

## **PWL List of Contractors for Concrete Testing**

Firms included in the List are published below for general information. The List may include contractors who at the present time are suspended from tendering for Public Works Laboratories Contracts. Contractors in the List, unless suspended, may tender for Public Works Laboratories Contracts in the category of concrete testing.

### **PWL List of Contractors for Concrete Testing**

1. Hong Kong Testing Co., Ltd.
2. Soils & Materials Engineering Co., Ltd.
3. Fugro Technical Services Ltd.
4. Castco Testing Centre Ltd.
5. Geotechnics & Concrete Engineering (HK) Ltd.
6. ETS Testconsult Limited
7. Stanger Asia Limited
8. FT Laboratories Limited
9. Quality Control Consultants Limited

**Notes on Management of PWL List of Contractors  
for Concrete Testing**

The captioned list, hereafter referred to as ‘the List’, shall be administered generally in accordance with the Contractor Management Handbook (CMH), except specified otherwise below. The CMH can be obtained from the website of Development Bureau at <http://www.devb.gov.hk>.

1. CEDD will handle all submissions of application for admission into and administer the List, without referring to DEVB. All recommendations for acceptance or rejection of an application shall be made by CGE/S&T and endorsed by H(GEO) through DH(P&S).
2. The minimum technical criteria for admission into and retention on the List of Contractors for Concrete Testing are given in Appendix I attached.
3. There are no financial criteria for admission into and retention on the List. Hence, financial vetting of an applicant and submission of the relevant information for such vetting in accordance with the CMH are not required.
4. The eligibility of a tenderer to tender shall be determined at the tender closing date and not within 40 days immediately after this date as mentioned in the CMH.
5. It is not mandatory for a contractor who is on or applying for admission into the List to obtain the quality management system certification to ISO 9001 in accordance with the CMH.
6. The PWL List will not be published in the Government of the HKSAR Gazette. It will be released on the CEDD website at <http://www.cedd.gov.hk> and can be made available to the public upon request.
7. All recommendations for regulating actions, such as voluntary and mandatory suspension and removal from the List, shall be made by CGE/S&T and endorsed by H(GEO) through DH(P&S) without referring to other Government departments and DEVB. All regulating actions taken will not be announced via the Government of the HKSAR Gazette.

**PWL List of Contractors for Concrete Testing**  
**Technical Criteria**

1. HOKLAS Accreditation

The contractor must be accredited by Hong Kong Accreditation Service (HKAS) to issue HOKLAS endorsed test report for tests listed in Table 1 for Concrete Testing.

2. Equipment

The contractor must own the minimum no. of equipment and facilities as shown in Table 2 for Concrete Testing.

3. Staff

The contractor must employ the minimum number of full time staff as shown in Table 3.

4. Technical Assessments

The applicant will be required to complete a technical assessment form, provide the required information and subject to assessment by the Standards and Testing Division of GEO, CEDD. The assessment will involve examination of the applicant's quality and procedure manuals and laboratory operations, vetting and approval of personnel and inspection of equipment, calibration records and laboratory testing records and reports. CGE/S&T may seek opinions from clients or their consultants on the performance of the applicant, and information received may be used to cross-check with other information possessed by Government for accuracy and validity.

5. Obligations

The contractors on the PWL List of Contractors for Concrete Testing must provide assistance to periodic auditing by the Standards and Testing Division of GEO, CEDD on technical performance. They must inform the Standards and Testing Division of any changes in approved personnel, organisation, equipment and procedures. They shall not conduct any concrete cube and core compliance tests for any parties in which they have potential conflicts (examples are parent or sister companies and companies who share the same director). They must continue to satisfy all List criteria to remain on the List.

**Table 1 - Tests Which Shall be Accredited By HKAS (Concrete)**

Category	Test
Concrete	1. The determination of compressive strength of concrete cubes in the force range of 50–2,500 kN, including saturated density and curing, in accordance with CS1:1990 and CS1:2010.
	2. The determination of compressive strength of concrete cores in the force range of 50–2,500 kN, including saturated density and curing, in accordance with CS1:1990 and CS1:2010.

**Table 2 - Minimum Equipment Requirements (Concrete)**

Category	Equipment	Number/Capacity
Concrete	compression machine <sup>see notes</sup>	3 nos.
	curing facility	4,200 nos. of cubes/cores <sup>see notes</sup>

Notes:

1. The contractor shall have not less than three (3) nos. of concrete compression machines with valid calibration certificates. Each of them equipped with an automatic rate control system and an impact type printout device (thermal printer is NOT accepted) to print permanent test details on a roll of paper or continuous fanfold paper. Test details should also include sample identification, machine identification, test date and time, pacer rate and maximum load as stipulated in Clause 2.3.3 of HOKLAS Supplementary Criteria No. 36.
2. The three (3) compression machines shall in combination cover the calibrated force range of 50-2,500 kN. In addition, each compression machine shall cover the calibrated force range of 100-2,000 kN.
3. The above compression machines shall be calibrated to the above specific force range to both BS 1610: Part 1:1992, Grade 1.0 and BS EN 12390-4, Class 1.0.
4. The cube size is taken as 100mm x 100mm x 100mm in estimation of the curing capacity.

**Table 3 - Minimum Personnel Requirements (full-time employment)**

Position	Option	Academic Qualification	Experience	No.
Laboratory Manager	1	Degree in Civil Engineering, or equivalent <sup>(c)</sup>	5 years of post-qualification civil engineering experience or equivalent, of which at least 1 year has been spent in supervising concrete testing and 1 year in management of a laboratory	1
	2	Ordinary Certificate in Civil Engineering, or equivalent <sup>(d)</sup>	7 years of post-qualification experience in construction materials testing, of which at least 2 years have been spent in supervising concrete testing and 1 year in management of a laboratory	
	3	Grade E or above in five subjects including Physics, Mathematics and English (Syllabus B) in HKCEE, or equivalent	10 years of post-qualification experience in construction materials testing, of which at least 2 years have been spent in supervising concrete testing and 1 year in management of a laboratory	
Senior Laboratory Technician	1	Ordinary Certificate in Civil Engineering, or equivalent <sup>(d)</sup>	3 years of experience in construction materials testing, of which at least 2 years have been spent in performing concrete test	1
	2	Grade E or above in five subjects including Physics, Mathematics and English (Syllabus B) in HKCEE, or equivalent	6 years of experience in construction materials testing, of which at least 2 years have been spent in performing concrete test	
	3	Grade E or above in English (Syllabus B) in the HKCEE, or equivalent	8 years of experience in construction materials testing, of which at least 2 years have been spent in performing concrete test	
Laboratory Technician	1	Ordinary Certificate in Civil Engineering, or equivalent <sup>(d)</sup>	Adequate on-the-job training covering the test to be carried out	3
	2	Grade E or above in five subjects including Physics, Mathematics and English (Syllabus B) in HKCEE, or equivalent		

	3	Grade E or above in English (Syllabus B) in the HKCEE, or equivalent	2 years of experience in concrete testing and adequate on-the-job training covering the test to be carried out	
Laboratory Assistant or Semi-skilled Labour		-----	Adequate on-the-job training in the operations required to be performed in the Laboratory	3
Notes: (a) All except Laboratory Assistant and Semi-skilled Labour must possess sufficient standard of English to understand instructions written in English. (b) An individual shall not assume more than one of the above positions at the same time. (c) The degree shall be up to degree level as assessed by the Hong Kong Council for Academic Accreditation (HKCAA) or recognised by HKIE as meeting the minimum academic qualification for admission to corporate membership. Corporate membership of HKIE (civil discipline) is accepted as equivalent to a degree in civil engineering. (d) Associated membership of HKIE (civil discipline) is accepted as equivalent to an ordinary certificate in civil engineering. (e) There shall be a Quality Manager responsible for the quality system/control of the laboratory who shall have a minimum academic qualification at a degree or certificate level in quality management, a science or an engineering subject and the minimum experience as specified for Option 1 or Option 2 of the Laboratory Manager respectively in this Table. (f) There shall be at least 2 HOKLAS Approved Signatories (1 main and 1 reserve) for each test type specified in the list criteria.				