

Project:
Sample project

Job No. :
123456

Location:
Sample location

Client:
Sample Client

Borehole:
BH1

Depth (m):
0.30

Parameter:
Allowable Bearing Capacity (kPa)

Overburden correction:
Tokimatsu and Yoshimi (1983)

Reference	Note	N	N60	(N1)60	Effective stress (kPa)	Depth (m)	Value	Formula
Teng (1969)	Based on shear failure criteria (FS = 3) N = Average corrected spt blow count (Gibbz and Holtz 1948) to 1B depth below footing B(m) = 1.50 N = 26 Rw = 1.00 R'w = 0.90	34	22	37	4.95	0.30	171.9721	$Qa(kPa) = 0.1570464(2N^2BR_w + 6(100 + N^2)D_fR'_w)/FS$
Meyerhof Method	Based on shear failure criteria (FS = 3) B(m) = 1.50 N = Average uncorrected spt blow count to 1.5B depth below footing N = 25 CW1 = 0.77 CW2 = 1.00	34	22	37	4.95	0.30	379.5288	$Qa(kPa) = 314.0928(NB/10(C_{w1} + C_{w2}D_f/B))/FS$
General Terzaghi formula	Based on shear failure criteria (FS = 3) B(m) = 1.50 Friction angle (Hatanaka and Uchida 1996) = 43.59 Nq (Bowels 1986) = 108.26 Nγ (Hansen 1970) = 153.17	34	22	37	4.95	0.30	810.4427	$Qa(kPa) = (\bar{q}N_q + 0.5B\gamma N_\gamma)/FS$
Terzaghi and Peck (1948)	Based on allowable settlement (25.00mm) B(m) = 1.50 N = Average uncorrected spt blow count to 1B depth below footing N = 23 Cw = 1.00 Cd = 0.95	34	22	37	4.95	0.30	275.3364	$B \leq 1.22 \Rightarrow Qa(kPa) = 0.4713 \frac{NS}{C_w C_d}, (B > 1.22) \Rightarrow Qa(kPa) = 0.3142 \frac{NS}{C_w} (\frac{B(2B+1)}{3.28B})$
Modified Meyerhof (1965)	Based on allowable settlement (25.00mm) B(m) = 1.50 N = Average uncorrected spt blow count to 1B depth below footing N = 23 Cd = 1.07	34	22	37	4.95	0.30	557.6188	$B \leq 1.22 \Rightarrow Qa(kPa) = 0.9426NS C_w C_d, (B > 1.22) \Rightarrow Qa(kPa) = 0.6283NS C_w (\frac{B(2B+1)}{3.28B})$

Reference	Note	N	N60	(N1)60	Effective stress (kPa)	Depth (m)	Value	Formula
Anagnostopoulos et al. (1991)	Based on allowable settlement (25.00mm) B(m) = 1.50 N = Average uncorrected spt blow count to 1B depth below footing N = 23	34	22	37	4.95	0.30	817.7961	$Qa(kPa) = \left(\frac{SN^{1.2}}{2.37B^{0.7}} \right)^{1/0.87}$
Burland and Burbidge (1985)	Based on allowable settlement (25.00mm) B(m) = 1.50 N = Average corrected spt blow count to 1.4*Br* (B/Br)^0.75 depth below footing Br = 0.3m N = 25	34	22	37	4.95	0.30	999.5698	$Qa(kPa) = \frac{SN^{1.4}}{1.706B^{0.7}}$

Count: 7 Average: 573.18 Min: 171.97 Max: 999.57 Variance: 97,560.07

Allowable Bearing Capacity (kPa)

