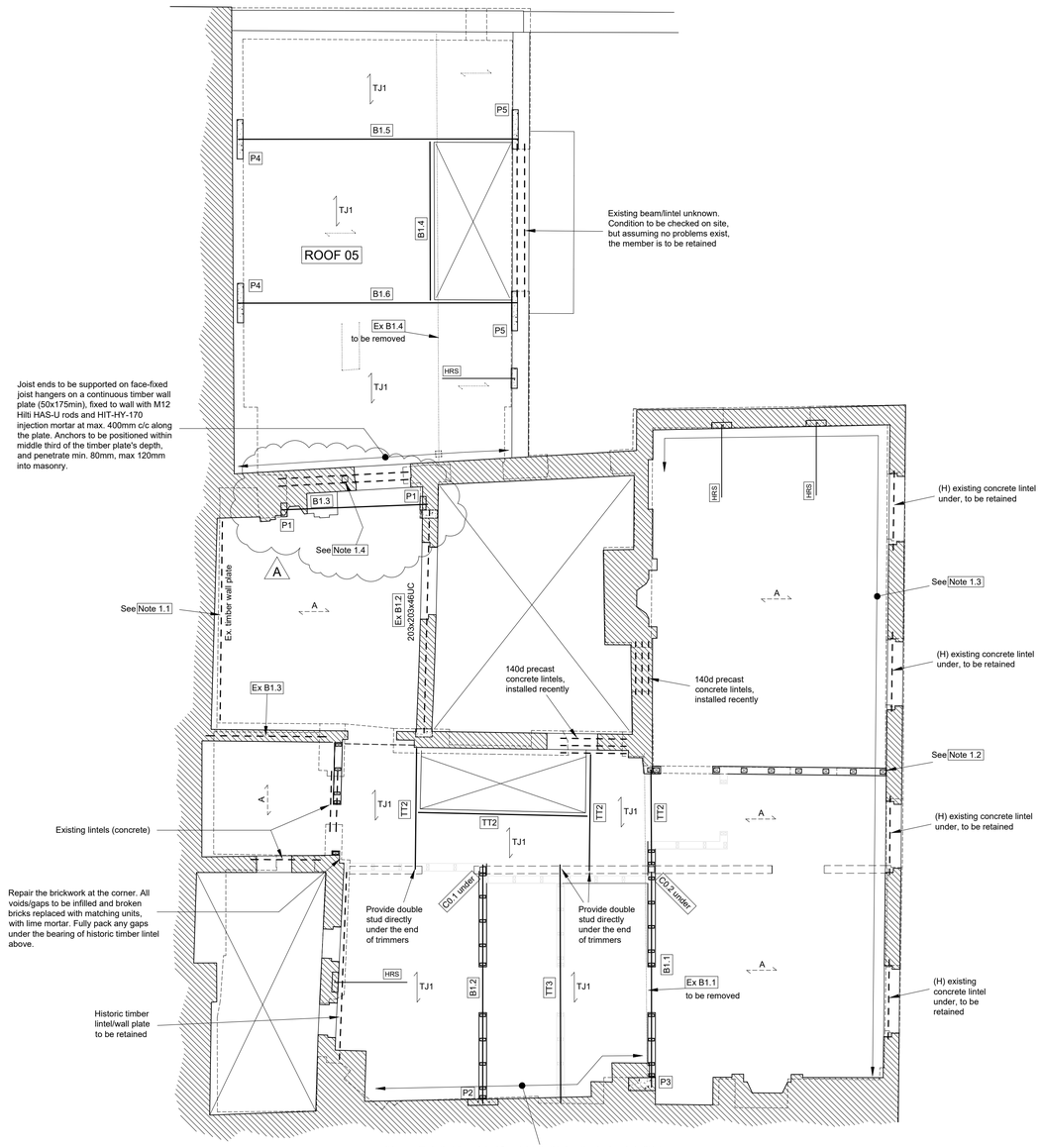

It is very likely that the original floor joists in this location had ends built into pockets in the brickwork wall (a detail present in other areas of the house). It is also possible these pockets have no tbeen infilled and are still present - to be confirmed when the existing floor joists are removed. If this is the case, the new joists should be built into the pockets to replicate the original detail. Otherwise, joist ends are to eb supported on face-fixed joist hangers on a continuous timber wall plate (50x175min), fixed to wall with M12 Hilti HAS-U rods and HIT-HY-170 injection mortar at max. 400mm c/c along the plate. Anchors to be positioned within middle third of the timber plate's depth, and penetrate min. 80mm, max 120mm into masonry.

1st Floor Plan

Drawing key:

Timber:

All existing joist and rafter types listed below are modern, installed during recent works:

- A — Existing 175x75 C24 joists at 400-430mm c/c
- B — Existing 150x75 C24 joists at 400-430mm c/c
- C — Existing 100x75 C24 joists at 400mm c/c

Proposed timber structures:

- TT1 — Existing trimmer (single joist) to be strengthened: Add another joist of the same section size on the side of the existing, fix together with:
  - M8 bolts at 400mm c/c for joists less than 125mm deep
  - M12 bolts at 400mm c/c for joists deeper than 125mm

  The added joist to be of the same length as existing, to share the bearing/end fixing. Where existing joist is supported on a joist hanger, a new (double-width) hanger will be required.
- TT2 — 2No. 175x63 C24 joists bolted together with M12 bolts at 400mm c/c max.
- TT3 — 3No. 175x75 C24 joists bolted together with M12 bolts at 400mm c/c max.
- TJ1 — 175x63 C24 joists (min. size) at 400mm c/c
- TJ2 — 150x50 C24 joists (min. size) at 400mm c/c

Walls:

- New brickwork - all brickwork infills to be fully toothed and bonded with existing brickwork
- Existing masonry
- Existing non-load-bearing walls (historic or recently installed, as noted)
- Non-load-bearing timber studwork walls installed during recent works
- Existing (recently installed) load-bearing timber studwork wall, comprising 95x70 C24 studs at 450mm c/c approx; to be retained
- Existing (recently installed) load-bearing timber studwork wall, comprising 42x85 C24 studs at 400mm c/c approx; to be retained
- New load-bearing timber studwork wall, comprising 50x100 C24 studs at 400mm c/c max, and 100x50 bottom and top plates. Double studs to be used at all wall corners and ends. Solid timber noggins to be installed between all studs, at 900mm vertical c/c max.

Existing structures:

- Ex B1.1 — to be removed
- Ex B1.2 — 203x203x46UC
- Ex B1.3 — (H) Existing steel beam - 150 deep approx
- Ex B1.4 — to be removed

Lintels:

- L1 — 100d x 100w precast lintels (Naylor S4 or similar) side by side - number to suit wall thickness, 2No. min.

Steelwork:

- B1.1 — 152x152x37UC
- B1.2 — 152x152x37UC
- B1.3 — 152x152x23UC
- B1.4 — 152x152x23UC
- B1.5 — 152x152x37UC
- B1.6 — 152x152x37UC

Padstones:

All padstones to be cast in-situ or precast units of the stated dimensions (all in mm).
L = length along the wall
W = width - penetration into wall
H = height (down the wall from underside of steel member)

- Existing padstones, to be retained
- P1 — 225L x 100W x 150H
- P2 — 500L x 100W x 300H
- P3 — 440L x 215W x 300H
- P4 — 650L x 100W x 300H
- P5 — 650L x 100W x 450H
- P6 — 330L x 100W x 225H

Other / general:

- Existing foundation under / structure under
- Existing beams, trimmers, or lintels, to be retained retained - material/function and details as noted on plans. For further details (including whether the members are historic or installed recently) refer to drawings series 11-15
- Proposed beams, trimmers, or lintels
- Structure to be demolished
- HRS — Restraint strap to tie external wall to floors where joists run parallel to wall.

  1.2m long 'heavy duty' proprietary galvanised steel restraint strap (4mm thick, 28mm wide) fixed across 3No. joists with noggins in between. Can be fixed to top or the underside of joists, and joists can be noteched locally).

  End of strap to be bent and cast into a type P6 padstone, cast in-situ into a pocket cut on the inside of the wall.

Repair/strengtheing specification:

Note 1.1 Strengthen connection between wall plate and brickwork behind, remediate poorly installed joist hangers :

1. Install additional resin anchors between the existing, to ensure max 400mm spacing between anchors along the wall plate: M12 Hilti HAS-U rods and HIT-HY-170 injection mortar. Anchors to be positioned within middle third of the timber plate's depth, and penetrate min. 80mm, max 120mm into masonry.
2. Replace all existing joist hangers along the wall plate with face-fixed hangers (Expamet Maxi-speedy or similar).

Note 1.2 Provide fixings between studwork walls and external masonry walls (the purpose is to ensure the two walls provide lateral restraint to each other):

1. Ensure the last stud is placed directly against the inside face of brickwork.
2. Fix the stud to the brick wall with M8 Hilti HAS-U rods and HIT-HY-170 injection mortar, at 600mm max vertical c/c. Anchors to be centred on the stud and penetrate 80-120mm into masonry.

Note 1.3 Timber plates buried in external walls are in poor condition due to historic or continued water ingress, affecting integrity of the walls, and providing inadequate bearing for joists.

Remove all timber plates embedded in external walls and infill the gaps with brickwork:

1. Existing timber plates (supporting the joist ends and higher within the walls, whether historic or installed recently), are to be carefully cut out, in segments no longer than 750mm at a time. Joists bearing on the segment being worked on to be temporarily supported.
2. Infill the void with bricks to match existing, with lime mortar joints - mortar to be packed in tightly to ensure good bond with existing masonry

Note 1.4 Recently installed SHS post head connection does not provide sufficient bearing for the supported historic steel beams. Beams significantly overhang the SHS profile and capping plate.

1. Site weld vertical stiffeners (ribs) between the sides of the SHS and underside of supported beams. Assume 150mm high plates, extending to the outer edges of both existing beams.
2. NOTE: Full details will be provided by Studio Strukt for construction.

GENERAL NOTES:

1. All Studio Strukt drawings are to be read in conjunction with the relevant Architect's, Engineer's and Specialist Supplier's drawings and specifications.
2. Do not scale from any Studio Strukt drawings. Use stated dimensions only. All dimensions to be verified on site by contractor.
3. Fire protection, thermal and sound insulation, and waterproofing are outside of Studio Strukt's scope. Any such elements are shown indicatively only.
4. The Contractor is responsible for ensuring the stability of all structures within and adjacent to the site at all times during the contract, and is to design and provide all temporary works required.
5. All work subject to Building Control approval, Party Wall agreement, and Listed Building consent. Formation levels of all foundations to be approved on site by Building Control inspector.
6. All Studio Strukt plans are drawn 'looking down' and show structure within and immediately below the floor/level the plan refers to. For example, a 1st floor plan shows 1st floor joists, beams within and under 1st floor, and lintels above openings at ground floor level.

Unless noted otherwise, all existing steelwork, concrete and timber structures shown on this drawing are non-historic elements installed during the recent construction works.

All historic timber, steel, and concrete members are marked with (H).

Unless noted otherwise, all masonry structures are assumed to be historic.

All existing member sizes marked with (*) are based on previous engineer's drawings and have not been verified on site. All other existing member sizes are based on on own site measurements.

Rev	Description	Date	By
A	Revised as clouded, issued for submission to the Council	03/12/24	BK
-	Issued for comments/coordination	28/11/24	BK

studio strukt
studiostrukt.co.uk
078 508 75 271
bart@studiostrukt.co.uk

PRELIMINARY
Not for construction

Scale	Date	By	Checked
1:50 @ A1	15/11/2024	BK	

Project
9 The Mount
London NW3 6SZ

Title
Proposed structural works:
1st Floor Plan

Drawing No.	Rev.
24-034/23	A