

FOUNDATIONS

Strip footings are proposed, in accordance with G&P BM report, Taken down thro' fill and poor natural ground, assumed allowable bearing pressure 110 kN/m² nett. Suspended precast ground floors are proposed.

Unit loadings are as Sheet 1. Ground floor dead loading will be as for first floor, super/ptn load provision is as follows:

Store Room/delivery, Boiler Rm: 5.0 kN/m²

$$\therefore E w/m^2 = 8.1 - 3.5 + 5.0 = \underline{9.6 \text{ kN/m}^2}$$

Shop/Retail and Corridors:

$$\therefore E w/m^2 = 8.1 - 3.5 + 4.0 = \underline{8.6 \text{ kN/m}^2}$$

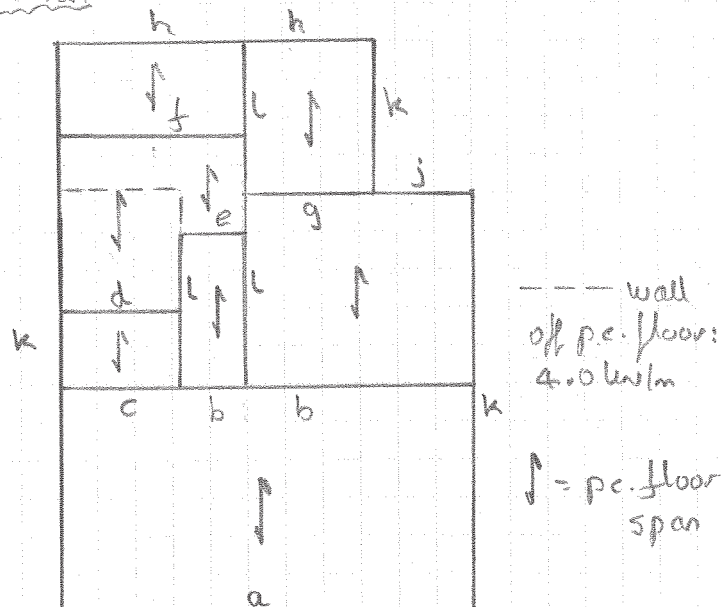
WC's: 2.0 LC + 0.5 ptns = 2.5 kN/m²

$$\therefore E w/m^2 = 8.1 - 3.5 + 2.5 = \underline{7.1 \text{ kN/m}^2}$$

Staffroom/Kitchen: 3.0 kN/m²

$$\therefore E w/m^2 = 8.1 - 3.5 + 3.0 = \underline{7.6 \text{ kN/m}^2}$$

Key Plan



REF.	JOB: RADIO WORLD, GREAT WYRLEY	CALCULATION SHEET F2 OF 3	AUTHOR JR	CHECKED JR	DATE JUNE '12
	<p>a - $Ld/m = 4.0 \times 7m \text{ av. wall}$ $+ (8.1 + 8.6) 7.5m/2 \text{ } \updownarrow = 91 \text{ kw/m}$ $Fdn. width req'd = \frac{91}{110} = .827m$ <i>(ie. 900)</i></p>				900 wide
	<p>b - $Ld/m = 3.0 \times 3m \text{ wall} + 8.1 \times 13.4/2 \text{ } \updownarrow$ $+ (8.6 \times 7.4/2 + 9.6 \times 6/2) \text{ } \updownarrow = 118 \text{ kw/m}$ $w = 1.07m \text{ } \updownarrow$ <i>(ie 1200)</i></p>				1200 wide
	<p>c - $Ld/m = 118 \text{ (or b)} - 9.6 (6/2 - 2.3/2) \text{ } \updownarrow$ $= 100 \text{ kw/m, } w = .9m \text{ } \updownarrow$ <i>(ie 900)</i></p>				900 wide
	<p>d - $Ld/m = 9.0 \text{ wall} + 8.1 \times 7.8m/2 \text{ } \updownarrow$ $+ (9.6 \times 2.4/2 + 7.55 \text{ say } \times 5.3/2) \text{ } \updownarrow$ $+ 4.0 \times \frac{1.7}{5.3} \text{ wall via pcu's}$ $= 74 \text{ kw/m, } w = .67m \text{ } \updownarrow$ <i>(ie 750)</i></p>				750 wide
	<p>e - $Ld/m = (8.1 \times 7.8m/2) \text{ } \updownarrow + (8.6 \times 7.8/2) \text{ } \updownarrow$ $+ \text{nom wall} = 70 \text{ kw/m,}$ $w = .64m \text{ } \updownarrow$ <i>(ie 750)</i></p>				750 wide
	<p>f - $Ld/m = (8.1 \text{ } \updownarrow + \text{say } 8.1 \text{ } \updownarrow) 8.3m/2$ $+ 4 \times \frac{3.6}{5.3} \text{ wall via pcu's}$ $+ 3.0 \times 3m \text{ wall} = 79 \text{ kw/m}$ $w = .72m \text{ } \updownarrow$ <i>(ie 750)</i></p>				750 wide
	<p>g - $Ld/m = (3.0 \times 3m + 1.6 \times 2.5m) \text{ wall}$ $+ (9.6 \times 6m/2 + 7.6 \times 4.8/2) \text{ } \updownarrow$ $+ (8.1 \times 10.8/2) \text{ } \updownarrow = 104 \text{ kw/m}$ $w = .95m \text{ } \updownarrow$ <i>(ie 1050)</i></p>				1050 wide

REF.	JOB: RADIO WORLD, GREAT WYRLAY	CALCULATION SHEET F3 OF 3	AUTHOR JD	CHECKED JA	DATE JUNE '12
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- h - $Ld/m = 4.0 \times 7m$ av. wall
 $+ (8.1 + 7.6) 4.0/2 \sqrt{1/2} = 666 \text{ w/m}$
 $w = 0.6m$ (ie. 750) 750 wide
- j - $Ld/m = 4.0 \times 7m$ av. wall
 $+ (8.1 + 9.6) 6m/2 \sqrt{1/2} = 81 \text{ w/m}$
 $w = .74m$ (ie 750) 750 wide
- k - $Ld/m = 4.0 \times 5.8m$ wall $+ 1.81 \times 12.5m \text{ roof}$
 $= 37 \text{ w/m}$, $w = .34m$ (ie 750) 750 wide
- l - by inspection - 450 wide 450 wide