

In Collaboration With



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or use our Online Feedback Form at:

<https://www.bca.gov.sg/feedbackform/>

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Dear Sir / Madam

JOINT BCA / GEOSS / IES / ACES CIRCULAR 2019
GUIDELINES ON IDENTIFICATION OF ROCK DURING BORED PILING WORKS

For bored pile foundation, the piles are often required to be socketed into rock stratum, in order to achieve their load carrying capacities. During pile installation, it may be difficult to determine the beginning depth of the rock stratum, especially when the site is of variable soil conditions and the rock-head level is undulating. This can sometimes lead to error or disputes on the identification of the beginning depth of rock stratum and the length of rock socket of piles.

2. Therefore, there is a need to formulate guidelines to provide a more objective assessment system to identify rock during bored piling works. BCA in collaboration with GeOSS has formed an industry working group comprising major government agencies, IES, ACES, and practitioners, to develop the guidelines.

3. The guidelines provide recommendations on criteria to be met for samples retrieved during pile installation to be identified as rock of weathering grade III or better. In the guidelines, point load test apparatus properly calibrated by an accredited laboratory could be used to measure the point load test index $I_{s(50)}$ of the rock samples. The measured index provides a more objective basis to determine whether the sample retrieved is rock of weathering grade III or better.

4. The guidelines give recommendations to Qualified Persons, site supervisors, builders and developers involved in piling works with rock socketing. The industry is strongly encouraged to adopt the guidelines for piling projects involving rock drilling. Notwithstanding the criteria recommended, QP must exercise their professional judgement diligently on whether the rock

encountered during bored pile construction is consistent with the borehole information and fulfils their design intent.

5. BCA will appreciate it if you can disseminate the contents of this circular to your members. The guidelines are available online at

https://www.bca.gov.sg/StructuralPlan/others/Guidelines_rock_identification.pdf.

If you have any enquiry or feedback, please contact Er. Dr Huang Yongqing at tel. 1800-3425222 or submit your enquiry through BCA's Online Feedback Form at <https://www.bca.gov.sg/feedbackform/>. Thank you.

Yours faithfully



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