


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

 Accredited to ISO/IEC 17025: 2005	<h3>Exova Ltd (Abu Dhabi)</h3> <p>Issue No: 034 Issue date: 02 November 2011</p>	
	<p>Exova Ltd (Abu Dhabi) PO Box 9191 Abu Dhabi United Arab Emirates</p>	<p>Contact: Mr. C Davey Tel: +971-2-5582345 Fax: +971-2-5584515 E-Mail: middle.east@exova.com Website: www.exova.com</p>
Testing performed by the Organisation at the locations specified below		

Exova Ltd (Abu Dhabi) is accredited for a flexible scope that enables them to establish site laboratories to conduct the activities detailed below under Construction Materials Testing and Site Sampling, in accordance with their documented in-house procedure: SLP 4.16

Current locations covered by the scope of accreditation:

Location details	Activity	Location code				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Location Address Exova Ltd (Abu Dhabi) Plot 25 Old Airport Road Umm Al Naar (Sas Al Nakhl) Abu Dhabi United Arab Emirates</td> <td style="width: 50%; border: none;">Local contact Mr. C Davey Tel: +971-2-5582345 Fax: +971-2-5584515 E-Mail: middle.east@exova.com</td> </tr> <tr> <td colspan="2" style="border: none;">Postal Address Exova Ltd (Abu Dhabi) PO Box 9191 Abu Dhabi United Arab Emirates</td> </tr> </table>	Location Address Exova Ltd (Abu Dhabi) Plot 25 Old Airport Road Umm Al Naar (Sas Al Nakhl) Abu Dhabi United Arab Emirates	Local contact Mr. C Davey Tel: +971-2-5582345 Fax: +971-2-5584515 E-Mail: middle.east@exova.com	Postal Address Exova Ltd (Abu Dhabi) PO Box 9191 Abu Dhabi United Arab Emirates		<p>Aggregates – Chemical tests Soils - Physical & Mechanical tests Metals & Weldments - Chemical tests Metals & Weldments - Corrosion tests Metals & Weldments - Mechanical tests Metals & Weldments - Metallurgical tests</p>	A
Location Address Exova Ltd (Abu Dhabi) Plot 25 Old Airport Road Umm Al Naar (Sas Al Nakhl) Abu Dhabi United Arab Emirates	Local contact Mr. C Davey Tel: +971-2-5582345 Fax: +971-2-5584515 E-Mail: middle.east@exova.com					
Postal Address Exova Ltd (Abu Dhabi) PO Box 9191 Abu Dhabi United Arab Emirates						
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Location Address Exova Ltd (Abu Dhabi) Taweelah A1 Power & Water Desalination Plant Facility Laboratory Taweelah United Arab Emirates</td> <td style="width: 50%; border: none;">Local contact Mr C Castillo Tel: Fax: E-Mail:middle.east@exova.com</td> </tr> </table>	Location Address Exova Ltd (Abu Dhabi) Taweelah A1 Power & Water Desalination Plant Facility Laboratory Taweelah United Arab Emirates	Local contact Mr C Castillo Tel: Fax: E-Mail:middle.east@exova.com	<p>Water - Chemical tests</p>	B		
Location Address Exova Ltd (Abu Dhabi) Taweelah A1 Power & Water Desalination Plant Facility Laboratory Taweelah United Arab Emirates	Local contact Mr C Castillo Tel: Fax: E-Mail:middle.east@exova.com					
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Location Address Exova Ltd (Abu Dhabi) Plot 25 Old Airport Road Umm Al Naar (Sas Al Nakhl) Abu Dhabi United Arab Emirates</td> <td style="width: 50%; border: none;">Local contact Mr. C Davey Tel: +971-2-5582345 Fax: +971-2-5584515 E-Mail: middle.east@exova.com</td> </tr> </table>	Location Address Exova Ltd (Abu Dhabi) Plot 25 Old Airport Road Umm Al Naar (Sas Al Nakhl) Abu Dhabi United Arab Emirates	Local contact Mr. C Davey Tel: +971-2-5582345 Fax: +971-2-5584515 E-Mail: middle.east@exova.com	<p>Cladding & Curtain Walling Systems - Physical tests</p>	C		
Location Address Exova Ltd (Abu Dhabi) Plot 25 Old Airport Road Umm Al Naar (Sas Al Nakhl) Abu Dhabi United Arab Emirates	Local contact Mr. C Davey Tel: +971-2-5582345 Fax: +971-2-5584515 E-Mail: middle.east@exova.com					



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<p>Location Address Exova Ltd (Abu Dhabi) Reem Island Laboratory Reem Island Abu Dhabi United Arab Emirates</p>	<p>Local contact Mr A Lucas Tel: + 971 2 5582345 Fax: +971-2-5581034 E-Mail:middle.east@exova.com</p>	<p>Aggregates – Physical & Mechanical tests Bituminous Mixtures - Physical & Mechanical tests Fresh Concrete - Sampling, & Physical tests Hardened Concrete - Physical & Mechanical tests Soils - Physical & Mechanical tests</p>	<p align="center">D</p>
<p>Address Commercial and Industrial Premises</p>	<p>Local contact Mr. C Davey Tel: +971-2-5582345 Fax: +971-2-5584515 E-Mail: middle.east@exova.com</p>	<p>Cladding & Curtain Walling Systems - Physical tests</p>	<p align="center">C & I</p>



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DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Analytical Chemical Analysis			
WATER	Ammonia	Documented In-house method CHEM 3002	B
	Electrical conductivity	Documented In-house method CHEM 2001	B
	Nitrite	Documented In-house method CHEM 3017	B
	pH value	Documented In-house method CHEM 3001	B
	Residual (free available) Chlorine	Documented In-house method CHEM 2005	B
	Total dissolved solids (TDS)	Documented In-house method CHEM 2008	B
	Turbidity	Documented In-house method CHEM 2003	B

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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Building Performance Testing			
WINDOWS, DOORS and CURTAIN WALLS	Rate of air leakage	ASTM E283-04	C
	Wind resistance	ASTM E330-02	C
	Static water penetration	ASTM E331-00	C
	Dynamic water penetration	AMMA 501.1:2005	C
	Hose test	AMMA 501.2:2009	C
End of Section			
Building Performance Site Testing			
WINDOWS AND DOORS	Hose test	AMMA 501.2:2009	C & I
	Air leakage	ASTM E783-02	C & I
WINDOWS, SKYLIGHTS, DOORS and CURTAIN WALLS	Water penetration	ASTM E1105-00	C & I
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Construction Materials Testing			
AGGREGATES	Particle density and water absorption for aggregate 10mm nominal size and smaller	BS 812:Part 2:1995	D
	Particle density and water absorption for aggregate all larger than 10mm	BS 812:Part 2:1995	D
	Particle density and water absorption for aggregate between 40mm and 5mm	BS 812:Part 2:1995	D
	Particle size distribution - washing and sieving	BS 812:Part 103 Section 103-1: 1985	D
	Particle size distribution - dry sieving	BS 812:Part 103 Section 103-1: 1985	D
	Flakiness index	BS 812:Part 105:Section 105.1: 1989	D
	Elongation index	BS 812:Part 105:Section 105.2: 1990	D
	Moisture content - oven dry method	BS 812:Part 109:1990	D
	Aggregate crushing value - particle size 10mm and greater (Forces from 30 to 3000kN)	BS 812:Part 110:1990	D
	Ten per cent fines value - dry - particle size 10mm and greater (Forces from 30 to 3000kN)	BS 812:Part 111:1990	D
	Aggregate impact value - dry	BS 812:Part 112:1990	D
Acid soluble chloride salt content	BS 812:Part 117:1988 (App C)	A	



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AGGREGATES (cont'd)	Total sulphate content by acid extraction	BS 812:Part 118:1988	A
	Materials finer than 75µm (No 200) in mineral aggregates by washing	ASTM C117-04	D
	Specific gravity and absorption of coarse aggregates	ASTM C127-07	D
	Specific gravity and absorption of fine aggregates	ASTM C128-07	D
	Resistance to degradation of small-size coarse aggregate by abrasion and impact in the Los Angeles Machine	ASTM C131-06	D
	Sieve analysis of fine and coarse aggregates	ASTM C136-06	D
	Clay lumps and friable particles in aggregates	ASTM C142-97(04)	D
	Resistance to degradation of large-size coarse aggregate by abrasion and impact in the Los Angeles Machine	ASTM C535-03	D
	Total evaporable moisture content by drying	ASTM C566-97(04)	D
BITUMINOUS MIXTURES for roads and other paved areas	Bulk specific gravity and density of compacted bituminous mixtures	ASTM D2726-10	D
	Thickness of compacted bituminous paving mixture specimens	ASTM D3549-03	D
	Mechanical size analysis of extracted aggregates	ASTM D5444-08	D
	Asphalt content of hot-mix asphalt by ignition method	ASTM D6307-10	D



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BITUMINOUS MIXTURES for roads and other paved areas (cont'd)	Preparation of bituminous specimens using Marshall apparatus	ASTM D6926-10	D
	Marshall stability and flow (Forces from 2.5 to 50 kN)	ASTM D6927-06	D
CONCRETE - hardened	Density	BS 1881:Part 114:1983	D
	Compressive strength of cubes - including curing (Forces from 30 to 3000 kN)	BS 1881:Part 116:1983 BS 1881:Part 111:1983	D
	Water absorption	BS 1881:Part 122:1983	D
	Shape and dimension of specimens	BS EN 12390-1: 2000	D
	Compressive strength of cubes - including curing (Forces from 30 to 3000 kN)	BS EN 12390-2: 2009 BS EN 12390-3: 2009	D
	Density	BS EN 12390-7: 2009	D
	Compressive strength of cores (Forces from 60 to 3000kN)	BS EN 12504-1:2009	D
	Rapid chloride permeability	ASTM C1202- 09	D
	Absorption of water by immersion	RILEM CPC 11.1:1984	D
	Absorption of water by immersion under vacuum	RILEM CPC 11.3:1984	D
SOILS for civil engineering purposes	Water permeability	DIN 1048:Part 5:June 1991	D
	Moisture content - oven drying method	BS 1377:Part 2:1990	D
	Particle size distribution - wet sieving	BS 1377:Part 2:1990	D
	Particle size distribution - dry sieving	BS 1377:Part 2:1990	D



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SOILS for civil engineering purposes (cont'd)	Dry density/moisture content relationship (4.5 kg rammer)	BS 1377:Part 4:1990	D
	CBR (California Bearing Ratio) of laboratory-compacted soils (<i>Forces from 2 to 40kN</i>)	BS 1377:Part 4:1990	D
	Laboratory compaction characteristics of soil using modified effort	ASTM D1557-09	D
	CBR (California Bearing Ratio) of laboratory-compacted soils (<i>Forces from 2 to 40kN</i>)	ASTM D1883-07	D
	Water (moisture) content	ASTM D2216-05	D

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Metallurgical, Mechanical, Corrosion and Associated Chemical Testing			
Plain carbon, low alloy and stainless steels	Elemental Analysis	Documented In-House Method CHEM 1001 using Direct Reading Optical Emission Spectrometry techniques	A
Low alloy and stainless steels	Elemental Analysis	Documented In-House Method CHEM 1007 using ICP-Optical Emission Spectrometry techniques	A
Copper alloys	Elemental Analysis	Documented In-House Method CHEM 1009 using ICP-Optical Emission Spectrometry techniques	A
Nickel alloys	Elemental Analysis	Documented In-House Method CHEM 1010 using ICP-Optical Emission Spectrometry techniques	A
	Carbon and Sulphur content	Documented In-House Method CHEM 1029 using IR-combustion techniques	A
Austenitic stainless steels and wrought, nickel rich, chromium bearing alloys	Ferric Sulphate/Sulphuric acid	ASTM G28-02 (2008) Method A	A
	Susceptibility to intergranular attack	ASTM A262-10 Practices A, B, C & E	A
	Pitting resistance	ASTM G48-03 (2009) Methods A, C & E	A
Iron, steels and other ferrous metals	Hydrogen induced cracking (HIC)	NACE TM0284-03 Documented In-house Method COR 07	A
	Bend	BS EN ISO 7438:2005	A
	Hardness: Brinell (HB1/30)	BS EN ISO 6506-1:2005 ASTM E10-10	A



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Iron, steels and other ferrous metals (cont'd)	Rockwell (B and C Scales)	BS EN ISO 6508-1:2005 ASTM E18-08b	A
	Vickers (HV5, 10 & 30)	BS EN ISO 6507-1:2005 ASTM E384-10	A
	Charpy impact (in the temperature range 77K to ambient)	ASTM E23-07a ASTM A370-11	A
	Charpy impact (in the temperature range 77K to ambient)	BS EN ISO 148-1:2010	A
	Fracture toughness		
	CTOD (in the temperature range 77K to ambient)	BS 7448-1:1991 BS 7448-2:1997	A
	Tensile at ambient temperature (forces up to 2000 kN)	BS EN ISO 6892-1:2009 ASTM E8/E8M-09 ASTM A370-11 API 5L 43 rd Edition 2004	A
Carbon steel bars for the reinforcement of concrete	Bend	BS 4449:1988 (withdrawn) ASTM A615/A615M-09b	A
	Rebend	BS 4449:1997 (withdrawn) BS 4449:2005+A2:2009	A
	Tensile	BS 4449:1997 (withdrawn) BS 4449:2005+A2:2009 ASTM A615/A615M-09b	A
	Fatigue	BS 4449:1997 Amd't1 (withdrawn) BS 4449:2005+A2:2009 BS 6744:2001+A2 2009	A
	Projected Rib Area (Geometry)	BS 4449:1997 Amd't1 (withdrawn) BS 4449:2005+A2:2009 BS EN ISO 15630-1:2002	A
Manhole tops	Loading (up to 1000 kN)	BS EN 124:1994 BS EN 1433:2002	A



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Weldments	Bend, Fillet weld fracture, Hardness, Impact, Nick-break, Tensile, Macro- and Micro-examination in accordance with specific welding codes	BS EN 287: Part 1:2004 BS EN 875:1995 BS EN 895:1995 BS EN ISO 5173:2010 BS EN 1043-1:1996 BS EN 1320:1997 BS EN 1321:1997 BS EN ISO 9606-2:2004 BS EN ISO 15614-1:2004 BS EN ISO 15614-2 :2005 AWS D1.1/D1.1M:2008 ASTM E407-07 API 1104-20 th edition. 2005 ASME IX-10 BS 4515-1:2004 BS 4515-2:1999 BS 7448:Part 2:1997 Documented specifications and procedures technical equivalent to those above	A
	Phase volume fraction	ASTM E562-08	A
	Ferrite content	Documented In-House Method MET 04 using Fischer Ferritscope	A
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Site Sampling and Testing			
AGGREGATES	Sampling coarse, fine and all-in aggregates - from heaps - from a lorry-load - from laid material	BS 812:Part 102:1989	D
CONCRETE- fresh	Sampling fresh concrete on site	BS 1881:Part 101:1983	D
	Sampling from initial discharge (slump test)	BS 1881:Part 102:1983	D
	Slump	BS 1881:Part 102:1983	D
	Sampling fresh concrete on site	BS EN 12350-1: 2000	D
	Slump	BS EN 12350-2: 2000	D
	Temperature	ASTM C1064/C1064M-05	D
CONCRETE - hardened	Coring	BS 1881:Part 120:1983	D
	Sampling of concrete by dust drilling	Documented In-House Method No. TP005	D
CONCRETE - reinforced	Location of reinforcement	BS 1881:Part 204:1988	D
SOILS for civil engineering purposes	In-situ density – sand replacement method (large pouring cylinder)	BS 1377:Part 9:1990	D
	Density and unit weight of soil in place by the sand-cone method	ASTM D1556-07	D
END			