

GENERAL NOTES:

1. DO NOT SCALE FROM PLANS, BUILDER REQUIRED TO TAKE DETAILED SITE MEASUREMENTS FOR CONSTRUCTION. ALL DIMENSIONS IN mm UNLESS NOTED OTHERWISE (UNO). ALL DIMENSIONS AND LEVELS SHOWN ON PLANS ARE INDICATIVE ONLY. BUILDER MUST TAKE SITE DIMENSIONS AND MUST NOT USE DIMENSIONS SHOWN ON PLANS FOR CUT LENGTHS OR FINAL CONSTRUCTION SETTING OUT.
2. THIS SKETCH TO BE READ IN CONJUNCTION WITH ALL SK SHEETS AND THE ARCHITECTURAL PLANS.
3. READ ALL DRAWING IN CONJUNCTION WITH CALCULATION 'GENERAL CONSTRUCTION NOTES' ON SHEET No. 03a & 03b
4. ALL WORK TO COMPLY WITH THE CURRENT BUILDING REGULATION REQUIREMENTS. ALL WORK TO BE CARRIED OUT TO THE SATISFACTION OF THE LOCAL AUTHORITY BUILDING INSPECTOR.
5. ALL NON STRUCTURAL ALTERATION DETAILS TO BE AGREED BETWEEN THE BUILDING CONTROL OFFICER AND BUILDER.
6. STEEL BEAMS MINIMUM BEARING ONTO CONCRETE PAD STONES: -
- 100mm WHEN ON 100mm WIDE PART
 - 150mm WHEN ON 150mm, 215mm 300mm, OR 330mm WIDE PART
 - 230mm WHEN ON 440mm WIDE PART
7. STEEL BEAM/S MUST BE POSITIONED CENTRAL TO MASONRY LEAFS UNLESS DIMENSIONED AND/OR SPECIFIED OTHERWISE.
5. AT SUPPORTS, MASONRY TO BE BUILT TIGHT INTO WEBS OF STEEL BEAMS.
6. PRECAST CONCRETE PAD STONE OF MIN. 50N/mm² CONCRETE
7. BEAM/S OR LINTELS INSTALLED INTO NEW OPENING IN EXISTING MASONRY WALLS TO BE SLATE WEDGED AND MORTAR PACKED (DRY MIX 1 CEMENT: 3 SAND) BETWEEN THE SOFFIT OF THE OPENING AND THE TOP OF THEN LINTEL, IN ORDER TO TRANSFER THE LOAD ONTO THE LINTEL.
8. NEW OPENINGS FORMED IN MASONRY WALLS TO HAVE CUT EDGES MADE GOOD WITH CONCRETE BLOCK OF MINIMUM 7.3N/mm² STRENGTH (OR WITH CLASS B ENGINEERING BRICKS WHERE NOTED ON PLAN). TOOTH BOND NEW MASONRY INTO EXISTING SURROUNDING MASONRY
9. NEW OPENINGS FORMED IN MASONRY WALLS WITH STRAIGHT , L or Z-SHAPPED PAD STONES LOCATED OVER THE EXISTING CAVITY: THE ENDS OF THE NEW OPENING TO BE MADE GOOD IN ENGINEERING BRICKWORK SO THAT NO CAVITY REMAINS BELOW THE PAD STONE FROM THE GROUND LEVEL UP TO THE UNDERSIDE OF THE NEW PAD STONE. TOOTH BOND NEW MASONRY INTO EXISTING SURROUNDING MASONRY.
10. ALL PURLINS MUST BE INSTALLED VERTICALLY.
11. ABOVE DPC LEVEL WALLS TO BE BUILT USING M4 / (iii) MORTAR STRENGTH, UNLESS NOTED OTHERWISE.

LEVEL SETTING OUT

BUILDER TO CONFIRM RELATIVE LEVELS ACCEPTABLE PRIOR TO ORDERING STEELWORK.

EDC MUST BE CONSULTED IF THE SETTING OUT OF THE MEMBERS IS ANY DIFFERENT TO THAT SHOWN.

BUILDING CONTROL RISK

NOTE RISK OF CONSTRUCTION WITHOUT BUILDING CONTROL APPROVAL

WHERE THESE CALCULATIONS AND DETAILS ARE USED TO OBTAIN LOCAL AUTHORITY APPROVALS, NO RELIANCE SHALL BE PLACED UPON THEM AND CONTAINED HEREIN ARE NOT TO BE USED UNTIL SUCH APPROVAL HAVE BEEN GIVEN IN FULL.

BUILDER AND CLIENT MUST UNDERSTAND AND ACCEPT THE RISK OF CONSTRUCTION WITHOUT BUILDING CONTROL APPROVAL. IT MAY BE THAT ADDITIONAL WORKS OR AMENDMENT TO EDC DETAILS WOULD BE REQUIRED AND THAT EDC WILL NOT BE HELD LIABLE FOR CHANGES REQUIRED IN OBTAINING BUILDING CONTROL APPROVAL.

LINTELS AND SILLS

CONTRACTOR TO CHECK ALL LINTELS FOR CAVITY WALL WIDTH FIT PRIOR TO ANY ORDER BEING PLACED, & INCLUDE FOR ALL NECESSARY STEP DPC'S AND WEEP HOLES OVER.

MIN. 150 END BEARINGS U.N.O. & INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS & RECOMMENDATIONS FOR TEMPORARY AND FINAL CONSTRUCTION.

STEELWORK NOTES:

1. ALL STRUCTURAL STEEL MEMBERS TO HAVE FIRE PROTECTION AMOUNT AGREED WITH BUILDING CONTROL. TYPICALLY, NO PROTECTION IF ONLY SUPPORTING ROOF, 30 MINUTES FOR SINGLE DOMESTIC RESIDENCE, 60 MINUTES OR ABOVE REQUIRED FOR NON DOMESTIC, OR PARTY STRUCTURES. 30 MINUTES FIRE PROTECTION CAN BE ACHIEVED WITH TWO LAYERS OF 12.5mm STANDARD PLASTERBOARD AND SKIM, OR ONE LAYER OF 12.5mm FIRE LINE BOARD & SKIM, UNLESS SPECIFIED OTHERWISE BY THE ARCHITECT. BUILDER MUST AGREE THE FIRE PROTECTION SPECIFICATION WITH THE BUILDING CONTROL OFFICER PRIOR TO COMMENCING.
2. ALL STEELWORK TO BE GRADE S275 (43) TO BS EN 10025 U.N.O.
3. ALL BOLTS TO BE GRADE 8.8 THROUGH STANDARD CLEARANCE HOLES U.N.O.
4. ALL BOLTS TO BE M12 & ALL WELDS TO BE 6mm C.F.W. U.N.O.
5. ALL STEELWORK TO HAVE ONE COAT OF ZINC RICH PRIMER, ALSO KNOWN AS RED LEAD OR ZINC PHOSPHATE RUST INHIBITOR WITH A MIN. 75µ FILM THICKNESS, TOUCH UP ON SITE WHERE DAMAGED.
6. STEEL WORK IN CAVITIES OR BELOW GROUND I.E. WIND POST AND ENDS OF STEELWORK EXPOSED TO CAVITIES TO RECEIVE AN ADDITIONAL TWO COATES OF BLACKJACK BITUMEN PAIN ON SITE. "EVER BUILD BLACK JACK 901 WEATHERPROOF PROTECTION" APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
7. STEEL LINTEL BEAMS SUPPORTING THE OUTSIDE MASONRY LEAF, OR ANY STEEL BELOW THE GROUND LEVEL TO BE HOT DIPPED GALVANIZED.
8. ALL STEELWORK TO CONFORM TO THE NATIONAL STEELWORK SPECIFICATION STANDARD (NSSS) FOR BUILDING CONSTRUCTION 5TH EDITION CE MARKING VERSION (OR THE LATEST VERSION).
9. EXECUTION CLASS 2 (EXC2) AS A MINIMUM SHOULD BE ADOPTED UNLESS CODE REQUIRES A HIGHER EXECUTION CLASS.
10. FOR ALL FABRICATED STRUCTURAL STEELWORK DELIVERED TO SITE THERE IS A LEGAL REQUIREMENT UNDER THE CPR THAT IT IS CE MARKED. IN ORDER TO ACHIEVE THIS, THE CLIENT OR MAIN CONTRACTOR SHOULD APPOINT A STEELWORK CONTRACTOR WITH AN EXECUTION CLASS EQUAL TO THAT REQUIRED FOR THE PROJECT. IT SHOULD BE NOTED THAT STEELWORK CONTRACTORS WITH EXC3 CAPABILITY CAN BE USED FOR EXC1, 2, & 3; AND A STEELWORK CONTRACTOR WITH EXC2 CAPABILITY CAN ONLY BE USED FOR EXC1 & 2.

STEEL BEAM HOLE REQUIREMENTS FOR SERVICES

HOLES REQUIRED IN THE WEB OF THE BEAM WHEN THE BEAM IS HIDDEN WITHIN THE FLOOR CONSTRUCTION DEPTH AND WHEN SERVICES CAN NOT BE ROUTED ABOVE OR BELOW THE BEAM MUST COMPLY WITH THE BELOW:-

1. CLIENT TO CHECK WITH ELECTRICIAN, PLUMBER ETC. NUMBER OF VOIDS REQUIRED
2. HOLES MUST BE DRILLED AT MID DEPTH IN THE WEB, NO HOLES PERMITTED IN THE FLANGES U.N.O.
3. HOLE MUST BE A MINIMUM DISTANCE AWAY FROM ITS SUPPORTS; BEING THE GREATER OF 0.1 TIMES THE SPAN AWAY FROM ANY SUPPORTING FACE, OR TWICE THE DEPTH OF THE BEAM.
4. MIN. SPACING BETWEEN HOLE EDGES TO BE EQUAL TO THE DEPTH OF THE BEAM
5. RECTANGULAR OR SQUARE HOLES WITH ROUNDED CORNERS NOT PERMITTED WITHOUT WRITTEN CONSENT
6. EACH HOLE WILL INCREASE THE BEAMS DEFLECTION BY APPROX. 3% THEREFOR ALWAYS CONSULT EDC WITH REGARDS TO THE FINAL NUMBER OF HOLES AND LOCATIONS AS MORE THAN ONE HOLE MAY REQUIRE STRENGTHENING OR BEAM WEIGHT/SIZE SPECIFIED ON PLANS INCREASING.

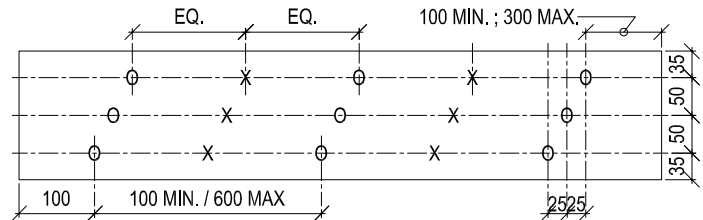
BEAM DEPTH	DIA. OF HOLES PERMITTED
LESS THAN 150	25
150 TO 200	50
200 AND ABOVE	75

TIMBERS:-

- RAFTERS SHALL BE BIRDS MOUTHED OVER PURLINS AND WALL PLATES, I.E NOTCH THE UNDERSIDE OF THE RAFTERS TO ALLOW FOR A FLAT HORIZONTAL BEARING AT SUPPORTS. FIX EVERY RAFTER DOWN TO SUPPORTS EITHER BY SKEW NAILING TWICE OR USING A PROPRIETARY TRUSS CLIP.
- RAFTERS SHOULD BE CONTINUOUS FROM THE RIDGE BEAM SUPPORT OVER ANY SLOPE PURLINS AND EAVES WALL PLATES, UNO.
- NOTCHES, BIRDS MOUTHING & HOLES IN SIMPLY SUPPORTED TIMBERS MUST BE WITHIN THE FOLLOWING LIMITS:-
- NO GREATER THAN ONE THIRD OF THE DEPTH AT THE SUPPORT BEARING
 - NOTCHES SHOULD BE NO DEEPER THAN 0.125 TIMES THE DEPTH OF A JOIST AND SHOULD NOT CUT CLOSER TO THE SUPPORT THAN 0.07 OF THE SPAN, NOR FURTHER AWAY THAN 0.25 TIMES THE SPAN.
 - HOLES SHOULD HAVE A DIAMETER NOT GREATER THAN 0.25 TIMES THE DEPTH OF A JOIST AND SHOULD BE DRILLED AT THE JOIST CENTRE LINE. THEY SHOULD BE NOT LESS THAN 3 DIAMETER (CENTRE TO CENTRE) APART AND SHOULD BE LOCATED BETWEEN 0.25 AND 0.4 TIMES THE SPAN FROM THE SUPPORT
 - NOTCHES OR HOLES OUTSIDE THE ABOVE LIMITS SHOULD NOT BE MADE WITHOUT THE WRITTEN APPROVAL OF EDC STRUCTURAL ENGINEER.
- ADOPT OVER SIZED WASHERS TO TIMBER FACE THROUGHOUT. MIN. 3mm THICK, 50mm DIAMETER OR SQUARE.

- DOUBLE OR TRIPLE TIMBER SECTIONS MUST BE CONNECTED TOGETHER. ANY SUPPORTED MEMBERS ON JOIST HANGER MUST HAVE TOP STRAP BEARING OVER ALL DOUBLE / TRIPLE MEMBERS. CONNECT MEMBER TOGETHER USING, EITHER:-

- BOLTS: GRADE 8.8 M12 BOLTS AT MAX. 600 CENTRES, & BETWEEN 100 AND 300 FROM ENDS, OR,
 - STRUCTURAL SCREWS: SIMPSON STRONG-TIE SDW STRUCTURAL WOOD SCREWS AS SPECIFIED BY MANUFACTURER (NO ALTERNATIVE PERMITTED WITHOUT WRITTEN CONSENT). FOR SDW SCREW SPACING SEE DIAGRAM (NOT TO SCALE) BELOW:-
- O = FIXING FROM THIS SIDE
- X = FIXING FROM OPPOSITE SIDE
- FOR TIMBER DEPTHS BETWEEN 120 & 170 USE TWO ROWS OF SCREWS
- FOR TIMBER DEPTHS 170 & GREATER USE THREE ROWS OF SCREWS
- SCREW REF # SDW22 338 FOR 2No. 45 - 47 WIDE TIMBERS
- SCREW REF # SDW22 438 FOR 2No. 50 - 63 WIDE TIMBERS
- SCREW REF # SDW22 500 FOR 3No. 47, OR 2No. 75 WIDE TIMBERS



FLOOR & CEILING JOISTS

JOIST RESTRAINED AT SUPPORTS BY BUILDING INTO WALL WITH MASONRY TIGHT AROUND; IF SUPPORTED ON JOIST HANGERS OR RESTING O STEEL PLATES, RESTRAIN ENDS BY USING SOLID TIMBER BLOCKING, MIN. 38mm THICK, MIN. 3/4 OF THE JOIST DEPTH, BLOCKED SOLIDLY TO THE PERIMETER WALL.

JOIST RESTRAINED AT POINTS ALONG THE SPAN USING SOLID TIMBER BLOCKING, MIN. 38mm THICK, 3/4 OF THE JOIST DEPTH AND BLOCKED SOLIDLY AT THE PERIMETER WALL, POSITIONED AS SHOWN IN TABLE BELOW: -

JOIST SPAN	ROWS OF STRUTTING OR BLOCKING BETWEEN SUPPORTS
UP TO 2.5m	NONE
2.5 TO 4.5m	1 AT MID SPAN
OVER 4.5m	2 AT ONE THIRD SPAN POSITIONS

TIMBER WALL PLATE ON MASONRY WALLS

FULLY BED TIMBER WALL PLATES ON MORTAR. LENGTHS SHOULD BE NOT LESS THAN 3m. WHERE NOT PRACTICAL; EACH LENGTH SHOULD SUPPORT AT LEAST THREE JOISTS OR TRUSSES. AT CORNERS AND FOR LONG LENGTHS OF WALLS; PLATES SHOULD BE JOINED WITH HALF-LAPPED JOINTS. BUTT JOINTS MUST NOT BE USED

WALL RESTRAINT TO FLOORS & ROOFS

WALLS RESTRAINT NOTES

ALL TO BE IN ACCORDANCE WITH PART "A" OF THE BUILDING REGULATIONS. WALLS SHOULD BE TIED TO ROOF STRUCTURE AT EAVES LEVEL, BASE OF GABLES, ALONG ROOF SLOPES, AND AT ALL FLOOR LEVELS.

HORIZONTAL LATERAL RESTRAINT STRAPS:-

- MAX. 2m CENTRES
- STRAPS MUST HAVE A MIN. 8kN DECLARED TENSILE STRENGTH
- STRAPS SHOULD HAVE AN ANCHORAGE TURN-DOWN AND HELD TIGHT AT THE WALL FACE OF AT LEAST 100mm BEARING ONTO FULL BLOCKS, AND MUST NOT BEAR ONTO PERPEND JOINTS, NO FIXINGS TO MASONRY WALL REQUIRED.
- MINIMUM 30x5mm CROSS SECTION, OR ALTERNATIVE SIMPSON STRONG-TIE ENGINEERED RESTRAINT STRAPS, REF. HES, 1.5mm THICK WITH ENGINEERED CORNERS, NO ALTERNATIVE MANUFACTURER PERMITTED.
- RESTRAINT STRAPS, AND ASSOCIATED FIXING NAILS, SCREWS WASHER PLATES ECT. MUST BE GALVANIZED OR STAINLESS STEEL

- MIN. 8No. 3.75mmx30mm SQUARE TWIST NAILS INTO FLOOR JOISTS OR RAFTERS WITH AT LEAST ONE IN THE THIRD MEMBER

- WHERE FLOOR JOISTS, CEILING JOISTS AND RAFTERS, RUN PARALLEL TO THE WALL, THE THREE JOISTS/RAFTERS NEAREST THE WALL SHOULD BE CONNECTED TO THE WALL BY METAL A MINIMUM 1200 LONG STRAP (100 BEND + 1100) RESTRAINING STRAPS, AT MAXIMUM 2m CENTRES, STRAPS TO BE SUPPORTED ON STRUTTING BETWEEN THE THREE JOISTS. IN ORDER THAT THE RESTRAINING STRAPS ARE ABLE TO ACT IN COMPRESSION, AS WELL AS IN TENSION, ENSURE ANY GAPS BETWEEN THE FIRST JOIST/RAFTER AND WALL ARE PACKED TIGHT & PROVIDE MIN. 3/4 DEPTH NOGGINS IF STRAP FIXED TO TOP, AND A FULL DEPTH NOGGINS IF STRAP FIXED TO THE UNDERSIDE.

- WHERE FLOOR JOIST ENDS ARE BUILT INTO THE WALL PROVIDE 1200mm LONG SINGLE BEND, SINGLE TWIST, STRAP FIXED TO SIDE OF FLOOR JOIST AND TO BEAR ONTO FULL BLOCK.

- WHERE JOIST HANGERS ARE TO BE USED TO SUPPORT TIMBER FLOOR JOIST EITHER PROVIDE RESTRAINT TYPE HANGER AT NO MORE THAN 2m CENTRES OR PROVIDE 1200mm LONG SINGLE BENT SINGLE TWIST STRAP AT 2m MAXIMUM CENTRES FIXED TO SIDE OF FLOOR JOIST AND TO BEAR ONTO FULL BLOCKS.

ROOF HOLDING DOWN STRAPS

VERTICAL RESTRAINT:

- FLAT ROOFS (IF ROOF PITCH 15° OR LESS); AT EAVES PROVIDE A VERTICAL STRAP WITH A SINGLE BEND OVER THE WALL PLATE AND DOWN THE WALL, AT MAX. 2m CENTRES. ALSO CONNECT EACH JOIST TO THE WALL-PLATE WITH FRAMING ANCHORS OR SKEW NAILS.

- PITCHED ROOFS (PITCH GREATER THAN 15°); AT EAVES PROVIDE A SINGLE TWIST VERTICAL STRAP / TO ANCHOR THE RAFTERS TO THE WALL AT MAX. 2m CENTRES. ALSO FIX EACH AND EVERY RAFTER TO THE WALL PLATE WITH A FRAMING ANCHOR OR TRUSS CLIP.

- MIN. 1m IN LENGTH DOWN THE MASONRY WALL

- MINIMUM 30x5mm CROSS SECTION, OR ALTERNATIVE SIMPSON STRONG-TIE ENGINEERED RESTRAINT STRAPS REF. LES, 1.5mm THICK WITH ENGINEERED CORNERS, NO ALTERNATIVE MANUFACTURER PERMITTED.

- FIX STRAP TO WALL PLATE WITH 3 NO. 3.75 x 30mm SQUARE TWIST NAILS AND TO MASONRY WITH 5 No. #12x4" (6mm x 100mm) WOOD SCREWS, PLUGGED AND SCREWED INTO MASONRY. THE LOWEST FIXING SHOULD BE LOCATED WITHIN 150mm OF THE BOTTOM OF THE VERTICAL STRAP.

ISSUE FOR PLANNING & BUILDING CONTROL SUBMISSION

SEE P 0002 FOR CONTINUATION OF STRUCTURAL NOTES

