

Case 44/2021

Issue: Large diameter bored pile found on (i) Meta-sedimentary rock or Meta-sedimentary Rock interbedded with Sedimentary Rock or (ii) Sedimentary Rock

Recommendation: To accept the founding criteria for large diameter bored pile on (i) Meta-sedimentary rock or Meta-sedimentary Rock interbedded with Sedimentary Rock or (ii) Sedimentary Rock, which has a RMR value of not less than 45, minimum UCS value of 25MPa or minimum PLI_{50} value of 1MPa, minimum 85% of TCR and not less than 25% RQD

Decision: Having noted the background information, members endorsed the recommendations on a case-by-case basis subject to the following conditions:

- (i) The founding rock materials should satisfy the acceptance criteria as below:

		Value
Design Parameters	Allowable Bearing Capacity	4 000 kPa
	Allowable Bond or Friction between (i) Meta-sedimentary Rock or Meta-sedimentary Rock interbedded with Sedimentary Rock or (ii) Sedimentary Rock and Concrete	300 kPa (compression or transient tension) 150 kPa (permanent tension)
Acceptance Criteria	Uniaxial Compressive Strength (UCS) Or Point Load Index Strength (PLI_{50}) [#]	Min. 25 MPa (UCS) Or Min. 1 MPa (PLI_{50})
	Total Core Recovery (TCR)	Min. 85%
	Weighted-Average of Rock Mass Rating (RMR) from the top of the effective rock socket to 5 m below pile base	Not less than 45
	Weighted-Average of Rock Quality Designation (RQD) from the top of the effective rock socket to 5 m below pile base	Not less than 25%

- (ii) Proof core-drilling, UCS or PLI_{50} test, evaluated RMR from individual predrill holes, sufficient quality supervision and pile load test should be provided. The result of proof test on trial piles and the review report on the RMR values based on predrill records should be found satisfactory.