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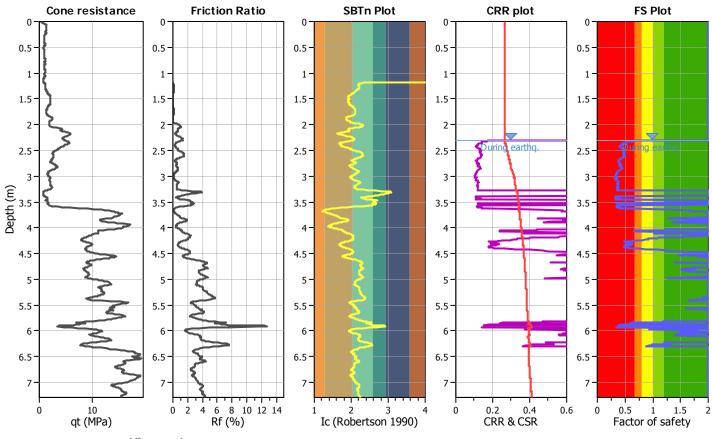
LIQUEFACTION ANALYSIS REPORT

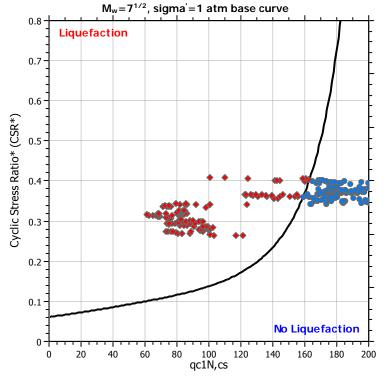
Project title: 24 - 26 Hutt Road Location: Thorndon, Wellington

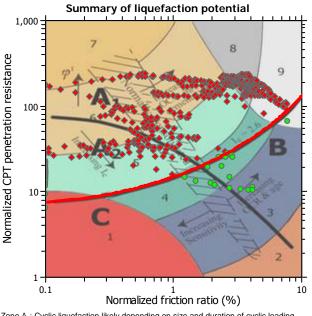
CPT file : CPT_03

Input parameters and analysis data

Analysis method: B&I (2014) G.W.T. (in-situ): 2.30 m Use fill: No Clay like behavior Fines correction method: B&I (2014) G.W.T. (earthq.): 2.30 m Fill height: N/A applied: Sand & Clay Points to test: Based on Ic value Average results interval: 5 Fill weight: N/A Limit depth applied: No Earthquake magnitude M_w: 7.50 Ic cut-off value: 2.60 Trans. detect. applied: No Limit depth: N/A Peak ground acceleration: Unit weight calculation: Based on SBT K_{σ} applied: MSF method: Method







Zone A_1 : Cyclic liquefaction likely depending on size and duration of cyclic loading Zone A_2 : Cyclic liquefaction and strength loss likely depending on loading and ground geometry

Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

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Liquefaction analysis overall plots **CRR** plot FS Plot Vertical settlements Lateral displacements 0.2 0.2 0.2 0.4 0.4 0.4 0.4 0.4 0.6 0.6 0.6 0.6 0.6 0.8 -0.8 0.8 0.8 0.8 1 -1 -1 1 1.2 1.2 -1.2 1.2 1.2 -1.4 1.4 1.4 1.4 1.4 1.6 1.6 1.6 1.6 1.6 1.8 1.8 -1.8 1.8 1.8 2 · 2 -2 -2 · 2 -2.2-2.2 -2.2 2.2 -2.2 During earthq 2.4 2.4 2.4 2.4 2.4 2.6 2.6 -2.6 2.6 2.6 2.8 2.8 2.8 2.8 2.8 3 · 3 -3 -3 -3 · 3.2 3.2 3.2 3.2 3.2 Depth (m) 3.6 3.8 4 Depth (m) 3.8 - - 9.8 - - 4.8 Depth (m) 3.8-Depth (m) 3.8-E 3.4 Depth (3.6-4 4.2 4.2 4.2 4.2 4.4 4.4 4.4 4.4 4.4 4.6 4.6 4.6 4.6 4.6 4.8 4.8 4.8 4.8 4.8 5 5 -5 -5 · 5 · 5.2 5.2 5.2 5.2 5.2 -5.4 5.4 5.4 5.4 5.4 5.6 5.6 5.6 5.6 5.6 5.8 5.8 5.8 5.8 5.8 6 6 -6 6.2 6.2 -6.2 6.2 6.2 6.4 6.4 6.4 6.4 6.4 6.6 6.6 6.6 6.6 6.6 6.8 6.8 6.8 6.8 6.8 7 7-7-7.2 7.2 7.2 7.2 -7.2 0.2 0.4 1.5 10 15 10 15 20 0.5 20 3 CRR & CSR Factor of safety Liquefaction potential Settlement (cm) Displacement (cm) F.S. color scheme LPI color scheme Input parameters and analysis data Almost certain it will liquefy Very high risk Analysis method: B&I (2014) Depth to GWT (erthq.): 2.30 m Fill weight: N/A Fines correction method: B&I (2014) Average results interval: Transition detect. applied: No Very likely to liquefy High risk Ic cut-off value: Points to test: Based on Ic value 2.60 K_{σ} applied: Yes Liquefaction and no liq. are equally likely Low risk Clay like behavior applied: Earthquake magnitude M_w: 7.50 Unit weight calculation: Based on SBT Sand & Clay Unlike to liquefy Peak ground acceleration: 0.45 Use fill: Limit depth applied: No Depth to water table (insitu): 2.30 m Fill height: N/A Limit depth: N/A

Almost certain it will not liquefy

CLiq v.2.2.1.14 - CPT Liquefaction Assessment Software - Report created on: 5/10/2018, 9:19:03 a.m. Project file: \\wtnsrv2\Jobs\W02200_W02299\W02231 - 24-26 Hutt Road, Thorndon\W02231700 - FS Geotech\007_Work\Field_Work\CPT\24 Hutt Road, Wellington_CLiq.clq