

DO NOT SCALE DIMENSIONS FROM DRAWING

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. DO NOT SCALE FROM THIS DRAWING.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELATED DRAWINGS AND DOCUMENTS. THE USER SHOULD CONSULT THE DRAWING ISSUE REGISTER FOR DETAILS.
4. THE CONTRACTOR IS TO CHECK AND VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION WORKS.
5. THE ENGINEER/ARCHITECT SHOULD BE CONTACTED IMMEDIATELY IF THE ASSUMPTIONS USED IN THE DESIGN DIFFER TO THAT FOUND ON SITE.

KEY

- DENOTES HIDDEN LINE
- DENOTES LINE OF STEELWORK OVER
- DENOTES STRUCTURAL WALL IN CONCRETE BLOCK
- DENOTES STRUCTURAL WALL IN BRICK
- DENOTES NON STRUCTURAL STUD WALL
- DENOTES INSULATION

CONCRETE

1. The grade of concrete is to be C35 as specified in BS5328, nominal Agg size 20mm, with w/c ratio of 0.60 and minimum cement content to be 300 Kg/m³
2. All reinforcement to be high yield conforming to BS 4449, Fy=460N/mm²
3. Cover to reinforcement to be 50mm
4. Lap length of bars to be 40x diameter, minimum length to be 300mm
5. All joints to be formed as shown in the standard details and debonded using flexcell and null-seal
6. All concrete to be spray cured
7. Finish to be class U4 as DTP Specification for Highways
8. All works to be in accordance with BS 8110
9. Concrete to be cured in accordance with BS 8110 Cl. 6.2.3
10. Formwork to be designed, prepared and struck in accordance with BS 8110 Pt11997 Cl.6.2.6
11. Reinforcement to be in accordance with Cl.7.1.7.5, system of marking to be as follows:
20 - T - 150 - TF
No Type Dia BarMark Spacing Layer
12. Blinding to be C15A 50mm thk to U/S of all ground bearing structures

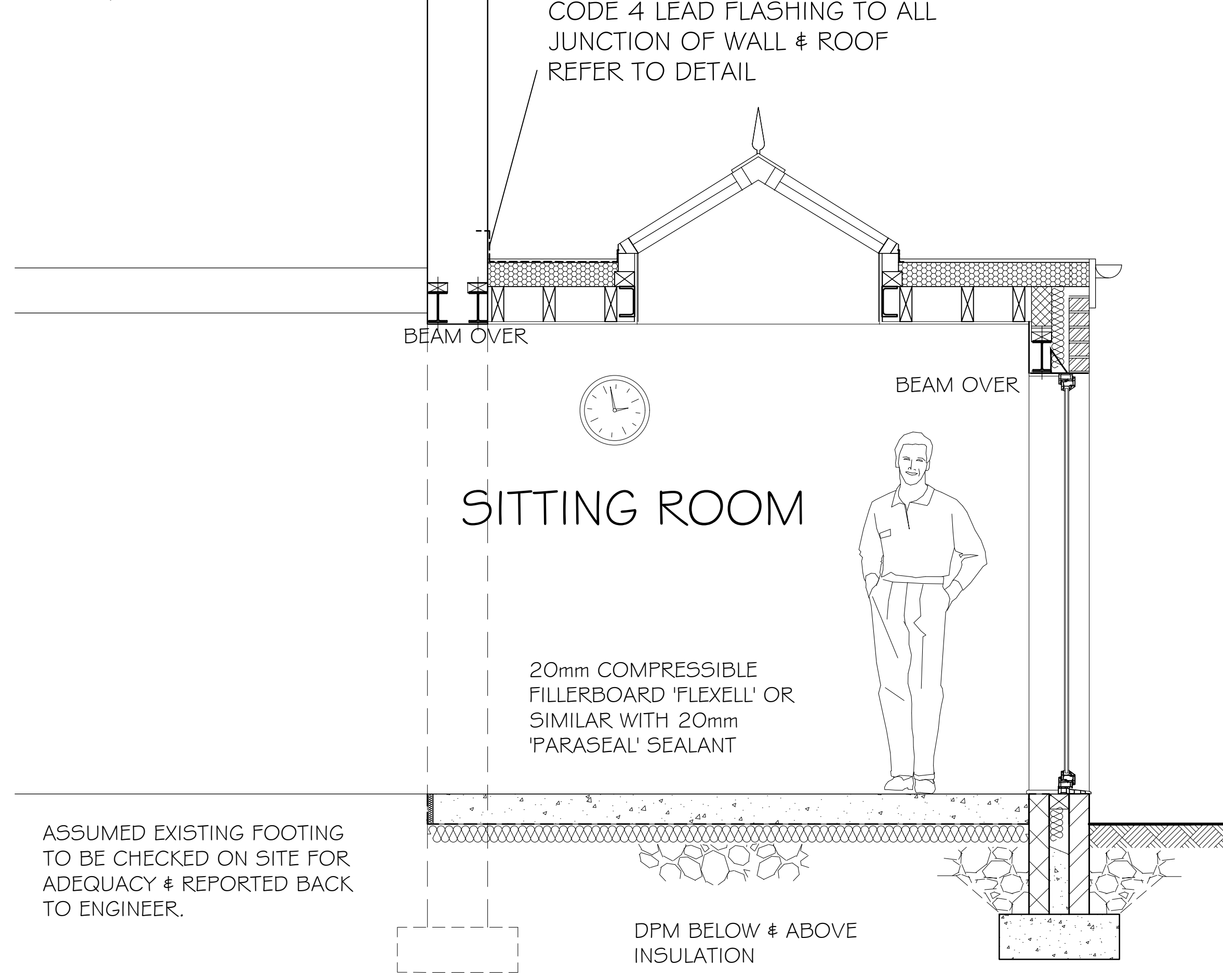
FOUNDATIONS

1. All foundations are to be taken down to a suitable bearing strata as stipulated by the Engineer) to be taken as 75kN/m²
2. S.G.B.P. as, i.e. firm to stiff Boulder clay or similar) to be verified on site by the Contractor to the satisfaction of the L.A. Building Inspector. All works are to conform to the Building Regulations Approved Document A1/2 Pt E.
3. All excavation is to be inspected and approved by the Engineer and L.A. inspector prior to backfilling.
4. All excavation are to be straight side to at least the dimensions as shown on the drawing, free of standing water and loose material. Site traffic on the formation surface shall not be permitted.
5. All existing foundations to be adopted in the works are to be exposed and confirmed to be as assumed. If the Foundations differ from that shown on the drawing and are unsuitable underpinning to the Engineer's requirements will be required.
6. Standard strip foundations are to be 450mm below ground level, with cross-sectional dimensions 600mm x 225mm min. Concrete is to be C20 as specified in BS5328.
7. Brickwork below the DPC is to be clay commons with a lean mix concrete cavity fill to ground level. The dpc to be reinforced pvc or bitumen polymer as supplied by perminite (class d); to be minimum of 150mm above ground level.
8. Ground Floor slab to be 150mm thk with 142 mesh in top face, with a minimum of 40mm laps, on 1200 gauge visqueen on sand blined 200mm thk crushed rock hard core rolled and compacted. Insulation to be 100mm thk kingspan thermalpro TF70 zero gap to achieve u=0.22w/m²k with a 50mm screed and 5mm thk asphalt covering.
9. Where relevant trial hole to be evacuated to establish depth of footing or existing slab, to be checked by engineer / building control officer for adequacy before works commence

INTERNAL PLUMBING

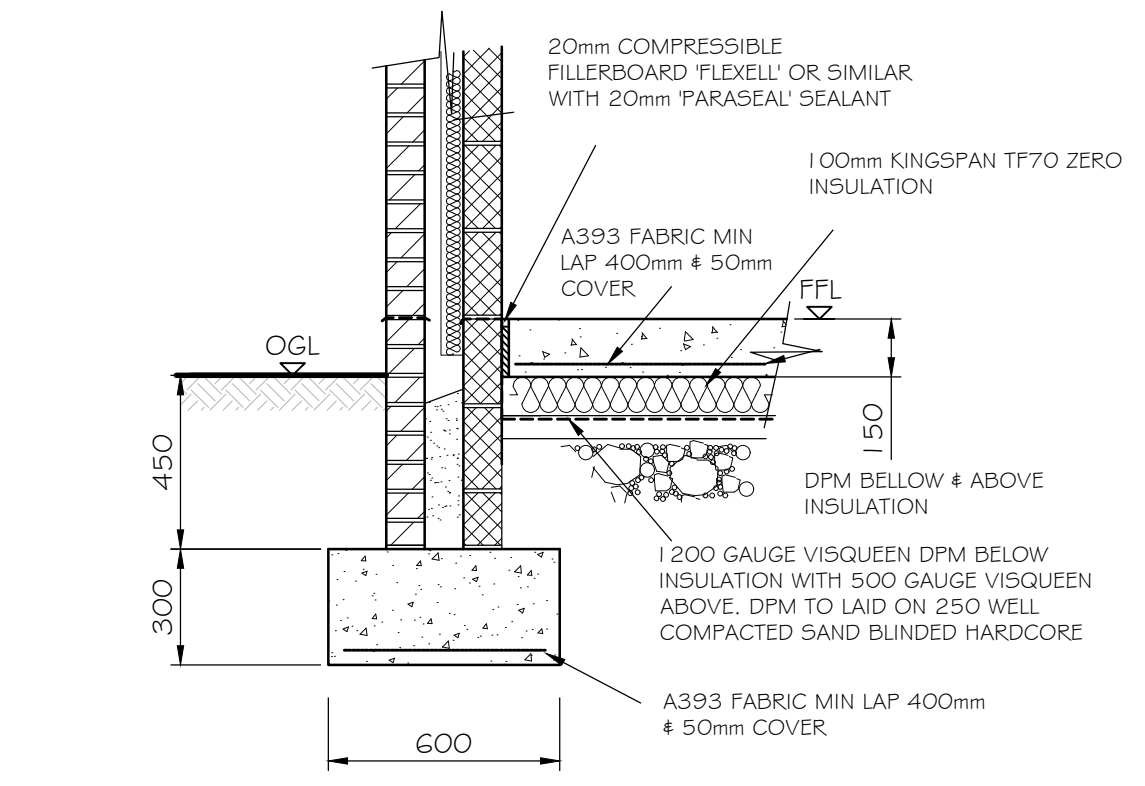
1. All plumbing to comply with CP5572.
2. 25mm dia to have 42mm diameter plastic waste pipe with 75mm deep seal bottle traps.
3. Mechanical ventilation to be provided in all confined rooms providing 3 air changes/hour discharging to external environment, connected to the light switch with 20 minute overrun, and mandatory to kitchen and bathroom areas, pull operated exrrn air ducted Fans KITCHEN RATE 60 LITRES/ SEC via wall/ceiling mounted extractor KITCHEN RATE 30 LITRES/ SEC above hob BATHROOM 15 LITRES/ SEC UTILITY RM 30 LITRES/ SEC
4. All gas and heating appliances to be design by specialist and installed by CDRGI registered fitter.
5. Radiators poss marked on drw, rads to be fitted with thermostatic valves to every room
6. Boiler condenser - combi boiler to be seasonally adjusted TRV/ thermo st. controlled Sedbuk rating of boiler to be 86%.
7. Any soil pipes that pass through the floor to be fitted with intumescent qualifire collars & boxed off with 15mm plaster board and sound insulated
8. Heat recovery Fans. sfp. cont. 0.8l/s/s minimum 66% efficiency
9. All spps to be clad with 2 ply plasterboard to achieve one hour fire resistance and sound insulated with rockwool
10. Where waste runs are excessive use anti siphon traps on 50mm pipes and air admittance valves to be fitted in accordance with building regulations approved document L31
11. All Extractors & ventilation rates in accordance with approve document F

EDUCROOM

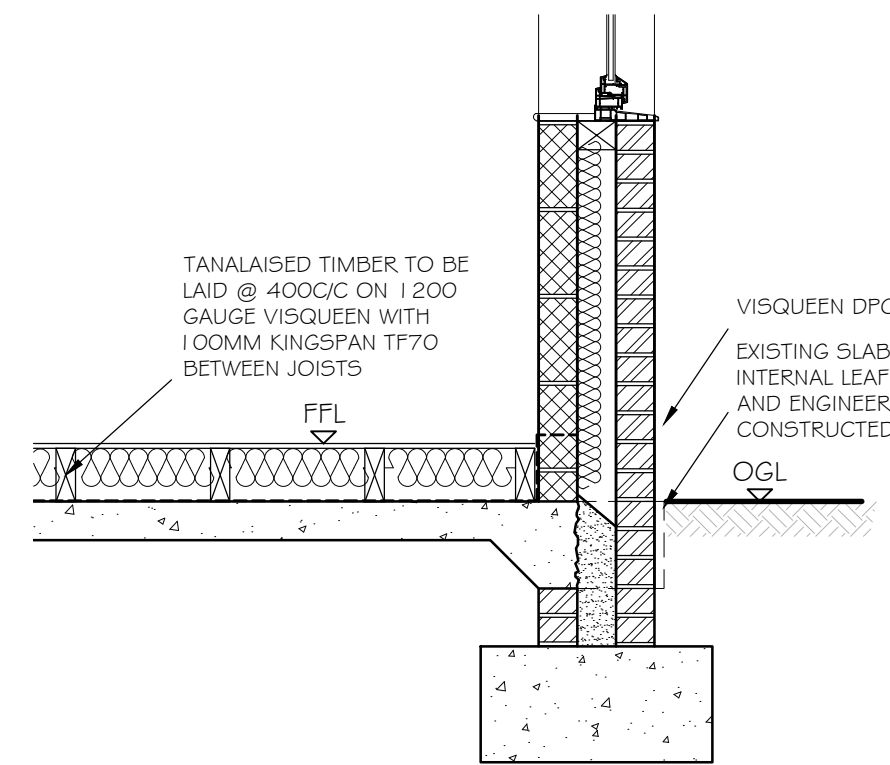


ASSUMED EXISTING FOOTING TO BE CHECKED ON SITE FOR ADEQUACY & REPORTED BACK TO ENGINEER.

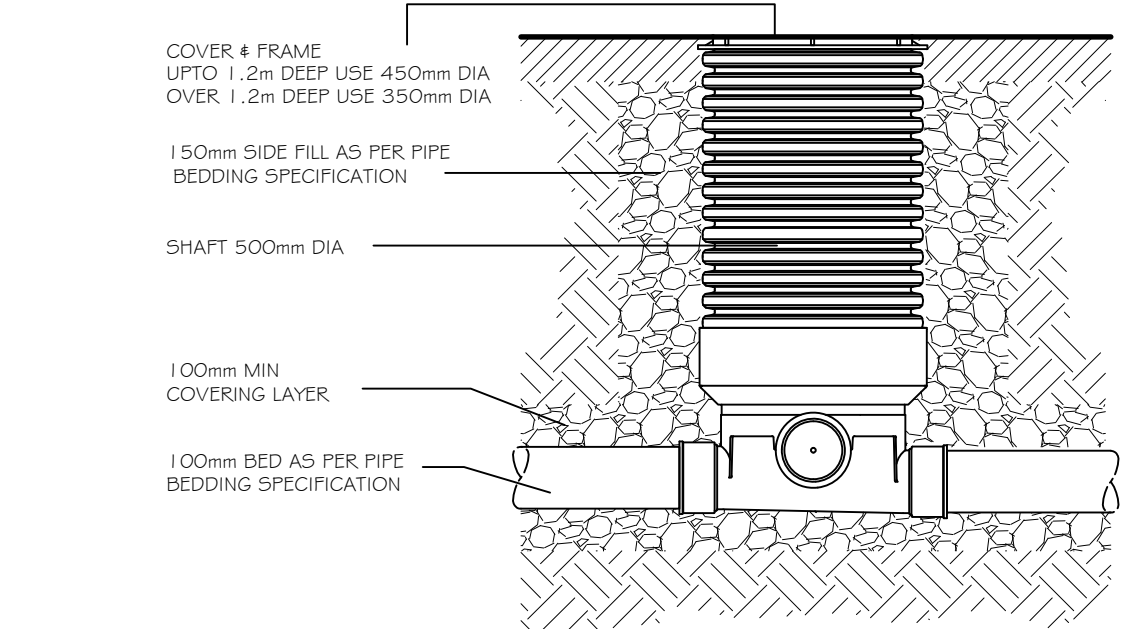
SECTION A-A



FOUNDATION DETAIL SCALE 1:20



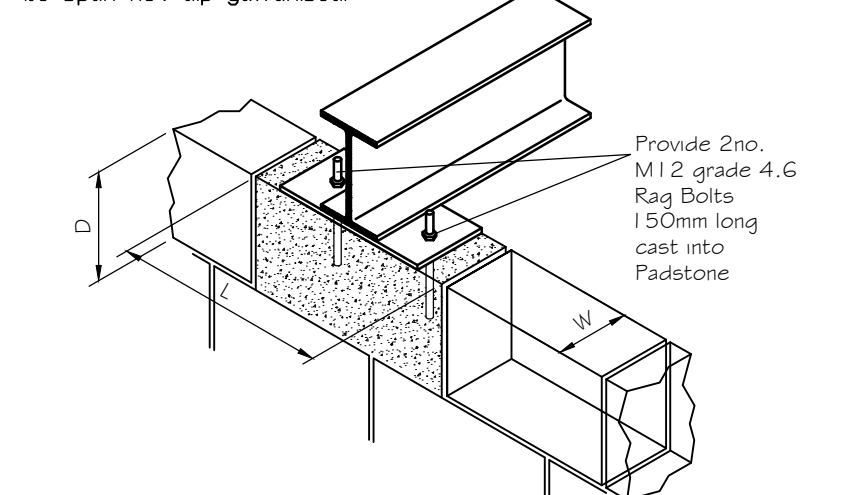
SECTION B-B



UNIVERSAL INSP CHAMBER DETAIL

STEELWORK

1. All steelwork to be grade 43A in accordance with BS4360, unless specified otherwise.
2. The Contractor is to ensure all existing structure is adequately propped prior to forming new openings. Brickwork is to be wedged and packed with dry mix mortar and slates over new beams prior to the removal of the props.
3. Where so marked as battened together beams are to be secured together with M12 blackbolts in sleeves at 600mm c/c along web staggered top and bottom, together with 6mm thk x 125mm wide plate welded to top and bot. Flanges at 600mm c/c. Bearing plates to be 12mm thk minimum 450mm wide welded to bot/flange.
4. All welds to be 6mm fillet welds unless specified otherwise.
5. All beams to be seated on minimum 100mm bearing on C20 cast insitu concrete positions as shown on drawing. Nominal size to be 100mm thk x 225mm deep x 215mm long, ie 1# dense concrete block.
6. All proprietary systems to be fixed in accordance with manufacturers details and specifications
7. All steelwork to be free from rust and mill scale and shot blasted to standard 2A. To be spray painted in the fabrication shop with 100µ Coat of zinc rich primer, 50 microns, zincatech or similar. All chips and handling scars to be touched up on site when in position.
8. Fire resistance to be a minimum of 1 hour) provided by 2 ply plasterboard and skim, with staggered joints; or an approved intumescent paint such as Nulifire or similar.
9. All steelwork joints to be detailed by steelwork fabricator, unless indicated on the drawing
10. All bolts to be M12 4.6 Black bolts unless specified otherwise, to be spun hot dip galvanised.



TYPICAL PADSTONE DETAIL

WINDOWS

1. All windows are to be double glazed, U=1.6w/m² - 16mm cavity with 90% argon fill & low E coating
2. All frames are to be proprietary system UPVC system, to match existing
3. trickle ventilation to be fitted to all frames, minimum 8000mm² to new habitable areas, 4000mm² to other areas.
4. All windows to be fitted with window locks
5. Minimum openers to be 1/20th floor area, to be as indicated on the drawing.
6. New escape windows to be min. 0.33 sqm no dimensions smaller than 450mm clear opening maximum cill height 1100mm, min all height 800mm
7. Toughened Safety glazing to be provided on all windows up to 800mm above finished floor level and 1500mm on doors + 300mm side panels
8. Existing windows and doors must achieve, Min U= 1.8 w/m²/k and contain safety glazing in all critical areas
9. Glazing not to exceed 25% of floor area to extended dwelling
10. When ventilation not from existing windows ventilation to be 1/20 of floor area to 8000mm² in accordance with approved doc F.

ELECTRICAL & MECHANICAL DETAILS

1. The electrical and mechanical works shown on this drawing are a representation of the clients requirements only and it is the responsibility of the specialist to design and provide details, drawings and provide instruction and maintenance manuals and records.
2. These items are to be fitted by a specialist contractor who is NICEIC approved and should refer to the specialist drawings. For electrical wiring and mechanical ventilation and heating systems.
3. All light switches to be posn 1200mm above ffl max
4. All plug sockets to be posn 450mm above ffl except kitchen & utility areas which are 1200mm high
5. Efficient low energy lighting is required to satisfy Approved Doc
6. All fire detection to be mains operated & interlinked to comply with BS 5839
7. All electrical work is to be inspected by a registered competent persons registration scheme and an adequate certificate to be issued prior to completion
8. Smoke detectors and heat detectors to be inter linked & separately mains operated & independent & battery back up
9. Extractor to be humidity thermo-statically controlled vent with heat recovery system

EXTERNAL DRAINAGE SPECIFICATION

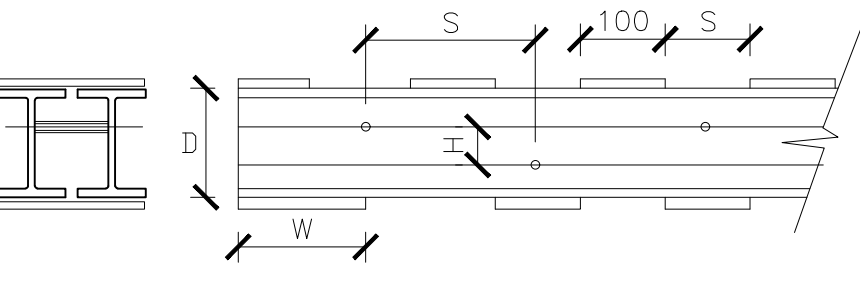
1. All existing sewer information has been supplied by Client. The contractor should verify invert levels assumed prior to construction. Any variation should be reported to this office immediately.
2. All work shall comply with Roads for adoption edition No.4 and United Utilities PLC standard document coupled with the CESVI spec, and the Building Regulations Approved document part H, in the event of conflicting req. the United Utilities PLC spec. takes precedence.
3. All pipes are to be class M vitrified clay pipe to BS 65 with flexible sleeve connections or concrete pipes with spigot and socket joints to BS 5911: P11 to 100 as detailed on the drawing
4. Pipes are to be laid straight in trenches to gradients as detailed, where none are given details shall be:

Pipe Dia.	Min	Max
150	1:100	1:60
225	1:100	1:60
5. Pipes are to be bedded on single size 'pea' gravel nominal dia 10mm to BS 882, minimum thk 100mm with selected stone surround, nominal size 40mm. Backfill as detailed.
6. Where cover is less than 400mm or adjacent to Foundations the surround and backfill is to be C20 concrete with Flexcell at pipe joints.
7. All cut ends to be treated with epoxy resin.
8. Pipes to be tested using a standard air test allowing 38mm loss of head in any 3 minute period.
9. Connection to the main sewer to the satisfaction of the Local Authority.
10. Back drop connection to be made at soffit level, pipe diameter to be 150mm.
11. All manhole covers to be class A heavy duty cast iron, minimum opening 600 x 600mm bedded on class 1 mortar and class B eng brick, min 1 course max. 3 course. Note: Bricks shall not contain frogs or holes
12. Manhole rings to BS 5911: P11 200 sizes as per:

as Pipe Dia	Depth	MH Dia	Chamber
150	250	1000	950
225	250	1500	1050
325	250	1500	950
325	320	2400	1400
13. Manhole to have rocker pipes 750mm long with 18mm compressible filler.
14. Rings to have min 150mm C20 concrete surround. Base min 225 mm thk C30 concrete with A142 mesh in bot. All manholes to have step irons as detailed. Safety chains reqd in manhole SS, up stream of 27mm pipe. Connection of all pipes to be to soffit, unless detailed differently
15. All rainwater good to be UPVC 112mm Half Round Gutter. Systems fascia brackets should be spaced no more than 1000mm apart on straight Gutter runs with 68mm down pipes.
16. Ensure lintie over where waste pipe passes through wall

EXTERNAL WALLS

1. All blockwork to comply with BS5628
2. External walls to be constructed from 102mm thk clay facing brick to match existing structure. Cavity to be cleared of all internal spots, closed with propriety cavity closure or slate or solder course.
3. Insulation to be provided by 50mm thick kingspan threewall T150 zero gap or similar approved
4. Inner leaf to be 100mm thk Thermalite 'Shield 2000' concrete blocks. (U=0.28W/m²K, Fk=5N/mm²)
5. Internal blockwork to have 2 coat plaster and skim 13mm thk
6. Cavity ties to be stainless steel double drip triangular ties to BS1243, at staggered centres 750mm c/c horizontally and 450mm c/c vertically
7. Openings to be closed with 'Thermabate' proprietary insulate cavity closer system
8. Cavity trays to be placed above all openings to be supplied by Cavity Tray type E or similar approved, installed as detailed in manufacturers instructions, unless specified on drawing.
9. Lintels to be type 7N as supplied by Cotnic, or similar, unless specified on drawing. Minimum bearing to be 150mm. Weep holes at 400mm/c to be provided above all openings, as supplied by Glövelev
10. Mortar to be class III 6:1 sand/cement mix with Feb plasticiser in accordance with BS5628
11. All Flashings to be lead code 4 to BLM Handbook.
12. Ensure continuous 50mm clear cavity throughout
13. Existing building comprising thermal envelope to be checked for compliance with approved document L1 B table 3 2010, where inadequate to be replaced
14. Brickwork below the DPC is to be clay commons with a lean mix concrete cavity fill to ground level. the dpc to be reinforced pvc or bitumen polymer as supplied by perminite (class d); to be minimum of 150mm above ground level.



DETAIL OF FULL RESTRAINT TO BEAMS N.T.S

INTERNAL WALLS

1. All internal walls to be 100mm blockwork with 13mm two-coat plaster skim to both sides
2. Non load bearing walls are to be timber stud walls, 125mm thk plaster board taped and skimmed both sides on 105 x 50mm timber framing at 600mm c/c, 100mm rockwool insulation infill to void
3. All walls between habitable rooms and washrooms to be sound insulated
4. Where relevant walls to comply with doc E should be 15mm plaster board or 12mm sound block
5. Stud partition up to underside of floor to provide protected escape route. min 1 hour fire protection required in doors fitted with smoke seals

DOORS

1. All doors to meet U-Value = 1.8
2. All internal doors to have 10mm gap under door for ventilation
3. All internal rooms without direct ventilation to have louvred vents in doors fitted with smoke seals
4. All internal doors to common areas to be min 750mm clear opening
5. All door to comply with doc n table 4 in relation to corridor widths
6. All windows & doors are to be made in accordance with bs standards & building regulations.
7. Where necessary existing door frames to be checked for suitability to fit f&d20 doors with intumescent strip
8. f&d30 door to be fitted with smoke seals and intumescent strip to door leading to main house

SPECIFICATION

- Standards**
All work to be in accordance with British Standards and to manufacturers recommendations. If Contractor wishes to use manufacturers different to that specified they shall only be permitted if prior approval given by Architect/Supervising DPFicer.
- Materials**
Manufacturers/Supplier Dsmo Soil pipes to BS4514 in PVC-U normal size 110mm. Wastes to BS255/3493 as appropriate in ABS or PP nominal sizes: 50mm, 40mm and 32mm. Traps to BS255/3493 as appropriate in PP or PE Dverflows to BS255/3493 as appropriate in PVC-U or PE.
- Workmanship**
All to be installed to BS5572. All soil pipes to have rodding access points at changes of direction. all solvent welded wastes to have cleaning access points at changes of direction.
- Finishes**
Soil pipes to be self colour or painted to specification Wastes and overflows self colour but, to be painted when exposed to view or sunlight.
Hot water system to be confirmed & kitchen layout to be finalised

PART G (SANITATION, HOT WATER SAFETY AND WATER EFFICIENCY

- water efficiency, 125 litres/head/day of wholesome water, resulting from the design of the cold and hot water systems, for each individual dwelling/flat, should be no greater than this target. prevent the temperature of the water stored in the vessel/cylinder, at any time exceeding 100 degrees centigrade, any discharge from safety devices, is safely conveyed to where it is visible, but will not cause danger to persons about the building, (to a tundish) the hot water to any fixed bath, must be designed and installed as to incorporate measures to ensure that the temperature of the water that can be delivered to that bath, does not exceed 48 degrees centigrade.

TYPE	CLASSIFICATION	METSEC REFERENCE	DESIGN CAVITY WIDTH	OVERALL LENGTH (L) mm
MT2	2	MT2-200	90 to 110	225
MSRC		MSRC		

For use with Ref. MT1, MT2, MT3, MT4 and MR4 shown above.

B	Client Amendments	21-12-21	JCH
A	Client Amendments	08-12-21	JCH
Rev.	Amendments	Date	By

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PROJECT ADDRESS
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PROJECT TITLE
REAR EXTENSION

DRAWING TITLE
PROPOSED SECTIONS, NOTES & DETAILS

Client	Mr & Mrs Thornhill	Scales@A1	1:10/20/50
Drawn	JCH	Checked	Date 16-11-21
DRAWING No.	A021/315/BR/02	Revision	B

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