



Star Design Solutions

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Address : 64 VICTORIA ROAD		DRG No:
Title : Pad foundation Calculation (Column C4)		Revision :001
REF	CALCULATIONS	OUTPUT
	<u>Pad Foudation Calculation</u> A Reinforced concrete pad foundation to satisfy BS 8110 and the following Axial imposed load = 26.13 kN Axial Dead load = 86.92 kN the loads are transferred to the base through a centrally positioned column which is 168mm Circle Service loading = 26.13+86.92 = 113.05 kN (from calculation done 25/11/22) Design loading = 163.50 kN Density of concrete = 2400 kg/m³ Density of soil = $\frac{1700}{700}$ kg/m³ this is appromately equivalent to 7 kN/m³ For a base say 1000 mm thick the difference = 7 x 1.0 7 kN/m² The safe ground bearing pressure is reduced by = 100 - 7.0 93 kN/m² Area Required = $\frac{\text{Load}}{\text{SGBP}}$ $\frac{71.86}{93.0}$ 1.76 m² So for a pad try 1.3m (WIDE) x 1.3m (LONG) x 1.0m (DEEP) Design Pressure = Design load/area 96.74 kN/m²	N = 113.05kN D = 163.50 kN Pad Size 1.3mx1.3mx1.0m design press 96.74kN/m²