Summary of Decisions of the Structural Engineering Committee
SEC 1/2005 held on 13.1.2005

(a) Case 1/2005

Issue : Proposed use of grouted composite twin steel H-piles in bored hole through existing caisson and socketted into bedrock.

Recommendation : To accept the design principle for the grouted composite twin steel H-piles installed in 800mm diameter bored hole through existing caisson and socketted into bedrock. The pile capacity will be contributed by the two steel H-pile sections and the grout and then by rock socket. The design parameters in the Code of Practice for Foundations for rock socketted steel-H pile will be adopted subject to verification by full scale loading test of trial pile.

Decision : Noting the background information and the rational approach adopted on verification of design principles, the committee endorsed the recommendation subject to the conditions in the following :

(a) The design parameters of the working piles shall be verified by the proposed trial pile test.

(b) Regarding the structural design of the pile element, reference shall be made to the design of composite column and the corresponding design code shall be given. The design of shear studs along the longitudinal length of the pile should be elaborated so as to achieve a full composite section.

(c) Proper connection details between the twin H-section, e.g. by welding, should be provided to maintain their alignment during installation.