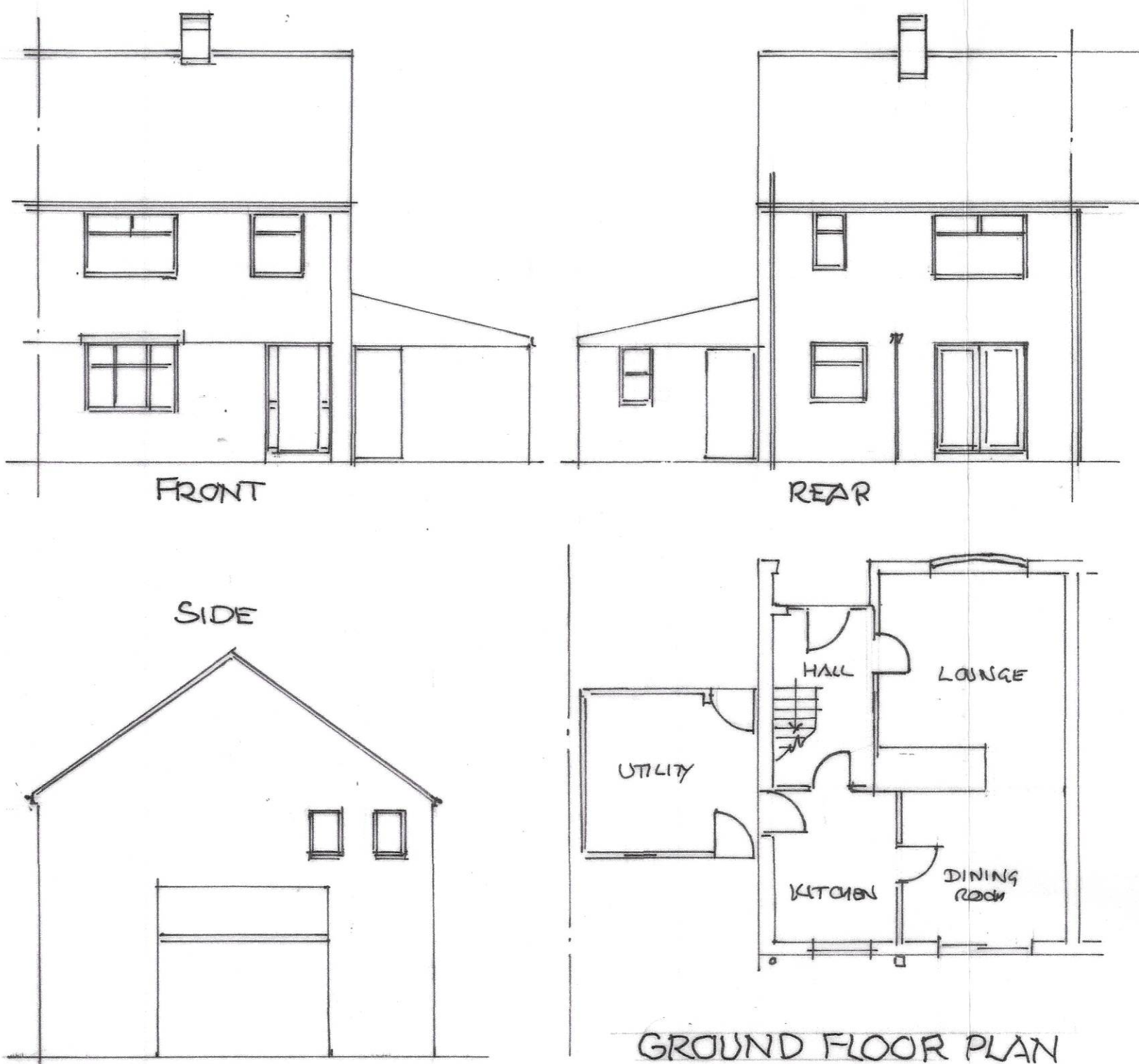


EXISTING



STEEL CHECK

(A) 203 x 102 mm UB SPAN 3000

LOADS FLOOR 1: 1.5 x 3.0 x 2.5 11.25

FLOOR 2: 1.2 x 3.0 x 2.5 9.0

BIWK: 2.5 x 3.0 x 2.2 16.5

ROOF: 2.7 x 2.0 x 2.0 10.8

W 47.58 KN

BM $W/8 = 17.8 \text{ KNm}$

$Z_{pl} M_{pl}/p_{bc} = 10.8 \text{ cm}^3 \checkmark$

$S_{a} SWL^3 = 16.7 = 3.8 \text{ mm} \checkmark$

384.5

(B) 178 x 102 mm R3J SPAN 2200

LOADS FLOOR 1: 1.2 x 2.2 x 2.2 15.49

FLOOR 2: 1.2 x 2.2 x 2.2 6.6

ROOF: 1.2 x 2.0 x 2.0 4.8

W 26.89 KN

BM $W/8 = 7.39 \text{ KNm}$

$Z_{pl} M_{pl}/p_{bc} = 4.5 \text{ cm}^3 \checkmark$

$S_{a} SWL^3 = 3.73 = 1.4 \text{ mm} \checkmark$

384.5

(C) 356 x 171 mm 67 kg/m UB SPAN 8000

LOADS BIWK: 2.4 x 8 x 2.2 42.24

ROOF: 1.2 x 8 x 2.0 19.2

W 61.44 KN

POINT LOAD FROM A+B $P = \frac{47.58 + 26.89 + 15.49}{2} = 45.965$

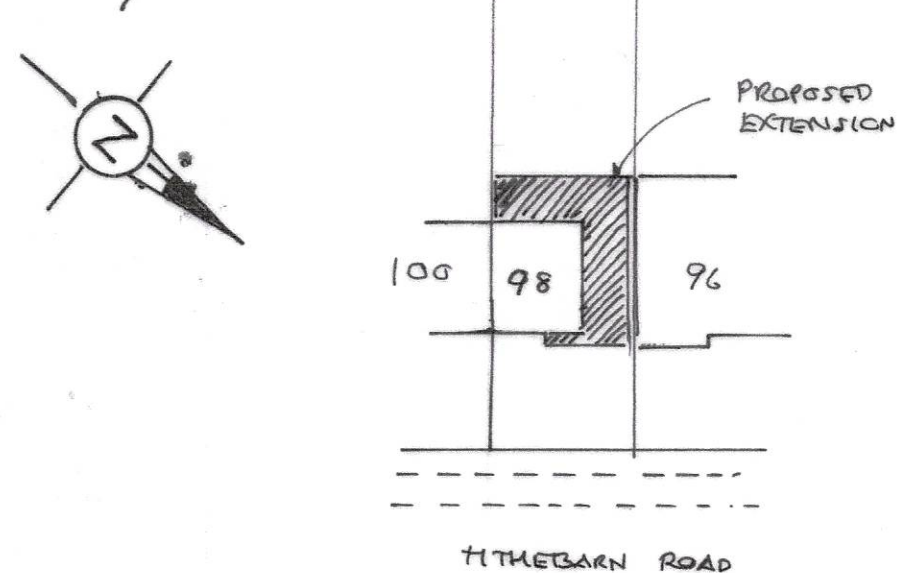
BM $W/8 + PL/4 = 61.44 + 92 = 153.44 \text{ KNm}$

$Z_{pl} M_{pl}/p_{bc} = 930 \text{ cm}^3 \checkmark$

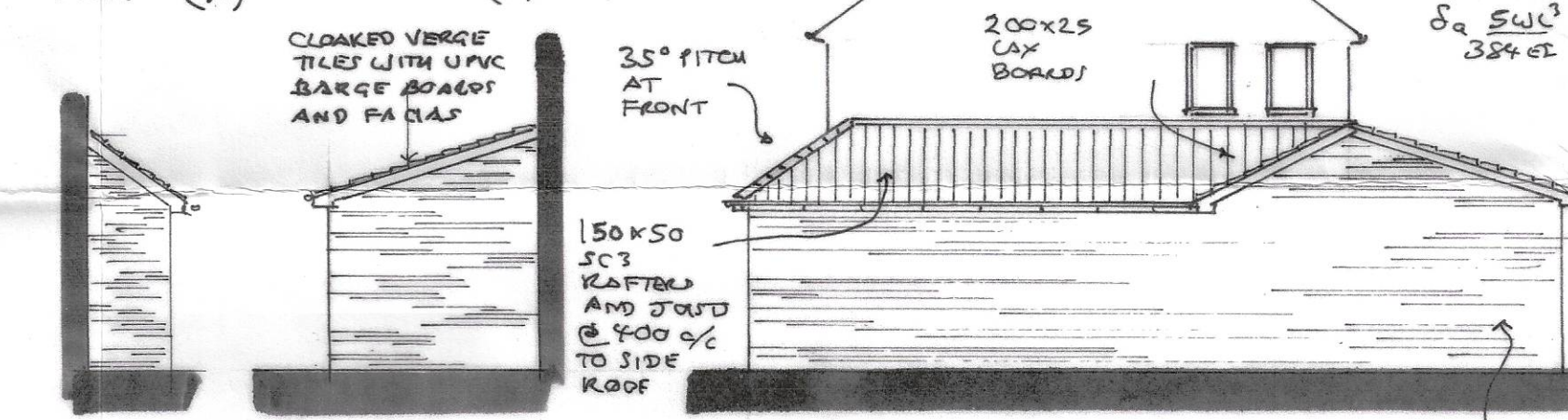
$S_{a} SWL^3 + PL^3 = \frac{409.6 + 490.3}{4.85} = 21.97 \text{ mm} \checkmark$

384.5

SITE PLAN



SIDE VIEWS



ROOF COVERING

SELECTED MATCHING ROOF TILES/SLATES NAILED TO TREATED S.W. BATTENS WITH LAP TO SUIT ROOF PITCH IN ACCORDANCE WITH MANUFACTURERS' INSTRUCTIONS OVER 'TYVEK' BREATHABLE SARKING FELT LAID OVER RAFTERS AS SPECIFIED. 300MM FIBREGLASS QUILT INSULATION OVER AND BETWEEN JOISTS ON 9MM PB AND SKIM CEILING.

ROOF CONSTRUCTION

175 X 50MM SC3 RAFTERS AT 400MM C/C 150MM KINGSFAN E.P.S. INSULATION BETWEEN RAFTERS ON 16MM PLY FIXED TO U/SIDE WITH 9MM PB CEILING. ENDS OF RAFTERS TO BE BIRD-MOUTHED ONTO WALL PLATES END RAFTERS TO BE RAWL BOLTED TO GABLE END MASONRY AT 500C/C.

WALL CONSTRUCTION

TWO COAT SAND CEMENT RENDER TO MATCH EXISTING ON 100MM CONCRETE BLOCKWORK OR SELECTED FACING BRICK OUTER LEAF 100MM CAVITY WITH ROCKWOOL INSULATION BATS FULL FILL 100MM CONCRETE BLOCKWORK. INNER LEAF WITH TWO COAT PLASTER FINISH TO GIVE A MAXIMUM 0.28 U VALUE. STAINLESS STEEL CAVITY TIES TO BE PROVIDED AT 450 + 750MM CENTRES AND AT 300MM CENTRES AROUND ALL OPENINGS. INSULATED 'THERMABATE' OR SIMILAR CAVITY CLOSERS WITH INSULATED CATNAC OR I.G. PROPRIETARY GALV. STEEL LINTOLS TO BE PROVIDED OVER ALL CAVITY WALL OPENINGS WITH A MINIMUM 150MM END BEARING. TIMBER STUD PARTITIONS 75 X 50MM STUDDING WITH MINERAL WOOL INFILL AND 12MM PB AND SKIM BOTH SIDES.

GROUND FLOOR

100MM CONCRETE SLAB WITH SELF-LEVELLING SCORED AND FINISH TO CLIENT'S CHOICE ON 120MM 'CELOTEX' ON 1200 G VISQUEEN DPM ON 50MM SAND BLINDING OVER 150MM WELL CONSOLIDATED BRICK HARDWARE. INSULATION BOARD TO BE TURNED UP AT EDGE OF SLAB. D.P.C. AND D.P.M. TO BE LAPPED AND BONDED.

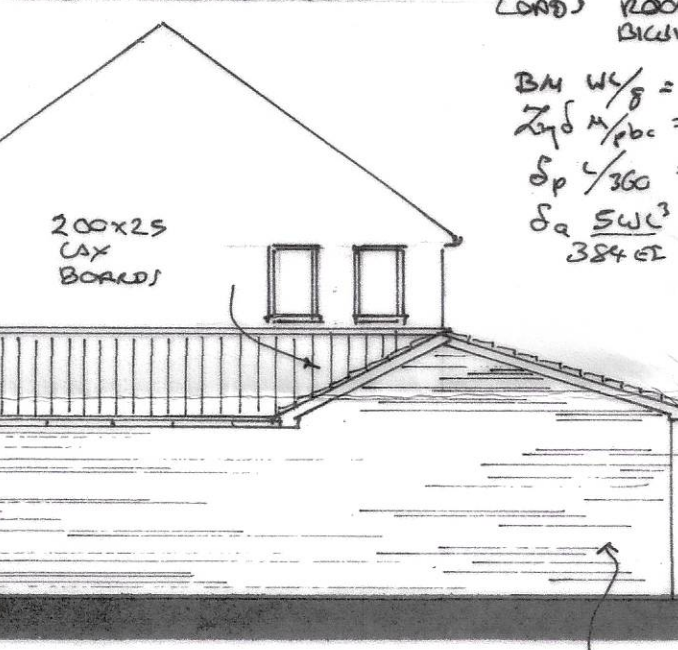
WINDOWS

ALL NEW WINDOWS AND ROOF LIGHTS IN U.P.V.C. OR H.W. FRAMES TO HAVE 20MM SEALED DOUBLE GLAZED UNITS INCORPORATING LOW EMISSIVITY 'K' GLASS TO ACHIEVE A MAXIMUM 1.4W/M² K VALUE.

VENTILATION

ALL HABITABLE ROOMS TO HAVE AT LEAST 8000MM² BACKGROUND VENTILATION PROVIDED THROUGH TRICKLE VENTILATORS BUILT INTO WINDOW FRAMES OR 2 NO 225 X 150MM AIR BRICKS WITH LOUVRED CONTROLLABLE PLASTER VENTS. AT LEAST 4000MM² BACKGROUND VENTILATION TO BE PROVIDED TO KITCHENS, BATHROOMS AND UTILITY ROOMS. WINDOW FRAMES TO INCORPORATE OPENING VENTS EQUIVALENT TO AT LEAST 5% OF THE FLOOR AREA OF THE ROOM SERVED.

SIDE ELEVATION



STEEL CHECK

254 x 146 mm 63 kg/m UB SPAN 6200

LOADS ROOF: 1.8 x 6.2 x 2.0 22.32

BIWK: 0.3 x 6.2 x 2.2 4.01

W 26.33

BM $W/8 = 20.41 \text{ KNm}$

$Z_{pl} M_{pl}/p_{bc} = 12.4 \text{ cm}^3 \checkmark$

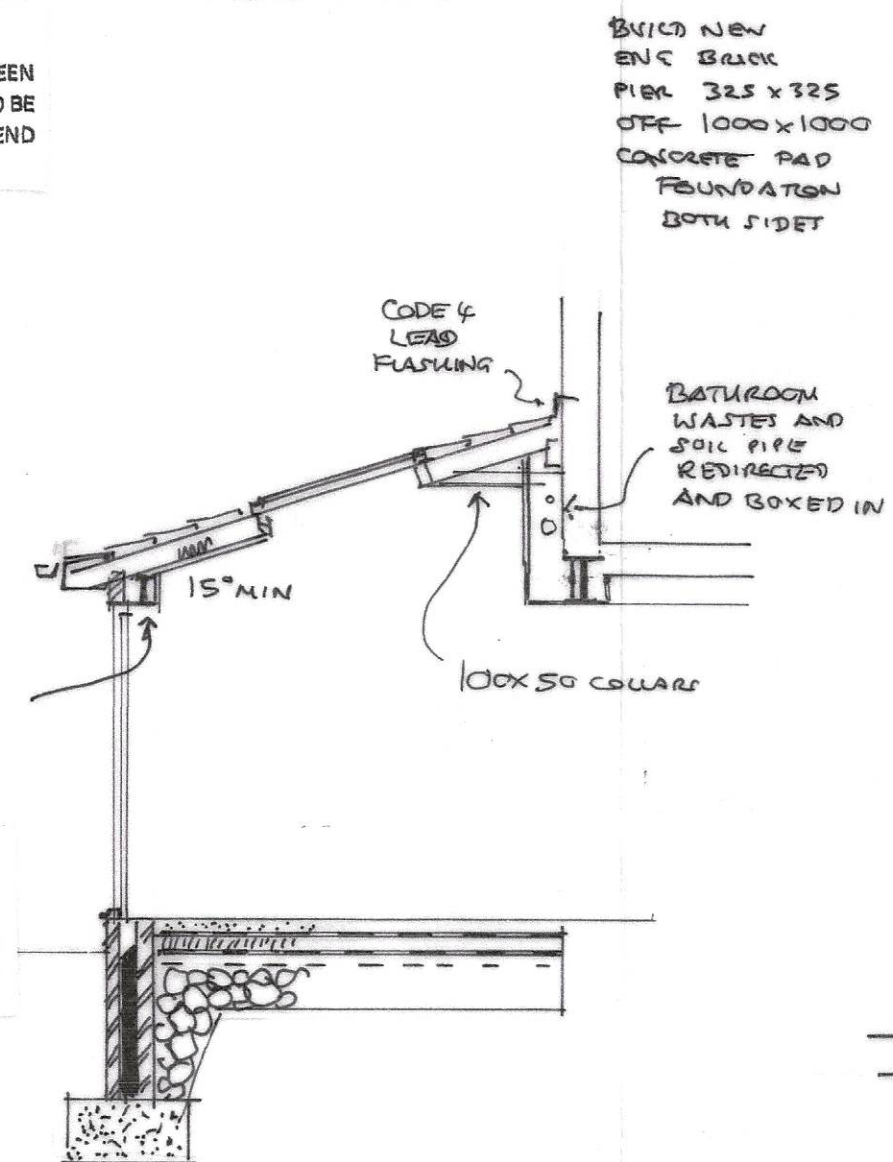
$S_{a} SWL^3 = 17.2 \text{ mm} \checkmark$

384.5

NOTE

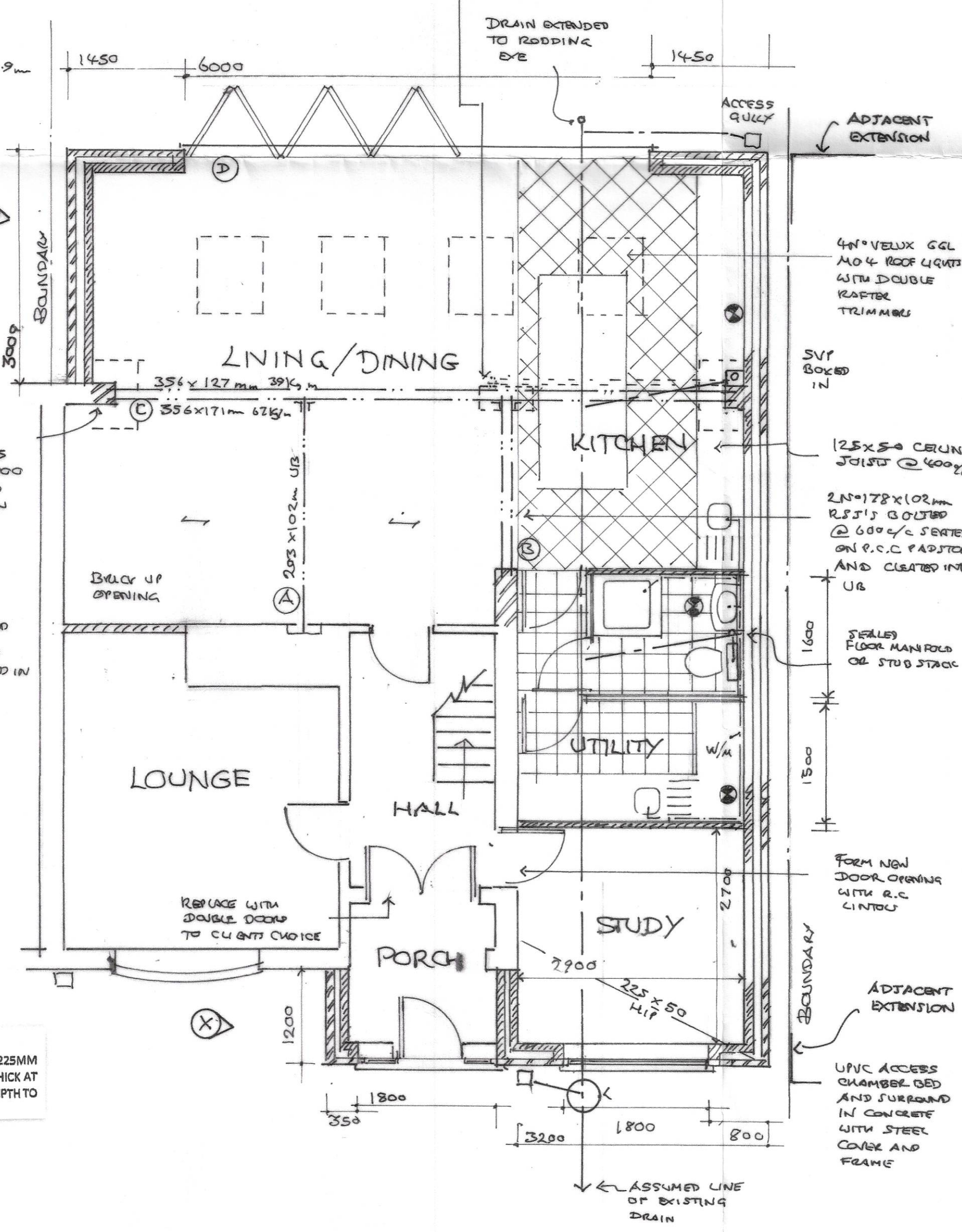
USE ALTERNATIVE STEEL SIZE FOR INTERNAL BRICK PIER 700 X 325 mm EN4 BRICK

SECTION



FOUNDATIONS

TWO LEAVES BRICKWORK BELOW D.P.C. LEVEL WITH CONCRETE CAVITY FILL UP TO 225MM BELOW D.P.C. LEVEL STRIP CONCRETE FOOTINGS MINIMUM 600MM X 200MM THICK AT LEAST 100MM DEEP BEARING ON FIRM CLAY SUBSTRATA, OVERALL SIZE AND DEPTH TO SUIT GROUND CONDITIONS IN AGREEMENT WITH THE B.C.O./A.I.



LOCATION PLAN



MECHANICAL VENTILATION

ALL BATHROOMS AND SHOWER ROOMS TO BE FITTED WITH A MECHANICAL EXTRACT FAN CAPABLE OF AT LEAST 15 LITRES/SECOND EXTRACT RATE. KITCHENS TO HAVE EITHER A MECHANICAL EXTRACT FAN CAPABLE OF 60 LITRES/SECOND OR A COOKER HOOD CAPABLE OF 60 LITRES/SECOND. MECHANICAL EXTRACT FANS SERVING WINDOWLESS BATHROOM/SHOWER ROOMS/W.C. CUBICLES TO PROVIDE AT LEAST 3 AIR CHANGES PER HOUR WITH A 15 MINUTE OVER RUN FACILITY.

DRAINAGE

ALL NEW DRAINS TO BE LAID USING 100MM DIAMETER HEPSELEVE OR U.P.V.C. PIPES AT 1:40 MINIMUM SELF-CLEANING GRADIENT. DRAINS UNDER BUILDING AND WITHIN 1M OF FOUNDATIONS TO BE ENCASED IN CONCRETE SURROUND, DRAINS PASSING THROUGH FOUNDATIONS TO BE BRIDGED OVER WITH P.C.C. LINTOLS AND ROCKER PIPE USED EITHER SIDE OF WALL 100MM DIAMETER S.V.P.'S TO RECEIVE UPPER FLOOR FITTINGS WITH WIRE BIRD CAGE TERMINAL AT LEAST 900MM ABOVE THE HIGHEST WINDOW VENT OPENING AND ABOVE ROOF LEVEL. ALL NEW SANITARY FITTINGS TO HAVE ANTI VAC TRAPS WITH WASTES CONNECTED SEPARATELY INTO SOIL STACKS. ALL WASTES TO BE MADE ACCESSIBLE.

GENERAL NOTES

ALL DIMENSIONS INCLUDING ROOF PITCHES TO BE CHECKED BY CONTRACTOR BEFORE WORK COMMENCES. ALL WORK TO COMPLY WITH CURRENT BUILDING REGULATIONS AND CARRIED OUT TO THE COMPLETE SATISFACTION OF THE DISTRICT B.C.O. ALL TIMBER TO BE TREATED WITH PRESERVATIVE. ALL NEW STEELWORK TO BE ENCASED IN 12M GYPSUM 'FIBRELINE' BOARD FOR 30 MINUTES FIRE PROTECTION. ALL GALV. LINTOLS TO BE INSULATED AND ENCASED WITH 12MM PLASTERBOARD AND SKIMFOR 30 MINUTES FIRE PROTECTION. ALL ELECTRICAL WORK TO BE UNDERTAKEN BY A NICEIC APPROVED CONTRACTOR WITH AN INSTALLATION CERTIFICATE TO BE PROVIDED ON COMPLETION. ALL NEW RADIATORS TO BE FITTED WITH THERMOSTATIC VALVES AND C.H. BOILERS TO BE REPLACED IF NECESSARY WITH CONDENSING TYPE BOILERS AND INSTALLED BY A CORGI REGISTERED CONTRACTOR. TOUGHENED OR LAMINATED SAFETY GLASS TO BE USED IN ALL CRITICAL LOCATIONS.

CLIENT

MISS. T. THAIN

SCHEME

SINGLE STOREY EXTENSION AT SIDE AND REAR

ADDRESS

98 TITHEBARN ROAD
KNOWSLEY VILLAGE
L34 0HA

DRAWING TITLE

Existing and proposed plans and elevations

NUMBER

001

REVISION

DATE

MARCH 2021

SCALES

1:50