Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

1774 **Accredited to ISO/IEC 17025:2017**	**Structural Soils Ltd** **Issue No:** 040 **Issue date:** 07 November 2023	
	The Old School **Stillhouse Lane** **Bedminster** **Bristol** **BS3 4EB**	**Contact: Dr Dimitris Xirouchakis** **Tel: +44 (0)1179 471000** **Fax: +44 (0)1179 471004** **E-Mail: Dimitris.Xirouchakis@soils.co.uk** **Website: www.soils.co.uk**

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**
Address 1A Princess Street Bedminster Bristol BS3 4AG	**Local contact** Dr Dimitris Xirouchakis	Rock, Concrete, Aggregates and Soils including unbound & hydraulically bound mixtures: Mechanical Tests; Physical Tests	Bristol
Address The Potteries Pottery Street Castleford West Yorkshire WF10 1NJ	**Local contact** Mr Luke Fisher	Soils including unbound & hydraulically bound mixtures: Mechanical Tests; Physical Tests	Castleford
Address 18 Frogmore Road Hemel Hempstead Herts HP3 9RT	**Local contact** Ms Sharon Cairns	Rock and Soils: Mechanical Tests; Physical Tests	Hemel Hempstead
Address Anerley Court Half Moon Lane Hildenborough Tonbridge TN11 9HU	**Local contact** Mr Richard Ashby	Soils: Mechanical Tests; Physical Tests	Tonbridge
Address Pony Pass Quarry Falkland Islands FIQQ 1ZZ	**Local contact** Ms Carolina Gallardo	Aggregates: Mechanical Tests; Physical Tests	Falkland Islands

Site activities performed away from the locations listed above:

Location details		Activity	Location code
All locations suitable for the activities listed	**Local contact** Mr S Hancock 1A Princess Street Bedminster Bristol BS3 4AG	Soils: Mechanical Tests	Site

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
AGGREGATES	Sample reduction by quartering	BS EN 932-2:1999	Castleford
	Sample reduction using a riffle box	BS EN 932-2:1999	Castleford Falkland Islands
	Sample reduction to a specified mass within a small tolerance	BS EN 932-2:1999	Falkland Islands
	Loose Bulk Density	BS EN 1097-3:1998	Castleford
	Particle size distribution - sieving method	BS EN 933-1:2012	Castleford Falkland Islands
	Flakiness index	BS EN 933-3:2012	Castleford Falkland Islands
	Constituents of coarse recycled aggregate	BS EN 933-11:2009	Castleford
	Resistance to wear (Micro Deval)	BS EN 1097-1:2011	Castleford Falkland Islands
	Resistance to fragmentation by the Los Angeles test method	BS EN 1097-2:2020	Castleford Falkland Islands
	Water content	BS EN 1097-5:2008	Castleford Falkland Islands
	Particle density and water absorption - pyknometer method for aggregate particles between 0,063 mm and 4 mm	BS EN 1097-6:2013	Castleford Falkland Islands
	Particle density and water absorption - pyknometer method for aggregate particles between 4 mm and 31,5 mm	BS EN 1097-6:2013	Castleford Falkland Islands

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
AGGREGATES (cont'd)	Magnesium Sulphate Test	BS EN 1367-2:2009	Castleford
	Assessment of fines - methylene blue test	BS EN 933-9:2009+A1:2013	Castleford
ROCK	Water content	The Complete ISRM Suggested Methods for Rock Characterisation, Testing and Monitoring: 1974-2006. Editors: R Ulusay & J A Hudson	Bristol Hemel Hempstead
	Uniaxial compressive strength	The Complete ISRM Suggested Methods for Rock Characterisation, Testing and Monitoring: 1974-2006. Editors: R Ulusay & J A Hudson	Bristol
	Porosity and density - by saturation and buoyancy techniques	The Complete ISRM Suggested Methods for Rock Characterisation, Testing and Monitoring: 1974-2006. Editors: R Ulusay & J A Hudson	Bristol Hemel Hempstead
	End preparation of rock cores	ASTM D 4543-19	Bristol
	Deformability under uniaxial compression	The Complete ISRM Suggested Methods for Rock Characterisation, Testing and Monitoring: 1974-2006. Editors: R Ulusay & J A Hudson	Bristol
	Point load strength	The Complete ISRM Suggested Methods for Rock Characterisation, Testing and Monitoring: 1974-2006. Editors: R Ulusay & J A Hudson	Bristol Hemel Hempstead

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
ROCK (cont'd)	Slake Durability Index	The Complete ISRM Suggested Methods – Rock Characterization Testing and Monitoring 1974 – 2006, Editors: R Ulusay & J A Hudson	Bristol
	Cerchar Abrasivity Test	The ISRM Suggested Methods for Rock Characterization, Testing and Monitoring: 2007-2014	Bristol
	Brazilian Tensile Strength	The Complete ISRM Suggested Methods – Rock Characterization Testing and Monitoring 1974 – 2006, Editors: R Ulusay & J A Hudson	Bristol
	Standard Test Method for Splitting Tensile Strength of Intact Rock Core Specimens	ASTM D3967 - 16	Bristol
	Standard Test Method for Laboratory Determination of Abrasiveness of Rock Using the CERCHAR Method	ASTM D7625 - 10	Bristol
	P & S Wave	ASTM D2845-08	Bristol
SOILS for civil engineering purposes	Moisture content - oven drying method	BS 1377-2:1990	Bristol Castleford Hemel Hempstead Tonbridge
	Saturation moisture content of chalk	BS1377-2 1990	Bristol Tonbridge Hemel Hempstead
	Chalk Crushing Value	BS1377-2 1990	Hemel Hempstead

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
SOILS for civil engineering purposes (cont'd)	Liquid limit - cone penetrometer	BS 1377-2:1990	Bristol Castleford Hemel Hempstead Tonbridge
	Liquid limit - cone penetrometer - one point	BS 1377-2:1990	Bristol Castleford Hemel Hempstead Tonbridge
	Plastic limit	BS 1377-2:1990	Bristol Castleford Hemel Hempstead Tonbridge
	Plasticity index and liquidity index	BS 1377-2:1990	Bristol Hemel Hempstead Tonbridge
	Density - linear measurement	BS 1377-2:1990	Bristol Castleford Hemel Hempstead
	Linear Shrinkage	BS 1377-2:1990	Bristol Tonbridge Hemel Hempstead Castleford
	Particle density - small pyknometer	BS 1377-2:1990	Bristol Hemel Hempstead Castleford Tonbridge
	Particle density - gas jar	BS 1377-2:1990	Bristol Hemel Hempstead Castleford Tonbridge

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
SOILS for civil engineering purposes (cont'd)	Particle size distribution - wet sieving	BS 1377-2:1990	Bristol Castleford Hemel Hempstead Tonbridge
	Particle size distribution - dry sieving	BS 1377-2:1990	Bristol Castleford Hemel Hempstead Tonbridge
	Particle size distribution - sedimentation - pipette method	BS 1377-2:1990	Bristol Castleford Hemel Hempstead Tonbridge
	Particle size distribution - sedimentation - hydrometer method	BS 1377-2:1990	Bristol Hemel Hempstead Castleford
	Dry density/moisture content relationship (4.5 kg rammer)	BS 1377-4:1990	Bristol Castleford Hemel Hempstead
	Dry density/moisture content relationship (2.5 kg rammer)	BS 1377-4:1990	Bristol Castleford Hemel Hempstead
	Dry density/moisture content relationship (vibrating hammer)	BS 1377-4:1990	Castleford
	Maximum density of sandy soils	BS 1377-4:1990	Castleford
	Minimum density of sandy soils	BS 1377-4:1990	Castleford
	Maximum density of gravelly soils	BS 1377-4:1990	Castleford

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
SOILS for civil engineering purposes (cont'd)	Minimum density of gravelly soils	BS 1377-4:1990	Castleford
	California Bearing Ratio (CBR)	BS 1377-4:1990	Bristol Castleford Hemel Hempstead
	Measurement of swelling of soaked CBR specimen	BS 1377- 4:1990	Bristol Castleford Hemel Hempstead
	MCV - natural moisture content	BS 1377-4:1990	Bristol Castleford Hemel Hempstead
	MCV/moisture content relation	BS 1377-4:1990	Bristol Castleford Hemel Hempstead
	Shear Strength by Laboratory Vane	BS1377-7:1990 Part 3	Bristol
	Undrained shear strength in triaxial compression without measurement of pore pressure (definitive method)	BS 1377-7: 1990	Bristol Castleford Hemel Hempstead
	Undrained shear strength in triaxial compression with multistage loading and without measurement of pore pressure	BS 1377-7: 1990	Bristol Castleford Hemel Hempstead
	Effective shear strength – consolidated-undrained triaxial compression test with measurement of pore pressure	BS 1377- 8:1990	Bristol
	Effective shear strength – consolidated-drained triaxial compression test with measurement of volume change	BS 1377- 8:1990	Bristol

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
SOILS for civil engineering purposes (cont'd)	One-dimensional consolidation properties	BS1377-5:1990	Bristol Castleford
	Determination of Swelling and Collapse Characteristics	BS1377-5:1990 Part 4 4.3/4.4	Bristol
	Shear strength – small shearbox	BS 1377- 7:1990	Bristol Castleford
	Shear strength – large shearbox	BS 1377- 7:1990	Bristol
	Effective angle of internal friction and effective cohesion	Specification for Highway Works, HMSO February 2016 Clause 636 using Large Shearbox	Bristol
	Residual strength - small ring shear apparatus	BS 1377- 7:1990	Bristol
	Ring Shear	ICP Design Methods for Driven Piles in Sands and Clays:2005 (Appendix A)	Bristol
	Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure (with calculation of thermal resistivity)	ASTM D5334 - 14	Bristol
	Measurement of Electrical Resistivity - Wenner probe method	BS 1377: Part 3: 2018	Bristol
	Standard Test Method for Field Measurement of Soil Resistivity Using the Wenner Four-Electrode Method	ASTM G57 - 06(2012)	Bristol
	Standard Test Method for Measurement of Soil Resistivity Using the Two-Electrode Soil Box Method	ASTM G187 - 18	Bristol

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
SOILS for civil engineering purposes (cont'd)	In-Situ Thermal Resistivity	IEEE 442-2017	Site
	In-situ California Bearing Ratio (CBR)	BS 1377-9:1990	Site
	Vertical deformation and strength characteristics of soil by the plate loading test	BS 1377:Part 9:1990	Site
	Plate Loading	DIN 18134:2012-04	Site
	Core cutter density	BS 1377-9:1990	Site
	In-situ density - sand replacement method (large pouring cylinder)	BS 1377-9:1990	Site
	In-situ bulk density - nuclear method - comparative tests	BS 1377-9:1990	Site
	In-situ bulk density - nuclear method - absolute tests	BS 1377-9:1990	Site
	In-situ bulk density - nuclear method - compliance tests	BS 1377-9:1990	Site
	In-situ moisture density - nuclear method - comparative tests	BS 1377-9:1990	Site
	In-situ moisture density - nuclear method - absolute tests	BS 1377-9:1990	Site
	In-situ moisture density - nuclear method - compliance tests	BS 1377-9:1990	Site

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Testing performed by the Organisation at the locations specified

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
GEOTECHNICAL INVESTIGATION and TESTING - Laboratory testing of soil	Water content	BS EN ISO 17892-1:2014 +A1:2022	Bristol Hemel Hempstead Castleford Tonbridge
	Determination of Bulk density - linear measurement method	BS EN ISO 17892-2:2014	Bristol Hemel Hempstead Castleford
	Determination of Bulk Density -immersion in fluid method	BS EN ISO 17892-2:2014	Bristol
	Determination of particle density – fluid pycnometer method	BS EN ISO 17892-3:2015	Bristol Hemel Hempstead Castleford Tonbridge
	Determination of particle size distribution -sieving method -pipette method	BS EN ISO 17892-4:2016	Bristol Hemel Hempstead Castleford Tonbridge
	Determination of particle size distribution -hydrometer method	BS EN ISO 17892-4:2016	Bristol Hemel Hempstead Castleford Tonbridge
	Incremental loading oedometer test	BS EN ISO 17892-5: 2017	Bristol Castleford
	Unconsolidated undrained triaxial test	BS EN ISO 17892-8:2018	Bristol Hemel Hempstead
	Consolidated triaxial compression tests on water saturated soils	BS EN ISO 17892-9:2018	Bristol

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
GEOTECHNICAL INVESTIGATION and TESTING - Laboratory testing of soil (cont'd)	Effective shear strength – Consolidated Anisotropic Undrained or Drained Triaxial tests in Compression or Extension	In-house method based on ISO17892-9:2018	Bristol
	Direct shear tests – Small Shearbox	BS EN ISO 17892-10:2018	Bristol Castleford
	Direct shear tests – Large Shearbox	BS EN ISO 17892-10:2018	Bristol
	Direct Shear Tests – Ring Shear Test	BS EN ISO 17892-10:2018	Bristol
	Determination of liquid limit by the fall cone method	BS EN ISO 17892-12 2018	Bristol Hemel Hempstead Castleford Tonbridge
	Determination of plastic limit	BS EN ISO 17892-12 2018	Bristol Hemel Hempstead Castleford Tonbridge
	Plasticity Index and Liquidity Index	BS EN ISO 17892-12 2018	Bristol Hemel Hempstead Castleford Tonbridge

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
UNBOUND and HYDRAULICALLY BOUND MIXTURES	Laboratory reference density and water content - vibrating hammer	BS EN 13286-4:2003	Castleford
	Test methods for the determination of the laboratory reference density and water content. Proctor compaction.	BS EN 13286-2:2010	Bristol Castleford
	Test method for the determination of California bearing ratio, immediate bearing index and linear swelling	EN 13286-47:2012	Bristol Castleford
CONCRETE	Testing concrete in structures	BS EN 12504-1:2009	Bristol
END			