

Schedule

Element Geotechnical Testing (S) Pte Ltd
215 Kaki Bukit Avenue 1
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Singapore 416042

Certificate No. : IB-2017-161-F
Issue No. : 7
Date : 19 December 2023
Expiry of Certificate : 09 October 2025
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Inspection Field : Site Investigation and Instrument & Monitoring

Type A Inspection Body

TYPE OF PRODUCT	TYPE AND RANGE OF INSPECTION	INSPECTION METHOD, CODES OR STANDARDS USED
1. Soil	<p>Site Investigation</p> <p>Identification, description and classification</p> <p>Under Undisturbed Sampling</p> <p>a) Stationary Piston Sampler</p> <p>b) Open Thin Wall Sampler</p> <p>c) Mazier Sampler</p> <p>Under Functional Testing</p> <p>a) Standard Penetration Test</p> <p>b) Vane Shear Test</p>	<p>BS 5930:1999 BS EN ISO 22475-1:2006 BS EN ISO 22475-1:2021 BS 5930:2015 BS EN ISO 14688:2018, Part 1 and Part 2</p> <p>BS 5930:1999 Section 22.5 BS EN ISO 22475-1:2006 BS EN ISO 22475-1:2021</p> <p>BS 5930:1999 Section 22.5 BS EN ISO 22475-1:2006 BS EN ISO 22475-1:2021</p> <p>BS 5930:1999 Section 20.7.3 and 22.8 BS EN ISO 22475-1:2006 BS EN ISO 22475-1:2021</p> <p>BS 5930:2015 Section 25.4.5 and Section 41 BS EN ISO 22476-3:2005+A1:2011</p> <p>BS 1377: 1990 Part 9 CI 4.4 BS EN ISO 22476-9:2020</p>

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TYPE OF PRODUCT	TYPE AND RANGE OF INSPECTION	INSPECTION METHOD, CODES OR STANDARDS USED
2. Rock	c) Pressuremeter Test d) Permeability Test e) Cone Penetration Test Site Investigation Identification, description and classification Under Undisturbed Sampling a) Rock Core Barrel Under Functional Testing a) Packer Test b) Pressuremeter Test	BS 5930:1999 Section 25.7 BS EN ISO 22476-4:2012 BS EN ISO 22476-4:2021 BS 5930: 1999 + A2:2010 Section 25.4 BS EN ISO 22282-2:2012 ASTM D5778-12 BS EN ISO 22476-1: 2012 BS5930:1999 BS EN ISO 22475-1:2006 BS 5930 : 2015 BS EN ISO 14689 : 2018 BS 5930: 1999 Section 20.7.3 and 22.8 BS EN ISO 22475-1:2006 BS 5930: 1999 + A2:2010 Section 25.4 BS EN ISO 22282-3:2012 BS 5930: 1999 Section 25.7 BS EN ISO 22476-4:2012
3. Geotechnical Borehole Instrumentation and Monitoring	Measurement of Displacement a) Magnetic Extensometer b) Rod Extensometer c) Tape Extensometer d) Inclinator e) Tiltmeter Measurement of Water Pressure a) Vibrating Wire Piezometer	ISO 18674-2:2016 BS 5930:2015+A1:2020 ISO 18674-3:2017+A1:2020 BS 5930:2015+A1:2020 ISO 18674-1:2015 ISO 18674-4:2020 BS 5930:2015+A1:2020

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4. Instrumentation and Monitoring Struts	b) Casagrande Piezometer	
	Ground Water Measurement	
	a) Water Standpipe	ISO 22475-1:2021 ISO 18674-1:2015 BS 5930:2015+A1:2020
	Geodetic Measurement	
	a) Total Station	ISO 18674-1:2015
	b) Digital Level	
	Vibration Measurement	
	a) Vibration Meter	ISO 18674-1:2015
	Measurement of Force	
	a) Strain Gauge	ISO 18674-1:2015
	b) Load Cell	ISO 18674-8:2023

Approved signatories

- Er Tan Chin Gee - For items 1 and 2
- Ng Tze Chiat - For items 3 and 4

Note:

An inspection body's fulfilment of the requirements of ISO/IEC 17020:2012 means the Inspection body meets both the technical competence requirements and **management system requirements** that are necessary for it to consistently deliver technically valid inspection results. The **management system requirements** in ISO/IEC 17020:2012 (Section 8) are written in language relevant to inspection body operations and are aligned with the pertinent requirements of ISO 9001.