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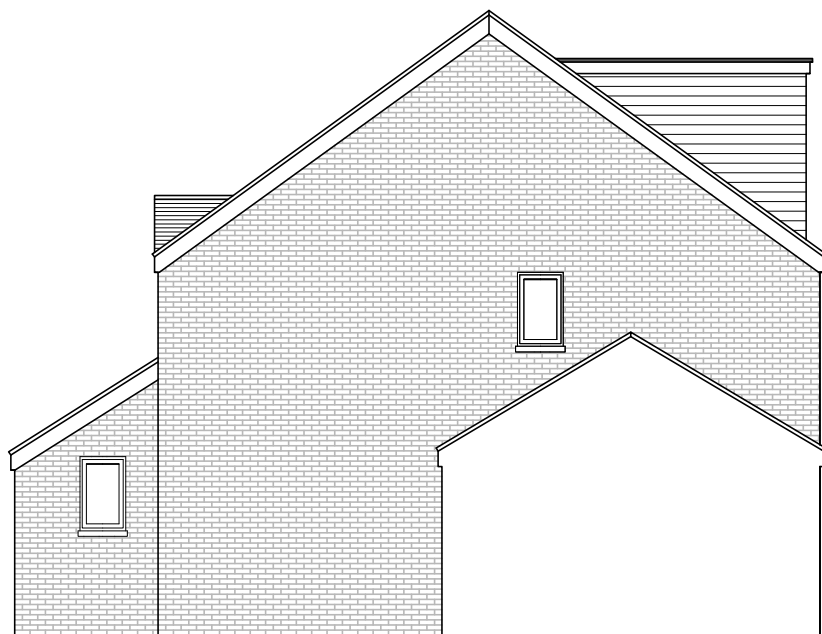
Volume Calculations

dormer: (Width x Depth x Height) / 2
(4.7m x 3.2m x 2.4m) / 2 = 24.85m³

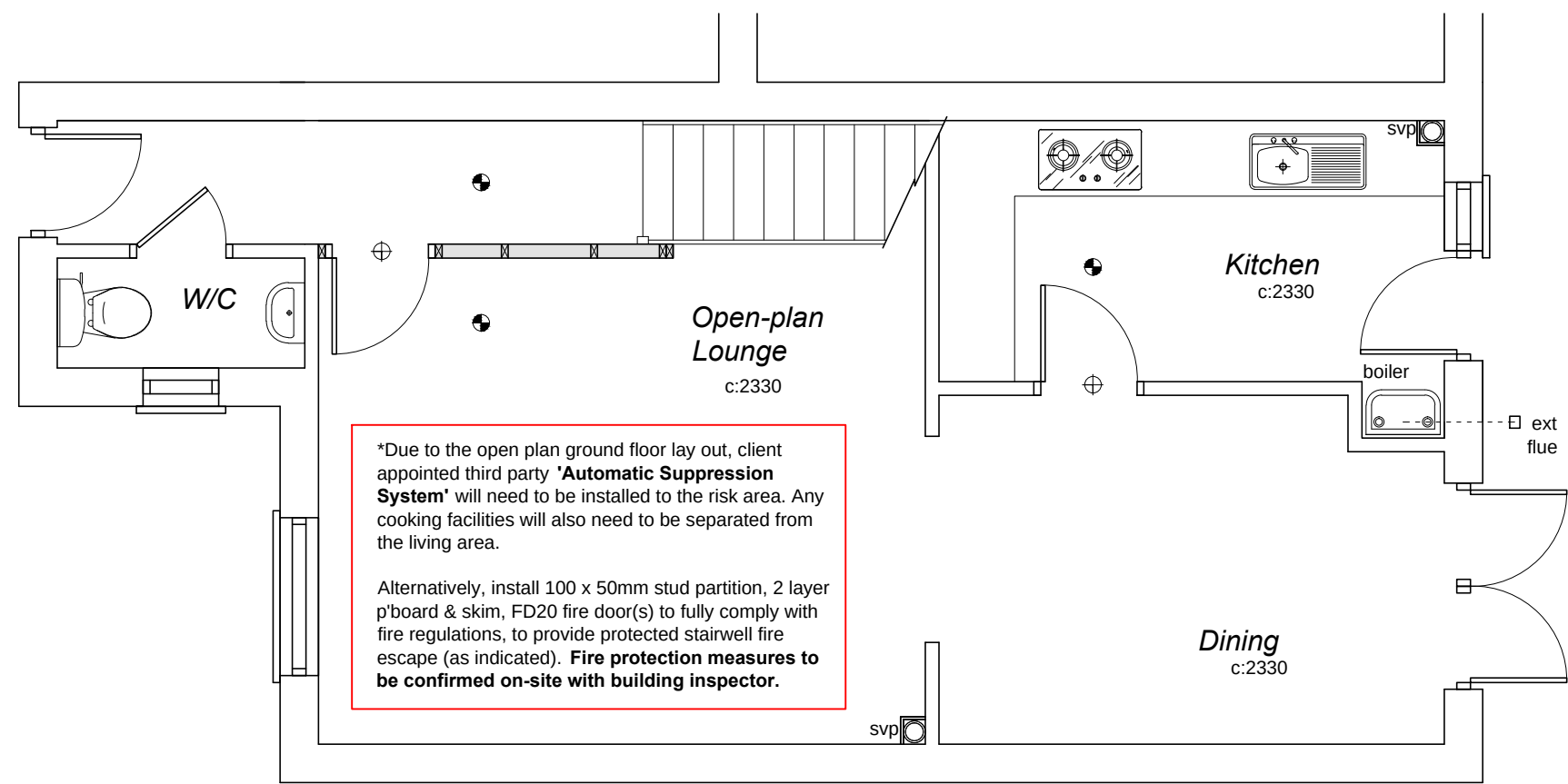
TOTAL ADDITIONAL VOLUME (50m³ max) : 18.04m³



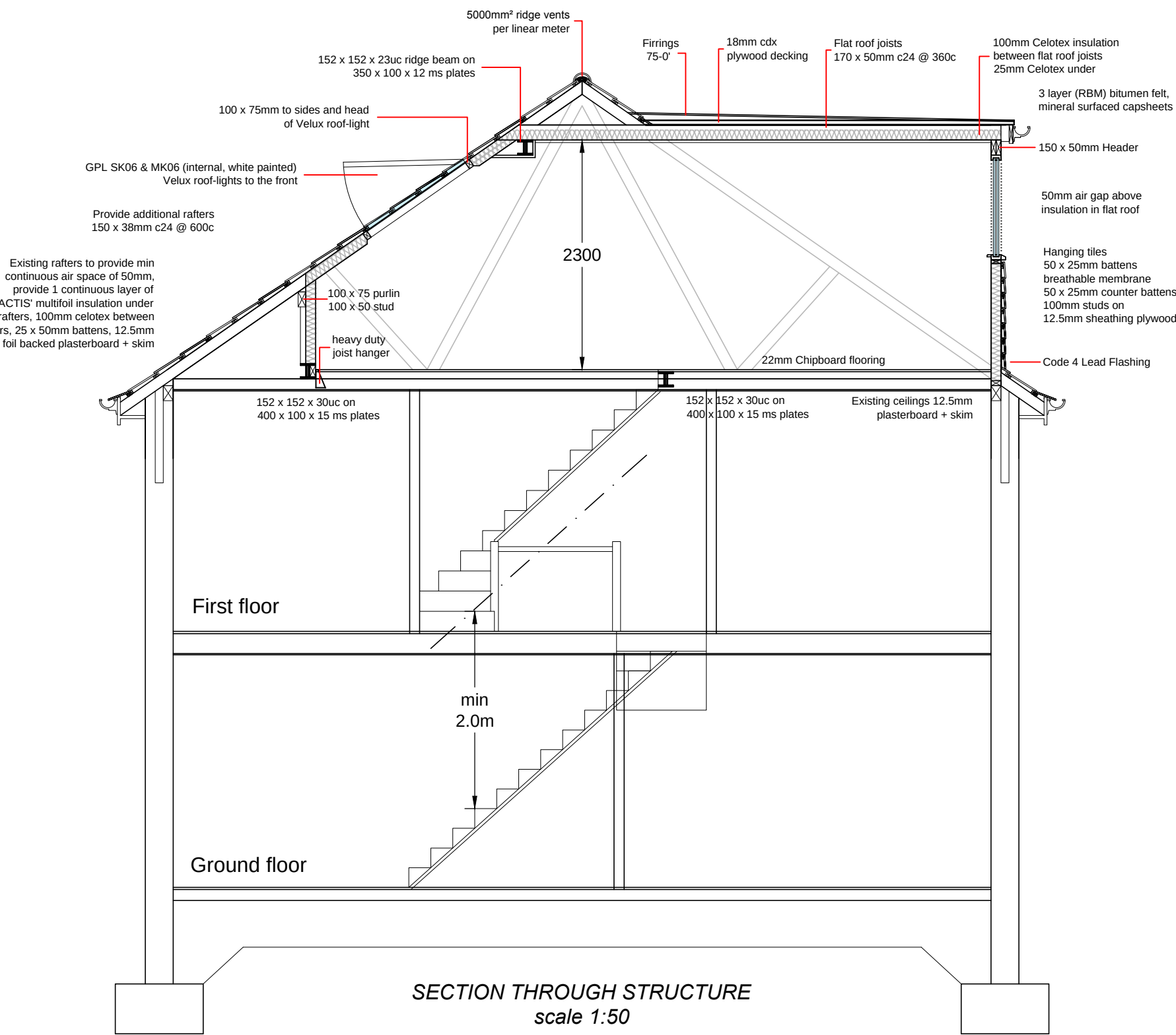
PROPOSED ELEVATIONS
scale 1:100



SIDE



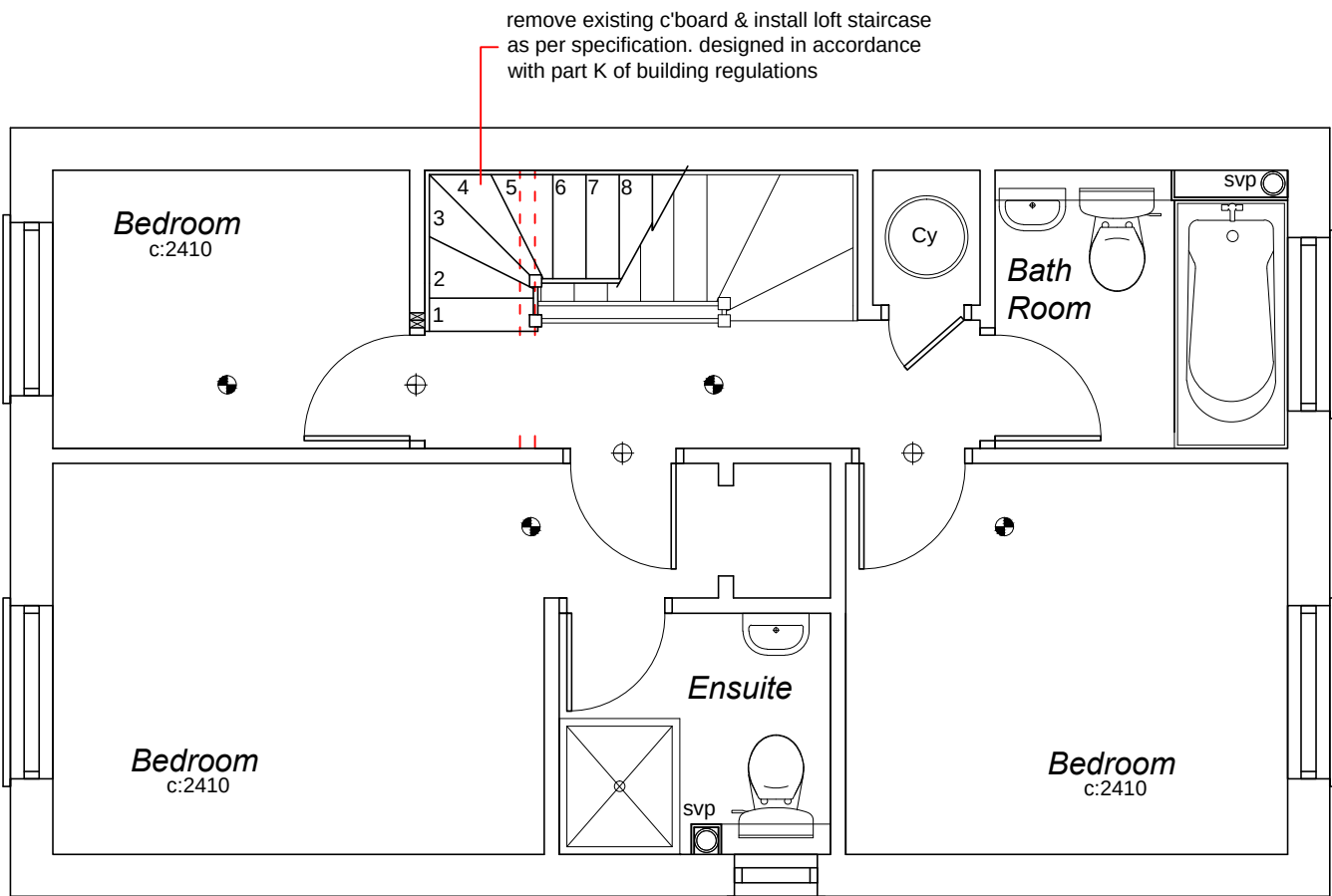
EXISTING GROUND FLOOR
scale 1:50



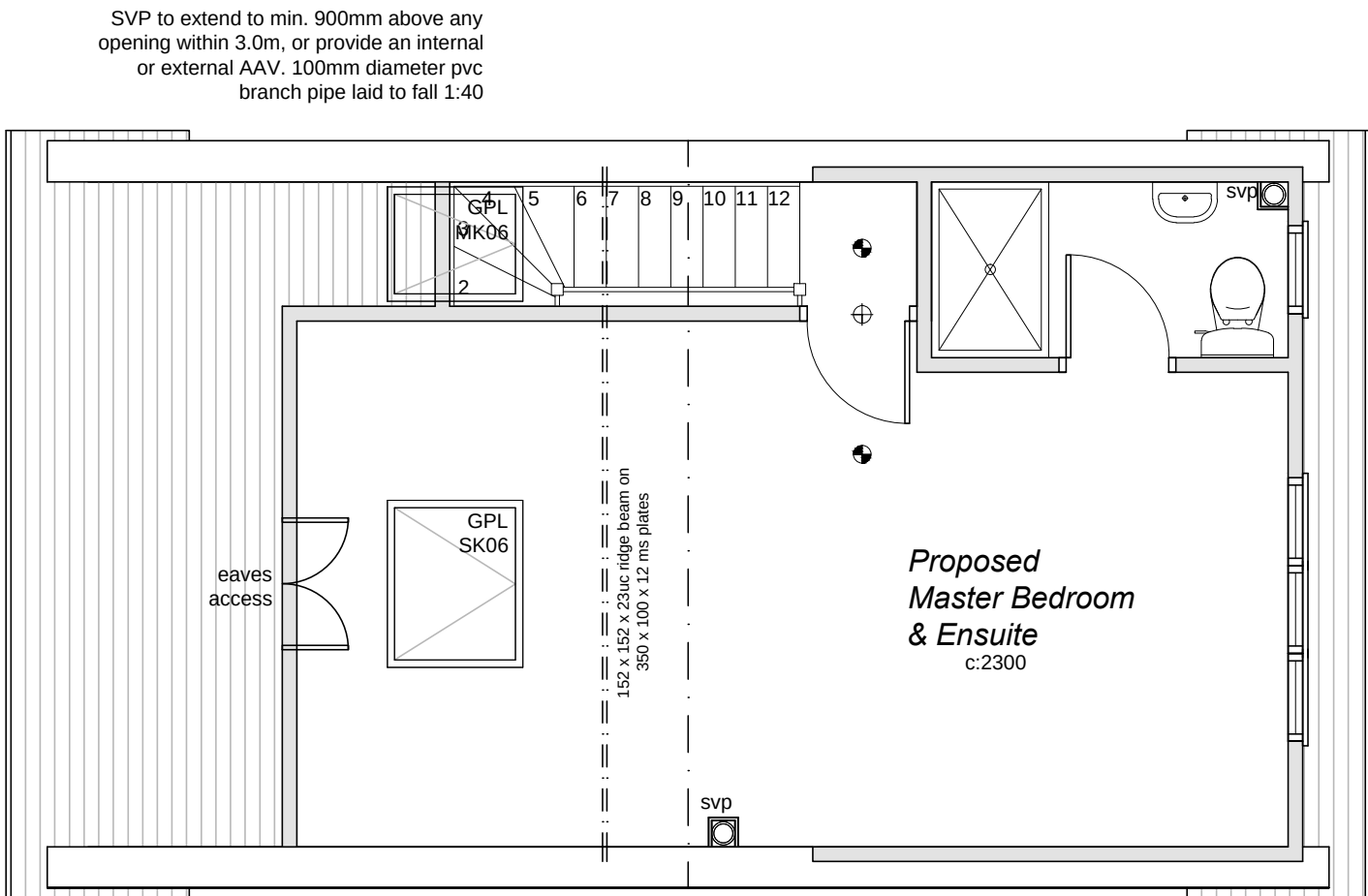
SECTION THROUGH STRUCTURE
scale 1:50

Mains operated smoke alarms are required in all habitable rooms and circulation areas on each floor with a heat detector in the kitchen to be interconnected with battery backup fitted in accordance with BS 5839-6:2004. Alternatively provide (3) FD20 fire doors to all habitable rooms to create a protected stairway.

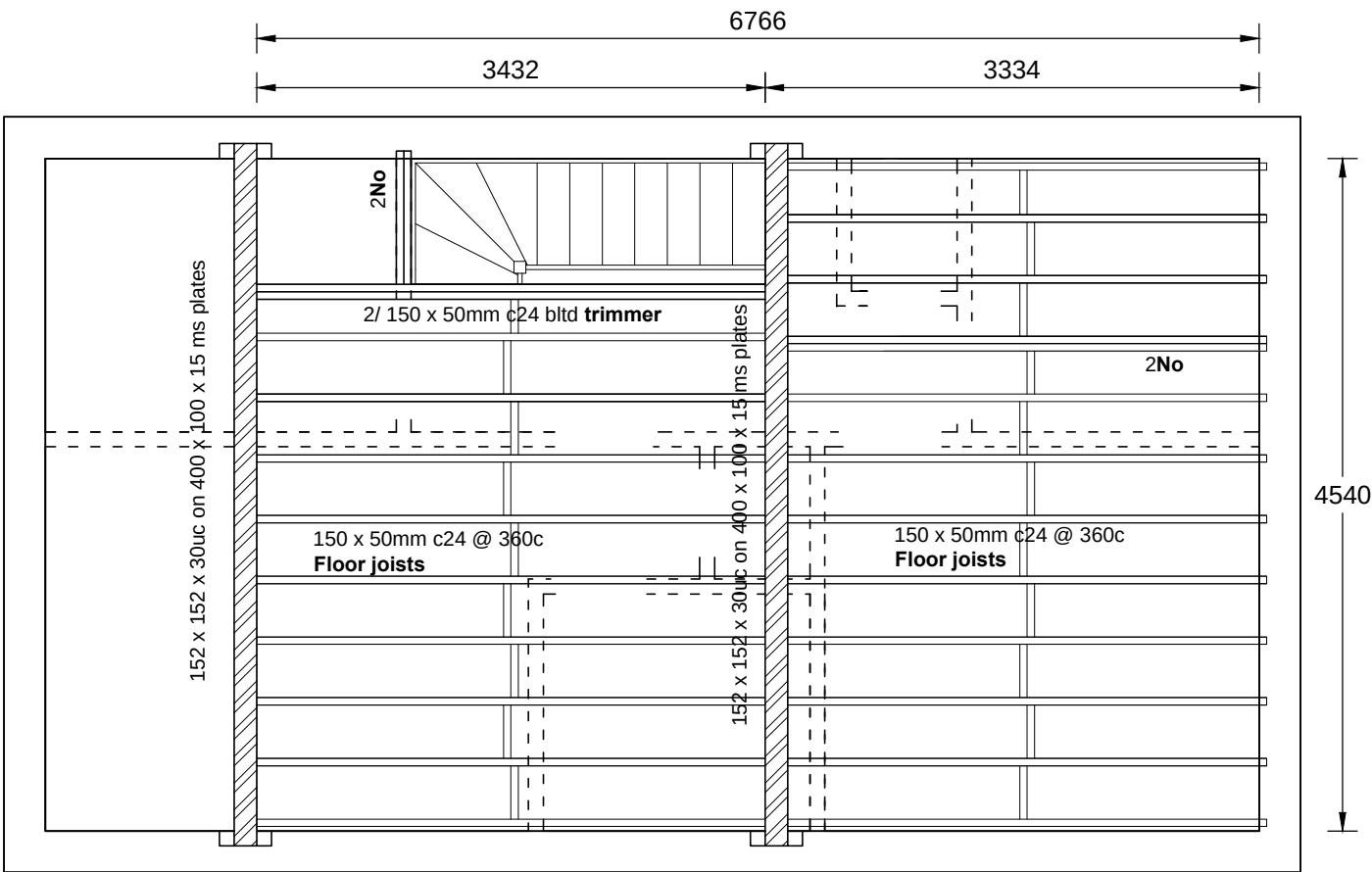
Fire protection measures to be confirmed on-site with building inspector.



PROPOSED FIRST FLOOR
scale 1:50



PROPOSED LOFT FLOOR
scale 1:50



PROPOSED FLOOR STRUCTURE
scale 1:50

Brief specification

Existing roof construction

Inter-locking roof tiles, 25 x 50mm battens on 110 x 38mm fink truss rafters and ceiling joists @ 560c. Existing walls cavity blockwork construction. Existing ceilings 12.5mm p'board & skim, first floor ceiling height 2410mm. Gable to gable in roof void 4540mm.

Flat / Crown roof dormer

Reinforced bitumen membrane, mineral surfaced capsheets, 3 layers of roofing felt to BS747, CH144. 19mm exterior grade plywood decking on firings 1:40, or 75.0mm. 50 x 170mm flat roof joists at 300mm centers, c24 grade. Insulate roof with 100mm celotex between joists with min 50mm air gap over and 25mm celotex continuous under joists, 12.5 etc or 140mm celotex. 12.5mm plasterboard and skim. Roof to be ventilated via continuous 25mm air gap at eaves and 5000mm² ventilating tiles at ridge, equal to 0.3% of the roof plan area. 152 x 152 x 23uc steel ridge beam (or as specified by structural engineer).

Dormer cheeks

Vertical tiles hanging on battens, vertical counter battens and breathable underlay, 9mm exterior grade plywood to prevent racking, (provide 9mm masterboard or similar where cheeks are within 1m of boundary). 100 x 50mm studs at 400mm centers with 90mm celotex insulation, 1000g polythene vapour barrier, 12.5mm plasterboard & skim. Provide 150 x 100mm header & 100 x 100mm posts to corners and sides of windows.

Stormwater

100mm half round PVC gutters to 63mm diameter downpipes to existing stormwater drainage system.

Walls and ceilings

100 x 75mm purlin on 140 x 50mm struts at 400mm centres. 12.5mm Duplex plasterboard and skim with 100mm celotex in between studs to vertical walls. Sloping ceilings to comprise 50mm continuous air gap through rafters with 'ACTIS' multifoil insulation fixed continuously under rafters, 100mm celotex between rafters, 25 x 50mm battens, 12.5mm foil backed plasterboard & skim. U value 0.18w.m²K. Insulate party & gable walls with 50 x 50mm battens, 54mm celotex, 2 layers of 12.5mm plasterboard & skim, to comply with parts E1, L1, B1.

New floor construction

22mm flooring grade chipboard extended through to eaves, on 50 x 150mm c24 grade joists at 360 centres. Ensure 25mm clearance between underside of floor joists and existing ceilings. Void between ceiling and flooring to have a minimum 100mm rockwool insulation or similar approved each sheet of insulation to be a minimum mass per unit area 10kg/m² to be laid over all living areas under bedrooms. 152 x 152 x 30uc steel beam to form perimeter beam, main staircase trimmer indicated on floor plan.

Stairs

Staircase width 650-850mm, treads min 220mm, risers max 220mm. Clear unobstructed headroom to be 2.0m between flights, and 1.9m sloping to 1.8m on either side to new flight, measured vertically above the pitch line. Handrails to be fixed 900mm vertically above the pitch line, with vertical balustrades at 100mm centres. Staircase pitch max 42 degrees. Tapered treads to be a min of 50mm at newel, and 220mm measured in the centre of tread. Treads to have a uniform going no less than the straight flight.

Ventilation

Trickle vents to windows min 8000mm², with continuous 25mm air gap at eaves plus ventilating tiles at ridge of 5000mm² per linear metre, equal to 0.3% of the roof plan area.

Fire regulation

Doors marked Ⓢ to be either upgraded or replaced with FD 20 fire doors. Doors to new bedroom to be FD 20 fire doors with 25 x 25mm stops glued and screwed. Alternatively provide additional smoke detectors to all habitable rooms, together with a heat sensor in the kitchen. All detectors to be mains operated, fully interlinked with battery back up.Windows to have min. unobstructed openable area of 750 x 450mm. Base of window to be min. 800mm and 1100mm from finished floor level. Ⓢ denotes mains operated fully integrated smoke alarms with battery back up. Encase any steel beams with 2 layers of 12.5mm plasterboard and skim to full fire resistance.

Drainage

32mm diameter PVC wastes to basins and showers, 38mm to bath, all with 75mm deep seal traps. Where waste runs exceed 1.7m use 50mm diameter waste. WC's connected to existing soil & vent pipe via 100mm diameter PVC branch pipe laid to fall 1:40. Alternative use sani-flow sani-plus pumped system installed in accordance with the manufacturers instructions. Use rodding eyes at all changes in direction. Install mechanical ventilators to all new bathroom areas min.15L/sec direct to the external air.

Notes

Existing lintels (if applicable) to be exposed to ascertain their structural adequacy to carry the additional loads, and replaced if found necessary. Provide double rafters either side of velux windows with 100 x 75mm trimmers to head & sill. All timber to be treated against infestation from house longhorn beetle. All windows to be double glazed with a min. 16mm air gap between panes, and the inner pane being PILKINGTON K glass. U value min 1.6w/m ok. Provide 100mm mineral wool within new floor void and partitions around any new bathrooms / ensuites, minimum density 10g/m³.

Building regulations 2000, January 2005, Part P.

All new electrical is to be designed, inspected and tested in accordance with 7671 (I.E.E wiring regulations 17th addition). The works are to be inspected by an installer under a suitable electrical self-certification scheme, with a certificate of compliance produced by that person to Building control on completion of works. Ensure that 1 light fitting per 4 No are energy efficient low voltage, taking only lamps of luminous efficiency greater than 40 lumens per circuit watt. L1.

title: LOFT CONVERSION INC FLAT ROOF DORMER

client: MR M BLENCOE

address: 29 EDEN ROAD
SOUTHAMPTON
SO18 3QW

date: 31/03/2022 dwg. no: LP3987

scale: 1:50 / 1:100

local authority: EASTLEIGH BOROUGH COUNCIL

drawn by: K CHARLTON



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