

DRAWING TITLE	DATE : 31.03.2025		
	SIZE	DWG. NO.	REV.
FRONT COVER AND DRAWING REGISTER	A3		
CONSTRUCTION SPECIFICATION SHEET 1 OF 3	A3	S-2.0-CS-01	A
CONSTRUCTION SPECIFICATION SHEET 2 OF 3	A3	S-2.0-CS-02	A
CONSTRUCTION SPECIFICATION SHEET 3 OF 3	A3	S-2.0-CS-03	A
CDM REGULATIONS - DESIGNERS RISK ASSESSMENT	A3	S-2.0-CDM - 01	A
APPROVED DOC-G WATER CALCULATOR	A3	S-2.0-AD G - 01	A
APPROVED DOC-O CALCULATION	A3	S-2.0-AD O - 01	A
SYMBOLS KEY	A3	S-2.0-01	A
SUB STRUCTURE PLAN - AS	A3	S-2.0-02 AS	A
SUB STRUCTURE PLAN - OPPOSITE	A3	S-2.0-02 OPP	A
FOUNDATION AND SLAB GA	A1	021	C1
SLAB MESH LAYOUT	A1	022	C1
GROUND FLOOR PLAN (STRUCTURAL)	A3	S-2.0-03	B
GROUND FLOOR PLAN (SERVICES)	A3	S-2.0-031	B
FIRST FLOOR SYSTEM LAYOUT	A3	S-2.0-04	B
FIRST FLOOR PLAN (STRUCTURAL)	A3	S-2.0-05	B
FIRST FLOOR PLAN (SERVICES)	A3	S-2.0-051	C
ROOF PLAN - 1 OF 2	A3	S-2.0-06	A
TYPICAL SECTION	A3	S-2.0-07	A
FRONT ELEVATION - TRADITIONAL (BRICK)	A3	S-2.0-08-TB	A
L.H. SIDE ELEVATION - TRADITIONAL (BRICK)	A3	S-2.0-081-TB	A
REAR ELEVATION - TRADITIONAL (BRICK)	A3	S-2.0-082-TB	A
R.H. SIDE ELEVATION - TRADITIONAL (BRICK)	A3	S-2.0-083-TB	A
WINDOW AND DOOR SCHEDULE	A3	S-2.0-09	A
KITCHEN & UTILITY LAYOUT	A3	S-2.0-10	B
KITCHEN & UTILITY ELEVATIONS	A3	S-2.0-10.1	B
BATHROOM PLAN AND WC DETAILS	A3	S-2.0-11	B
BATHROOM ELEVATIONS	A3	S-2.0-11.1	B
EN-SUITE DETAILS	A3	S-2.0-11.2	C
STAIRCASE DETAILS - 1 OF 2	A3	S-2.0-12	A
STAIRCASE DETAILS - 2 OF 2	A3	S-2.0-12.1	A
CUSTOMER ADDITIONS PLAN - GROUND FLOOR	A3	S-2.0-13	B
CUSTOMER ADDITIONS PLAN - FIRST FLOOR	A3	S-2.0-13.1	C
SALES OFFICE DETAILS	A3	S-2.1-14	A
SALES OFFICE DETAILS	A3	S-2.1-15	A
BEAM 001 DETAILS	A4	HSp - SK1	
BEAM 002 DETAILS	A4	HSp - SK2	
ENGINEERS MARKED UP	A3	NONE	
ENGINEERS MARKED UP	A3	NONE	
FLOOR PLANS CENTRAL HEATING	A3	DHS-HARE-01	A
FLOOR PLANS HOT & COLD WATER SERVICES	A3	DPS-HARE-01	A
EQUIPMENT SCHEDULE	A4		A
RAD/T-R SCHEDULE	A4		A

MARKETING CODES	
PLAN REFERENCE	SPECIAL
ELEVATION REFERENCES	
TRADITIONAL	SPECIAL
STONE	



TIMELESS

COLLECTION

HOUSE TYPE
 HAREWOOD - T4H1266
 NDSS 4B5P
 TIMELESS SPECIFICATION.
 CONSTRUCTION DETAILS.

DUCHY SERIES 2.1
 SITE: NORTH MANCHESTER GOLF CLUB
 PLOTS: 1, 16, 18, 29, 42
 ISSUE: 02



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1. GENERAL

ALL WORKMANSHIP AND MATERIALS TO COMPLY WITH BUILDING REGULATIONS, BRITISH STANDARDS, CODES OF PRACTICE, ROBUST CONSTRUCTION DETAILS, ACCREDITED CONSTRUCTION DETAILS AND NHBC REQUIREMENTS. ALL MATERIALS TO BE FIXED, APPLIED OR MIXED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS OR SPECIFICATION. ALL MATERIALS TO BE SUITABLE FOR THEIR PURPOSES. ALL WORKS TO BE CARRIED OUT TO THE SATISFACTION OF THE 'INSPECTOR' WHETHER OR NOT INDICATED ON ANY OF THE DRAWINGS. THIS SPECIFICATION APPLIES UNLESS OTHERWISE STATED ON THE WORKING DRAWINGS OR MANUFACTURERS DETAILS.

2. GROUND WORKS (BASIC DETAILS ALWAYS REFER TO SITE SPECIFIC DETAILS.)

THE STANDARD SPECIFICATION RELATES TO SITES WITHOUT THE FOLLOWING CONDITIONS; SHOULD ANY OF THESE CONDITIONS OCCUR, REFERENCE MUST BE MADE TO OBTAIN THE STRUCTURAL ENGINEER'S ADVICE.

1. PRESENCE OF TREES EITHER ON OR AROUND SITE (REFER TO NHBC PRACTICE NOTE 3).
 2. PRESENCE OF PONDS AND/OR STREAMS.
 3. KNOWLEDGE OF, OR DISCOVERY OF, TIPPED OR WASTE MATERIALS.
 4. KNOWLEDGE OF, OR DISCOVERY OF, OLD MINE OR QUARRY WORKINGS,
 5. GROUND SLOPES GREATER THAN 1:10.
 6. STEPS IN FOUNDATIONS EXCEEDING 175mm.
- NB. DO NOT ATTEMPT TO AMEND OR ADJUST DETAILS WITHOUT EXPERT ADVICE.

GROUND FLOOR SLAB TO BE MINIMUM 100mm THICK, FLOATED CONCRETE ON KINGSPAN TF70 INSULATION, WITH A MAX THERMAL CONDUCTIVITY OF 0.023W/mK AND MINIMUM COMPRESSIVE STRENGTH OF 7kN/m², EXTENT AND THICKNESS OF INSULATION, AS INDICATED ON DRAWING NO's 02 & 07 ON 1200 GAUGE POLYTHENE DPM, 50mm SAND BLINDING ON 150mm TO 600mm MAXIMUM HARD-CORE (LAID IN MAXIMUM 150mm THICK LAYERS, WELL CONSOLIDATED). ALSO, DEPTH OF HARDCORE BELOW THICKENED OUT SLAB BELOW NON-LOAD BEARING WALLS TO BE 150mm-600mm MAX AS DESCRIBED PREVIOUSLY.

ENSURE 100mm BREAK IN GROUND FLOOR SLAB BENEATH SEPARATING (PARTY) WALLS AND THAT THE CAVITY EXTENDS A MINIMUM OF 225mm BELOW UNDERSIDE OF SLAB, OR AS REQUIRED BY ROBUST DETAILS. RAFT FOUNDATION CANNOT BE USED FOR MASONRY CONSTRUCTION APARTMENTS OR TERRACE BLOCKS, OTHERWISE PRE-COMPLETION SOUND TESTING WILL BE REQUIRED.

CONCRETE GRADE TO GROUND BEARING SLABS IS TO BE GEN4. DETAILS FOR REINFORCED CONCRETE FLOOR SLABS TO BE AS DESCRIBED ON DRAWING NO's. 021 & 022 (INSULATION WHEN REQUIRED TO BE THE SAME SPECIFICATION AS ABOVE).

FOUNDATIONS TO EXTERNAL AND PARTY WALLS TO BE 600mm WIDE x 175mm THICK CONCRETE STRIP FOOTINGS WITH THERMALITE OR OTHER APPROVED TRENCH BLOCK, LAID IN 1.4 MORTAR. FACING BRICKWORK TO EXTEND 4 COURSES BELOW DPC OR TO BE BELOW FINISHED GROUND LEVEL AND TO BE F2, S2 QUALITY. THE CAVITY IS TO BE FILLED WITH GEN3 OR ST2 CONCRETE TO 225mm BELOW DPC.

FOUNDATIONS TO INTERNAL LOAD BEARING WALLS TO BE 450mm x 175mm THICK CONCRETE STRIP FOOTINGS WITH WALL THICKNESS CONTINUED BELOW DPC LEVEL IN COMMON OR CONCRETE BRICKS.

NON-LOAD BEARING INTERNAL WALLS ARE TO BE BUILT OFF THE SLAB, WHICH IS TO BE THICKENED IN ACCORDANCE WITH THE DETAILS.

DEPTHS OF FOUNDATIONS, TO FORMATION LEVEL ARE TO BE MINIMUM OF 1000mm IN CLAY SOILS OR 625mm IN SAND (OR AS REQUIRED BY THE STRUCTURAL ENGINEER OF LOCAL AUTHORITY). CONCRETE TO BE GEN1 OR ST2.

ALL THE ABOVE FOUNDATION SPECIFICATIONS ARE SUBJECT TO CHANGE IN ACCORDANCE WITH STRUCTURAL ENGINEERS DESIGNS FOR SITE SPECIFIC GROUND CONDITIONS AND LOCAL AUTHORITY REQUIREMENTS.

3. HOUSE DRAINAGE

100mm NOMINAL UPVC PIPE, SEE SALES SPECIFICATION FOR MANUFACTURER. FOUL RUNS MINIMUM GRADIENT OF 1:40 WITH INSPECTION CHAMBERS AT MAXIMUM 12m INTERVALS.

PIPEWORK BELOW BUILDINGS TO BE ENCASED IN 100mm THICK GRANULAR OR OTHER FLEXIBLE FILLING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SEE SITE DRAINAGE PLAN FOR DRAINAGE RUNS, GRADIENTS, AND MANHOLE INVERTS.

DRAINS PASSING THROUGH WALLS TO HAVE 50mm CLEARANCE ALL ROUND WITH LINTEL OVER.

4. SOIL & WASTE

TO BE A SINGLE STACK DRAINAGE SYSTEM TO BS 5572:1994, CONNECTING, VIA A SUITABLE ADAPTOR, TO THE UNDERGROUND DRAINAGE SYSTEM. LOCATION AND SIZES OF INTERNAL PIPEWORK ARE INDICATED IN THE CONSTRUCTION PACK.

FOR BUILDINGS UP TO 3 STORIES WHERE GROUND FLOOR APPLIANCES CONNECT TO SVP THE DISTANCE FROM THE BRANCH TO INVERT TO BE NOT LESS THAN 450mm. FOR BUILDINGS ABOVE 3 STORIES THE DISTANCE SHOULD BE INCREASED.

EXTERNAL VENT PIPES TO TERMINATE 900mm ABOVE ANY ADJACENT VENTILATED OPENING AND TERMINATE WITH A WIRE BALLOON CAGE.

INTERNAL VENT PIPES WHEN REQUIRED TO BE VENTED ARE TO BE TERMINATED AT A PROPRIETARY RIDGE VENT (FITTED TO MANUFACTURERS INSTRUCTIONS) IF ON FRONT ELEVATION. WHEN LOCATED ON REAR ELEVATION THEY ARE TO BE TAKEN THROUGH THE ROOF & TERMINATED AS AN EXTERNAL STACK. OTHERWISE ALL ARE TO BE TERMINATED WITH AN AIR ADMITTANCE VALVE. CHECK WITH DRAINAGE DESIGN FOR LOCATION OF VENTED STACKS.

BLOCK SPECIFICATION (UNLESS OTHERWISE STATED ON INDIVIDUAL DRAWING)
INNER LEAF: 100mm AERATED BLOCK. DENSITY 480 kg/m³, STRENGTH 2.9N/mm² . THERMAL CONDUCTIVITY 0.11 W/mK. REFER TO SUPPLIER AGREEMENT FOR MANUFACTURER.

OUTER LEAF (BEHIND RENDER): 100mm MEDIUM DENSITY SOLID BLOCK. DENSITY 1400kg/m³, STRENGTH 3.6N/mm². THERMAL CONDUCTIVITY 0.51W/mK. REFER TO SUPPLIER AGREEMENT FOR MANUFACTURER.

PARTITION WALLS: 100mm MEDIUM DENSITY SOLID BLOCK. DENSITY 1400kg/m³, STRENGTH 3.6N/mm². THERMAL CONDUCTIVITY 0.51W/mK. REFER TO SUPPLIER AGREEMENT FOR MANUFACTURER.

PARTY WALLS: 100mm AERATED BLOCK. DENSITY 600 kg/m³, STRENGTH 2.9N/mm² . THERMAL CONDUCTIVITY 0.15 W/mK. REFER TO SUPPLIER AGREEMENT FOR MANUFACTURER.

INNER LEAF OF EXTERNAL GABLES ABOVE HEATED ENVELOPE: 100mm MEDIUM DENSITY SOLID BLOCK. DENSITY 1400kg/m³, STRENGTH 3.6N/mm². THERMAL CONDUCTIVITY 0.51W/mK. REFER TO SUPPLIER AGREEMENT FOR MANUFACTURER.

TRENCH BLOCK: 355mm TRENCH BLOCK, STRENGTH 3.6N/mm². THERMAL CONDUCTIVITY 0.16W/mK OR SIMILAR APPROVED. 100mm TRENCH BLOCK, STRENGTH 3.6N/mm². THERMAL CONDUCTIVITY 0.16W/mK. REFER TO SUPPLIER AGREEMENT FOR MANUFACTURER.

5. CAVITY INSULATION

CHECK WITH MANUFACTURER FOR FITTING INSTRUCTION, LOCATION OF CAVITY TRAY AND REQUIREMENTS FOR LOCATION TO FLUES.

6. SHELTERED & MODERATE EXPOSURE EXTERNAL CAVITY WALLS (BRICKWORK & RENDER), EXPOSURE ZONE RATING 1 & 2

328mm OVERALL CAVITY CONSTRUCTION TO GIVE A TOTAL "U" VALUE OF 0.20 W/m²K, COMPRISING:
103mm FACING BRICK OR RENDERED BLOCKWORK OUTER SKIN (AS SHOWN ON ELEVATIONS), ONLY F2, S2 QUALITY CLAY BRICKS ARE TO BE USED & BEHIND RENDER ONLY SOLID BLOCKWORK IS TO BE USED FOR OUTER SKIN.
125mm CAVITY WITH FULL FILL CAVITY BLOWN INSULATION. THERMAL CONDUCTIVITY OF 0.034W/mK.
100mm AERATED BLOCKWORK INNER SKIN OF MAX. THERMAL CONDUCTIVITY OF 0.11W/mK.

SEVERE & VERY SEVERE EXPOSURE EXTERNAL CAVITY WALLS (BRICKWORK & RENDER) EXPOSURE ZONE RATING 3 & 4

328mm OVERALL, CAVITY CONSTRUCTION TO GIVE A TOTAL "U" VALUE OF 0.19 W/m²K COMPRISING:
RENDERED BLOCKWORK/103mm FACING BRICK OUTER SKIN (AS SHOWN ON ELEVATIONS), ONLY F2, S2 QUALITY CLAY BRICKS ARE TO BE USED & BEHIND RENDER ONLY SOLID BLOCKWORK IS TO BE USED FOR OUTER SKIN.
MORTAR TO BE CLASS (II) IN ACCORDANCE WITH BS 5628-1:2005 (SULPHATE RESISTING PORTLAND CEMENT)
50mm RESIDUAL CAVITY.
75mm KINGSPAN TW50 PARTIAL FILL CAVITY WALL INSULATION. THERMAL CONDUCTIVITY OF 0.022W/mK. MANUFACTURERS BBA CERTIFICATE REQUIRED TO SATISFY NHBC REQUIREMENT FOR RAIN SCREEN.
100mm AERATED BLOCKWORK INNER SKIN OF MAX. THERMAL CONDUCTIVITY OF 0.11W/mK. BUILT TO SPECIAL CATEGORY OF CONSTRUCTION CONTROL IN ACCORDANCE WITH BS 5628-1:2005
IMPORTANT NOTE: FOR BRICKWORK, FACING MASONRY TO HAVE TOOLED FLUSH JOINTS.

7. CAVITY WALL GENERAL NOTES

WALL TIES TO BE PROVIDED IN ACCORDANCE WITH BS EN 845-1:2013+A1:2016, AT MAX 900mm HORIZONTALLY & 450mm VERTICAL CENTRES, STAGGERED IN ALTERNATE ROWS. 600mm HORIZONTAL AND 450mm VERTICAL CENTRES FOR PARTIAL FILL INSULATION IN ROWS NOT STAGGERED. ENSURE WALL TIES HAVE 50mm EMBEDMENT INTO INTERNAL AND EXTERNAL LEAVES FOR 100mm CAVITIES. ADDITIONAL TIES ARE TO BE PROVIDED AROUND ALL OPENINGS AT 225mm VERTICAL CENTRES & 150mm MAX FROM OPENING. TIES TO BE STAINLESS STEEL OR NON-FERROUS IN AREAS OF SEVERE EXPOSURE.

ALL CAVITIES ARE TO BE CLOSED AT EAVES & VERGE, AS INDICATED IN THE STANDARD DETAILS. HYLOAD PITCH POLYMER 100mm WIDE WHERE REQUIRED, OR OTHER APPROVED DPC, A MINIMUM OF 150mm ABOVE ADJACENT FINISHED GROUND LEVEL. DPC TO HAVE A MINIMUM 150mm LAP AT JOINTS, AND WITH DPM IN ORDER TO ENSURE A CONTINUOUS WATERTIGHT SEAL. OPENING JAMBS TO BE CLOSED OFF AS INDICATED IN THE STANDARD DETAILS.

CAVITY TRAYS ARE TO BE FITTED AS NOTED IN THE SPECIFICATION & CONSTRUCTION PACK. WHEN TRAYS ARE FITTED IN A FULLY FILLED CAVITY, STOP ENDS ARE TO BE PROVIDED.

8. EXTERNAL STUD WALLS & DORMER CHEEKS.

75x38mm STUDWORK, WITH 75mm INSULATION TO BE USED BETWEEN STUD WITH 30mm BETWEEN STUDS & PLASTERBOARD GIVING A THERMAL CONDUCTIVITY OF 0.022W/mK, WITH 12.5mm PLASTERBOARD OR SIMILAR APPROVED TO ROOM SIDE. ALL GIVING A MAXIMUM OVERALL ROOF CONSTRUCTION U-VALUE OF 0.25W/m²K.

9. PARTY WALLS

ROBUST DETAIL E-WM-30, 300mm OVERALL WIDTH COMPRISING TWO SKINS OF 100mm AERATED BLOCK (600 kg/m³), WITH A CAVITY WIDTH OF 100mm, CAVITY TO BE FILLED WITH KNAUF SUPAFIL PARTY WALL BLOWN GLASS MINERAL WOOL INSULATION. INTERNAL FINISH IS TO BE 12.5mm (8kg/m²) PLASTERBOARD ON DABS BOTH HABITABLE SIDES. ONLY 'TYPE A' WALL TIES ARE TO BE USED TO TIE THE BLOCK LEAVES. THE ROBUST DETAILS GUIDE MUST BE FOLLOWED AT ALL TIMES. ALL INSTALLED TO MANUFACTURER & ROBUST DETAILS REQUIREMENTS.

CHECK SITE SPECIFIC FOUNDATION/ SLAB DETAILS AND ENSURE THEY ARE DESIGNED TO SUIT THE ROBUST STANDARD DETAIL REQUIREMENTS. RAFT FOUNDATIONS ARE NOT ACCEPTABLE.

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		A		FIRST DUCHY 2.1 ISSUE
		Rev		Comments
				Date
House Type	Code	Drawing no.		Rev
HAREWOOD	T4H1266-NDSS	S-2.1-CS-01		A
Title				Scale
CONSTRUCTION SPECIFICATION SHEET 1 OF 3				N/A

A COMPRESSIBLE, NON-COMBUSTIBLE PACKING WILL BE PROVIDED BETWEEN THE TOP OF THIS SEPARATING WALL AND THE UNDERSIDE OF THE ROOF COVERING; AND TILES SPANNING THE PARTY WALL WILL BE BEDDED IN WEAK MIX MORTAR TO PROVIDE A FIRE STOP BETWEEN ADJACENT BATTENS.
A SIMILAR PACKING TO BE INSERTED INTO THE EXTERNAL CAVITY AT THE PARTY WALL JUNCTION - SEE STANDARD DETAIL. CAVITY TO BE STOPPED IN ACCORDANCE WITH EXTERNAL WALL JUNCTION DETAILS IN APPROVED DOCUMENT E. SEE STANDARD DETAILS.

WHERE A BOXED OUT EAVES DETAIL IS USED ON SEMI-DETACHED HOUSES/ BUNGALOWS, FIRE STOPPING SHALL BE PROVIDED TO THE PARTY WALL SITUATION. SEE STANDARD DETAIL.

10. INTERNAL WALLS

TO GROUND FLOOR LEVEL; 100mm MEDIUM DENSE SOLID BLOCK LINED WITH 12.5mm (8kg/m²) PLASTERBOARD ON DABS TO BOTH SIDES. LOAD BEARING WALLS TO HAVE FOOTINGS. NON-LOAD BEARING TO HAVE THICKENED FLOOR SLAB. ALL AS INDICATED ON DRAWING. NO. 02. DPCs TO BE PROVIDED. LOAD BEARING WALLS AS PER STANDARD FOUNDATION DETAILS.

11. WALL PLASTERBOARD

EXTERNAL WALLS 12.5mm PLASTERBOARD, PARTY WALLS 12.5mm PLASTERBOARD, INTERNAL BLOCK PARTITIONS LINED WITH 12.5mm PLASTERBOARD ON DABS, APPLIED AND SUPPORTED IN FULL ACCORDANCE WITH MANUFACTURERS (REFER TO GROUP PROCUREMENT MANAGER) INSTRUCTIONS AND RECOMMENDATIONS. ALSO SEE STANDARD DETAILS FOR LOCATION OF CONTINUOUS SEALING BANDS.

12. WALLS TO UN-HEATED SPACES

SEMI-EXPOSED 100mm AERATED BLOCKWORK LEAF OF MAX THERMAL CONDUCTIVITY OF 0.11W/mK GIVING A TOTAL U-VALUE OF 0.3W/m²K, WITH 90mm LAMINATED INSULATION BOARD ON DABS (BRITISH GYPSUM GYPROC THERMALINE SUPER OR SIMILAR APPROVED) FITTED TO MANUFACTURERS DETAILS, WITH A MAX THERMAL CONDUCTIVITY OF 0.021W/mK. OR WITH 25x38mm BATTENS AT 400mm CENTRES, WITH 25mm INSULATION BOARD HAVING A MAX THERMAL CONDUCTIVITY OF 0.021W/mK BETWEEN THE BATTENS. WHERE A CAVITY WALL FORMS THE PARTITION BETWEEN THE GARAGE & HOUSE THEN THE CAVITY IS TO BE FILLED AS PER THE EXTERNAL CAVITY WALL CONSTRUCTION.

13. CHIMNEYS

FLUES SHALL BE IN ACCORDANCE WITH APPROVED DOCUMENT J 2013 & FITTED TO MANUFACTURERS RECOMMENDATIONS. LABELS TO BE PERMANENTLY FIXED, SEE STANDARD DETAILS. PLEASE CHECK WITH CAVITY WALL INSULATION MANUFACTURER FOR THE SUITABILITY OF THE INSULATION IN RELATIONSHIP TO THE FLUE.

14. FLOOR CONSTRUCTION (HOUSES)

I BEAM FLOORS (241mm DEEP JOISTS) TO BE FIXED TO MANUFACTURERS RECOMMENDATIONS. DECKING TO BE 22mm T & G GRADE II/III WATER RESISTANT CHIPBOARD TO ALL AREAS. DECKING TO HAVE PROTECTIVE COATING TO PROVIDE A WORKING PLATFORM, DECKING MUST BE FITTED TO MANUFACTURERS RECOMMENDATIONS. 15mm PLASTERBOARD FIXED TO UNDERSIDE (NOGGINS TO MANUFACTURERS RECOMMENDATIONS) SEE SALES SPECIFICATION FOR FINISH. WHERE THE DRAWINGS INDICATE A CEILING TO AN INTEGRAL GARAGE, THIS IS TO COMPRISE OF 15mm FIRELINE PLASTERBOARD, WITH NOGGINS & JOINTING AS REQUIRED BY MANUFACTURER TO ACHIEVE 30 MINUTES FIRE RESISTANCE.

WHEN JOISTS ARE BUILT INTO EXTERNAL OR PARTY WALLS PLEASE REFER TO STANDARD DETAILS FOR SEALING. WHEN JOIST HANGERS ARE USED ALWAYS REFER TO JOIST & HANGER MANUFACTURERS FOR HEALTH & SAFETY REQUIREMENTS.

15. FLOOR CONSTRUCTION (APARTMENTS): PRE-CAST CONCRETE HOLLOW CORE PLANK FLOOR (295-305kg/m²) REFER TO ENGINEERS DETAILS.

FLOOR CONSTRUCTION EF-C-4: OVERALL THICKNESS 386mm; CONSISTING OF A LAYER OF 65mm SAND CEMENT SCREED. ISOLATING LAYER OF 6mm IsoRubber WITH IsoEdge FLANKING STRIP, 30-36 kg/m³. 150mm DEEP PC CONCRETE FLOOR BASE WITH 150mm MF SUSPENDED CEILING SYSTEM FOR SERVICES / DOWNLIGHTERS & 15mm PLASTERBOARD CEILING FINISH.

16. TIMBER STUD PARTITIONS

63x38mm S/W STUDDING @ 600mm CENTRES AND 400mm CENTRES TO WALLS TO RECEIVE WALL TILING. WITH CONTINUOUS TOP AND BOTTOM RAILS AND INTERMEDIATE NOGGINS AS REQUIRED FOR STABILITY AND FOR FIXINGS. 12.5mm WALLBOARD EITHER SIDE WITH TAPED JOINT FINISH. 65mm ISOVER ACOUSTIC PARTITION ROLL BETWEEN STUDS REQUIRED BETWEEN BEDROOMS OR A ROOM CONTAINING A WC AND OTHER ROOMS ONLY. (REFER TO WORKING DRAWINGS FOR LOCATION).

17. LINTELS

PROPRIETARY LINTELS ARE TO BE PLACED OVER ALL OPENING DOORS, WINDOWS AND METER BOXES. LINTELS ARE TO BE INSTALLED TO MANUFACTURERS DETAILS & ARE TO BE LAID LEVEL, PROPPED WHEN REQUIRED, AND HAVE A MINIMUM END BEARING OF 150mm AND CASED INTERNALLY TO GIVE 1/2hr FIRE PROTECTION. MINIMUM GALVANIZED FINISHED STEEL LINTELS, INSULATED WITH POLYSTYRENE, ARE TO BE USED IN THE EXTERNAL WALLS. THE LINTELS MUST ALSO COMPLY WITH ACCREDITED CONSTRUCTION DETAILS, ie. PERFORATED BASE OR BASELESS DESIGN. CAVITY TRAYS TO BE PROVIDED WHERE NOTED ON DRAWINGS OR REQUIRED BY LINTEL MANUFACTURER. WHERE FULL FILL CAVITY INSULATION IS USED ALL LINTELS & CAVITY TRAYS MUST HAVE STOP ENDS.

18. ROOF

TO BE CONCRETE INTERLOCKING SINGLE LAP TILES (TO BS 5534:2014), CLIPPED AT VERGES AND EAVES; LAID ON, OR FIXED TO, TREATED S/W BATTENS 50 x 25mm, OVER UNTEARABLE SARKING FELT (TO BS EN 13707:2013) LAPPED A MINIMUM OF 150mm. GRADE TO BE 1F WITH MINIMUM GRADE 5U FOR FIRST ROW WHICH IS DRESSED INTO THE GUTTER OVER A TILTING FILLET. NB. THE BATTENS ARE TO BE SET OUT TO GIVE A TILE LAP, AS RECOMMENDED BY THE TILE MANUFACTURER; TO SUIT THE EXPOSURE RATING OF THE SITE. ALSO, SITES HAVING A SEVERE EXPOSURE RATING ARE TO HAVE EVERY COURSE OF TILES NAILED. ALL EXTERNAL TIMBERS ARE TO BE PRESERVATIVE TREATED. (IF DIFFERENT TILES ARE SPECIFIED IN THE CONSTRUCTION PACK OR FINISHES SCHEDULE THEN THE BATTEN SIZE IS TO BE CHECKED WITH THE NHBC OR APPROVED INSPECTOR). ALL ROOF POINTING IS TO BE AS TILE MANUFACTURERS & NHBC REQUIREMENTS. ie. A MIXTURE OF CEMENT, SHARP & SOFT SAND TO ACHIEVE WORKABILITY, THE SHARP SAND CONTENT MUST NOT BE LESS THAN 1/3 OF THE TOTAL SAND CONTENT.(CHECK FINISHES SCHEDULE FOR COLOUR).

THIS ROOF COVERING TO BE SUPPORTED ON TRUSSED RAFTERS (ON 50 x 100mm WALL PLATES) DESIGNED, MANUFACTURED AND BRACED IN ACCORDANCE WITH BS 5268-3:2006 BY SPECIALISTS, INCLUDING GIRDER & DIMINISHING TRUSSES. POSITIONING OF TRUSSES, BRACES, RESTRAINING STRAPS, NOGGINS, ETC. ARE AS DETAILED ON ROOF LAYOUT (DRAWING NO. 06).

CEILING IS TO BE 15mm PLASTERBOARD FIXED TO UNDERSIDE OF TRUSSES. FIRE COMPARTMENT HALLWAYS (USUALLY 3 STOREY UNITS) REQUIRE 1 LAYER OF 15mm FIRELINE PLASTERBOARD TO ACHIEVE 30 MINUTE FIRE RESISTANT CEILING BELOW THE ROOF SPACE (THROUGHOUT THE WHOLE TOP FLOOR CEILING). FOR ROOM IN THE ROOF TERRACE SITUATIONS SEE DROP ROOF SECTION BELOW. ALL NOGGINS TO MANUFACTURERS RECOMMENDATIONS. SEE SALES SPECIFICATION FOR FINISH WHERE THE DRAWINGS INDICATE A CEILING TO AN INTEGRAL GARAGE, THIS IS TO COMPRISE OF 15mm FIRELINE PLASTERBOARD, WITH NOGGINS & JOINTING AS REQUIRED BY MANUFACTURER TO ACHIEVE 30 MINUTES FIRE RESISTANCE.

GABLE LADDERS TO BE AS DETAILED ON DRAWING NO.06. SEE EXTERNAL FINISHES SPECIFICATION FOR RIDGE & VERGE FINISH, ALL TO BE FITTED TO MANUFACTURERS SPECIFICATION. VERGE PROTECTION AND EAVES OVERHANG TO BE AS SPECIFIED. PATENT SOFFIT AND EAVES VENTILATORS TO ROOF SPACE GIVING CLEAR OPENING OF 10,000mm² PER METRE RUN WITH 5,000mm² PER METRE RUN AT THE RIDGE IF THE ROOF PITCH EXCEEDS 35° OR THE SPAN EXCEEDS 10 METRES. WHERE THE INSULATION IS LOCATED BETWEEN THE RAFTERS, 25,000mm² PER METRE RUN IS TO BE PROVIDED WITH 5,000mm² PER METRE RUN AT THE RIDGE. BARGE BOARDS AND FASCIA BOARDS TO BE AS DETAILED. NB. WHERE APPLICABLE THE FOLLOWING ITEMS WILL BE PROVIDED AND CONSTRUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND DETAILS, VIZ.

HIPS, VALLEYS, ABUTMENTS, CHIMNEYS AND VENT PIPES ARE ALL TO BE CONSTRUCTED TO THE REFERENCED DETAILS AND LEAD USED IN ACCORDANCE WITH BS EN 12588:1999 (VIZ. CODE 4 FOR FLASHINGS; CODE 3 FOR SOAKERS) TO PROVIDE A FULLY WATERTIGHT SEAL. CAVITY TRAYS WILL ALSO BE PROVIDED AT ABUTMENTS. WHERE FULL FILL CAVITY INSULATION IS USED ALL CAVITY TRAYS MUST HAVE STOP ENDS FITTED.

THE LOFT ACCESS IS TO BE A FULLY INSULATED & DRAUGHT PROOF PRE-FORMED HATCH. WHERE NOTED IN THE CONSTRUCTION PACK THE LOFT ACCESS IS TO BE 1/2 HOUR FIRE RATED.

19. ROOF INSULATION

MINERAL WOOL INSULATION THERMAL CONDUCTIVITY OF 0.044W/mK IS TO BE PLACED IN ALL ROOF VOIDS. 500mm THICKNESS GIVING A U-VALUE OF 0.09 W/m²K. THE QUILT IS TO BE 1NO. 100mm LAYER BETWEEN ROOF TIMBERS WITH FURTHER CROSS LAYERS TO SUIT REQUIRED DEPTH. THE SOFFIT/ ROOF VENTILATION MUST NOT BE OBSTRUCTED, SO EAVES TRAYS MUST BE PROVIDED TO SUIT THE INSULATION DEPTH.

20. DROP ROOF INSULATION

100mm INSULATION TO BE PROVIDED BETWEEN RAFTERS, WITH 30mm BELOW RAFTERS BEHIND PLASTERBOARD, BOTH GIVING A THERMAL CONDUCTIVITY OF 0.022W/mK. WITH A 15mm PLASTERBOARD FINISH TO ROOM (REFER TO NOTE BELOW FOR SPECIAL CASES), ALL GIVING A MAXIMUM OVERALL ROOF CONSTRUCTION U-VALUE OF 0.18W/m²K.

TERRACE PARTY WALL SITUATION REQUIRE 2 LAYERS OF 12.5mm PLASTERBOARD CROSS LAID TO COMPLY WITH RSD & ALSO ACHIEVES 30 MINUTES OF FIRE PROTECTION WHEN REQUIRED FOR COMPARTMENT HALLWAYS (USUALLY 3 STOREY) . DETACHED UNITS HAVING A FIRE COMPARTMENT ENTRANCE HALLWAY (USUALLY 3 STOREY UNITS) REQUIRED 1 LAYER OF 15mm FIRELINE PLASTERBOARD TO ACHIEVE 30 MINUTE FIRE RESISTANT CEILING BELOW THE ROOF SPACE (THROUGHOUT THE WHOLE TOP FLOOR CEILING).

ALL NOGGINS TO MANUFACTURERS RECOMMENDATIONS. SEE SALES SPECIFICATION FOR FINISH.

21. STAIRCASE

AS INDICATED ON DRAWING NO's.03, 05 & LARGE SCALE DETAILS. MIN. CLEAR WIDTH OF 800mm. MAXIMUM GAP BETWEEN BALUSTERS OF 99mm. HANDRAIL MIN. 900mm ABOVE PITCH LINE. CLEAR HEADROOM OF 2000mm ABOVE PITCH LINE.

22. STAIRCASE LANDINGS TO APARTMENTS (COMMUNAL)

22mm CHIPBOARD DECKING ON TIMBER PACKING ON 65mm SCREED ON CONCRETE DECK. 12.5mm GYPTONE ACOUSTIC PLASTERBOARD SECURED TO M/F SYSTEM SUSPENDED FROM MAIN FLOOR STRUCTURE TO REDUCE SOUND REVERBERATION.

23. CENTRAL HEATING

A WALL MOUNTED GAS BOILER IS TO BE PROVIDED TO FIRE THE CENTRAL HEATING SYSTEM, FITTED TO MANUFACTURERS INSTRUCTIONS. THE BALANCED FLUE OUTLET FROM THIS BOILER WILL BE LOCATED AS PER STANDARD DETAILS, AND A WIRE GUARD WILL BE PROVIDED WHERE THIS IS LESS THAN 2m ABOVE FINISHED GROUND LEVEL. REFER TO HEAT DESIGN FOR SYSTEM ZONING & REQUIRED CONTROLS. CENTRAL HEATING SYSTEM IS TO BE REGISTERED WITH "BENCHMARK" & RELEVANT LOGBOOK TO BE PROVIDED.

		A FIRST DUCHY 2.1 ISSUE		JUNE 23	
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House Type	Code	Drawing no.		Rev	
HAREWOOD	T4H1266-NDSS	S-2.1-CS-02		A	
Title				Scale	
CONSTRUCTION SPECIFICATION SHEET 2 OF 3				N/A	

24. EXTRACTORS/ VENTILATION

THE INSTALLER MUST DESIGN THE SYSTEM TO SUIT THE REQUIRED RATES SPECIFIED IN THE CONSTRUCTION PACK. THE AIR FLOW MEASUREMENT TEST & COMMISSIONING DETAILS SHEET (AS SPECIFIED IN THE DOMESTIC VENTILATION COMPLIANCE GUIDE) MUST BE PROVIDED TO THE SITE MANAGER SO IT CAN BE SHOWN TO THE BUILDING CONTROL/ NHBC. THE EXTRACTOR SYSTEM INSTALLER IS ALSO RESPONSIBLE FOR INCLUDING THE KITCHEN EXTRACTOR IN THE DESIGN & TESTING OF THE SYSTEM, IF THIS IS THE ONLY KITCHEN EXTRACTION. ALL SYSTEMS SHOULD BE AS MANUFACTURERS REQUIREMENTS/ INDIVIDUAL DESIGN. RIGID/ FLAT DUCTING MUST BE USED WHERE POSSIBLE & FLEXIBLE DUCT KEPT TO A MINIMUM, & WHEN USED EXTENDED TO AT LEAST TO 90% OF IT'S FULL LENGTH. ALL DUCTING MUST BE CLIPPED INTO PLACE WITH PROPRIETARY CLIPS TO MANUFACTURER/ EXTRACT MANUFACTURERS DETAILS. ALL DUCTS SHOULD BE INSULATED WHEN THEY PASS THROUGH AN UNHEATED SPACE.

25. ELECTRICAL

ALL INSTALLATIONS ARE TO BE TO THE CURRENT EDITION OF BS7671 (THE REQUIREMENTS FOR ELECTRICAL INSTALLATION). ALL SUB-CONTRACTORS ARE TO BE NICEIC REGISTERED & ARE TO PROVIDE THE APPROPRIATE COMPLETION CERTIFICATE FOR EACH PROPERTY.
SEE SPECIFICATION FOR REQUIRED MANUFACTURER OF ITEMS. ALL CABLE USED IS TO BE BASE APPROVED. REFER TO 031, 051 & SPECIFICATION FOR LOCATION, QUANTITY & TYPE OF ENERGY EFFICIENT LIGHTING. ALL TO COMPLY WITH APPLICABLE AD PART L

26. RAINWATER GOODS

110mm UPVC HALF ROUND GUTTERS AND 68mm DIAMETER RAINWATER PIPES, SEE FINISHES SCHEDULE/SPECIFICATION FOR COLOUR, FIXED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, POSITIONED AS THE DRAWINGS AND CONNECTED TO A SEPARATE UNDERGROUND STORM WATER DRAINAGE SYSTEM. (UNLESS OTHERWISE STATED ON EXTERNAL FINISHES SCHEDULE).

27. WINDOWS, DOORS & SAFETY GLAZING

THE CAVITY CLOSER PROVIDED MUST COMPLY WITH THE ACCREDITED CONSTRUCTION DETAILS & ALSO POSITION THE WINDOW TO SUIT THE ACCREDITED DETAILS. IF IN A VERY SEVERE EXPOSURE LOCATION THE CAVITY FORM MUST EITHER BE APPROVED BY THE NHBC FOR IT'S LOCATION OTHERWISE SWITCH TO A CHECK REVEAL DETAIL.
SAFETY GLAZING WILL BE REQUIRED IN THE FOLLOWING LOCATIONS:
1. EXTERNAL AND INTERNAL DOORS WHEN GLAZED BELOW 1.5m.
2. SIDE PANELS TO ENTRANCE DOORS WHEN GLAZED BELOW 1.5m.
3. ANY SIDE WINDOW ADJACENT TO DOOR AND WITHIN 300mm OF DOOR (GLAZED BELOW 1.5m).
4. PATIO DOORS.
5. ANY WINDOW GLAZED BELOW 800mm.
ALL IN ACCORDANCE WITH APPROVED DOCUMENTS OF THE BUILDING REGULATIONS.
GROUND FLOOR, BASEMENT & OTHER EASILY ACCESSIBLE WINDOWS (INCLUDING EASILY ACCESSIBLE ROOF LIGHTS) ARE TO BE SECURE WINDOWS THAT ARE MADE TO A DESIGN TO SATISFY THE REQUIREMENTS OF PAS24:2012. EASILY ACCESSIBLE EXTERNAL DOORS (INCLUDING FRENCH & BI-FOLD DOORS) ARE ALSO TO BE MADE TO A DESIGN TO SATISFY THE REQUIREMENTS OF PAS24:2012.

28. AIR TIGHTNESS / THERMAL BRIDGING DETAILS.

REFER TO DUCHY HOMES STANDARD DETAILS HANDBOOK FOR VARIOUS JUNCTIONS. SITE MANAGER SHOULD PHOTOGRAPH THE REQUIRED JUNCTION AS NOTED IN AD L OF THE BUILDING REGULATIONS. THESE ARE TO BE PLOT SPECIFIC & LOADED ON TO THE DUCHY SYSTEM TO BE PROVIDED TO BUILDING CONTROL/ NHBC AND SAP ASSESSOR. FOR OUR SAP RATING WE USE THE THERMALITE PERFORMANCE FIGURES IN CONJUNCTION WITH OTHER MANUFACTURERS FIGURES FOR LINEAR THERMAL BRIDGING.
FOR FURTHER SEALING AND AIR PRESSURE REQUIREMENTS SEE DUCHY HOMES STANDARD DETAILS. THE IMPORTANT ISSUE IS TO ENSURE ALL AREAS ARE SEALED BEFORE THE WALL PLASTERING STAGE STARTS, & THEN ENSURE ANY NEW PENETRATIONS ARE FULLY SEALED IF REQUIRED AFTER THIS STAGE.



		A		FIRST DUCHY 2.1 ISSUE
		Rev		Comments
				Date
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Title				Scale
CONSTRUCTION SPECIFICATION SHEET 3 OF 3				N/A

DESIGNERS RISK ASSESSMENT				
	HOUSE TYPE NAME: HAREWOOD DUCHY SERIES 2.0	NO BEDS - 4 NO OF STOREYS - 2 TYPE - DETACHED	DESIGNERS NAME: GROUP DESIGN DATE:	
REF	ACTIVITY/ELEMENT	HAZARDS / BRIEF DESCRIPTION	ACTION TAKEN AT DESIGN STAGE	POSSIBLE CONTROL MEASURES TO BE TAKEN
A	UNIT DESIGN			
	DESIGN	STANDARD HOUSE TYPE FROM DUCHY HOMES RANGE. NO LOW LEVEL ABUTMENTS, OR UPPER FLOOR INTERNAL MASONRY WALLS.	PLANNING LAYOUT DESIGNER SHOULD ALWAYS CONSIDER THE UNIT DESIGN & FUTURE MAINTENANCE WHEN SETTING OUT PLOT.	
B	EXCAVATION AND FOUNDATIONS			
		NOT IN GROUP DESIGN SCOPE OF WORKS REFER TO OTHERS.		
C	PRIMARY STRUCTURE			
	RC SLAB	NOT APPLICABLE TO THIS DESIGN		
	WALLS	STANDARD CAVITY WALL CONSTRUCTION BRICK & BLOCKWORK. INSTALLATION AT HIGH LEVEL - LIFTING, RISK OF DROPPING UNITS.	STANDARD STRETCHER BOND & BRICK DIMENSIONS WHERE POSSIBLE TO AVOID EXCESS CUTTING. BLOCKWORK SPECIFIED IS MEDIUM DENSITY, & IS BELOW 20KG.	ENSURE SCAFFOLDING IS CORRECTLY FITTED WITH BRICK GUARDS. FALL ARREST SYSTEM WILL BE REQUIRED AT HIGHER LEVELS.
	FLOORS	ENGINEERED FLOOR SYSTEM, DESIGNED BY MANUFACTURER. LIFTING & WORKING FROM HEIGHT.	STAIRWELL TO HAVE TEMPORARY JOIST & TRAP DOOR TO AVOID FALLING. ALL JOIST BUILT INTO WALL TO PROVIDE WORKING PLATFORM ONCE COMPLETE.	ENSURE CONSTRUCTION PROCEDURES ARE FOLLOWED & REFER TO FLOOR DESIGNERS ASSESSMENT. FALL ARREST SYSTEM WILL BE REQUIRED.
	ROOF	TRUSS ROOF SYSTEM. LIFTING & WORKING FROM HEIGHT.	PREFORMED TRUSSES USED WHERE POSSIBLE TO AVOID ASSEMBLY AT HIGH LEVEL.	LOOSE TIMBER INFILL REQUIRED TO HIGH LEVEL DROP ROOF & DORMERS. PLEASE REFER TO BUILD PROCEDURE FOR INSTALLATION & TRUSS DESIGNERS ASSESSMENT. FALL ARREST SYSTEM & EDGE PROTECTION WILL BE REQUIRED. A FURTHER LIFT OF FALL ARREST MAY BE REQUIRED FOR TRUSS
	STAIRCASE	STAIRCASE SCHEMATIC PRODUCED. STAIRCASE TO BE DESIGNED & INSTALLED TO MANUFACTURER INSTRUCTION. REFER TO THEIR RISK ASSESSMENT. RISK OF WORKING FROM HEIGHT & LIFTING.	STAIRCASES FLIGHTS WITH WINDERS - OR - STRAIGHT FLIGHT STAIRCASE	ENSURE MAN SAFE IS PROVIDED WHEN INSTALLING, UNTIL BALUSTRADE & STAIRS ARE SECURELY IN PLACE. PLEASE ALSO FOLLOW BUILD PROCEDURES. WHEN WORKING AROUND STAIRCASE, A STAIRWELL SYSTEM WILL BE REQUIRED FOR FALL PROTECTION.
	ARTSTONE/ARCHITECTURAL FEATURES	RISK OF LIFTING & DROPPING. WEIGHTS & LIFTING SPECIFICATION SHOULD BE CHECKED WITH MANUFACTURER AS THIS MAY VARY.	ENSURE UNITS ARE IN SEPARATE PIECES WHERE POSSIBLE, & WHEN OVER 20KG ADEQUATE LIFTING SUPPORTS ARE PROVIDED.	FOLLOW MANUFACTURERS ASSESSMENT & BUILD PROCEDURES.
	STRUCTURAL STEELWORK	N/A		
	LINTELS	INSTALLATION AT HIGH LEVEL - LIFTING, RISK OF DROPPING UNITS.		FOLLOW MANUFACTURERS ASSESSMENT & BUILD PROCEDURES.
	PREFORMED ITEMS.	DORMERS & PORCH ARE GRP PREFORMED PRODUCT. RISK OF LIFTING & WORKING FROM HEIGHT.		ENSURE MANUFACTURERS GUIDANCE IS FOLLOWED & CORRECT LIFTING EQUIPMENT IS USED.
	RAILINGS & GRILLS	NOT APPLICABLE TO THIS DESIGN		
D	BUILDING ELEMENTS & BUILDING			
	PLUMBING & HEATING	UNVENTED GAS FIRED SYSTEM, WITH PLASTIC PIPEWORK.	REFER TO DESIGNERS ASSESSMENT.	FOLLOW GOVERNING BODIES, MANUFACTURERS RECOMMENDATIONS & BUILD PROCEDURES.
	ELECTRICAL INSTALLATION		STANDARD DOMESTIC SYSTEM, NO SPECIAL ITEMS.	FOLLOW GOVERNING BODIES REGULATIONS
	PLASTER BOARD FINISH	RISK OF LIFTING & WORKING FROM HEIGHT.	ONLY BOARD THICKNESS SPECIFIED. ALLOWING FOR BOARD SIZES TO BE FLEXIBLE TO SUIT LOCATION & MANUAL HANDLING	FOLLOW MANUFACTURERS ASSESSMENT & BUILD PROCEDURES.
	PAINT FINISH	RISK OF WORKING FROM HEIGHT & SOLVENT BASED PAINTS.		FOLLOW MANUFACTURERS ASSESSMENT & BUILD PROCEDURES.
	INSULATION	AIRBORNE PARTICLES & FALLING FROM HEIGHT		ENSURE MANUFACTURES RECOMMENDATIONS & BUILD PROCEDURES ARE FOLLOWED.
	KITCHEN & APPLIANCE	RISK LIFTING		FOLLOW MANUFACTURERS RECOMMENDATIONS, & ENSURE ADEQUATE ASSISTANCE & EQUIPMENT IS ON SITE.
	SANTARYWARE & FITTINGS.	RISK LIFTING.		FOLLOW MANUFACTURERS RECOMMENDATIONS, & ENSURE ADEQUATE ASSISTANCE & EQUIPMENT IS ON SITE.
	WINDOW MAINTENANCE	RISK OF WORKING FROM HEIGHT.	EASY CLEAN HINGES ARE SPECIFIED TO ALL WINDOWS, TO ENABLE CLEANING FROM INSIDE.	
	BUILDING MAINTENANCE	RISK OF WORKING FROM HEIGHT.	WHERE POSSIBLE MAINTENANCE FREE PRODUCTS HAVE BEEN SPECIFIED. UPVC WINDOWS & FASCIAS. PREFORMED DORMERS WITH DRY RIDGE & VERGE SYSTEMS.	ALWAYS ENSURE MAINTENANCE IS CARRIED OUT BY A COMPETENT PERSON, USING THE REQUIRED APPARATUS FOR THE LOCATION.
	GALLERIES & OTHER FEATURES.		THE DESIGN HAS NO PARTICULAR UNUSUAL GALLERIES OF FITTING LOCATIONS.	
	CHEMICALS & HAZARDOUS MATERIALS			REFER TO MANUFACTURERS & SPECIALIST ASSESSMENT.
E	BUILD SEQUENCE			
		NOT IN GROUP DESIGN SCOPE OF WORKS REFER TO OTHERS.		

GENERAL NOTES

1. HAZARDS
AS REQUIRED BY CDM (CONSTRUCTION, DESIGN AND MANAGEMENT) WE HAVE ENDEAVOURED TO HIGHLIGHT THE SIGNIFICANT HAZARDS TO HEALTH & SAFETY. IF YOU FEEL THAT WE HAVE OVERLOOKED ANY IMPORTANT ISSUES PLEASE INFORM THE PRINCIPAL DESIGNER & WE WILL AMEND THESE DETAILS.

2. OTHER ASSESSMENTS
THIS ASSESSMENT MUST ALWAYS BE READ IN CONJUNCTION WITH OTHER DESIGNERS/SPECIALISTS ASSESSMENTS.

3. PLOTS & LOCATION
THIS ASSESSMENT IS BASED ON THE UNIT FOR A NOTIONAL LOCATION. THE PLANNING/ LAYOUT DESIGNER SHOULD ALWAYS CONSIDER THE UNITS SITING ON ITS PLOT.

4. USERS.
PLEASE ENSURE THIS INFORMATION IS PROVIDED TO ALL PARTIES DURING CONSTRUCTION & TO THE END USER ONCE CONSTRUCTION IS COMPLETE.

5. TOOLS & EQUIPMENT
CARE SHOULD ALWAYS BE TAKEN WITH USING TOOLS & EQUIPMENT, & SHOULD ONLY BE OPERATED BY COMPETENT PERSONS. PROTECTIVE CLOTHING / EQUIPMENT TO BE USED WHERE APPLICABLE; REFER TO MANUFACTURERS INSTRUCTIONS.

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House Type	Code	Drawing no.	Rev
HAREWOOD	T4H1266-NDSS	S-2.1-CDM - 01	A
Title			Scale
CDM REGULATIONS - DESIGNERS RISK ASSESSMENT			N/A

PART G 2010 - WATER CALCULATOR FOR NEW DWELLINGS		UNIT: HAREWOOD	DATE: 27.05.20				To be completed by the Site Manager for each plot & provide to Building Control.
Installation Type	Unit of Measure	Capacity/Flow rate (1)	Restriction type	Use Factor (2)	Fixed use (litres/person/day) (3)	Litres/person/day (1)x(2) + (3) (4)	Confirm fittings are as sales specification & restricted as specified. If not, list product & details below.
WC (single flush)	Flush Volume (litres)			4.42	0.00	0.00	
WC (dual flush)	Full flush Volume (litres)	4.50	Built in	1.46	0.00	6.57	
	Part flush Volume (litres)	3.00	Built in	2.96	0.00	8.88	
WC (multiple fittings)	Average effective flushing Volume (litres)			4.42	0.00	0.00	
Taps (excluding kitchen/utility room taps)	Flow rate (litres/min)	3.00	In line.	1.58	1.58	6.32	
Bath (where shower also present)	Capacity to overflow(litres)	185.00	Bath size	0.11	0.00	20.35	
Shower (where bath also present)	Flow Rate(litres / minute)	9.00	In line.	4.37	0.00	39.33	
Bath Only	Capacity to overflow(litres)			0.50	0.00	0.00	
Shower Only	Flow Rate (litres/minute)			5.60	0.00	0.00	
Kitchen/Utility room sink taps	Flow rate (litres/minute)	4.00	In line.	0.44	10.36	12.12	
Washing Machine	(Litres/kg dry load)	8.17	Default value, none specified	2.10	0.00	17.16	
Dishwasher	(Litres/place setting)	0.92	Manufacturer information	3.60	0.00	3.32	
Waste disposal unit	(Litres/use)	If present= 1 If absent =0		3.08	0.00	0.00	
Water Softener	(Litres/person/day)			1.00	0.00	0.00	
	-5	Total Calculated use (litres/person/day) =SUM (column 4)				114.05	
	(6)	Contribution from greywater (litres/person/day)					
	(7)	Contribution from rainwater (litres/person/day)					
	(8)	Normalisation factor				0.91	
	(9)	Total water consumption (Code for Sustainable Homes) = [(5)-(6)-(7)]x(8) (litres/person/day)				103.79	
	-10	External water use				5.00	
	-11	(Building Regulation 17.K) =(9)+(10)(litres/person/day)				108.79	

NOTE: NO CONTRIBUTION FROM GREYWATER OR RAINWATER.

NOTES

TO BE READ IN CONJUNCTION WITH SALES SPECIFICATION FOR MANUFACTURERS DETAILS.

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House Type	Code	Drawing no.	Rev
HAREWOOD	T4H1266-NDSS	S-2.1-AD G - 01	A
Title	Scale		
APPROVED DOC-G WATER CALCULATOR	N/A		

Building Regulations Part O 2021 (England), Simplified Method - Summary results for all orientations

This sheet displays results for all orientations.

Please make sure you have entered all home data information on the 'Window & Door DATA INPUT' sheet and the 'RESULTS' sheet in order for results to be shown here.

Future Homes Hub spreadsheet tool version:FHH-SM-V1														
ASite data														
Company	Duchy Homes													
Site	N/A													
House type	Harewood													
Plot number	Worst case													
BHome data														
Location risk category	Moderate Risk				Glazed area information									
Shading provided?	None				'Clock face'	Total glazed area (m2)		% of total						
Cross ventilation?	Yes				12	4.71		37%						
Total GIA of home (m2)	117.6				3	3.714		29%						
Direction of most glazed façade on house type plan	'Clock face' 12				6	4.234		33%						
					9	0.222		2%						
CResults														
			Largest glazed façade orientation			Largest glazed façade orientation			Largest glazed façade orientation			Largest glazed façade orientation		
			North			East			South			West		
			Target	RESULT	PO	Target	RESULT	PO	Target	RESULT	PO	Target	RESULT	PO
Limiting solar gains:														
Total glazing area for home			12.88m²	10.95%		18%	Target met	P	18%	Target met	P	15%	Target met	P
Glazing area for most glazed room:			4.57m²	16.30%		37%	Target met	P	37%	Target met	P	30%	Target met	P
Kitchen/ Dining														
Shading			None			Not required		P	Not required		P	Not required		P
Removal of excess heat:														
Total equivalent area (% of floor area)			11.21m²	9.53%		9%	Target met	P	9%	Target met	P	9%	Target met	P
Total equivalent area (% of glazed area)			11.21m²	87.03%		55%	Target met	P	55%	Target met	P	55%	Target met	P
Bedroom 1 equivalent area			0.52m²	4.16%		4%	Target met	P	4%	Target met	P	4%	Target met	P
Bedroom 2 equivalent area			1.04m²	11.00%		4%	Target met	P	4%	Target met	P	4%	Target met	P
Bedroom 3 equivalent area			0.52m²	5.91%		4%	Target met	P	4%	Target met	P	4%	Target met	P
Bedroom 4 equivalent area			1.00m²	13.35%		4%	Target met	P	4%	Target met	P	4%	Target met	P
Bedroom 5 equivalent area			m²	%		%			%			%		

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Refer to the cover page for full legal notices.

Should you have any comments, observations or suggestions please send them to
admin@futurehomes.org.uk

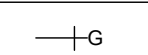
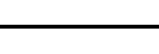
NOTES

IF THE DEVELOPMENT HAS NOISE OR
POLLUTION ISSUES THE DYNAMIC
THERMAL MODELLING ROUTE SHOULD BE
FOLLOWED.

A FIRST DUCHY 2.1 ISSUE
Rev Comments Date

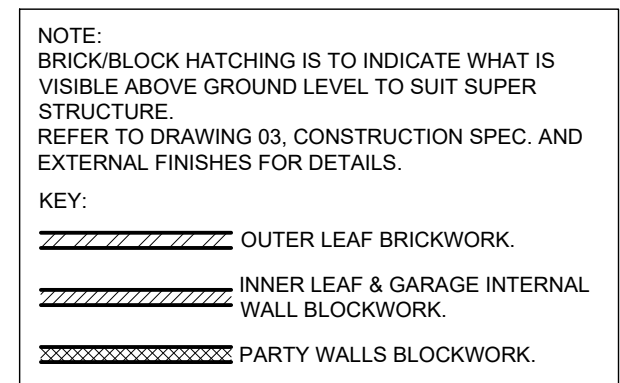
House Type	Code	Drawing no.	Rev
HAREWOOD	T4H1266-NDSS	S-2.1-AD O - 01	A
Title			Scale
APPROVED DOC-O CALCULATION			N/A

PLAN	ELEVATION	DESCRIPTION
		EXTERNAL WALL LIGHT (TO COMPLY WITH BUILDING REGULATIONS AD PART L)
	IP66 	EXTERNAL ELECTRIC SOCKET - IP66 RATED
	TWG	TRAPPED WATER GULLY
		EXTERNAL HOSE BIB TAP
		EXTERNAL TELEPHONE BOX
RWP 		RAINWATER PIPE
		ENERGY EFFICIENT LIGHT FITTING POSITION (TO COMPLY WITH BUILDING REGULATIONS AD PART L)
		ENERGY EFFICIENT RECESS LIGHT FITTING POSITION (TO COMPLY WITH BLDG REGS AD PART L)
		ENERGY EFFICIENT BATTEN HOLDER LIGHT FITTING POSITION (TO COMPLY WITH BLDG. REG'S AD PART L)
		LIGHT SWITCH (INC'. TWO & THREE WAY)
		SHAVER SOCKET
		DRAW STRING LIGHT SWITCH
		SHOWER HEAD
		CARBON MONOXIDE ALARM TO COMPLY WITH BS EN 50291:2001, POWERED BY A BATTERY DESIGNED TO OPERATE FOR THE WORKING LIFE OF THE ALARM. TO BE INSTALLED TO COMPLY WITH BS EN 50292:2002
		SMOKE DETECTOR - INSTALLED TO BS5839-6:2019 GRADE D CATEGORY LD3. FITTINGS TO COMPLY WITH BS EN 14604:2005, TO BE PERMANENTLY WIRED TO A SEPARATELY FUSED CIRCUIT AT THE DISTRIBUTION BOARD. MULTIPLE ALARMS TO BE INTERCONNECTED. WIRING TO CONFORM TO IEE WIRING REGULATIONS.
 HEAT ALARM		HEAT ALARM - INSTALLED TO BS5446-2:2013 GRADE D CATEGORY LD3. FITTINGS TO BS 5446-2:2003. TO BE PERMANENTLY WIRED TO A SEPARATELY FUSED CIRCUIT AT THE DISTRIBUTION BOARD. MORE THAN ONE TO BE INTERCONNECTED. WIRING TO CONFORM TO IEE WIRING REGULATIONS.

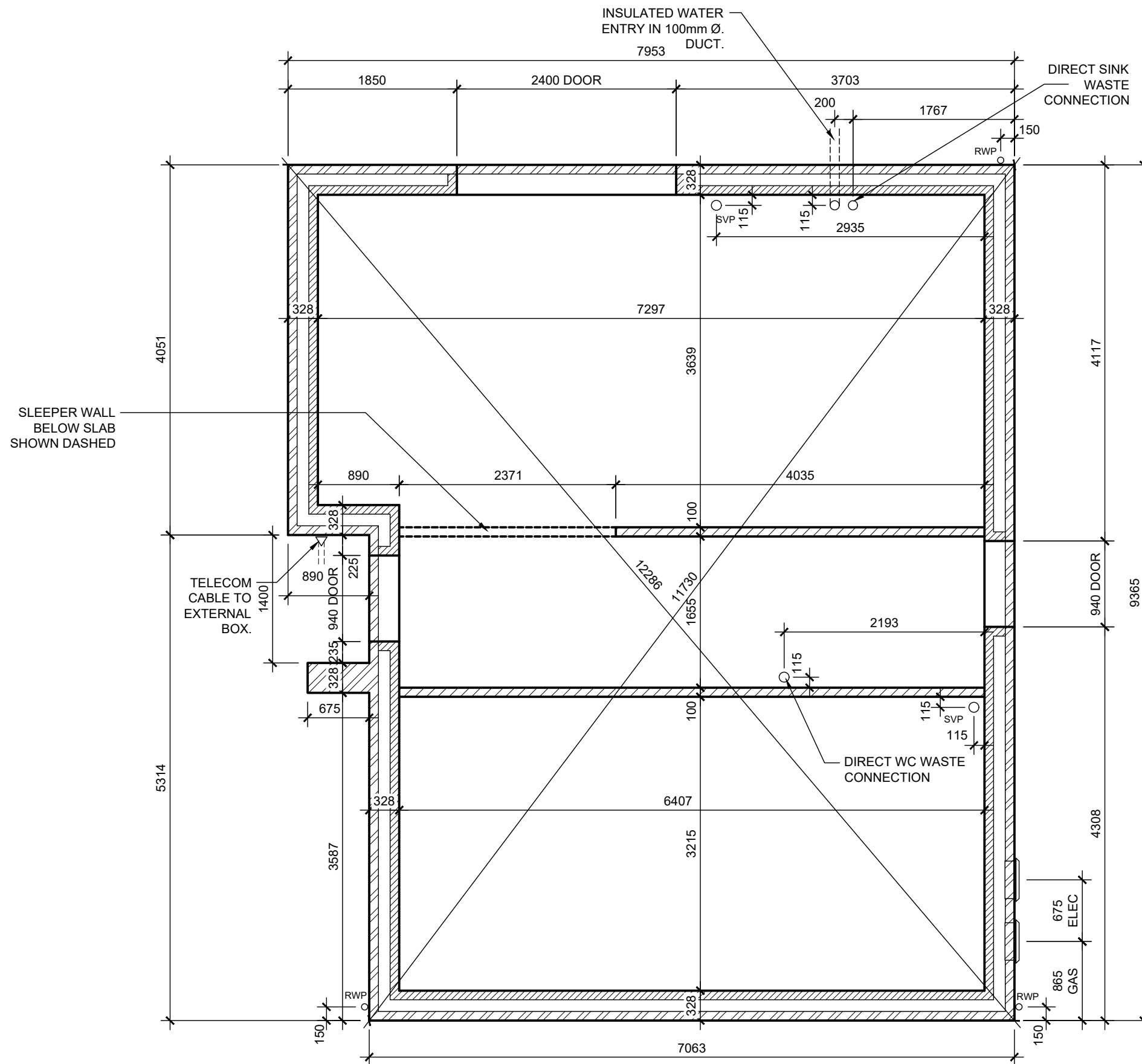
PLAN	ELEVATION	DESCRIPTION
	 NEON  CONNECTOR	SWITCHED FUSED SPUR WITH NEON INDICATOR LINKED TO CONNECTOR PLATE
		LOW LEVEL SINGLE SOCKET
		HIGH LEVEL SINGLE SOCKET
		LOW LEVEL DOUBLE SOCKET
	USB 	LOW LEVEL DOUBLE SOCKET WITH INTEGRAL USB OUTLETS
		HIGH LEVEL DOUBLE SOCKET
	USB 	HIGH LEVEL DOUBLE SOCKET WITH INTEGRAL USB OUTLETS
		TV POINT
		TELEPHONE / INTERNET POINT
		ETHERNET SOCKET
		COOKER SWITCH
		LOW LEVEL MEDIA POINT CONTAINING, 4 MAINS SOCKETS, TV POINT & BT POINT
	W	WATER HEATER SWITCH FUSED SPUR WITH NEON INDICATOR
		PELMET LIGHT (KITCHEN)
		BOILER PROGRAMMER
		ROOM THERMOSTAT
		SWITCHED FUSED SPUR
	c.u.	CONSUMER UNIT
	G	GAS OUTLET
	FGS	FUSED GRID SWITCH (FOR KITCHEN APPLIANCES).
		EXTRACTOR FAN AND DUCT
		RADIATOR (WIDTH VARIES)

House Type	Code	Drawing no.	Rev
HAREWOOD	T4H1266-NDSS	S-2.1-01	A
Title	Scale		
SYMBOLS KEY	N/A		

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House Type	Code	Rev	Comments	Date
HAREWOOD	T4H1266-NDSS		Drawing no. S-2.1-02-AS	Rev A
Title SUB-STRUCTURE PLAN - AS				Scale 1:50



NOTES

- SEE SITE DRAINAGE PLAN FOR POSITIONS OF RWP GULLIES & MANHOLES.
- DRAINS : ANY DRAIN PASSING THROUGH A WALL OR FOUNDATION TO HAVE A CLEAR OPENING OF 50mm ALL ROUND WITH LINTEL OVER.
- REST BEND WITH WASTE ADAPTOR MUST BE CONNECTED TO A VENTED DRAIN WITH IN 6m.
- GROUND MOUNTED WATER METER TO BE USED WHERE APPLICABLE
- 150mm FULL SLAB INSULATION REQUIRED - SEE SPEC FOR TYPE
- METER POSITIONS SHOWN ARE OPTIONS ONLY. PLEASE CHECK WITH LAYOUT FOR SITE SPECIFIC LOCATION.
- MOVEMENT JOINTS MAY BE REQUIRED DEPENDING ON LENGTH OF TERRACE BLOCK. REFER TO STANDARD DETAILS & LINK BLOCK PLANS FOR REQUIREMENTS & LOCATION.
- MOVEMENT JOINTS ARE REQUIRED AT 12m MAX CENTRES FOR CLAY BRICKS & 6m FOR CONCRETE BRICKS AND /OR RENDER. SEE STANDARD DETAILS.
- * DENOTES TYPICAL MOVEMENT JOINT LOCATION.

IMPORTANT NOTE:

THIS DRAWING IS ONLY TO BE USED FOR SUB STRUCTURE SETTING OUT & SERVICES. FOR DETAILS OF FOUNDATIONS AND SUB STRUCTURE STRUCTURAL DETAILS PLEASE REFER TO ENGINEERS DRAWINGS. ALL WALLS SHOWN ARE LOAD BEARING. FOR STUD WALLS & NON LOAD BEARING MASONRY WALLS REFER TO GROUND FLOOR PLAN 03.

NOTE:

BRICK/BLOCK HATCHING IS TO INDICATE WHAT IS VISIBLE ABOVE GROUND LEVEL TO SUIT SUPER STRUCTURE. REFER TO DRAWING 03, CONSTRUCTION SPEC. AND EXTERNAL FINISHES FOR DETAILS.

KEY:

- OUTER LEAF BRICKWORK.
- INNER LEAF & GARAGE INTERNAL WALL BLOCKWORK.
- PARTY WALLS BLOCKWORK.

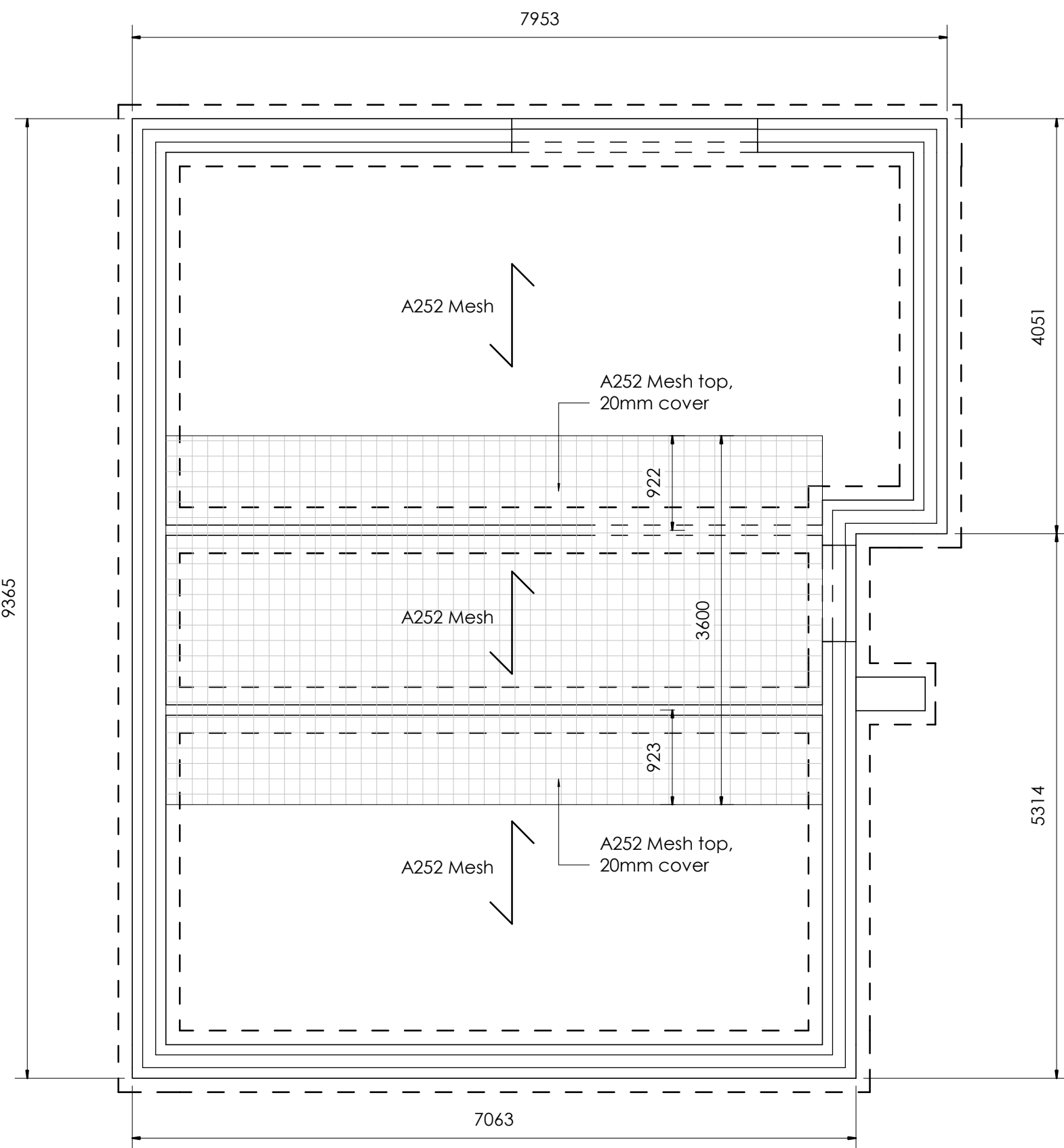
THIS DETAIL IS FOR OPPOSITE HAND UNITS ONLY.

A FIRST DUCHY 2.1 ISSUE

JUNE 23

House Type	Code	Drawing no.	Rev
HAREWOOD	T4H1266-NDSS	S-2.1-02-OPP	A
Title	Scale		
SUB-STRUCTURE PLAN - OPPOSITE	1:50		

300mm
200mm
100
50
0 10mm



Foundation & Slab GA
Scale 1 : 50

Ground floor to be 140 in-situ slab.
Finish, insulation, DPM ect to Duchy specification.
Cover to mesh, T & B 20mm. Laps to be minimum 400mm.

Where more than 2 sheets overlap, bars may be cut to ease mesh build up subject to leaving at least one layer of 8mm bars, lapping minimum 400 mm, in each direction

Denotes 1 way spanning, 140mm deep, suspended in-situ slab. Btm bars of mesh to run in direction of span arrow.

Cover to be 20mm

Denotes extent A252 mesh in top where slab is continuous over supports, 20mm cover

Concrete Mixes: -

- C1. Unless noted otherwise, mixes shall be designated mixes in accordance with BS8500 and NHBC Standards section 2.1, as follows;
- Floor Slab - Designated mix RC35 Consistence class S2 Normal weight
- C2. All workmanship, including formwork, reinforcement, testing, casting and curing, shall be in accordance with NHBC Standards Section 2.1
- C3. Sizes of concrete elements do not include thickness of applied finishes.
- C4. Maximum areas and dimensions of pours shall not exceed the recommendations given in the National Structural Concrete Specification.
- C5. Surfaces receiving grout shall be left rough and free of laitance.
- C6. All dimensions to slab edges to be confirmed by the Architect.
- C7. Penetrations less than 300mm square or diameter are not necessarily shown on the engineers' drawings. Contractor to ensure co-ordination with Architects, M&E consultants & specialists drawings for all service entries.
- C8. Cover to reinforcement to be as follows:
- Top of slab 20mm
Btm of slab 20mm
- C9. Minimum laps in reinforcement to be as follows:
- Mesh Ends 400 mm
Mesh Sides 400 mm
- NB: Alternative lap requirements may be identified on the detailed drawings
- C10. Welding of reinforcement shall not be permitted without approval.

General Notes: -

- G1. This drawing is to be read in conjunction with Duchy Homes Standard details & specification.
- G2. All materials & workmanship shall be in accordance with NHBC Standards;
- Substructure Masonry Notes: -
- M1. For brickwork specification refer to architect's details.
- M2. Substructure brickwork should be class F2 S2 in accordance with BSEN 771-1.
- M3. Substructure blockwork shall be autoclaved aerated blockwork and is to have an agreement certificate for use in that situation.
- M4. Substructure blockwork shall have a minimum compressive strength of 3.6n/mm².
- M5. The contractor is to provide all temporary bracing / strutting to brick / block walls to ensure their stability.
- M6. All substructure mortar to be class (ii) to BS 5628 Part i & iii.

Ground Floor Slab Notes: -

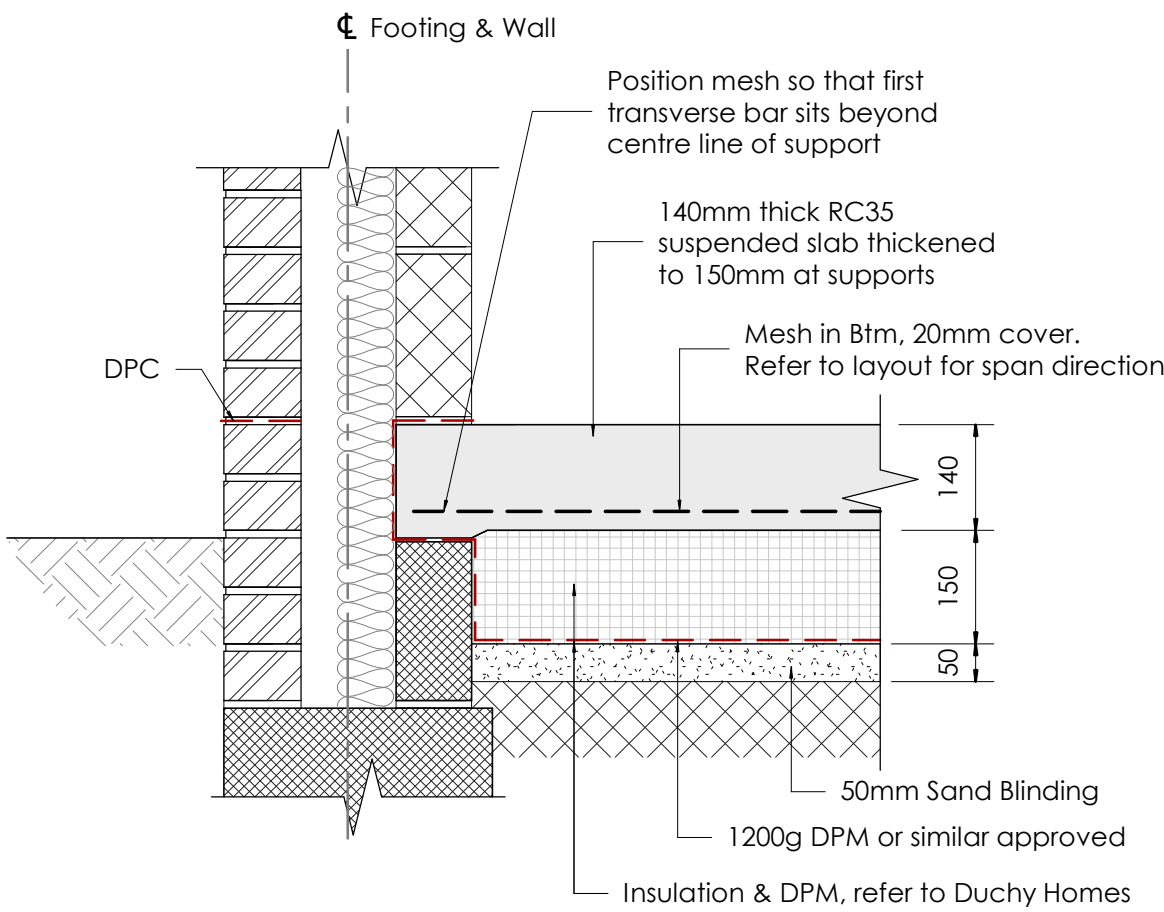
- G1. The ground floor slab is designed as suspended end is to be cast on a sub-base of clean well graded, inert selected site fill material. This material should be nominally compacted to provide a suitable base for receiving freshly poured concrete and shall be blinded with fines and covered with DPM to Duchy Homes specification and requirements.
- G2. All ground floor slabs to be 140mm thick, uno, reinforced in accordance with details shown on the drawing. Slabs are to receive a power float finish in accordance with Duchy Homes specification and requirements.

CDM Notes: -

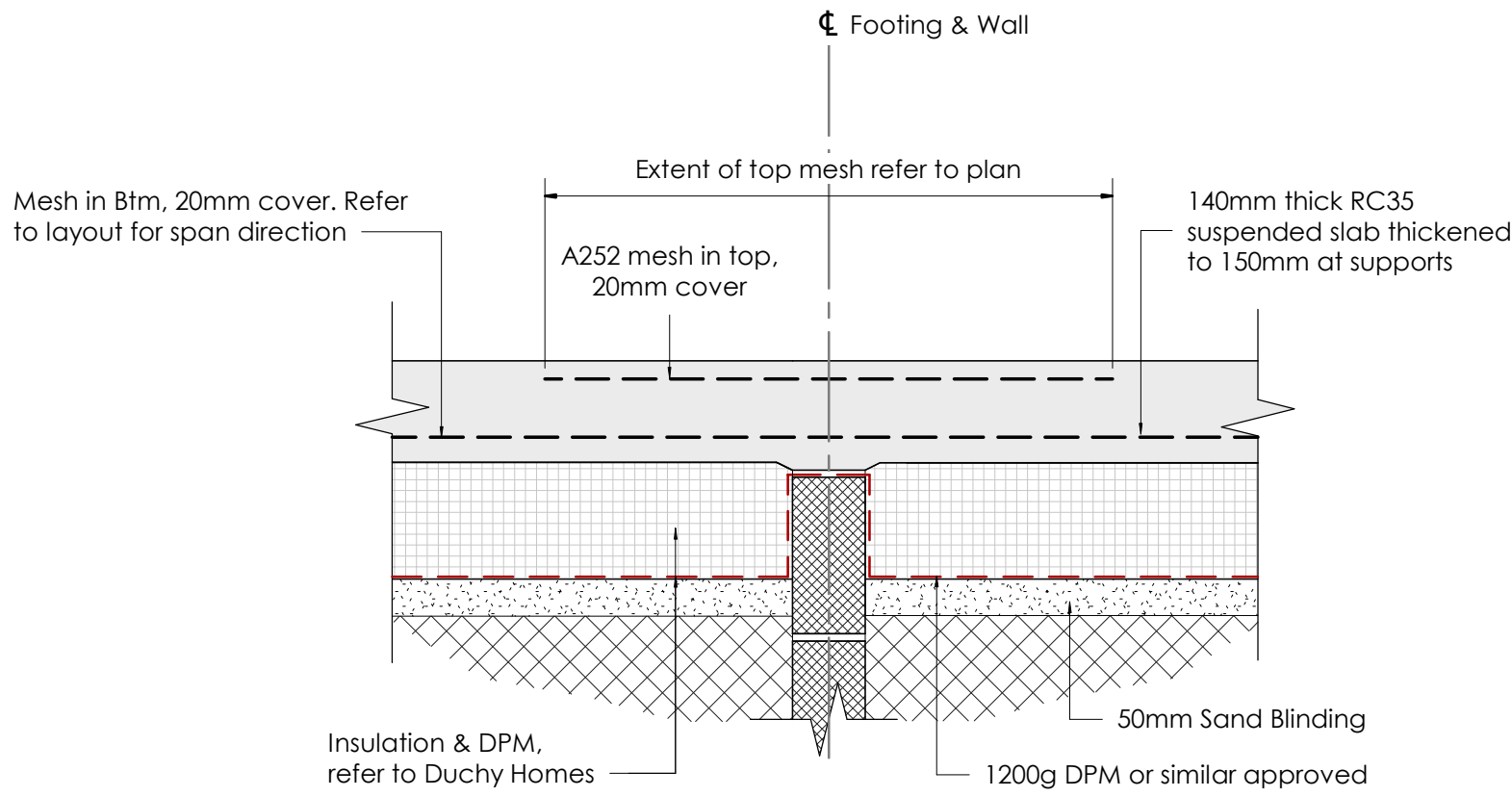
- CDM1. This drawing should be read in conjunction with the project health & safety plan.
- CDM2. All unforeseen eventualities which occur during demolition/ construction and affect health & safety issues or resources must be reported to the CDM co-ordinator.
- CDM3. All design work carried out by the Contractor or appointed Sub-contractors must be notified to the CDM co-ordinator.
- CDM4. Significant residual design & construction hazards, related to this drawing are:
- Interface with site personnel
 - Interface with the general public
 - Plant/vehicle movements & space restrictions
 - Existing live services
 - Excavations in unstable ground
 - Working in contaminated ground
 - Falls from height
 - Falling objects
 - Co-ordination of various design elements
 - Instability of masonry walls in temporary conditions

FOR FLOOR INSULATION REQUIREMENTS
REFER TO DUCHY HOMES SPECIFICATION

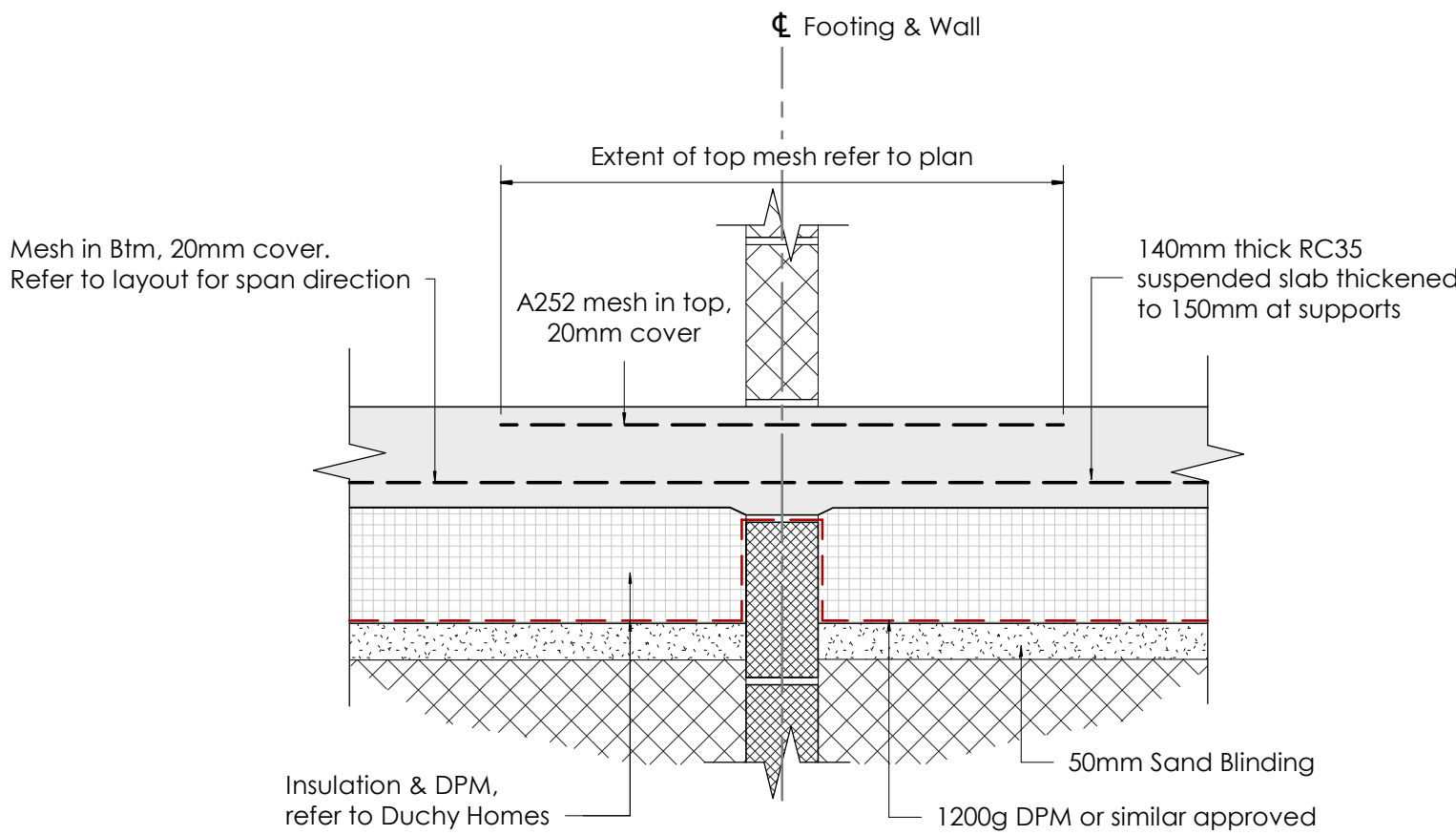
FOR SETTING OUT OF ALL EXTERNAL &
INTERNAL WALLS/ PARTITIONS REFER
TO DUCHY HOMES DRAWINGS



Typical Slab Edge Detail



Typical Internal Slab Detail (Sub-Wall)
(Slab continuous over supports)



Typical Internal Slab Detail
(Slab continuous over supports)

P2	21.02.20	Concrete specification added & minor modifications	DM
P1	30.01.20	Preliminary Issue	DM
C1	01.07.20	Construction Issue	DM
Mark	Date	Details	By

Revision history

Drawing originator:



Client:



Project title:

Standard House Types
T4H1266
HT Harewood

Drawing title:

Foundation & Slab GA

Scale: As indicated for the original size of A1

Drawn by: DM | Checked by: MF | Passed by: MD | Date: Jan '20

Drawing status:

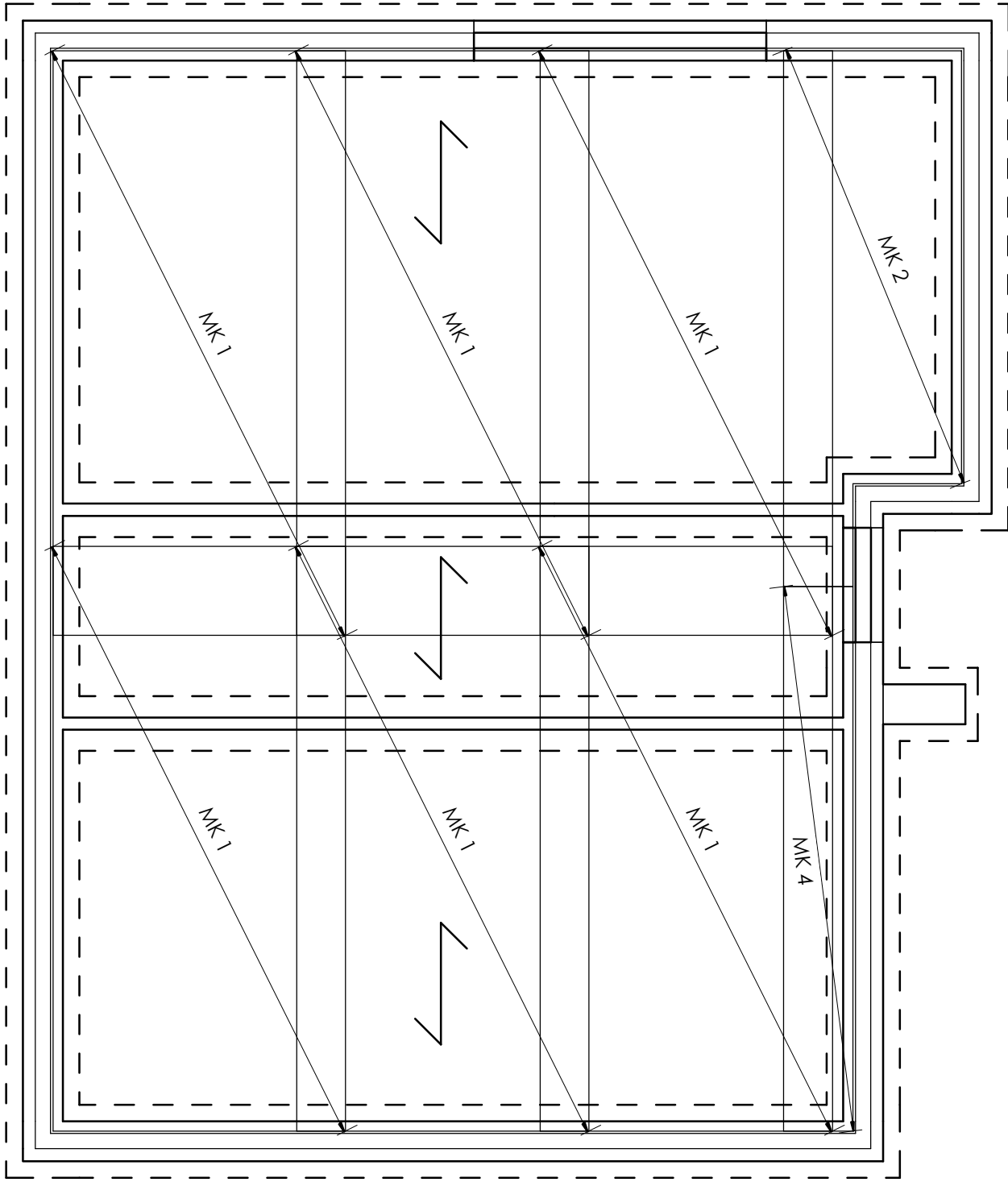
Construction

Job No:	Drawing No:	Project	Origin	Volume	Level	Type	Discp.	Number	Revision:
DLH03	xx	BET	xx	xx	DR	S	021	C1	

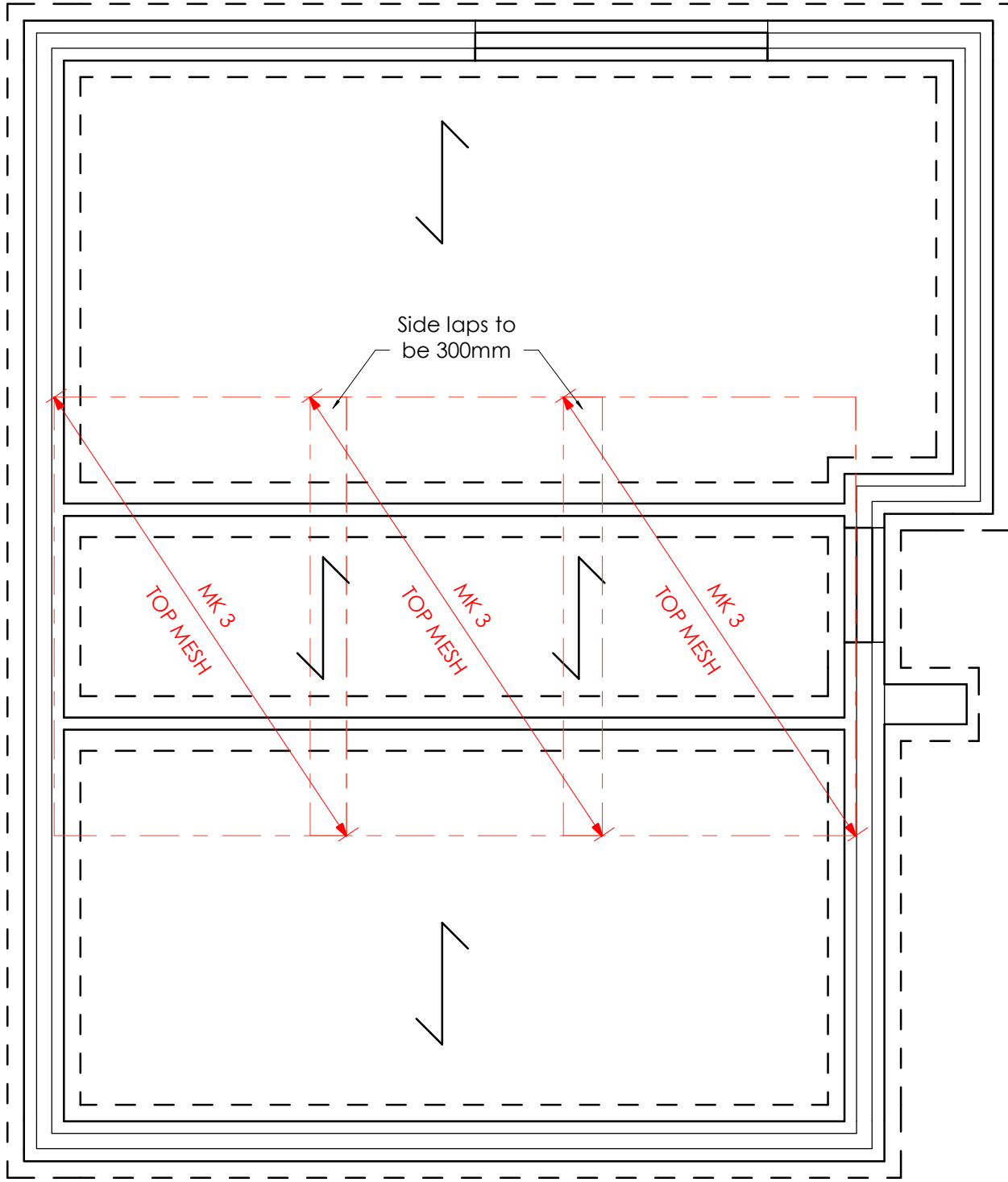
Do not scale this drawing
6-7 Old Marsh Farm Barns, Welsh Road, Sealand, Flintshire, CH5 2LY
enquiries@betts-associates.co.uk
Chester 01244 288178 | Adrin@betts-associates.co.uk

300mm
200mm
100
50
0 10mm

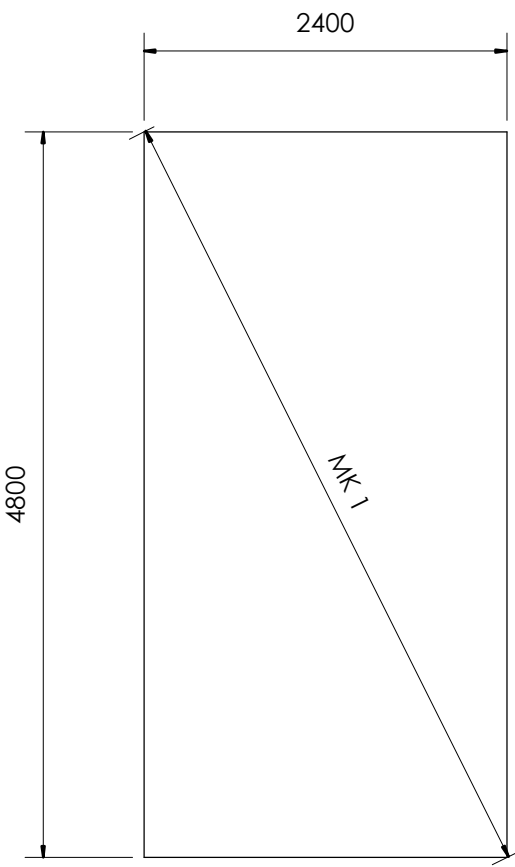
Note
Where more than 2 sheets overlap, bars may be cut to ease mesh build up subject to leaving at least one layer of 8mm bars, lapping minimum 400 mm, in each direction



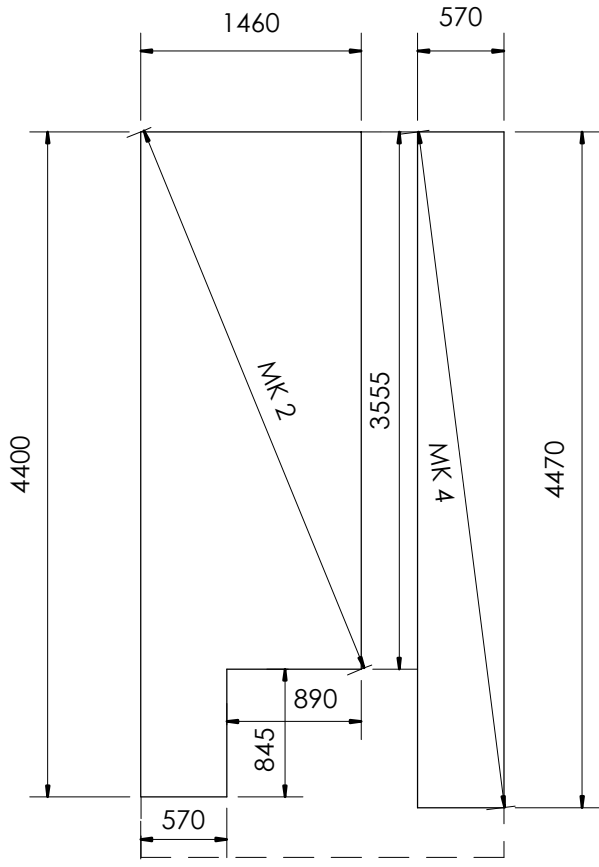
Harewood Bottom Mesh Layout
Scale 1 : 50



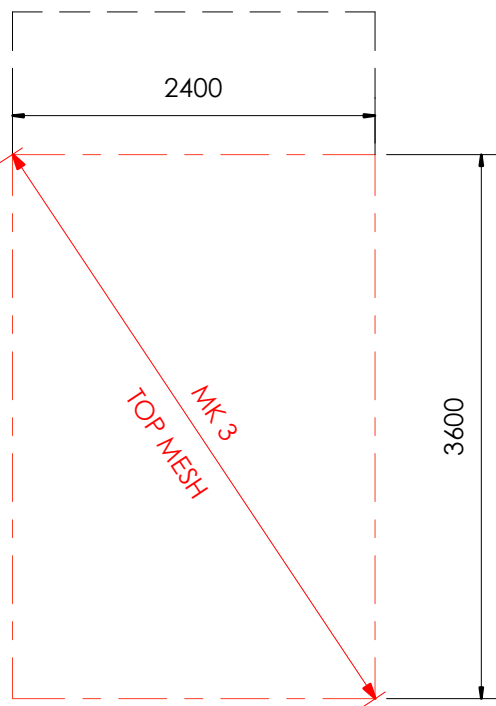
Harewood Top Mesh Layout
Scale 1 : 50



MK 1
6No. 2400x4800mm A252 Sheets



MK 2 & MK 4
1No. 2400x4800mm A252 Sheets



MK 3
3No. 2400x4800mm A252 Sheets

Concrete Mixes: -

C1. Unless noted otherwise, mixes shall be designated mixes in accordance with BS8500 and NHBC Standards section 2.1, as follows;

Floor Slab - Designated mix RC35 Consistence class S2 Normal weight

C2. All workmanship, including formwork, reinforcement, testing, casting and curing, shall be in accordance with NHBC Standards Section 2.1

C3. Sizes of concrete elements do not include thickness of applied finishes.

C4. Maximum areas and dimensions of pours shall not exceed the recommendations given in the National Structural Concrete Specification.

C5. Surfaces receiving grout shall be left rough and free of laitance.

C6. All dimensions to slab edges to be confirmed by the Architect.

C7. Penetrations less than 300mm square or diameter are not necessarily shown on the engineers' drawings. Contractor to ensure co-ordination with Architects, M&E consultants & specialists drawings for all service entries.

C8. Cover to reinforcement to be as follows:

Top of slab 20mm
Btm of slab 20mm

C9. Minimum laps in reinforcement to be as follows:

Mesh Ends 400 mm
Mesh Sides 400 mm

NB: Alternative lap requirements may be identified on the detailed drawings

C10. Welding of reinforcement shall not be permitted without approval.

General Notes: -

G1. This drawing is to be read in conjunction with Duchy Homes Standard details & specification.

G2. All materials & workmanship shall be in accordance with NHBC Standards;

Substructure Masonry Notes: -

M1. For brickwork specification refer to architect's details.

M2. Substructure brickwork should be class F2 S2 in accordance with BS EN 771-1.

M3. Substructure blockwork shall be autoclaved aerated blockwork and is to have an agreement certificate for use in that situation.

M4. Substructure blockwork shall have a minimum compressive strength of 3.6n/mm².

M5. The contractor is to provide all temporary bracing / strutting to brick / block walls to ensure their stability.

M6. All substructure mortar to be class (ii) to BS 5628 Part i & iii.

Ground Floor Slab Notes: -

G1. The ground floor slab is designed as suspended and is to be cast on a sub-base of clean well graded, inert selected site fill material. This material should be nominally compacted to provide a suitable base for receiving freshly poured concrete and shall be blinded with fines and covered with DPM to Duchy Homes specification and requirements.

G2. All ground floor slabs to be 140mm thick, uno, reinforced in accordance with details shown on the drawing. Slabs are to receive a power float finish in accordance with Duchy Homes specification and requirements.

CDM Notes: -

CDM1. This drawing should be read in conjunction with the project health & safety plan.

CDM2. All unforeseen eventualities which occur during demolition/ construction and affect health & safety issues or resources must be reported to the CDM co-ordinator.

CDM3. All design work carried out by the Contractor or appointed Sub-contractors must be notified to the CDM co-ordinator.

CDM4. Significant residual design & construction hazards, related to this drawing are:

- Interface with site personnel
- Interface with the general public
- Plant/vehicle movements & space restrictions
- Existing live services
- Excavations in unstable ground
- Working in contaminated ground
- Falls from height
- Falling objects
- Co-ordination of various design elements
- Instability of masonry walls in temporary conditions

Mesh to be A252 unless noted otherwise

10No. Sheets A252 mesh 2400x4800mm

Ground floor to be 140 in-situ slab.

Finish, insulation, DPM ect to Duchy specification.

Cover to mesh, T & B 20mm. Laps to be minimum 400mm.

Where more than 2 sheets overlap, bars may be cut to ease mesh build up subject to leaving at least one layer of 8mm bars, lapping minimum 400 mm, in each direction

Denotes span of Top & Btm bars of mesh to run in direction of span arrow.

Cover to be 20mm

P2	21.02.20	Concrete specification added & minor modifications	DM
P1	30.01.20	Preliminary Issue	DM
C1	01.07.20	Construction Issue	DM
Mark 1	Date	Details	By

Revision history

Drawing originator:

BETTS HYDRO
CONSULTING ENGINEERS

BETTS ASSOCIATES
CONSULTING ENGINEERS

BETTS GEO
CONSULTING ENGINEERS

Client:

Duchy Homes

Project title:

Standard House Types
T4H1266
HT Harewood

Drawing title:

Slab Mesh Layout

Scale:	As indicated	for the original size of A1
Drawn by:	DM	Checked by: MF Passed by: MD Date: Jan '20
Drawing status:	Construction	
Job No:	Drawing No:	Revision:
DLH03	xx BET xx xx DR S 022	C1

Do not scale this drawing
6-7 Old Marsh Farm Barns, Welsh Road, Sealand, Flintshire, CH5 2LY
enquiries@betts-associates.co.uk
Chester 01244 288178 | Abchurchham 0161 413531 |

FOR PLOT 1 SALES OFFICE BEAMS AND DETAILS
REFER TO SALES OFFICE AND ENGINEERS DETAILS IN
HOUSE TYPE PACK.

DECENTRALISED EXTRACTION SYSTEM.
THE QUOTED BOOST RATES ARE THE
REQUIRED MINIMUM. REFER TO OTHER
FLOOR PLAN FOR FAN SETTING SPEEDS.

NOTES
• ALL DIMENSIONS TAKEN FROM FACE OF
BRICKWORK OR BLOCKWORK & TIMBER FACE OF
STUD PARTITIONS
• RODDING POINTS TO BE PROVIDED WHERE
DISCHARGE PIPES CANNOT BE REACHED BY
REMOVING TRAPS
• METER POSITIONS SHOWN ARE OPTIONS ONLY.
PLEASE CHECK WITH LAYOUT FOR SITE SPECIFIC
LOCATION.
ROBUST CONSTRUCTION DETAILS ARE TO BE USED
TO COMPLY WITH BUILDING REGULATIONS AD PART
L1A 2013. PLEASE REFER TO STANDARD DETAILS
FOR SPECIFIC INFORMATION.

• ALL INTERNAL DOORS TO HAVE A 10mm AIR GAP
BETWEEN THE UNDERSIDE OF THE DOOR AND THE
FLOOR FINISH.

• MOVEMENT JOINTS MAY BE REQUIRED DEPENDING
ON LENGTH OF TERRACE BLOCK. REFER TO
STANDARD DETAILS & LINK BLOCK PLANS FOR
REQUIREMENTS & LOCATION.

• MOVEMENT JOINTS ARE REQUIRED AT:
• 12m MAX CENTRES FOR CLAY BRICKS.
• RECON STONE AS MANUFACTURERS
REQUIREMENTS
• 6m MAX CENTRES FOR CONCRETE BRICKS.
• 6m MAX CENTRES & 3.75m MAX FROM
RESTRAINED ENDS (I.E. CORNERS) FOR RENDER.
• SEE STANDARD DETAILS.

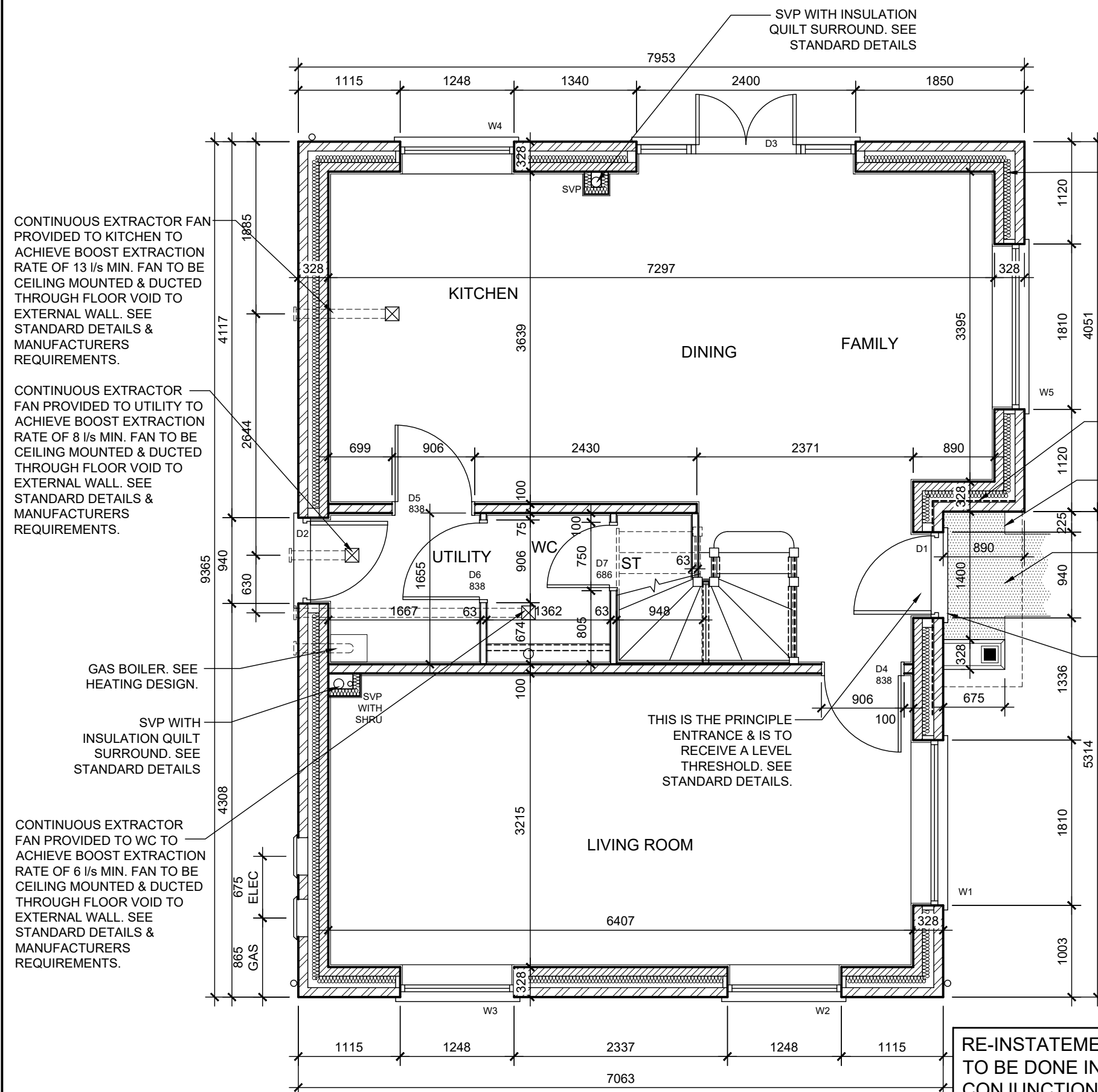
* DENOTES TYPICAL MOVEMENT JOINT LOCATION.
(REFER TO ELEVATION DRAWINGS FOR RECON
STONE REQUIREMENTS)

WALL TYPES KEY:	
	OUTER LEAF: BRICKWORK OR BLOCK REFER TO ELEVATIONS
	INNER LEAF: AERATED BLOCKWORK.
	PARTITION WALLS: MEDIUM DENSE SOLID BLOCKWORK.
	PARTY WALLS: AERATED SOLID BLOCKWORK.
	INSULATED STUD PARTITION.
	STUD PARTITION.
REFER TO CONSTRUCTION SPEC FOR DETAILS	

PROVIDE 22mm PLY PATRESS IN BETWEEN STUDS
FOR SANITARY WARE, KITCHENS & OTHER FITTINGS
AS REQUIRED OR INDICATED IN STANDARD DETAILS

NOTES
THESE DETAILS ARE BASED ON A LEVEL
SITE. SEE STANDARD DETAILS FOR
FURTHER INFORMATION.
ALWAYS REFER TO SITE LAYOUT FOR
SPECIFIC DRIVE & PATH SETTING OUT
DETAILS. ANY QUERIES TO BE CHECKED
WITH REGIONAL TECHNICAL DEPT.

RE-INSTATEMENT OF PLOT 1
TO BE DONE IN
CONJUNCTION WITH
ENGINEERS DETAILS IN
PACK. LOUNGE/FAMILY
WALL TO BE DOUBLE STUD.



House Type	Code	Drawing no.	Rev
HAREWOOD	T4H1266-NDSS	S-2.1-03	B
Title	Scale		
GROUND FLOOR PLAN (STRUCTURAL)	1:50		

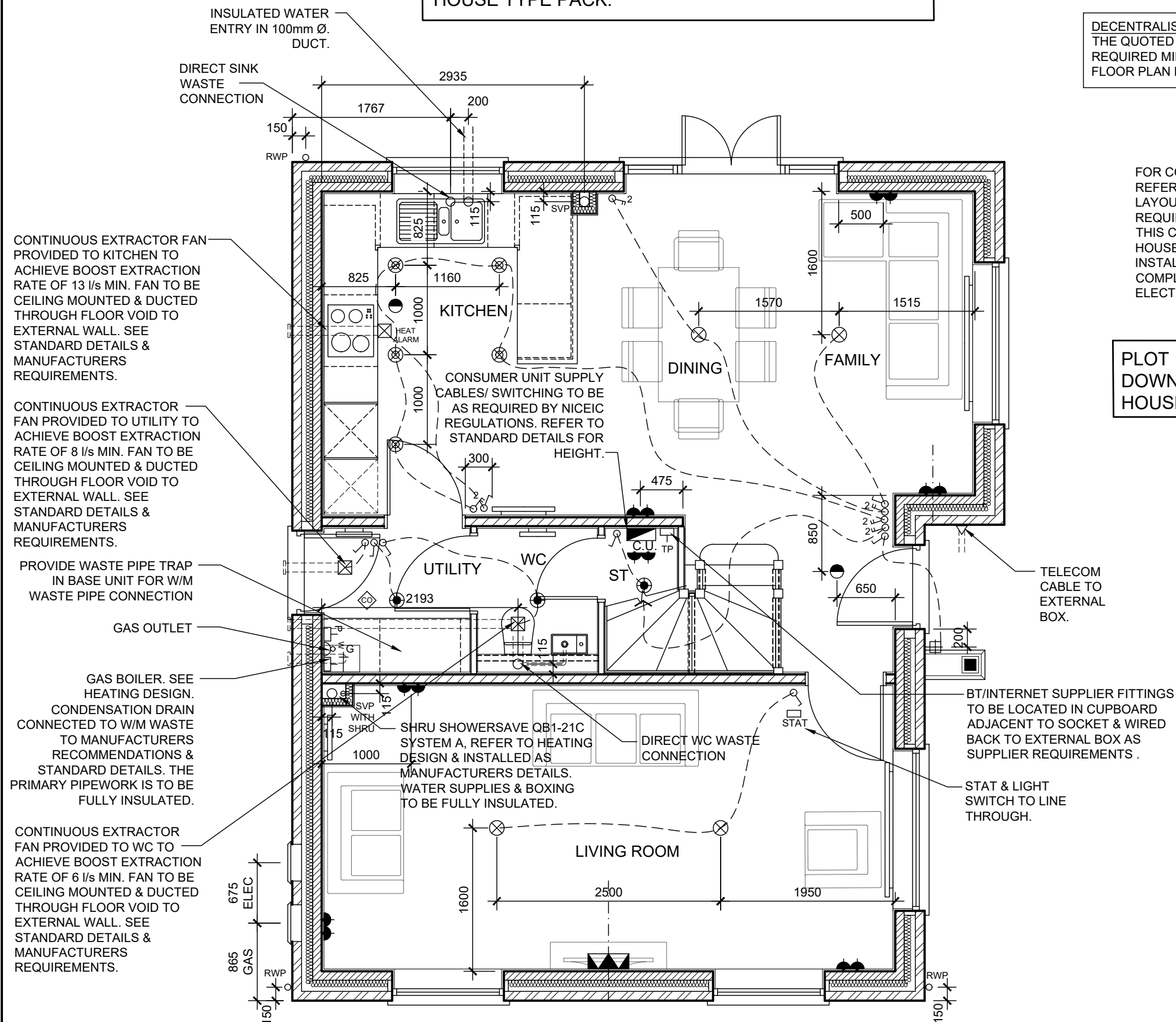
FOR PLOT 1 SALES OFFICE BEAMS AND DETAILS
REFER TO SALES OFFICE AND ENGINEERS DETAILS IN
HOUSE TYPE PACK.

DECENTRALISED EXTRACTION SYSTEM.
THE QUOTED BOOST RATES ARE THE
REQUIRED MINIMUM. REFER TO OTHER
FLOOR PLAN FOR FAN SETTING SPEEDS.

FOR COMPLIANCE WITH PART S,
REFER TO REGIONAL DEVELOPMENT
LAYOUT FOR THE LOCATION OF THE
REQUIRED CAR CHARGING POINT.
THIS COULD BE LOCATED ON THE
HOUSE, GARAGE OR BOLLARD. ALL
INSTALLATION TO BE FULL
COMPLIANT WITH REQUIRED
ELECTRICAL REGULATIONS.

PLOT 1 PORCH WALL LEFT
DOWN & BUILT WHEN SHOW
HOUSE CLOSES.

- NOTES
- ALL DIMENSIONS TAKEN FROM FACE OF BRICKWORK OR BLOCKWORK & TIMBER FACE OF STUD PARTITIONS
 - RODDING POINTS TO BE PROVIDED WHERE DISCHARGE PIPES CANNOT BE REACHED BY REMOVING TRAPS
 - METER POSITIONS SHOWN ARE OPTIONS ONLY. PLEASE CHECK WITH LAYOUT FOR SITE SPECIFIC LOCATION.
 - CHECK WITH DRAINAGE PLAN TO DETERMINE LOCATION OF OPEN VENTED STACKS. OTHERWISE ALL SVPS TO TERMINATE IN ROOF SPACE WITH AN AIR RELEASE VALVE SEE STD DETAILS.
 - LIGHTS TO BE CENTRAL TO ROOM UNLESS DIMENSIONED OTHERWISE.
 - SEE STANDARD DETAILS FOR:
 1. HEIGHTS OF SOCKETS, SWITCHES, ETC.
 2. POSITION OF LIGHT SWITCHES UNLESS OTHERWISE DIMENSIONED.
 3. HEIGHT & POSITION OF WALL LIGHT CABLES UNLESS OTHERWISE DIMENSIONED.
 4. POSITION OF SOCKETS UNLESS OTHERWISE DIMENSIONED.
 5. POSITION OF RADIATORS UNLESS CENTRAL TO A WINDOW OR DIMENSIONED.
 - INTERNAL ENERGY EFFICIENT LIGHTING & EXTERNAL LIGHTING TO BE PROVIDED TO COMPLY WITH BUILDING REGULATIONS AD PART L1A 2013. REFER TO SPECIFICATION FOR TYPE.

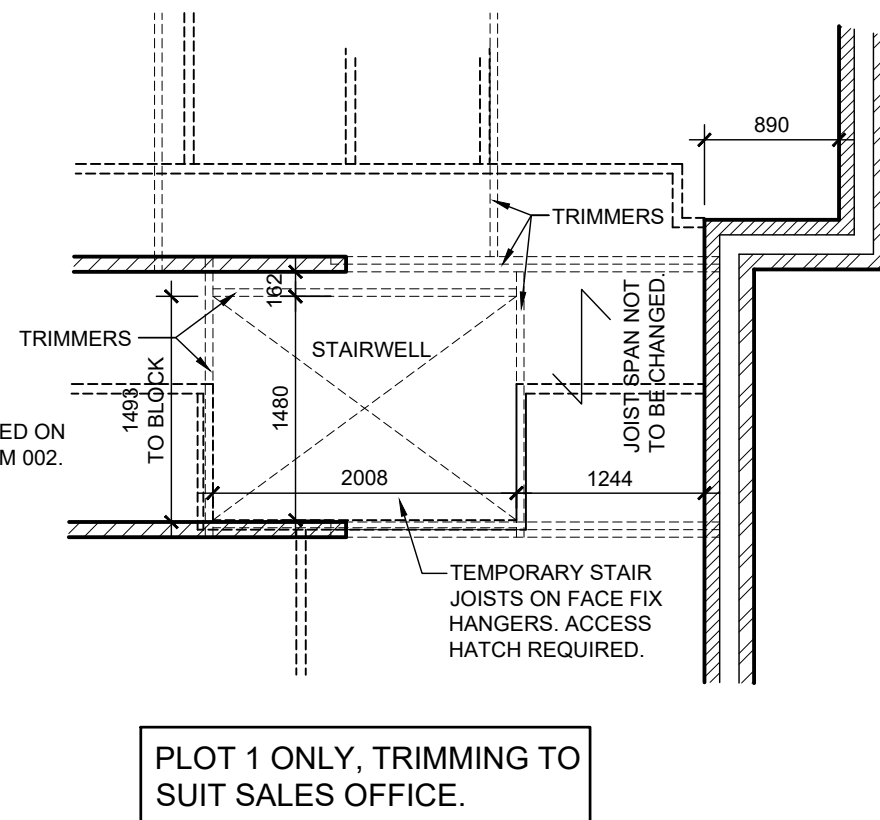


RE-INSTATEMENT OF PLOT 1
TO BE DONE IN
CONJUNCTION WITH
ENGINEERS DETAILS IN
PACK. LOUNGE/FAMILY
WALL TO BE DOUBLE STUD.

B	KITCHEN LIGHTS AMENDED	09.04.24
A	FIRST DUCHY 2.1 ISSUE	
Rev	Comments	Date

House Type	Code	Drawing no.	Rev
HAREWOOD	T4H1266-NDSS	S-2.1-031	B
Title	Scale		
GROUND FLOOR PLAN (SERVICES)	1:50		

 Duchy Homes



House Type	Code	Rev	Comments	Date
HAREWOOD	T4H1266-NDSS		S-2.1-04	B
Title				Scale
FIRST FLOOR SYSTEM LAYOUT				1:50

DMEV EXTRACTION SYSTEM (AIR FLOW iCONSTANT)			
TOTAL FLOOR AREA	117.61m ²	*0.3	REQUIRED MIN - 35.28 l/s
PART F TABLE 1.3 - BEDS	4		REQUIRED MIN - 37 l/s
ROOM	BOOST l/s		TRICKLE l/s
KITCHEN	13		11
WC	8		5
UTILITY	11		8
BATHROOM	11		8
EN-SUITE	11		8
SR	N/A		N/A
ACHIEVED TOTAL TRICKLE			40 l/s

NOTES

• ALL DIMENSIONS TAKEN FROM FACE OF BRICKWORK OR BLOCKWORK & TIMBER FACE OF STUD PARTITIONS

• RODDING POINTS TO BE PROVIDED WHERE DISCHARGE PIPES CANNOT BE REACHED BY REMOVING TRAPS

ROBUST CONSTRUCTION DETAILS ARE TO BE USED TO COMPLY WITH BUILDING REGULATIONS AD PART L1A 2013. PLEASE REFER TO STANDARD DETAILS FOR SPECIFIC INFORMATION.

• ALL INTERNAL DOORS TO HAVE A 10mm AIR GAP BETWEEN THE UNDERSIDE OF THE DOOR AND THE FLOOR FINISH.

• MOVEMENT JOINTS MAY BE REQUIRED DEPENDING ON LENGTH OF TERRACE BLOCK. REFER TO STANDARD DETAILS & LINK BLOCK PLANS FOR REQUIREMENTS & LOCATION.

• MOVEMENT JOINTS ARE REQUIRED AT:

- 12m MAX CENTRES FOR CLAY BRICKS.
- RECON STONE AS MANUFACTURERS REQUIREMENTS
- 6m MAX CENTRES FOR CONCRETE BRICKS.
- 6m MAX CENTRES & 3.75m MAX FROM RESTRAINED ENDS (I.E. CORNERS) FOR RENDER.
- SEE STANDARD DETAILS.

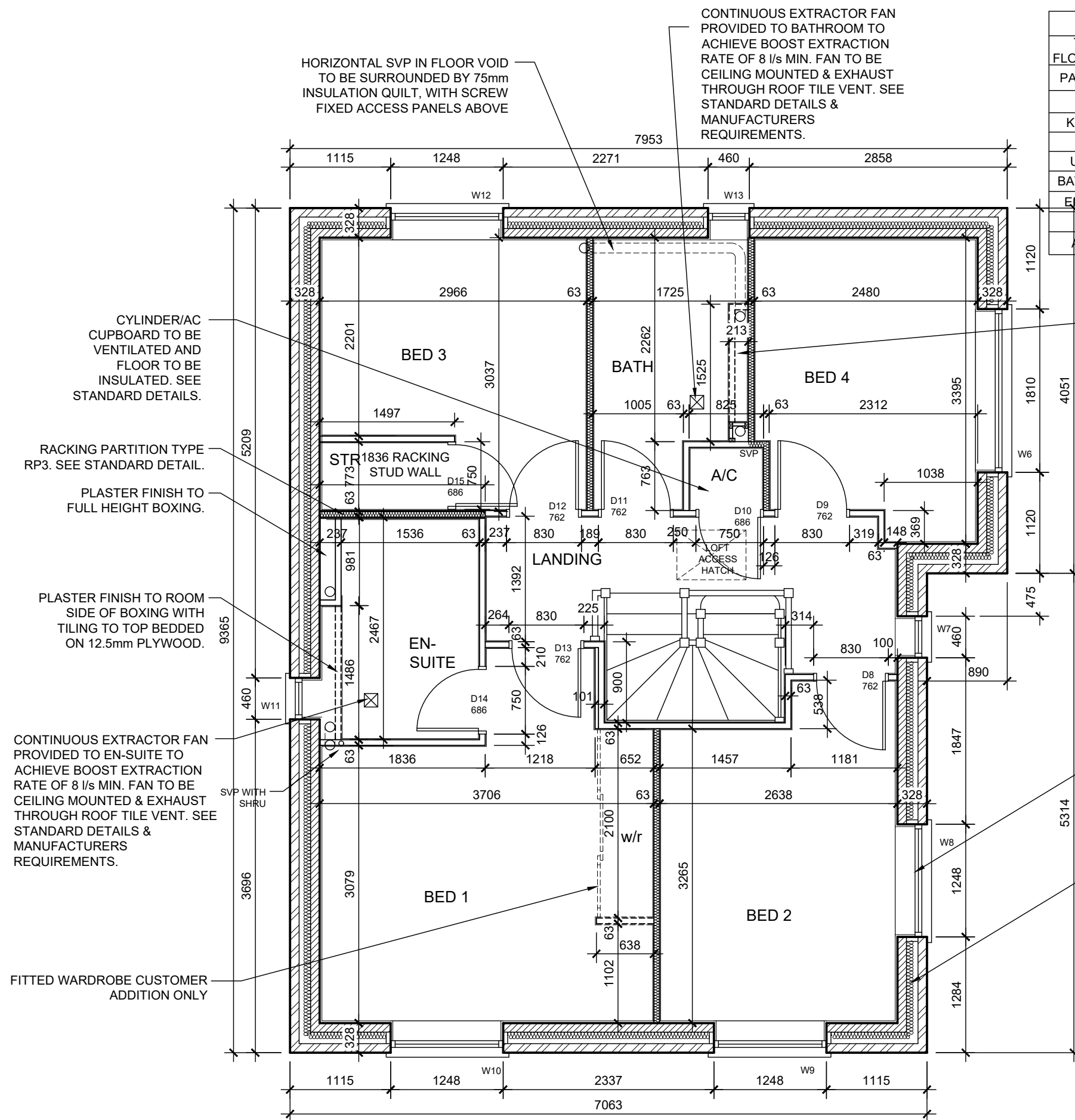
* DENOTES TYPICAL MOVEMENT JOINT LOCATION. (REFER TO ELEVATION DRAWINGS FOR RECON STONE REQUIREMENTS)

WALL TYPES KEY:

- OUTER LEAF: BRICKWORK OR BLOCK REFER TO ELEVATIONS
- INNER LEAF: AERATED BLOCKWORK.
- PARTITION WALLS: MEDIUM DENSE SOLID BLOCKWORK.
- PARTY WALLS: AERATED SOLID BLOCKWORK.
- INSULATED STUD PARTITION.
- STUD PARTITION.

REFER TO CONSTRUCTION SPEC FOR DETAILS

PROVIDE 22mm PLY PATRESS IN BETWEEN STUDS FOR SANITARY WARE, KITCHENS & OTHER FITTINGS AS REQUIRED OR INDICATED IN STANDARD DETAILS



GUARD RAILS TO WINDOWS DEEPER THAN 1050.
GUARD RAIL TO BE PROVIDED TO WINDOWS WHERE REQUIRED TO PROVIDE AN 1100mm HIGH BALUSTRADE. PLEASE SEE STANDARD DETAIL FOR FOR FURTHER INFORMATION.

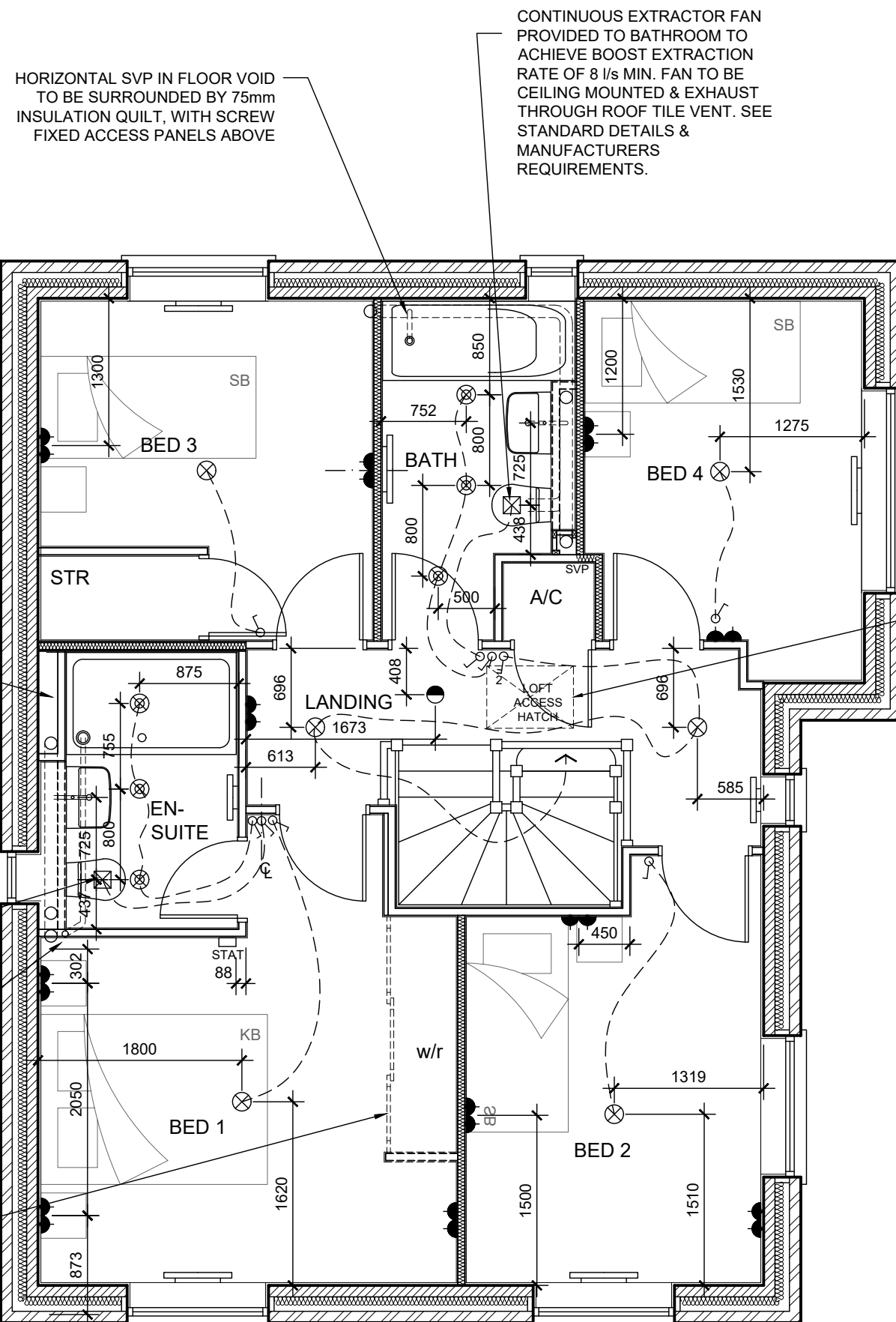
House Type	Code	Drawing no.	Rev
HAREWOOD	T4H1266-NDSS	S-2.1-05	B
Title	Scale		
FIRST FLOOR PLAN (STRUCTURAL)	1:50		

B	SHOW TRAYS REDUCED.	19.02.25
A	FIRST DUCHY 2.1 ISSUE	JUNE 23
Rev	Comments	Date

DMEV EXTRACTION SYSTEM (AIR FLOW iCONSTANT)			
TOTAL FLOOR AREA	117.61m ²	*0.3	REQUIRED MIN - 35.28 l/s
PART F TABLE 1.3 - BEDS	4		REQUIRED MIN - 37 l/s
ROOM	BOOST l/s	TRICKLE l/s	
KITCHEN	13	11	
WC	8	5	
UTILITY	11	8	
BATHROOM	11	8	
EN-SUITE	11	8	
SR	N/A	N/A	
ACHIEVED TOTAL TRICKLE		40 l/s	

NOTES

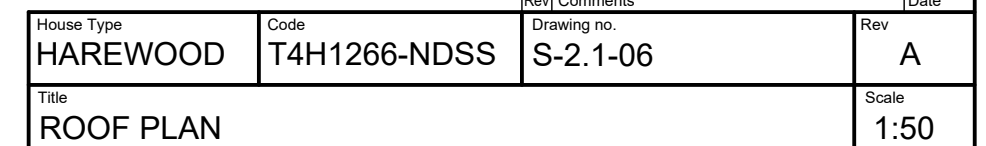
- ALL DIMENSIONS TAKEN FROM FACE OF BRICKWORK OR BLOCKWORK & TIMBER FACE OF STUD PARTITIONS
- RODDING POINTS TO BE PROVIDED WHERE DISCHARGE PIPES CANNOT BE REACHED BY REMOVING TRAPS
- CHECK WITH DRAINAGE PLAN TO DETERMINE LOCATION OF OPEN VENTED STACKS. OTHERWISE ALL SVPS TO TERMINATE IN ROOF SPACE WITH AN AIR RELEASE VALVE SEE STD DETAILS.
- LIGHTS TO BE CENTRAL TO ROOM UNLESS DIMENSIONED OTHERWISE.
- SEE STANDARD DETAILS FOR:
 1. HEIGHTS OF SOCKETS, SWITCHES, ETC.
 2. POSITION OF LIGHT SWITCHES UNLESS OTHERWISE DIMENSIONED.
 3. HEIGHT & POSITION OF WALL LIGHT CABLES UNLESS OTHERWISE DIMENSIONED.
 4. POSITION OF SOCKETS UNLESS OTHERWISE DIMENSIONED.
 5. POSITION OF RADIATORS UNLESS CENTRAL TO A WINDOW OR DIMENSIONED.
- INTERNAL ENERGY EFFICIENT LIGHTING & EXTERNAL LIGHTING TO BE PROVIDED TO COMPLY WITH BUILDING REGULATIONS AD PART L1A 2013. REFER TO SPECIFICATION FOR TYPE.



GUARD RAILS TO WINDOWS DEEPER THAN 1050. GUARD RAIL TO BE PROVIDED TO WINDOWS WHERE REQUIRED TO PROVIDE AN 1100mm HIGH BALUSTRADE. PLEASE SEE STANDARD DETAIL FOR FOR FURTHER INFORMATION.

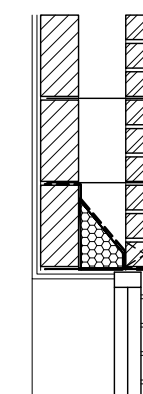
C	SHOW TRAYS REDUCED.	19.02.25
B	WETROOM LIGHTS AMENDED	09.04.24
A	FIRST DUCHY 2.1 ISSUE	
Rev	Comments	Date

House Type	Code	Drawing no.	Rev
HAREWOOD	T4H1266-NDSS	S-2.1-051	C
Title	Scale		
FIRST FLOOR PLAN (SERVICES)	1:50		



NOTES

- 150mm FULL SLAB INSULATION REQUIRED - SEE SPEC FOR TYPE
- CHECK WITH DRAINAGE PLAN TO DETERMINE LOCATION OF OPEN VENTED STACKS. OTHERWISE ALL SVPS TO TERMINATE IN ROOF SPACE WITH AN AIR ADMITTANCE VALVE. SEE STD DETAILS.
- ROOF COVERING AS GENERAL SPEC NOTES. TRUSSES DESIGNED & MANUFACTURED BY SPECIALIST TO BS5268 PT 3 1985.
- PIPEWORK IN ROOF SPACE TO BE RUN BELOW ROOF INSULATION & INSULATED WHERE IT RISES ABOVE
- 30x5mm TRUSS RESTRAINING STRAPS AT 2000mm MAX CENTRES TO TOP & BOTTOM CHORDS.

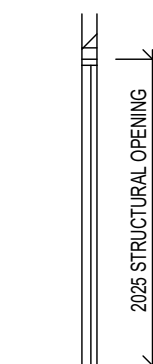


CAVITY TRAY OVER LINTELS AT GROUND FLOOR & IN GABLES.

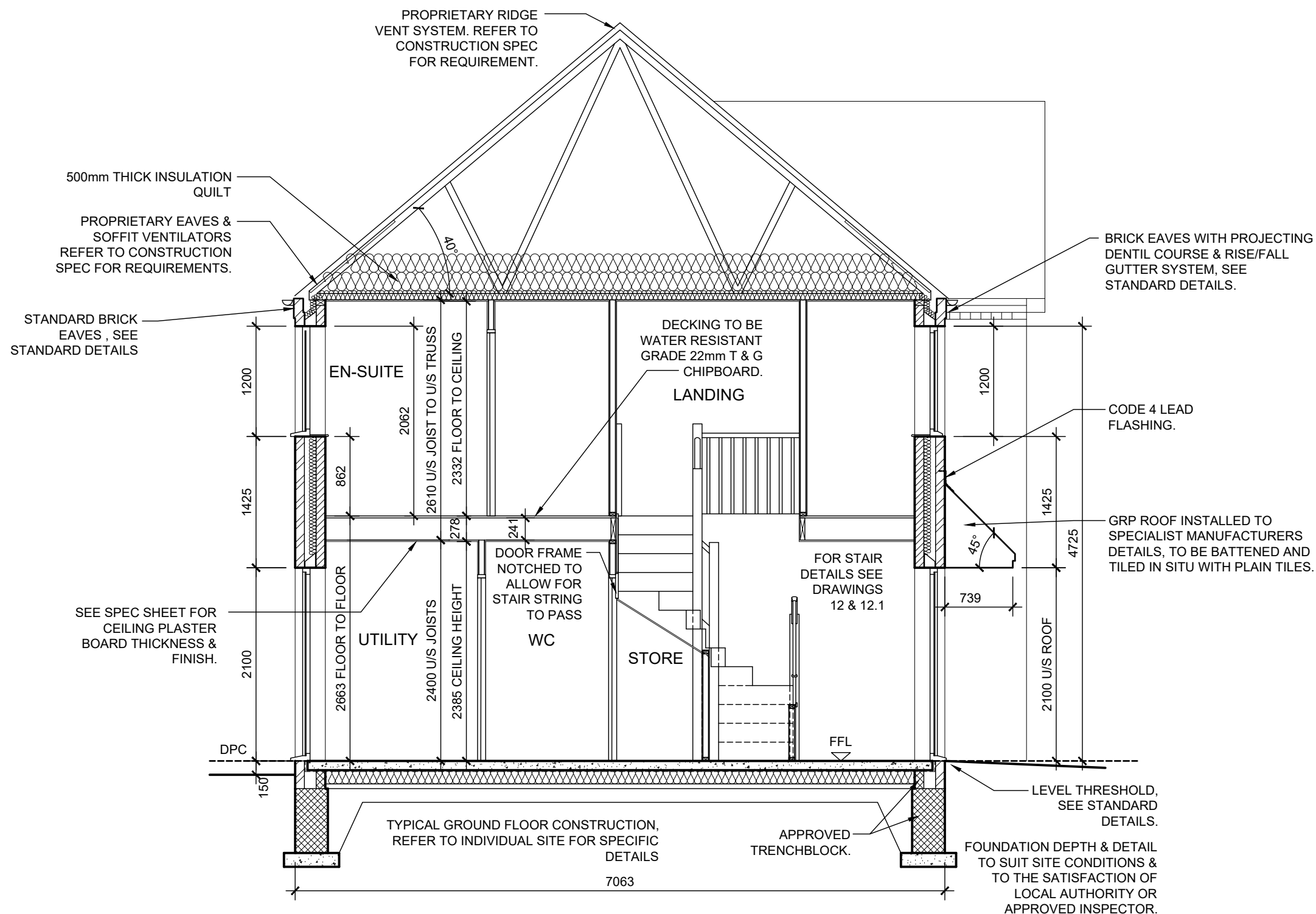
LENGTH OF TRAY TO BE WIDTH OF OPENING + 600mm i.e. TRAY TO EXTEND 300mm PAST SIDE OF OPENING. TRAY TO PROJECT 15mm PAST FRONT OF LINTEL.

PROVIDE WEEPHOLES AT MIN 450mm CENTRES, WITH AT LEAST TWO ABOVE EACH OPENING.

DETAIL OF CAVITY TRAY. 1:20



DETAIL OF INTERNAL DOOR



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A FIRST DUCHY 2.1 ISSUE

JUNE 23

House Type	Code	Drawing no.	Rev
HAREWOOD	T4H1266-NDSS	S-2.1-07	A
Title	Scale		
TYPICAL SECTION	1:50		

NOTES:
RWP'S POSITIONED AS DRAINAGE PLAN.

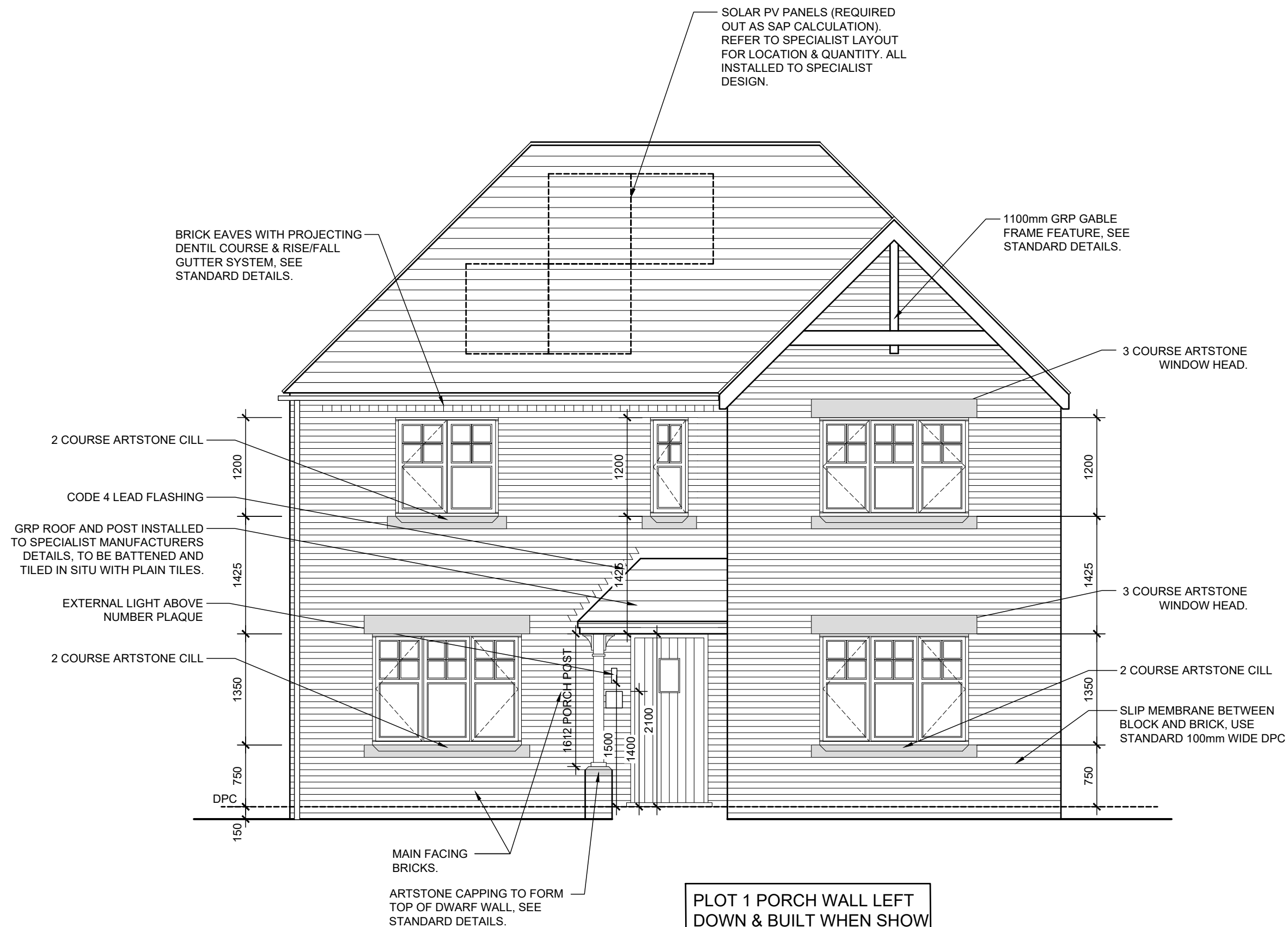
METER POSITIONS SHOWN ARE OPTIONS ONLY.
PLEASE CHECK WITH LAYOUT FOR SITE SPECIFIC
LOCATION.

CHECK WITH DRAINAGE PLAN TO DETERMINE
LOCATION OF OPEN VENTED STACKS. OTHERWISE
ALL SVPS TO TERMINATE IN ROOF SPACE WITH AN
AIR ADMITTANCE VALVE SEE STD DETAILS.

MOVEMENT JOINTS ARE REQUIRED AT:
• 12m MAX CENTRES FOR CLAY BRICKS.
• 6m MAX CENTRES FOR CONCRETE BRICKS.
• 6m MAX CENTRES & 3.75m MAX FROM RESTRAINED
ENDS (I.E. CORNERS) FOR RENDER.
• SEE STANDARD DETAILS.

* DENOTES TYPICAL MOVEMENT JOINT LOCATION.

ALL FEATURE BRICKWORK TO BE FLUSH UNLESS
OTHERWISE STATED



PLOT 1 PORCH WALL LEFT
DOWN & BUILT WHEN SHOW
HOUSE CLOSSES.

A FIRST DUCHY 2.1 ISSUE
Rev Comments
Date

House Type HAREWOOD	Code T4H1266-NDSS	Drawing no. S-2.1-08-TB	Rev A
Title FRONT ELEVATION - TRADITIONAL (BRICK)	Scale 1:50		

NOTES:
RWP'S POSITIONED AS DRAINAGE PLAN.

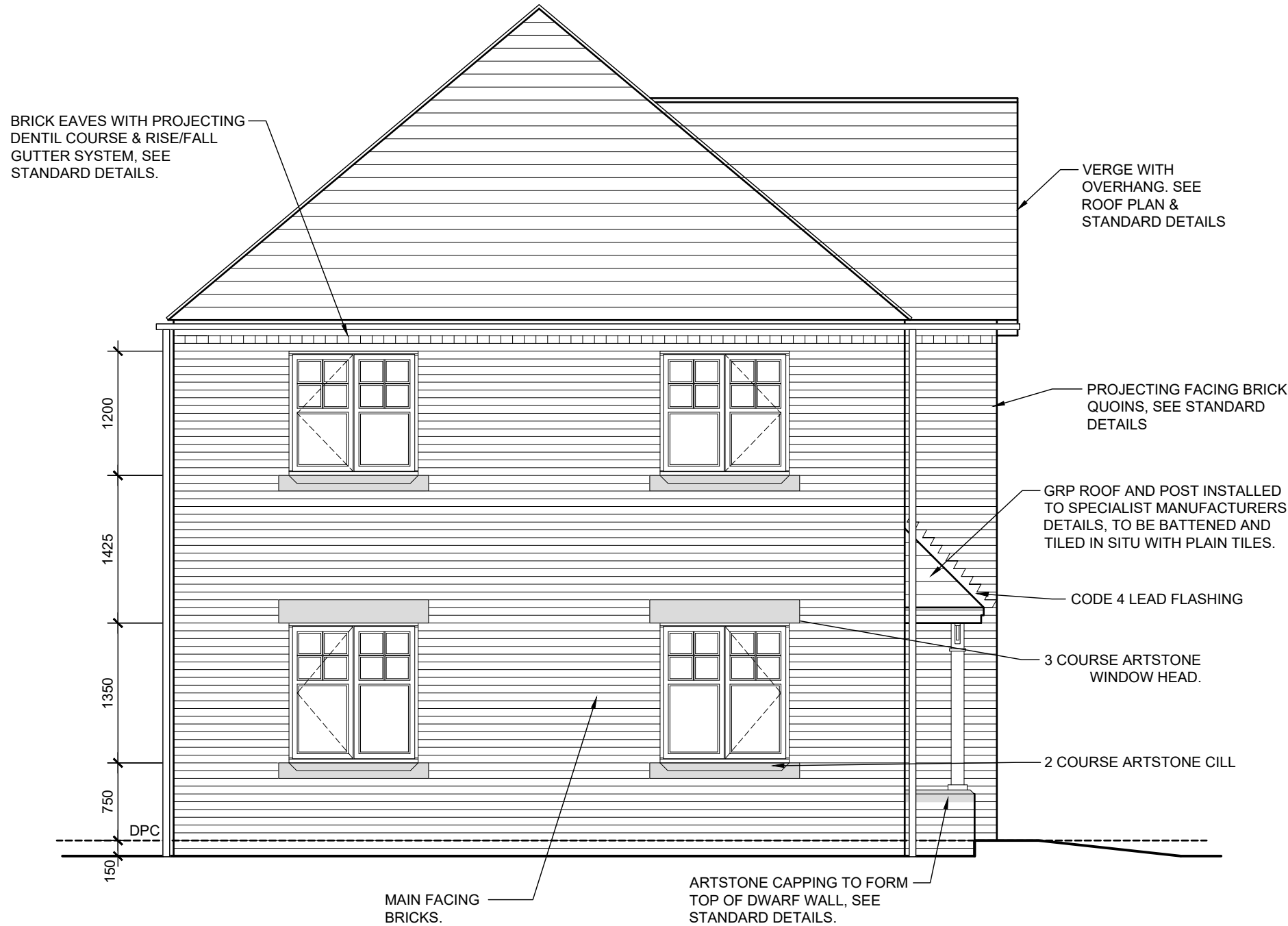
METER POSITIONS SHOWN ARE OPTIONS ONLY.
PLEASE CHECK WITH LAYOUT FOR SITE SPECIFIC
LOCATION.

CHECK WITH DRAINAGE PLAN TO DETERMINE
LOCATION OF OPEN VENTED STACKS. OTHERWISE
ALL SVPS TO TERMINATE IN ROOF SPACE WITH AN
AIR ADMITTANCE VALVE SEE STD DETAILS.

MOVEMENT JOINTS ARE REQUIRED AT:
• 12m MAX CENTRES FOR CLAY BRICKS.
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• 6m MAX CENTRES & 3.75m MAX FROM RESTRAINED
ENDS (I.E. CORNERS) FOR RENDER.
• SEE STANDARD DETAILS.

★ DENOTES TYPICAL MOVEMENT JOINT LOCATION.

ALL FEATURE BRICKWORK TO BE FLUSH UNLESS
OTHERWISE STATED



A FIRST DUCHY 2.1 ISSUE
Rev Comments Date

House Type HAREWOOD	Code T4H1266-NDSS	Drawing no. S-2.1-081-TB	Rev A
Title LH. SIDE ELEVATION - TRADITIONAL (BRICK)			Scale 1:50

NOTES:
RWP'S POSITIONED AS DRAINAGE PLAN.

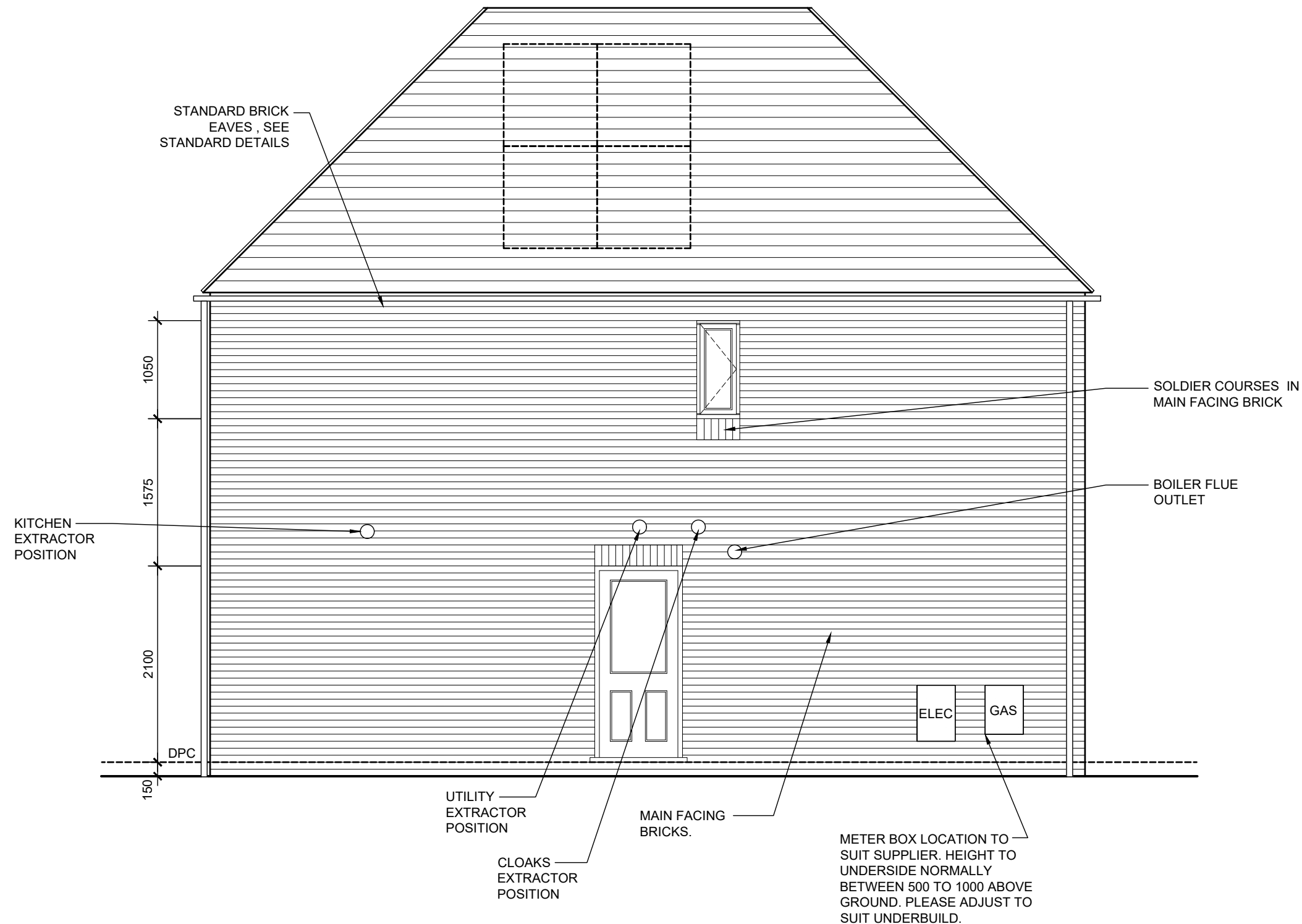
METER POSITIONS SHOWN ARE OPTIONS ONLY.
PLEASE CHECK WITH LAYOUT FOR SITE SPECIFIC
LOCATION.

CHECK WITH DRAINAGE PLAN TO DETERMINE
LOCATION OF OPEN VENTED STACKS. OTHERWISE
ALL SVPS TO TERMINATE IN ROOF SPACE WITH AN
AIR ADMITTANCE VALVE SEE STD DETAILS.

MOVEMENT JOINTS ARE REQUIRED AT:
• 12m MAX CENTRES FOR CLAY BRICKS.
• 6m MAX CENTRES FOR CONCRETE BRICKS.
• 6m MAX CENTRES & 3.75m MAX FROM RESTRAINED
ENDS (I.E. CORNERS) FOR RENDER.
• SEE STANDARD DETAILS.

* DENOTES TYPICAL MOVEMENT JOINT LOCATION.

ALL FEATURE BRICKWORK TO BE FLUSH UNLESS
OTHERWISE STATED



A FIRST DUCHY 2.1 ISSUE JUNE 23
Rev Comments Date

House Type HAREWOOD	Code T4H1266-NDSS	Drawing no. S-2.1-082-TB	Rev A
Title REAR ELEVATION - TRADITIONAL (BRICK)			Scale 1:50

NOTES:
RWP'S POSITIONED AS DRAINAGE PLAN.

METER POSITIONS SHOWN ARE OPTIONS ONLY.
PLEASE CHECK WITH LAYOUT FOR SITE SPECIFIC
LOCATION.

CHECK WITH DRAINAGE PLAN TO DETERMINE
LOCATION OF OPEN VENTED STACKS. OTHERWISE
ALL SVPS TO TERMINATE IN ROOF SPACE WITH AN
AIR ADMITTANCE VALVE SEE STD DETAILS.

MOVEMENT JOINTS ARE REQUIRED AT:
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• 6m MAX CENTRES & 3.75m MAX FROM RESTRAINED
ENDS (I.E. CORNERS) FOR RENDER.
• SEE STANDARD DETAILS.

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ALL FEATURE BRICKWORK TO BE FLUSH UNLESS
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A FIRST DUCHY 2.1 ISSUE
Rev Comments Date

House Type HAREWOOD	Code T4H1266-NDSS	Drawing no. S-2.1-083-TB	Rev A
Title R.H. SIDE ELEVATION - TRADITIONAL (BRICK)			Scale 1:50