THE HONG KONG HOUSING AUTHORITY

Memorandum for the Building Committee

QUALITY HOUSING : PARTNERING FOR CHANGE

Brief Update on Quality Reform Measures for Piling Works

PURPOSE

This paper is to update Members on the progress of the quality reform for piling works.

BACKGROUND

2. Most of the quality reform measures for piling works reported vide Paper Nos. BC 84/2000 and QH 05/2000 are already in operation. This paper provides a brief update on the implementation of –

(a) those quality reform measures which are still in the pipeline; and

(b) those responding to Members’ comments on the above paper (Annex refers).
UPDATING OF THE QUALITY REFORM MEASURES

Equivalent Role of Authorized Persons (AP) / Registered Structural Engineers (RSE)

3. We are examining the definition of the roles and responsibilities of our project teams in discharging their duties as “equivalent AP/RSE” for Housing Authority (HA) developments. In the case of piling contracts, both based on engineer’s design and contractor’s design & build arrangements, our “equivalent AP/RSE” will be responsible for the design / design control, supervision and certifying completion of piling works. This will deem to satisfy the Practice Note for APs & RSEs (PNAP) 242 on Quality Supervision issued by the Buildings Department (BD) on 16 June 2000.

4. We are proposing to introduce an objective third party scrutiny on the HA’s buildings by putting them under the control of the Buildings Ordinance. In the interim, the piling works will also be subject to third party scrutiny by the new Independent Checking Unit to be established under the Director’s Office to parallel the BD’s practice. We will report further on this reform measure under the Quality Housing Initiative No. 18.

Independent Certification of Contractor’s Design

5. Under the current contract requirements for design & build piling contract, RSEs employed by the contractor have very limited responsibility. There are practical difficulties in effectively controlling the contractor’s RSEs due to their personal appointment by the contractor. The private practice is such that even if the design is prepared by the contractor, the developer’s RSE will still maintain his role for submission to the BD.

6. We will therefore parallel the private practice and further enhance our control for contractor’s design & build contacts. We will revise our specification to require the contractor to employ a sizable
consultant firm, subject to our listing control, to certify his design. The performance of the contractor’s consultant will then be assessed for consideration of future appointment with HA on other projects. Our “equivalent RSE” will take on the submission to the Independent Checking Unit. The manual and specification will be revised and put into operation in October 2000.

**Drilling Activities**

7. There are two main types of drilling activities –

   (a) the pre-tender ground investigation and 5% “full-length” coring tests which are conducted by HA’s own testing contractors; and

   (b) pre-drilling and 100% interface coring which are conducted by the contractor’s testing sub-contractors.

8. Pre-drilling is classified as ground investigation works (GI) by PNAP. We are making arrangements to establish HA’s own list of GI Contractors in 6-months time. In the interim, we have extended our performance assessment to cover the GI sub-contractors employed by the piling contractors. As a means of control, we will not admit any poor performing GI contractors / sub-contractors to our future list.

**Foundation Advice Report**

9. We have been practicing a two-stage geotechnical assessment for HA projects in the form of –

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*Note 1* HA’s list of consultant firms is short-listed from the Architect and Associated Consultant Selection Board (AACSB) list.

*Note 2* BD also allows the contractor to employ their own testing sub-contractors to conduct the pre-drilling and interface coring.
(a) advice on foundation options, as a general appraisal, at the Feasibility and Conceptual Layout Stage; and

(b) detailed advice at the Design Stage.

10. During piling stage, contractors conduct pre-drilling to ascertain the ground data for determining the founding levels of each individual large diameter bored pile. By enhancing professional geotechnical input to supervising pre-drilling and bedrock validation, the project teams have strengthened the vetting of the pre-drilling reports for large diameter bored piles by checking against the foundation advice report.

**Control of Sub-contracting for Piling Works**

11. We are introducing a new proposal on control of sub-contracting by stipulating the minimum percentage of the main contractor’s self-owned plant (Paper Nos. BC 97/2000 and QH 06/2000 refers). A control system on the deployment of all piling plant on site will be introduced to enforce this new requirement for tenders returning from October 2000 onwards.

**Preliminary Piles**

12. We have strengthened the restriction on installation of working piles to founding levels before the preliminary piles are accepted. The specification on the details for the preliminary piles will be further reviewed and implemented in October 2000.

**Listing of HA Piling and GI Contractors**

13. We will propose a comprehensive listing of piling contractors for Members’ approval in August 2000. We are making arrangements to establish HA’s list of GI Contractors and details will be submitted to this Committee in October 2000.
Specification Review

14. We are undertaking a comprehensive review of our piling specification, covering items mentioned in paragraphs 6, 11 and 12 above, to ensure that all the provisions are practical and consistent. We will inform Members of some critical items of the review in September 2000. The revised specification will be implemented in October 2000.

Manual Review

15. We are reviewing the manuals for the piling process with focus on end results and parallel the BD’s practice. The revised manuals will be implemented in October 2000.

Publicity Work

16. Following Members’ suggestion, we will be organizing some publicity work to let the community know that a comprehensive reform is being carried out.

INFORMATION

17. This paper is issued for Members’ information.

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