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11 GROVE ROAD, WREXHAM

FOUNDATION DESIGN TO BS 8004, BS 8110

Summary of Design Data

Notes	All dimensions are in mm and all forces are per metre run
Material Densities (kN/m ³)	Concrete 24.00, Masonry 20.00
Concrete grade	fcu 20 N/mm ² , Permissible tensile stress 0.250 N/mm ²
Soil bearing pressure	Assumed pressure 100.00 kN/m ²

Overall Bearing Pressure - Existing walls with new beams

1.

Self wt walls = $7.2 \times 6.0 = 43.2$ kN/m

Beam reaction = $62/1.4 = 44.3$ kN Load spread over 2.5 m = 17.7 kN/m

Total = 60.9 kN/m

For foundations 600 wide bearing pressure = 101 kN/m²

Likely to be satisfactory.

2.

Self wt walls = $7.2 \times 6.0 = 43.2$ kN/m

Beam reaction = $(65.7/1.4) + 43.4 = 90.3$ kN Load spread over 4.0m = 22.6 kN/m

Total = 65.8 kN/m

For foundations 600 wide bearing pressure = 110 kN/m²

Likely to be satisfactory.

Existing foundations are likely to be adequate if 600 mm wide and bearing onto ground of 110 kN/m² minimum. Foundations and ground conditions to be checked on site.