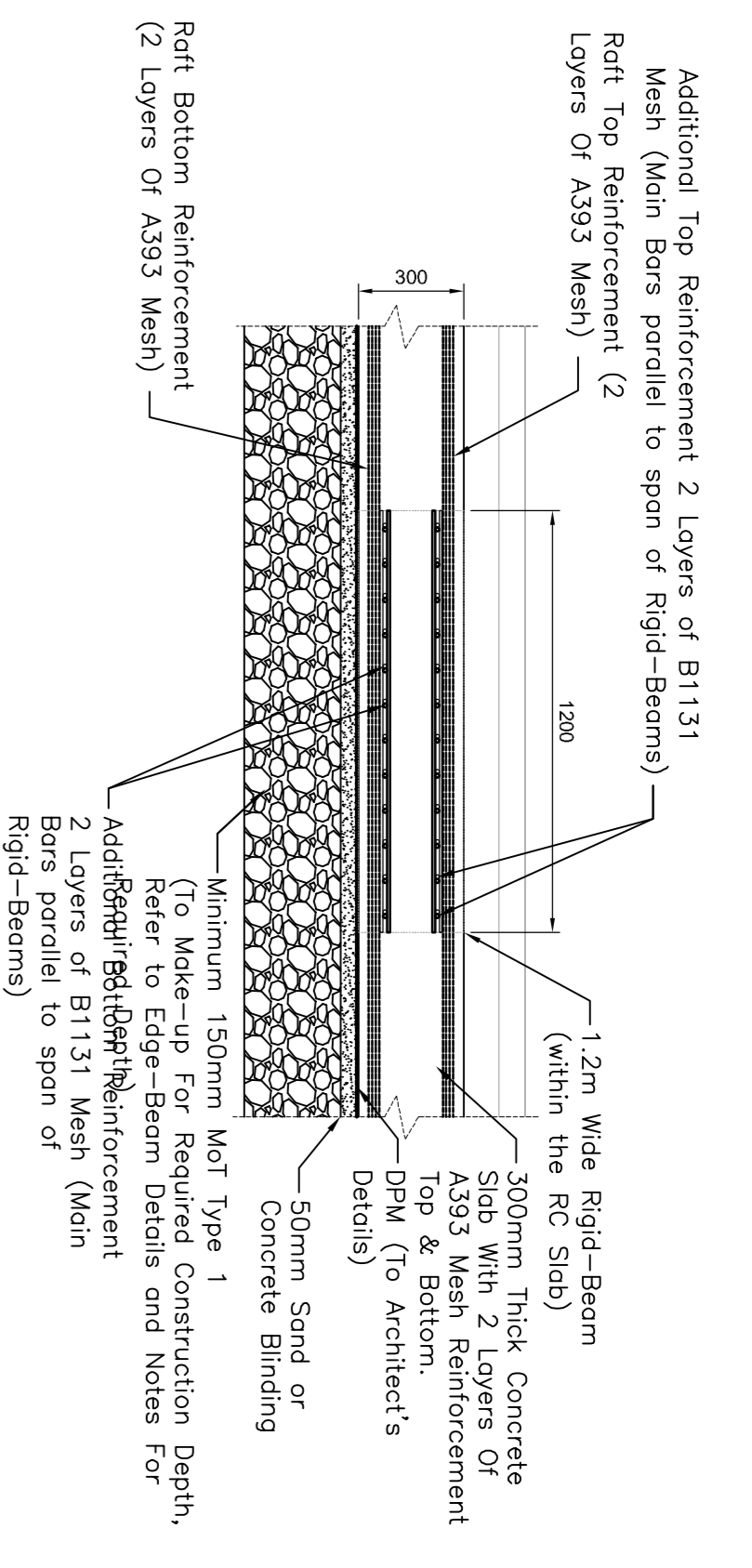


TYPICAL SLAB EDGE-BEAM (EB) SECTION
Scale 1:20

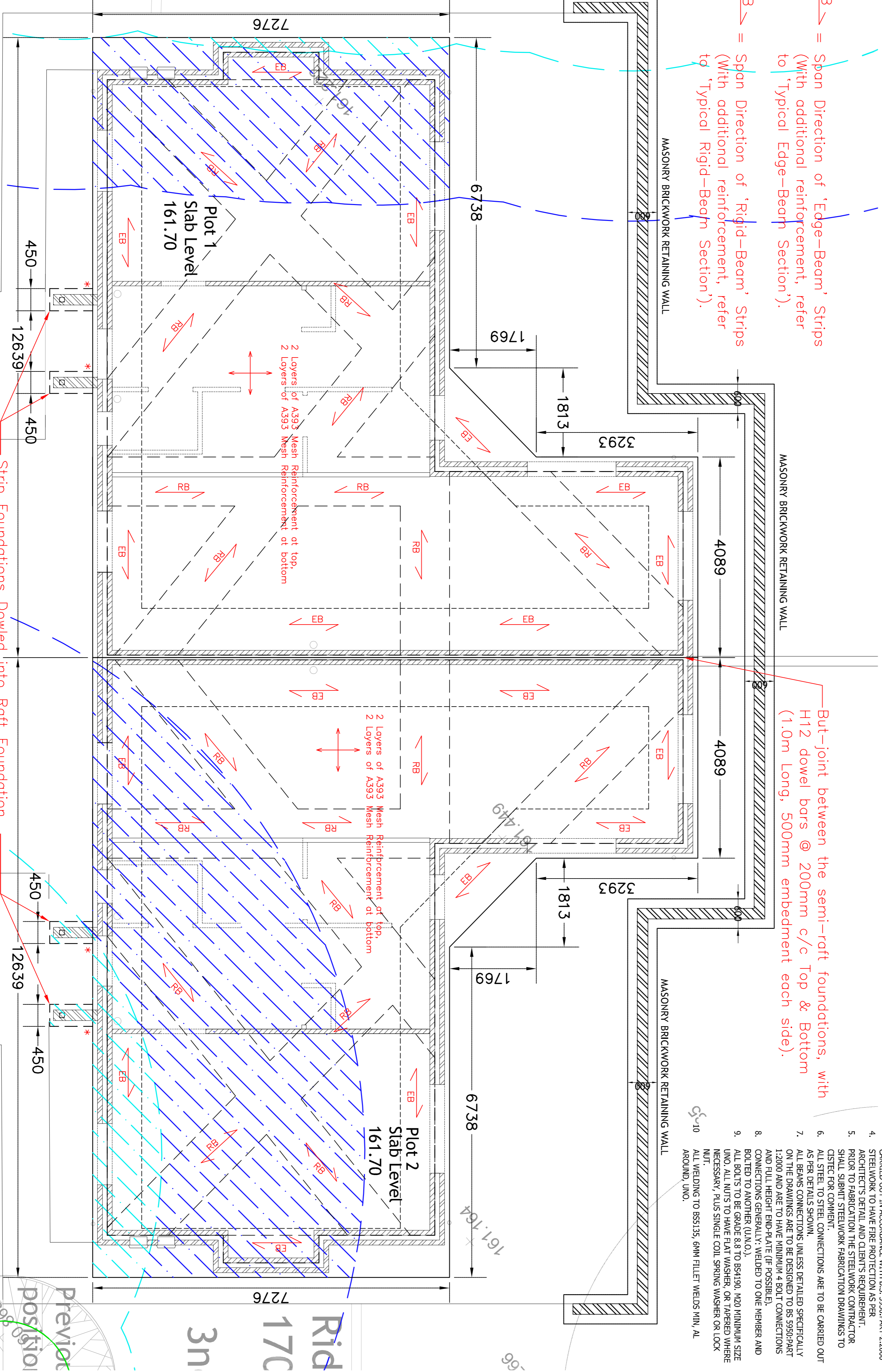
EB = Span Direction of 'Edge-Beam' Strips (With additional reinforcement, refer to 'Typical Edge-Beam Section').

RB = Span Direction of 'Rigid-Beam' Strips (With additional reinforcement, refer to 'Typical Rigid-Beam Section').



TYPICAL RIGID-BEAM (RB) SECTION
Scale 1:20

But-joint between the semi-raft foundations, with H12 dowel bars @ 200mm c/c Top & Bottom (1.0m Long, 500mm embedment each side).



PLOTS 1 & 2 - REINFORCED CONCRETE SEMI-RAFT FOUNDATION
SCALE 1:50

Stored in rear

- GROUND FLOOR**
- ADDITIONAL TOP REINFORCEMENT 2 LAYERS OF B1131 MESH (MAIN BARS PARALLEL TO SPAN OF RIGID-BEAMS) ROFT TOP REINFORCEMENT (2 LAYERS OF A393 MESH)
1. ALL UPPER FLOORS TO BE THINER POSSIBLE POST OR T1 JOISTS), DESIGNED AND SUPPLIED BY AN APPROVED ARCHITECT.
 2. FLOOR SPANS ARE INDICATED THIS: PARALLEL WALLS SUPPORTED BY THE FLOOR, REFER TO ARCHITECT'S DRAWINGS.
 3. FIRST FLOOR CONSTRUCTION TO BE DESIGNED FOR THE FOLLOWING LOADS:
 - 1.0 IMPOSED LOAD OF 1.5 kN/m² (TO BS6399).
 - 2. LIGHT WEIGHT STUD PARTITIONS 1.0 kN/m².
- UPPER FLOORS (FIRST & ATTIC FLOORS):**
1. ALL UPPER FLOORS TO BE THINER POSSIBLE POST OR T1 JOISTS), DESIGNED AND SUPPLIED BY AN APPROVED ARCHITECT.
 2. FLOOR SPANS ARE INDICATED THIS: PARALLEL WALLS SUPPORTED BY THE FLOOR, REFER TO ARCHITECT'S DRAWINGS.
 3. FIRST FLOOR CONSTRUCTION TO BE DESIGNED FOR THE FOLLOWING LOADS:
 - 1.0 IMPOSED LOAD OF 1.5 kN/m² (TO BS6399).
 - 2. LIGHT WEIGHT STUD PARTITIONS 1.0 kN/m².

- SEMI RAFT FOUNDATIONS - GENERAL NOTES**
1. THE SETTING OUT OF THE REINFORCED CONCRETE SLAB IN RELATION TO THE BASEMENT WALL IS AS SHOWN ON DRAWING AND SECTION. THE ENGINEER SHALL BE RESPONSIBLE FOR ANY VARIATIONS REQUIRED ON SITE TO ALLOW FOR SURFACE REVISIONS OF THE FOUNDATION SETTING OUT DETAILS.
 2. THE DEPTHS OF THE FOUNDATIONS SHALL CONFORM TO THE GREATER DEPTH:
 - 2.1. TO THE MINIMUM DEPTHS AS SHOWN ON THE DRAWING (BASES, WHICH IS THE DEPTHS OF THE PROPOSED GROUND LEVELS, WHICHEVER IS THE LOWER).
 - 2.2. TO A MINIMUM 500mm BELOW ANY TREE ROOTS EXPOSED DURING EXCAVATIONS, WHERE FOUND IN SHAKINABLE MATERIAL.
 - 2.3. A MINIMUM OF 300mm UNDISTURBED NATURAL GROUND.
 3. FOUNDATIONS ARE TO BEAR A MINIMUM OF 300mm BEARING CAPACITY OF 75 kN/m².
 4. ANY EXISTING FOUNDATIONS ENCOUNTERED ARE TO BE GRUBBED OUT LOCALLY AT THE POSITION OF NEW SLAB, TO 300mm BELOW THE DEPTH OF THE EXISTING FOUNDATION LEVEL, AND THE NEW SLAB FORMATION LEVELS TO BE AT THIS DEPTH OR BELOW.
 5. ALL EXISTING FOUNDATIONS AND RUBBERISH ETC. THE FOUNDATION LEVEL SHALL NOT BE EXPOSED UNTIL THE DAY OF THE CONCRETE POUR.
 19. ALL MADE GROUND, TOPSOIL AND ORGANIC MATTER, TOGETHER WITH ANY SOFT, DISTURBED OR RESICCATED MATERIAL SHOULD BE REMOVED FROM BENEATH THE AREA OF GROUND BEARING SLAB.
 20. PRIOR TO PLACING GRANULAR FILL, THE FORMATION SHOULD BE PROOF ROLLED TO INDICATE ANY FURTHER SOFT SPOTS, WHERE ENCOUNTERED THESE SHOULD BE EXCAVATED AND REPLACED WITH ADDITIONAL GRANULAR FILL.
 21. AFTER EXCAVATION TO FORMATION LEVEL, AND REMOVAL OF ALL POCKETS OF SOFT OR DISTURBED MATERIAL, THE BEARING STRATA IS TO BE INSPECTED BY THE ENGINEER. THE ENGINEER SHALL BE RESPONSIBLE FOR THE APPROVAL OF THE FORMATION BEING PLACED. THE CONCRETE SHOULD IDEALLY BE PLACED IMMEDIATELY, HOWEVER, IF THE INTENDED CONCRETE POUR IS TO BE DELAYED BY MORE THAN 4 HOURS FROM WHEN THE EXCAVATION WAS FIRST OPENED, THEN THE FORMATION SHOULD BE PROTECTED FROM THE DETERIORATION BY PLACING A MIN. 50mm THICK LAYER OF CONCRETE BLINDING.
 7. THE ENGINEER SHOULD BE AFFORDED THE OPPORTUNITY OF INSPECTING THE FORMATION LEVEL UNDER THE SLAB AND REINFORCEMENTS PRIOR TO THE PLACING OF THE CONCRETE. ALLOW A MINIMUM 24 HOURS NOTICE FOR INSPECTION.
 16. SUB BASE TO BE SAND BLINDED TO RECEIVE D.P.M.
 17. SUB BASE COULD BE FIN. OF 150mm NOT THE 1. WELL COMPACTED IN A MIN. 150mm LAYERS. LAY AND CONFORM WITH TABLE 8/1 OF THE SPECIFICATION FOR HIGHWAY WORKS. FOR LEVELING PURPOSES: THE CONCRETE USED FOR GROUND BEARING SLABS IS TO BE SEPARATED FROM THE UNDERLYING FILL MATERIAL BY A DAMP PROOF MEMBRANE (REFER TO ARCHITECT'S DRAWINGS FOR SPEC).
 19. CONCRETE IS SPECIFIED IN ACCORDANCE WITH BS8500-1 AND BRE SPECIAL DIGEST N01 ALL CONCRETE IS TO CONFORM TO BS EN 206-1 AND BS 8500-2. CONCRETE STRENGTH/DURABILITY REQUIREMENTS ARE AS FOLLOWS:
 - 13.1. CONCRETE GRADE C40 (COMPRESSIVE STRENGTH 40 N/mm²).
 - 13.2. DESIGN SULPHATE CLASS DS-1 AND ACEC CLASS AC1 AND DESIGN CHEMICAL CLASS TO B1K1 SPECIFIED IN DRAWING.
 - 13.3. CONCRETE TESTING AND TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH BS 1881.
 21. THE LAYOUT OF ANY EXISTING DRAINPIPES OR SERVICES IS TO BE CONFIRMED UPON EXCAVATION, AND SPLIT SLEEVE DUCTING IS TO BE USED WHERE THOSE TO REMAIN, AND ANY NEW DRAINPIPES OR SERVICES, PASS THROUGH NEW CONCRETE SLAB AND WALLS. THE DUCTING SHOULD BE SUITABLY SIZED TO PROVIDE A MINIMUM 50mm CLEAR VOID AROUND THE PIPE OR SERVICE. THE VOID MAY BE USING EXPANDED POLYSTYRENE OR SIMILAR MATERIAL.
 22. THE SLAB SHOULD BE REINFORCED THROUGHOUT. IT SHOULD CONSIST OF 2 LAYERS OF A393 MESH AT TOP & BOTTOM. LAYS IN MESH TO BE 500mm MINIMUM.
 23. HESH REINFORCEMENT TO BE GRADE 483 TO BS 483.
 24. COBE BARS TO BE GRADE 80 H/TYRE HOT ROLLED.
 25. ALL REINFORCEMENT TO BE FIRMLY HELD IN PLACE TO PROVIDE SUFFICIENT REINFORCEMENT SUPPORTS AND MAINTAIN COVER TO REINFORCEMENT DURING EXING AND POURING.
 27. ALL CONCRETE TO BE FULLY MECHANICALLY VIBRATED.
 28. ALL CONCRETE CAST AGAINST BLINDING OR FORMWORK OR SHUTTERS TO HAVE 30mm THICK COVER TO REINFORCEMENT.
 29. CONCRETE CAST DIRECTLY AGAINST EARTH TO HAVE 75mm THICK COVER TO REINFORCEMENT.
 30. ALL CONCRETE WORK IS TO COMPLY WITH THE REQUIREMENTS OF BS8110 AND BS801 AND NATIONAL STRUCTURAL CONCRETE SPECIFICATION FOR BUILDING CONSTRUCTION. MIX CERTIFICATES SHALL BE APPROVED BY THE ENGINEER PRIOR COMMENCEMENT OF WORK ON SITE.
 31. STANDARD CUBES SHALL BE TAKEN FOR COMPRESSIVE STRENGTH TESTING. ONE SET OF 3 CUBES SHALL BE TAKEN FOR EACH 20m³ OF CONCRETE PLACED, OR LESS PER DAY. ONE CUBE IS TO BE TESTED AT 7 DAYS AND THE REMAINING TWO AT 28 DAYS.18 FINISHES TO FLOOR SLABS, DPM/DPC, INSULATION ETC TO ARCHITECT'S DETAILS.

- FOUNDATIONS DEPTHS**
- REQUIRED MINIMUM CONSTRUCTION DEPTHS FOR THE REINFORCED CONCRETE CONSTRUCTED CONCRETE SLAB & HARDCORE DUE TO THESE ARE AS FOLLOWS:
- 0.65M MINIMUM.
 - 0.75M
 - 0.90M
- * = 450mm Wide Strip Foundation Dowled into Raft Foundations (4 No. H12 Bars (2 Top & 2 Bottom), 1.0m Long, 500mm embedment each side)

Rev Amendment

Rev	First Issue	By	Date
P1	Final Issue	CSF	20/07/12
P2	Foundation Details & Section of Retaining Wall amended.	CSF	06/08/12
A	Consolidation	CSF	10/09/12
B	Changing from Traditional Strip/Footing to Semi-Raft Foundation Due to Ground Conditions.	MW	31/10/12

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Group

Drawing

STRUCTURAL ENGINEERING
Semi-Raft Foundation Layout
Plots 1 & 2

Project

Six Tunnels Farm, Gaddesden Row, Hemel Hempstead

Scale as noted @ A1 Date July 2012 Approved JA

Drawing no. 1183 - 301 B

STATUS: CONSTRUCTION