

Summary of Decisions of the Structural Engineering Committee  
SEC Meeting 8/2025 held on 9.9.2025

Case 9/2025

**Issue:** Large Diameter Bored Piles (LDBP) founded on Meta-Sedimentary Rock and/or Sedimentary Rock with site-specific founding criteria and allowable bearing capacity

**Recommendation:** To accept the proposed founding criteria and allowable bearing capacity (5 000 kPa) for end bearing LDBP in Meta-Sedimentary or Sedimentary Rock with a Rock Mass Rating (RMR) Value of not less than 50 and Total Core Recovery (TCR) not less than 90% within 1st 5 m below pile base and load capacity (3 000 kPa) for Sedimentary Rock with RMR not less than 40 and TCR not less than 85% in 2nd and 3rd 5 m below pile base.

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

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

Rock Type		Value	
		Meta-Sedimentary Rock	Sedimentary Rock
<b>Design Parameters</b>	Presumed Bearing Capacity (Foundation Code)	3 000 kPa	Not specified in Code for Sedimentary Rock
	Proposed Bearing Capacity	5 000 kPa	5 000 kPa
<b>Acceptance Criteria</b>	Loading Capacity in 2 <sup>nd</sup> and 3 <sup>rd</sup> 5 m below pile base	3 000 kPa*	3 000 kPa
	Uniaxial Compressive Strength (UCS) or equivalent Point Load Index Strength (PLI <sub>50</sub> )	Min. 25 MPa (UCS) or Min. 1 MPa (PLI <sub>50</sub> )	
	Total Core Recovery (TCR)	Min. 90% of designated grade within 1 <sup>st</sup> 5 m below pile base	Min. 85% of designated grade in 2 <sup>nd</sup> and 3 <sup>rd</sup> 5 m below pile base
	Rock Mass Rating (RMR)	Min. 50	Min. 50 (within 1 <sup>st</sup> 5 m below pile base) Min. 40 (in 2 <sup>nd</sup> and 3 <sup>rd</sup> 5 m below pile base)

\* Specified in the Code as Category 2 Rock

- (b) Refer to paragraph 8 of PNAP APP-61, a drill hole with a minimum penetration of 20 m into sound marble rock is recommended to reduce the risk of failing to identify existing cavities when marble is encountered during pre-drilling. If cavities are encountered, the depth of penetration shall be increased, and the required penetration depth shall be recalculated from the bottom of the cavity.

- (c) The quality control and assurance measures suggested in the SEC paper should be implemented.
- (d) The pre-drilling report, trial pile completion report, and design review report shall be submitted to BD and GEO for their satisfaction prior to the application of consent for the LDBP works.