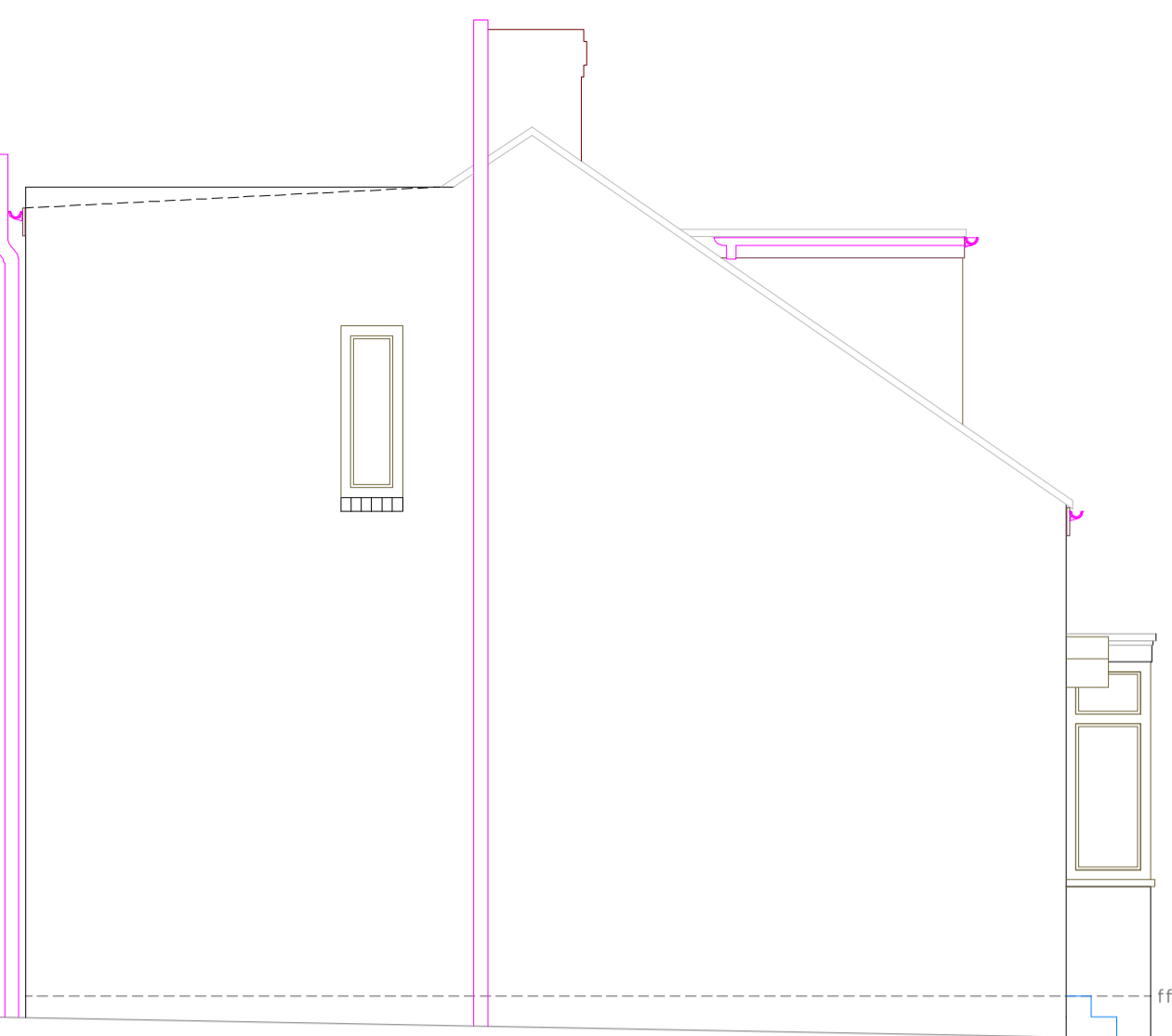




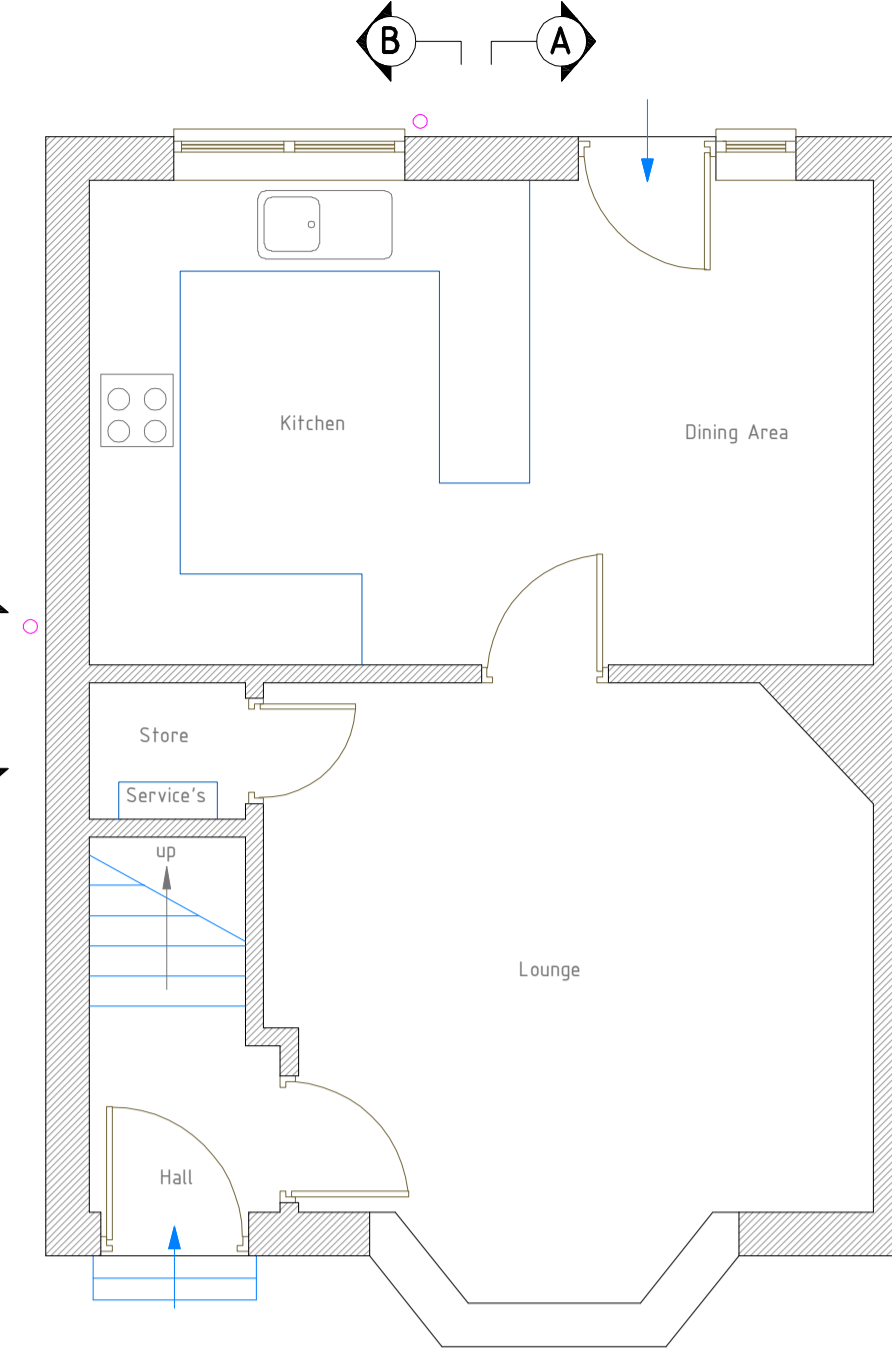
EXISTING FRONT ELEVATION "CC"

EXISTING REAR ELEVATION "DD"

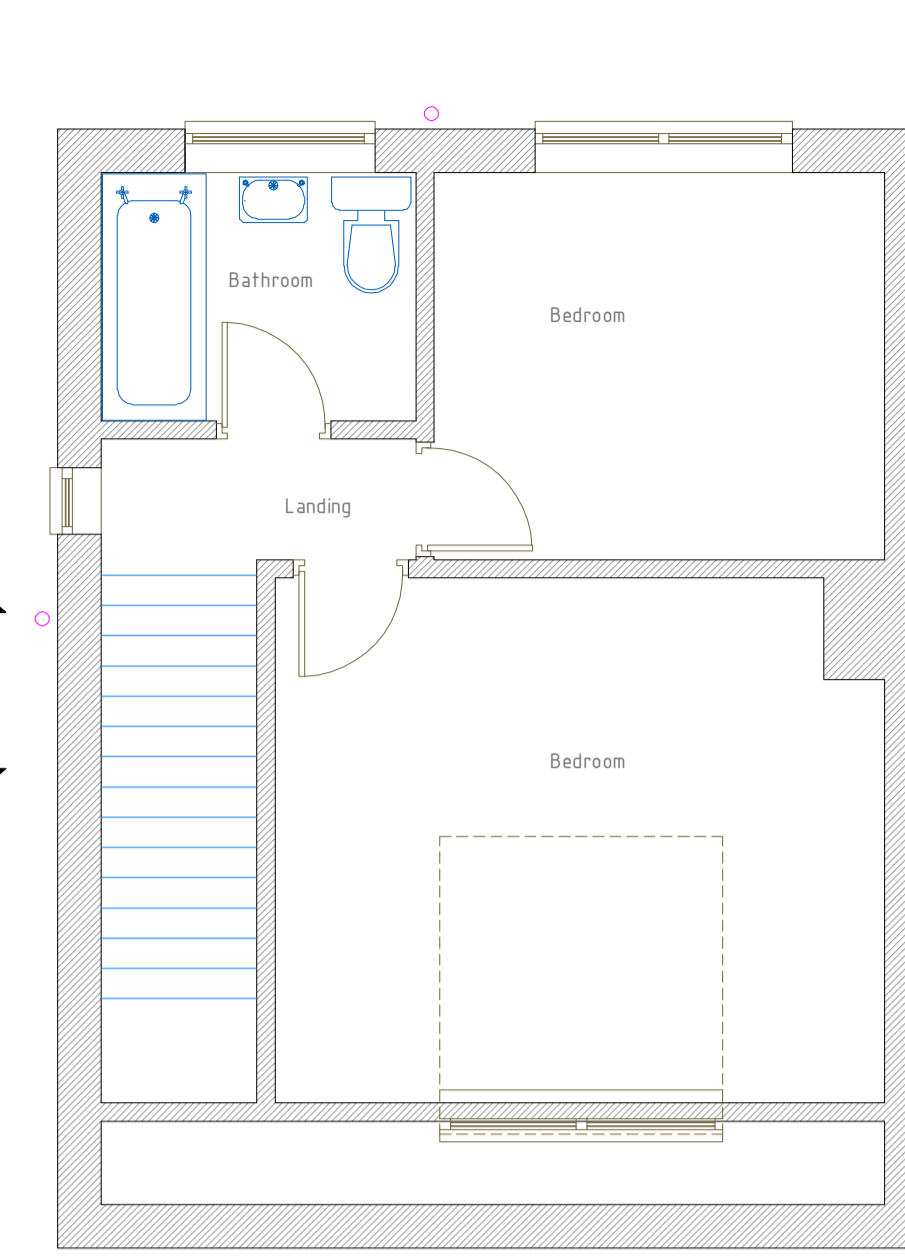


EXISTING SIDE ELEVATION "BB"

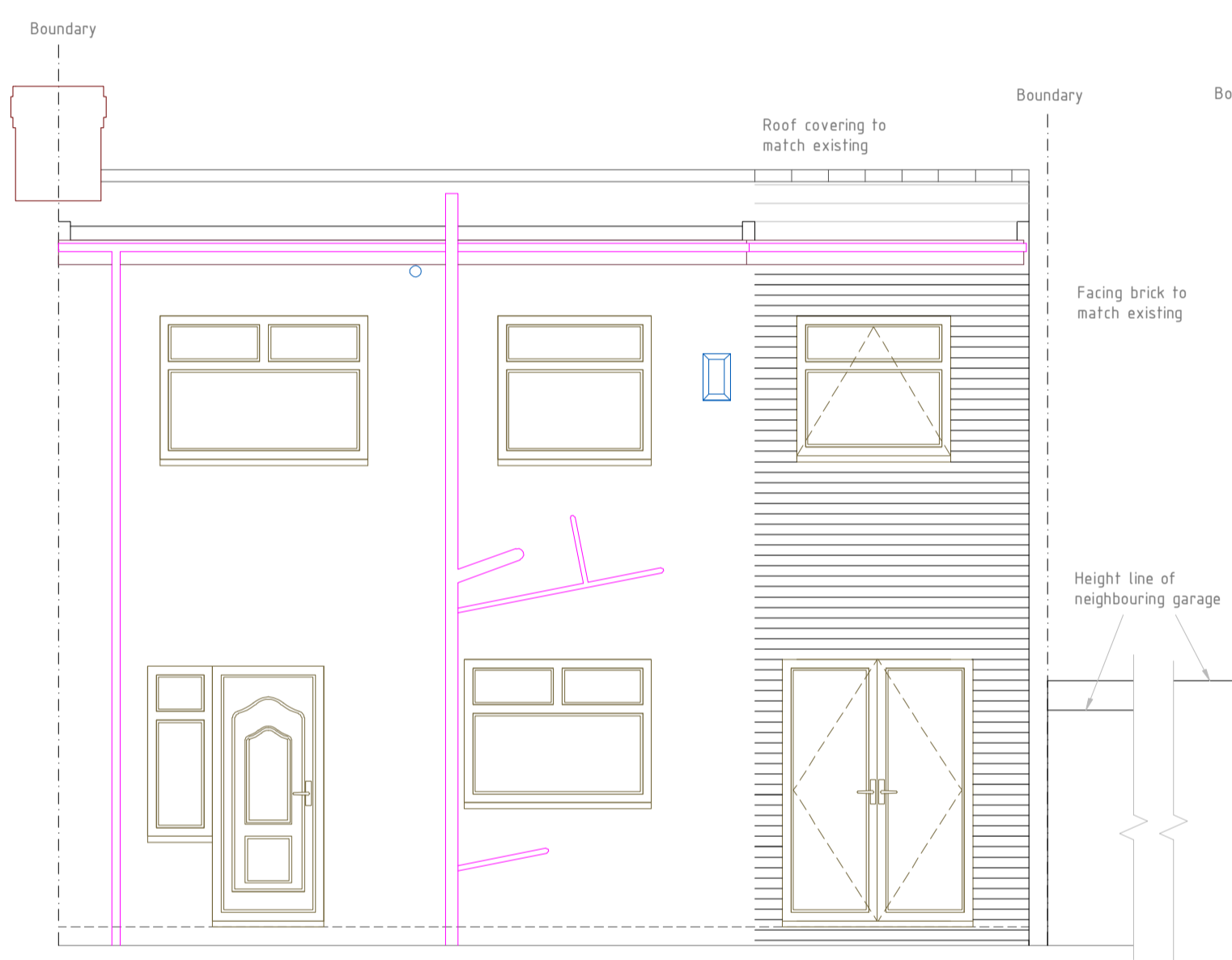
Existing vent pipe to be grubbed up & made good



EXISTING G/F PLAN



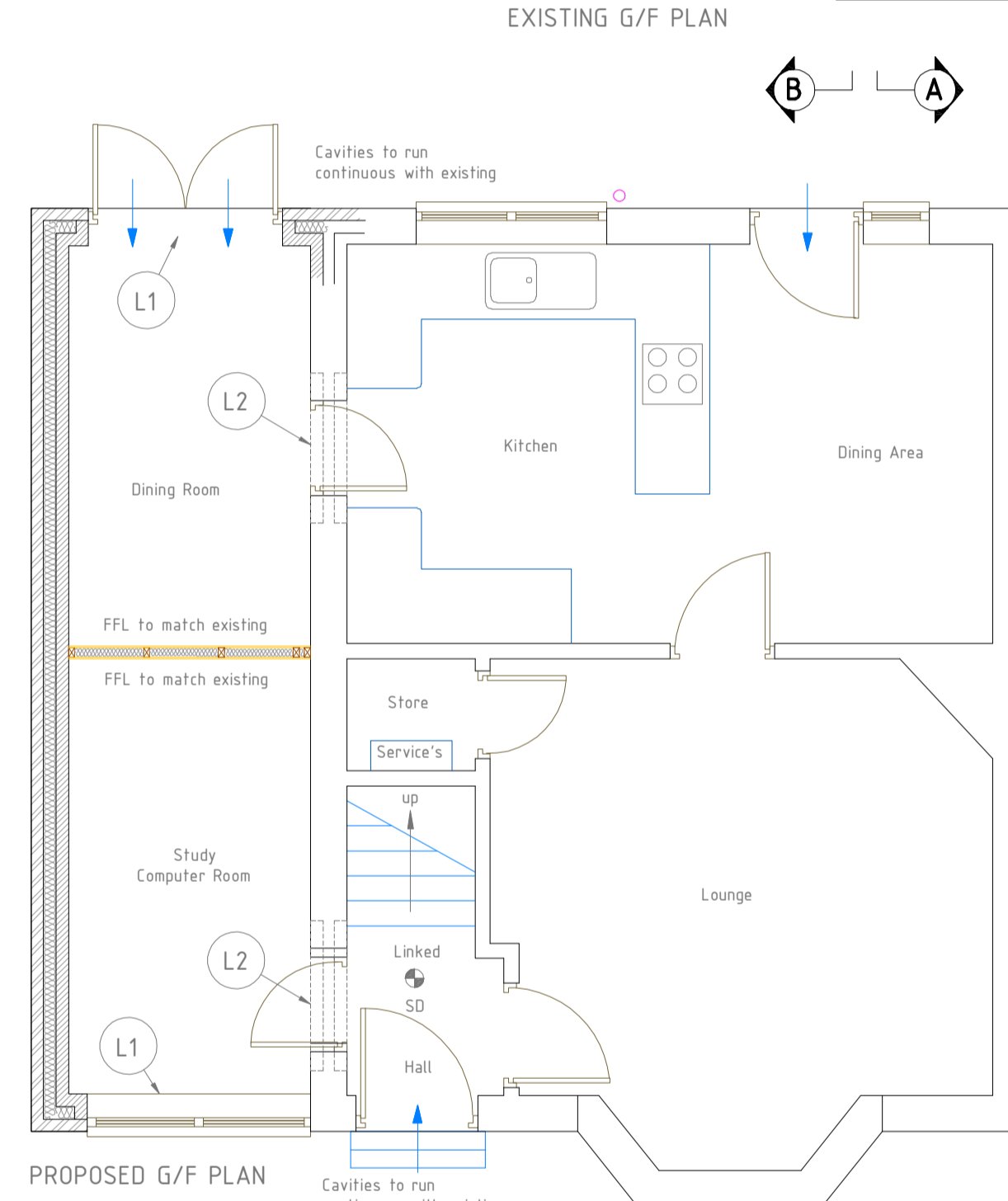
EXISTING F/F PLAN



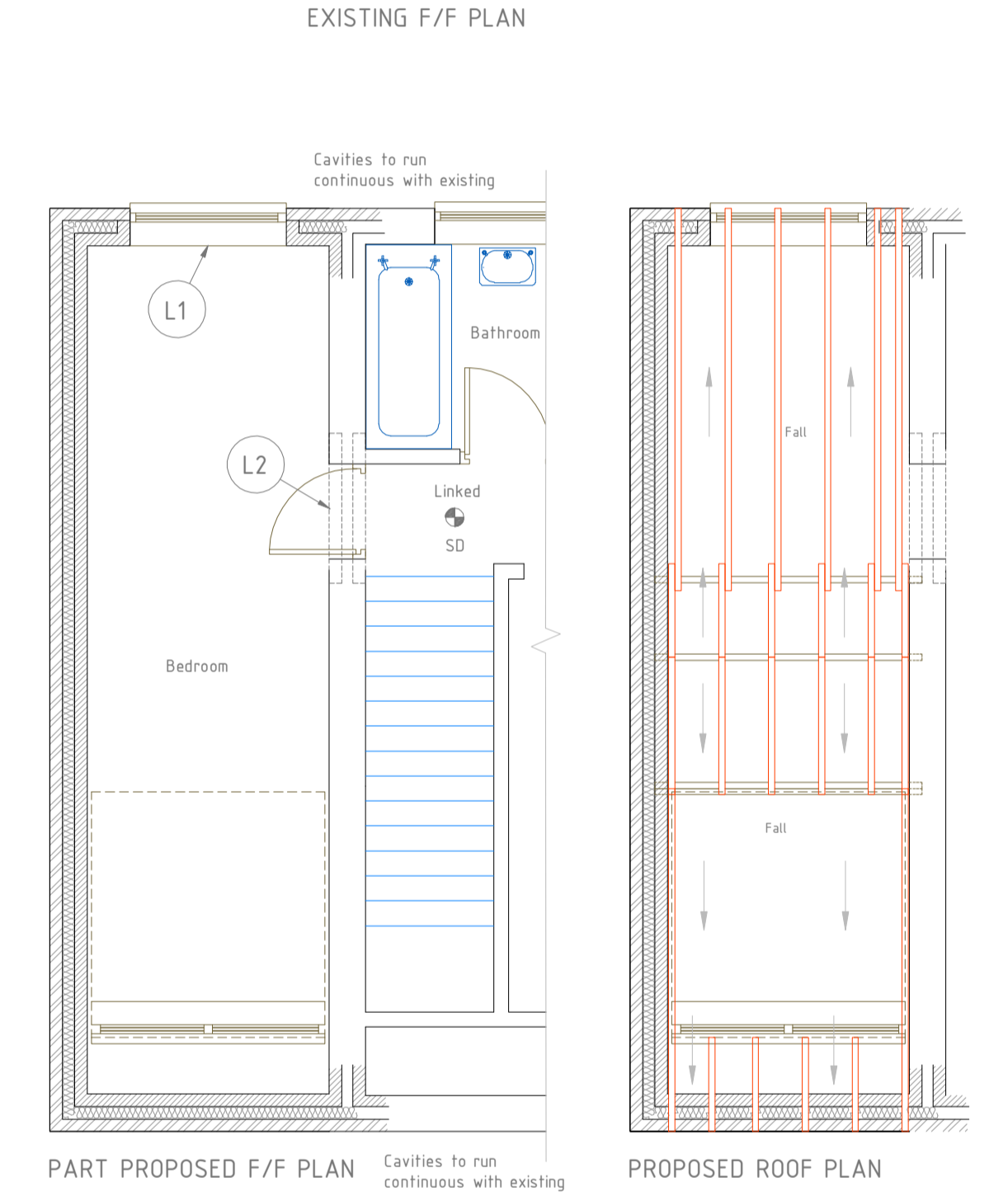
PROPOSED REAR ELEVATION "DD"



PROPOSED FRONT ELEVATION "CC"



PROPOSED G/F PLAN



PART PROPOSED F/F PLAN

PROPOSED ROOF PLAN

ROOF JOIST DESIGN SHEET

Joists at 50mm x 150mm spanning 2645mm spaced at 400mm (max span 3100mm)
 $Z = I/Y = 145.78\text{mm}^3$
 allowable bending $M_e Z \leq 0.72\text{KNm}$
 max load for UDL $W_e 0.6\text{KN/m}$
 actual loading with live load $15\text{KN/m}^2 = 0.7\text{KN/m}$
 max deflection $\text{span}/500 = 6.2\text{mm}$
 I required = $(5xW_e^3)/(384EI) = 14.021$
 I (b 3 /12) = 14.062 therefore OK

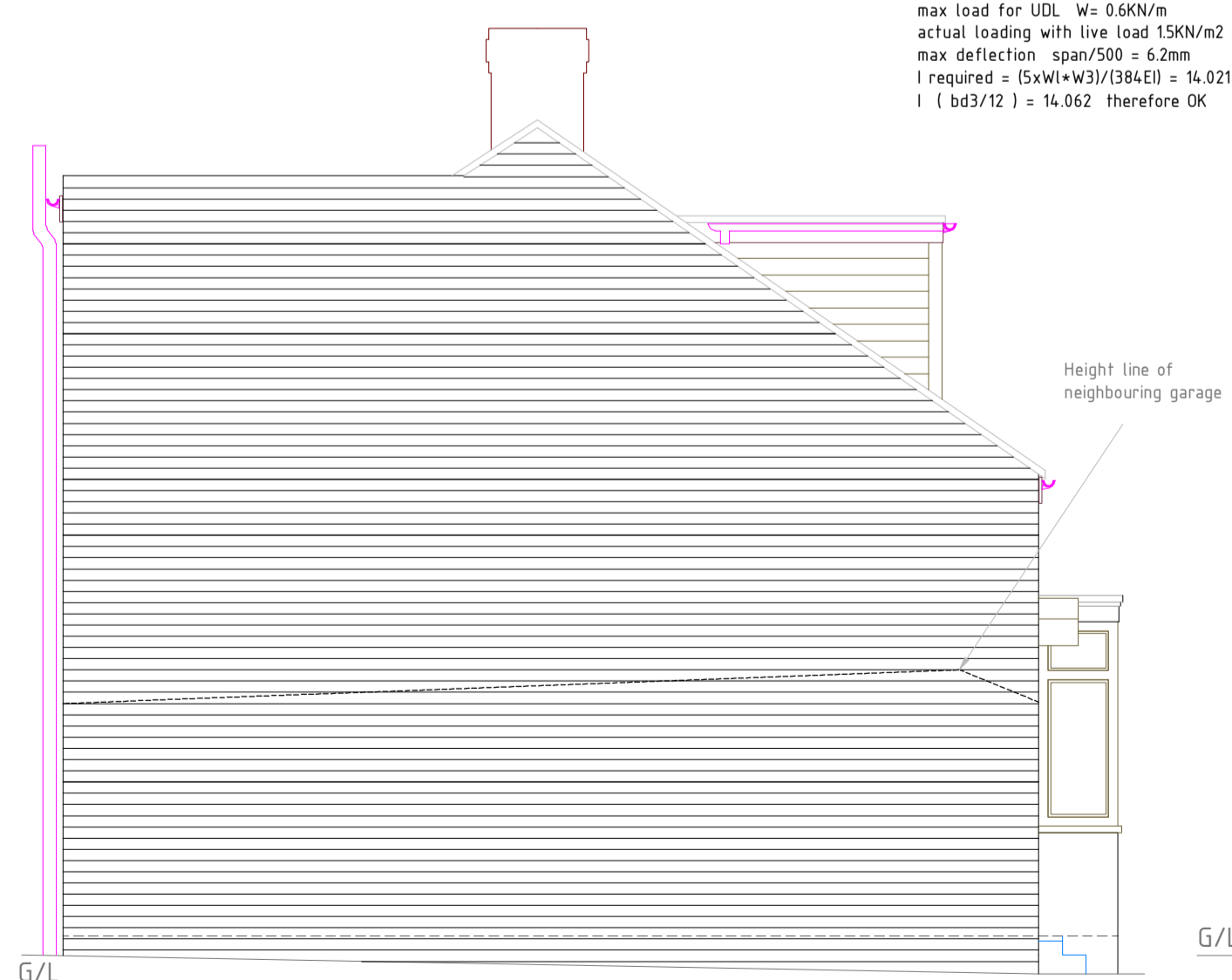
CEILING JOIST DESIGN SHEET

Joists at 50mm x 150mm spanning 1930mm spaced at 600mm (max span 3255mm)
 $Z = I/Y = 152.57\text{mm}^3$
 allowable bending $M_e Z \leq 0.76\text{KNm}$
 actual loading with live load $0.75\text{KN/m}^2 = 0.62\text{KN/m}$
 max load for UDL $W_e 0.6\text{KN/m}$
 max deflection $\text{span}/500 = 6.5\text{mm}$
 I req $(5xW_e^3)/(384EI) = 14.01$
 I is $b^3/12 = 14.062$

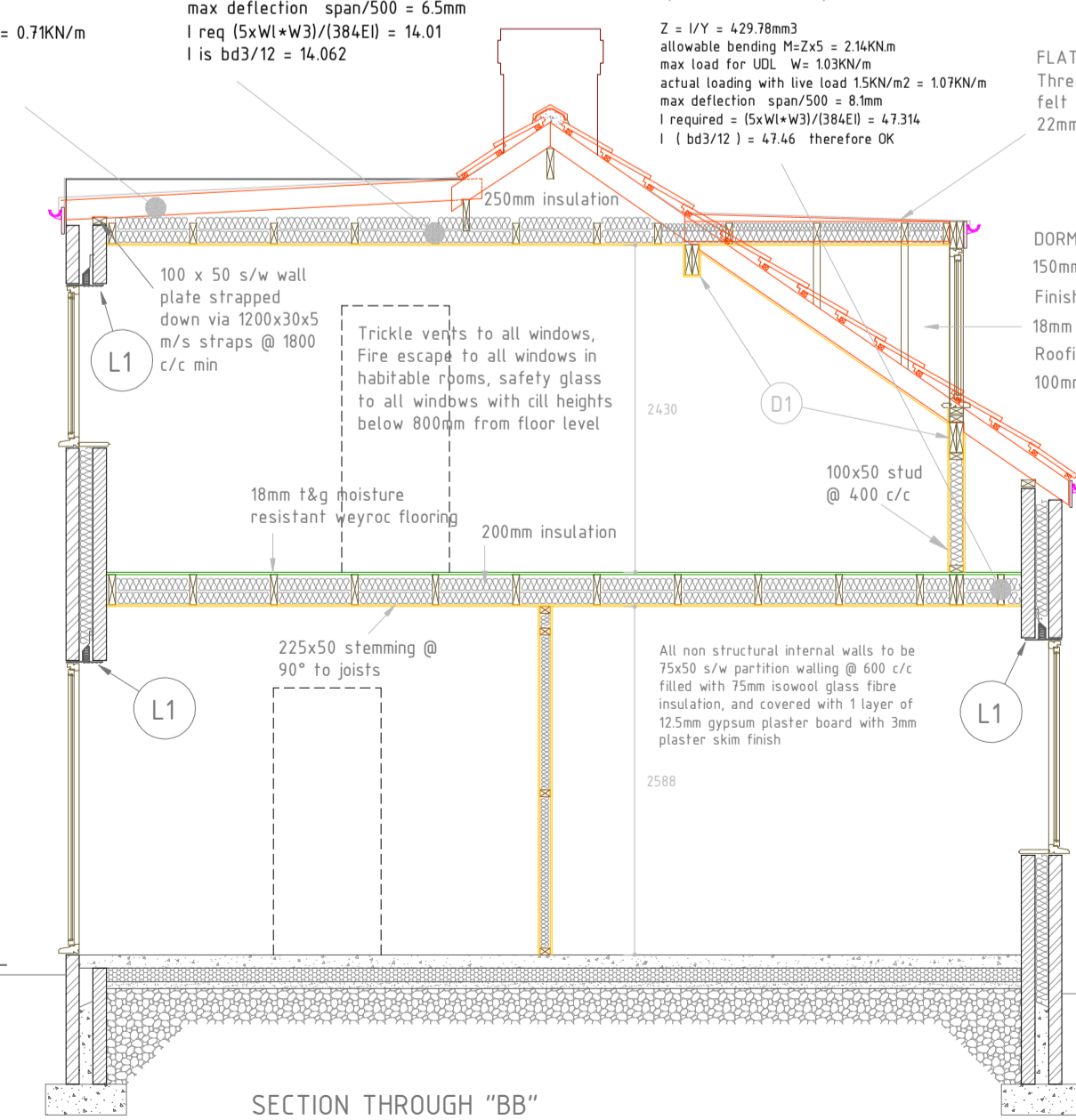
FLOOR JOIST DESIGN SHEET

Floor joists at 50mm x 225mm spanning 1930mm spaced at 600mm (max span 4075mm)
 $Z = I/Y = 429.78\text{mm}^3$
 allowable bending $M_e Z \leq 2.4\text{KNm}$
 max load for UDL $W_e 10.9\text{KN/m}$
 actual loading with live load $15\text{KN/m}^2 = 10.9\text{KN/m}$
 max deflection $\text{span}/500 = 8\text{mm}$
 I required = $(5xW_e^3)/(384EI) = 4.7314$
 I (b 3 /12) = 4.746 therefore OK

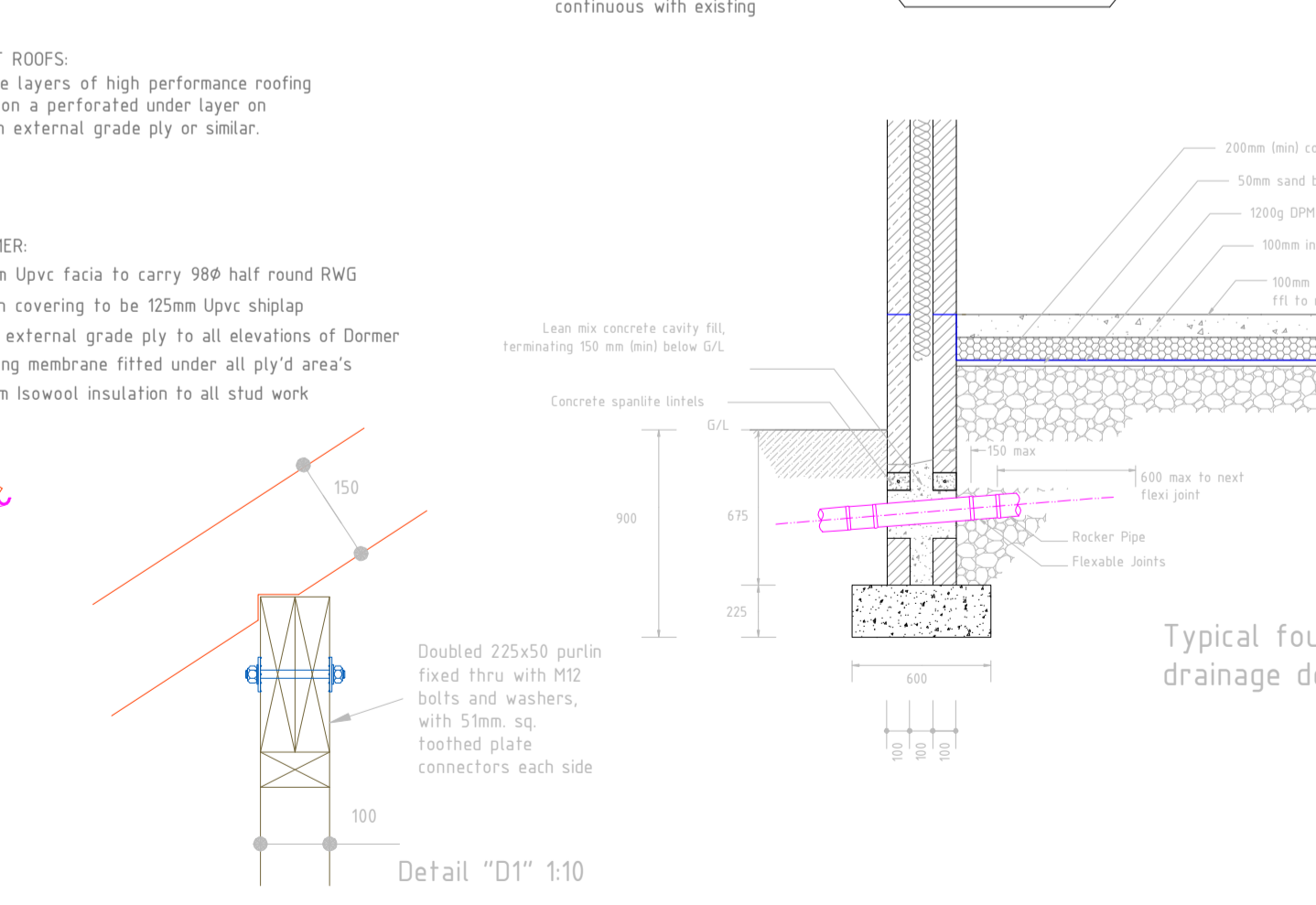
FLAT ROOFS:
 Three layers of high performance roofing felt on a perforated under layer on 22mm external grade ply or similar.



PROPOSED SIDE ELEVATION "BB"



SECTION THROUGH "BB"

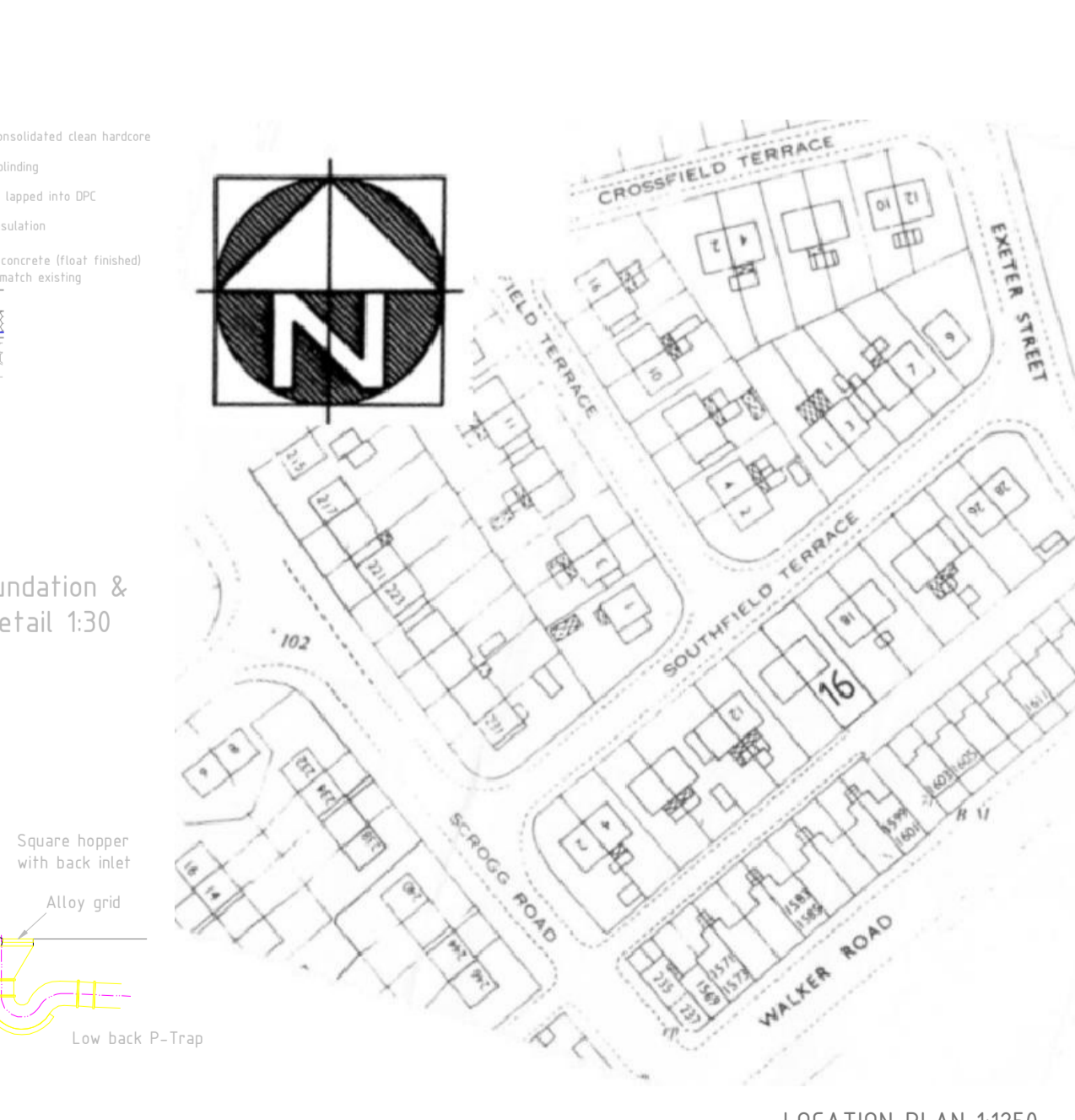


TYPICAL FOUNDATION & DRAINAGE DETAIL 1:30

INSPECTION CHAMBER PLAN



TYPICAL DRAINAGE DETAILS 1:30



LOCATION PLAN 1:250

FOUNDATIONS
 To be a minimum 600x225mm deep concrete strip foundations, minimum depth 600mm. Actual type and depth of foundation to be determined on site following inspection of ground conditions by Local Authority Building Control Officer. If deemed ground conditions require more specialist foundations than those specified above, the Client must seek the advice of a Structural Engineer. All foundations to be taken down beyond any existing drainage levels.

EXTERNAL WALLS
 300mm cavity construction, consisting of 100mm facing brick outer leaf to match existing, 100mm cavity, 100mm Thermalite block work. Cavity insulation to consist of 45mm Kingspan Thermaflax TW50 (or similar approved to achieve minimum U value of 0.35). Provide galvanised steel cavity wall ties (1900mm horizontally, 450mm vertically, decreased to 225mm vertically around openings). 9mm Supertex board cavity closer. New cavities to run continuous with existing. Close cavities at openings including installation of insulated vertical DPC.

LINTELS
 All lintels to be Galvalume insulated steel lintels or similar over all new openings, 150mm end bearing to all lintels.

GROUND FLOOR
 100mm thick concrete floor slab float finish on 55mm Kingspan Thermaflax T10 insulation (or similar) to achieve minimum U value of 0.25) turned up at all edges on 120g visqueen dpm on minimum 200mm thick well compacted clean stone hardcore with 50mm minimum clean sand bedding. All new dpc's to be minimum 150mm above ground level and to overlap into dpm. Provide air bricks at minimum 1800mm centres ducted through to ventilate existing floor void if any existing air bricks are blocked by new extension. All new dpc's to be minimum 150mm above ground level and to lap into dpm.

ROOF TRUSSES
 Roof trusses to be designed & built by specialist manufacturer, all trusses to be installed to manufacturer's specifications, all structural calculations to be submitted to building control for approval prior to installation.

PITCHED ROOF
 Tiles to match existing on 38 x 25mm s/w battens on "Tyvec" breathable roofing felt or similar on roof trusses, code 4 lead flashing, 100mm glass fibre insulation laid between ceiling joists, 150mm laid over joists opposite way to first layer. Provide proprietary rafter trays to ensure insulation does not obstruct the air flow.

VENTILATION TO PITCHED ROOFS
 (If not using breathable roofing felt)
 Provide continuous 10mm wide ventilation gap to eaves and the equivalent of 5mm continuous ventilation gap (tile vents) at ridge level. All open ventilation to receive proprietary anti vermin mesh.

ANCHOR STRAPS
 30 x 5mm galvanised steel straps to be fixed at 1800mm centres along 100mm x 50mm wall plate and tied down wall minimum 450mm, also to first floor joist, to span 1200mm over joists if applicable.

CEILING
 Generally to be 12.5mm plasterboard and 3mm skim to underside. Min 30 min fire check to all structural steelwork.

BELOW GROUND DRAINAGE
 All drainage to connect to existing service. Where drains pass through walls form opening with Spanlite concrete lintels or similar leaving a minimum 50mm clear gap around drainage pipe. Provide cement fibre collars to both sides of openings.

ABOVE GROUND DRAINAGE
 All drainage to connect to existing service
 Gutters - 100mm PVCu half round
 Rainwater pipes - 65mm diameter PVCu
 Soil and vent pipes - 100mm PVCu

VENTILATION
 Windows and are to provide a minimum of 1/20th floor area natural ventilation. Background ventilation minimum 8000 sq mm to each habitable room, 4000 sq mm to Kitchens, Sanitary and Utilities.

Provide mechanical extract ducted to the outside air to the following where applicable:
 1) Kitchen/Utility
 2) W/C
 3) Bathroom

GLAZING
 All glazing to be double glazed sealed units into new uPVC frames with Pilkington "K" glass, to comply with Part L Building Regulations with a minimum 16mm air gap to achieve minimum U value to meet current building regulations. Any glazing to windows under a height of 800mm and to doors under 1500mm to be safety glass. Any glazing in adjacent panels within 300mm of doors to be safety glass, trickle vents to be fitted to all new windows to provide 8000 sq mm per habitable room. Any glazing to a habitable room must have provision for an emergency fire escape, opening to be no more than 1100mm from floor level and no less than 600mm from floor level.

ELECTRICAL WORK
 All electrical work to comply with approved document P (electrical safety) must be designed, installed, inspected and tested by a person competent to do so. Prior to completion the L/A should be satisfied that the part P has been complied with. This may require an appropriate BS 7671 electrical installation certificate to be issued by a person competent to do so.

SMOKE DETECTORS
 Linked smoke alarms to be fitted at bottom and top of staircase so that activation of one will trigger the other, to be wired into mains on a separate fused circuit.

NOTE
 All dimensions are to be checked on site prior to the commencement of works. Any modifications considered an improvement by the Builder are to be submitted to the Local Authority and comply with any approval necessary. All work to comply with current Building Regulations and good building practice. If the Contractor wishes to use any alternative materials to those specified, they must be submitted to the Building Control Officer for approval.

LINTEL SCHEDULE	
L1	Galvalume C980/100 Steel Lintel
L2	Boumacrete R15A Precast concrete lintel (100 x 225dp)
L3	Steels to be on structural engineers coats
L4	Use existing lintel in situ

Min. bearing for all lintels to be 150mm

G.W. Architectural Design
 15 St Romans View,
 Low Fell, Gateshead, NE9 7TF
 Tel/Fax/Ans (0191) 420 8844
 www.drawingplans.co.uk

Project: Two story side extension to provide G/F study & dining room and F/F bedroom
 Location: [Location details]

DRAWING STATUS: FEASIBILITY PLANNING BUILDING REGULATIONS

Drawing No: PB/06/001
 Scale: 1:50
 Drawn by: Gary Wheatley
 Date: Oct 06