

SECTION

DORMER VOLUME
 $5.65\text{m}^2 \times 5.99\text{m} = 33.84\text{m}^3$

HIP TO GABLE VOLUME
 $(8.3 \times 3.3 \times 3.3)/6 = 15.06\text{m}^3$

Total additional Volume = 48.9m³

FLAT ROOF
 3 layer felt roof system on 120mm of Kingspan flat roof insulation on 18mm WPB plywood on firrings to provide 1 in 40 fall. New joists to be 150 x 50 treated C16 timber at 400mm centres
 Ceiling formed using 12.5mm foil backed plasterboard with 3mm skim finish

NEW WINDOWS
 New UPVC windows with double glazed units to min 1.6W/m²k
 Windows provided with 10,000mm² background ventilation
 Windows adjacent to doors to be toughened glass
 Windows to have openable area equivalent to 1/20th of rooms floor area

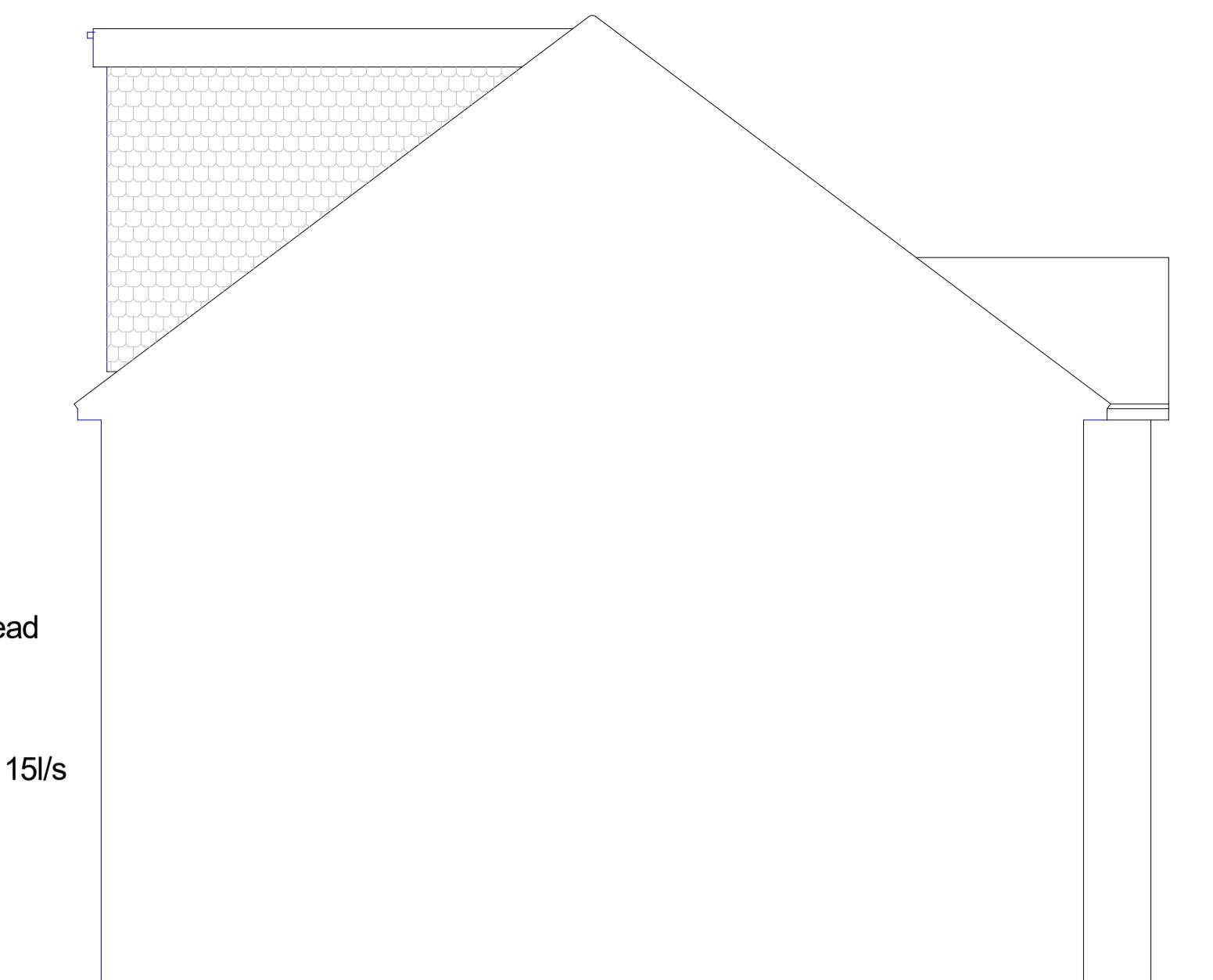
PITCHED ROOF
 Plain clay tiles on 50 x 25 tanalised battens on Tyvek breathable felt on 100x50 c16 rafters at 400mm c/s pitched roof to be vented at eaves and ridge minimum 50mm ventilation space over insulation 50mm Kingspan insulation between rafters and 72mm composite board fixed beneath

WASTES
 32mm basin, 40mm bath shower and sink combined wastes to be 50mm All wastes to have deep seal traps

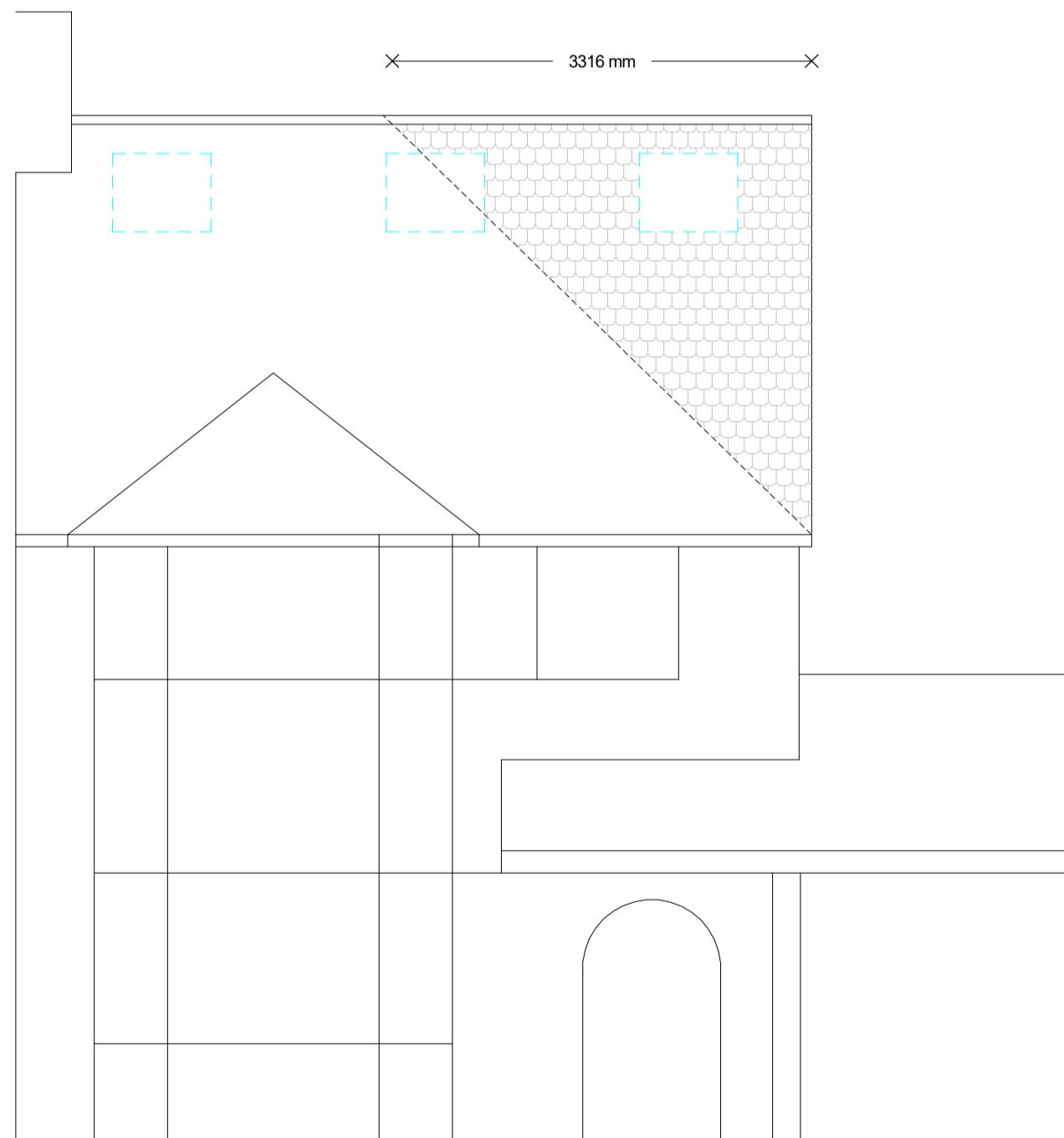
GABLE END EXTERNAL WALLS
 105mm brickwork 90mm Kingspan K106 with 10mm residual cavity, cavity tied with 5No wall ties/m² (doubled at openings)
 100mm Celcon Solar inner leaf, finished internally with 12mm bonding plaster with set finish

STAIRS
 Stair to have a maximum pitch of 42 degrees, and a handrail fixed at 900mm above tread Minimum headroom above the stair to be 2m

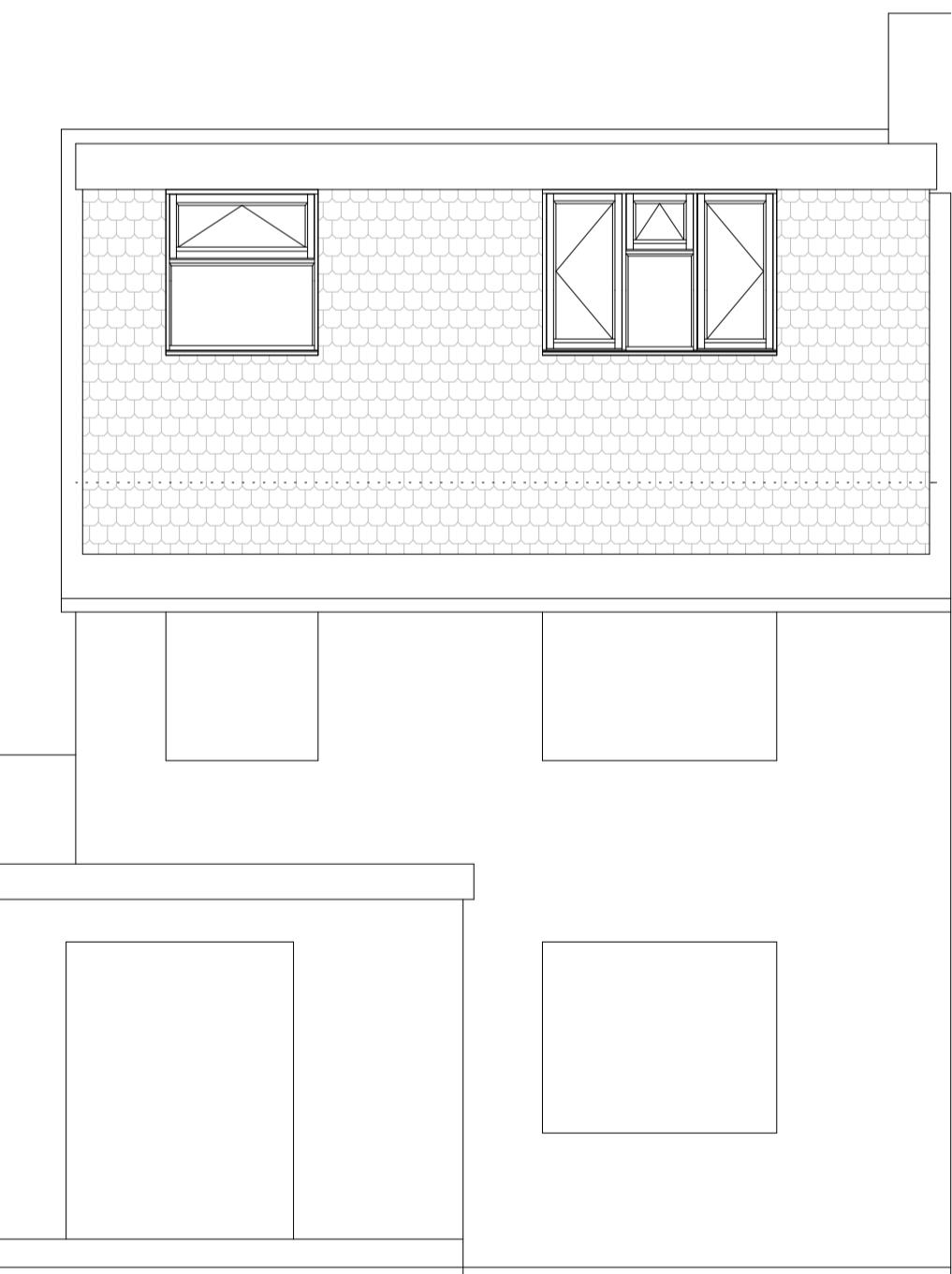
MECHANICAL VENTILATION
 Bathrooms to have 30l/s fan, Kitchen to have 30l/s fan in extract hood over hob, Utility 15l/s All fans to discharge to external air via appropriate size duct Bathrooms to have humidistat control



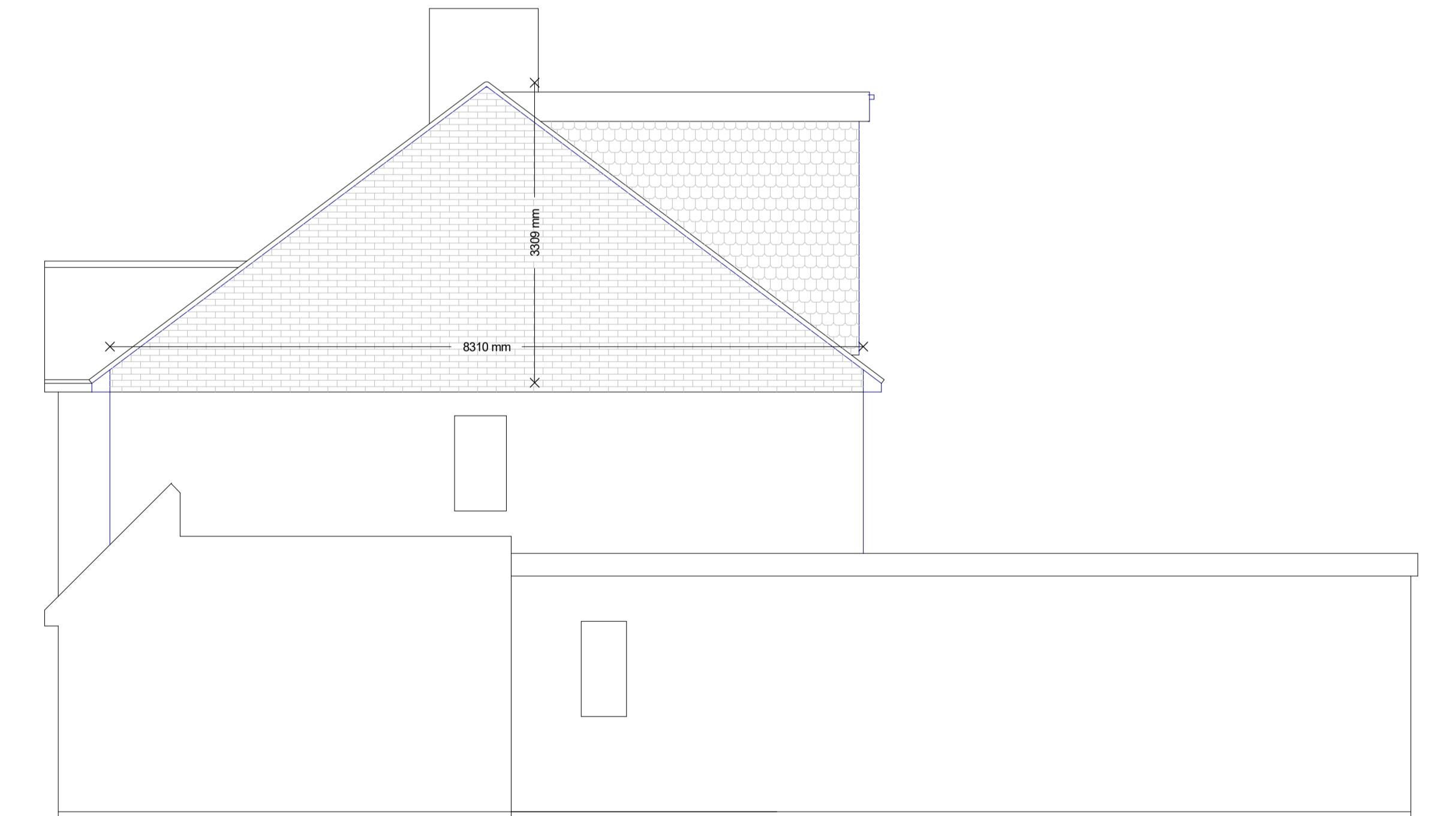
FLANK ELEVATION



FRONT ELEVATION



REAR ELEVATION



FLANK ELEVATION