

**LIST OF DAC (17025) ACCREDITED TESTS**  
**CONSTRUCTION MATERIALS TESTING**

**WATER:**

S. No.	Type of Test	Material / Product	Test Description	Test Method
01	Chemical	Water	Determination of pH Value	BS 1377 Part 3 Clause 9 AMD 9028
02	Chemical	Water	Determination of sulphate content of soil and ground water testing	BS 1377 Part 3 Clause 5.4 AMD 9028
03	Chemical	Water	Determination of water-soluble chloride content	BS 1377 Part 3 Clause 7.2 AMD 9028

**AGGREGATE:**

S. No.	Type of Test	Material / Product	Test Description	Test Method
01	Chemical	Aggregate	Determination of water-soluble chloride content	BS 812 Part 117 Clause 9.2
02	Chemical	Aggregate	Determination of water-soluble Sulphate content	BS 812 Part 118 Clause 6
03	Chemical	Aggregate	Determination of Organic Impurities in Fine Agg.	ASTM C 40 / C40 M

**SOIL:**

S. No.	Type of Test	Material / Product	Test Description	Test Method
01	Chemical	Soil	Determination of water-soluble chloride content	BS 1377 Part 3 Clause 7.2 AMD 9028
02	Chemical	Soil	Determination of water-soluble Sulphate content	BS 1377 Part 3 Clause 5 AMD 9028
03	Chemical	Soil	Determination of pH value of Soil	BS 1377 Part 3 Clause 9 AMD 9028
04	Chemical	Soil	Determination of Acid Soluble Chloride Content	BS 1377 Part 3 Clause 7.3 AMD 9028
05	Chemical	Soil	Determination of sulphate Content of soil and ground water (Preparation of soil and its acid extract)	BS 1377 Part 3 Clause 5.2 AMD 9028

#### HARDENED CONCRETE:

S. No.	Type of Test	Material / Product	Test Description	Test Method
01	Physical / Mechanical	Hardened Concrete	Determination of electrical indication of concrete's ability to resist Chloride Ion Penetration	ASTM C 1202
02	Physical / Mechanical	Hardened Concrete	Depth of penetration of water under pressure	BS EN ISO 12390 part 8
03	Physical / Mechanical	Hardened Concrete	Determination of compressive strength of concrete cubes	BS 1881 Part 116
04	Physical / Mechanical	Hardened Concrete	Determination of initial surface absorption of concrete	BS 1881 Part 208
05	Physical / Mechanical	Hardened Concrete	Determination of water absorption	BS 1881 Part 122
06	Physical / Mechanical	Hardened Concrete	Methods for determination of density & Curing of hardened concrete.	BS 1881 Part 114 & BS 1881 part 111

#### STEEL BAR:

S. No.	Type of Test	Material / Product	Test Description	Test Method
01	Physical / Mechanical	Steel Bar	Steel bend test-Carbon steel bars for the reinforcement of concrete	BS 4449 Appendix C Clause C.1.6.1
02	Physical / Mechanical	Steel Bar	Steel rebend test -Carbon steel bars for the reinforcement of concrete	BS 4449 Appendix E Clause E.1.6
03	Physical / Mechanical	Steel Bar	Steel tensile strength test -Carbon steel bars for the reinforcement of concrete	BS EN 10002-1
04	Physical / Mechanical	Steel Bar	Tensile properties	BS 4449 Clause 7.2.3
05	Physical / Mechanical	Steel Bar	Reinforcing bars, wire rod and wire (Tensile properties)	BS EN 15630 Clause 5
06	Physical / Mechanical	Steel Bar	Bend Performance	BS 4449 Clause 7.2.5
07	Physical / Mechanical	Steel Bar	Reinforcement bars, wire rod and wire (Bend Test)	BS EN 15630-1 Clause 6
08	Physical / Mechanical	Steel Bar	Bend Performance	BS 4449+A2 Clause 7.2.5
09	Physical / Mechanical	Steel Bar	Reinforcement bars, wire rod and wire (Re bend test)	BS EN 15630-1 Clause 7

**BLOCKS (Precast Concrete Masonry Units):**

S. No.	Type of Test	Material / Product	Test Description	Test Method
01	Physical / Mechanical	Blocks	Measurement of Dimension	BS 6073 Part 1 Appendix A
02	Physical / Mechanical	Blocks	Routine rapid control test of compressive strength	BS 6073 Part 2 Appendix B
03	Physical / Mechanical	Blocks	Determination of Compressive strength of Paving Blocks	BS 6717 Part 1 Annex B
04	Physical / Mechanical	Blocks	Measurement of dimension and plan area of Paving Blocks	BS 6717 Part 1 Annex A

**AGGREGATE:**

S. No.	Type of Test	Material / Product	Test Description	Test Method
01	Physical / Mechanical	Aggregate	Determination of Density, Relative Density (Specific gravity), and Absorption of Fine Aggregate	ASTM C 128
02	Physical / Mechanical	Aggregate	Determination of Particle size distribution	BS 812 Part 103
03	Physical / Mechanical	Aggregate	Determination of Aggregate Impact value (AIV)	BS 812 part 112
04	Physical / Mechanical	Aggregate	Determination of Density, Relative Density (Specific gravity), and Absorption of Coarse Aggregate	ASTM C 127
05	Physical / Mechanical	Aggregate	Determination of Aggregate Crushing value (ACV)	BS 812 Part 110
06	Physical / Mechanical	Aggregate	Determination of Clay Lumps and Friable Particles in Aggregate	ASTM C 142
07	Physical / Mechanical	Aggregate	Determination of TEN % Fine Value (TFV)	BS 812 Part 111
08	Physical / Mechanical	Aggregate	Determination of Soundness of Aggregate by use of sodium sulfate	ASTM C 88
09	Physical / Mechanical	Aggregate	Degradation of small size coarse aggregate by abrasion and impact in the Los Angeles Machine	ASTM C 131
10	Physical / Mechanical	Aggregate	Degradation of large size coarse aggregate by abrasion and impact in the Los Angeles Machine	ASTM C 535
11	Physical / Mechanical	Aggregate	Determination of particle shape (Flakiness Index)	BS 812 Part 105.1
12	Physical / Mechanical	Aggregate	Determination of particle shape Elongation index of (coarse aggregate)	BS 812 Part 105.2

**SOIL:**

S. No	Type of Test	Material / Product	Test Description	Test Method
01	Physical / Mechanical	Soil	Determination of Liquid Limit	BS 1377 Part 2 Clause 4.3
02	Physical / Mechanical	Soil	Determination of Plastic Limit & Plasticity Index	BS 1377 Part 2 Clause 5
03	Physical / Mechanical	Soil	Determination of dry density moisture content relationship	BS 1377 Part 4 Clause 3.5 and 3.6
04	Physical / Mechanical	Soil	In-situ tests (sand replacement method by using large pouring cylinder)	BS 1377 Part 9 Clause 2.2
05	Physical / Mechanical	Soil	Determination of California Bearing Ratio (CBR)	BS 1377 Part 4 Test 7 AMD 8259
06	Physical / Mechanical	Soil	Determination of particle size distribution (Wet and Dry)	BS 1377 Part 2 Clause 9.2 and 9.3
07	Physical / Mechanical	Soil	Determination of sand equivalent value of soil and fine aggregate	ASTM D 2419

**SOIL INVESTIGATION / GEOTECHNICAL INVESTIGATION:**

S. No.	Type of Test	Material / Product	Test Description	Test Method
01	Physical / Mechanical	Soil Investigation	Determination of penetration resistance using split barrel sampler (Standard Penetration Test SPT)	BS 1377 Part 9 Section 3.3
02	Physical / Mechanical	Soil Investigation	Field Investigations – Soil Sampling <ul style="list-style-type: none"> <li>• Light cable percussion boring</li> <li>• Sampling the ground</li> </ul>	BS 5930 Clause 20.5 and 22
03	Physical / Mechanical	Soil Investigation	<ul style="list-style-type: none"> <li>• Description of soils</li> <li>• Description and classification of rocks</li> </ul>	BS 5930 Section 41 & 44 Clark and Walker
04	Physical / Mechanical	Ground Water	<ul style="list-style-type: none"> <li>• Determination of ground water pressures</li> <li>• Field test observation wells</li> <li>• Report and interpretation</li> </ul>	BS 5930 Clause 23.2, 27.5 and 47.2.7
05	Physical / Mechanical	Ground Water	Field investigations- Ground water samples	BS 5930 Clause 23.3

**ROCK:**

S. No.	Type of Test	Material / Product	Test Description	Test Method
01	Physical / Mechanical	Rock	Description of Rock masses – Rock quality designation (RQD)	BS 5930 Clause 44.4.4
02	Physical / Mechanical	Rock	Description of rock masses – Core recovery (CR)	BS 5930 Clause 44.4.4
03	Physical / Mechanical	Rock	Geotechnical Reports and interpretation	BS 5930 Section 7

**ENVIRONMENTAL TESTING:**

S. No.	Type of Test	Material / Product	Test Description	Test Method
01	Chemical	Water / Waste Water	pH	APHA 4500 H <sup>+</sup> B 22 <sup>nd</sup> Edition
02			Total Suspended Solids	APHA 2540 D 22 <sup>nd</sup> Edition
03			Total Dissolved Solids	APHA 2540 C 22 <sup>nd</sup> Edition
04			Biochemical Oxygen Demand	APHA 5210 B 22 <sup>nd</sup> Edition
05			Chemical Oxygen Demand	APHA 5220 B 22 <sup>nd</sup> Edition
06			Oil and Grease	APHA 5520 B 22 <sup>nd</sup> Edition
07			Copper (Cu), Lead (Pb), Cadmium (Cd), Zinc (Zn), Nickel (Ni), Chromium (Cr), Iron (Fe), Manganese (Mn), Cobalt (Co)	APHA 3120 B 22 <sup>nd</sup> Edition
08		Drinking Water	Alkalinity	APHA 2320 B 22 <sup>nd</sup> Edition
09			Hardness	APHA 2340 C 22 <sup>nd</sup> Edition
10			Chlorides (Cl)	APHA 4500 Cl B 22 <sup>nd</sup> Edition
11			Sulphates (SO <sub>4</sub> )	APHA 4500 SO <sub>4</sub> 2-C 22 <sup>nd</sup> Edition
12			Calcium (Ca)	APHA 3120 B 22 <sup>nd</sup> Edition
13			Magnesium (Mg)	
14			Sodium (Na)	
15			Potassium (K)	

**ALC-LIST OF TESTING FACILITIES**

**SOIL TESTING DETAILS**

S. No.	Description of Test	Test Method
01	In-situ density by sand replacement method using large pouring cylinder and small pouring cylinder.	BS 1377 Part 9: 1990 AMD. 8264: 1995 (A)
02	In-place density test by sand cone method.	ASTM D 1556 : 1996
03	Dry Density – Moisture content relationship using 4.5kg rammer for Coarse and Medium gravel size particle.	BS 1377 Part 4: 1990 CLS. 3.6 AMD. 13925- 2002/ (A) /ASTM D 1557 : 2007 /AASHTO T 180: 1993
04	Particle Size Distribution	BS 1377 Part 2: 1990 CLS. 9.2 & 9.3 AMD. 9027: 1996 (A)/ ASTM D 422 : 1998
05	California Bearing Ratio	BS 1377 Part 4: 1990 CLS. 7 AMD. 13925: 2002/ (A) ASTM D 1883: 1999/ AASHTO T-193
06	Liquid Limit	BS 1377 Part 2: 1990 CLS. 4.3 & 4.5/ (A)/ ASTM D 4318: 1998/ AASHTO T90: 1993
07	Plastic Limit & Plasticity Index	BS 1377 Part 2: 1990 CLS 5.3/ ASTM D 4318: 1998 (A) / AASHTO T90: 1993
08	Moisture Content	BS 1377 Part 2 : 1990
09	Moisture content by Calcium Carbide Gas Pressure Tester	ASTM D 4944 : 1998
10	Sedimentation by Hydrometer method	BS 1377 Part 2 : 1990 CLS 9.4/ ASTM D 422
11	Linear Shrinkage	BS 1377 Part 2 : 1990 CLS 6.5.4
12	Soil Classification	ASTM D2487: 2000 / ASTM D3282: 1997
13	Plate Load Test	BS 1377 Part 9: 1990 CLS. 4
14	Particle Density of Soil	BS 1377 Part 2: 1990 CLS. 7
15	Determination of maximum & minimum density of granular soil	BS 1377 Part 4: 1990 CLS. 4
16	In Situ CBR	ASTM D 4429

### CEMENT TESTING DETAILS

S. No.	Description of Test	Test Method
01	Compressive Strength	BS EN 196 Part 1: 2005/ ASTM C109: 1995a/ ASTM C 114 : 1999
02	Specific Surface	ASTM C204: 1996a/ BS EN 196 Part 6: 1992
03	Normal Consistency of Hydraulic Cement	ASTM C 187: 1998/ ASTM C 191: 1999/ BS EN 196 Part 3 : 2005
04	Soundness	BS EN 196 Part 3: 2005/ ASTM C151 : 1998 a
05	Heat of hydration	BS EN 196 Part 8 & 9: 2003
06	Initial & Final Setting Time	ASTM C 191 : 1999/ BS EN 196 Part 3 : 2005
07	Consistency	BS EN 196 Part 1and BS 12/BS 4027 / ASTM C 150
08	Flexural Strength	BS EN 196 Part 1and BS 12/BS 4027 / ASTM C 150

### POZZOLONIC MATERIAL TESTING

#### GGBS & FLY ASH CHEMICAL TESTING:

S. No.	Description of Test	Test Method
01	Insoluble Residue	EN-196 part 2
02	Magnesia	EN-196 part 2
03	Sulpher	EN-196 part 2
04	Loss of Ignition	EN-196 part 2 / ASTM C 311
05	Manganese	EN-196 part 2
06	Chloride	EN-196 part 21
07	Chemical Moduli	EN-196 part 2
08	Silicon Dioxide, Aluminum Oxide, Iron oxide, Calcium Oxide, Magnesium Oxide, Sulpher Trioxide, Sodium Oxide and Potassium Oxide	ASTM C 114
09	Strength Activity Index with Portland Cement	ASTM C 109 / C 109M / ASTM C 989 and BS 6699

**GGBS & FLY ASH PHYSICAL TESTING:**

S. No.	Description of Test	Test Method
01	Compressive Strength	ASTM C 989 and BS 6699 / EN 196 part 01
02	Soundness	ASTM C 989 and BS 6699 / EN 196 Part 03
03	Setting Time	ASTM C 989 and BS 6699
04	Fineness (45 Microns)	ASTM C 989 and BS 6699 / EN 196 part 6
05	Index – Slag Activity (Pozzolonic)	ASTM C 989 and BS 6699
06	Moisture Content	BS 6699-1992

**MICRO SILICA:**

S. No.	Description of Test	Test Method
01	Pozzolonic Index Activity	ASTM C 1240
02	Silicon Dioxide	ASTM C 1240-01
03	Loss of Ignition	ASTM C 1240-01
04	Moisture Content	ASTM C 1240-01
05	Fineness	ASTM C 430
06	Compressive Strength	ASTM C 109 and C 109 M

**GROUT TESTING:**

S. No.	Description of Test	Test Method
01	Flow Test	In Compliance to Project Specification / Applicable and relevant International Standards (BS EN 445)
02	Bleeding	
03	Density	
04	Volume Change	
05	Temperature	
06	Compressive Strength	



**MORTAR MIX:**

S. No.	Description of Test	Test Method
01	Flow Test	ASTM C 185
02	Air Content	ASTM C 185
03	Compressive Strength	ASTM C 109 and C 109 M

**AGGREGATE TESTING DETAILS**

S. No.	Description of Test	Test Method
01	Particle size distribution (Wet / Dry sieving)	BS 812 Part 103 Sec 103.1: 1985 AMD. 6003: 1989 (A)
02	Flakiness Index of Aggregates	BS 812 Part 105 Sec 105.1 : 1989 (A)
03	Elongation Index of Aggregates	BS 812 Part 105 Sec 105.2 : 1990 (A)
04	Shell Content in coarse aggregates	BS 812 Part 106 : 1985
05	Aggregate Crushing value	BS 812 Part 110 : 1990 (A)
06	Ten Percent Fines Value	BS 812 Part 111 : 1990 (A)
07	Aggregate Impact Value	BS 812 Part 112 : 1990 (A)
08	Soundness of aggregates	ASTM C 88 : 2005 (A) / BS 812 Part 121:1989
09	Materials finer than 75µm sieve (Fines passing No.200) in mineral aggregates by washing	BS 812 Part 103.1: 1985/ ASTM C 117 : 1995
10	Specific gravity and water absorption of coarse aggregates	ASTM C 127 : 2007 (A)
11	Specific gravity & water absorption of fine aggregates	ASTM C 128 : 2007a (A)
12	Sieve Analysis of fine and coarse aggregates	ASTM C 136 : 2005
13	Resistance to degradation of small size or large size coarse aggregates by abrasion and impact in Los Angeles machine	ASTM C 131 : 2006 / ASTM C 535 : 2003 (A)
14	Clay lumps and friable particles	ASTM C 142 : 1997 (A)
15	Sand Equivalent Value of Soil & Fine Aggregates	ASTM D 2419 : 2009 (A)
16	Specific Gravity and water absorption of fine & coarse aggregate	BS 812 Part 2 : 1995
17	Sieve Analysis of Mineral Filler	ASTM D 546 : 1999

18	Bulk Density of Aggregate	BS 812 Part 2 : 1995/ ASTM C29 C29M : 1997
19	Water (moisture) content of soil & rock by mass	BS 812 Part 109 : 1990/ ASTM D2216: 1998
20	Unconfined compressive strength of intact rock core	ASTM D 7012: 2005
21	Determination of size/ weight distribution of Quarried stone	CIRIA Special publication 83/ CUR Report 154
22	Determination of the Drop test Breakage Index	CIRIA Special publication 83/ CUR Report 154

### CONCRETE TESTING DETAILS

#### FRESH CONCRETE TESTING:

S. No.	Description of Test	Test Method
01	Method of sampling fresh concrete at site	BS 1881 Part 101: 1983 (A)
02	Determination of slump and temperature in fresh concrete	BS 1881 Part 102: 1983
03	Testing Concrete, Method of Normal Curing of Specimens (20°C)	BS 1881 Part 111: 1983 Cls.4 (A)
04	Determination of air content in fresh concrete	BS 1881 Part 106: 1983
05	Determination of density of compacted fresh concrete	BS 1881 Part 107: 1983
06	Method for bleeding of fresh concrete	ASTM C 232 : 1999
07	Time of Setting of fresh concrete by penetration resistance	ASTM C403/ C403M; 1999
08	Method for specifying concrete mixes (Trial Mix)	BS 1881 Part 125: 1986

#### HARDEN CONCRETE TESTING DETAILS:

S. No.	Description of Test	Test Method
01	Flexural Strength of Concrete Beams	BS 1881 Part 118: 1983
02	Determination of compressive strength of concrete (using rebound hammer)	BSEN 12504 Part 2: 2001/ ASTM C805: 2002
03	Pulse velocity through Concrete (Test for crack depth)	BS 1881 Part 203: 1988
04	Cover meter survey (To determine the cover, thickness and location of bars)	BS 1881 Part 204: 1988

05	Compressive Strength of Mortar Cube	BS 4551 Part 1: 1998
06	Determination of Compressive Strength of concrete cubes	BS 1881 Part 116: 1983 AMD. 6057 & 6720 (A)
07	Determination of Density of Hardened Concrete	BS 1881 Part 114: 1983 (A)
08	Electrical Indication of concrete's ability to resist chloride ion penetration	ASTM C1202 : 2009 (A)
09	Determination of Water Absorption of hardened concrete	BS 1881 Part 122: 1983 (A)
10	Depth of penetration of water under pressure of hardened concrete	BSEN 12390 Part 8 (A) / DIN 1048: 1991
11	Recommendations for the determination of the initial surface absorption of concrete	BS 1881 Part 208: 1996 (A)
12	Compressive strength of concrete cores	BS 1881 Part 120: 1983 AMD. 6109: 1989
13	Compressive strength of cylindrical concrete specimens	ASTM C 39 / C39M: 2004a

#### **ASPHALT TESTING DETAILS**

S. No.	Description of Test	Test Method
01	Satiability of Bituminous	ASTM D 6926 and ASTM 6927
02	Specific Gravity and Density of Bituminous	ASTM D 2041
03	Bulk Specific Gravity of Compacted Bituminous	ASTM D 2726 and ASTM D 1188
04	Satiability of Bituminous Immersion Time Test	ASTM D 6926 and ASTM D 6927
05	Percentage of Voids in Compacted Bituminous	DMS – 9
06	Specimen Thickness and DIA meter of Compacted Bituminous	ASTM D 3549 and ASTM D 2726
07	Sampling of Bituminous Paving Mixture	ASTM D 979
08	Asphalt Content	ASTM D 6307
09	Loss of Stability of Compacted Bituminous	DMD – 10
10	Coating and Stripping Test of Bitumen Aggregate Mixture	ASTM D 6307
11	Rate of Application of Bituminous Distributors	ASTM D 2995
12	Extracted Aggregate Particle Size Distribution	ASTM D 5444
13	Marshall Test Preparation	ASTM D 6926

### AGGREGATE AND ROCK TESTING DETAILS

S. No.	Description of Test	Test Method
01	Particle size distribution (Wet / Dry sieving)	BS 812 Part 103 Sec 103.1: 1985 AMD 6003: 1989 (A)
02	Flakiness Index of Aggregates	BS 812 Part 105 Sec 105.1 : 1989 (A)
03	Elongation Index of Aggregates	BS 812 Part 105 Sec 105.2 : 1990 (A)
04	Shell Content in coarse aggregates	BS 812 Part 106 : 1985
05	Aggregate Crushing value	BS 812 Part 110 : 1990 (A)
06	Ten Percent Fines Value	BS 812 Part 111 : 1990 (A)
07	Aggregate Impact Value	BS 812 Part 112 : 1990 (A)
08	Soundness of aggregates	ASTM C 88 : 2005 (A) / BS 812 Part 121:1989
09	Materials finer than 75µm sieve (Fines passing No.200) in mineral aggregates by washing	BS 812 Part 103.1: 1985/ ASTM C 117 : 1995
10	Specific gravity and water absorption of coarse aggregates	ASTM C 127 : 2007 (A)
11	Specific gravity & water absorption of fine aggregates	ASTM C 128 : 2007a (A)
12	Sieve Analysis of fine and coarse aggregates	ASTM C 136 : 2005
13	Resistance to degradation of small size or large size coarse aggregates by abrasion and impact in Los Angeles machine	ASTM C 131 : 2006 / ASTM C 535 : 2003 (A)
14	Clay lumps and friable particles	ASTM C 142 : 1997 (A)
15	Sand Equivalent Value of Soil & Fine Aggregates	ASTM D 2419 : 2009 (A)
16	Specific Gravity and water absorption of fine & coarse aggregate	BS 812 Part 2 : 1995
17	Sieve Analysis of Mineral Filler	ASTM D 546 : 1999
18	Bulk Density of Aggregate	BS 812 Part 2 : 1995/ ASTM C29 C29M : 1997
19	Water (moisture) content of soil & rock by mass	BS 812 Part 109 : 1990/ ASTM D2216: 1998
20	Unconfined compressive strength of intact rock core	ASTM D 7012: 2005
21	Determination of size/ weight distribution of Quarried stone	CIRIA Special publication 83/ CUR Report 154
22	Determination of the Drop test Breakage Index	CIRIA Special publication 83/ CUR Report 154
23	Determination of Length to thickness ratio of Quarried Stone	CIRIA Special publication 83/ CUR Report 154

### STEEL TESTING DETAILS

S. No.	Description of Test	Test Method
01	Bend tests on Steel reinforcement bar	BS 4449 : 2005 (A) / BS EN ISO 15630 (A)
02	Re-bend Tests on Steel Reinforcement bar	BS 4449 : 2005 (A) / BS EN ISO 15630 (A)
03	Tensile Test on Steel Reinforcement Bars	BS 4449 : 2005 (A) / ASTM A 370 / BS EN ISO 15630 (A) / BS EN 10002-1 (A)
04	Tensile Test on Steel Reinforcement Bars with coupler	BS 4449 : 2005/ BS 8110 -1: 1997
05	Tensile Test on Anchor Bolts	BS 4360 : 1990
06	Tensile Test on Tie Rods	BS 4482 : 1985
07	Tensile Test as Welded steel Bar	BS 4360 : 1990
08	Tensile Test on Steel Pipe	ASTM A370 : 1997a
09	Mechanical tests on multi wire strand	BS 5896/ ASTM A370: 1997a
10	Test Method for mechanical properties of bolts, screws & studs tensile tests	ASTM F 606M: 1998/ BS EN ISO 898 Part 1
11	Determination of coating thickness	ASTM A775 A775M: 1997
12	Determination of coating flexibility	ASTM A775 A775M: 1997
13	Galvanizing Coating Thickness on steel article	BS 729: 1990
14	Pull off Test (After Salting)	ASTM D 4541
15	Pull out Strength	BS 1881 Part 207
16	Pull off Test on Paints	ASTM D 4541
17	Dry Film Thickness (DFT)	BS 3900 part C 5
18	Cover Metter Survey Testing	BS 1881 Part 204
19	Pull off Test on Plaster	BS 1881 Part 207
20	Test for Crack Width	CIRIA C 519
21	Thickness Test on Warning Tape	ALC-SOP-036
22	Scaffolding Load Test	-
23	Wet Film Coating Thickness	ASTM D 4414

24	Pull off Test on Tiles)	BS 1881 Part 207
25	Ultrasonic Pulse Velocity	BS EN 12504 Part 4
26	Breaking load (Post Tension Strand / Wire)	ASTM D 416 / A4 16 M

### **GEOTECHNICAL OPERATIONS AND TESTING DETAILS**

<b>S. No.</b>	<b>Description of Test</b>	<b>Test Method</b>
<b>01</b>	Ground Water Sampling	BS 5930 CLS. 23.3 (A)
<b>02</b>	Ground water level monitoring and sampling using peizometer.	BS 5930 CLS. 23.2, CLS 27.5 & (A)/ CLS. 47.2.7
<b>03</b>	Determination of the Penetration Resistance using the Split Barrel Sampler ( the Standard Penetration test, SPT)	BS 1377 Part 9 Section 3.3 (A)
<b>04</b>	Soil Sampling	BS 5930 CLS. 20.5 and Cls.22 (A)
<b>05</b>	Soil Description	BS 5930 Section 41 & 44 Clark and Walker (A)
<b>06</b>	Rock Quality Designation	BS 5930 CI 44.4.4 (A)
<b>07</b>	Core Recovery	BS 5930 CI 44.4.4 (A)
<b>08</b>	Code of Practice for Site Investigations / Geotechnical Reporting	BS 5930 Section 7 (A)
<b>09</b>	Falling Head / Constant head permeability test into borehole	BS 5930
<b>10</b>	Electrical Resistivity of soil	ASTM G 57 : 1995a
<b>11</b>	Thermal Conductivity of soil	IEEE Std. 442 : 1982

## SPECIAL TESTING

### WATER PROOFING MEMBRANE

S. No.	Description of Test	Test Method
01	Reinforcement	ASTM D545: 1999
02	Softening Point	ASTM D36: 1995
03	Static Puncture Resistance	ASTM E154: 1999
04	Heat Resistance	ASTM D5147: 2007b
05	Tensile Strength & Elongation	ASTM D5147: 2007b
06	Tear Resistance	ASTM D1004: 1994a
07	Dimensional Stability	ASTM D5147: 2007b
08	Water Absorption	ASTM D5147: 2007b
09	Chemical Resistance	ASTM D543: 1995
10	Bitumen Content	ASTM D545: 1999
11	Cold Flexibility	ASTM D5147: 2007b
12	Carrier Weight	UEATC 31: 1984

### GEOTEXTILE & SIMILAR FABRICS

S. No.	Description of Test	Test Method
01	Grab Strength Test	ASTM D 5034 & ASTM D 4632
02	Thickness Measurement	ASTM D 5199 and ASTM D 5261
03	Trapezoidal Tear Strength (non Woven)	ASTM D 5733
04	Trapezoidal Tear Strength	ASTM D 5587 and ASTM 4533
05	Mass per Unit Area	ASTM D 5261
06	Static Puncture Strength (CBR)	ASTM D 6241
07	Tensile Strength (Wide -Width)	ASTM D 4595
08	Resistance of Index Puncture	ASTM D 4833 and ASTM E 154
10	Wide-Width Tensile (Geo synthetics) Testing	BS EN ISO 10319

### KERBSTONE / PAVING BLOCKS AND MASONRY UNITS TESTING DETAILS

S. No.	Test Description	Test Method
01	Water Absorption of Paving Blocks	ASTM C140 CLS. 8: 1999b
02	Dimension & Compressive strength of concrete paving blocks	BS 6717 Part 1 Annex A : 2001 (A)
03	Determination of compressive strength of pre-cast concrete paving blocks	BS 6717 Part 1 Annex B : 2001 (A)
04	Compressive Strength of Masonry Units	BS EN 772 Part 1: 2000
05	Dimension & Compressive strength of masonry blocks.	BS 6073 Part 2: 1981 Appendix B: 1981/ AMD. 4462 & 4508: 1981 (A)
06	Determination of compressive strength of pre-cast concrete masonry units	BS 6073 Part 2 Appendix B : 1981 (A)
07	Determination of water absorption of dimension stone	ASTM C 97: 1996
08	Transverse strength of Kerbstone	BS 7263 : Part 1: 1994
09	Water Absorption of Precast concrete flags, Kerbstone, Channels & Edgings.	BS 7263: Part 1: 1994 Annex C CLS. 3