Summary of Decisions of the Structural Engineering Committee
SEC Meeting 7/2024 held on 15.10.2024

Case HD 02/2024

Issue: Large Diameter Bored Piles on Category 2 bedrock with Grade III or better Meta-Sedimentary Rock with site-specific allowable vertical bearing pressure

Recommendation: To accept the site-specific design parameters and founding criteria for Large Diameter Bored Pile founded on and/or socketed into Category 2 bedrock with Grade III or better Meta-Sedimentary rock, which has (i) not less than 85% TCR; (ii) minimum Rock Mass Rating (RMR) of 45; and (iii) Uniaxial Compressive Strength (UCS) of rock material not less than 25 MPa (or equivalent Point Load Index Strength (PLI_{50}) not less than 1 MPa), within 1-pile base diameter or 5 m, whichever is deeper, below pile founding level.

Decision: Having noted the background information, members had no objection to endorse the paper on a case-by-case basis subject to the following conditions:

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

		Value
Design Parameters	Site-Specific Allowable Vertical Bearing Pressure	4 000 kPa
	Allowable Bond or Friction between Meta-sedimentary rock and Concrete	300 kPa (compression or transient tension)
		150 kPa (permanent tension)
Acceptance Criteria	Within 1-pile base diameter or 5 m, whichever is deeper, beneath founding level	
	Uniaxial Compressive Strength (UCS) or equivalent Point Load Index Strength (PLI_{50})#	Min. 25 MPa (UCS) or Min. 1 MPa (PLI_{50})
	Total core recovery (TCR) of designated grade or better rock	Min. 85%
	Rock Mass Rating (RMR)	Not less than 45
	Dissolution feature	None

Remarks:
(#) UCS test shall be carried out for samples within 1-pile base diameter or 5 m, whichever is deeper, beneath founding level of proposed LDBPs for all predrill holes. If UCS test is impractical to carry out due to rock joints, Point Load Test (PLT) will be adopted.

(b) Consent to the commencement of working piles would not be granted until the results of proof test on the trial piles and the review report on the RMR values based on predrill records are found satisfactory.