

Ref : BD \_\_\_\_\_

Address : \_\_\_\_\_

Appendix \_\_\_\_\_ to approval dated \_\_\_\_\_

**Foundation Works (Spread Footings/Rafts)  
with Foundation Units founded on Soil**

In giving this approval of plans, I hereby impose the following conditions under item 6 in section 17(1) of the Buildings Ordinance:

- (a) Qualified site supervision of the reinforced concrete works, including sampling of concrete and steel reinforcing bars and making and curing of test cubes, by experienced and competent persons should be provided to ensure that the works are carried out in accordance with the plans approved and that the required standards are complied with.
- (b) Sampling and testing of steel reinforcing bars should be carried out in accordance with CS2:2012<sup>#</sup>/Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAP) APP-45 for compliance with CS2:1995<sup>#</sup>. Testing should be carried out by a laboratory\* accredited under the HOKLAS for the particular test concerned. Test results<sup>@</sup> should be submitted within 60 days of the delivery of the steel reinforcing bars to the site. The test reports should be appended with a statement signed by the Registered Structural Engineer to confirm the following:
  - (i) All steel reinforcing bars used for the construction and the test specimens covered by the test reports are in accordance with the types and grades of steel shown in the approved plans.
  - (ii) Sampling and testing of steel reinforcing bars used have been carried out in accordance with CS2:2012<sup>#</sup>/PNAP APP-45 for compliance with CS2:1995<sup>#</sup>.
  - (iii) The acceptance criteria appropriate to each type and grade of steel reinforcing bars used have been complied with.
  - (iv) All steel reinforcing bars tests have been carried out by a laboratory\* accredited under the HOKLAS.
- (c) Sampling of concrete and compression testing of concrete test cubes should be carried out in accordance with the methods specified in CS1:2010. Testing should be carried out by a laboratory\* accredited under the HOKLAS for the particular test concerned. Test results<sup>@</sup> should be submitted within 21 days after testing. The test reports should be appended with a summary which contains information on locations of concerned structural elements, concrete grades and dates of cast. The summary should also

include previous summary information of concrete cube test reports in chronological order. The test reports should also be appended with a statement signed by the Registered Structural Engineer to confirm the following:

- (i) All concrete used for the construction and concrete cubes covered by the test reports are in accordance with the concrete grades shown in the approved plans.
  - (ii) Concrete cube sizes, rates of sampling fresh concrete for testing and acceptance criteria for compressive strength set out in Building (Construction) Regulations have been complied with.
  - (iii) All concrete cube tests have been carried out by a laboratory\* accredited under the HOKLAS and in accordance with the methods specified in CS1:2010.
- (d) Concrete should be obtained from concrete suppliers certified under the Quality Scheme for the Production and Supply of Concrete except for those exceptional projects permitted under clause 11.7.1 of the Code of Practice for Structural Use of Concrete 2013 where documents should be submitted by the Registered Structural Engineer at least one week prior to commencement of the works to prove that the concrete supplier is operating under an approved quality system.
- <sup>#</sup>(e) Static plate loading tests should be carried out to verify the adequacy of the allowable bearing capacity of the founding stratum. The related testing procedures and acceptance criteria are required to be submitted prior to consent application of the foundation works. The reports of the static plate loading tests should be submitted within 21 days after testing.

2. Under item 7 in section 17(1) of the Buildings Ordinance, adequate precautionary measures and suitable working procedures should be adopted in the carrying out of the above works to safeguard the stability of any building, structure, land, street or services. <sup>#</sup>In this connection, two sets of excavation and lateral support plans are required to be submitted.

3. You are reminded that site supervision of the foundation works by a team of supervisors shall be provided each by the Authorized Person, the Registered Structural Engineer, <sup>#</sup>Registered Geotechnical Engineer and the Registered General Building Contractor/Registered Specialist Contractor in accordance with the Technical Memorandum for Supervision Plans 2009 and the Code of Practice for Site Supervision 2009 to ensure that the quality of the foundation works is up to standard and that the works are carried out in accordance with the approved plans and in such a manner as not to render inadequate the margin of safety of, or impair the stability of, or cause danger to any building, structure, land, street or services. Details of site supervision for the foundation works shall be included in the supervision plan and submitted prior to or at the time of application for consent to the commencement of the foundation works.

<sup>#</sup> 4. In connection with paragraph 3 above regarding inspection of bearing stratum to check for compliance with approved plans, site investigation reports and design assumptions and, the static plate loading tests as specified in paragraph 1(e) above where required, the

Buildings Department should be notified of the time and date of the inspection and the test so that they may be witnessed by a representative from the Department.

5. Under Building (Administration) Regulation 10, two sets of foundation record plans and report together with the <sup>+</sup>Form BA 12/13/14 stipulated in Building (Administration) Regulation 25 to certify the completion of the foundation works are required to be submitted. The record plans should include details of the characteristic features of the site and the identification, location, size, depth and level of each foundation unit as constructed and the report should include, for each foundation unit, the date of construction, the quality and quantity of materials used, the concrete test cube results, the excavation records.

# 6. Consent to the commencement and carrying out of the above works will not be given until the excavation and lateral support plans specified in paragraph 2 and, where required, the static plate loading testing procedures and acceptance criteria specified in paragraph 1(e) above have been submitted and found satisfactory/approved.

7. All significant signs of distress during the construction works should be reported promptly to the Buildings Department. Where the ground settlement reaches or exceeds the trigger value of the "Alarm Level" defined in the monitoring scheme, the Chief Highway Engineer/Research and Development, Highways Department (Attention: Land Surveyor/Geographic Information System, telephone number: 2762 3498, fax number: 2714 5290, email: lsgis.rnd@hyd.gov.hk) should be notified promptly together with the relevant details of the monitoring.

# Delete wherever inapplicable

\* A Directory of Accredited Laboratories in Hong Kong is obtainable from the Hong Kong Accreditation Service (HKAS) Executive, Innovation and Technology Commission.

A laboratory's accreditation for an individual test or calibration may be granted, modified or withdrawn at any time. Up-to-date information on accredited laboratories and their scopes of accreditation are available on the internet at the HKAS website at <http://www.info.gov.hk/itc/hkas/>.

@ The test carried out by an accredited laboratory should be within its scope of accreditation. To ensure this, test results should be reported on a HOKLAS Endorsed Certificate or equivalent Certificate/Report issued from other laboratory accreditation bodies which have reached mutual recognition agreements/arrangements with the HOKLAS.

<sup>+</sup> If the same contractor is employed for both the foundation works and the superstructure works for a new building or in the alteration and addition works to an existing building, where spread footing foundation with excavation depth not exceeding 4.5m is adopted, the certification of completion of the spread footing works may be made together with the certification of completion of the superstructure works in a Form BA 12/13 or a single Form BA 14, as the case may be. In other cases, a separate Form BA 14 for completion of the spread footing works is to be submitted.