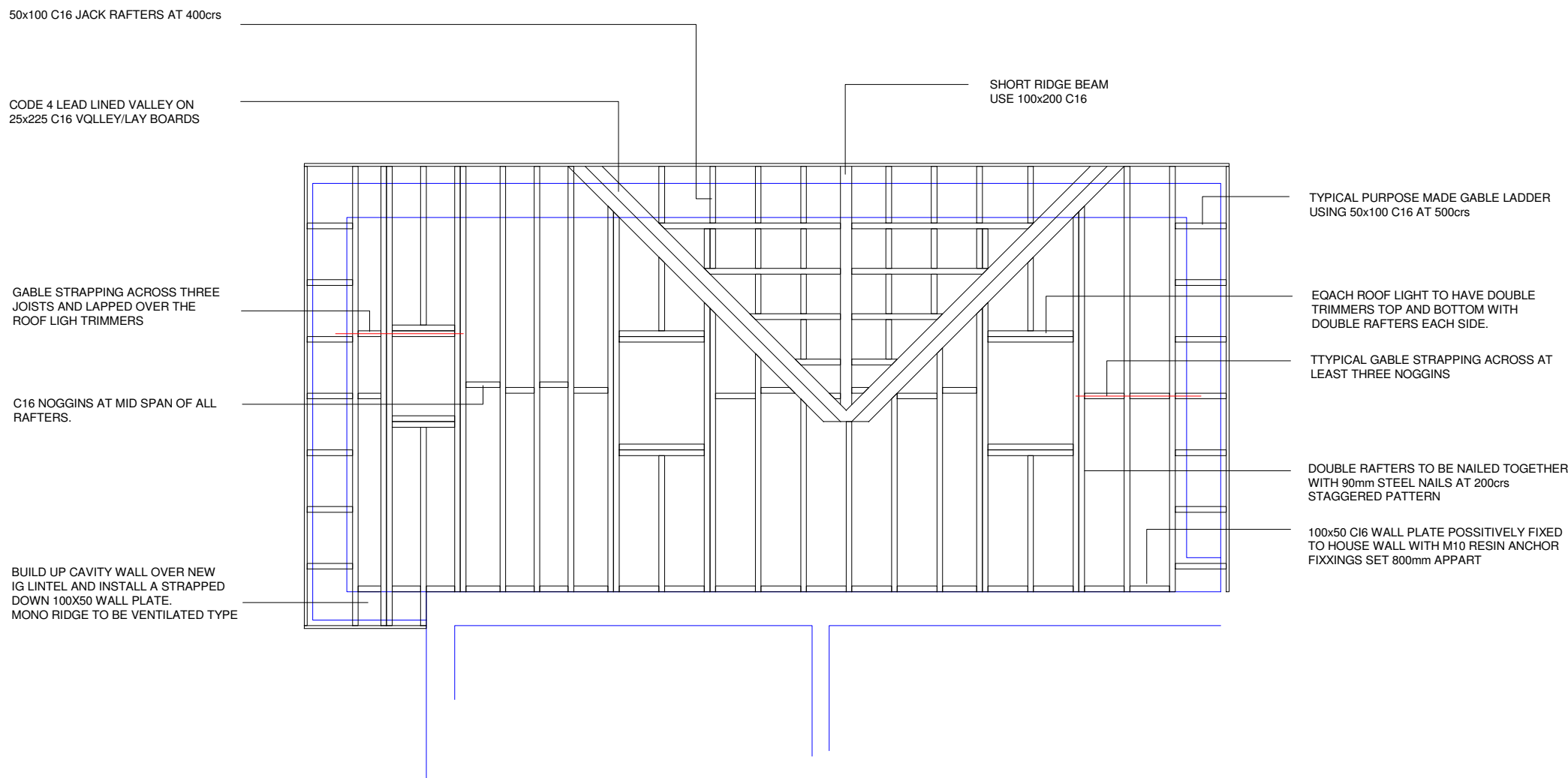


ROOF PLAN DETAIL



STRUCTURAL USE OF TIMBER

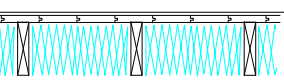
ALL STRUCTURAL TIMBER MEMBERS ie. JOISTS, RAFTERS, PURLINS, LINTELS, TRIMMERS, TIMBER TIES ETC. SHALL BE IN ACCORDANCE WITH BS 5268-2:2002. TIMBERS USED SHALL BE C16min FROM SUPPLIES THAT WERE STAMPED 'DRY' or 'KD'. (REF. TO ANY CALCS). TIMBERS USED SHALL BE FROM GRADE STRESSED STOCK. MAXIMUM THICKNESS OF ANY MEMBER TO BE 100mm AND MAXIMUM DEPTH OF ANY MEMBER SHALL BE 300mm. ANY NOTCHES IN A TIMBER MEMBER SHALL BE LIMITED TO MAX. 1/8th DEPTH. BE BETWEEN 1/20th & 1/4 OF SPAN FROM A SUPPORT. DRILLED HOLES TO BE AT THE MIDDLE AXIS OF MEMBER AND NOT MORE THAN 1/4 OF DEPTH. NOT LESS THAN THREE DIAMETERS APART. & BE BETWEEN 0.25 AND 0.4 SPAN. NAILED JOINTS TO HAVE MIN. 2 SCREW DRIVEN NAILS. WHERE BEAMS AND TRIMMERS ARE BOLTED TOGETHER THEN THE PREFARED BOLT SIZE IS M16 WITH NUT AND WASHER AND 400mm APART.

STRIP FOUNDATION

GENERALLY IN ACCORDANCE WITH APPROVAL DOC 'A'. CONCRETE STRIP TO NEW BWK AND BLOCK WALLS. BCO INSPECTIONS APPLY IN RESPECT TO DEPTH FOR FROST AVOIDANCE AND FIELD TESTS FOR THE DETERMINATION OF EXCAVATION DEPTH REQUIREMENT ONTO SUITABLE SUB-STRATA THAT IS BELOW LEVEL OF ANY ADJACENT DRAINS AND AWAY FROM INFLUENCE OF ANY TREES SHOULD ANY EXIST CLOSE BY. EXCAVATION DEPTH IS IN RELATION TO THE GROUND LEVEL AND NOT DPC OR FORMATION LEVEL. FOUNDATION MUST BE SUITABLE FOR CARRYING A TWO STOREY DEVELOPMENT. MINIMUM STRIP SIZE SHALL BE 600mm x 200mm, BUILDER TO CONSULT WITH BUILDING CONTROL PRIOR TO ANY EXCAVATING TO ESTABLISH THE STRATA STABILITY & THE LOCAL GROUND CONDITIONS. TRIAL/TEST HOLES SHALL BE DUG & A DETERMINATION MADE IN REGARDS TO THE FOUNDATION REQUIRED. DO NOT UNDERMINE ANY ADJACENT FOUNDATIONS AND REFER TO MATTERS CONCERNING PARTY WALL ACT FOR THIS SITE. IF SPECIAL FOUNDATIONS ARE REQUIRED (IE OTHER THAN STRIP FOUNDS) THEN DIFFERENT PROCEDURES WILL APPLY IE. SOIL SURVEY, GROUND SURVEY, BORE HOLE SURVEY ETC.. WORK MUST NOT PROCEED UNTIL LOCAL AUTHORITY HAVE APPROVED SPECIAL FOUNDN PROPSALS.

FLOOR CONSTRUCTION

NEW FLOOR DECKS TO BE 22mm THICK DENSE BOARDING.



FOR INSULATION USE CELOTEX CG4000 110mm OR KINGSPAN TF70 110mm

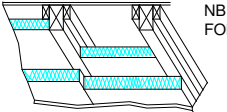
INNER & OUTER SURFACES	= 0.18
INSULATION 0.135/0.022	= 6.14
PLASTER BOARD CLG 0.013/0.16	= 0.08
'U' VALUE = 0.156 W/sqmK	= 6.4
'U' VALUE ALLOWABLE = 0.18W/sqmK	

PITCH ROOF CONSTRUCTION

SELECT TILES FROM LIST PROVIDED & FIX ON 38x25 TANALISED BATTENS, ON ONE LAYER KINGSPAN MILVENT BREATHABLE MEMBRANE INSULATION BETWEEN AND OVER CEILING JOIST EARTHWOOL 100mm BETWEEN AND 170mm OVER ROCKWOOL 100mm BETWEEN AND 170mm OVER CEILING SOFFITS 12mm PLASTER BOARD & 'ARTEX' FINISH. INSULATION LOCATED NOT TO OBSTRUCT CROSS FLOW VENTILATION WHICH IS PROVIDED BY VENT TILES EQUAL TO 25mm CONTINUOUS EAVES OPENING AND 25mm SOFFIT STRIP VENTS. BUILDER IS TO ESTABLISH PRECISE ACHIEVABLE PITCH BEFORE BUYING AND/OR LAYING TILES. REFER TO ARCHITECT IF IN DOUBT. NOTE THAT WHERE THERE IS AN ANGLED CEILING THEN THIS MUST BE INSULATED AND A 50mm AIR SPACE PROVIDED FOR CROSS FLOW VENTILATION. USE CELOTEX 100mm BETWEEN RAFTERS AND 35mm UNDER RAFTERS. THIS GIVES 0.18W/sqmK. ALTERNATIVELY USE FULL FILL KINGSPAN K7 INSULATION BETWEEN RAFTERS WITH NILVENT BREATHABLE MEMBRANE AND 38x38 COUNTER BATTENS. NOTE USE K7 OR SUITABLE EQUIVALENT.

LOFT INSULATION BETWEEN RAFTERS

VENTED COLD DECK PITCHED ROOF CELOTEX 100mm BETWEEN & 35mm UNDER KINGSPAN KOOLTHERM 127mm K7 BETWEEN & 25mm K18 DRY-LINING BOARD



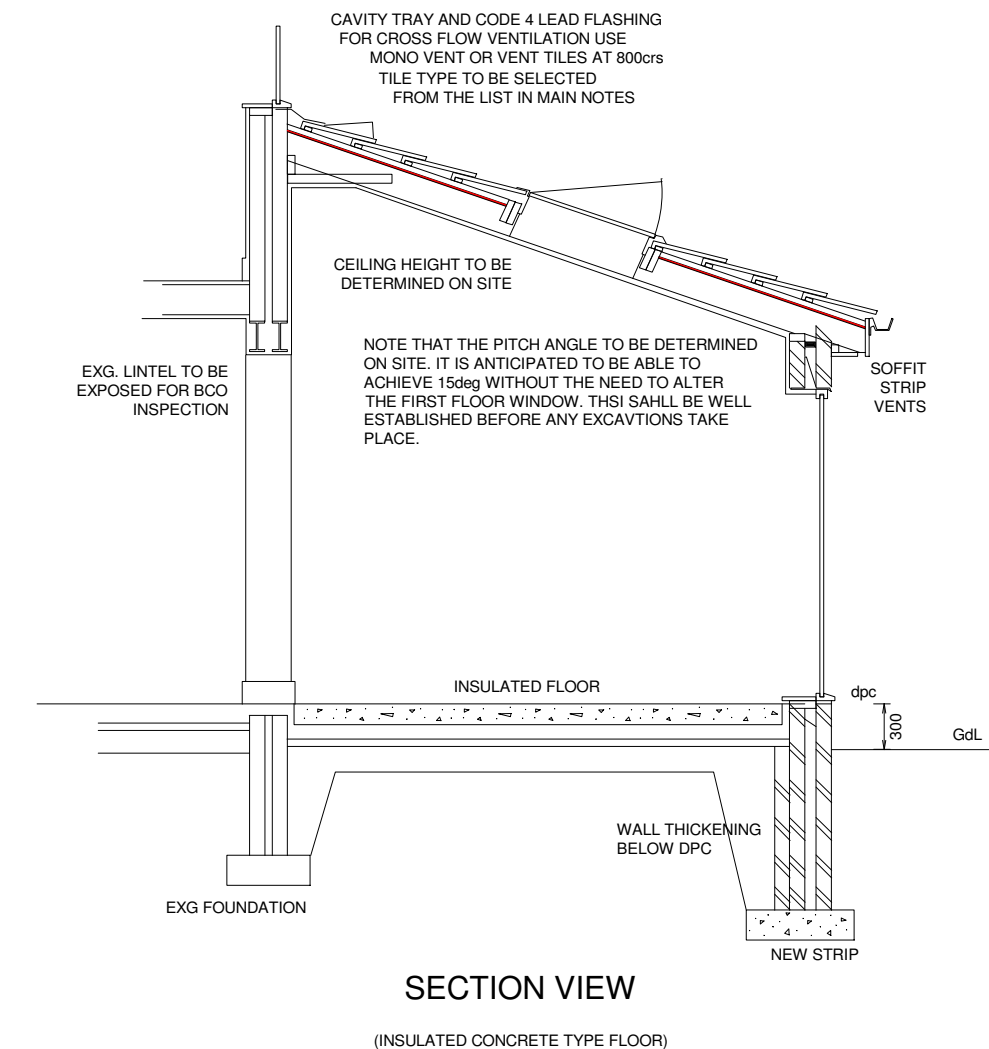
INNER & OUTER SURFACES	= 0.18
INSULATION 0.135/0.022	= 6.14
PLASTER BOARD CLG 0.013/0.16	= 0.08
'U' VALUE = 0.156 W/sqmK	= 6.4
'U' VALUE ALLOWABLE = 0.18W/sqmK	

PITCH ANGLES FOR MARLEY TILES

ALL SMOOTH FINISH		
PANTILE	75mm HEADLAP	23deg
EURO 9	75mm HEADLAP	30deg
MONARCH	75mm HEADLAP	23deg
BOLD ROLL	75mm HEADLAP	15deg
WESSEX	75mm HEADLAP	15deg
MODERN	100mm HEADLAP	18deg
MENDIP	75mm HEADLAP	23deg
LUDLOW MAJOR	100mm HEADLAP	23deg
DOUBLE ROMAN	100mm HEADLAP	23deg
ANGLIA PLUS	100mm HEADLAP	25deg
LUDLOW PLUS	100mm HEADLAP	23deg
DO NOT USE TILES BELOW RECOMMENDED PITCH.		

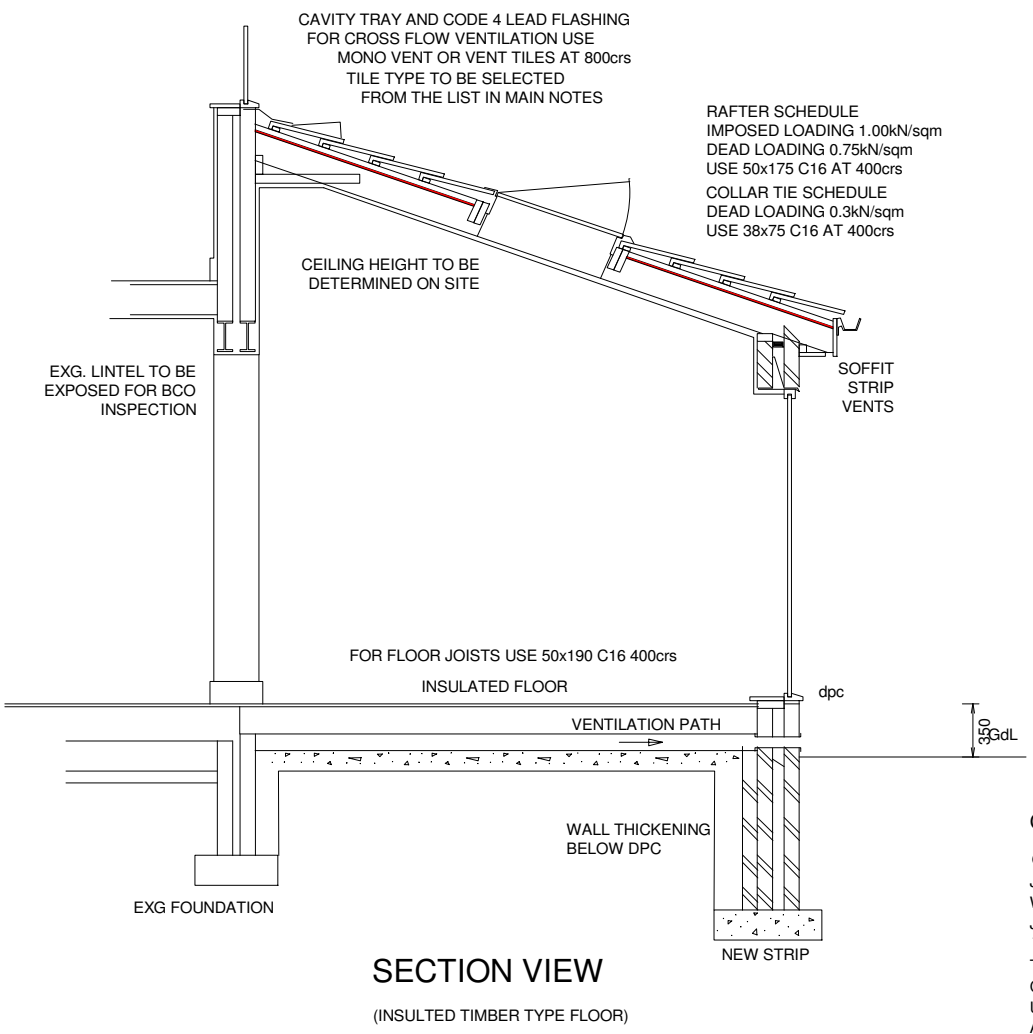
RAIN WATER GOODS.

SURFACE WATER TO DISCHARGE FROM ANY NEW ROOF INTO 100 1/2RD GUTTER AND 63dia DOWN PIPE. PIPES AND GUTTERS MADE OF DURABLE PLASTIC AND BE FIRMLY SUPPORTED AND REMAIN WATER TIGHT.



INSULATED GROUND FLOOR

NON-GAS RESISTING WITH 'U' < 0.25W/sqmK UNDER SLAB INSULATION REQUIRES 200mm THICK OVERSITE HARDCORE FULLY COMPACTED, LEVELLED WITH BLINDING SAND. 1200g DPM LAID OVER AND LAPPED UP SIDES AND LAPPED WITH DPC. FOR MOST APPLICATIONS USE CELOTEX GA4100 CELOTEX GA4100 OR FF4100 LAID OVER DPM WITH VERTICAL STRIPS OF CUT BOARD TO FIT AROUND THE PERIMETER TO STOP THERMAL BRIDGE. NEVER INSTALL INSULATION BELOW DPM. LAY A SEPARATING LAYER OF 500g DPM OVER THE BOARDS. POUR CONCRETE SLAB TO 150mm THICK ALLOWING FOR SURFACE FINISHES OR LEVELLING COMPOUND.



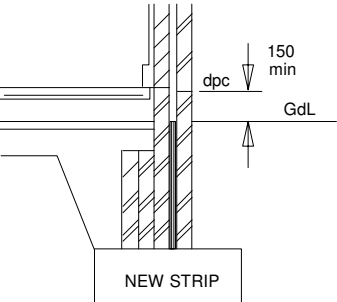
RAFTER SCHEDULE IMPOSED LOADING 1.00kN/sqm DEAD LOADING 0.75kN/sqm USE 50x175 C16 AT 400crs COLLAR TIE SCHEDULE DEAD LOADING 0.3kN/sqm USE 38x75 C16 AT 400crs

GROUND FLOOR TIMBER CONSTRUCTION

GROUND FLOOR JOISTS TO BE C16 GRADE AT 400crs JOISTS WILL BEAR ON DPC ON INNER LEAF AND SLEEPER WALLS (IF APPLICABLE). JOISTS WITH FLOOR LATERAL STRAPS AT 1m crs. THERE SHALL BE A MINIMUM AIR SPACE OF 150mm BELOW THE TIMBER JOISTS AND ABOVE THE 100mm OVERSITE CONCRETE SLAB. UNDER FLOOR VENTING SHALL BE PROVIDED BY MAXI-VENTS AND THE OPENINGS TO BE LARGE ENOUGH TO GIVE THE EQUIVALENT OF 5000SQ MM PER METRE RUN OF WALL. EACH EXTERNAL WALL SHOULD HAVE VENT OPENINGS PLACED SO THAT VENTILATING AIR WILL HAVE A FREE PATH BETWEEN OPPOSITE SIDES AND TO ALL SIDES.

BELOW GROUND WALL THICKENING

SUB WALL THICKENING IN ACCORDANCE WITH SECTION 'A' OF APPROVAL DOCUMENTS. WALL THICKNESS NOT LESS THAN 1/4 OF THE HEIGHT DIFFERENCE.



KEITH SWAIN DESIGN

KEITH SWAIN 01744 885131 07980 555415 swain.keith@sky.com

DRAWING NUMBER P 13282

PROPOSED DEVELOPMENT

GROUND FLOOR REAR EXTENSION TO FORM LOUNGE, KITCHEN AND SHOWER ROOM

AT

52 ARCHWAY ROAD HUYTON L36 9XE

SCALES 1 : 50

sht 3

WORK MUST NOT BEGIN UNTIL APPROPRIATE LOCAL AUTHORITY APPROVALS HAVE BEEN GAINED