

**FOUNDATIONS**  
 Existing foundations to be checked for suitability. 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**  
 235mm cavity construction, consisting of 100mm facing brick outer leaf to match existing, 75mm cavity, 100mm Thermatite block work. Cavity insulation to consist of 45mm Kingspan ThermaWall TW50 (or similar approved) all to achieve a max u value of 0.30W/m<sup>2</sup>K. Provide galvanised steel cavity wall ties (750mm horizontally, 450mm vertically) decreased to 225mm vertically around openings. 9mm Superior 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.

**FIRST FLOOR**  
 20x50 timber joists "built into" inner leaf, 18mm moisture resistant weyroc T&G flooring with 200mm isowool insulation between joists, mild steel anchor straps to span min 1200mm over joists.

**ROOF**  
 Roof to be flat "warm roof" design as per drawings see Detail 1 (D1)

**PITCHED ROOF**  
 Make good to existing pitched roof where abuts new works, with code 4 lead flashing and stepped cavity over-trays to be installed above.

**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**  
 30mm x 5mm galvanised steel straps to be fixed at 1800mm centers 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 Spanrite concrete lintels or similar leaving a minimum 50mm clear gap around drainage pipe. Provide cement fiber 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.

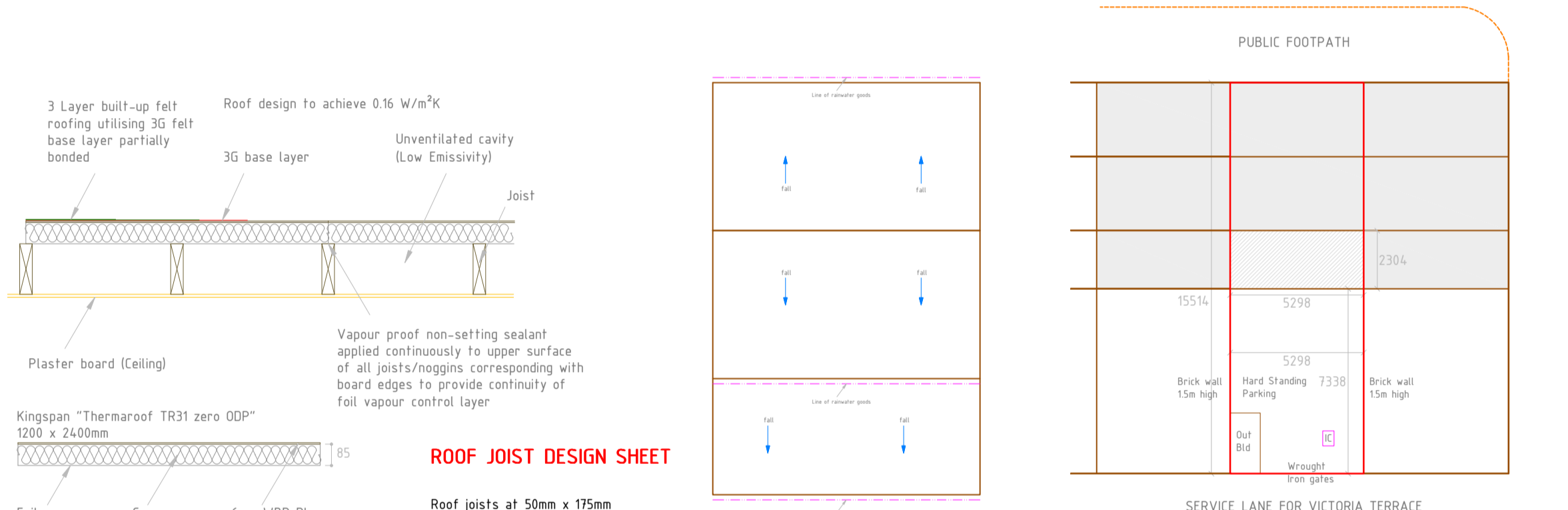
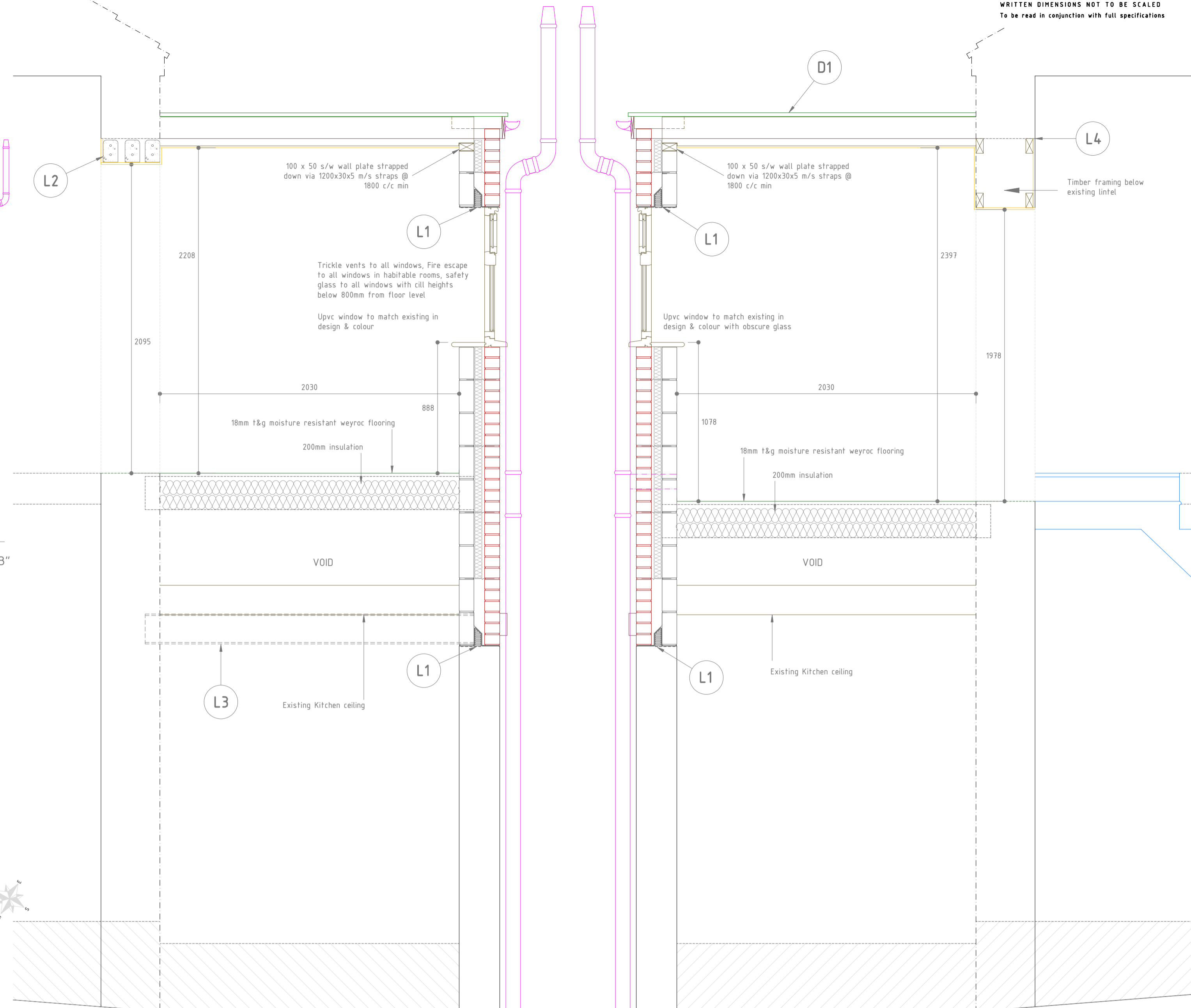
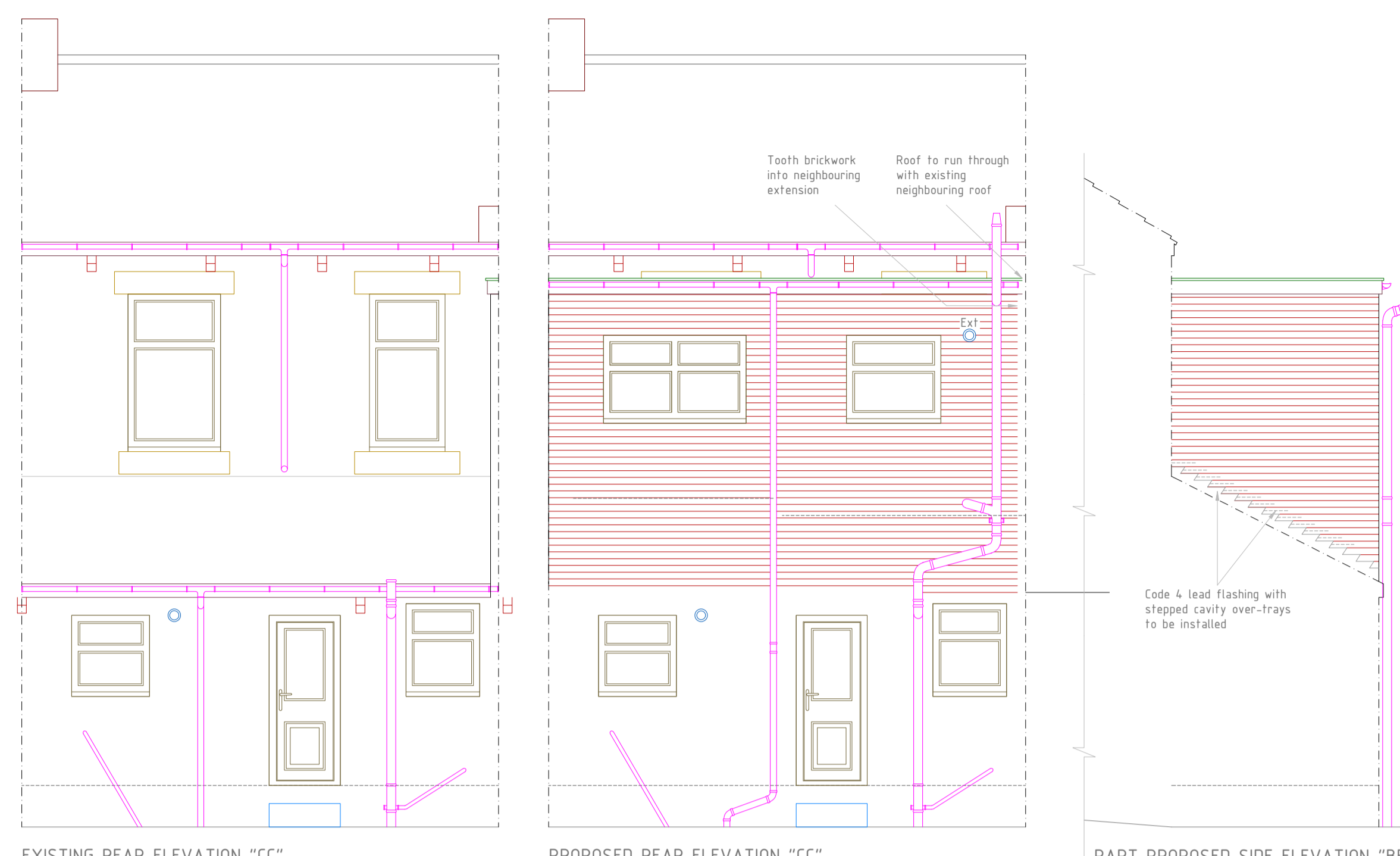
Provide mechanical extract ducted to the outside air to the following where applicable:  
 1) Kitchen/Utility - 60 ltr/sec  
 2) W/C - N/A  
 3) Bathroom - 15 ltr/sec

**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 electric 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.



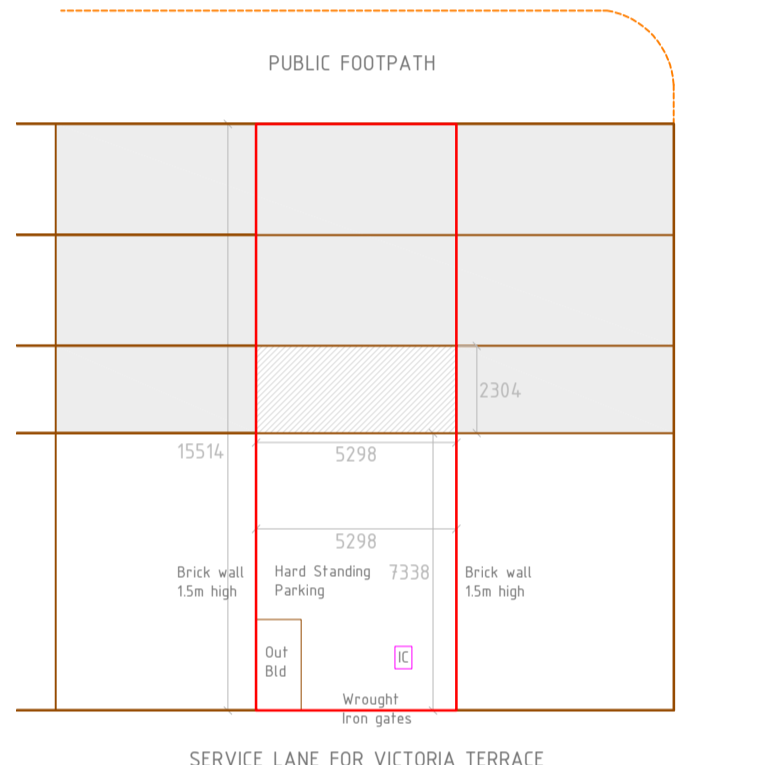
**WARM ROOF DETAIL 1:20**

Board Size	1200x 2400mm
Insulation Thickness (mm)	45 50 55 60 70 75 80 85
Upper Facing	6mm WBP Plywood
Core	CFC/HFC-free rigid urethane
Lower Facing	Composite Foil
Fire Performance	
- FAA Rating	BS 476: Part 3: 1975
- Class 1	BS 476: Part 7: 1997

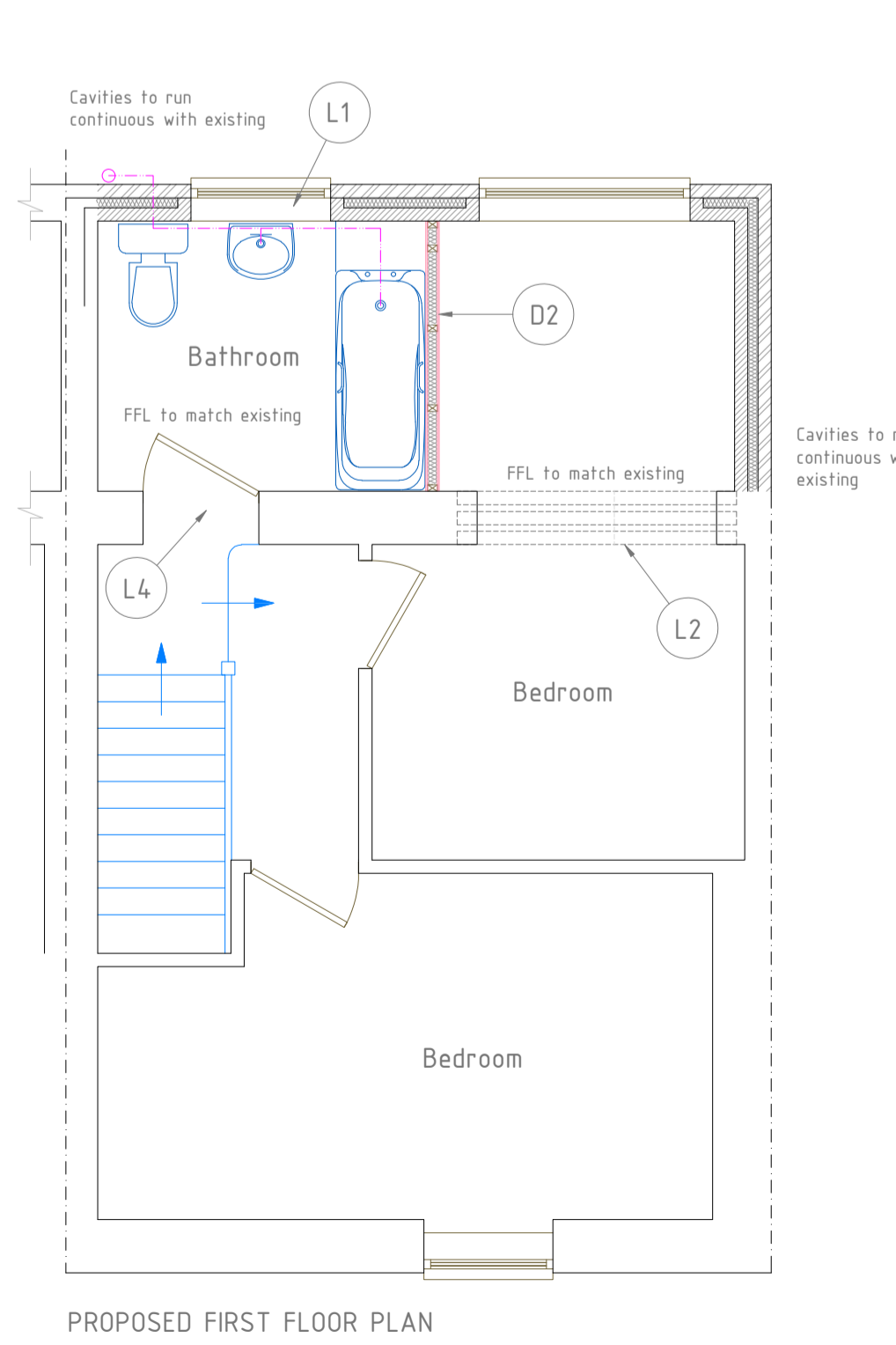
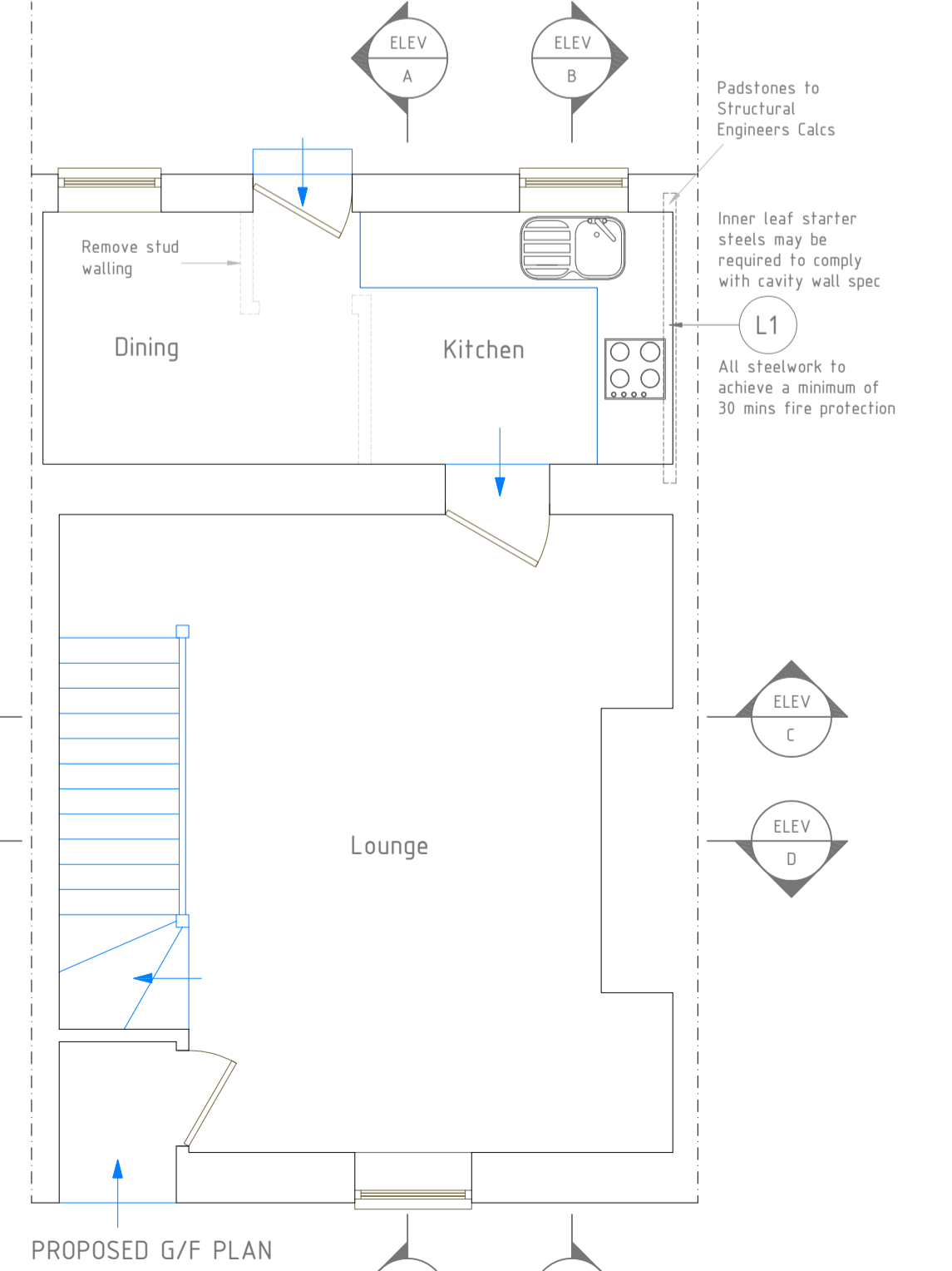
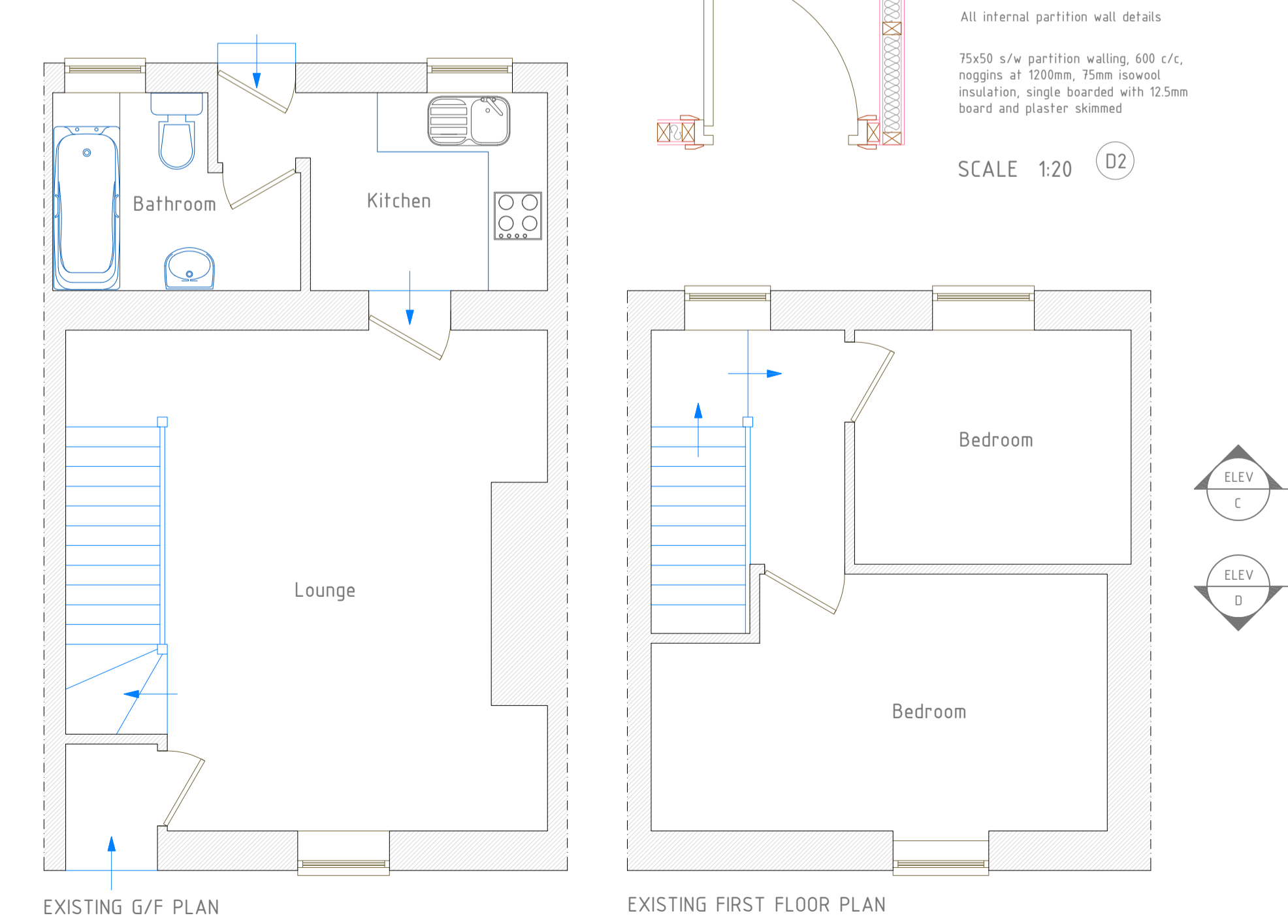
**ROOF JOIST DESIGN SHEET**

Roof joists at 50mm x 175mm spanning 2100mm spaced at 600mm

$Z = I/Y = 231.6\text{mm}^3$   
 allowable bending  $M_{zAS} = 115\text{KNm}$   
 max load for UDL,  $W = 0.7\text{KN/m}$   
 actual loading with live load  $15\text{KN/m}^2 = 0.7\text{KN/m}$   
 $I$  required =  $(5xW^3)/(384EI) = 22.296$   
 $I$  (bd<sup>3</sup>/12) = 22.33 therefore OK



**SITE PLAN 1:200**  
 Additions shown in hatch



**LINTEL SCHEDULE**

L1	Cotnic cougar CD90/100 Steel Lintel
L2	Bournecrete R15A Precast concrete lintel (100 x 225)
L3	Steels to be as structural engineers advice
L4	Use existing lintel in situ

Min. bearing for all lintels to be 150mm

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**PROJECT**  
 Second storey extension to rear elevation to provide bathroom to first floor

**LOCATION**

**DRAWING STATUS**  
 [ ] FEASIBILITY [X] PLANNING [ ] BUILDING REGULATIONS

Drawing No: 107/JN/09/001 Rev: A  
 Scale: Drawn by: Date: 150 @ A1 Gary Wheatley Aug 09