

**GENERAL:**

- DRAWINGS TO BE READ IN CONJUNCTION WITH DOCUMENT FA-R-20-17 SPECIFICATION
- ALL DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEER'S DETAILS AND CALCULATIONS
- DO NOT SCALE FROM THIS DRAWING
- LANDSCAPING INDICATIVE ONLY AND SUBJECT TO A FULL DETAILED DESIGN
- ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE BUILDING REGULATIONS AND RELEVANT CODES OF PRACTICE AND BRITISH STANDARDS
- UNLESS OTHERWISE NOTED, DIMENSIONS ARE SHOWN TO STRUCTURE

**ALL DIMENSIONS TO BE CHECKED ON SITE**

**BUILDING SAFETY ACT**  
THE CLIENT MUST ABIDE BY THEIR DUTIES AS DEFINED WITHIN THE BUILDING SAFETY ACT 2022 WHICH RELATE TO ANY BUILDING WORKS.

**CDM REGULATIONS**  
THE CLIENT MUST ABIDE BY THE CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS 2015 WHICH RELATE TO ANY BUILDING WORKS WHICH:

(a) LASTS LONGER THAN 30 WORKING DAYS AND HAS MORE THAN 20 WORKERS WORKING SIMULTANEOUSLY AT ANY POINT IN THE PROJECT;  
OR:  
(b) EXCEEDS 500 PERSON DAYS.

N.B. THIS LIST IS NOT EXHAUSTIVE AND THE PD (PRINCIPAL CONTRACTOR) HAS A DUTY TO CO-ORDINATE, COMMUNICATE AND CO-ORDINATE WITH THE PD (PRINCIPAL DESIGNER) AND DESIGN TEAM AND COMPILE A COMPREHENSIVE RISK REGISTER WITH METHODS OF WORK STATEMENTS AT THE DESIGN STAGE PRIOR TO COMMENCEMENT OF WORK ON SITE. RISKS SHALL BE ANTICIPATED, REDUCED AND/OR AVOIDED WHERE POSSIBLE. THIS LIST SERVES TO HIGHLIGHT KEY RISKS IDENTIFIED BY THE DESIGN TEAM AND PD IN THE CONSTRUCTION, USE AND MAINTENANCE OF THE BUILDING.

REFER TO DESIGNS CDM HAZARD IDENTIFICATION AND ANALYSIS AND OPTION MATRIX FOR FURTHER INFORMATION

**CDM - RISK REGISTER**

- HAZARD - WORKING AT HEIGHT**  
ADEQUATE PROVISION OF SAFE ACCESS VIA SCAFFOLDING DURING THE WORKS. WORKING AT HEIGHT RULES TO BE OBSERVED DURING CONSTRUCTION PHASE AND FOR ALL ROUTINE ROOF MAINTENANCE INCLUDING GUTTER MAINTENANCE.
- HAZARD - FALLING OBJECTS**  
CONSTRUCTORS WORKERS TO BE PROTECTED FROM FALLING OBJECTS FROM WORKS TO ROOF DURING THE CONSTRUCTION WORKS.
- HAZARD - COLLAPSING STRUCTURE**  
TEMPORARY WORKS AND METHODS REQUIRED TO PROPOSED RETAINED WALLS DURING THE CONSTRUCTION WORKS. CONSULT WITH STRUCTURAL ENGINEER TO CO-ORDINATE.
- HAZARD - MANUAL HANDLING**  
MANUAL LIFTING RULES TO BE OBSERVED WHEN ASSESSING WEIGHTS OF CONSTRUCTION MATERIALS. IF BLOCK WORK EXCEEDS 20KG, 2 MAN LIFT REQUIRED. PC AND SUB-CONTRACTOR TO CARRY OUT RISK ASSESSMENT PRIOR TO COMMENCEMENT.
- HAZARD - GLAZING PANELS**  
CONSTRUCTION & MAINTENANCE - NEW GLAZING WILL REQUIRE ROUTINE MAINTENANCE/CLEANING. IT IS CONSIDERED THAT THE HEIGHT OF THE GLAZING IS WITHIN THE LIMITS OF EXTENDABLE WINDOW CLEANING EQUIPMENT AND IT IS THEREFORE FORESEEN THAT WINDOW CLEANING OPERATIVES WILL CARRY OUT THE WORK FROM GROUND LEVEL. WHERE HEIGHTS OF WINDOWS OR ACCESS ISSUES PRECLUDE EXTERNAL MAINTENANCE INTERNALLY HINGED WINDOW FRAMES WILL BE SPECIFIED FOR CLEANING/ MAINTENANCE. IN THE UNLIKELY EVENT THAT A FULL HEIGHT GLAZING PANEL NEEDS TO BE REPLACED, THE OCCUPIER SHOULD ARRANGE TO DO SO OBSERVING THE 20KG LIFTING TWO MAN LIFT RULE.
- HAZARD - IMTEL COLUMN & BEAM INSTALLATION**  
CONSTRUCTION LIMITS & BEAM/STRUCTURAL ELEMENTS TO BE LIFTED INTO PLACE WITH APPROPRIATE EQUIPMENT BY SKILLED OPERATIVES.

**IN ALL CASES - REFER TO CDM RISK REGISTER PROVIDED BY MAIN CONTRACTOR**

**ABBREVIATION NOTES:**

- RWP RAINWATER DOWNPIPE
- SVP SOIL VENT PIPE
- AAV AUTOMATIC AIR VALVE
- TG TOUGHENED GLASS
- MECHANICAL EXTRACT
- SHTC SMOKE/HEAT/CARBON MONOXIDE DETECTOR
- DENOTES PROPOSED DRAINAGE RUNS
- DENOTES ASSUMED EXISTING DRAINAGE RUNS
- DENOTES SITE BOUNDARY
- DENOTES INDICATIVE POSITION OF STRUCTURE OVERHEAD TO STRUCTURAL ENGINEER'S DETAILS & SPECIFICATION
- Q DENOTES SOIL VENT PIPE
- DENOTES DEMOLITION LINES
- 500 DENOTES AS EXISTING SURVEYED DIMENSIONS
- 500 DENOTES PROPOSED DIMENSIONS
- 0000 DENOTES MINIMUM 30 MINUTE CAVITY BARRIER - PARTY WALL
- DENOTES MINIMUM 30 MINUTE CAVITY CLOSER

**BEAM AND BLOCK FLOOR PLATE LEGEND:**

- RWP RAINWATER DOWNPIPE
- SVP SOIL VENT PIPE
- DC DIRECTION CONNECTION
- MJ MOVEMENT JOINT
- INDICATES STUD WALL OVER
- DENOTES PROPOSED DIRECTION OF FLOOR BEAMS
- DENOTES PROPOSED DRAINAGE RUNS

**WALL LEGEND**

**WT01 - EXTERNAL MASONRY WALL ABOVE RETAINING WALL**

- TO ACHIEVE U-VALUE 0.13 W/M<sup>2</sup>K
- 200MM TWO COAT SAND/CEMENT RENDER TO COMPLY TO BS EN 12814-1 WITH WATERPROOF ADDITIVE
- 100MM 7.3N DENSE CONCRETE BLOCKS, 1.13 W/M<sup>2</sup>K
- 55MM CLEAR RESIDUAL CAVITY
- 120MM KINGSPAN K10B INSULATION BOARD WITH INSULATION RETAINING CLIPS
- 100MM 7.3N DENSE CONCRETE BLOCKS, 1.13 W/M<sup>2</sup>K
- 4MM PARGE COAT TO INNER LEAF OF BLOCKWORK
- INTERNAL FINISH TO BE 12.5MM PLASTERBOARD ON 10MM DABS
- STAINLESS STEEL WALL TIES AT 750MM CTS HORIZONTALY, 400MM VERTICALLY AND 250MM CTS AT REVEALS AND CORNERS IN STAGGERED ROWS
- WALLS TO BE BUILT WITH 1:3:4 CEMENT MORTAR

**WT02 - EXTERNAL MASONRY RETAINING WALL**

- TO ACHIEVE MIN U-VALUE 0.18 W/M<sup>2</sup>K
- RC RETAINING WALL TO STRUCTURAL ENGINEER'S DESIGN AND DETAIL WITH RW WATERPROOFING TO BOTH SIDES (SEE DETAIL)
- 100MM 7.3N DENSE CONCRETE BLOCKS, 1.13 W/M<sup>2</sup>K E.G. STOWELL
- 175MM CAVITY
- FULL FILL THE CAVITY WITH WITH ROCKWOOL FILL CAVITY BATT
- 100MM BLOCKWORK ANGLE LEAF - STRENGTH CLASS TO STRUCTURAL ENGINEER'S DESIGN
- 4MM PARGE COAT TO INNER LEAF OF BLOCKWORK
- INTERNAL FINISH TO BE 12.5MM PLASTERBOARD ON 10MM DABS
- STAINLESS STEEL WALL TIES AT 750MM CTS HORIZONTALY, 400MM VERTICALLY AND 250MM CTS AT REVEALS AND CORNERS IN STAGGERED ROWS
- WALLS TO BE BUILT WITH 1:3:4 CEMENT MORTAR

**WT03 - EXTERNAL MASONRY WALL - COMPOSITE CLADDING**

- TO ACHIEVE U-VALUE 0.18 W/M<sup>2</sup>K
- 50MM COMPOSITE CLADDING PANELS TO CLIENT APPROVAL
- 25MM BATTENS (AND COUNTER BATTENS IF REQUIRED FOR VENTED AND DRAINED CAVITY)
- IF REQUIRED BY ECO LINE OUTLETS OF BLOCKWORK WITH TYVEK HOUSE WRAP
- 100MM 7.3N DENSE CONCRETE BLOCKS, 1.13 W/M<sup>2</sup>K
- 100MM 7.3N DENSE CONCRETE BLOCKS, 1.13 W/M<sup>2</sup>K
- 55MM CLEAR RESIDUAL CAVITY
- 120MM KINGSPAN K10B INSULATION BOARD WITH INSULATION RETAINING CLIPS
- 100MM 7.3N DENSE CONCRETE BLOCKS, 1.13 W/M<sup>2</sup>K
- 4MM PARGE COAT TO INNER LEAF OF BLOCKWORK
- INTERNAL FINISH TO BE 12.5MM PLASTERBOARD ON 10MM DABS
- STAINLESS STEEL WALL TIES AT 750MM CTS HORIZONTALY, 400MM VERTICALLY AND 250MM CTS AT REVEALS AND CORNERS IN STAGGERED ROWS
- WALLS TO BE BUILT WITH 1:3:4 CEMENT MORTAR

**WT04 - INTERNAL MASONRY WALL**

- CONSTRUCT NON LOAD BEARING INTERNAL MASONRY PARTITIONS USING DENSE CONCRETE BLOCKS BUILT OFF THICKENED FLOOR SLAB
- WALLS TO BE TIED AT 225MM CENTRES WITH PROPERLY STEEL PROFILES OF BLOCKS BONDING TO ALL INTERNAL AND EXTERNAL WALLS
- WALLS FACED THROUGHTER WITH 4MM PARGE COAT, 12.5MM PLASTERBOARD ON 10MM DABS WITH 50MM PLASTER FINISH READY TO RECEIVE DECORATION
- WALLS TO BE BUILT WITH 1:3:4 CEMENT MORTAR

**WALL TYPE WT05 - INTERNAL WALL**

- 89MM x 38MM SW TREATED STUDS AT 400 - 600MM CTS WITH HEAD AND SOLE PLATES AND SOLID INTERMEDIATE HORIZONTAL JOISTS AT 113 HEIGHT OR 450MM
- PROVIDE MIN U-VALUE 0.18 W/M<sup>2</sup>K ACUSTIC SOUNDPROOF GUILT TIGHTLY PACKED (EG. 100MM ROCKWOOL OR 100MM MINERAL FIBRE INSULATION IN ALL VOIDS THE FULL DEPTH OF THE JTD)
- LINE DRY SIDES WITH 2 x LAYERS OF 12.5MM GYPROC FIRELINE PLASTERBOARD WHERE FORMING PROTECTED FIRE ESCAPE ROUTE AND FINISH WITH 5MM SKIM READY TO RECEIVE DECORATION
- ELSEWHERE LINE DRY SIDES WITH 2 x LAYERS OF 12.5MM GYPROC SOUNDLOC PLASTERBOARD WITH 5MM SKIM READY TO RECEIVE DECORATION
- AREAS SUSCEPTIBLE TO HIGH LEVELS OF MOISTURE (E.G. KITCHENS) TO RECEIVE MOISTURE RESISTANT PLASTERBOARD

**ROBUST FIXINGS**

- IF REQUIRED APPLY 1 x LAYER OF 18MM WBP FLY TO ACT AS ROBUST FIXING FOR CABINERY IN LIEU OF 1 x LAYER OF PLASTERBOARD.

**WALL TYPE WT06 - INTERNAL WALL LINING**

WHERE INDICATED ON PLAN LINE STUDS WITH:

- 12MM HARDBOARD CEMENT BOARD AFTER FINISHING SURRY SUITABLE FOR WET ROOM APPLICATIONS
- 4MM ACROHENE FOR DEPTH AS SPECIFIED BY THE MANUFACTURER INSTALLATION GUIDANCE
- FINISH WITH 12MM TILES & GROUT TO CLIENT SPECIFICATION
- IF REQUIRED FOR ROBUST FINISH INCLUDE 1 x LAYER OF 18MM MARINE GRADE FLY TO THE REAR FACE OF CEMENT BOARD - FOR EXAMPLE - TO RECEIVE SHOWER CONTROL UNIT OVER BATH

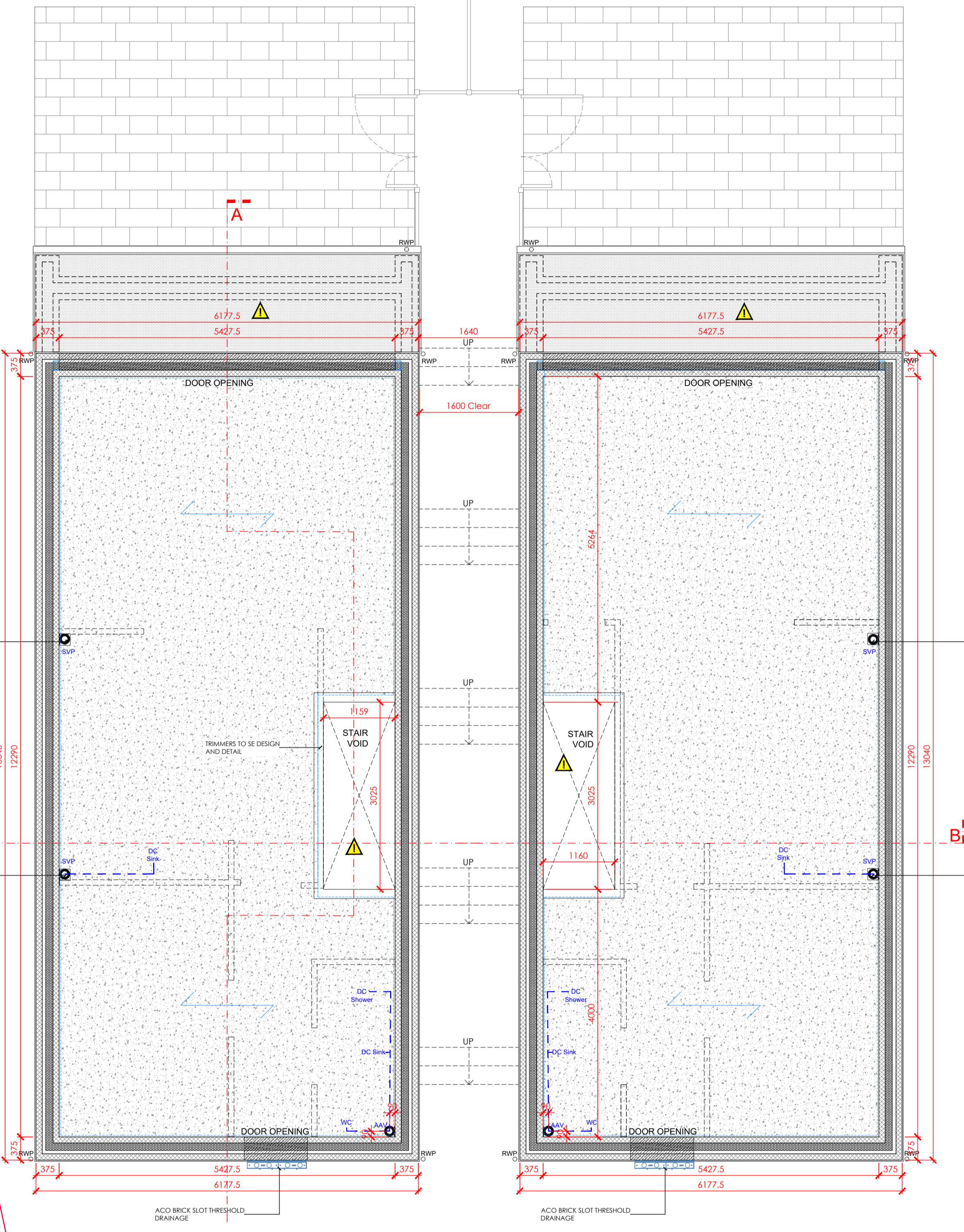
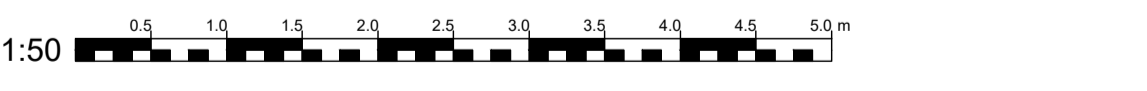
**WALL TYPE WT07 - INTERNAL WALL**

- 89MM x 38MM SW TREATED STUDS AT 400 - 600MM CTS WITH HEAD AND SOLE PLATES AND SOLID INTERMEDIATE HORIZONTAL JOISTS AT 113 HEIGHT OR 450MM
- LINE DRY SIDES WITH 2 x LAYERS OF 12.5MM GYPROC FIRELINE PLASTERBOARD WHERE FORMING PROTECTED FIRE ESCAPE ROUTE AND FINISH WITH 5MM SKIM READY TO RECEIVE DECORATION
- ELSEWHERE LINE DRY SIDES WITH 2 x LAYERS OF 12.5MM GYPROC SOUNDLOC PLASTERBOARD WITH 5MM SKIM READY TO RECEIVE DECORATION
- AREAS SUSCEPTIBLE TO HIGH LEVELS OF MOISTURE (E.G. KITCHENS) TO RECEIVE MOISTURE RESISTANT PLASTERBOARD

**ROBUST FIXINGS**

- IF REQUIRED APPLY 1 x LAYER OF 18MM WBP FLY TO ACT AS ROBUST FIXING FOR CABINERY IN LIEU OF 1 x LAYER OF PLASTERBOARD.

**PROPOSED GROUND FLOOR BEAM AND BLOCK LAYOUT**  
SCALE 1:50



**INTERMEDIATE FLOORS**

- PCC BEAMS TO BE SUPPLIED AND FIXED TO BEAM MANUFACTURER'S PLAN, LAYOUT AND DETAILS (DETAILS AND CALCULATIONS TO BE SENT TO BUILDING CONTROL FOR APPROVAL BEFORE WORKS COMMENCE).
- BEAM TO HAVE A MINIMUM BEARING OF 100MM ONTO LOAD BEARING WALLS.
- PROVIDE CONCRETE BLOCKS TO BS EN 772-2, WET AND GROUT ALL JOINTS WITH 1:4 CEMENT/SAND MIX.
- PROVIDE DOUBLE BEAMS BELOW NON-CO-BEARING PARTITIONS.
- INTERMEDIATE FLOORS SHOULD HAVE A LAYER OF INSULATION TO REDUCE DOWNWARDS HEAT TRANSMISSION WITH A THERMAL RESISTANCE OF NOT LESS THAN 0.75 (M<sup>2</sup> K)/W.
- LAY 25MM KINGSPAN K103 FLOOR INSULATION OVER BEAM AND BLOCK FLOOR APPLIED AS A RIGID MATERIAL.
- 25MM INSULATION TO CONTINUE AROUND FLOOR PERIMETERS TO AVOID THERMAL BRIDGING. JOINTS BETWEEN INSULATION BOARDS TO BE PROPERLY TAPED TO PREVENT SEEPAGE OF SCAFFOLD.
- LAY 50KG SEPARATING LAYER OVER INSULATION AND PROVIDE 75MM SAND/CEMENT SCREED OVER AND PREPARE FOR FLOOR FINISHES AS REQUIRED.
- SCREEDS TO BE ISOLATED AT ALL EDGES, ABUTMENTS AND COLUMNS TO ALLOW FOR MOVEMENT DUE TO THERMAL LOADINGS. JOINTS TO BE FILLED WITH A SUITABLE FLEXIBLE FILLER. GROUT MUST NOT BE USED. THE MANUFACTURER'S GUIDANCE FOR BOTH THE FLOOR SCREED AND THE TILING MUST BE FOLLOWED TO DETERMINE THE MINIMUM THICKNESS OF EDGE STRIP REQUIRED TO ALLOW FOR EXPANSION.
- ALLOW 75MM SERVICE VOID BELOW BEAM AND BLOCK FLOOR AND FINISH WITH 15MM GYPROC FIRELINE PLASTERBOARD AND 5MM SKIM READY TO RECEIVE DECORATION.

**UNDERFLOOR HEATING**

- UNDERFLOOR HEATING INSTALLATION TO BE DESIGNED AND SPECIFIED AS AN INTEGRATED PACKAGE BY THE SYSTEM MANUFACTURER TO ENSURE COMPATIBILITY OF ALL THE COMPONENTS.
- PIPEWORK LOOPS DESIGN, LAYOUT AND SIZING OF THE SYSTEM TO BE IN ACCORDANCE WITH BS EN 12641-5]. THE MOST APPROPRIATE LAYOUT FOR A PARTICULAR APPLICATION SHOULD BE CONFIRMED BY THE SYSTEM MANUFACTURER.
- MAXIMUM FLOOR TEMPERATURE TO BE 29°C, OR 27°C WHERE FLOOR TILING OR RESILIENT FLOOR IS PROPOSED IN COMPLIANCE WITH BS EN 1264-2(1).
- PIPEWORK TO BE INSTALLED DIRECTLY TO RIGID INSULATION USING PROPRIETARY CLIP RAILS AND CLIPS, SPACED IN ACCORDANCE WITH PIPE LAYOUT DESIGN.
- PIPEWORK LOOPS TO BE CHARGED WITH WATER AND PRESSURE TESTED PRIOR BEFORE SCREED IS POURED.
- PIPEWORK LOOPS LEADING TO AND FROM THE MANIFOLDS TO BE KEPT FREE OF ANY SHARP BENDS THAT COULD RESTRICT THE FREE FLOW OF WATER, WHERE 90° BENDS ARE REQUIRED, METAL FORMERS TO BE USED TO PREVENT TWISTING AND CONSTRUCTION.
- ALL JOINTS BETWEEN THE MANIFOLD AND PIPEWORK LOOPS ARE TO BE ACCOMMODATED ABOVE THE LEVEL OF SCREED, NO JOINTS TO BE EMBEDDED IN THE SCREED.
- PIPEWORK LOOPS SHOULD NOT EXTEND RIGHT TO THE EDGE OF THE FLOORS AND UNDER THE SKIRTING BOARDS.
- PIPEWORK FIXINGS TO MAINTAIN THE INTEGRITY OF THE INSULATION AND OTHER MATERIALS.
- EACH ROOM SHOULD BE PROVIDED WITH THERMOSTATIC ROOM CONTROLS, CAPABLE OF BEING USED TO SEPARATELY ADAPT THE HEATING OUTPUT IN EACH ROOM SERVED BY THE HEATING APPLIANCE.
- LABELLING TO BE PROVIDED TO ENABLE EFFECTIVE INSPECTION, COMMISSIONING, MAINTENANCE AND REPAIRS OF THE UNDERFLOOR HEATING INSTALLATION AND TO IDENTIFY THE ROOMS TO WHICH INDIVIDUAL PORTS OF THE MANIFOLD ARE CONNECTED.
- ALL INSTALLED EQUIPMENT IN UNDERFLOOR HEATING SYSTEMS TO BE COMMISSIONED IN ACCORDANCE WITH BS EN 1264-4 BEFORE FLOOR FINISH IS APPLIED.

# BUILDING REGULATIONS

THIS DOCUMENT DOES NOT CONSTITUTE A WORKING DRAWING AND HAS BEEN PREPARED FOR PRICING & BUILDING REGULATIONS APPROVAL ONLY. NO LIABILITY IS ACCEPTED FOR ANY LOSS OF ANY SORT OR ADDITIONAL EXPENSE INCURRED CONSEQUENT ON ANY FAILURE, REAL OR ALLEGED, OF THE DRAWINGS AND SPECIFICATION.

SPECIALIST SUPPLIERS/SUBCONTRACTORS TO SUBMIT DRAWINGS AND DETAILS TO FREDRICK ADAM ARCHITECTS FOR APPROVAL PRIOR TO MANUFACTURE/CONSTRUCTION.

DO NOT SCALE FROM DRAWINGS. WORK TO FIGURED DIMENSIONS. ALL DIMENSIONS ARE TO BE CHECKED ON SITE PRIOR TO FABRICATION OF COMPONENTS / SETTING OUT. REPORT ANY DISCREPANCIES TO FREDRICK ADAM IMMEDIATELY.

**LAND TO THE REAR OF DEERHURST**  
**Mr and Mrs P Wheeler**  
**The Shrave**  
**Four Marks,**  
**Hampshire, GU34 5BH**

REVISION	DATE	DESCRIPTION

PROJECT NO: **FA-R-20-17**  
MODEL FILE:  
DRAWN BY: **HBR**  
CHKD BY: **TAD**

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SHEET TITLE

**B002**  
**Ground Floor Beam and Block Layout**

**FA-R-20-17**

Scale: 1: 50 @ A1

**DRAFT - SUBJECT TO REVIEW BY BUILDING CONTROL & STRUCTURAL ENGINEER. TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEER'S DOCUMENTATION**