

# Schedule of Accreditation

issued by

## United Kingdom Accreditation Service

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

|                                                                                                                                                         |                                                                                                |                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p><b>0251</b></p> <p>Accredited to<br/><b>ISO/IEC 17025:2017</b></p> | <p><b>Stanger Testing Services Ltd</b></p> <p>Issue No: 058    Issue date: 13 October 2022</p> |                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                         | <p><b>Cambuslang Laboratory</b><br/>Bogleshole Road<br/>Cambuslang<br/>Glasgow<br/>G72 7DD</p> | <p><b>Contact: Mr L Murphy</b><br/>Tel: +44 (0)141 641 3623<br/>Fax: +44 (0)141 641 9279<br/>E-Mail: <a href="mailto:enquiries@stangertesting.co.uk">enquiries@stangertesting.co.uk</a><br/>Website: <a href="http://www.stangertesting.co.uk">www.stangertesting.co.uk</a></p> |
| <p><b>Testing performed by the Organisation at the locations specified below</b></p>                                                                    |                                                                                                |                                                                                                                                                                                                                                                                                 |

### Locations covered by the organisation and their relevant activities

Stanger Testing Services Limited is accredited for a flexible scope that enables them to establish site laboratories to conduct the activities detailed below marked 'Flexi' in accordance with their documented in-house procedure:TPM43

#### Laboratory locations:

| Location details                                                                                                                                                                                                                                                                                                            | Activity                                  | Location code |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------|
| <p><b>Address</b><br/>Cambuslang Laboratory<br/>Bogleshole Road<br/>Cambuslang<br/>Glasgow<br/>G72 7DD</p> <p><b>Local contact</b><br/>Mr L Murphy<br/>Tel: +44 (0)141 641 3623<br/>Fax: +44 (0)141 641 9279<br/>E-Mail: <a href="mailto:enquiries@stangertesting.co.uk">enquiries@stangertesting.co.uk</a></p>             | Construction materials laboratory testing | A             |
| <p><b>Address</b><br/>Stanger Testing Services<br/>c/o Geddes Quarry<br/>Waulkmill Quarry<br/>Inverkeilor<br/>Arbroath</p> <p><b>Local contact</b><br/>Mr A Cobb<br/>Tel: +44 (0)1382 535272<br/>Fax: +44 (0)1382 530899<br/>E-Mail: <a href="mailto:enquiries@stangertesting.co.uk">enquiries@stangertesting.co.uk</a></p> | Construction materials laboratory testing | B             |
| <p><b>Address</b><br/>Stanger Testing Services<br/>Ardownie Quarry<br/>Monifieth<br/>Dundee<br/>DD5 4HW</p> <p><b>Local contact</b><br/>Mr A Cobb<br/>Tel: +44 (0)1382 535272<br/>Fax: +44 (0)1382 530899<br/>E-Mail: <a href="mailto:enquiries@stangertesting.co.uk">enquiries@stangertesting.co.uk</a></p>                | Construction materials laboratory testing | C             |

#### Site activities performed away from the locations listed above:

| Location details                                 | Local contact | Activity                                                                     | Location code |
|--------------------------------------------------|---------------|------------------------------------------------------------------------------|---------------|
| All locations suitable for the activities listed | As above      | Construction materials site sampling and testing from the named laboratories | X             |



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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                | Frost-heave                                                                  | BS 812-124:2009                                    | A             |
|                           | Sampling coarse, fine and all-in aggregates<br>- from flattened stockpiles   | BS EN 932-1:1997                                   | X             |
|                           | Sample reduction                                                             | BS EN 932-2:1999                                   | A B C X       |
|                           | Determination of particle size distribution - sieving method                 | BS EN 933-1:2012                                   | A B C Flexi   |
|                           | Determination of particle shape<br>- flakiness index                         | BS EN 933-3:2012                                   | A B C Flexi   |
|                           | Resistance to fragmentation by the Los Angeles test method                   | BS EN 1097-2:2020                                  | A             |
|                           | Bulk density and calculation of voids and bulking of aggregate               | BS EN 1097-3:1998                                  | A C           |
|                           | Water content<br>- oven drying method                                        | BS EN 1097-5:2008                                  | A C Flexi     |
|                           | Particle density and water absorption for aggregate between 63 µm and 4 mm   | BS EN 1097-6:2022                                  | A C           |
|                           | Particle density and water absorption for aggregate between 4 mm and 31.5 mm | BS EN 1097-6:2022                                  | A C           |
|                           | Resistance to wear - Micro deval method                                      | BS EN 1097-1:2011                                  | A             |
|                           | Aggregate abrasion value                                                     | BS EN 1097-8:2020                                  | A             |
|                           | Polished stone value                                                         | BS EN 1097-8:2020                                  | A             |
| Soundness                 | BS EN 1367-2:2009                                                            | A                                                  |               |



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|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------|
| AGGREGATES (cont'd)                                 | Drying shrinkage                                                                                                   | BS EN 1367-4:2008                                  | A             |
|                                                     | Water soluble chloride salt - Volhard method                                                                       | BS EN 1744-1:2009+A1:2012                          | A             |
|                                                     | Water soluble sulphates                                                                                            | BS EN 1744-1:2009+A1:2012                          | A             |
|                                                     | Acid soluble sulphates                                                                                             | BS EN 1744-1:2009+A1:2012                          | A             |
|                                                     | Total sulphur content                                                                                              | BS EN 1744-1:2009+A1:2012                          | A             |
| BITUMINOUS MIXTURES for roads and other paved areas | Sampling from - around the augers of the paver                                                                     | BS EN 12697-27:2017                                | X             |
|                                                     | Sampling from workable material in heaps                                                                           | BS EN 12697-27:2017                                | X             |
|                                                     | Sampling of finished material - core cutting method                                                                | BS EN 12697-27:2017                                | X             |
|                                                     | Sampling of pre-coated chippings from stockpiles                                                                   | BS EN 12697-27:2017                                | X             |
|                                                     | Preparation of samples for determining binder content, water content and grading                                   | BS EN 12697-28:2020                                | A B C X       |
|                                                     | Soluble binder content by difference, using bottle rotation machine and pressure filter                            | BS EN 12697-1:2020                                 | A B           |
|                                                     | Soluble binder content by recovery, using bottle rotation machine, bucket centrifuge type 1 and volume calculation | BS EN 12697-1:2020                                 | A             |
|                                                     | Particle size distribution                                                                                         | BS EN 12697-2:2015+A1:2019                         | A B C         |
|                                                     | Temperature of bituminous mixtures - in the hopper of a paver                                                      | BS 598-109:1990                                    | X             |



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| BITUMINOUS MIXTURES for roads and other paved areas (cont'd) | Temperature of bituminous mixtures<br>- in a lorry<br>- of laid material<br>- in a heap | BS EN 12697-13:2017                                | X             |
|                                                              | Maximum density-volumetric procedure                                                    | BS EN 12697-5:2018                                 | A             |
|                                                              | Bulk density - dry                                                                      | BS EN 12697-6:2020                                 | A             |
|                                                              | Bulk density<br>- saturated surface dry (SSD)                                           | BS EN 12697-6:2020                                 | A             |
|                                                              | Bulk density<br>- sealed specimen                                                       | BS EN 12697-6:2020                                 | A             |
|                                                              | Bulk density by dimensions                                                              | BS EN 12697-6:2020                                 | A             |
|                                                              | Air voids content                                                                       | BS EN 12697-8:2018                                 | A             |
|                                                              | Wheel tracking<br>- Procedure B (in air)                                                | BS EN 12697-22:2020<br>BS EN 12697-22:2003         | A<br>A        |
|                                                              | Determination of the dimensions of a bituminous specimen                                | BS EN 12697-29:2020                                | A             |
|                                                              | Laboratory compaction of bituminous mixtures by vibratory compaction                    | BS EN 12697-32:2019                                | A             |
|                                                              | Stiffness - test applying indirect tension to cylindrical specimens (IT-CY)             | BS EN 12697-26:2004 Annex C                        | A             |
| BITUMINOUS ROAD SURFACING                                    | Rate of spread of coated chippings for mechanical chipping spreaders                    | BS 598-1:2011                                      | X             |
| CONCRETE - Fresh                                             | Sampling fresh concrete on site<br>- spot sample<br>- composite sample                  | BS EN 12350-1:2019                                 | X Flexi       |
|                                                              | Slump                                                                                   | BS EN 12350-2:2019                                 | X Flexi       |
|                                                              | Air content - pressure method                                                           | BS EN 12350-7:2019                                 | X Flexi       |



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| CONCRETE - Fresh          | Making cubic specimens for strength tests                       | BS EN 12390-2:2019                                 | A C X<br>Flexi |
| CONCRETE - Hardened       | Cement & aggregate content                                      | BS 1881-124:2015+A1:2021                           | A              |
|                           | Chloride content                                                | BS 1881-124:2015+A1:2021                           | A              |
|                           | Sulphate content                                                | BS 1881-124:2015+A1:2021                           | A              |
|                           | Capillary porosity                                              | BS 1881-124:2015+A1:2021                           | A              |
|                           | Chloride content - potentiometric method                        | Documented In-House Method No TPM49: January 2017  | A              |
|                           | Depth of carbonation                                            | BS EN 14630:2006                                   | A              |
|                           | Rapid determination of high alumina cement in concrete          | Documented in-house method No.TPM2:March 2006      | A              |
|                           | Sampling by dust drilling                                       | Documented In-House Method No TPM32:March 2006     | X              |
| CONCRETE – Reinforced     | Location of reinforcement                                       | BS 1881-204:1988                                   | X              |
| CONCRETE - Hardened       | Compressive strength of cubes                                   | BS EN 12390-3:2019                                 | A C Flexi      |
|                           | Curing                                                          | BS EN 12390-2:2019                                 | A C<br>Flexi   |
|                           | Shape, dimensions                                               | BS EN 12390-1:2021                                 | A C Flexi      |
|                           | Density                                                         | BS EN 12390-7: 2019                                | A C Flexi      |
|                           | Cored specimens – taking, examining and testing in compression. | BS EN 12504-1:2019                                 | A X            |



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| GEOTECHNICAL INVESTIGATION and TESTING<br>- Laboratory testing of soil              | Water content                                                           | BS EN ISO 17892-1:2014                                                        | A Flexi       |
|                                                                                     | Determination of particle density                                       | BS EN ISO 17892-3:2015                                                        | A             |
|                                                                                     | Determination of particle size distribution – sieving method            | BS EN ISO 17892-4:2016                                                        | A Flexi       |
|                                                                                     | Unconsolidated undrained triaxial test                                  | BS EN ISO 17892-8:2018                                                        | A             |
|                                                                                     | Determination of liquid and plastic limits                              | BS EN ISO 17892-12:2018                                                       | A             |
| STRUCTURAL FIXINGS                                                                  | Measurement of bond strength by pull off                                | BS EN 1542:1999                                                               | A             |
| EXTERNAL THERMAL INSULATION COMPOSITE SYSTEMS with rendering (ETICS) and components | Bond strength                                                           | ETAG 004:2011 5.1.4.1.1<br>ETAG 004:2011 5.1.4.1.2<br>ETAG 004:2011 5.1.4.1.3 | A             |
|                                                                                     | Bond strength after ageing                                              | ETAG 004:2011 5.1.7.1.1<br>ETAG 004:2011 5.1.7.1.2                            | A             |
|                                                                                     | Water absorption (capillarity test)                                     | ETAG 004:2011 5.1.3.1                                                         | A             |
| MORTARS, SCREEDS and PLASTERS                                                       | Chemical analysis - ready-mixed lime: fine aggregate (sand) for mortars | BS 4551: 2005+A2:2013                                                         | A             |
| ROAD PAVEMENT SURFACES                                                              | Measurement of texture depth by the sand-patch method                   | BS 598-105:2000                                                               | X             |
|                                                                                     | Pavement surface macrotexture depth using a volumetric patch technique  | BS EN 13036-1:2010                                                            | X             |
|                                                                                     | Surface regularity using a rolling straight-edge                        | TRRL Supplementary Report 290:1977                                            | X             |
|                                                                                     | Falling weight deflectometer (FWD)                                      | Documented in-house method TPM 42:June 2010                                   | X             |



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| REINSTATEMENT OF OPENINGS IN HIGHWAYS | Pavement construction                                                             | Methods of test required for the assessment of conformity under the New Roads and Street Works Act (1991) (Specification for the Reinstatement of Openings in Highways) 3 <sup>rd</sup> edition: April 2010, 4 <sup>th</sup> edition: May 2020 and Scottish 4 <sup>th</sup> edition: May 2019. | X             |
|                                       | Sampling of laid and compacted material by coring                                 | BS EN 12697-27:2017                                                                                                                                                                                                                                                                            | X             |
|                                       | Determination of the thickness of a bituminous pavement - destructive measurement | BS EN 12697-36:2022                                                                                                                                                                                                                                                                            | X             |
| ROCK                                  | Water absorption                                                                  | BS EN 13383-2:2019                                                                                                                                                                                                                                                                             | A             |
|                                       | Uniaxial compressive strength                                                     | BS EN 1926:2006                                                                                                                                                                                                                                                                                | A             |
| SOILS for civil engineering purposes  | Water content - oven drying method                                                | BS 1377-2:2022                                                                                                                                                                                                                                                                                 | A Flexi       |
|                                       | Liquid limit - cone penetrometer - one point                                      | BS 1377-2:2022                                                                                                                                                                                                                                                                                 | A             |
|                                       | Plastic limit                                                                     | BS 1377-2:2022                                                                                                                                                                                                                                                                                 | A             |
|                                       | Plasticity index                                                                  | BS 1377-2:2022                                                                                                                                                                                                                                                                                 | A             |
|                                       | Particle density - gas jar                                                        | BS 1377-2:2022                                                                                                                                                                                                                                                                                 | A             |
|                                       | Particle size distribution - dry sieving                                          | BS 1377-2:2022                                                                                                                                                                                                                                                                                 | A Flexi       |
|                                       | Particle size distribution - wet sieving                                          | BS 1377-2:2022                                                                                                                                                                                                                                                                                 | A Flexi       |
|                                       | Dry density/moisture content relationship (2.5 kg rammer)                         | BS 1377-2:2022                                                                                                                                                                                                                                                                                 | A Flexi       |
|                                       | Dry density/moisture content relationship (4.5 kg rammer)                         | BS 1377-2:2022                                                                                                                                                                                                                                                                                 | A Flexi       |



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| SOILS for civil engineering purposes (cont'd) | Dry density/moisture content relationship (vibrating hammer)                         | BS 1377-2:2022                                     | A Flexi       |
|                                               | Moisture condition value(MCV) - natural moisture content                             | BS 1377-2:2022                                     | A Flexi       |
|                                               | California Bearing Ratio (CBR)                                                       | BS 1377-2:2022                                     | A             |
|                                               | Undrained shear strength - triaxial compression without measurement of pore pressure | BS 1377-2:2022                                     | A             |
|                                               | In-situ density - sand replacement method (large pouring cylinder)                   | BS 1377-9:1990                                     | X Flexi       |
|                                               | In-situ California Bearing Ratio (CBR)                                               | BS 1377-9:1990                                     | X             |
|                                               | In-situ bulk density - dielectric method                                             | ASTM D7698-11a                                     | X             |
|                                               | Dynamic cone penetration                                                             | Documented In-House Method No TPM 12 March 2006    | X             |

END