Summary of Decisions of the Structural Engineering Committee
SEC HD-03/2011 held on 01.09.2011

(a) Case HD-03/2011

Issue: Large diameter bored piles (LDBPs) using shaft grouted friction

Recommendation:

1) That the proposed rational design method in conjunction with the in-situ testing method for the design of 2.0m diameter large diameter bored piles (LDBPs) using shaft grouted friction on soil only be accepted.

2) That the following design capacity be accepted for the pile design:

   (a) The design working capacity of shaft grouted LDBPs with 2.0m diameter is 15.5MN which is solely generated by shaft friction in alluvium and completely decomposed metamorphosed siltstone (CDMS).
   (b) The piles are proposed to be embedded in CDMS (i.e. terminated at -56mPD).
   (c) The capacity and performance of the piles will be verified by trial pile load tests.

3) That the modification to Building (Construction) Regulation 26(5)(a) to permit the spacing between centers of the LDBPs to be less than the minimum requirement of one pile perimeter (i.e. 6.28m) but subject to a clear spacing between LDBPs of not less than 2 m be granted.

4) That the modification to Building (Construction) Regulation 26(5)(b) to permit the spacing between centers of the LDBPs and site boundary to be less than the minimum requirement of half the length of the pile perimeter (i.e. 3.14m) but subject to a clear spacing to the site boundary of not less than 1.0 m be granted.

5) That the following proposed acceptance criteria for loading tests of the LDBPs be accepted:

   (a) Maximum settlement *(at head of pile)* < PL/AE + D/50
   (Where P = 2 x design working load, L = pile length, A = cross sectional area of pile, E = Young's Modulus of pile, D = diameter of pile)
   (b) Residual settlement < D/50 (mm)
   (c) Under working load condition, maximum settlement should not exceed 20mm.

Decision:	Finding RSE's justification insufficient, members did not endorse the recommendation.