


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 <p>Accredited to ISO/IEC 17025:2005</p>	Test Houses Limited	
	Issue No: 033	Issue date: 15 March 2011
	Wolverhampton Laboratory Millfields Road Ettingshall Wolverhampton West Midlands WV4 6JP	Contact: Mr M Hyland Tel: +44 (0)1902-382383 Fax: +44 (0)1902-408260 E-Mail: mhyland@tarmac.co.uk Website:
Testing performed by the Organisation at the locations specified below		

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	Activity	Location code				
<table border="0"> <tr> <td>Address</td> <td>Local contact</td> </tr> <tr> <td>Wolverhampton Laboratory Millfields Road Ettingshall Wolverhampton West Midlands WV4 6JP</td> <td>Mr M Hyland</td> </tr> </table>	Address	Local contact	Wolverhampton Laboratory Millfields Road Ettingshall Wolverhampton West Midlands WV4 6JP	Mr M Hyland	Testing of aggregates, bitumens and bituminous mixtures, concrete and soils	A
Address	Local contact					
Wolverhampton Laboratory Millfields Road Ettingshall Wolverhampton West Midlands WV4 6JP	Mr M Hyland					

Site activities performed away from the locations listed above:

Location details	Activity	Location code
All site locations suitable for the activities listed	Sampling of bituminous mixtures	B



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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
AGGREGATES	Aggregate crushing value - particle size 10mm and greater	BS 812:Part 110:1990	A
	Ten per cent fines value - dry - particle size 10mm and greater	BS 812:Part 111:1990	A
	Ten per cent fines value - soaked - particle size 10mm and greater	BS 812:Part 111:1990	A
	Particle density and water absorption	BS EN 1097-6:2000	A
	Particle density of filler - pycnometer method	BS EN 1097-7:2008	A
	Bulk density and calculation of voids and bulking of aggregate	BS 812:Part 2:1995	A
	Loose bulk density and voids	BS EN 1097-3:1998	A
	Apparent (bulk) density of filler in kerosene	BS EN 1097-3:1998 Annex A	A
	Voids of dry compacted filler	BS EN 1097-4:2008	A
	Particle size distribution - washing and sieving	BS 812:Part 103 Section 103.1:1985	A
	Particle size distribution - dry sieving	BS 812:Part 103 Section 103.1:1985	A
	Particle size distribution	BS EN 933-1:1997	A
	Assessment of fines - grading of fillers by air jet sieving	BS EN 933-10:2009	A
	Assessment of fines - methylene blue test	BS EN 933-9:2010	A
Flakiness index	BS EN 933-3:1997 BS 812:Part 105 Section 105.1:1989	A	
Shape index	BS EN 933-4:2008	A	



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AGGREGATES (cont'd)	Crushed and broken surfaces in coarse aggregate	BS EN 933-5:1998	A
	Shell content - percentage of shells in coarse aggregate	BS EN 933-7:1998	A
	Constituent materials in recycled coarse aggregate and recycled concrete aggregate	Specification for Highway Works: TSO May 2009, Clause 710	A
	Elongation index	BS 812:Part 105 Section 105.2:1990	A
	Water content by drying in a ventilated oven	BS EN 1097-5:1999	A
	Aggregate impact value -dry	BS 812:Part 112:1990	A
	Aggregate impact value - soaked	BS 812:Part 112:1990	A
	Flow coefficient of aggregates	BS EN 933-6:2001	A
	Aggregate abrasion value	BS 812:Part 113:1990 BS EN 1097-8:2009	A
	Polished stone value	BS 812:Part 114:1989 BS EN 1097-8:2009	A
	Magnesium sulfate test	BS EN 1367-2:2009	A
	Magnesium sulphate soundness	Defence Works Functional Standards – Hot Rolled Asphalt and Coated Macadam for Airfield Pavement Works (1995)	A
	Soundness	PSA - Airfield Pavements Standard Specification Part 3 1979 - Appendix 3.A	A
	Soundness of aggregates	PSA Specification for Airfield Works App. 4B 1979	A
Micro-Deval coefficient	BS EN 1097-1:1996	A	
Resistance to fragmentation by the Los Angeles method	BS EN 1097-2:2010	A	



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AGGREGATES (cont'd)	Preparation of eluates by leaching	BS EN 1744-3:2002	A
	Sample reduction using a riffle box	BS EN 932-2:1999	A, B
	Sample reduction using fractional shovelling	BS EN 932-2:1999	A, B
	Sample reduction by quartering	BS EN 932-2:1999	A, B
	Sample reduction to a test portion of a specified mass within a small tolerance	BS EN 932-2:1999	A, B
	Sample reduction with crushing to reduce the particle size	BS EN 932-2:1999	A
BITUMINOUS MATERIALS	Needle penetration - 25°C	BS 2000:Part 49:1993	A
	Needle penetration	BS EN 1426:2007	A
	Softening point - ring and ball method	BS EN 1427:2007 BS 2000:Part 58:1993	A
	Delta ring and ball test	BS EN 13179-1:2000	A
	Viscosity of cutback bitumen	BS 2000:Part 72:1993	A
	Binder viscosity using a Brookfield Viscometer	Documented In-House Method TPM/1/007	A
	Recovery of bitumen binders by dichloromethane extraction rotary film evaporator method	BS 2000:Part 397:1995	A
BITUMINOUS MIXTURES for roads and other paved areas	Determination of the composition of design wearing course rolled asphalt	BS 598:Part 107:1990	A
	Marshall method of design	PSA Specification for Airfield Works App. 4C 1979	A
	Indirect tensile stiffness modulus	DD 213:1993	A



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BITUMINOUS MIXTURES for roads and other paved areas (cont'd)	Resistance to permanent deformation - unconfined dynamic loading	DD 226:1996	A
	Indirect tensile fatigue	DD ABF (June 1995)	A
	Resistance to permanent deformation - repeated load axial test with vacuum confinement	TRL PA 3287:1997	A
	Modified RLAT (100mm indent)	SHW Series 900:Clause 9(iii)	A
	Saturation ageing tensile stiffness (SATS) test	SHW Series 900:Clause 953 November 2004 IAN 101/07 Amd 1	A
	Sensitivity to water	BBA Guidelines Document for the Assessment and Certification of Thin Surfacing Systems for Highways - July 2004	A
	Water sensitivity of bituminous specimens	BS EN 12697-12: 2008 NFP98-251-1: 2002	A
	Binder content and grading of mineral aggregate - extraction bottle method: binder determination by difference	BS 598:Part 102:2003	A
	Binder content and grading of mineral aggregate - extraction bottle method: binder directly determined, filler by difference	BS 598:Part 102:2003	A
	Binder content and grading of mineral aggregate - extraction bottle method: binder by difference, filler directly determined	BS EN 12697-1: 2005 BS EN 12697-2: 2002	A
Specimen prepared by roller compactor	BS EN 12697-33: 2003	A	



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BITUMINOUS MIXTURES for roads and other paved areas (cont'd)	Thickness of a Bituminous Pavement (Destructive method)	BS EN 12697-36 Clause 4.1:2003	A
	Indirect Tensile Stiffness Modulus	BS EN 12697-26 Annex C:2004	A
	Wheel tracking (large size device)	BS EN 12697-22:2003 +A1:2007	A
	Specimen preparation by impact compactor	BS EN 12697-30:2004	A
	Preparation of samples for determining binder content, water content and grading.	BS EN 12697-28:2001	A+B
	Determination of the dimensions of a bituminous specimen.	BS EN 12697-29:2002	A
	Bitumen recovery by rotary evaporator	BS EN 12697-3:2005	A
	Binder drainage (basket method)	BS EN 12697-18:2004	A
	Percentage refusal density (PRD)	BS 598:Part 104:2005	A
	Density of cores	BS 598:Part 104:2005	A
	Wheel-tracking rate	BS 598:Part 110:1998	A
	Marshall test	BS EN 12697-34:2004	A
	Laboratory mixing	BS EN 12697-35:2004	A
	In-situ drainability	BS EN 12697-40:2005	A
	Wheel tracking (small-size devices)	BS EN 12697-22:2003	A
	Maximum density	BS EN 12697-5:2009 BSI DD 228:1996	A
Binder drainage (Schellenberg Method)	BS EN 12697 -18:2004	A	



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BITUMINOUS MIXTURES for roads and other paved areas (cont'd)	Maximum binder content of bituminous mixtures without excessive binder drainage	BSI DD 232:1996	A
	Air void content	Specification for Highway Works, HMSO December 1991 Clause 929	A
	Affinity between aggregate and bitumen	BS EN 12697-11:2005	A
	Theoretical maximum specific gravity and density	ASTM D 2041-2000	A
	Bulk density	BS EN 12697-6: 2003 +A1: 2007	A
	Conventional reference density - by impact compactor	BS EN 12697-9:2002	A
	Conventional refusal density - vibratory compaction	BS EN 12697-9:2002	A
	Laboratory compaction of bituminous mixtures by vibratory compaction	BS EN 12697-32:2003 +A1: 2007	A
	Bulk specific gravity and density	ASTM D 2726-2000	A
	Void characteristics	BS EN 12697-8:2003	A
	Percent air voids	ASTM D 3203-2000	A
	Torque bond test	BBA Guidelines Document for the Assessment and Certification of Thin Surfacing Systems for Highways - July 2004	A
	Relative hydraulic conductivity of permeable surfacings	DD 229:1996	B
Sampling of laid and compacted materials by coring	BS EN 12697-27:2001	B	



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CONCRETE - fresh	Slump	BS EN 12350-2:2009 BS 1881:Part 102:1983	A
	Density	BS EN 12350-6:2009	A
CONCRETE - hardened	Making and curing specimens for strength tests	BS EN 12390-2:2009	A
	Compressive strength	BS EN 12390-1:2000 BS EN 12390-3:2009	A
	Flexural strength	BS EN 12390-1:2000 BS EN 12390-5:2009 BS 1881:Part 118:1983	A
	Density	BS EN 12390-7:2009	A
SOILS for civil engineering purposes	Moisture content - oven drying method	BS 1377:Part 2:1990	A
	Liquid limit - cone penetrometer	BS 1377:Part 2:1990	A
	Plastic limit	BS 1377:Part 2:1990	A
	Plasticity index and liquidity index	BS 1377:Part 2:1990	A
	Particle size distribution - wet sieving	BS 1377:Part 2:1990	A
	Particle size distribution - dry sieving	BS 1377:Part 2:1990	A
	Dry density/moisture content relationship (vibrating hammer)	BS 1377:Part 4:1990	A
California Bearing Ratio (CBR) (loads from 0.1 to 48 kN)	BS 1377:Part 4:1990	A	
END			