

1. Design Standards

- BS 648: Dead loads.
- BS 5268: Structural timber.
- BS 5628: Masonry.
- BS 5950: Structural steelwork.
- BS 6399: Imposed & wind loads.

2. Key

- U.N.O. = Unless noted otherwise
- All dimensions in mm (U.N.O)

3. Steelwork

- Exact dimensions for of all new steelwork to be determined by fabricator/ builder on site prior to fabrication.
- Steelwork fabrication is to be in accordance with the NSSF for Building Construction 5th Edition CE Marking Version and include CE marking.
- Minimum Grade S355JR.
- Finish with 1 coat of red zinc phosphate primer with min. dft of 60 microns (U.N.O).
- Elements exposed within external wall cavities to receive 2 additional coats of bituminous emulsion locally.
- External beams and those in line with outer leaf of cavity walls to be hot dip galvanised.
- All beams bearing onto masonry to have a minimum end bearing of 225mm (see also padstones)
- All bolts to be grade 8.8. Minimum 2 No M16 bolts per steel to steel connection.
- All welds to be 6 mm fillet weld or full strength butt weld.
- Provide 30 minute fire protection to internally exposed steel beams via 15 thick 'Firecase' system by British Gypsum (or similar approved).

4. Timber

- All structural timbers: Strength Class C24 (U.N.O).
- All roof timbers to be preservative treated. All nails to be galvanised or equivalent.
- All wall plates to be continuous (see also wall straps).
- Eaves details etc. are to be assessed from Architectural drawings.
- All dimensions to be checked on site prior to be fabrication.
- For details of decking/roof covering, see Architect's details.
- All joist hangers to have a minimum SWL of 2 kN (U.N.O).
- Floor joists to be provided with herringbone strutting or timber blocking (at least 38 wide and ¾ joist depth). Provide at each support and at mid-span for joist spans of 2.5 – 4.5m, or third points for joist spans exceeding 4.5m.
- Anti-corrosive finish to fasteners/bolts to be sheradizing to BS.4921 Class1. Treatment to be compatible with timber preservative.

- Provide as necessary temporary bracing to trusses /cut rafters to maintain stability until roof is secured.
- All bolts to be grade 8.8 complying with BS.4190. Bolt holes to be as close as practicable to the nominal diameter of the bolt and in no case more than 2.0mm larger than the bolt diameter.
- All floor joists must apply one layer of 18mm plywood screwed down to timber joists using No 10 screws at 200 ctrs.
- All flat roof much apply 12mm thick OSB3 covering on top screwed on using No10 screws at 200 ctrs.

5. Masonry

- All external facing bricks to match existing.
- All blockwork to be manufactured to BS EN 771-3 or 4 as appropriate, Category 1.
- All cavity blockwork to be standard aerated blocks with density of approximately 750 kg/m³ & minimum compressive strength of 3.6 N/mm² to upper storey and 7.3 N/mm² to all lower storeys (U.N.O).
- All new brickwork to internal walls to have a minimum compressive strength of 20 N/mm².
- All mortar above dpc: Designation (iii)/ Strength Class M4 (except blockwork less than 4.0 N/mm² to be Designation (iv)/ Strength Class M2).
- All dry pack mortar: 1:3 OPC:Sharp sand.
- New walls to be tied to existing walls via proprietary stainless steel wall starters (WS090 by Expamet or similar approved) or block bonding.
- All gable walls to be strapped back to timber roof trusses/ framing (see also wall straps).

6. Construction/ proprietary products

- All construction products used in the works are to carry the CE mark in accordance with the Construction Products Regulation (CPR).
- All proprietary products to be installed in accordance with manufacturer's recommendations.

7. Wall straps

- All timber wall plates to be strapped down to supporting walls by proprietary 30 x 2.5 galv. mild steel vertical restraint straps at 2.0m max. centres.
- All timber floor joists, ceiling joists and rafters to be strapped to external cavity walls by proprietary 30 x 5.0 galv. mild steel lateral restraint straps at 2.0m max. centres.
- Fixings - 5 Nr 5mm x 50mm exterior (zinc plated) screws to each element.

8. Padstones

- Mass concrete padstones to be cast in-situ as bearings for all new steel beams supported on masonry.
- Padstone width to match the width of wall & be 440 mm long & 225 mm high (U.N.O).
- Pre-fabricated concrete padstones (if used) must be bedded onto full bricks or blocks and depth increased accordingly. Bearing onto cut bricks/ blocks less than 65mm thick will not be acceptable.

9. Internal stud walls

- 50 x 100 timber head and sole plates securely fixed to floor and soffit.
- 50 x 100 timber studs at 400 centres with double studs at all openings. Packing's provided at mid-height. End studs fixed to masonry walls with frame anchors at 600 vertical centres.

10. Foundation

- Concrete for new footings to be GEN3 to BS5328
- Foundations to be minimum of 0.9m below ground level. Final levels to be agreed with Building Control Officer.
- Founding level to be on consistent strata. In other words, founding the building partly on clay and partly on sand will not be permitted.
- The contractor should allow for propping sides of trenches and dewatering the excavations if found necessary.
- Footings to be minimum widths as shown on relevant drawings.
- Footings to be minimum thickness of 300mm (U.N.O)
- It is assumed that the underlying substrata is a Sandy alluvial' material or firm chalk. The contractor should notify the Engineer should a clay material be discovered.

11. Finishes

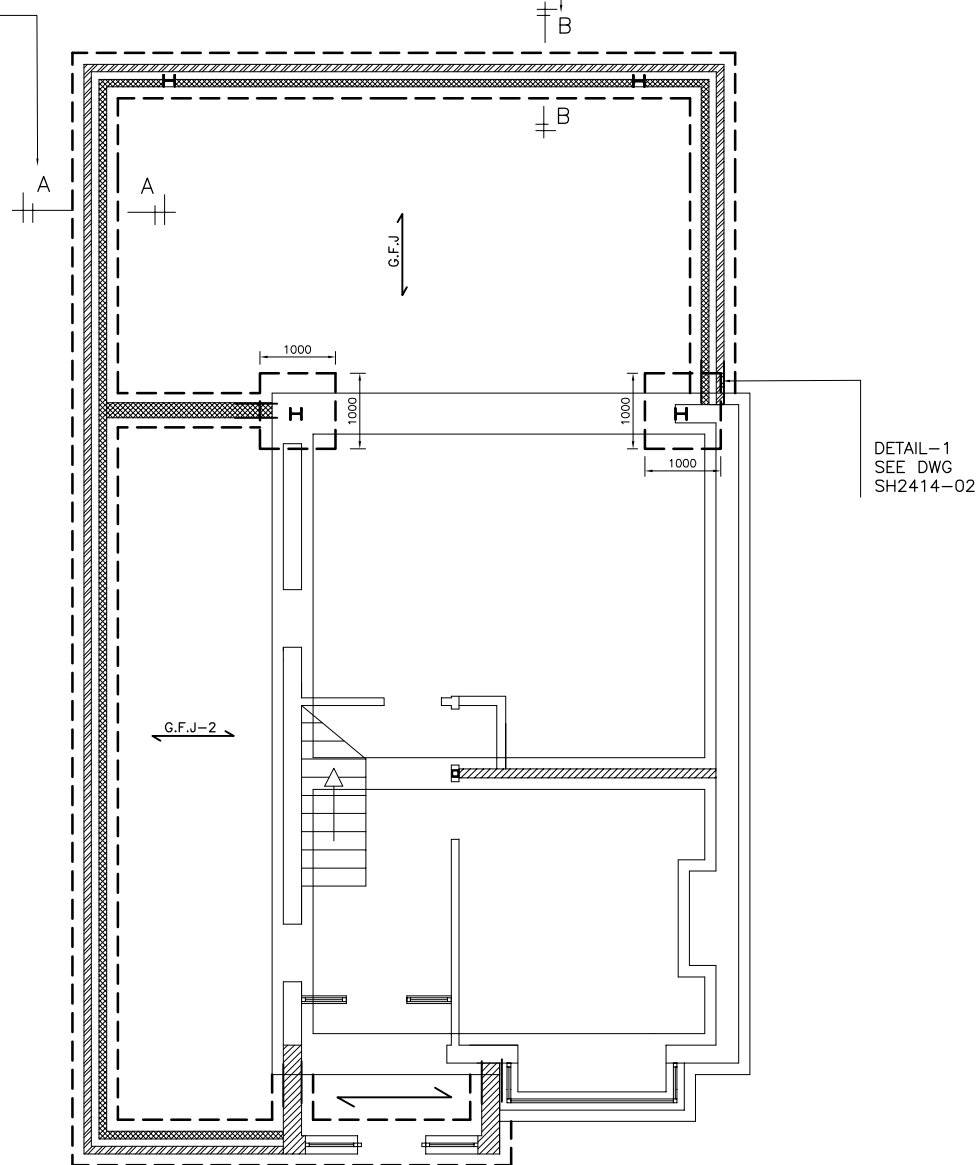
- All finishes to Architect details.

12. CDM Regulation

- Owner / Architect to perform CDM regulations.

SECTION A-A
SEE DWG
SH2414/02

SECTION B-B
SEE DWG
SH2414/02



DETAIL-1
SEE DWG
SH2414-02

GROUND FLOOR PLAN SHOWING
FOUNDATION
SCALE 1:100

NOTES

ALL FOOTINGS TO BE 600MM WIDE U.N.O

DEPTH OF FOUNDATION TO BE AT LEAST 900MM IF
FIRM SOIL FOUND BELOW AND SHOULD BE AGREE
WITH BUILDING CONTROL.

KEY:

GROUND FLOOR JOISTS G.F.J:
225X50 C24 @ 300 C/C.

GROUND FLOOR JOISTS G.F.J-2:
225X50 C24 @ 400 C/C.

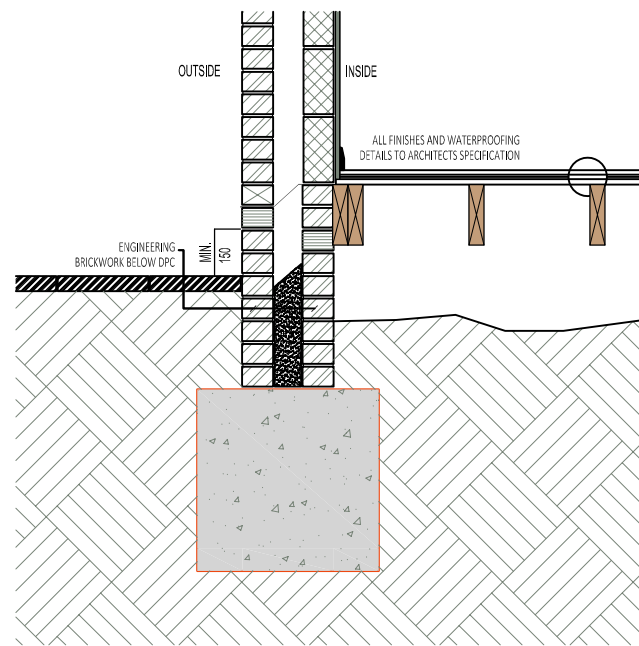
A	Issue for approval	12.08.2024	N.K
-	Issue for approval	20.05.2024	N.K

Revision	Date	Initial
Status PRELIMINARY		
Project SUTTON SM3 9LA		
Client		
Drawing Title GROUND FLOOR PLAN SHOWING FOUNDATION		
Date MAY 2024	Scale AS SHOWN AT A3	Drawn by N.K
Project No SH2414	Drawing No 01	Revision A

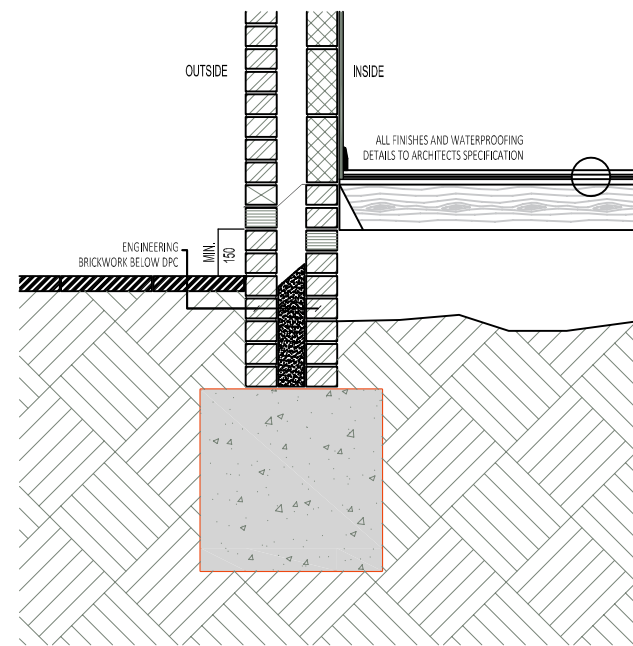


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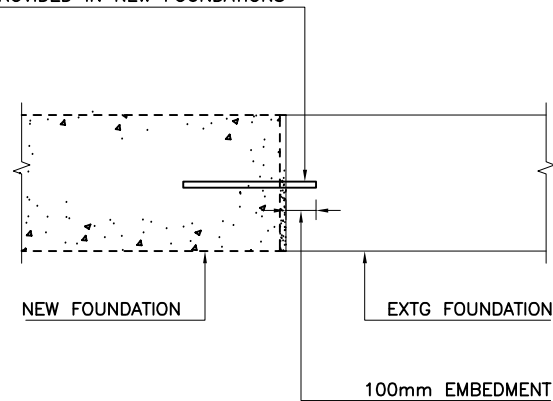


SECTION A-A
SCALE 1:25



SECTION B-B
SCALE 1:25

H12 DOWEL BARS x 600 LONG
FIXED TO EXTG FOUNDATION WITH
HILTI HY-200a RESIN OR SIMILAR
APPROVED AT MAX 300c/c OR MIN
3 DOWELS. MIN 40mm COVER TO
BE PROVIDED IN NEW FOUNDATIONS

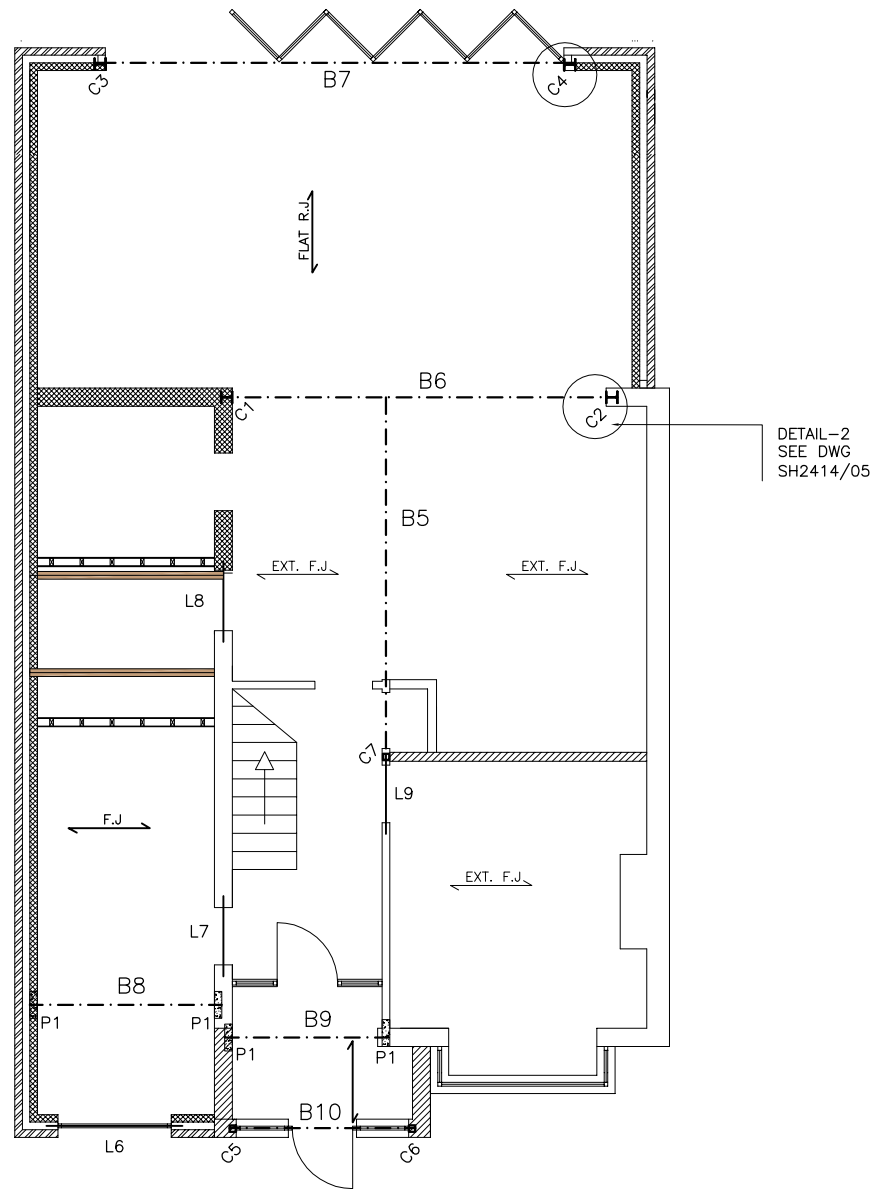


DETAIL-1
NEW FOUNDATION TO
EXISTING TYPICAL JOINT
SCALE 1:25

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Project SUTTON SM3 9LA		
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Drawing Title FOUNDATION DETAILS		
Date MAY 2024	Scale AS SHOWN AT A3	Drawn by N.K
Project No SH2414	Drawing No 02	Revision A

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GROUND FLOOR PLAN SHOWING
STRUCTURE OVER
SCALE 1:100

KEY

FLAT R.J	200X50 C24 @ 400 C/C.
FLOOR JOIST (F.J)	200X50 C24 @ 400 C/C.
BEAM (B5)	152UC37kg S355
BEAM (B6)	203UC52kg S355 WITH 8MM TOP PLATE TO SUIT MASONRY.
BEAM (B7)	203UC52kg S355 WITH 8MM BOTTOM PLATE TO SUIT MASONRY.
BEAM (B8, B9)	2/178X102X19kg S355 BOLTED TOGETHER
BEAM (B10)	203X102X23kg S355
COLUMN (C1, C2, C3, C4)	152UC23kg S355
COLUMN (C5, C6, C7)	100X100X6.3 SHS
LINTEL (L6)	STANDARD DUTY IG L1/S100 TO SUIT CAVITY
LINTEL (L7, L8)	2/TYPE-1 KING STONE 100X140MM DEEP LINTEL TO SUIT
LINTEL (L9)	1/TYPE-1 KING STONE 100X140MM DEEP LINTEL TO SUIT
PADSTONE (P1)	330X100X215 MM DEEP P.C.C

NOTE:



DOUBLE UP JOISTS

DO NOT SCALE FROM DRAWING.

ALL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS

ALL INTERNAL WALLS WITHIN LOFT TO BE TIMBERSTUD

CONTACT ENGINEER IF ANY DISCREPANCY FOUND ONSITE.

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Revision	Date	Initial
Status	PRELIMINARY	
Project	SUTTON SM3 9LA	
Client		
Drawing Title	GROUND FLOOR PLAN SHOWING STRUCTURE OVER	
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Project No	Drawing No	Revision
SH2414	03	A



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KEY

FLAT R.J	200X50 C24 @ 400 C/C.
RAFTERS	200X50 C24 @ 400 C/C.
FLOOR JOISTS (F.J)	200X50 C24 @ 400 C/C.
CEILING JOISTS (C.J)	150X50 C24 @ 400 C/C.
HIP MEMBERS	2/200X50 C24 @ 400 C/C.
TIMBER POSTS (TP1, TP2)	100X100 C24 TIMBER POST
RIGDE BEAM (RB1)	152UC37kg S355
BEAM (B2, B3, B4)	203UC46kg S355
LINTEL (L1, L2)	2NO. 200X50 C24 TIMBERS BOLTED TOGETHER
LINTEL (L3, L4)	STANDARD DUTY IG L1/S100 TO SUIT CAVITY
LINTEL (L5)	2/TYPE-1 KING STONE 100X140MM DEEP LINTEL TO SUIT
PADSTONE (P1)	330X100X215 MM DEEP P.C.C
PADSTONE (P2)	440X100X215 MM DEEP P.C.C
BEAM (B1)	152UC37kg S355 WITH 10MM TOP PLATE TO SUIT

NOTE:

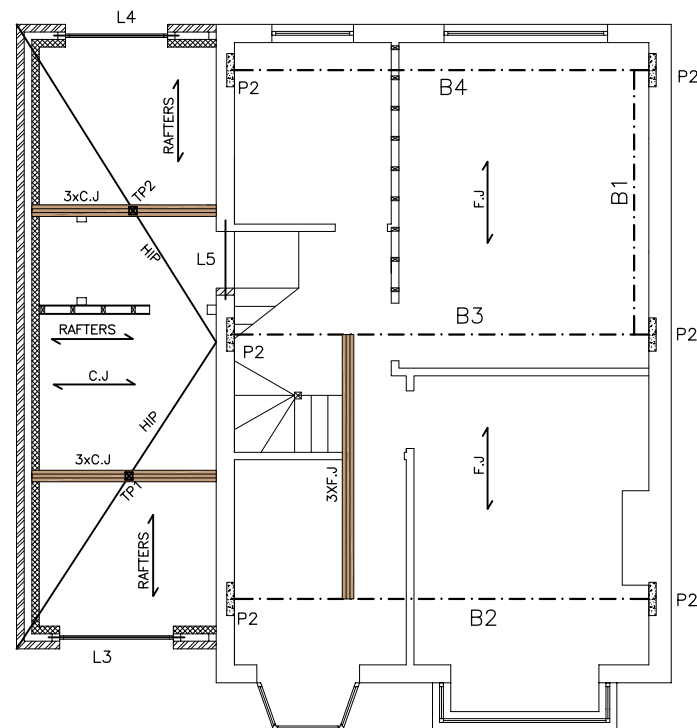


DOUBLE UP JOISTS AROUND ROOF OPENING.
 DOUBLE UP JOISTS
 DO NOT SCALE FROM DRAWING.
 ALL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS
 ALL INTERNAL WALLS WITHIN LOFT TO BE TIMBERSTUD
 CONTACT ENGINEER IF ANY DISCREPANCY FOUND ONSITE.

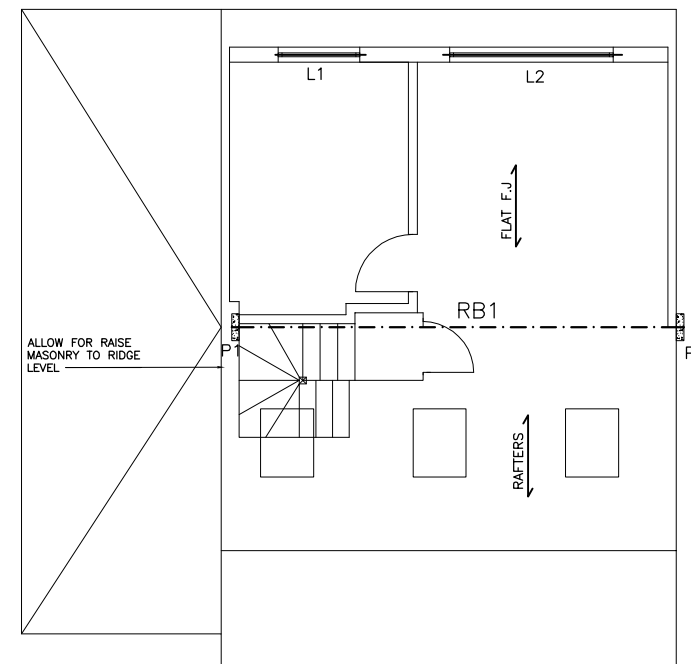
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-	Issue for approval	20.05.2024	N.K

Revision	Date	Initial
Status	PRELIMINARY	
Project	SUTTON SM3 9LA	
Client		
Drawing Title	FIRST FLOOR & LOFT PLANS SHOWING STRUCTURE OVER	
Date	Scale	Drawn by
MAY 2024	AS SHOWN AT A3	N.K
Project No	Drawing No	Revision
SH2414	04	A

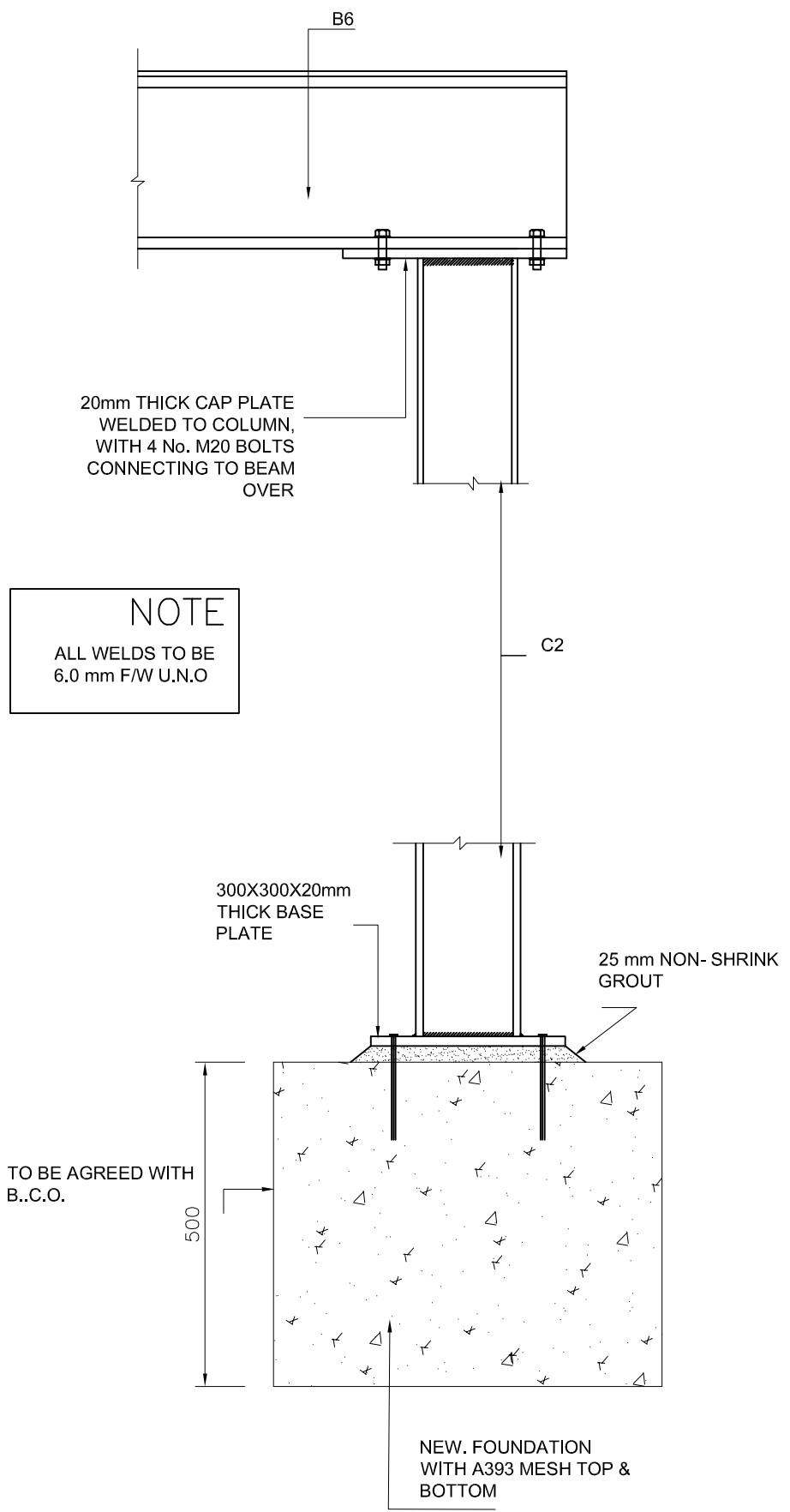
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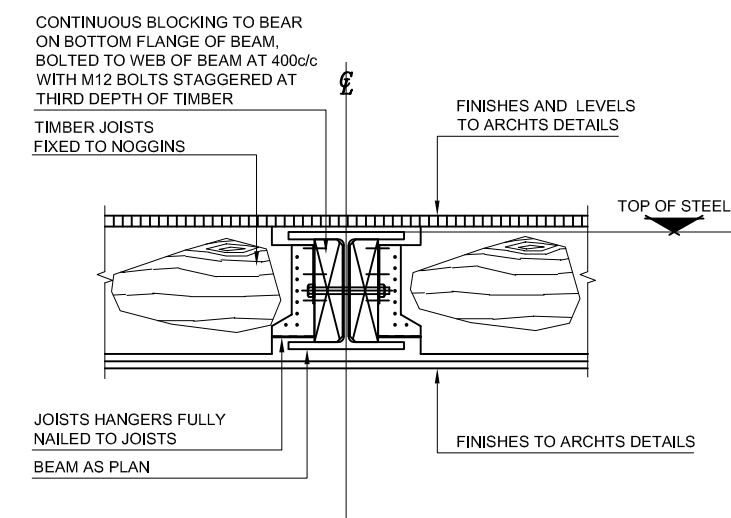
FIRST FLOOR PLAN SHOWING STRUCTURE OVER
 SCALE 1:100



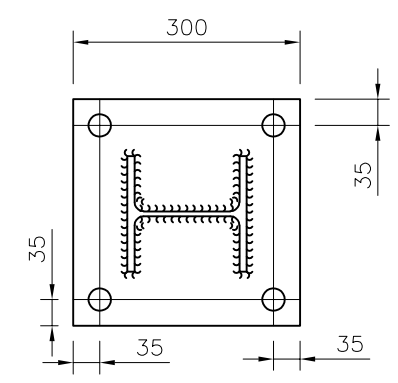
LOFT FLOOR PLAN SHOWING ROOF
 SCALE 1:100



DETAIL-2
BEAM (B6) TO COLUMN (C2) CONNECTION
(SCALE 1:10)



JOISTS TO STEEL BEAM B3 CONNECTION
(SCALE 1:10)



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