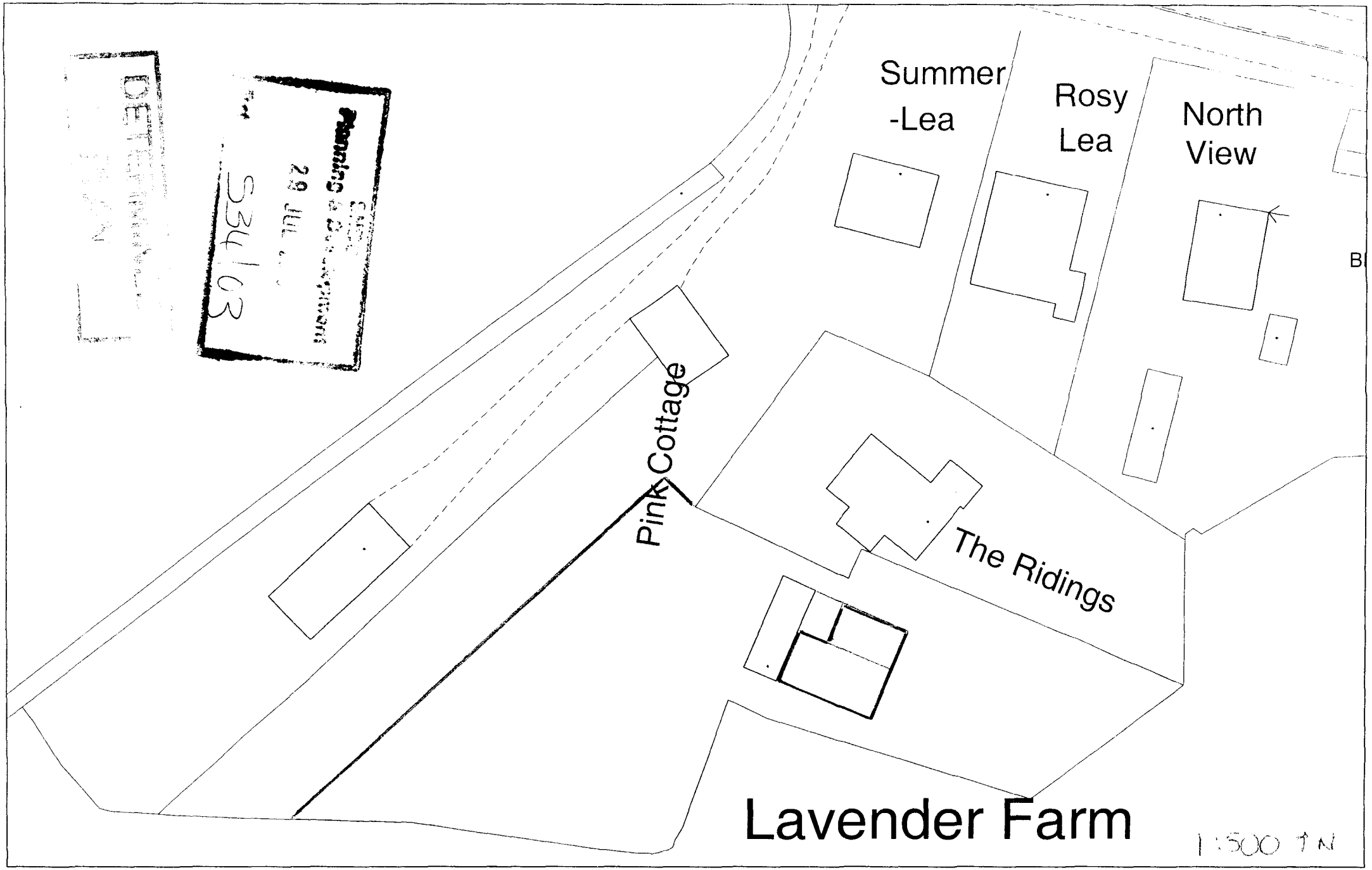
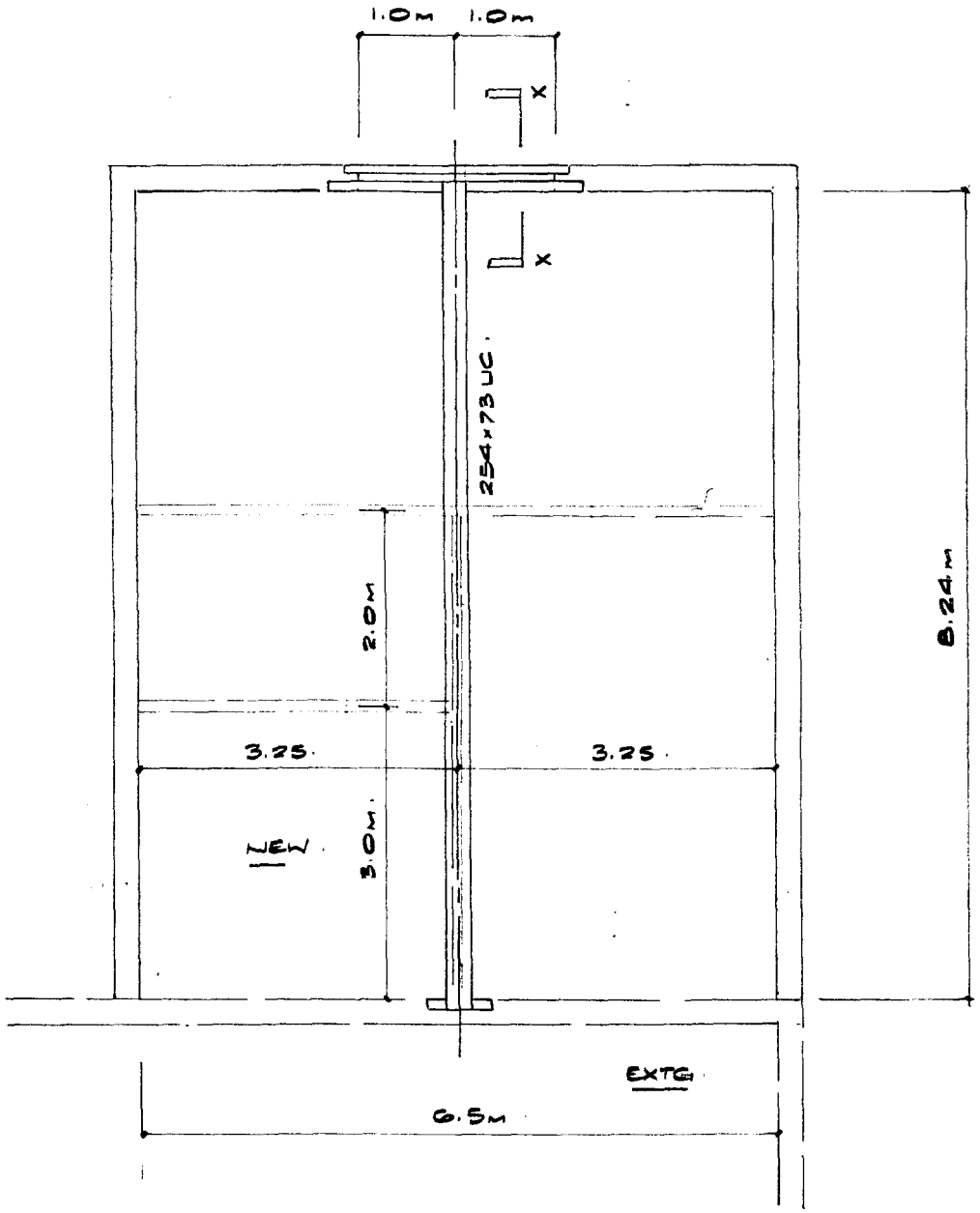
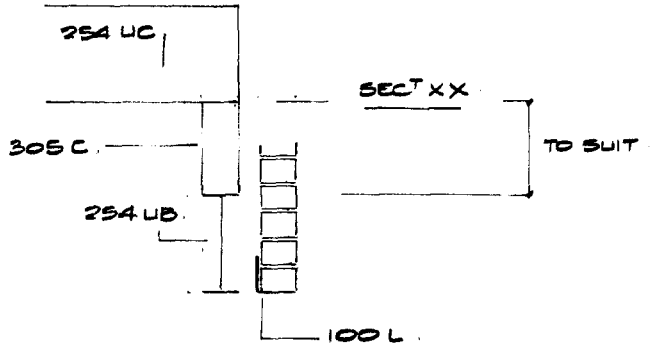

Summer
-Lea
Rosy
Lea
North
View
Pink Cottage
The Ridings
Lavender Farm
1:500 ↑N

PROPOSED EXTENSION TO LAVENEDER FARM — MR. P. NICHOLSON.



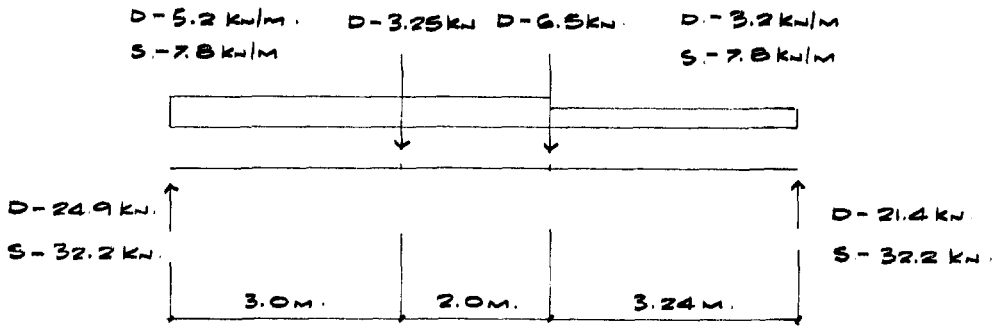


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PROPOSED EXTENSION TO LAVENDER FARM – MR. P NICHOLSON

LOADINGS.		ULS.
Dead – JOISTS –	0.2 kN/m²	0.28 kN/m²
FLOOR –	0.25 kN/m²	0.35 kN/m²
CEILING –	0.25 kN/m²	0.35 kN/m²
STUD WALL –	1.4 kN/m	2.0 kN/m
Super –	1.5 kN/m².	2.4 kN/m².

MAIN BEAM



BM. (Mid Span) = 121.2 kNm.

Le. – (8.24 x 1.2) + (2 x 0.25) = 10.4m.

TRY 254 x 73 UC. Mb. = 143 kNm. I_{xx} = 11400 cm⁴.

CHECK δ

$$\text{Max} = \frac{8240}{300} = 27.5\text{mm} \qquad \text{(Total Loads)}$$

Max δ at 4.11m. = 25.9mm. (Dead - 13.3mm. Super - 12.6mm)

USE – 254 x 254 x 73 UC S275JR

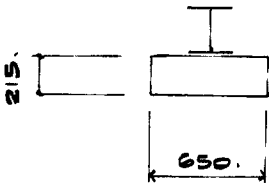
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CHECK BEARING (EXTG)

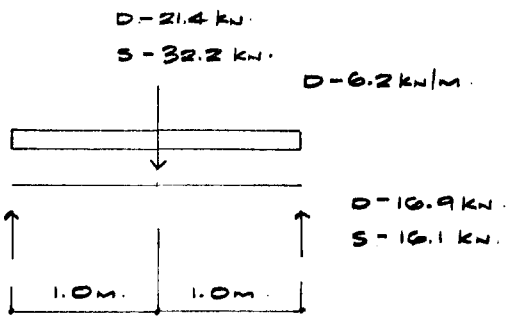
Allowable Stress = $\frac{1.25 \times 2.5}{3.5}$ = 0.89 N/mm² (Extg BWK)

Bearing Length Req'd = $\frac{57 \times 10^3}{0.89 \times 100}$ = 642mm

∴ Use - 100 x 215 deep x 650 long conc' Padstone.



DOOR BEAM.



BM. - 30 kNm.

Le - (2.0 x 1.2) + (2 x 0.25) = 2.9m.

TRY 254 x 102 x 25 UB Mb = 39 kNm. Ixx = 3420 cm⁴.

CHECK δ.

Max = $\frac{2000}{300}$ = 6.7mm (Total Loads)

Max δ at 1.0m = 1.0mm (Dead - 0.5mm Super - 0.5mm)

Use - 254 x 102 x 25 UB S275 JR.

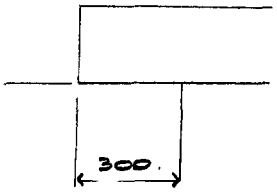
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CHECK BEARING.

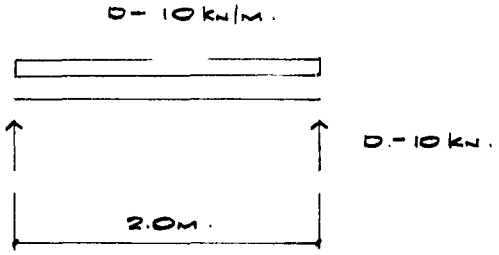
Allowable Stress = $\frac{1.25 \times 3.5}{3.5}$ = 1.25 N/mm²

Bearing Length Req'd = $\frac{33 \times 10^3}{1.25 \times 100}$ = 264 mm.

∴ Provide 300mm bearing.



OUTER DOORBEAM.



BM. = 5 kNm.

Le.= (2.0 × 1.4) + (2 × 0.1) = 3.0m.

TRY 100 × 12 L $\varepsilon = \left[\frac{275}{275.}\right]^{0.5} = 1$ rv = 1.94 cm. Zx = 29.1 cm³.

$Mb = Py\, Zx \left[\frac{1350\varepsilon - Le/rv}{1625\varepsilon.}\right]$

$= 275 \times 29.1 \times 10^3 \left[\frac{1350 - 300/1.94}{1625.}\right] \times 10^{-6}$

= 5.9 kNm.

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CHECK δ

$$\text{Allowable} = \frac{2000}{360} = 5.6\text{mm}$$

$$\text{I Req'd} = \frac{5 \times 10 \times 2000^4}{384 \times 205000 \times 5.6 \times 10^4} = 181.5\,\text{cm}^4$$

Use - 100×12 L $\quad I_{xx} = 207\,\text{cm}^4$

S275JR

CHECK BEARING

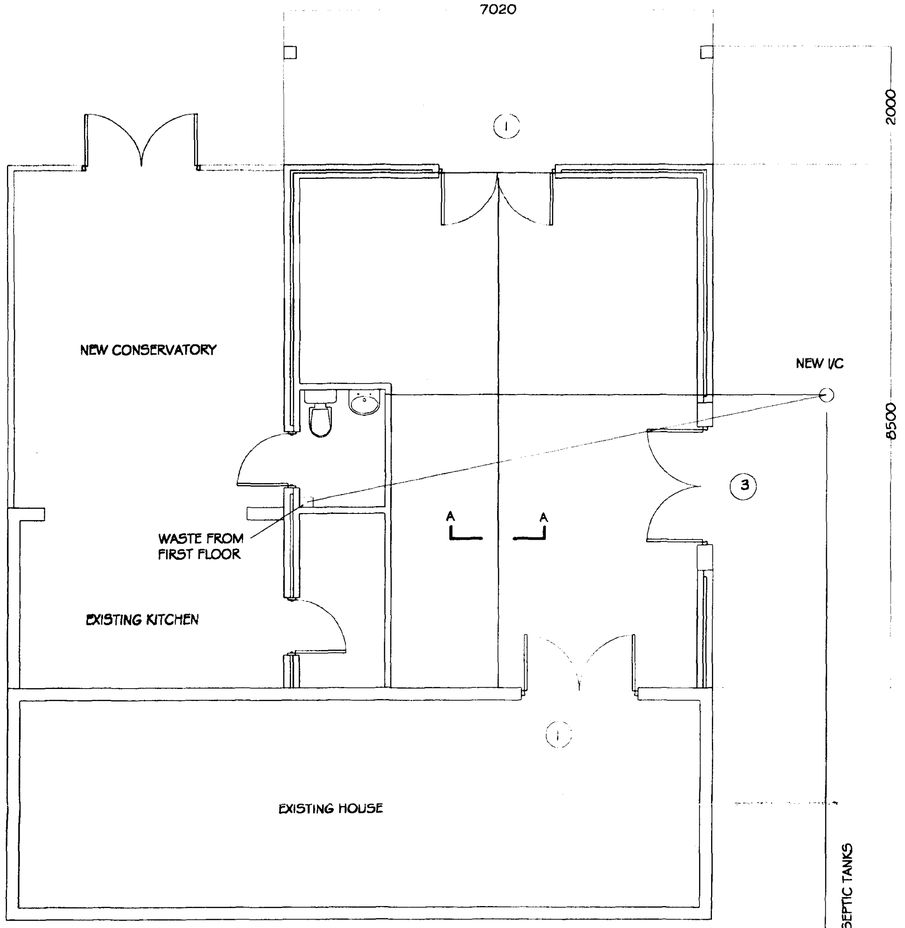
$$\text{Allowable Stress} = \frac{1.5 \times 2.5}{3.5} = 1.07\,\text{N/mm}^2$$

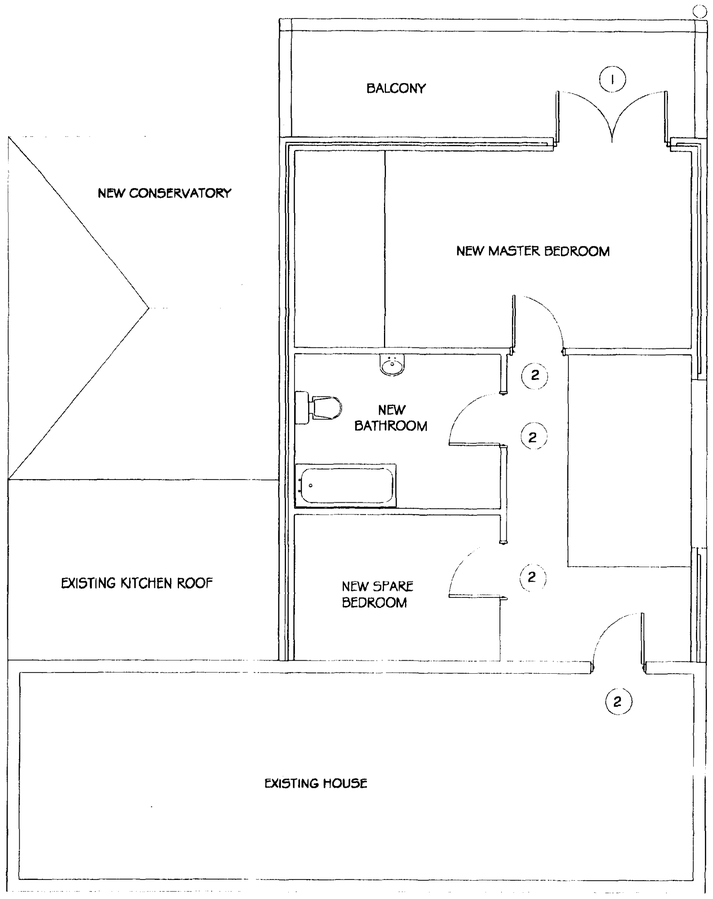
$$\text{Bearing Length Req'd} = \frac{10 \times 10^3}{1.07 \times 100} = 93.5\text{mm}$$

∴ Provide 150mm bearing

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PROPSED EXTENSION FOR MR PETER NICHOLSON, LAVENDER FARM, SHEPEA STOW, CROWLAND, PETERBOROUGH, PE12 OTY.





FOUNDATIONS
700 WIDE * 225 DEEP STRIP FOOTING TO CAVITY WALL. 450 WIDE * 225 DEEP STRIP FOOTING TO SINGLE LEAF BWK. CONCRETE GEN3 MIX. ALL TAKEN DOWN TO A SUITABLE LOAD BEARING SUB STRATA. IF ANY NON-LOAD BEARING SUB-STRATA IS ENCOUNTERED THE DESIGNER IS TO BE INFORMED BEFORE LAYING ANY CONCRETE ETC AND THE ADVISE OF A CONSULTING ENGINEER MAY BE OBTAINED. ALL THE ABOVE TO BE APPROVED BY LOCAL BUILDING INSPECTOR.

WALLS
265 CAVITY BWK TO COMPRISE OF 102 FACING BWK TO MATCH EXISTING. 65 CAVITY WITH 65 DITHERM INSULATION LAID TO MANUFACTURERS INSTRUCTIONS. 100 TARMAC TOPLITE TOPBLOCK STD AERATED CONCRETE BLOCK OR SIMILAR RENDERED AND SKIMMED INTERNALLY TO ACHIEVE U VALUE OF 0.35 W/m²K. MORTAR MIX AS RECOMMENDED BY BRICK BLOCK MANUFACTURER AND TO BE B.R.E. DIGEST No. 178 & C.P. 121 PART 1 1973. GALV OR SIMILAR WALL TIES AT 800 CRS HORIZONTAL & 450 CRS VERTICAL STAGGERED & AT 300 CRS AS NEAR TO DOOR / WINDOW AND ABOVE HEADS. DPC & DPM TO BE LAPPED AND CONTINUOUS. CLOSE CAVITY AT PLATE LEVEL. CLASS 'A' CONC. BLOCKS BELOW GROUND LEVEL. ALL BRICK BELOW GROUND LEVEL TO BE F.L. QUALITY. 50*100 WALL PLATE OFF MORTAR BED WITH 300*5*1000 Lg GALV METAL ANCHOR STRAPS AT MAX 2m CRS 'EXPAMET' OR SIMILAR WALL STARTERS. PROVIDE THERMAL BREAKS WHERE REQUIRED IN THE STRUCTURE TO AVOID COLD BRIDGING OCCURRING.

GROUND FLOOR
150 MIN CONSOLIDATED HARDCORE BLINDED. 1200 GAUGE DPM LAPPED OVER DPC. 100 THK JABLITE FLOORING GRADE 50 INSULATION BOARDS WITH PERIMETER INSULATION TO WALLS ALL LAID TO MANUFACTURES INSTRUCTIONS. 100 MIN CONCRETE GEN3 MIX. SAND / CEMENT SCREED TO BRING FLOORS LEVEL (MIN 40mm).

FIRST FLOOR
75*220 GRADE SC3 TIMBER JOISTS AT 600 C/C SPANNING 3.25 BETWEEN STEEL AND NEW WALL WITH 19mm WETROCK OR SIMILAR T&G FLOORING GRADE DECKING.

WINDOWS
ALL CODES ARE FOR SOFTWOOD 'JOLTON AND PAUL / JOHN CARR WINDOW / DOOR CODES, CLIENT MAY REQUIRE WHITE UPVC DOUBLE GLAZED WITH 12 mm AIR GAP BETWEEN SEALED UNITS AND DRAFT SEALED WITH LOW-E GLASS. WINDOWS TO HAVE TRICKLE VENTS TO GIVE 4000mm2 VENTILATION. ALL LINTOLS TO HAVE 150mm BEARING & LAID TO MANUFACTURES INSTRUCTIONS. ALL GLAZING TO COMPLY WITH B.S.6206 STD.
WINDOWS : ANY GLASS WITHIN 800 ABOVE FFL TO BE TOUGHTENED. DOORS : ANY GLASS WITHIN 1500 ABOVE FFL AND 300 AROUND DOOR TO BE TOUGHTENED.
FLOOR AREA : (6.5X7.02)X2=119.84m2. WINDOW AREA : ((0.9X0.6)X3)+(2.7X3.5)=11.07m2 THEREFORE WINDOWS DO NOT EXCEED 25% RULE.

HEATING
EXTEND EXISTING HEATING SYSTEM. POSITION OF RADIATORS TO BE AGREED WITH CLIENT.

ELECTRICS
SOCKETS / OUTLETS / LIGHT SWITCHES TO BE I.E.E. REGULATIONS & N.H.B.C STD. POSITIONS TO BE AGREED WITH CLIENT.

ROOF
SANDTOFT OR SIMILAR APPROVED INTERLOCKING ROOF TILES TO MATCH EXISTING HOUSE. ONE LAYER OF UNTEARABLE ROOFING FELT TYPE 1F SPARKING FELT WITH MIN 150 OVERLAP. BATTENS 38*25 T.T. AT GAUGE CENTRES. TWINAPLATE OR SIMILAR APPROVED ROOF TRUSSES 'PINK' TYPE AT 600 CENRES FITTED TO MANUFACTURES INSTRUCTIONS TO MATCH EXISTING SLOPE. INSULATION TO ROOF TO BE 250 mm FIBREGLASS. SOFTWOOD FASIA BOARDS AND SOFFITS TO MATCH EXISTING. PROVIDE EITHER 1) OVER FACIA VENTILATION SYSTEM COMPRISING OF HIGH DENSITY BLACK POLYPROPYLENE STRIP VENTILATORS, COMB FILLERS, VACUUM FORMED POLYSTYRENE DUCT TRAYS AND TIMBER FILLETS / PLYWOOD SUPPORTS OR 2) CONTINUOUS 10mm SLOTTED VENT STRIP COMPLETE WITH ROLLED FORMED EAVES VENT BETWEEN RAFTERS TO PROVIDE 50mm CLEAR OPENING.

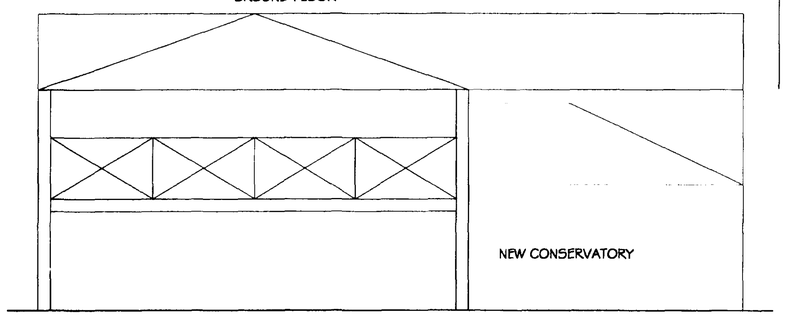
DRAINS
NEW PIPEWORK GOING UNDER PROPOSED EXTENSION TO BE 100mm UPVC POLYDRAIN OR SIMILAR PIPEWORK. PIPE LAID TO MANUFACTURES INSTRUCTIONS. DRAINS PASSING THROUGH WALL TO HAVE CONC. LINTEL OVER WITH 50mm CLEAR AROUND. DRAINS TO BE SEALED WITH METAL PROTECTION WHERE THEY PENETRATE THE WALLS. PIPES TO BE LAID ON SELECTED BACKFILL & GRANULAR BED. ALL JUNCTIONS TO HAVE SLOW BENDS. PROTECT ALL DRAINS WITH LESS THAN 600mm COVER WITH CONC. SLABS/PATH. FALL TO MIN 1 IN 80. BUILD IN NEW POLYDRAIN HIGH DENSITY BLACK POLYETHENE I.C. WITH I/P SEAL & CAST IRON I.D. S.V.P. TO HAVE BALLOON FINIAL. TO ALL WASTE PIPES PROVIDE 75mm DEEPSEAL TRAP & RODDING POINTS. CONNECTION OF THE WC TO THE DRAINS TO BE 450 ABOVE THE INVERT OF THE DRAINS.

SURFACE WATER DRAINAGE
USE MARLEY OR SIMILAR 112mm HALF ROUND PVC GUTTER TO MATCH EXISTING TO 68mm RWP COMPLETE WITH REDUCER CONNECTED TO 110mm UPVC PIPES FLEXIBLY JOINTED TO FALL MINIMUM 1:80 (AS RECOMMENDED BY MARLEY). TRENCH TO BE AS NARROW AS PRACTICAL. PREPARED BED WITH 100mm DEEP LAYER OF RECOMMENDED BEDDING MATERIAL i.e. GRAVEL FROM 5 TO 10mm. SAND OR OTHER MATERIAL WHICH HAS A COMPACTION FACTOR LESS THAN 0.3. PLACE SELECTED BACK FILL MATERIAL AROUND PIPE AND CAREFULLY COMPACTED UPTO MINIMUM HEIGHT LEVEL WITH THE CROWN OF THE PIPE. COMPACT BACKFILL BY HAND UNTIL 300mm OF COVER HAS BEEN MADE. REMAINING BACKFILL CAN BE COMPACTED WITH MECHANICAL COMPACTING EQUIPMENT. ALL TANKS TO SOAKAWAYS MINIMUM OF 5m FROM BUILDING CONSTRUCTED OF MINIMUM 1200mm DIAMETER BRICK FILLED HOLE WITH POLYTHENE OVER AND COVERED WITH TOPSOIL ETC.

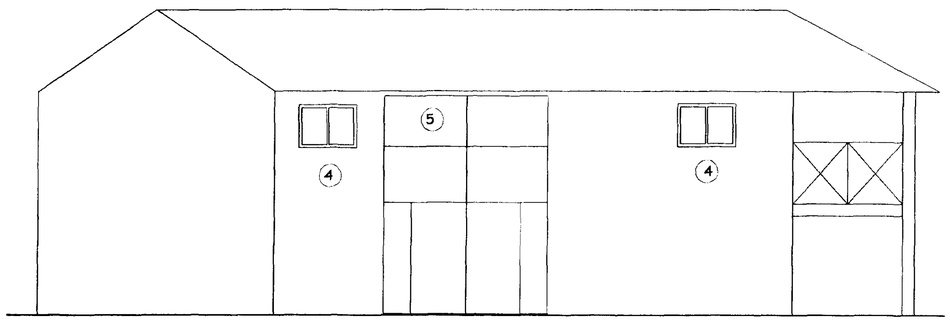
VENTILATION
TO WC PROVIDE MECHANICAL VENTILATION TO GIVE A MIN AIR FLOW OF 15 LITRES PER SECOND TO THE EXTERNAL AIR. C/W GUARD.

STEELWORK
MAIN BEAM - UC254*73 SPANNING FROM TOP WALL TO EXISTING.
DOOR BEAM - UB254*102*25 SPANNING OVER DOOR WITH STUB TO RECIEVE MAIN BEAM.
FOR BOTH MEMBERS SEE ATTACHED CALCULATIONS.

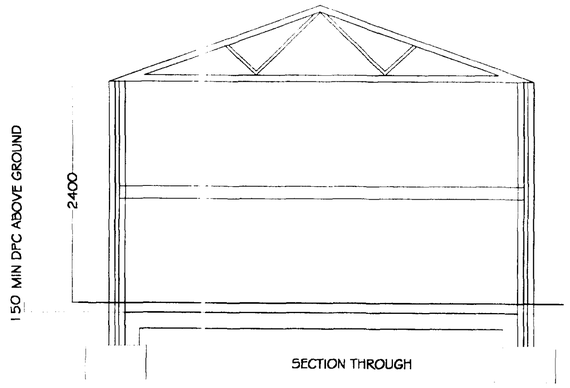
GROUND FLOOR



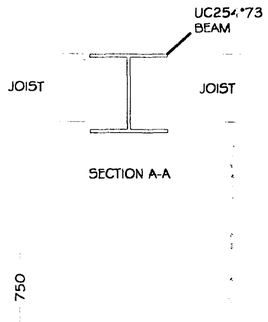
END ELEVATION



FIRST FLOOR



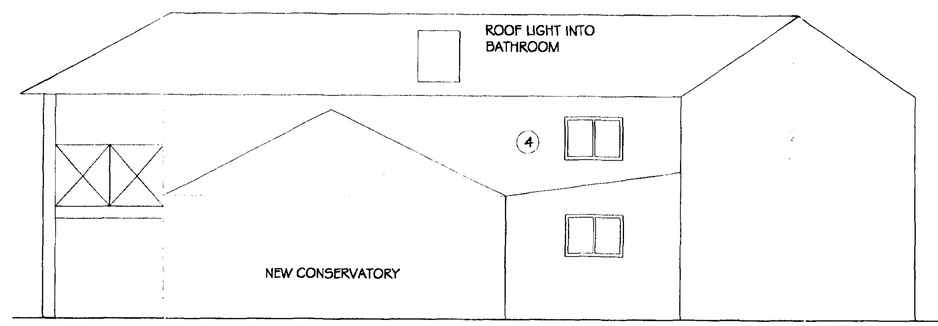
SECTION THROUGH

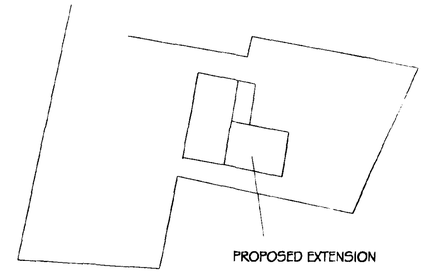


SECTION A-A

REF	QTY	BOULTON AND PAUL	IG LINTOL	LENGTH
1	3	FCS180	L1/5.75	2400
2	3	760 WIDE	BOX100	1500
3	1	FCS180	~~L1/5.75~~	~~3000~~
4	3	2NO7CV	L1/5.75	1500
5	1	BESPOKE	L1/5.75	3000

SUPERSEDED





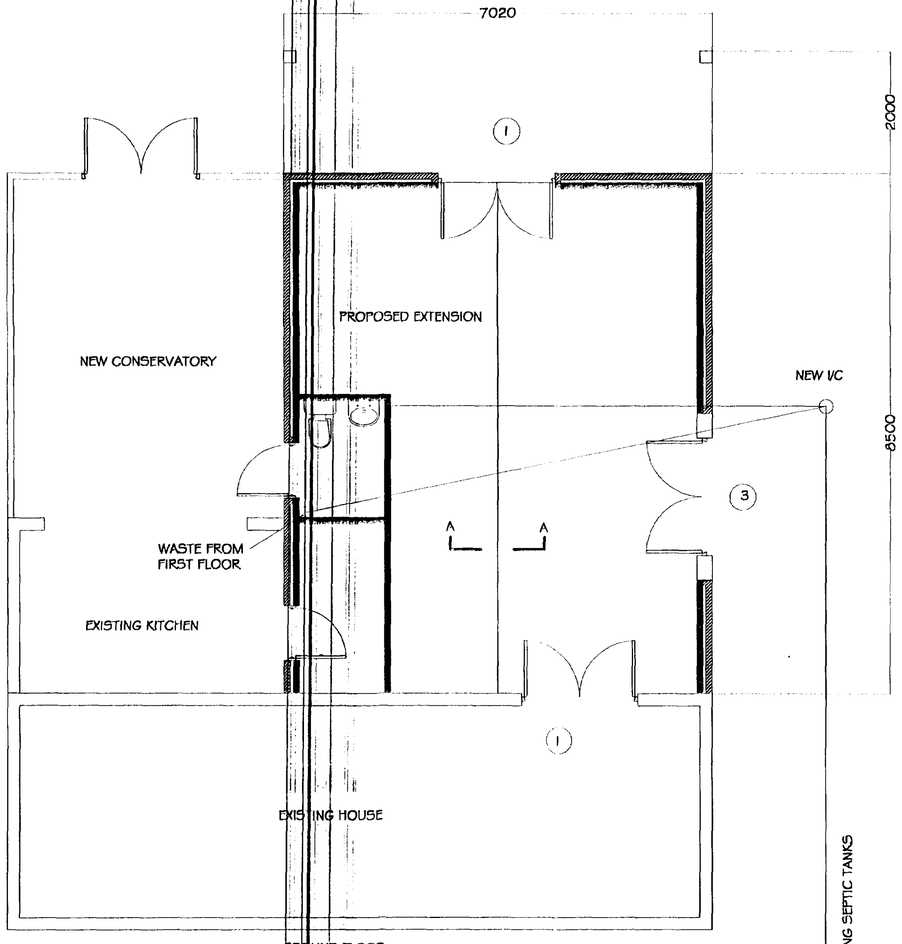
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DRAWING 1 OF 1

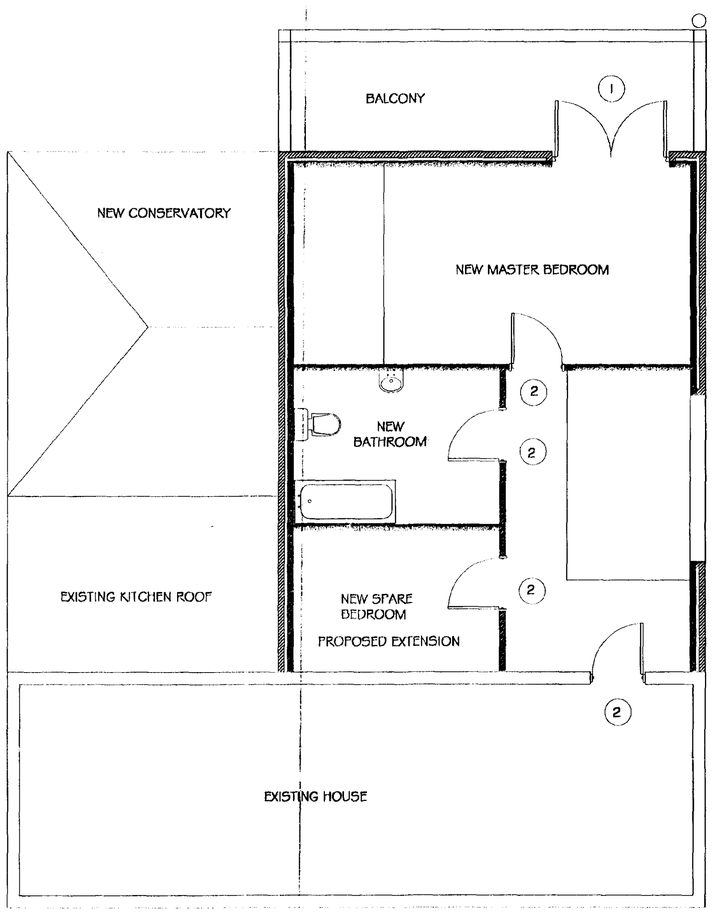
SCALE 1:50

SITE PLAN

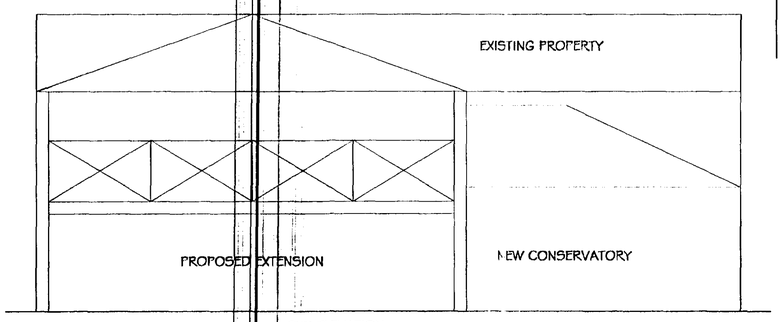
PROPSED EXTENSION FOR MR PETER NICHOLSON, LAVENDER FARM, SHEPEA STOW, CROWLAND, PETERBOROUGH, PE12 OTY.



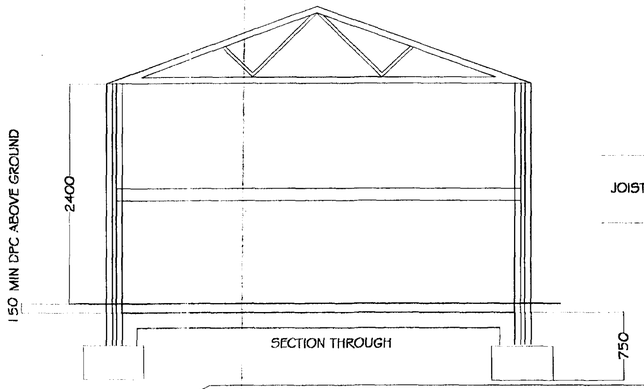
GROUND FLOOR



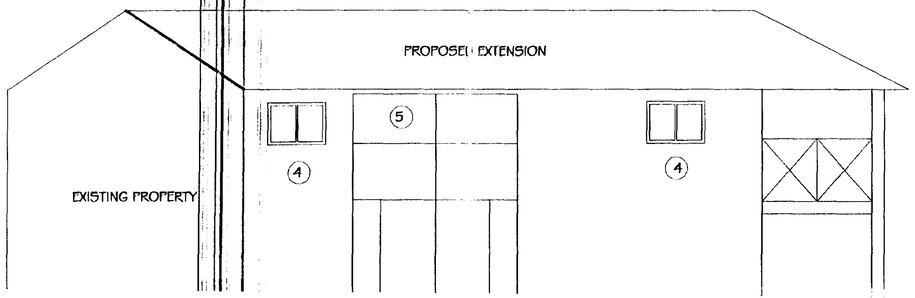
FIRST FLOOR

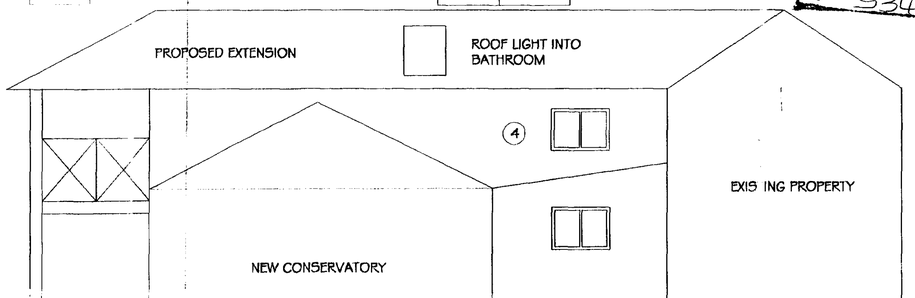


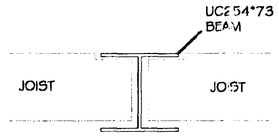
END ELEVATION



SECTION THROUGH





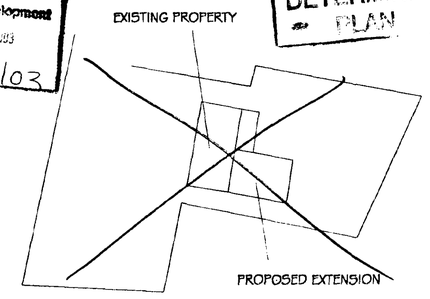


SECTION A-A

REF	QTY	BOULTON AND PAUL	IG LINTOL	LENGTH
1	3	FCS180	LI/S 75	2400
2	3	760 WIDE	BOX100	1500
3	1	FCS180	LI/S 75	3000
4	3	2NO7CV	LI/S 75	1500
5	1	BESPOKE	LI/S 75	3000

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DETERMINED PLAN



SITE PLAN

FOUNDATIONS
700 WIDE * 225 DEEP STRIP FOOTING TO CAVITY WALL. 450 WIDE * 225 DEEP STRIP FOOTING TO SINGLE LEAF BWK. CONCRETE GEN3 MIX. ALL TAKEN DOWN TO A SUITABLE LOAD BEARING SUB STRATA. IF ANY NON-LOAD BEARING SUB-STRATA IS ENCOUNTERED THE DESIGNER IS TO BE INFORMED BEFORE LAYING ANY CONCRETE ETC AND THE ADVISE OF A CONSULTING ENGINEER MAY BE OBTAINED. ALL THE ABOVE TO BE APPROVED BY LOCAL BUILDING INSPECTOR.

WALLS
265 CAVITY BWK TO COMPRISE OF 102 FACING BWK TO MATCH EXISTING, 65 CAVITY WITH 65 ENTHERM INSULATION LAID TO MANUFACTURES INSTRUCTIONS, 100 TARMAC TOPLITE TOPBLOCK STD AERATED CONCRETE BLOCK OR SIMILAR RENDERED AND SKIMMED INTERNALLY TO ACHIEVE u VALUE OF 0.35 W/m2K. MORTAR MIX AS RECOMMENDED BY BRICK BLOCK MANUFACTURER AND TO BE B.R.E. DIGEST No. 176 & C.P. 121 PART 1 1973. GALV OR SIMILAR WALL TIES AT 900 CRS HORIZONTAL & 450 CRS VERTICAL STAGGERED & AT 300 CRS AS NEAR TO DOOR / WINDOW AND ABOVE HEADS. DPC & DPM TO BE LAPPED AND CONTINUOUS. CLOSE CAVITY AT PLATE LEVEL. CLASS 'A' CONC. BLOCKS BELOW GROUND LEVEL. ALL BRICK BELOW GROUND LEVEL TO BE F.L. QUALITY. 50*100 WALL PLATE OFF MORTAR BED WITH 300*5*1000 Lg GALV METAL ANCHOR STRAPS AT MAX 2m CRS TOFAMET OR SIMILAR WALL STARTERS. PROVIDE THERMAL BREAKS WHERE REQUIRED IN THE STRUCTURE TO AVOID COLD BRIDGING OCCURRING.

GROUND FLOOR
150 MIN CONSOLIDATED HARDCORE BLINDED. 1200 GAUGE DPM LAPPED OVER DPC. 100 THK JABLITE FLOORING GRADE SD INSULATION BOARDS WITH PERIMETER INSULATION TO WALLS ALL LAID TO MANUFACTURES INSTRUCTIONS. 100 MIN CONCRETE GEN3 MIX. SAND / CEMENT SCREED TO BRING FLOORS LEVEL (MIN 40mm).

FIRST FLOOR
75*220 GRADE SC3 TIMBER JOISTS AT 600 C/C SPANNING 3.25 BETWEEN STEEL AND NEW WALL. WITH 19mm WEYROCK OR SIMILAR 14G FLOORING GRADE DECKING.

WINDOWS
ALL CODES ARE FOR SOFTWOOD DOLTON AND PAUL / JOHN CARR WINDOW / DOOR CODES, CLIENT MAY REQUIRE WHITE UPVC DOUBLE GLAZED WITH 12 mm AIR GAP BETWEEN SEALED UNITS AND DRAFT SEALED WITH LOW-E GLASS. WINDOWS TO HAVE TRICKLE VENTS TO GIVE 4000mm2 VENTILATION. ALL LINTOLS TO HAVE 150mm BEARING & LAID TO MANUFACTURES INSTRUCTIONS. ALL GLAZING TO COMPLY WITH B.S.6206 STD.
WINDOWS : ANY GLASS WITHIN 800 ABOVE FFL TO BE TOUGHHENED. DOORS : ANY GLASS WITHIN 1500 ABOVE FFL AND 300 AROUND DOOR TO BE TOUGHHENED.
FLOOR AREA : (6.527.073)2=115.34m2. WINDOW AREA : ((0.9X0.6)X3)+(2.7X3.5)=11.07m2 THEREFORE WINDOWS DO NOT EXCEED 25% RULE.

HEATING
EXTEND EXISTING HEATING SYSTEM. POSITION OF RADIATORS TO BE AGREED WITH CLIENT.

ELECTRICS
SOCKETS / OUTLETS / LIGHT SWITCHES TO BE I.E.E. REGULATIONS & N.H.B.C STD. POSITIONS TO BE AGREED WITH CLIENT.

ROOF
SANDTOFT OR SIMILAR APPROVED INTERLOCKING ROOF TILES TO MATCH EXISTING HOUSE. ONE LAYER OF UNTEARABLE ROOFING FELT TYPE 1F SPARKING FELT WITH MIN 150 OVERLAP. BATTENS 38*25 T.T. AT GAUGE CENTRES. TWINAPLATE OR SIMILAR APPROVED ROOF TRUSSES TINK TYPE AT 600 CENRES FITTED TO MANUFACTURES INSTRUCTIONS TO MATCH EXISTING SLOPE. INSULATION TO ROOF TO BE 250 mm FIBREGLASS. SOFTWOOD FASIA BOARDS AND SOFFITS TO MATCH EXISTING. PROVIDE EITHER 1) OVER FACIA VENTILATION SYSTEM COMPRISING OF HIGH DENSITY BLACK POLYPROPYLENE STRIP VENTILATORS, COMB FILLERS, VACUUM FORMED POLYSTYRENE DUCT TRAYS AND TIMBER FILLETS / PLYWOOD SUPPORTS OR 2) CONTINUOUS 10mm SLOTTED VENT STRIP COMPLETE WITH ROLLED FORMED EAVES VENT BETWEEN RAFTERS TO PROVIDE 50mm CLEAR OPENING.

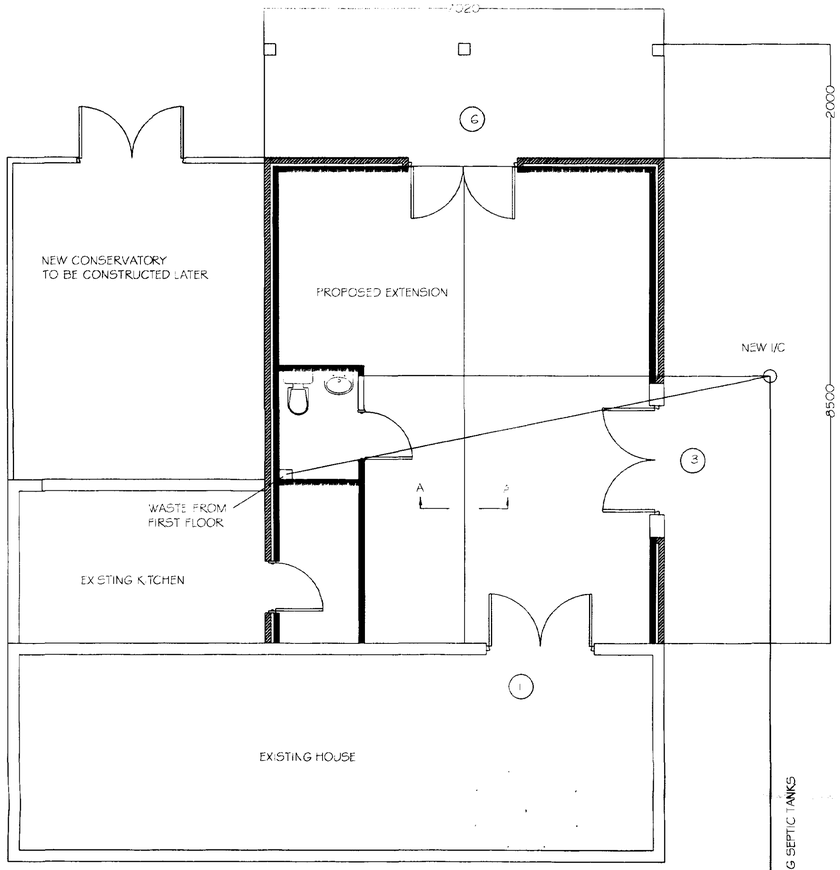
DRAINS
NEW PITEWORK GOING UNDER PROPOSED EXTENSION TO BE 100mm UPVC POLYDRAIN OR SIMILAR PITEWORK. PIPE LAID TO MANUFACTURES INSTRUCTIONS. DRAINS PASSING THROUGH WALL TO HAVE CONC. LINTEL OVER WITH 50mm CLEAR AROUND. DRAINS TO BE SEALED WITH METAL PROTECTION WHERE THEY PENETRATE THE WALLS. PIPES TO BE LAID ON SELECTED BACKFILL & GRANULAR BED. ALL JUNCTIONS TO HAVE SLOW BENDS. PROTECT ALL DRAINS WITH LESS THAN 600mm COVER WITH CONC. SLABS/PATH. FALL TO MIN 1 IN 80. BUILD IN NEW POLYDRAIN HIGH DENSITY BLACK POLYETHENE I.C. WITH LIP SEAL & CAST IRON I.D. S.V.P. TO HAVE BALLON FINIAL TO ALL WASTE PIPES PROVIDE 75mm DEEPSEAL TRAP & RODDING POINTS. CONNECTION OF THE WC TO THE DRAINS TO BE 430 ABOVE THE INVERT OF THE DRAINS.

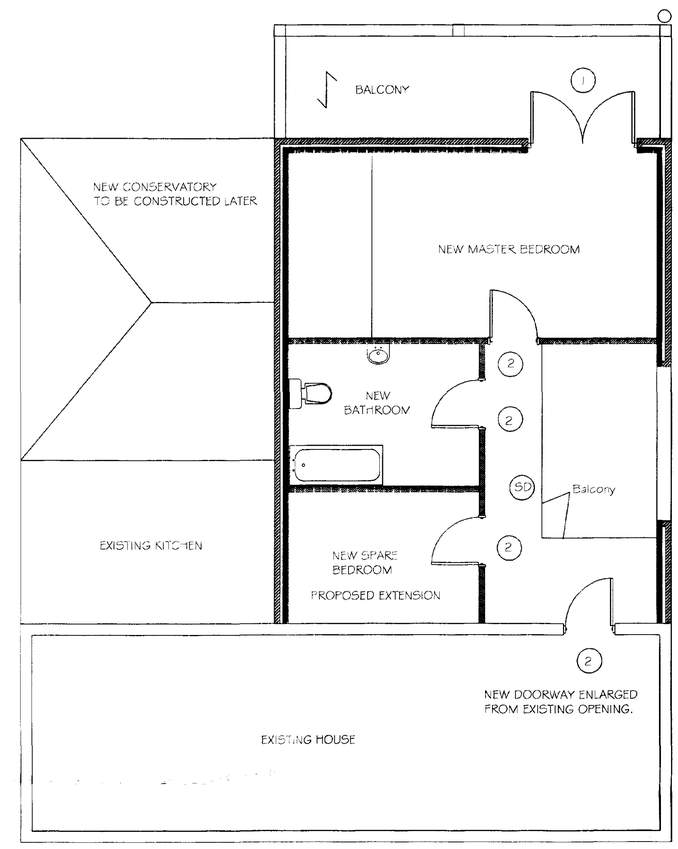
SURFACE WATER DRAINAGE
USE MARLEY OR SIMILAR 112mm HALF ROUND PVC GUTTER TO MATCH EXISTING TO 68mm RWP COMPLETE WITH REDUCER CONNECTED TO 110mm UPVC PIPES FLEXIBLY JOINTED TO FALL MINIMUM 1:80 (AS RECOMMENDED BY MARLEY). TRENCH TO BE AS NARROW AS PRACTICAL. PREPARED BED WITH 100mm DEEP LAYER OF RECOMMENDED BEDDING MATERIAL i.e. GRAVEL FROM 5 TO 10mm, SAND OR OTHER MATERIAL WHICH HAS A COMPACTION FACTOR LESS THAN 0.3. PLACE SELECTED BACK FILL MATERIAL AROUND PIPE AND CAREFULLY COMPACTED UPTO MINIMUM HEIGHT LEVEL WITH THE CROWN OF THE PIPE. COMPACT BACKFILL BY HAND UNTIL 300mm OF COVER HAS BEEN MADE. REMAINING BACKFILL CAN BE COMPACTED WITH MECHANICAL COMPACTING EQUIPMENT. ALL TAKEN TO SOAKAWAYS MINIMUM OF 5m FROM BUILDING CONSTRUCTED OF MINIMUM 1200mm DIAMETER BRICK FILLED HOLE WITH POLYTHENE OVER AND COVERED WITH TOPSOIL ETC.

VENTILATION
TO WC PROVIDE MECHANICAL VENTILATION TO GIVE A MIN AIR FLOW OF 15 LITRES PER SECOND TO THE EXTERNAL AIR. C/W GUARD.

STEELWORK
MAIN BEAM - UC254*73 SPANNING FROM TOP WALL TO EXISTING.
DOOR BEAM - UB254*102*25 SPANNING OVER DOOR WITH STUB TO RECIEVE MAIN BEAM.
FOR BOTH MEMBERS SEE ATTACHED CALCULATIONS.

DRAWING 1A OF 1





FOUNDATIONS
300 WIDE x 225 DEEP STRIP FOOTINGS TO CAVITY WALLS, 450 x 225 DEEP STRIP FOOTINGS TO INTERNAL LOAD
BEARING WALLS, 1000 x 225 DEEP PAD FOOTINGS TO STEELWORK COLUMNS, ALL TO BE FOUNDED ON
BWK CONCRETE GEN3 MIX ALL TAKEN DOWN TO A SUITABLE LOAD BEARING SUB STRATA. IF ANY UNSUITABLE
BEARING SUB STRATA IS ENCOUNTERED THE DESIGNER IS TO BE INFORMED BEFORE LAYING ANY CONCRETE
ETC AND THE ADVICE OF A CONSULTING ENGINEER MAY BE OBTAINED. DEPTH OF FOUNDATION TO ACCEPTABLE
STRATUM OF SOIL AND PROXIMITY OF TREES. ALL THE ABOVE TO BE APPROVED BY LOCAL BUILDING INSPECTOR.

WALLS
255 CAVITY BWK TO COMPRISE OF TWO SKINS OF BLOCK EXTERNALLY RENDERED AS EXISTING, 65 CAVITY WITH
65 DPERM INSULATION LAID TO MANUFACTURERS INSTRUCTIONS, 100 THK CONCRETE TOPBLOCK STD AERATED
CONCRETE BLOCK OR SIMILAR RENDERED AND SKIMMED INTERNALLY TO ACHIEVE U-VALUE OF 0.35 W/m2K MORTAR
MIX AS RECOMMENDED BY BRICK BLOCK MANUFACTURER AND TO BS 5628 DIRECTION No. 7184 C.P. 121 PART 1 1978.
CAVITY OR SIMILAR WALL TIES AT 900 CRS HORIZONTAL & 450 CRS VERTICAL STAGGERED & AT 300 CRS AS NEAR
TO DOOR / WINDOW AND ABOVE HEADS. DPC & DPM TO BE LAPPED AND CONTINUOUS. CLOSE CAVITY AT PLATE
LEVEL, CLASS A CONC. BLOCKS BELOW GROUND LEVEL. ALL BRICK BELOW GROUND LEVEL TO BE F.L.B.M.
50 x 100 WALL PLATE ON MORTAR BED WITH BOOMER 1000 LONG GALVANISED METAL ANCHOR STRAPS AT MAX 2m CRS
EXPANSION OR SIMILAR WALL STARTERS. PROVIDE THERMAL BREAKS WHERE REQUIRED IN THE STRUCTURE TO AVOID
COLD BRIDGING OCCURRING.
WALLS ABOVE FIRST FLOOR TO BE INSULATED STUD PARTITIONS

GROUND FLOOR
50 MM CONSOLIDATED HARDCORE BLINDED, 1200 GAUGE DPM LAPPED OVER DPC, 100 THK CASTLE FLOORING
GRADE EPS INSULATION BOARDS WITH PERIMETER INSULATION TO WALLS ALL AS TO MANUFACTURERS INSTRUCTIONS
100 MM CONCRETE GEN3 MIX SAND / CEMENT SCREED TO BRING FLOORS LEVEL (MIN 400mm).

FIRST FLOOR
75 x 220 GRADE SC5 TIMBER JOISTS AT 600 CC SPANNING 3.25 BETWEEN STEEL AND NEW WALL STRUTTING TO BE AT 90 DEGREES
TO JOISTS UNDER PARTITIONS AND BATH WITH 18mm WBRICK OR SIMILAR T&G FLOORING GRADE DECKING.
PROVIDE 100MM WOOL INSULATION TO FLOOR CAVITY TO REDUCE IMPACT NOISE. DOUBLE UP JOISTS FOR TRIMMER AND TRIMMING
MEMBERS TO BALCONY.
CEILING TO BE 15mm PLASTERBOARD.

WINDOWS
ALL DOORS ARE FOR SOFTWOOD SECTION AND FACTORY PAINTED CASE WINDOW / DOOR DOORS, CLIENT MAY REQUIRE
WHITE UPVC DOUBLE GLAZED WITH 16mm AIR GAP BETWEEN SEALED PLATES AND DRAFT SEALED WITH LOW E GLASS.
WINDOWS TO HAVE OPENABLE AREA OF AT LEAST 1/20 OF THE FLOOR AREA AND TRICKLE VENTS TO GIVE 8000mm2
VENTILATION TO HABITABLE ROOMS AND 4000mm2 TO OTHER ROOMS.
ALL WINDOWS TO HABITABLE ROOMS IN THE FIRST STOREY SHOULD HAVE AN UNOBSTRUCTED OPENABLE AREA OF 0.33M2
AND AT LEAST 450mm WIDE AND 450mm HIGH AND CILL LEVEL NOT TO BE MORE THAN 800mm ABOVE FLOOR.
ALL CATCHES TO HAVE 50mm BEARING & LAID TO MANUFACTURERS INSTRUCTIONS.
ALL GLASS TO COMPLY WITH BS 6206 STD. ALL WINDOWS ANY GLASS WITHIN
800 ABOVE FFL TO BE TOUGHENED, DOORS : ANY GLASS WITHIN 500 ABOVE FFL AND 300 AROUND DOOR TO BE TOUGHENED
WINDOWS DO NOT EXCEED 25% RULE.
WINDOWS AND DOORS WILL BE RESEALED OVER THE CAVITY BY 30mm.
VELUX WINDOW TO FIT BETWEEN ROOF TRUSSES WITH INSULATED STUD DOWN TO CEILING LEVEL.

HEATING
EXTEND EXISTING HEATING SYSTEM, POSITION OF RADIATORS TO BE AGREED WITH CLIENT, THERMOSTATIC
CONTROLS TO ALL RADIATORS.

ELECTRICS
SOCKETS / OUTLETS / LIGHT SWITCHES TO BE 13 AMP, REGULATIONS & WITHIN STD. POSITIONS TO BE AGREED WITH CLIENT.

SMOKE DETECTION
PROVIDE MAINS OPERATED SELF CONTAINED SMOKE ALARMS TO BS5446 PART 1 IN ACCORDANCE WITH APPROVED DOCUMENT B

ROOF
SANKEY OR SIMILAR APPROVED INTERLOCKING ROOF TILES TO MATCH EXISTING HOUSE, ONE LAYER OF BITUMINOUS ROOFING
FELT TYPE 1 FIBRE BASED TO BS 747 TYPE 1 W, 50 OVERLAP, BATTENS 38 x 25 AT GAUGE CENTRES TO MANUFACTURERS INSTRUCTIONS
ROOF TILES TO BE TYPE AT 600 CENTRES FIXED TO MANUFACTURERS INSTRUCTIONS TO MATCH EXISTING, 25mm INSULATION TO
ROOF TO BE 250 mm FIBRE GLASS CROSS LAID, SOFTWOOD FASCIA BOARDS AND SOFFITS TO MATCH EXISTING, PROVIDE EITHER 10 OVER FASCIA
VENTILATION SYSTEM COMPRISING OF HIGH DENSITY BLACK POLYPROPYLENE STRIP VENTILATORS, COVER FILLERS, VACUUM MOLDED
POLYSTYRENE DOT SPACERS AND TIMBER FILLETS / PLYWOOD SUPPORTS OR 2) CONTINUOUS 6mm SLOTTED VENT STRIP COMPLETE
WITH ROLLED FORMED EAVES VENT BETWEEN RAFTERS TO PROVIDE 50mm CLEAR OPENING.

DRAINS
NEW PIPEWORK GOING UNDER PROPOSED EXTENSION TO BE 100mm UPVC POLYPROPYLENE OR SIMILAR PIPEWORK, PIPE LAID TO
MANUFACTURERS INSTRUCTIONS, DRAINS PASSING THROUGH WALL TO HAVE CONCRETE LINTEL OVER WITH 50mm CLEAR AROUND
DRAINS TO BE SEALED WITH METAL PROTECTION WHERE THEY PENETRATE THE WALLS, PIPES TO BE LAID ON SELECTED BACKFILL
& GRANULAR BED, ALL JUNCTIONS TO HAVE BLOW BACKS, PROTECT ALL DRAINS WITH 150mm MIN 200mm COVER WITH CONC
SLABS/PATH, FALL TO VARY IN 1 IN 80, BUILD IN NEW POLYPROPYLENE 3 DENSITY BLACK ROWPIPE INSPECTION CHAMBER WITH PIPE SEAL & CAST IRON
L.D. S.V.P. TO HAVE BALLOON FINIAL TO ALL WASTE PIPES PROVIDE 75mm DEEP SEAL TRAP & FLOODING PROVISION, CONNECTION OF
THE WC TO THE DRAINS TO BE ALSO ABOVE THE INVERT OF THE DRAINS CONNECTED TO EXISTING SEPTIC TANKS, SVP TO EXTEND
TO OPEN AIR.

SURFACE WATER DRAINAGE
USE MARLEY OR SIMILAR 112mm HALF ROUND PVC GUTTER TO MATCH EXISTING TO 68mm RWP COMPLETE WITH REDUCER CONNECTED
TO 110mm UPVC PIPES FLEXIBLY JOINTED TO FALL MIN 1:80 (AS RECOMMENDED BY MARLEY), TRENCH TO BE AS NARROW AS
PRACTICAL, PREPARED BED WITH 100mm DEEP LAYER OF RECOMMENDED BEDDING MATERIAL e.g. GRAVEL FROM 5 TO 10mm, SAND OR
OTHER MATERIAL WHICH HAS A COMPACTION FACTOR LESS THAN 1.4, **0.5 m PACK SELECTED BACK FILL MATERIAL AROUND PIPE AND**
CAREFULLY COMPACTED BY HAND IN 150mm LAYERS WITH THE CROWN OF THE PIPE, **COMPACT BACKFILL BY HAND UNTIL 300mm OF**
COVER HAS BEEN MADE, REMAINING BACKFILL CAN BE COMPACTED WITH MECHANICAL COMPACTING EQUIPMENT. ALL TAKEN TO
SOAKAWAYS MINIMUM OF 5m FROM BUILDING CONSTRUCTED OF MAXIMUM 300mm DIAMETER BORE HOLES WITH RESTORE
OVER AND COVERED WITH TOPSOIL ETC.

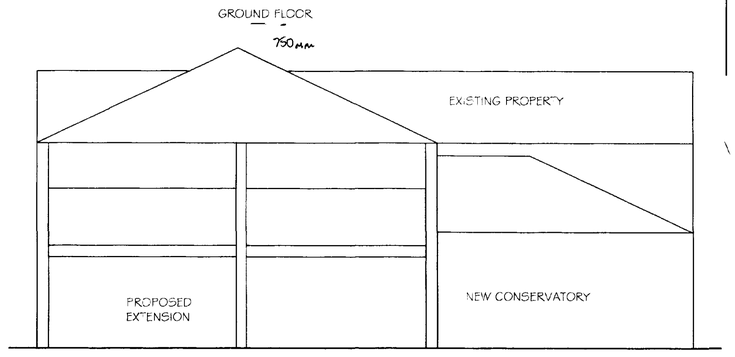
VENTILATION
TO WC PROVIDE MECHANICAL VENTILATION TO GIVE A MIN AIR FLOW OF 15 LITRES PER SECOND TO THE EXTERNAL AIR WITH 15 MIN OVERRUN, C/W GUARD
TO BATHROOM PROVIDE MECHANICAL VENTILATION TO GIVE A MIN AIR FLOW OF 15 LITRES PER SECOND TO THE EXTERNAL AIR C/W GUARD.

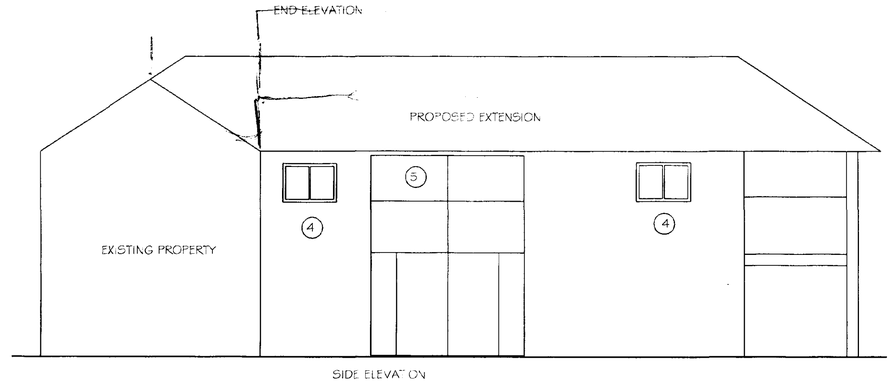
BALUSTRADING (EXTERNAL AND EXTERNAL)
ALL BALUSTRADING TO BE ABLE TO RESIST HORIZONTAL FORCE OF 0.36 kN AND AT A HEIGHT OF 900mm INSIDE AND 1100mm OUTSIDE.
VERTICAL GAURDING TO BALCONIES MUST NOT BE MORE THAN 100mm APART.

EXTERNAL BALCONY
PERIMETER MEMBERS 75 x 220, POSTS 150 x 150, JOISTS 47 x 47 @ 600 CC.
WITH NON-SLIP TIMBER DECKING FITTED TO TOP OF JOISTS. ALL TIMBER TO BE EXTERNAL GRADE AND TREATED.
CALCULATIONS TO THE EXPOSED ROOF AREA MIGHT BE REQUIRED FROM A STRUCTURAL ENGINEER.

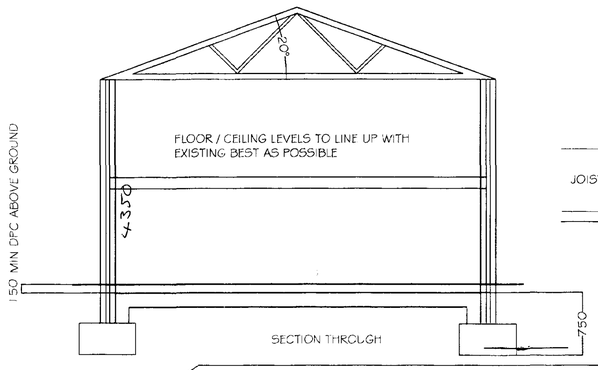
STEELWORK
MAIN BEAM - UC254 x 73 SPANNING FROM TOP WALL TO EXISTING.
DOOR BEAM - 152 x 89 UC 29.8 SPANNING OVER DOOR WITH STUB TO RECEIVE MAIN BEAM.
FOR BOTH MEMBERS SEE ATTACHED CALCULATIONS.

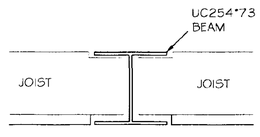
REF	QTY	BOULTON AND PAUL	INTO	LENGTH
1	2	FCS180	LI/S 50	2400
2	3	760 WIDE	STUDWORK	
3	1	FCS180	LI/S 50	3000
4	3	2NO7CV	LI/S 50	1500
5	1	BESPOKE	LI/MD 50	3000
6	1	FCS180	AS CALCS	



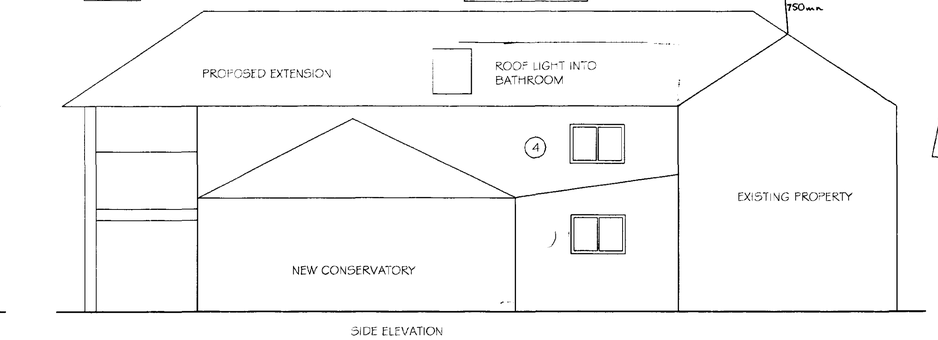


SIDE ELEVATION



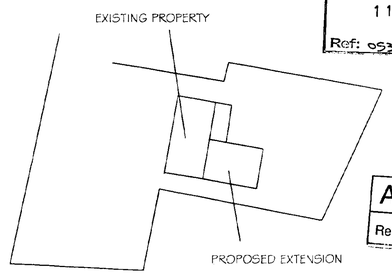


SECTION A-A



SIDE ELEVATION

SHDC
Planning & Development
11 MAY 2005
Ref: 05/341/03



SITE PLAN

AMENDED PLAN
Ref. A1

REVISION B - ROOF LINE AMMENDED
REVISION A - TO SUIT BUILDING REGULATIONS.

DRAWING 1B OF 1

SCALE 1:50