

VOLUME CALCULATION

RED SECTION

Area of the elevation on the rear is 5.7m^2
 The length of that part of the dormer is 4.4m
 $5.7\text{m}^2 \times 4.4\text{m} = 25.08\text{m}^3$

BLUE SECTION

Area of the elevation on the left side is 3.5m^2
 The length of that part of the dormer is 4.9m
 $3.5\text{m}^2 \times 4.9\text{m} = 17.15\text{m}^3$

There is a DOTTED triangular section of the BLUE part of the dormer on the rear elevation that is already within the existing roof void (where the valley is), this needs to be removed from the calculation above.

Therefore;

Area of the elevation on the rear side [DOTTED BLUE] is 0.9m^2
 The length of that part of the dormer is 4.4m
 $0.9\text{m}^2 \times 4.4\text{m} = 3.96\text{m}^3$

BLUE SECTION $[17.15\text{m}^3]$ - DOTTED BLUE SECTION $[3.96\text{m}^3]$
 $= 13.19\text{m}^3$

TOTAL DORMER CALC

RED SECTION $[25.08\text{m}^3]$ + BLUE SECTION $[13.19\text{m}^3]$
 $= 38.27\text{m}^3$

