

Calculation Sheet



Project No/Reference No: 17017
 Project and Description: Newport

Sheet No: 0
 Rev: 0
 Computed by: NH
 Date: 05/07/2017

Client: Keepmoat Regeneration

Calculation Details: Preliminary Set Calculation

Checked by:
 Date:

Ref

Output

Pile Set Calculation

Pile Type: - 0.25m square Precast Concrete Pile

Hammer weight = 3 Tonnes

Drop 300 mm

Hammer Efficiency = 100%

Modified Hiley Formula $R_u = \frac{E}{S + \frac{C}{2}}$

Total Load = 450 kN Factor of Safety = 2.00

Ultimate negative skin friction (n.s.f) if applicable = 75 kN

Where: $R_u =$ (Total Load x Factor of Safety) + n.s.f.
 $E =$ Transfer Energy at pile top
 $C =$ Temporary Compression of Pile and Ground per blow
 $S =$ Set per blow

$$R_u = (450 \times 2.00) + 75 = 975 \text{ kN}$$

$$E = 1 \times 10^4 \text{ kNmm}$$

$$C = 9 \text{ mm (Actual - Based on test probing)}$$

$$S = \frac{E}{R_u} - \frac{C}{2}$$

$$S = \frac{9000}{975} - 5$$

$$S = 5 \text{ mm per blow}$$

Therefore set for 10 blows = **45** mm/Blow or less
 (to nearest 5mm below)

Soil Profile

Enquiry/Project Name: Herbert Road Newport (Phase 1)
 Enquiry/Project No: #####
 Compiled by: NPF
 Design Status: NPF
 Date: 26 April 2017
 Revision: 2 of 2
 Sheet No: 2 of 2

Checked by: NH
 Approved by: (Approval if required in acc with QMS PG03)
 Date: #
 Revised by: #
 Date: #



