

NO: SAMM 254

(Issue 3, 24 March 2011 replacement of SAMM 254 dated 6 October 2010)

LABORATORY LOCATION: GEOLAB (M) SDN BHD
380-380A, JALAN SIMBANG
TAMAN PERLING, 81200 JOHOR BAHRU
JOHOR, MALAYSIA

The standard used for assessment of this laboratory is MS ISO/IEC 17025:2005

FIELD OF TESTING: CHEMICAL

SCOPE OF ACCREDITATION:

<u>Materials/Products Tested</u>	<u>Type of test/ Properties measured/ Range of measurement</u>	<u>Standard Test Methods/Equipment/Techniques</u>
Groundwater and surface water	Dissolved oxygen	BS 6068: Section 2.3: 1984 ISO 5813 –1983
	Ammonium nitrogen	BS 6068: Section 2.7: 1984 ISO 5664 - 1984
	Chemical oxygen demand	BS 6068: Section 2.34: 1989
	Suspended solids	BS 2690: Part 120: 1981
	Dissolved solids	BS 2690: Part 121: 1981
	Bicarbonate and carbonate ions	ASTM D 523 - 82 ASTM D513-82
	Oil and grease	ASTM D 4281 - 83 ASTM D4281-89
	Chloride	BS 6068: Section 2.37: 1990 ISO 9297: 1989
	Sulphate	BS 1377: Part 3: 1990: 5
	Total Chlorine	BS 6068: Section 2.27: 1990 ISO 7393-3: 1990
	pH Value	BS 1377: Part 3: 1990: 9



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Soil	Sulphate	BS 1377: Part 3: 1990: 5
	Organic matter	BS 1377: Part 3: 1990: 3
	Chloride	BS 1377: Part 3: 1990: 7
	pH Value	BS 1377: Part 3: 1990: 9
Aggregates	Sulphate	BS 812: Part 118: 1988
	Chloride	BS 812: Part 117: 1988
	pH value	BS 1377: Part 3: 1990: 9

Signatory :

Ahmad Zamani bin Ab. Halim

IKM No. A/2539/5222/2007



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Aggregates	Clay, silt and dust	BS 812: Part 1: Clause 7.2: 4: 1975
	Relative densities and water absorption	BS 812: Part 2: Clause 5 1975
	Soundness of aggregates	ASTM C88-90
	Flakiness Index	BS 812: Section 105.1: 1989
	Elongation Index	BS 812: Section 105.2: 1990
	Aggregate crushing value	BS 812: Part 110: 1990
	Ten percent fines value	BS 812: Part 111: 1990
	Particle size distribution	BS 812: Part 103: 1985
	Aggregate impact value	BS 812: Part 112: 1990
Soil	Maximum dry density / Moisture content relationship	BS 1377: Part 4: 1990
Bitumen	Thickness or height of compacted bituminous paving mixtures specimen	ASTM: D 3549 - 83



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<u>Materials/Products Tested</u>	<u>Type of test/ Properties measured/ Range of measurement</u>	<u>Standard Test Methods/Equipment/Techniques</u>
Concrete	Initial Surface Absorption	BS 1881:Part 208:1999
	Electrical Indication of Concrete Ability to Resist Chloride Ion Penetration	ASTM C1202-92
	Water Absorption of Concrete	BS 1881:Part 114:1983
	Specific Gravity, Absorption and Voids in Hardened Concrete	ASTM C 642-97
	Compressive Strength of Test Specimens	BS EN 12390-3:2009
	Density of Hardened Concrete	BS EN 12390-7:2009

Signatories:

- | | |
|----------------------------|-------------------------|
| 1. Ir Koo Kean Siang | I/C No.: 611213-07-5683 |
| 2. Lim Kean Hong | I/C No.: 771011-02-5613 |
| 3. Katit binti Dalik | I/C No.: 800201-01-5408 |
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Geotechnical		
Soil	Moisture content	BS 1377: Part 2: 1990: Clause 3
	Liquid limit : One Point Cone Penetrometer Method	BS 1377: Part 2: 1990: Clause 4.4
	Plastic limit and Plasticity Index	BS 1377: Part 2: 1990: Clause 5
	Particle density : Small Pyknometer Method	BS 1377: Part 2: 1990: Clause 8.3
	Particle size distribution : Wet sieving, dry sieving and sedimentation by Hydrometer Method	BS 1377: Part 2: 1990: Clause 9.2, Clause 9.3 & Clause 9.4

Signatories:

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|----|---------------------------|-------------------------|
| 1. | Ir. Koo Kean Siang | I/C No.: 611213-07-5683 |
| 2. | Lim Kean Hong | I/C No.: 771011-02-5613 |
| 3. | Siti Zalipah binti Jumary | I/C No.: 790908-10-5910 |

