

**HPLB/BAB Paper/15/03**

**Bills Committee on  
Buildings (Amendment) Bill 2003**

**Registration of Geotechnical Engineers**

**Purpose**

This paper describes the proposal under the Buildings (Amendment) Bill 2003 for providing a statutory framework for the registration of geotechnical engineers.

**Background**

2. At present, under the Buildings Ordinance (BO), every person for whom building works or street works are to be carried out shall appoint an Authorized Person (AP) as the coordinator of such building works or street works, and a Registered Structural Engineer (RSE) for the structural elements of such building works or street works. There is no requirement for the appointment of a suitably qualified geotechnical engineer for the geotechnical elements of the building works or street works.

3. Many building developments in Hong Kong stand on steep hillsides and man-made slopes. The building works require expertise in geotechnical works. Since the 1980s, the BO and relevant regulations have been amended in stages with more stringent geotechnical requirements for the design and construction of building works, e.g., prescribing the submission of ground investigation and geotechnical report for the design of foundations and site formation works. Given the expertise required, in many cases, geotechnical engineers are usually engaged as sub-consultants to the AP for the design and supervision of geotechnical works.

**Proposals**

4. To recognize the role of geotechnical engineers and to ensure the quality of geotechnical works, the Bill (Clause 5(a)) requires the appointment of Registered Geotechnical Engineers (RGEs) to undertake

the investigation, design and supervision of geotechnical works. For this purpose, the Bill also proposes to require the registration of geotechnical engineers (Clause 4(a)).

5. A registered geotechnical engineer (RGE) will be responsible for all geotechnical plans, reports or supporting documents that he has prepared (Clause 52(c)). He will also be responsible for supervising the carrying out of geotechnical works and ensuring that they comply with the provisions of the BO and the regulations (Clause 5(d)). Like APs and RSEs, RGEs are subject to prosecution (Clause 39) or disciplinary action (Clause 9) for breaching the BO and its regulations.

6. Only registered professional engineers (RPEs) in the geotechnical engineering discipline with relevant practical experience in geotechnical works will be eligible for registration as RGEs (Clause 46). This is similar to the present registration requirement of RSEs, i.e., RPEs in the structural engineering discipline with relevant practical experience. The registration period is five years, and renewable.

### **Transitional Arrangement**

7. The new section 53I (Clause 43) provides for transitional arrangements for registration of geotechnical engineers without the prescribed qualifications.

#### **(a) RPE - Civil and Structural Engineering Discipline**

8. Before the geotechnical engineering discipline was well established, many geotechnical works had been undertaken by civil engineers or structural engineers. Therefore, some engineers in these two disciplines have practical experience in geotechnical works. As a transitional arrangement, the new sections 53I(2)(b) and (6) provide that, within one year from the commencement of the new legislation, RPEs in the civil or structural engineering discipline with relevant practical experience in geotechnical works are eligible to apply for registration as RGEs. Recommendation by the Geotechnical Engineer Registration Committee (GERC) is required for these applicants to be registered. During the first registration period of three years, they should obtain the qualification of RPE in the geotechnical engineering discipline under the Engineers Registration Board. Otherwise, their registration as RGEs under the BO cannot be renewed.

**(b) APs/RSEs**

9. At present, some APs/RSEs possess the relevant geotechnical knowledge and experience from undertaking the geotechnical works of projects for which they are the APs/RSEs appointed under the BO. The Bill provides a mechanism for these APs/RSEs to continue their practice in geotechnical works. The new sections 53I(2)(a), (4) and (5) provide that an AP (in the list of engineers) or RSE who possesses the following appropriate geotechnical experience and technical competence is eligible to apply for registration as RGE within one year from the commencement of the new legislation: -

- (a) within the seven years preceding the date of his application, he has been engaged in and worked on site formation works carried out and completed in accordance with the BO;
- (b) he was the AP or RSE appointed under section 4(1) for the site where the site formation works in (a) were carried out; and
- (c) he must, with reference to the site formation works mentioned in (a) above, satisfy the Building Authority (BA) that he has the appropriate geotechnical experience and competence.

The BA will consider an application under this category without seeking advice/recommendation from the GERC. The first registration period will be five years and the registration is renewable as long as the applicants remain as APs/RSEs.

10. In relation to condition (c) in paragraph 9 above, we have worked out and agreed the technical details in terms of the number, scale and complexity of such site formation projects required to support the AP/RSE's competence in geotechnical works with the Hong Kong Institution of Engineers (HKIE) and the Engineers Registration Board. In its submission of 15 August 2003 to the Bills Committee, HKIE has suggested that these agreed technical details be clearly spelt out in the BO. As explained in item 29 of LC Paper No. CB(1) 59/03-04(03) ("Response to Submissions"), since this is a transitional arrangement and only APs/RSEs are involved, we consider that setting out these technical details in a practice note to APs and RSEs should be a more appropriate

and effective means to achieve the objective of notifying the parties concerned.

## **Conclusion**

11. We believe that the proposals on RGEs will enhance the quality of geotechnical works and public safety.

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