

#### CAVITY WALL SPECIFICATION.

OUTER LEAF OF BWK. AN INSULATED CAVITY AND INNER LEAF OF 100mm THICK THERMALITE TURBO BLOCK, ALONG WITH INTERNAL PIR INSULATION & PL BOARD ON DABS. OUTER LEAF MAY BE SUBJECT TO PLANNING CONDITIONS CAVITY WALL BELOW DPC TO BE OF BWK, CONC. BWK, DENSE CONC. BLOCK OR 4N min. TRENCH BLOCK WALL BELOW DPC AT LEAST AS THICK AS THE ABOVE DPC WALL ( IN CASE 140t INNER LEAF IS REQUIRED) CAVITY BELOW DPC TO BE FILLED WITH CONCRETE TO 225mm BELOW DPC LEVEL.

CAVITY CLOSED AT EAVES AND VERGE.
CAVITY WALL BUILT OFF A CONCRETE FOUNDATION. DPC TO BS743 AND BE AT LEAST 150mm ABOVE GROUND U-VALUE REQUIRED 0.15w/sqmK FULL FILL CAVITY 105 BWK, 100 CAVITY, 100 TURBO OR 100 CELCON SOLAR OR 100 DUROX SUPABLOCK

INTERNAL INSULATION 40mm PIR WITH 12.5 PL BD. NOTE THERMAL BLOCK TO BE MINIMUM 0 15W/ml

# **NEW CAVITY WALL**



102.5mm OUTER LEAF 20N BWK 100mm PIR FILLED CAVITY 100mm THERMAL BLOCK (OR 140t THREMAL BLOCK) FULL FILL CELLOTEX PIR INSULATION 40mm PIR INNER WITH 12 5 PL RD

INNER AND OUTER SURFACE CAVITY INSULATION 0.100/0.032 = INTERNAL THERMAL BLK 0.100/0.15 = 0.6667 INNER INSULATION PIR 0.040/0.023 = 1.7390

U VALUE ACHIEVABLE = 0.169W/sqmK 5.9165 W/mK

#### INTERNAL BLOCK WALLS (120kg/sqm)

100mm THICK DENSE CONCRETE SOLID BLOCK TO BE ON A CONCRETE FOUNDATION. SEE FOUNDATION NOTES WALL BELOW DPC TO BE BWK OR CONC. BWK CONST'N. THE LOWEST DPC LEVEL SHALL BE AT LEAST 150mm ABOVE SUBBOUNDING GROUND LEVEL AND SHALL IF APPLICABLE BE CONTINUOUS WITH THE FLOOR DPM.

#### LINTEL SCHEDULE

TO BS5977: PART 2: 1983. BBA 86/1674 & BBA 85/1453. LINTELS MUST NOT SUPPORT CONCRETE FLOOR LOADS OR POINT LOADS.

DO NOT USE DAMAGED LINTELS. END BEARINGS GENERALLY NOT LESS THAN 150mm FOR END BEARING OF 100mm THE ENDS ARE TO BE FILLED WITH CONCRETE FOR A DEPTH OF 150mm INSIDE OF BEAMS TO BE FILLED WITH FIBREGLASS INSUL.

#### BEAM AND STRUCTURAL NOTE

FOR STRUCTURAL CALCULATION PURPOSES ALL THE MAJOR STEEL AND/OR TIMBER BEAMS WILL CARRY DEAD AND IMPOSED LOADS FROM WALLS, FLOORS AND ROOFS BASED ON THE SPANS INDICATED ON THIS PLAN OR ASSOCIATED PLANS. IN SOME CASES THE CALCS MAY SHOW A DIFFERENT OR ASSUMED SPAN FOR THE PURPOSES OF CALCULATING

DEPARTURES FROM APPROVED CALCULATIONS ARE NOT

WHERE BEAMS ARE LOCATED FOUNDATIONS SHOULD BE SHOWN TO BE ADEQUATE. REQUIRES BCO INSPECTION. NOTE THAT WHERE A BEARING SIZE IS GIVEN THEN THIS WILL BE THE MINIMUM PERMITTED AND THAT TH CONTRACTOR SHALL WHERE SPACE IS AVAILABLE FIT A LARGER SIZE PADSTONE.

WHEN PURCHASING BEAMS THE CONTRACTOR SHALL USE SITE MEASUREMENTS FOR LENGTHS OF BEAM FOR THE PURPOSES OF SAFETY. THE BUILDER SHALL ALREADY HAVE KNOWLEDGE OR OBTAIN KNOWLEDGE IN RESPECT TO THE HANDLING AND INSTALLATION OF THE

# INSULATED GROUND FLOOR

NON-GAS RESISTING WITH 'U' < 0.25W/sqmK UNDER SLAB INSULATION REQUIRES 200mm THICK WITH BLINDING SAND. 1200g DPM LAID OVER AND LAPPED UP SIDES AND LAPPED WITH DPC FOR MOST APPLICATIONS P/A LESS THAN 1 INSULATION TO BE CELOTEX GA4000 100 PIR WITH 25mm PERIMETER UPSTAND. (KINGSPAN K103 100mm WITH SAME UPSTAND 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 POUR CONCRETE SLAB TO 150mm THICK ALLOWING

FOR SURFACE FINISHES OR LEVELLING COMPOUND.

# 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 INFILIENCE 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

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. SPECIAL CARE SHOULD BE EXERCISED WHEN EXCAVATING ADJACENT TO OR CLOSE BY AND OTHER BUILDING OR STRUCTURE, BUILDER SHOULD SEEK EXTRA ADVICE FOR LAYING FOUNDATIONS IN MULITPLE STAGES. IF SPECIAL FOUNDATIONS ARE REQUIRED (IE OTHER

THAN STRIP FOUNDS') THEN DIFFERENT PROCEDURES WILL APPLY IE. SOIL SURVEY, GROUND SURVEY, BORE LOCAL AUTHORITY HAVE APPROVED SPECIAL FOUNDS

## ROOM VENTILATION HABITABLE ROOMS)

PURGE VENTILATION - VIA DOOR OR WINDOW OPENING AT LEAST 1/20tH FLOOR AREA. WINDOWS TO OPEN MORE THAN 30deg. SEE ALSO ESCAPE WINDOW SIZES BACKGROUND VENTS OF MINIMUM 8000sg mm

eg. TRICKLE VENTILATOR WHERE A HABITABLE ROOM EXTENS. IS ONTO ANOTHER ROOM THEN THE FLOOR AREAS OF EACH OF THE AFFECTED ROOMS ARE TO ADDED. WHERE A CONSERVATORY IS ADDED THEN SEE NOTES ON THE FLOOR PLAN DETAIL

ROOM VENTILATION (UTILITY ROOM) MECHANICAL EXTRACT VENTILATION FOR RAPID VENTING AT A RATE OF 30L per sec. WITH INTERMITTENT OPERATING & 15mins. OVERRUN. BACKGROUND VENTS OF MINIMUM 8000sa mm eg. TRICKLE VENTILATOR ROOM VENTILATION (KITCHEN)

MECHANICAL EXTRACT VENTILATION FOR RAPID VENTING, AT A RATE OF 60L per sec, (OR 30L per sec IN COOKER HOOD). AND BACKGROUND VENTS OF MINIMUM 8000sq mm eg. TRICKLE VENTILATOR

ROOM VENTILATION (TOILET MECHANICAL EXTRACT VENTILATION FOR RAPID VENTING, AT A RATE OF 6L per sec. WITH INTERMITTENT OPERATING & 15mins. OVERRUN. ROOM VENTILATION (BATH/SHOWER ROOM MECHANICAL EXTRACT VENTILATION FOR RAPID VENTING, AT A RATE OF 15L per sec, WITH INTERMITTENT OPERATING & 15mins. OVERRUN

# GLAZING REQUIREMENTS

SAFETY GLASS TO BE USED BETWEEN FINISHED FLOOR LEVEL AND 1500mm ABOVE THAT LEVEL. 'U' VALUE TO BE AT LEAST 1.6 IN UPVC WINDOWS AND/OR DOORS
DOUBLE GLAZING WITH 16mm PANE GAP AND LOW 'E'

en = 0.05) FOR PVC-U WINDOWS AND/OR DOOR ALL GLAZING WITHIN CRITICAL LOCATIONS MUST SATISFY APPROVAL DOCUMENT 'K'.

### THERMAL BRIDGE LIMITATION

REVEALS TO LINTELS, JAMBS AND SILLS ARE TO BE INSULATED. BOX LINTELS TO BE FILLED WITH INSULATION. FRAMES AND SILLS TO OVERLAP THE BLOCKWORK WHERE POSSIBLE BY 30mm mir INTERNAL FACES OF STEEL LINTELS ARE TO BE COVERED WITH 20mm PLASTER BOARD AND 5mm PLASTER SKIM FINISH THERMAL CONDUCTIVITY OF BLOCKWORK

NOT TO EXCEED 0.16W/mK

#### STRUCTURAL USE OF TIMBER

ALL STRUCTURAL TIMBER MEMBERS in JOISTS BAFTERS PURLINS, LINTELS, TRIMMERS, TIMBER TIES ETC. SHALL BE IN ACCORDANCE WITH BS 5268-2:2002. TIMBERS USED SHALL BE C16min AND C24 FOR STRUCTURAL MEMBERS AND AS DIRECTED BY ANY SUPPORTING CALCS TIMBERS USED SHALL BE STAMPED 'DRY' or 'KD' AND
TIMBERS USED SHALL BE FROM GRADE STRESSED STOCK MAXIMI IM 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 SCEW DRIVEN NAILS. WHERE BEAMS AND TRIMMERS ARE BOLTED TOGETHER
THEN THE PREFARED BOLT SIZE IS M16 WITH NUT AND WASHER AND 400mm APA

# 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 OVE 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 LINDER BAFTERS, THIS GIVES 0 18W/samK LTERNATIVELY USE FULL FILL KINGSPAN K7 INSULATION BETWEEN RAFTERS WITH NILVENT BREATHABLE MEMBRANE AND 38x38 COLINTER BATTENS. NOTE USE K7 OR SUITABLE EQUIVALENT

## **GENERAL NOTES**

1. ALL WORK TO BE IN ACCORDANCE WITH THE BUILDING REGULATIONS. WORK TO PROCEDE AT THE DISCRETION OF THE BUILDING INSPECTOR 2 DRAINS PASSING UNDER EXTENSION TO BE ENCASED IN 150mm CONCRETE. SEE ADDITIONAL NOTES ON DRAINS ON PLAN. 3 ANY ADDITIONAL INSPECTION CHAMBER TO BE EITHER PLASTIC MANIFOLD OR PRE-CAST CONCRETE CONSTRUCTION. NON-VENT COVER, STEP IRONS AS NEEDED & SMOOTH IMPERVIOUS BENCH'G.

4 NEW DRAINS TO BE SUPER SLEVE TYPE OF 100mm dia, 1:40min FALL. ANY NEW SOIL & VENT PIPE TO BE TAKEN UP TO AT LEAST 900mm HIGHER THAN WINDOW LEVEL . REINFORCED CONCRETE LINTELS OVER ANY NEW/EXG. DRAIN.

6 WASTE PIPES TO NEW SINKS, BATHS OR SHOWERS TO BE 50dia AND HAVE 75mm DEEP SEAL TRAPS.
7 HORIZONTAL AND VERTICAL DPC TO NEW OPENINGS. 8 STEEL LINTELS TO NEW OPENINGS, 150mm END BEARINGS AND

FILLED WITH FIBREGLASS INSULATION.

9 NEW WINDOWS AND GLAZED DOORS TO BE DOUBLE GLAZED. 10. EXG. FOUNDATIONS. WALLS AND LINTELS THAT TAKE INCREASED LOADS SHALL BE EXPOSED FOR INSPECTION.

11. WALL TIES ON 900crs AND STAGGARED EVERY 3rd COARSE OF BRICK WORK.

12. MILD STEEL ROOF AND FLOOR LATERAL SUPPORTS ON 1m crs. 13 NEW CAVITY WALL RETURNS GENERALLY 665mm min.
14. ALL NEW BWK/BLOCK NIBS TO BE ON A CONCRETE FOUNDATION.

15. ALL ABUTMENTS OF NEW ROOFS AND WALLS ARE TO BE LEAD FLASHED (STEPPED/LINEAR) WITH CODE 4 LEAD AND WHERE NECESSARY CAVITY TRAYS INSTALLED. 16. UNLESS OTHERWISE STATED ALL BRICK AND BLOCK WORK TO

BE FULLY KEYED TO EXSITING WALLS.

17. EXPOSED TIMBERS TO BE TREATED WITH PRESERVATIVE. 18. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS & CONDITIONS PRIOR TO COMENCEMENT OF WORKS ON SITE. THE DESIGNER WILL NOT ACCEPT RESPONSIBILITY FOR ANY ANOMOLIES OR MISTAKES OCCURING DURING CONSTRUCTION STAGES. THESE DRAWINGS ARE FOR PLANNING AND BUILDING REGULATION PURPOSES ONLY AND WHERE NECESSARY DETAILED DESIGN & SUPERVISION WILL BE CARRIED OUT ON A SEPARATE BASIS AND AS AGREED WITH CUSTOMER.

19. THE CONTRACTOR SHOULD DISCUSS THE PROPOSED WORKS DIRECTLY WITH BUILDING CONTROL DURING ALL STAGES.

20 PERMISSION WILL BE REQUIRED FROM OWNER OF ADJACENT PROPERTY OR LAND FOR ANY WORK ON OR BEYOND BOUNDARY. 21. PRODUCTS OF DIFFERENT MANUFACTURERS MAY BE USED, BUT

REASONABLE QUALITY PRODUCTS ARE A MINIMUM REQUIREMENT 22 THE BUILDER IS ADVISED PRIOR TO COMMENCEMENT OF WORK AND DURING WORK IN PROGRESS TO DISCUSS WITH THE CUSTOMER ANY ASPECTS OF WORK THAT MAY BE CONSIDERED AS 'EXTRA WORK' THESE MATTERS MUST BE DISCUSSED. COSTED

AND AGREED WITH THE CUSTOMER PRIOR TO IMPLEMENTATION 23 ALL BWK, SHALL BE IN ACCORDANCE WITH BS5628 AND CONCRETE', AND SPECIFICATION OF PRESCRIBED & DESIGNED MIXES FOLLOWS THAT PRACTICE SET OUT IN BS5328.
CONCRETE SHALL BE GRADE C25 USING SULPHATE RESISTING CEMENT TO BS4027 WITH A MINIMUM CEMENT CONTENT OF 330kg/cubic m UNLESS OTHERWISE SPECIFIED. 24 THE NATURE OF THE GROUND AND SAFE BEARING CAPACITY

SHALL BE DETERMINED PRIOR TO COMMENCEMENT. CONTRACTOR SHALL DO THIS IN CONJUNCTION WITH BUILDING INSPECTORS. 25 ALL EXCAVATIONS SHALL WHERE NECESSARY BE TIMBERED AND STRUTTED AND SECURED TO PREVENT MOVEMENT OF THE SURROUNDING GROUND AND SAFETY OF THE BUILDING AND ADJACENT PROPERTIES BEFORE IT IS SUPPORTED BY PERMANENT WORK, PRECAUTIONS ARE TO BE TAKEN TO KEEP EXCAVATIONS
FREE FROM WATER. THE BOTTOM OF EXCAVATIONS SHALL BE SEALED WITH CONCRETE IMMEDIATELY AFTER INSPECTION HAS

SHOWN IT TO BE SATISFACTORY 26 WITH THE ADDITION OF FANS A GAS SPILLAGE TEST SHOULD BE CARRIED OUT BY A SPECIALIST CONTRACTO 27 NEW REQUIREMENTS UNDER PART L OF THE BUILDING REGULATIONS WILL NOW ENCOMPASS OVERALL SYSTEM PERFORMANCE.

REFER TO NOTES ON COMMISSIONING OF HEATING SYSTEM. ANY ADDITIONAL WORK DONE BY OTHER PARTIES IN REGARDS TO THIS PROJECT MUST BE APPROVED BY THE LOCAL AUTHORITY.

GENERALLY ANY DEPARTURE FROM THE APPROVED PLAN MAY

REQUIRE A RE-SUBMISSION FOR BUILDING REG. OR PLANNING APPROVAL. IT IS ADVISED THAT WORK STOPS UNTIL ANY SUCH APPROVAL IS OBTAINED. 30 ALL ELEMENTS OF STRUCTURE TO BE 1/2hr FIRE RESISTING.

31 ENSURE THAT THE PROJECT WHEN COMPLETED HAS APPROPRIATE AND COMPLIANT MEANS OF ESCAPE IN THE EVENT OF FIRE 32 IN THE EVENT THAT ROOF LIGHTS ARE BEING INSATLLED. THE BUILDER SHALL ENSURE THAT THE ROOF LIGHT SELECTED IS SUITABLE FOR THE ACHEIVED ROOF PITCH ANGLE, DIFFERENT PITCH ANGLES REQUIRE A SPECIFIC TYPE OF ROOF LIGHT

FOR PLANNING PERMISSION REQUIREMENTS THE ROOF LIGHT PROJECTION FROM THE ROOF SHALL BE LESS THAN 150m 33 ALLOWABLE 'U' VALUES (EXTRACTS FROM AD L1B)

PITCH TILED ROOF 0.15 W/sqmK

EXPOSED PERIMETER WALL 0.18 W/sqmk
MULITPLE GLAZE WINDOW 1.4 W/sqmK GLAZED DOORS

34 LIGHTING

ENERGY EFFICIENT LIGHT FITTINGS TO BE INSTALLED ON THE BASIS OF THREE PER FOUR FIXED LIGHTING

35 SMOKE DETECTION SD

SMOKE DETECTORS TO BE INSTALLED ON ALL FLOORS AND SHOULD BE WIRED DIRECT FROM CONSUMER UNIT AND BE INTERLINKED WITH BATTERY BACK UP.

# KEITH SWAIN DESIGN

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DRAWING NUMBER

PROPOSED DEVELOPMENT

**GROUND FLOOR EXTENSION** 

ΑT

44 QUEENS DRIVE ST HELENS, WA10 6HF

SCALES

sht 2

WORK MUST NOT BEGIN UNTIL APPROVAL FROM LOCAL AUTHORITY

1:50