13 Internal timber staircases

Internal timber staircases provide access from ground to first and second floor levels. The staircases have poor alignment throughout and appear to have suffered severe timber decay (dry rot) in many locations. Refer to photographs P46 to p51, Appendix A.

3.14 Timber first floor

The timber first floor structures were not visible for inspection due to the presence of plaster ceilings, floor boards and stored materials. Despite some undulations and misalignment in the landing / staircase areas, no significant deflections or distortions were observed.

3.15 Timber second floor

The timber second floors (all rooms) have suffered severe decay with evidence of extensive wet and dry rot throughout the timber floor deck, joists, trimmers and floor beams.

Past modifications and repairs to the timber floor within the front section of the building (room 6) have been poorly implemented and the floor has suffered significant deflection and misalignment.

The second floor joists within room (4), at the northwestern corner of the building, have failed at their junction with the rear elevation wall. The northern edge of the floor appears unsupported and has dropped in level. Refer photographs P29, P30 + P35, Appendix A.

The second floor timber joists within room (5) at the northeastern corner of the building have been replaced at some time in the past (not recent), the joists have suffered subsequent timber decay at the bearing onto the rear elevation wall of the building with significant loss of cross section in some cases. Refer photograph P31, Appendix A.

3.16 Timber roof structures

The roof structures of the building appear to have been replaced in the past and are not original.

The roof to the front (south) section of the building was only visible internally and appears to be of a low-pitched construction, with bitumen felt, on plywood deck, on timber roof joists which span between the front elevation wall and internal load bearing wall of the building. Past water ingress was noted adjacent to the front elevation wall (gutter line) with evidence of timber decay within the timber joists at their bearings onto the wall. Refer photographs P39 + P40, Appendix A.

The timber roof structure to the rear (north) of the property appears to have been recently reconstructed. New timber rafters and dormers have been constructed off existing timber rafters and purlins (some decay was evident within the original timber elements). Refer photographs P42 to P45, Appendix A.

3.17 Basement and sub-floors

Partial basements are present beneath the building, only limited access was possible during our inspection. No significant structural defects were identified within the partial basement area.

3.2 CHIMNEY STACK – 30/32 NARROWGATE

The external chimney stack has poor vertical alignment at high level, the head of the chimney leaning to the east by approximately 100mm-150mm – viewed from ground level.

The chimney stack abuts the gable wall of the adjacent property for much of its height and projects above the higher roof level by approximately 1.0-1.5m.

Weathered mortar joints were visible in some locations and the face of some brick elements appear to have spalled from the stack.

Refer photographs P53 to P56, Appendix A.

3.3 EXTERNAL TIMBER PERGOLA

The timber posts supporting the pergola roof structure have good vertical alignment and appear stable when agitated and pushed.

The base support of the posts could not be confirmed. The posts appear to be supported in galvanised steel shoes which bear directly onto the concrete / stone paving. The timber posts appear slender in cross section and some were noted to have twisted (on plan) over their 3m height, refer photographs P62, Appendix A.

The two outer timber posts, at the northern end of the pergola, are connected to the stone boundary wall using anchor bolts. The timber posts do not extend fully to the floor / base. Refer photographs P63 to P65, Appendix A.

Local damage to one of the roof purlins was noted to have been caused by a tensioning cable from the adjacent tented structure. Refer photograph P67, Appendix A.

4.0 OPINION & RECOMMENDATIONS

4.1 28 NARROWGATE - ALNWICK

The property is in very poor structural condition having suffered severe timber decay in many areas. The condition of the property has also been compromised by past sub-standard repair and modification works and poor long-term maintenance.

4.1.1 Timber staircases and floors

The timber staircases and second floors within the building are in very poor, potentially unstable and dangerous condition. We recommend that the second floors should not be accessed until temporary support has been provided at the lower levels.

The timber staircases and second floor structures will require removal and replacement with new. Temporary lateral restraint will be required to the front elevation wall to allow the floor to be removed and replaced. Temporary support (propping through to basement level) will also be required to allow safe access to the upper floors and roof structures.

Although not currently visible for inspection, we suspect (based on past experience of buildings of this age, construction and condition) that significant rot and decay will also be encountered within other timber elements of the building (ground floors, first floors, lintels, beams), which will require treatment, repair or replacement.

We recommend, following the installation of safe temporary support to staircases and floors, that all stored materials be removed from the building and that internal plaster finishes be removed to allow a detailed inspection of all structural elements.

All timber elements within the building will require exposing and inspecting for indications of decay and infestation. It may be possible to treat and repair some timber elements, however, we expect that many will require removal and replacement with new.

Where dry rot is identified within timber elements and masonry walls, specialist treatments will be required to retained elements – to both timber and masonry elements.

4.12 Timber roof structures

Areas of rot and decay were identified within the timber roof structures (note:- only limited access was possible within the second floor), new timber roof structures also appear to have been constructed off existing decayed timber elements. Extensive repair and reinstatement of the roof structures will be required and in the worst case the roofs may require removal and replacing with new (to be confirmed). Gutters, flashings and rainwater drainage will require repair and/or replacement.

4.13 Front elevation wall

The cracking and movement observed within the front (south) elevation wall would appear to be the result of the partial failure of the shopfront beams, at first floor level. The existing shopfront beams are currently concealed behind plaster and timber cladding and the details and condition of the beams could not be confirmed. Based on our observations, the existing front elevation wall will require temporary propping to allow the existing beams to be repaired, treated or more likely replaced with new. The front elevation wall, timber upper floors and roof structure will require temporary propping to allow the shopfront supports to be reinstated, repaired or replaced.

The front elevation wall will require structural repair to cracks, repair to rainwater drainage and all timber lintels above external openings are likely to require replacement.

During the extensive structural remedial works required within the building, we also recommend that additional lateral restraint be provided to the external wall, this may include strapping to internal buttressing walls, installation of internal structural timber frames and tying walls to new floor and roof structures.

4.2 CHIMNEY STACK – 30/32 NARROWGATE

The external chimney stack has poor vertical alignment at high level. We recommend that the upper section of the chimney stack, above the higher roof level (approx 1.0-1.5m), be taken down and rebuilt to a sympathetic and satisfactory vertical alignment. The chimney stack should be rebuilt using existing brickwork where possible with damaged and defective bricks being replaced with matching, reclaimed bricks.

Following the rebuilding of the upper section of chimney stack, the chimney stack should be repointed for its full exposed extent using an approved conservation mortar.

All works to the chimney stack should be approved by the LOCAL Authority conservation officer prior to commencing works.

4.3 EXTERNAL TIMBER PERGOLA

The timber structure is very slender and of lightweight construction. The frame is less robust than would usually be expected in a public, hospitality or retail setting. However, the timber framed pergola structure has good horizontal and vertical alignment and appears to be stable in its current condition.

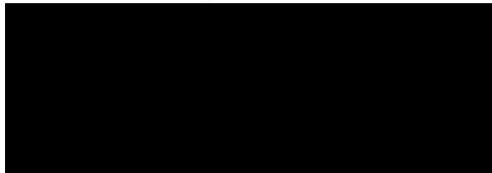
The base support of the timber posts is of concern, as the structure is very lightweight and resistance to wind uplift must be achieved by the connection of the posts to a suitable foundation.

As the post base support and connection details are currently unknown, we recommend that additional anchoring be provided to posts which are isolated or free standing (i.e. may not be required to posts which are bolted to walls, connected to heavy steel containers, etc).

We recommend that the damaged timber purlin (refer photographs P67, Appendix A) be repaired and reconnected to the main roof beam.

We trust the above to be in order.

Yours faithfully



Philip Ashworth

BEng (Hons) CEng MIStructE

Appendices

- A Inspection photographs
- B Diagrammatic location plan
- C Diagrammatic floor plans (as existing) – 28 Narrowgate
- D Diagrammatic layout (as existing) – external pergola

APPENDIX A

INSPECTION PHOTOGRAPHS
8TH JANUARY 2025



P1 – The Dirty Bottles – No. 34 Narrowgate – Alnwick

Front, southwest elevation.



P2 – The Dirty Bottles – No. 32 - 34 Narrowgate - Alnwick

Front, southwest elevation.



P3 – The Dirty Bottles – No. 30 - 32 Narrowgate - Alnwick
Front, southwest elevation.



P4 – The Dirty Bottles – No. 28 - 32 Narrowgate - Alnwick - Front, southwest elevation.
Red arrow highlighting chimney stack with poor vertical alignment.



P5 – No. 28 Narrowgate - Alnwick - Front, southwest elevation.



P6 – No. 28 Narrowgate – Alnwick - Front, southwest elevation.



P7 – No. 28 Narrowgate - Alnwick - Front, southwest elevation.

Poor vertical alignment within front elevation wall, leaning and bowing inwards at 1st and 2nd floor



P8 – Cracking within first floor wall (red arrows) above deflected shopfront beam (blue arrow)



P9 – Deflection within shopfront beam above ground floor entrance with cracking to first floor wall and distortion and damage to shopfront fascia.



P10 – Deflection within shopfront beam above ground floor entrance with cracking to first floor wall and distortion and damage to shopfront fascia.



P11 – Deflection within shopfront beam above ground floor entrance with cracking to first floor wall and distortion and damage to shopfront fascia.



P12 – Cracking within first floor wall above defective shopfront beam.
Defective roof rainwater drainage.



P13 – Cracking within first floor wall above defective shopfront beam.
Defective roof rainwater drainage.



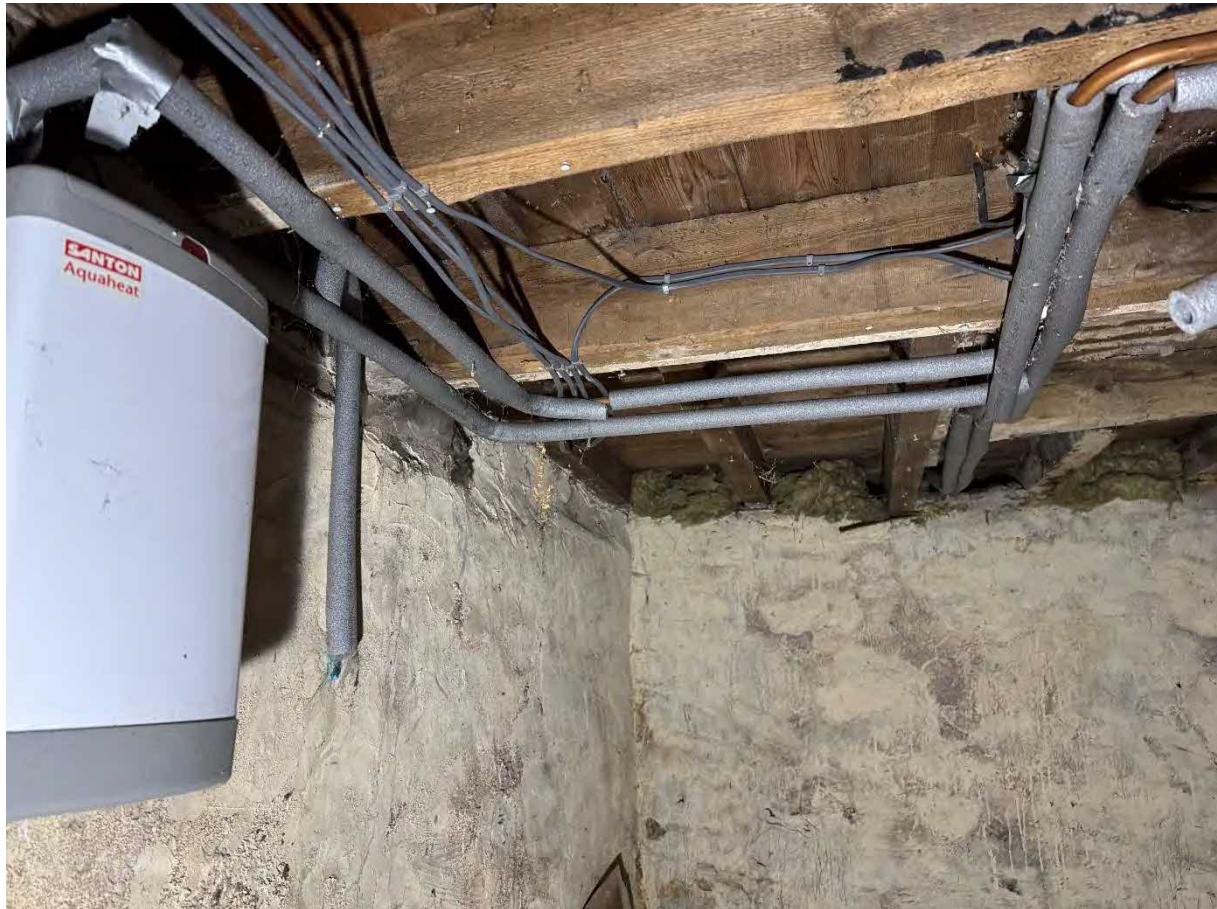
P14 – No. 28 Narrowgate – Alnwick - Rear, northeast elevation (viewed from boundary).



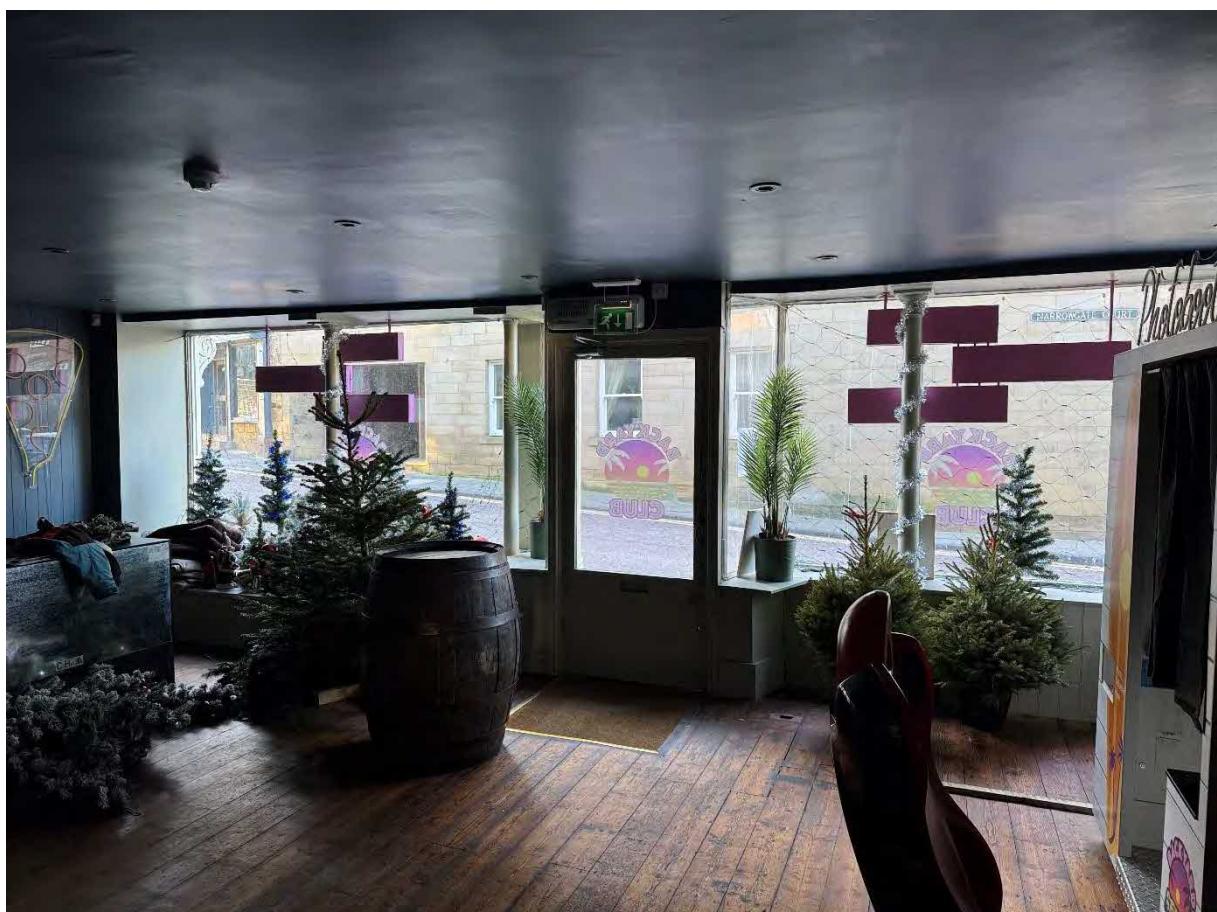
P15 – Entrance to partial basement to rear of property.
View of underside of timber staircase at ground floor level.



P16 – Entrance to partial basement to rear of property.
Stone steps into basement – timber ground floor over.



P17 – Underside of timber ground floor – viewed from within basement.



P18 – Internal view, ground floor shopfront.



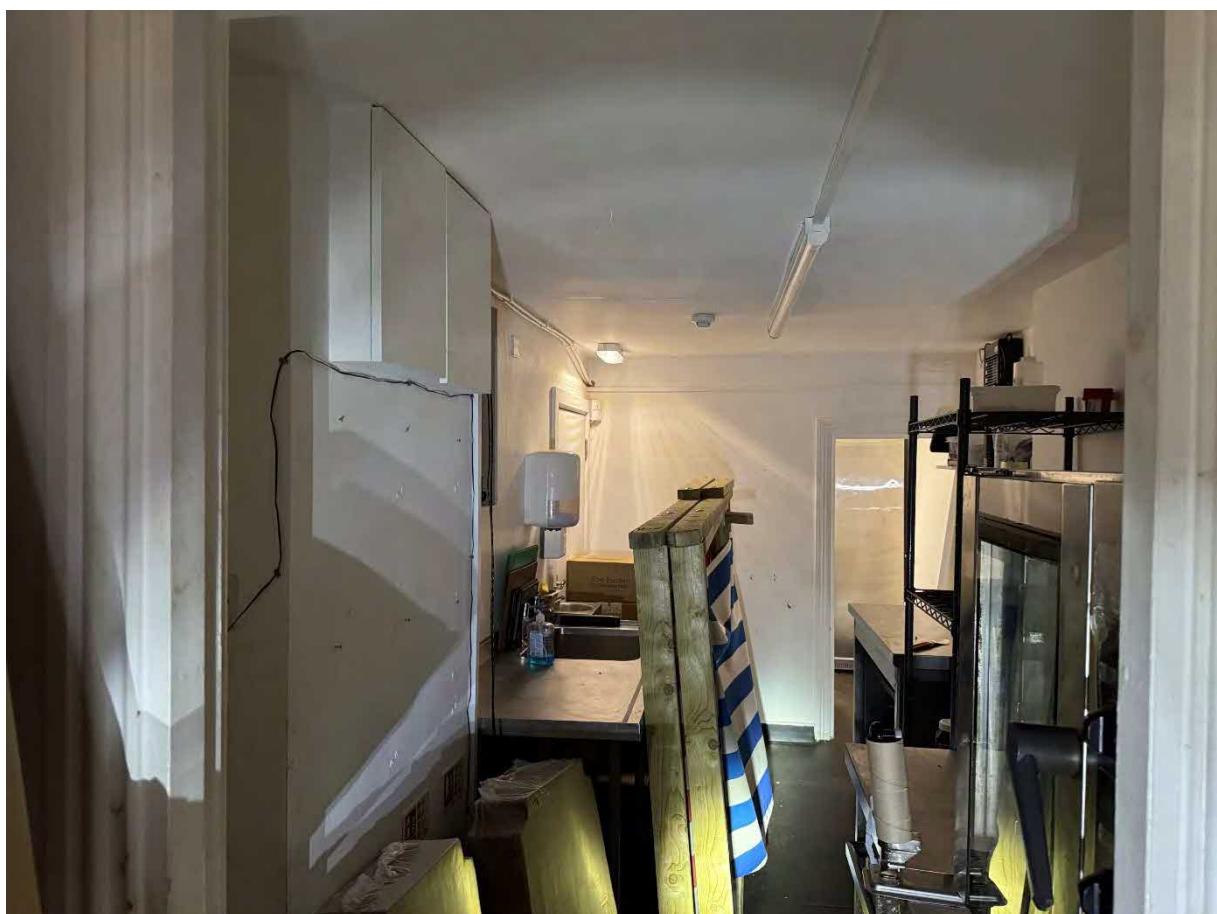
P19 – Cast iron columns supporting shopfront beams.



P20 – Head of outer (two) cast iron columns lean out to south by approx 20mm over 1.0m level length.



P21 – Head of outer (two) cast iron columns lean out to south by approx 20mm over 1.0m level length.

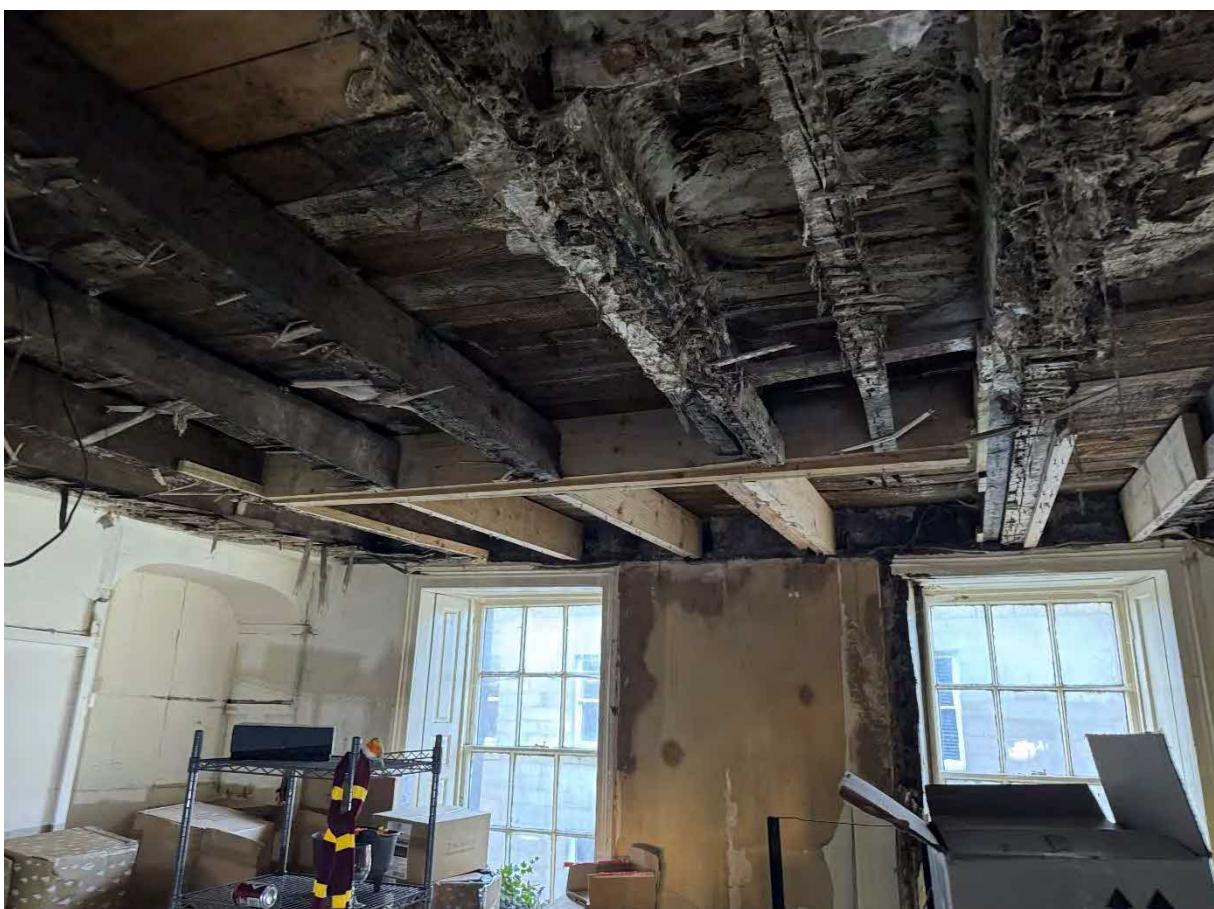


P22 – Ground floor – rear kitchen and projecting outrigger.



P23 – Ground floor – view from front to rear room.

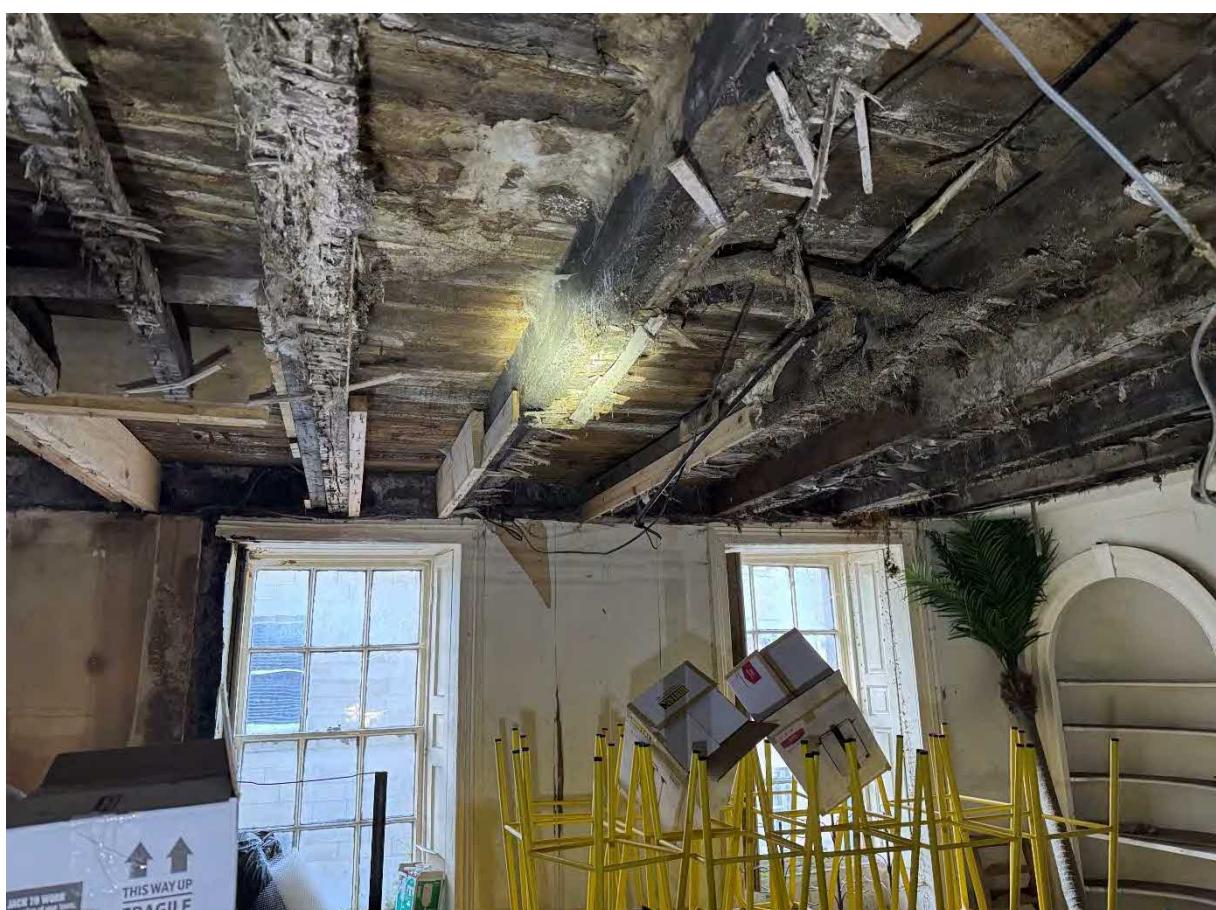
Loadbearing masonry spine wall to nearside – with large openings at ground floor level.



P24 – First floor level – front room (3). Severe decay (wet and dry rot) within timber second floor structure. Past modifications and repairs to second floor structure appear to have been poorly implemented and the floor is potentially unsafe.



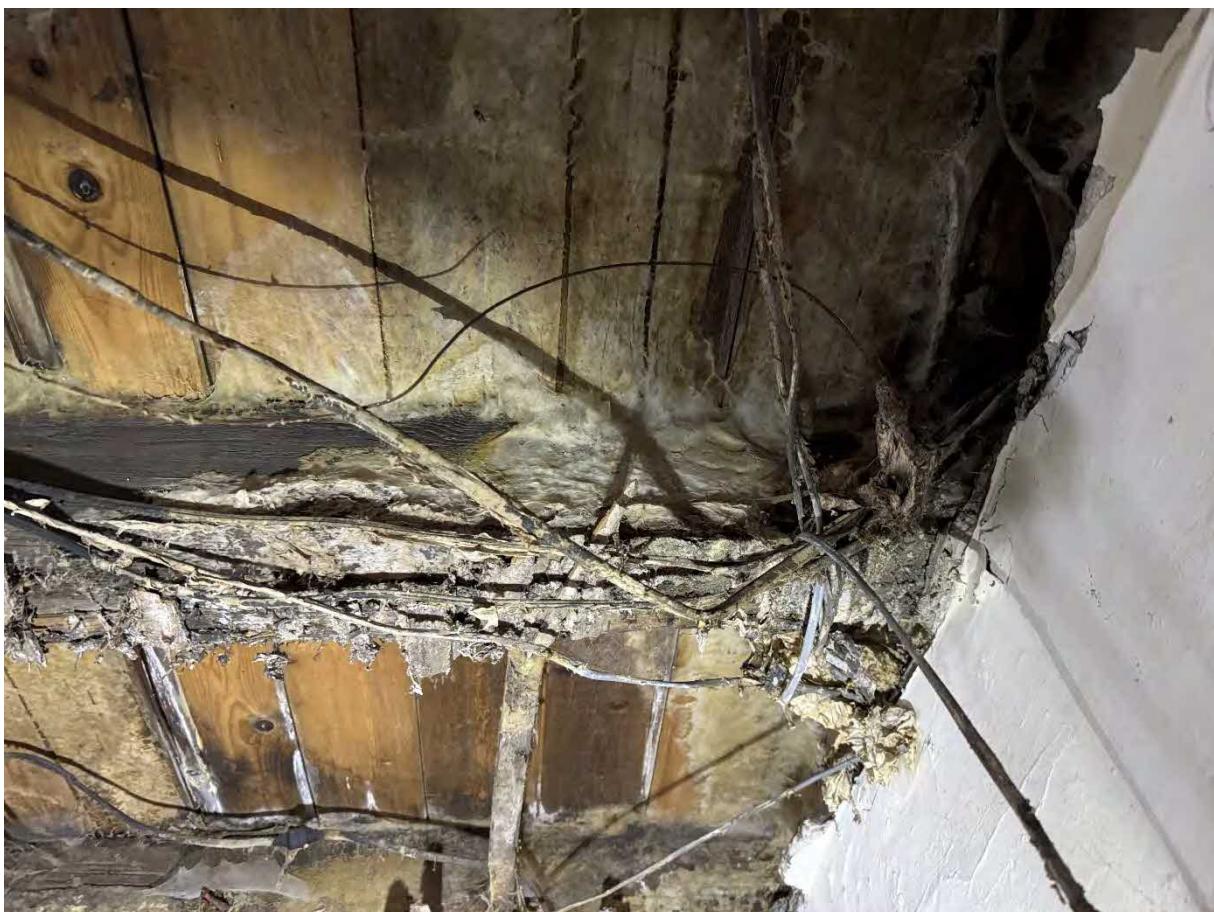
P25 – First floor level – front room (3). Severe decay (wet and dry rot) within timber second floor structure. Past modifications and repairs to second floor structure appear to have been poorly implemented and the floor is potentially unsafe.



P26 – First floor level – front room (3). Severe decay (wet and dry rot) within timber second floor structure. Past modifications and repairs to second floor structure appear to have been poorly implemented and the floor is potentially unsafe.



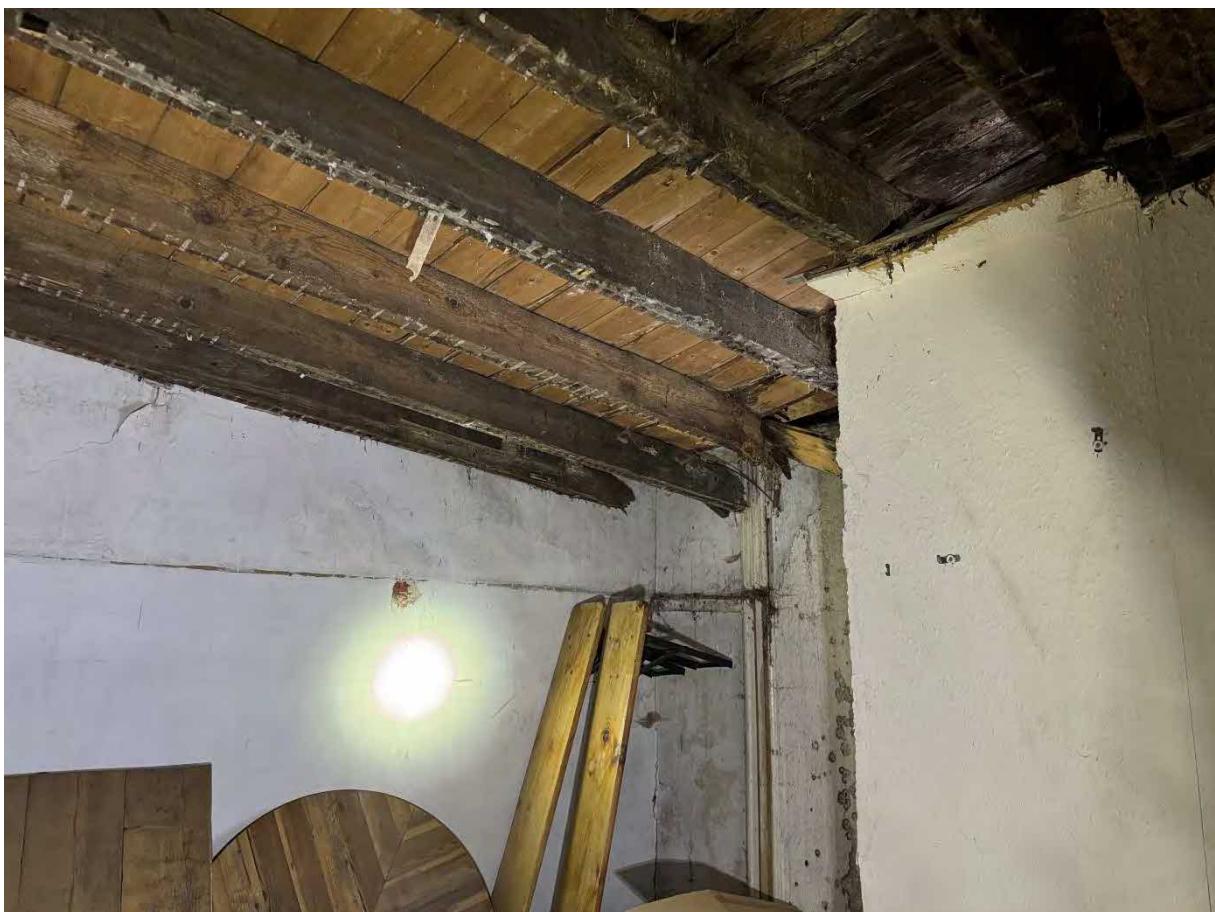
P27 – First floor level – front room (3). Severe decay (wet and dry rot) within timber second floor structure. Past modifications and repairs to second floor structure appear to have been poorly implemented and the floor is potentially unsafe.



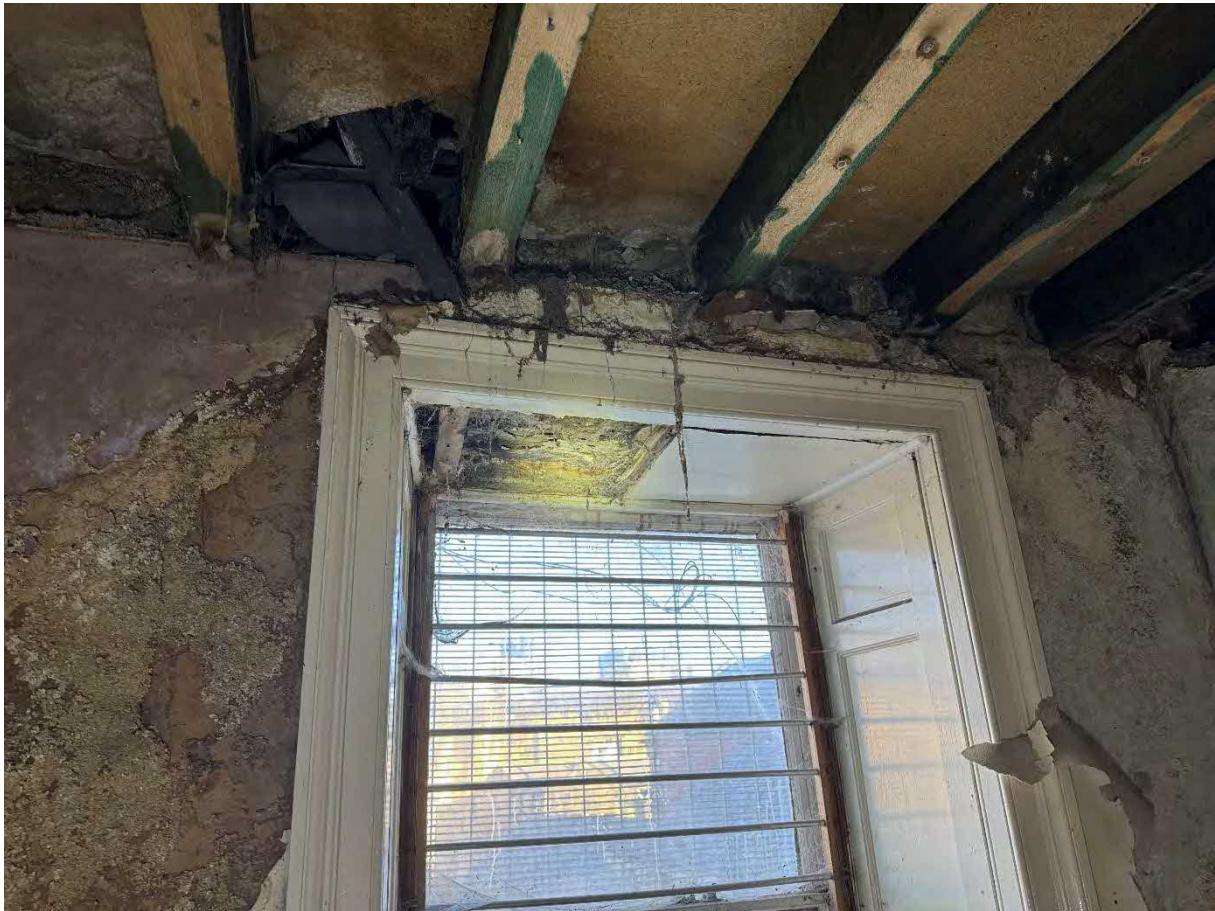
P28 – First floor level – front room (3).
Severe decay (dry rot) within timber second floor structure.



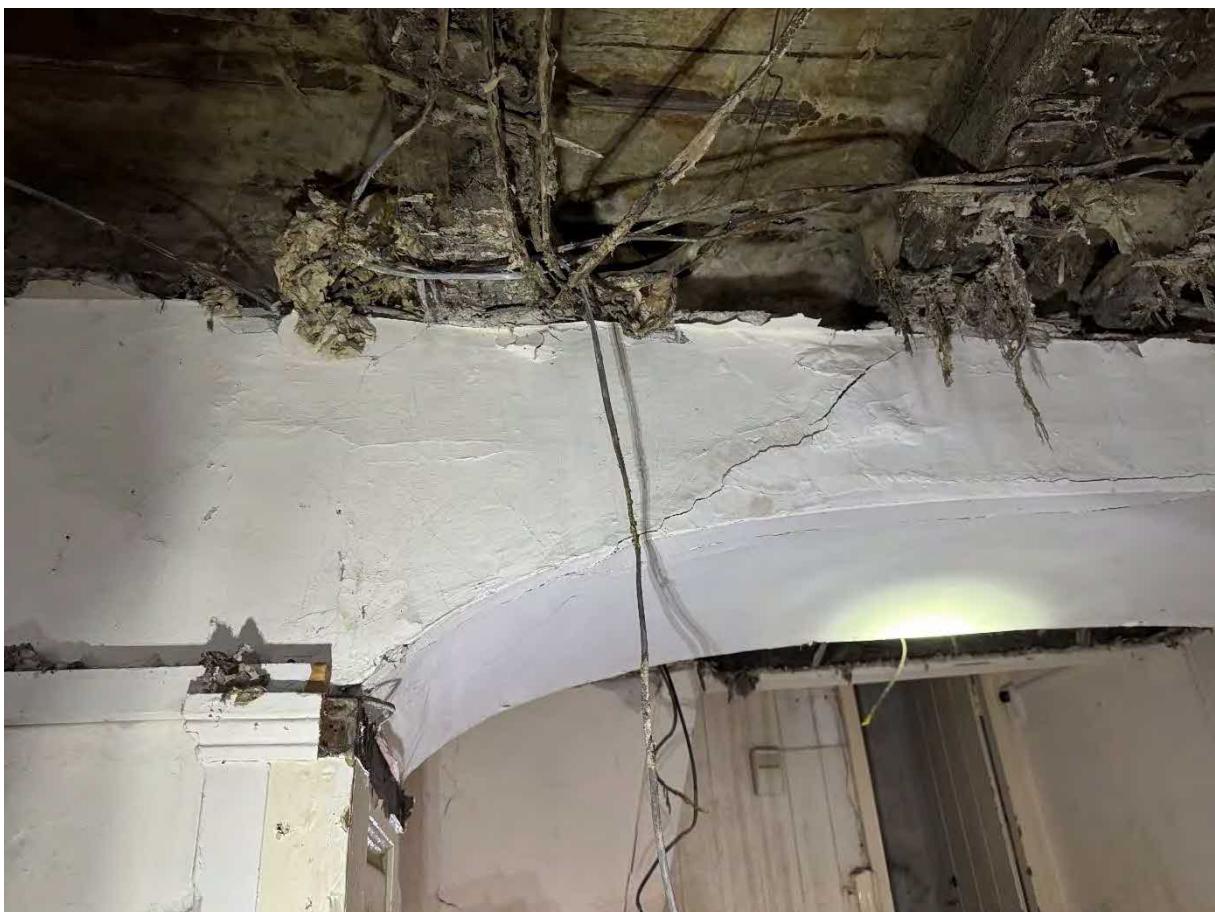
P29 – First floor level – front room (1). Second floor structure (over) has failed at bearing onto rear elevation wall. Second floor over has poor horizontal alignment and is unstable.



P30 – First floor level – front room (1). Second floor structure (over) has failed at bearing onto rear elevation wall. Second floor over has poor horizontal alignment and is unsafe.



P31 – First floor level – front room (2). Second floor structure (over) has been replaced in the past (not original). Timber joists have suffered severe decay at bearing onto rear elevation wall. The second floor (over) is potentially unsafe.



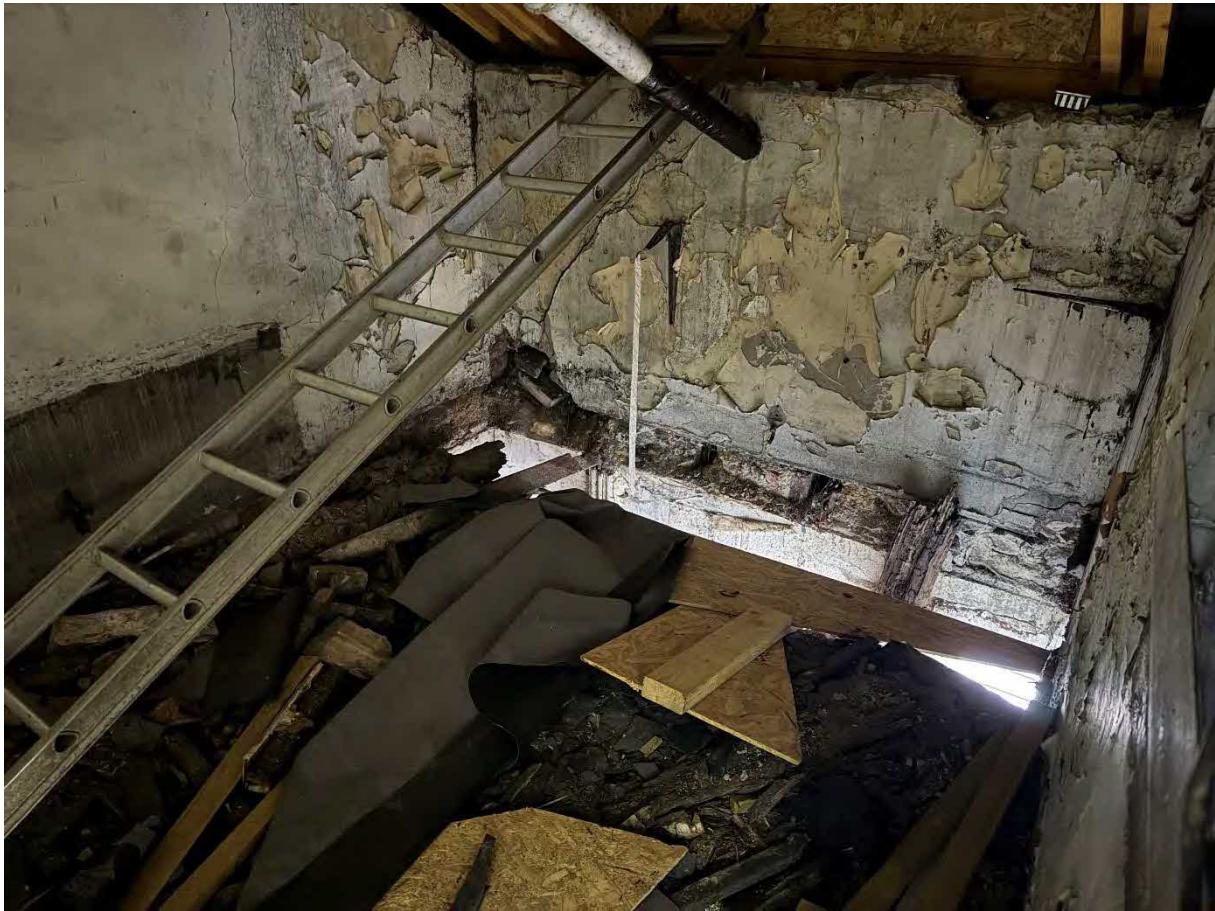
P32 – First floor level – cracking within plaster arched opening between front room (3) and landing.



P33 – Loose masonry and decayed timber within wall at second floor landing.



P34 – Loose masonry and decayed timber within wall at second floor landing.



P35 – Second floor level – rear room (4). Second floor structure has failed at bearing onto rear elevation wall. Timber floor structure has poor horizontal alignment and is unstable.

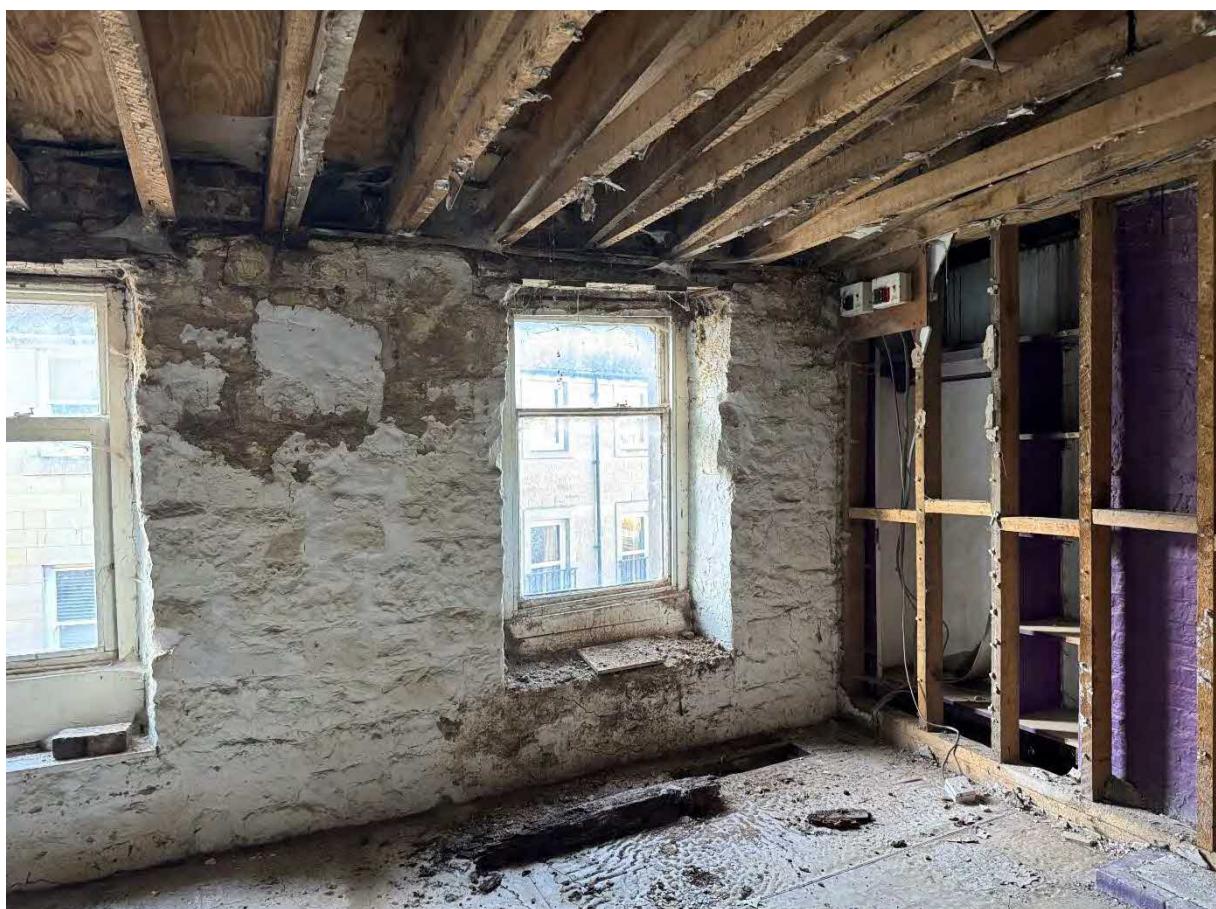


P36 – Brick rubble debris at second floor level – room (6).



P37 – Internal view – front elevation wall, second floor level – room (6)

Severe decay within timber lintels above window openings (viewed from distance).



P38 – Internal view – front elevation wall, second floor level – room (6)

Severe decay within timber lintels above window openings (viewed from distance).



P39 – Internal view – front elevation wall, second floor level – room (6)

Severe decay within timber lintels above window openings (viewed from distance).



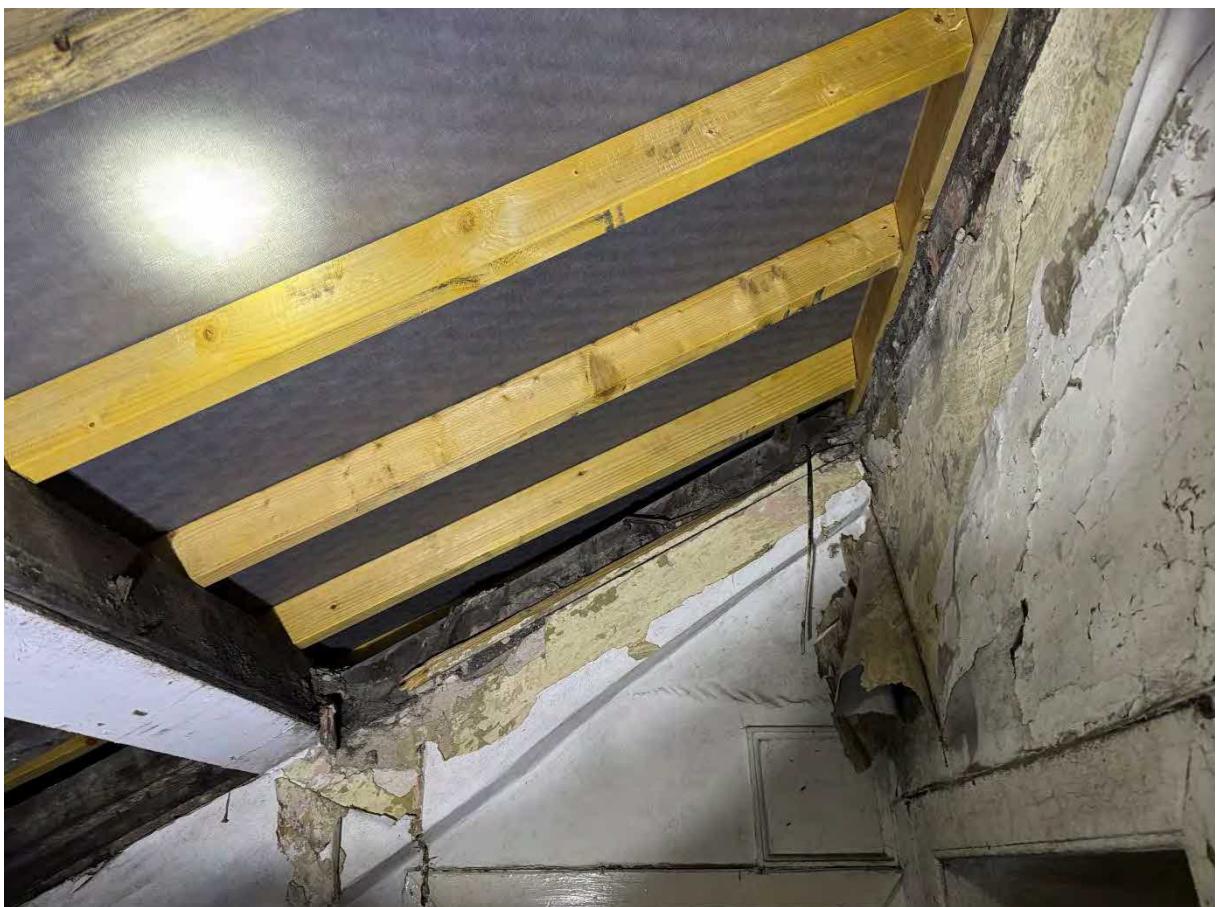
P40 – Internal view – front elevation wall, second floor level – room (6)

Evidence of water ingress and timber decay at junction of timber rafters into wall - (viewed from distance).



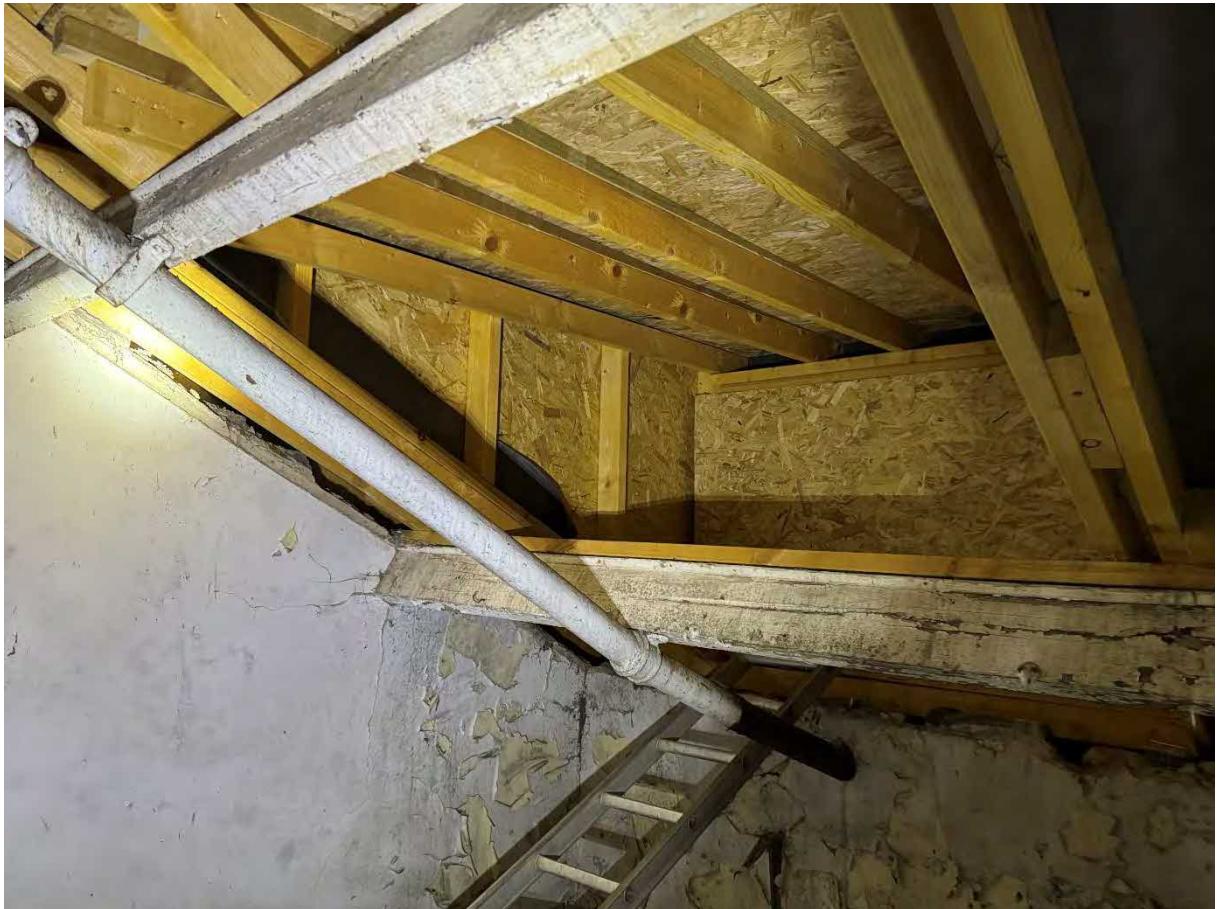
P41 – Underside of low-pitched timber roof to front of building.

Viewed from within room (6).

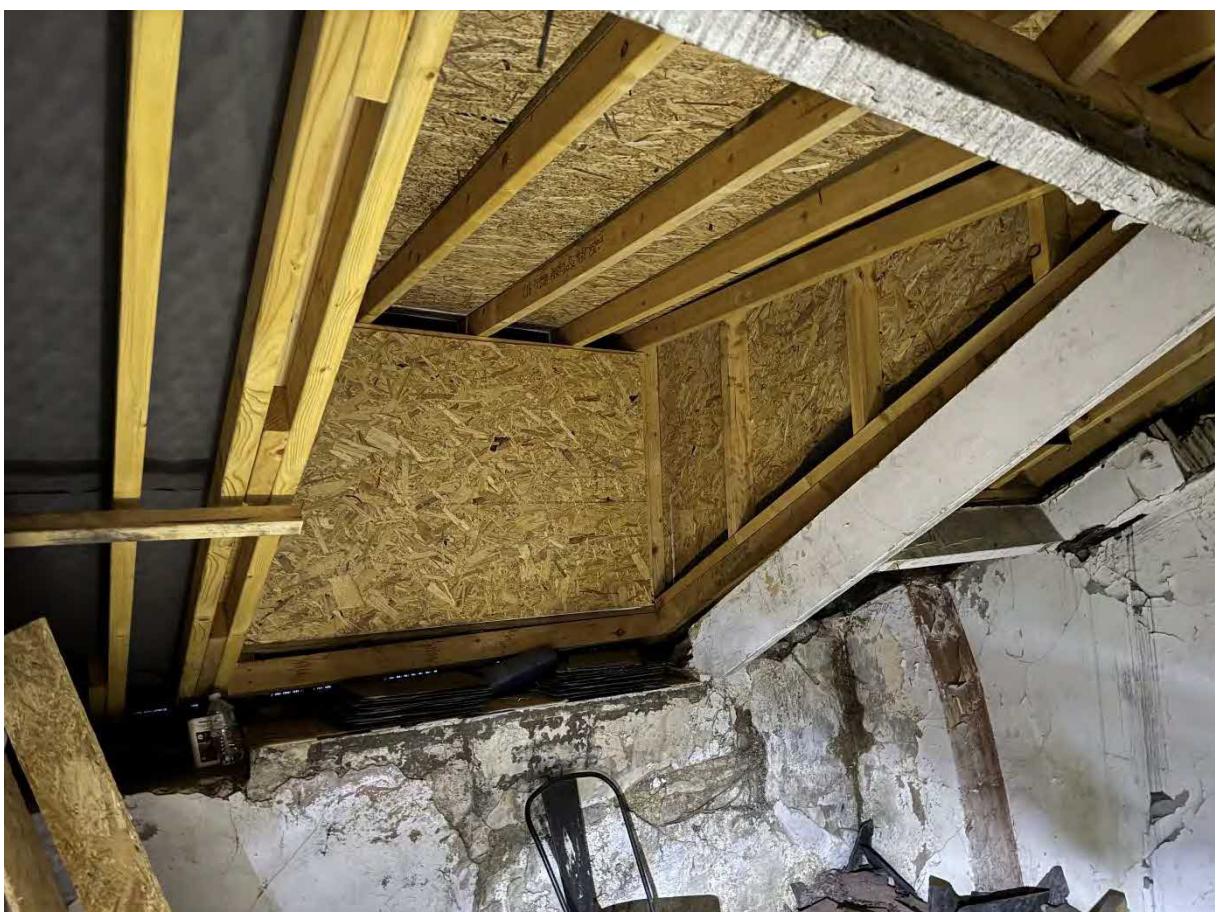


P42 – Recently installed timber rafters and roof membrane – supported on original timber roof structure.

Rear roof slope.



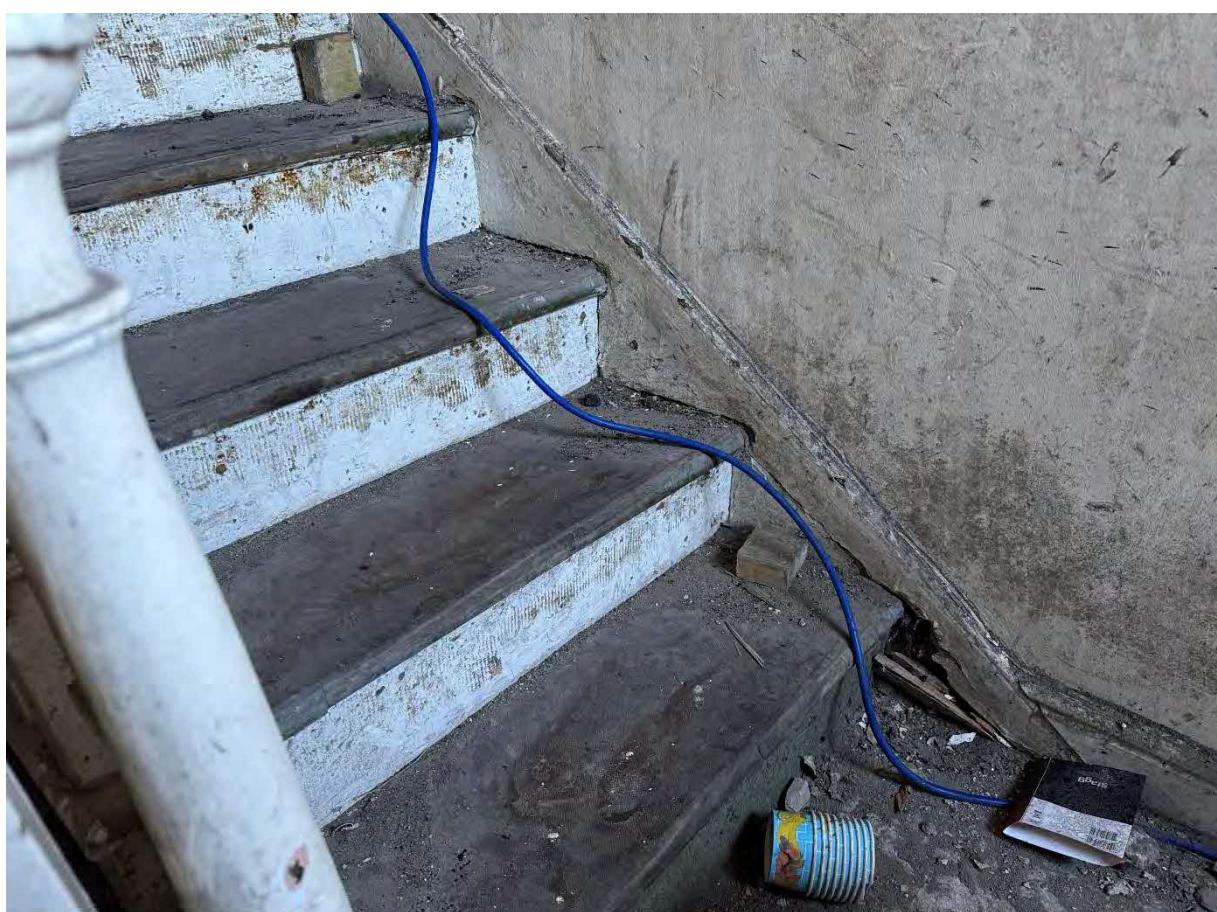
P43 – Recently constructed timber dormer to rear of property.
Dormer constructed off original timber roof structure.



P44 – Recently constructed timber dormer to rear of property.
Dormer constructed off original timber roof structure.



P45 – Recently installed timber rafters and roof membrane – supported on original timber roof structure.
Rear roof slope.



P46 – Internal timber staircase – ground to first floor level.
Staircase has poor alignment.



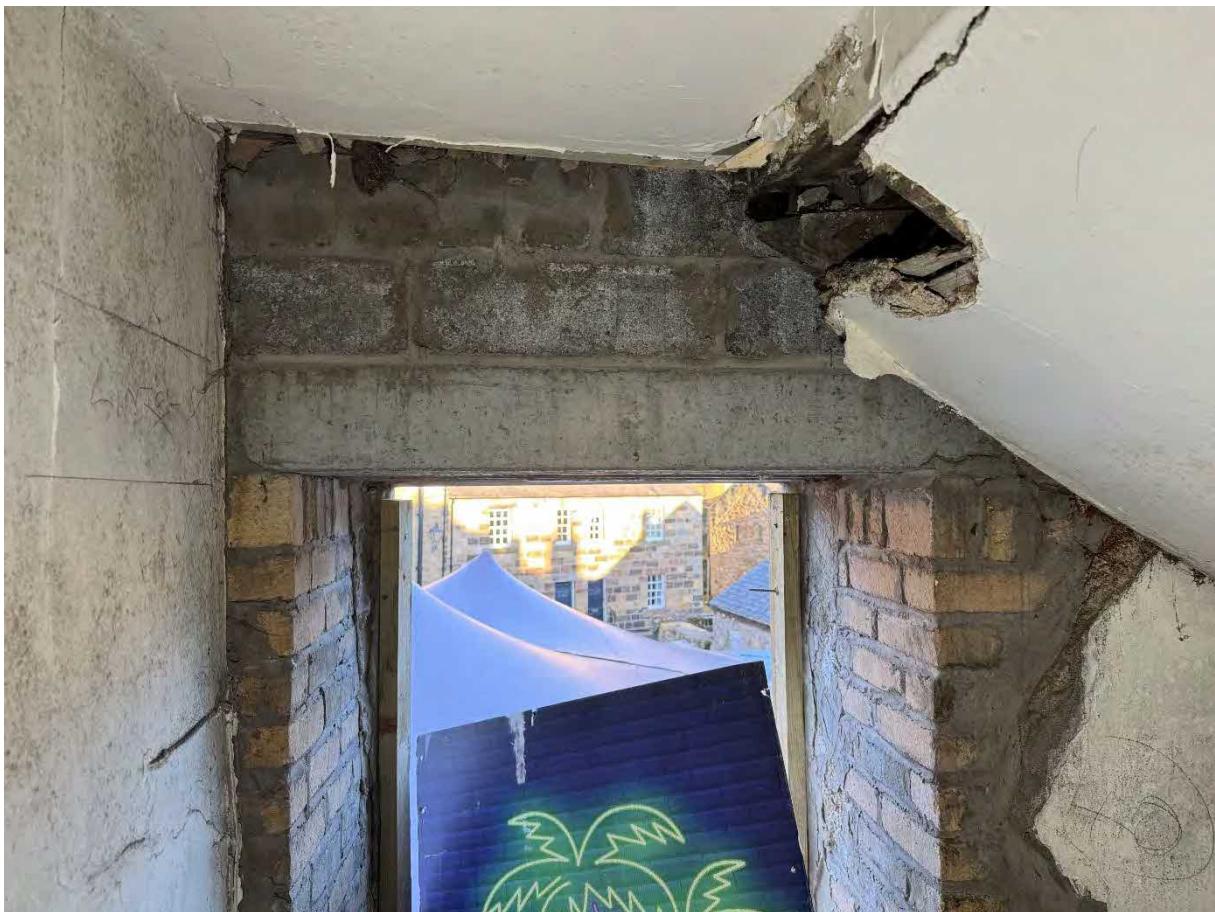
P47 – Poorly infilled window opening within rear elevation wall – staircase.

Built in timber lintels appear decayed.



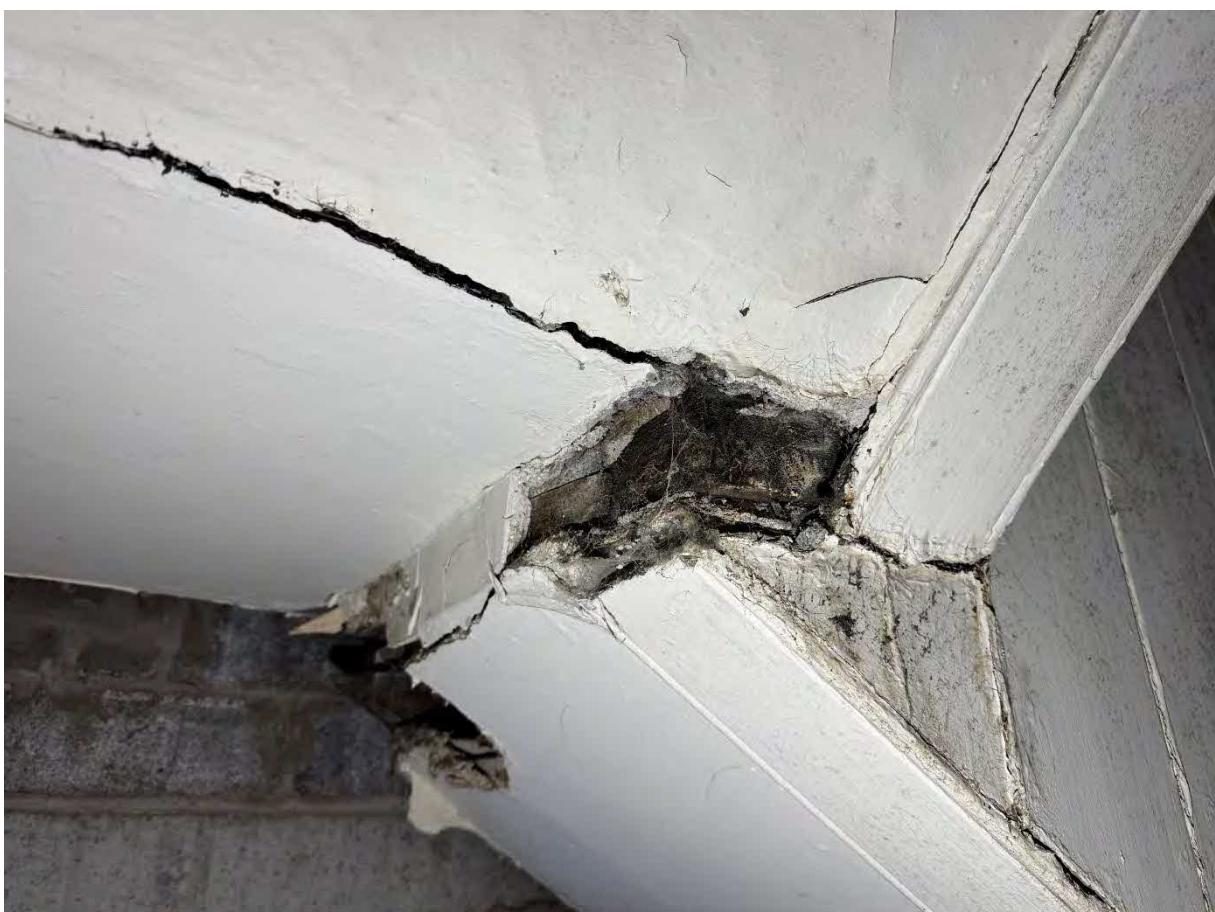
P48 – Internal timber staircase – ground to first floor level.

Staircase has poor alignment.



P49 – Recently replaced lintels forming opening within rear elevation wall.

Internal timber staircase – first to second floor level (RHS) has poor alignment with evidence of timber decay.



P50 – Underside of internal timber staircase – first to second floor level - has poor alignment with evidence of timber decay. Staircase is potentially unsafe.



P51 – Dry rot (fruiting body) – timber staircase, first to second floor level.



P52 – Chimney stack to party wall of 30-32 Narrowgate – viewed from rear.

Chimney stack has poor vertical alignment, leaning out to east (estimate approx 100mm).



P53 – Chimney stack to party wall of 30-32 Narrowgate – viewed from rear.

Chimney stack has poor vertical alignment, leaning out to east (estimate approx 100mm).



P54 – Chimney stack to party wall of 30-32 Narrowgate – viewed from front (south).

Chimney stack has poor vertical alignment, leaning out to east (estimate approx 100mm).



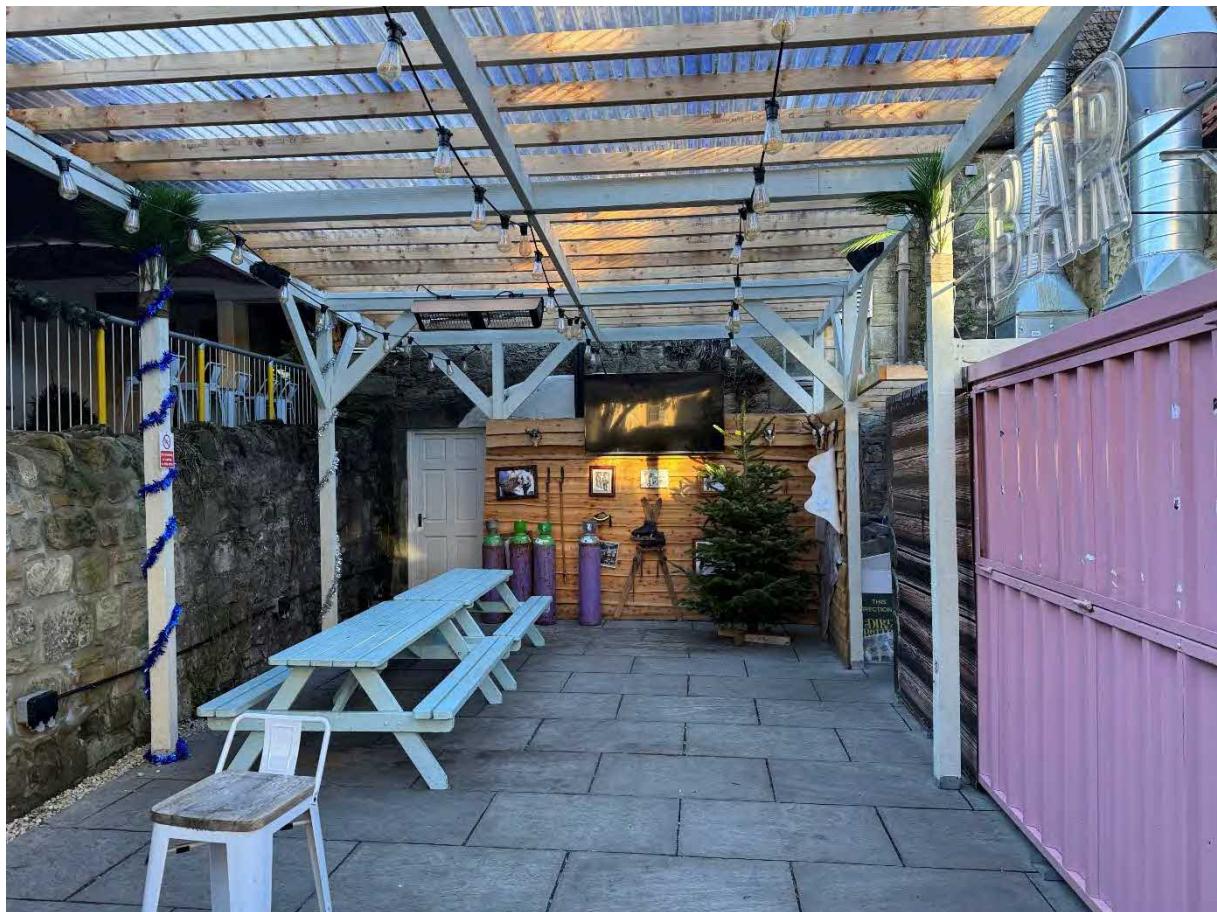
P55 – Chimney stack to party wall of 30-32 Narrowgate – viewed from front (south).

Chimney stack has poor vertical alignment, leaning out to east (estimate approx 100mm).

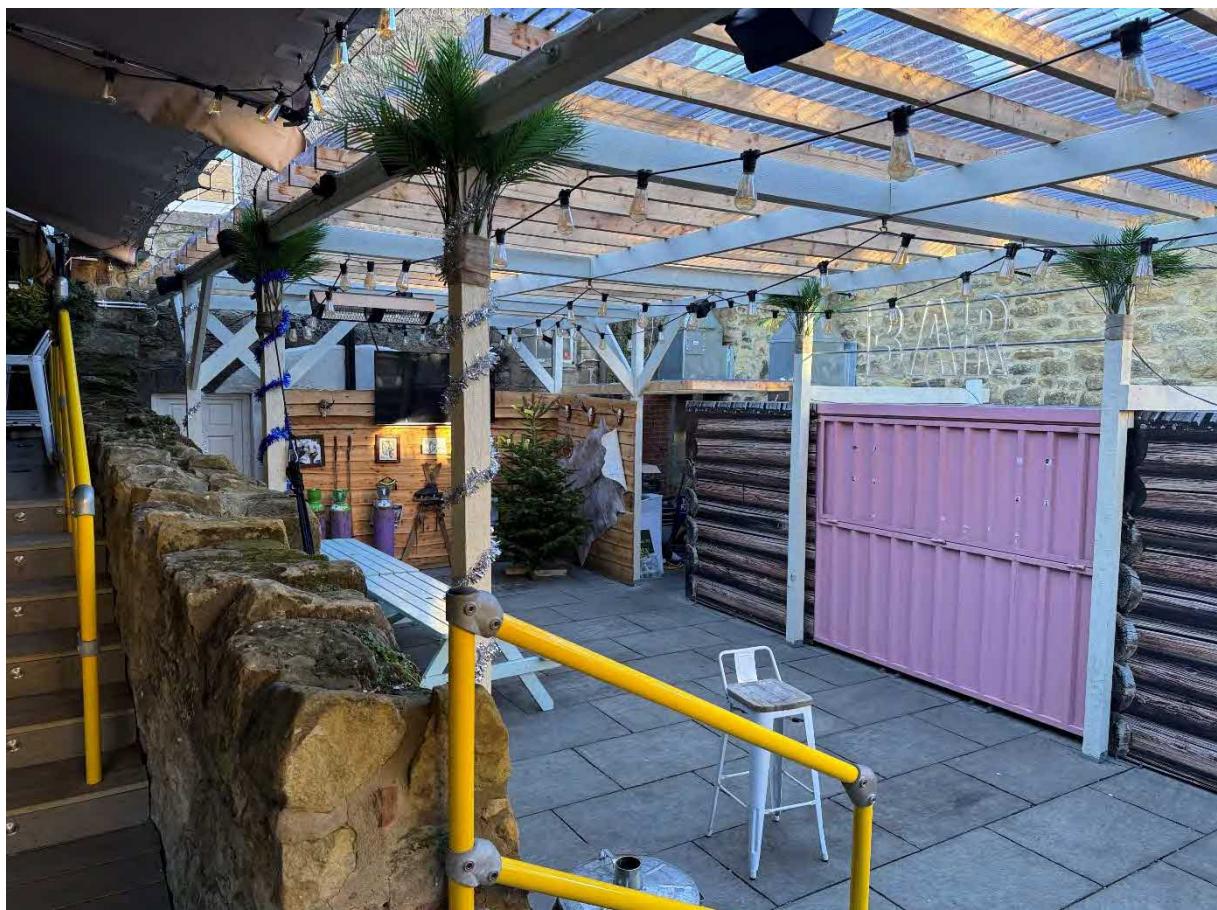


P56 – Chimney stack to party wall of 30-32 Narrowgate – viewed from front (south).

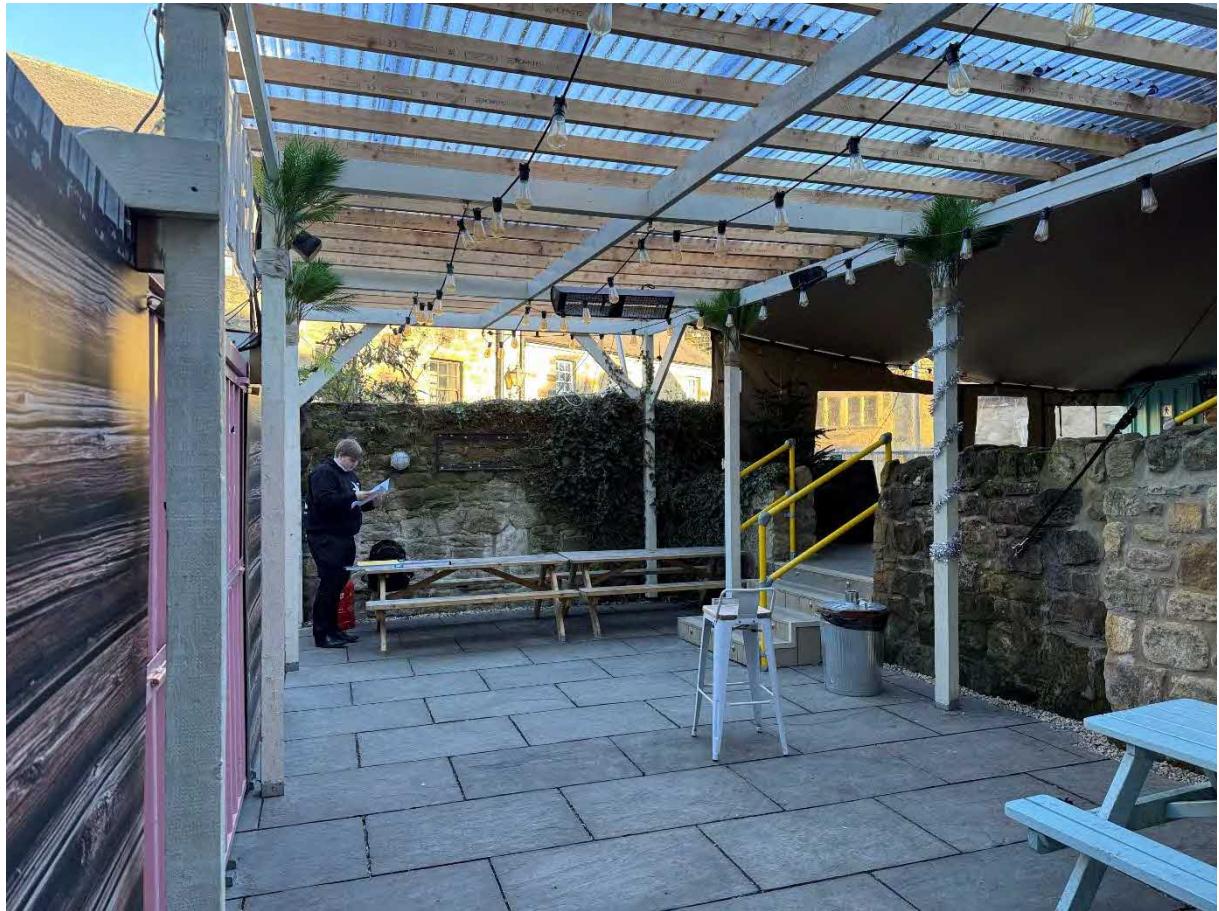
Chimney stack has poor vertical alignment, leaning out to east (estimate approx 100mm).



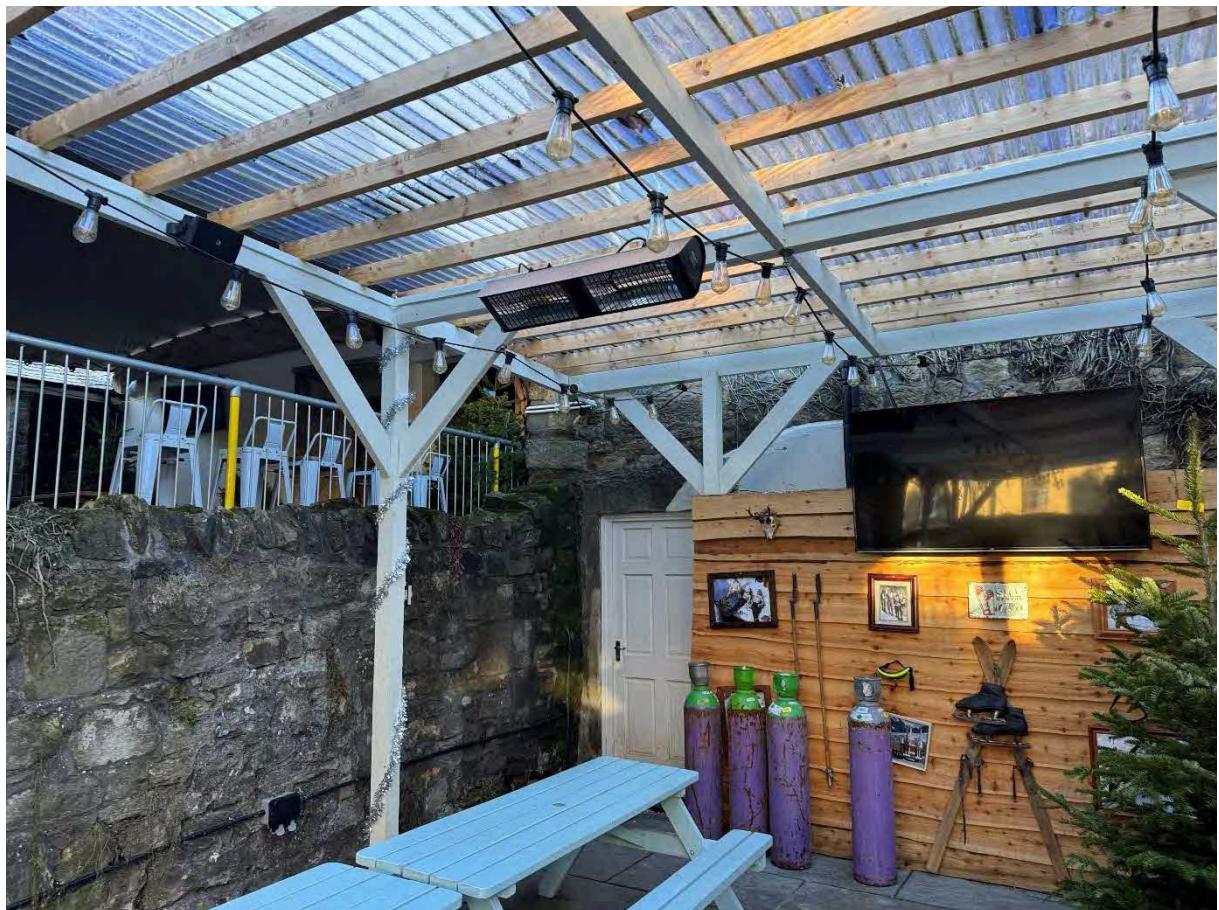
P57 – Timber framed pergola to rear beer garden.



P58 – Timber framed pergola to rear beer garden.



P59 – Timber framed pergola to rear beer garden.

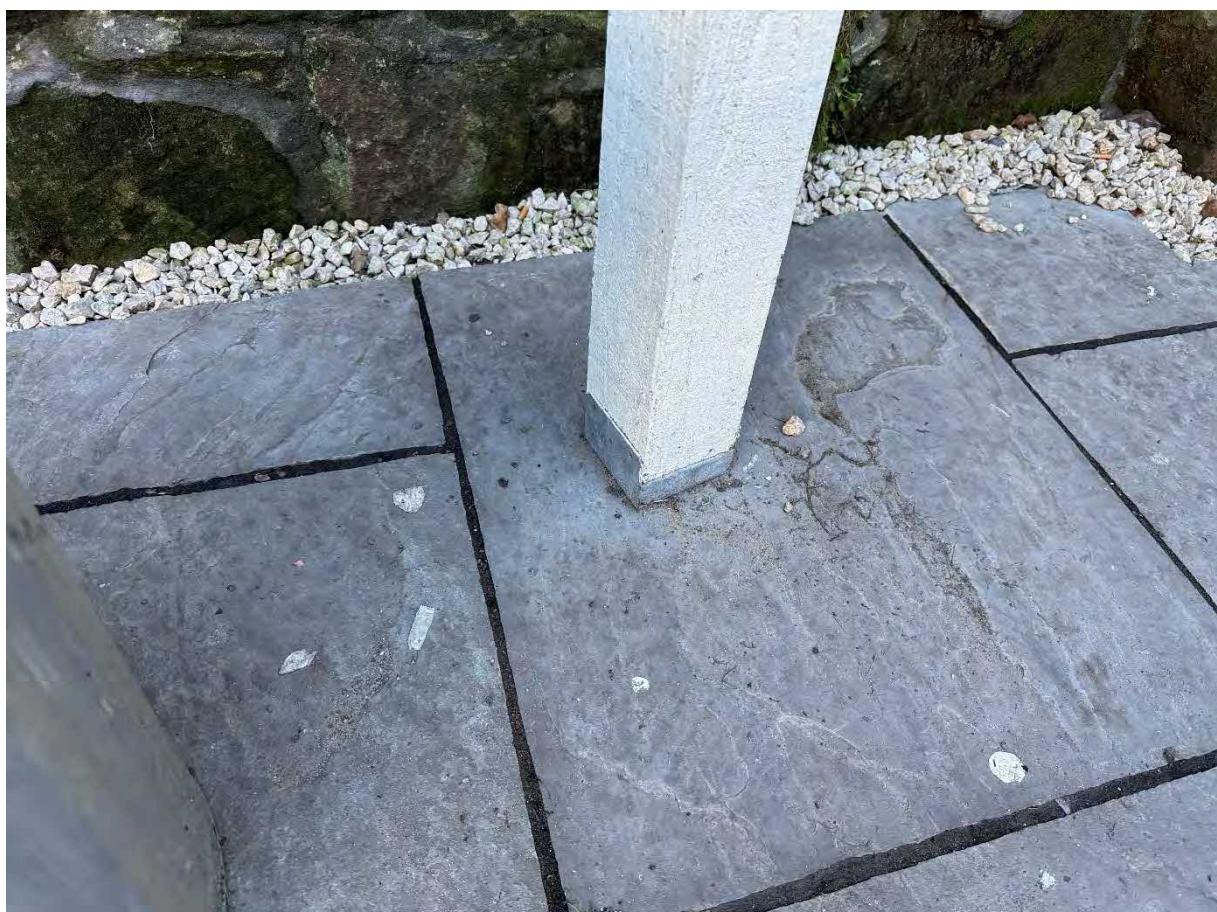


P60 – Timber framed pergola to rear beer garden.



P61 – Timber framed pergola to rear beer garden.

95x45mm timber purlins supported on 145x45mm timber beams, supported on 100x100mm softwood timber posts.

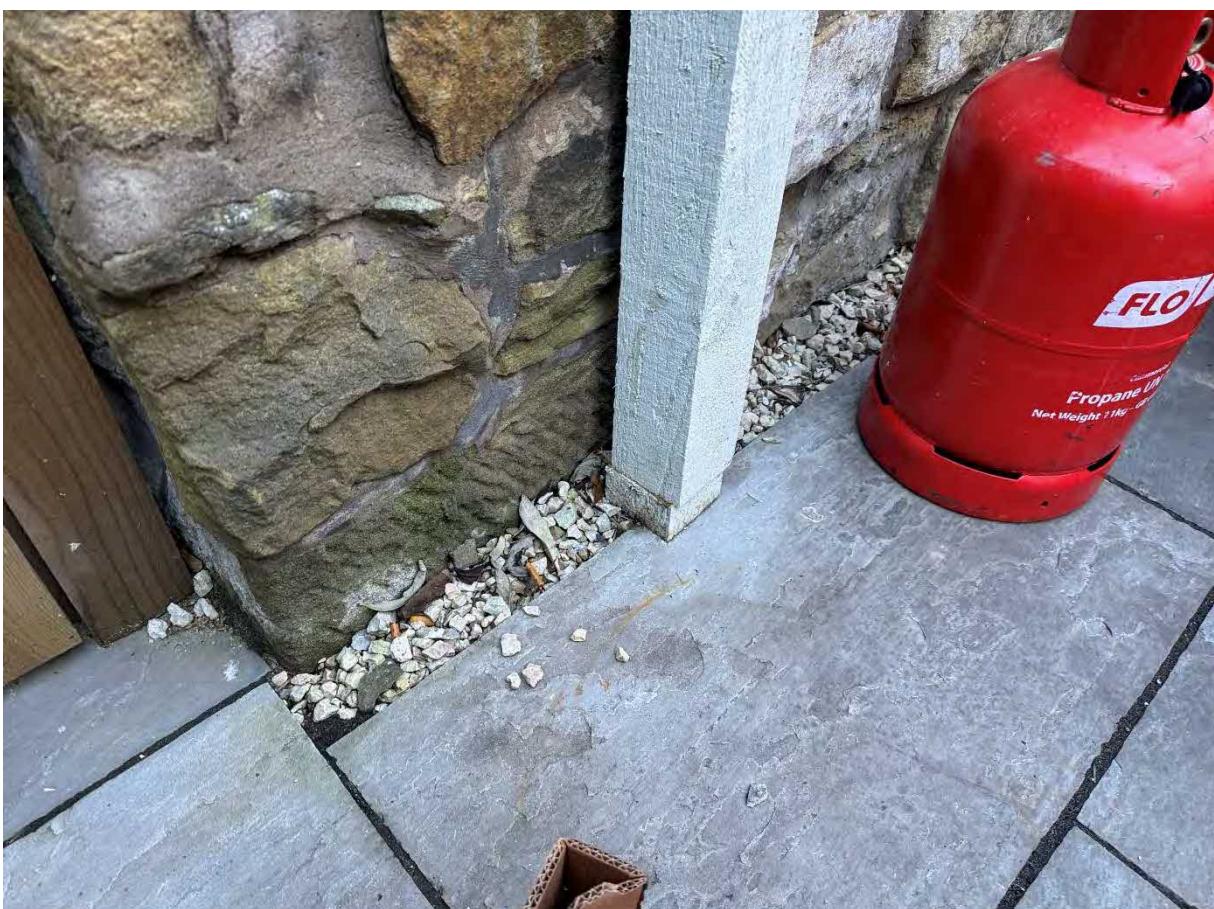


P62 – 100x100mm softwood timber post supported in galvanised steel base shoe.

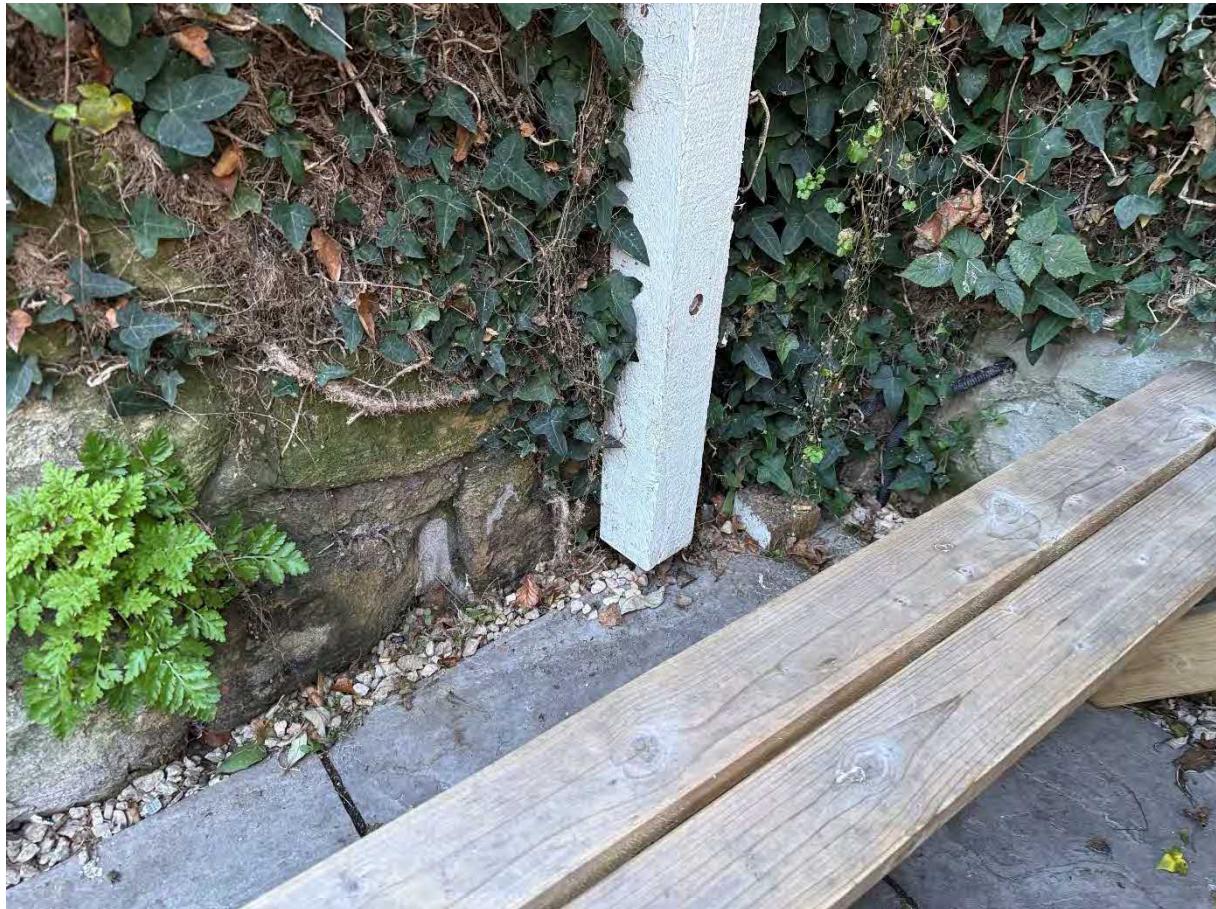
Posts are twisted and base anchorage / support is unknown.



P63 – Timber framed pergola to rear beer garden.
Rear posts bolted to rear stone boundary wall.

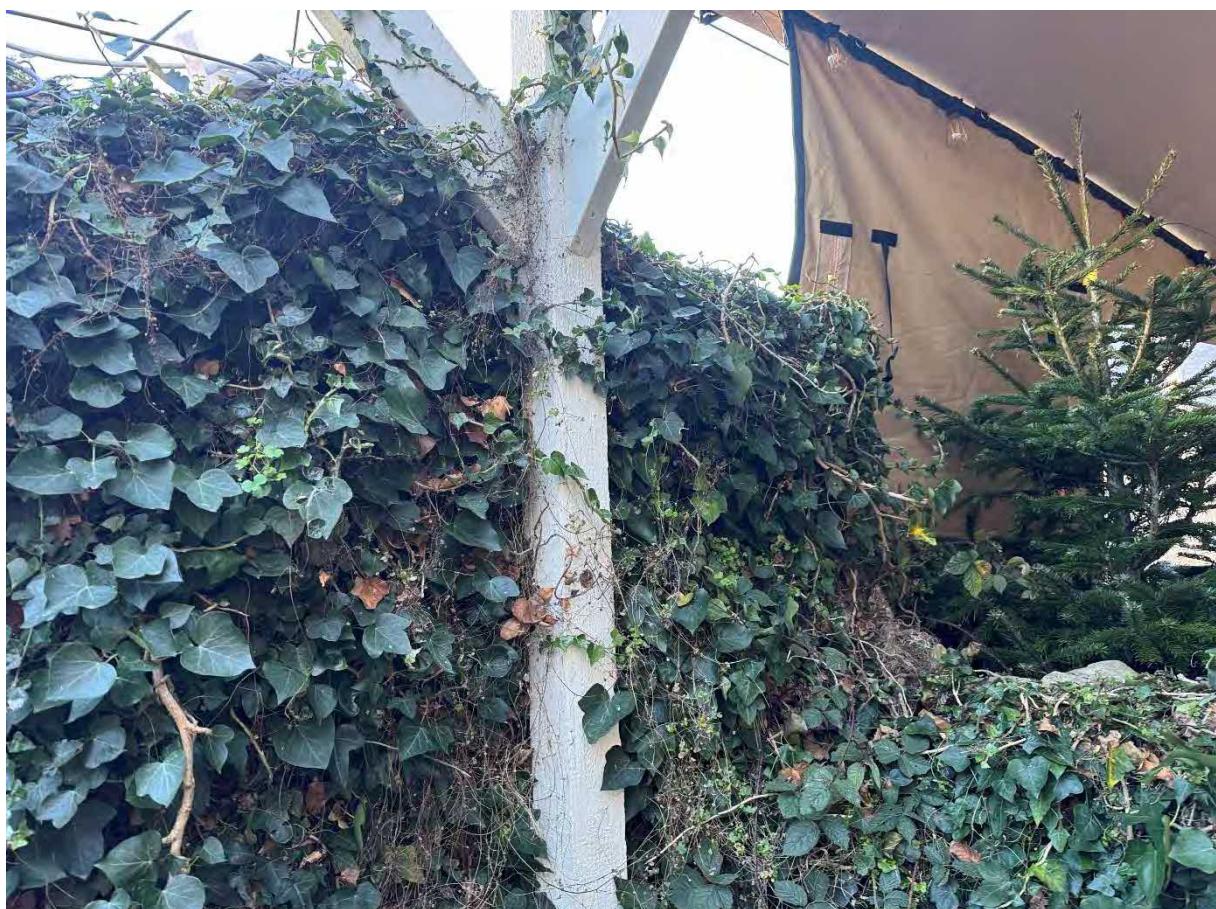


P64 – Timber framed pergola to rear beer garden.
Rear posts bolted to rear stone boundary wall – posts do not extend to ground and are not supported at base.



P65 – Timber framed pergola to rear beer garden.

Rear posts bolted to rear stone boundary wall – posts do not extend to ground and are not supported at base



P66 – Timber framed pergola to rear beer garden.

Rear posts bolted to rear stone boundary wall – posts do not extend to ground and are not supported at base



P67 – Timber framed pergola to rear beer garden.

Local damage to timber purlin and roof sheet from cable braced structure.

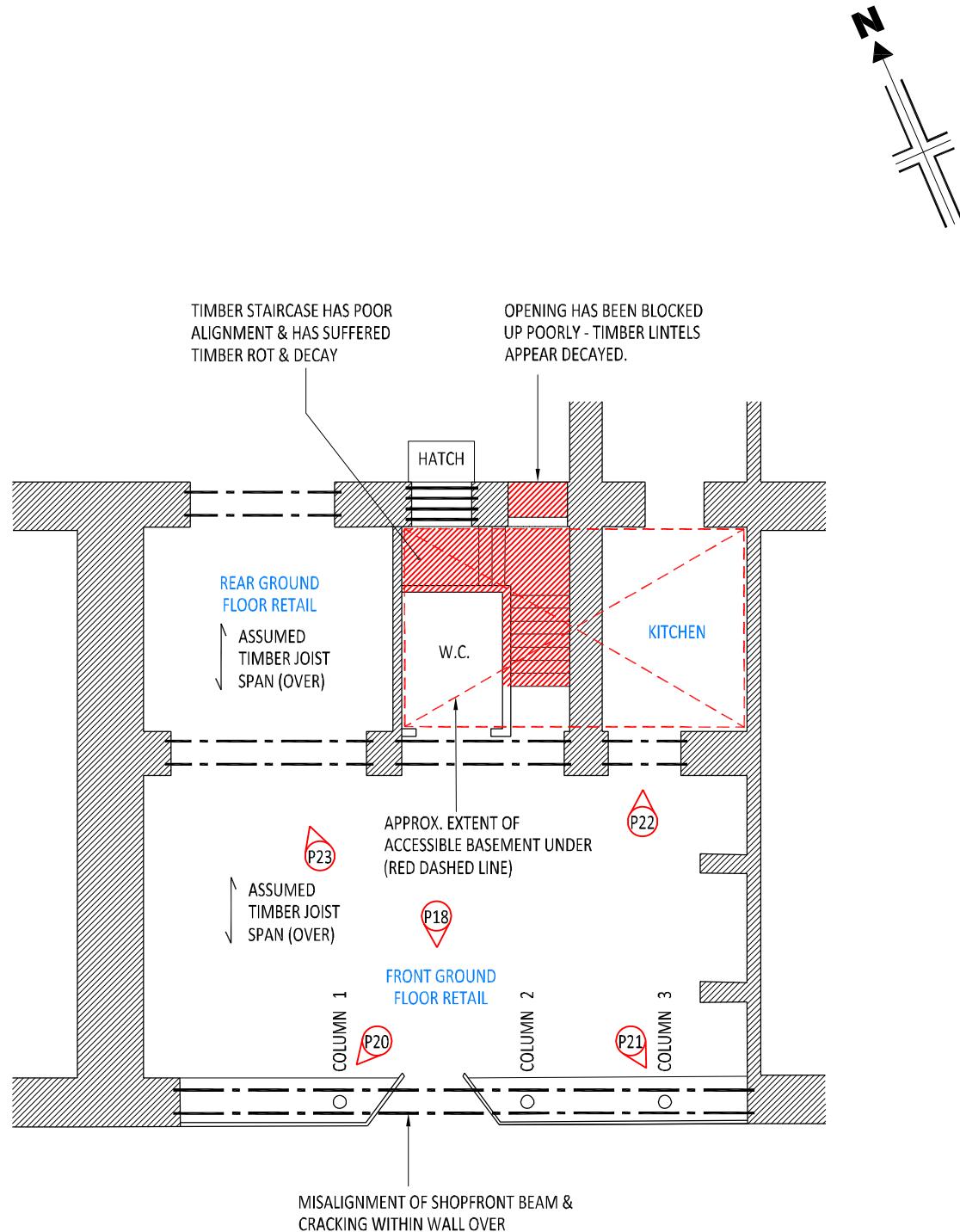
APPENDIX B

DIAGRAMMATIC LOCATION PLAN



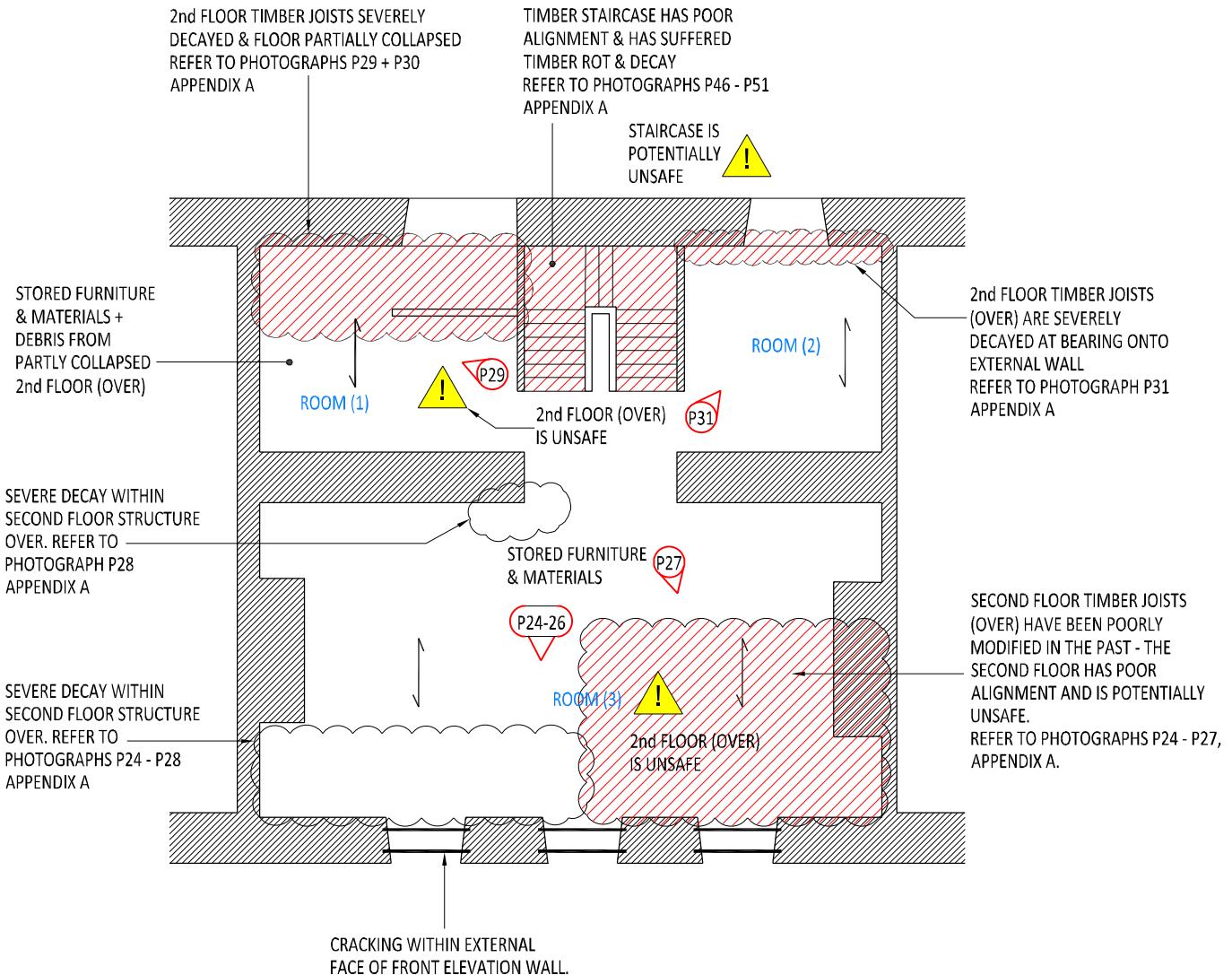
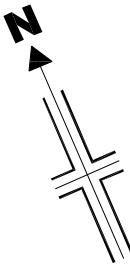
	PSA Design Ltd The Old Bank House, 6 Berry Lane Longridge, Preston, PR3 3JA Tel. 01772 786066 www.psadesign.co.uk mail@psadesign.co.uk	Client	Greene King Brewing & Retailing Limited	Drawn	Date	Scale	Drwg No.
		Job	The Dirty Bottles - No. 28 Narrowgate - Alnwick	CH	14/01/25		S4510-001
		Title	Diagrammatic Location Plan	Check	Appr.	Sheet Size	Rev.
				PHA	PHA	A4	P1

APPENDIX C
DIAGRAMMATIC FLOOR PLANS
(AS EXISTING)
28 NARROWGATE



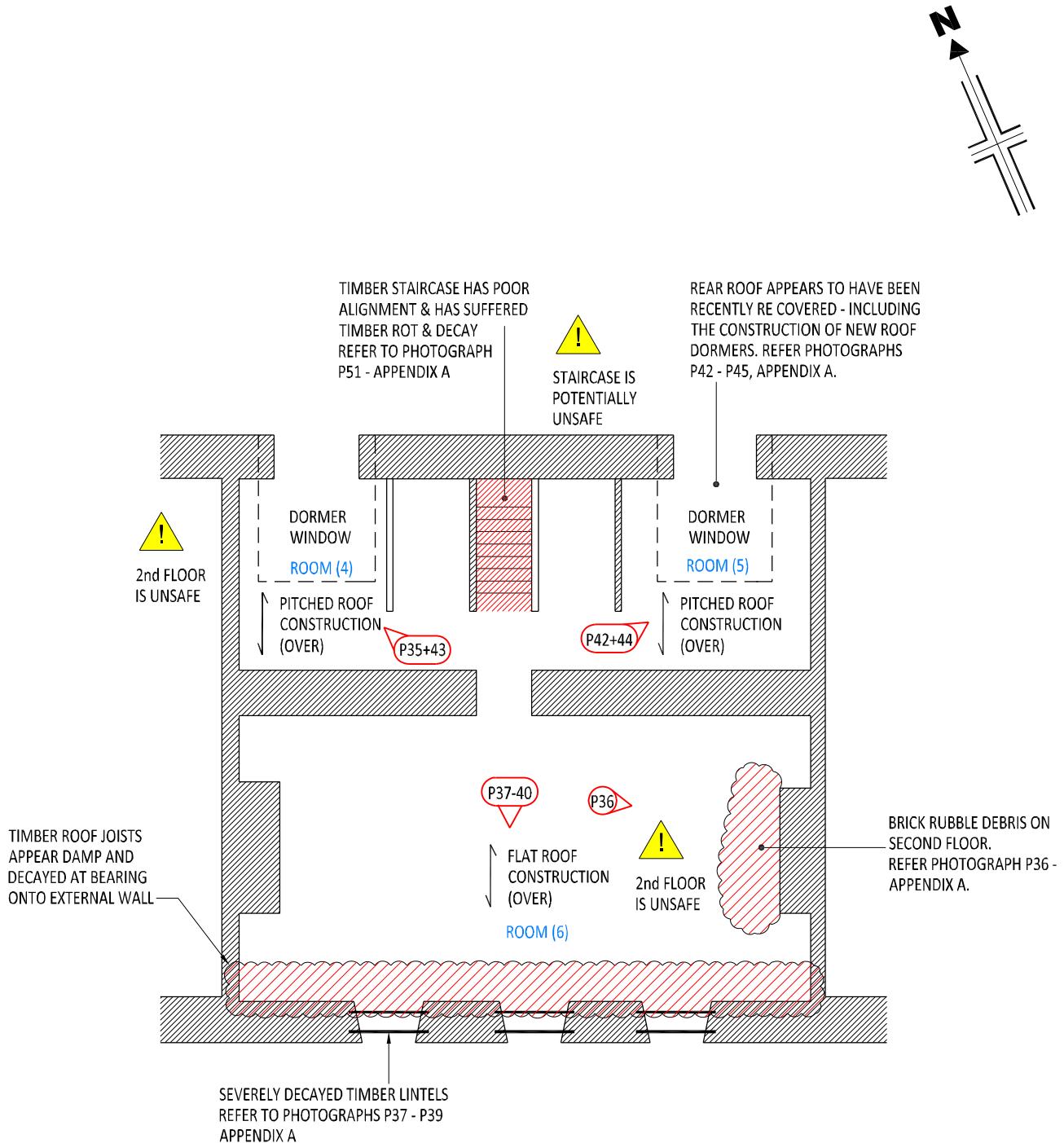
DIAGRAMMATIC GROUND FLOOR PLAN

APPROX. SCALE 1:100



DIAGRAMMATIC FIRST FLOOR PLAN

APPROX. SCALE 1:100



APPENDIX D
DIAGRAMMATIC LAYOUT
EXTERNAL PERGOLA
(AS EXISTING)

