

JANUARY 2024

NEWTOWN LINFORD, ALL SAINTS

HEATLOSS CALCULATION

NAVE & CHANCEL

"U" values etc

Δt 21°C (minus 3 to 18) Infiltration 0.17 Glass 5.6 Walls 2.4 Roof 1.9 Floor 1.2

Cube = $996\text{m}^3 \times 0.17 \times 21$ = 3,555 watts

Glass = $25.5\text{m}^2 \times 5.6 \times 21$ = 2,998

Wall = (less glass) $177\text{m}^2 \times 2.4 \times 21$ = 8,920

Roof = $205\text{m}^2 \times 1.9 \times 21$ = 8,179

Floor = (less underfloor heating area)
 $132\text{m}^2 \times 1.2 \times 21$ = 3,326

_____ **26,978**

 Add 10% = 2,698

 Add 20% Heat up = 5,935

 Total = **35,611 Watts**

Underfloor heating = $58\text{m}^2 \times$ (say) $120\text{w/m}^2 = 7.0\text{kW approx.} = \Delta t$ of 4.5°C