



Star Design Solutions

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Address : 64 VICTORIA ROAD		DRG No:
Title : Pad foundation Calculation (Column C5)		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 = 25.88 kN Axial Dead load = 56.74 kN the loads are transferred to the base through a centrally positioned column which is 168mm Circle Service loading = 25.88+56.74 = 82.62 kN (from calculation done 25/11/22) Design loading = 120.84 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 = $\frac{\text{Load}}{\text{SGBP}}$ $\frac{71.86}{93.0}$ 1.30 m² So for a pad try 1.1m (WIDE) x 1.1m (LONG) x 1.0m (DEEP) Design Pressure = Design load/area 99.87 kN/m²	N = 82.62kN D = 120.84 kN Pad Size 1.1mx1.1mx1.0m design press 99.87kN/m²