Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

0262 **Accredited to ISO/IEC 17025:2017**	**Sandberg LLP** **Issue No:** 089 **Issue date:** 01 September 2026	
	5 Carpenters Place **London** **SW4 7TD**	**Contact: Mr Ewan Maclean** **Tel: +44 (0)20 7565 7000** **Fax: +44 (0)20 7565 7101** **E-Mail: ewan.maclean@sandberg.co.uk** **Website: www.sandberg.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
5 Carpenters Place Clapham High Street London SW4 7TD Tel: +44 (0)20 7565 7000 Fax: +44 (0)20 7565 7101	**Geology:** Mr D Ellis david.ellis@sandberg.co.uk **Aggregates & Concrete:** Mr M. Sabra mohamad.sabra@sandberg.co.uk **Chemistry**: Mr G Mayers gavin.mayers@sandberg.co.uk **Geomaterials:** Mr M Eden mike.eden@sandberg.co.uk **Building:** Mr G Moor greg.moor@sandberg.co.uk **Metals:** Dr S Tabrizi Shervin.tabrizi@sandberg.co.uk	Testing of aggregates, bricks and blocks, concrete, construction materials, cement, mortar, paints, rock, roofing slate, building stone and natural stone, Metals, Alloys, Metal Products, Weldments, Reinforcing Steels, Steel Couplers, Nuts and Bolts	A

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Testing performed by the Organisation at the locations specified

Site activities performed away from the locations listed above:

Location details		Activity	Location code
All sites suitable for the activities listed Tel: +44 (0)20 7565 7000 Fax: +44 (0)20 7565 7101	**Aggregates & Concrete:** Mr M. Sabra mohamad.sabra@sandberg.co.uk **Building:** Mr G Moor greg.moor@sandberg.co.uk **Metallurgy:** Dr S Tabrizi Shervin.tabrizi@sandberg.co.uk **Curtain Walling:** Richard Tat Richard.Tat@sandberg.co.uk	Sampling and testing of concrete structures, floors and other paved surfaces, curtain walling, metals, alloys, metal products	D

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
AGGREGATES	Water-soluble chloride salt content	BS EN 1744-1:2009 +A1:2012	A
	Sulphate content of a 2:1 water/aggregate extract	BS EN 1744-1:2009 +A1:2012	A
	Total sulfur content	BS EN 1744-1:2009 +A1:2012	A
	Total sulphate content by acid extraction	BS EN 1744-1:2009 +A1:2012	A
	Total sulphur by acid digestion	Documented In-House method 5.5	A
	Total sulfur content by high temperature combustion (HTC)	BS EN 1744-1:2009 + A1:2012	A
	Acid soluble sulfides	BS EN 1744-1:2009 +A1:2012	A
	Acid-soluble material content	BS 812-119:1985	A
	Petrographic examination of aggregates for concrete	ASTM C295/C295M-19	A
	Qualitative and quantitative petrographic description of aggregates	BS 812-104:1994	A
	Petrographic description	BS EN 932-3:2022	A
	Particle size distribution - washing and sieving	BS EN 933-1:2012	A
	Flakiness index	BS EN 933-3:2012	A
	Water content - oven drying method	BS EN 1097-5:2008	A
	Magnesium sulphate soundness	BS EN 1367-2:2009	A
	Resistance to fragmentation by the Los Angeles method	BS EN 1097-2:2020	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
CLAY BRICKS	Soluble salt content	BS 3921:1985 (Withdrawn)	A
	Compressive strength	BS 3921:1985 (Withdrawn)	A
	Water absorption	BS 3921:1985 (Withdrawn)	A
	Determination of the active soluble salts content of clay masonry units	BS EN 772-5: 2016	A
	Determination of water absorption by boiling in water	BS EN 772-7:1998	A
	Water absorption by cold water absorption	BS EN 772-21:2011	A
CEMENT	Loss on ignition	BS EN 196-2:2025	A
	Gravimetric determination of sulphate	BS EN 196-2:2025	A
	Residue insoluble in hydrochloric acid and sodium carbonate	BS EN 196-2:2025	A
	Chloride content	BS EN 196-2:2025	A
	Alkali content	BS EN 196-2:2025	A
	Chemical analysis of Portland cement	Documented In-House Method 11.1/5 based on BS 4550-2:1970	A
PULVERISED FUEL-ASH	Chloride	BS EN 196-2:2025	A
	Calcium oxide content	BS EN 196-2:2025	A
	Sulphuric anhydride	BS EN 196-2:2025	A
	Loss on ignition	BS EN 196-2:2025	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
CONCRETE - hardened	Cement and aggregate content	BS 1881-124:2015+ A1:2021	A
	Aggregate grading	BS 1881-124:2015 + A1:2021	A
	Chloride content	BS EN 14629:2007 BS 1881-124:2015 + A1:2021 and DIHM 14.8.1 based on BS 1881-124:2015 + A1:2021	A
	Sulphate content	BS 1881-124:2015 + A1:2021	A
	Sodium oxide and potassium oxide	BS 1881-124:2015 + A1:2021	A
	Alumina and iron oxides	BS 1881-124:2015 + A1:2021 and Documented In-House Method 34.1	A
	Chemical analysis and aggregate content	Documented In-House Method TP/C14.0/8	A
	Air-void content - by modified point count method B	ASTM C457/C457M-24	A
	Petrographic examination	ASTM C856/856M-25 APG-SR2 using SEM	A
	Procedure and terminology for the petrographic examination of hardened concrete	BS 1881-211: 2016	A
	Equivalent water/cement ratio by microporosity assessment	Documented In-House Method TPG8-4, May 2019, using optical microscopy with UV illumination and fluorescent dyes	A
	Depth and degree of carbonation	Documented In-House Method TPG7-2, May 2018, using chemical staining, optical microscopy and polarized light	A
	Compressive strength of cubes - including curing	BS EN 12390-1:2012 BS EN 12390-2: 2009 (Withdrawn) BS EN 12390-2:2019 BS EN 12390-3: 2009 (Withdrawn) BS EN 12390-3:2019	A
	Compressive strength of cores	BS EN 12504-1: 2009 (Withdrawn) BS EN 12504-1:2019 + AC:2020	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
CONCRETE – hardened (cont'd)	Density	BS EN 12390-7: 2009 (Withdrawn) BS EN 12390-7:2019 + AC:2020	A
	Determination of the chloride migration coefficient	BS EN 12390-18:2021+A1:2024	A
CONCRETE, MORTAR & CEMENT-BASED REPAIR MATERIALS	Chloride migration coefficient from non-steady-state migration experiments	NT Build 492 Approved 1999	A
CONCRETE STRUCTURES	Carbonation	BS EN 14630:2006 BRE Information Paper IP 6/81 Documented In-House Method TP/F/10	D
	Coring	BS EN 12504-1: 2009 (Withdrawn) BS EN 12504-1:2019 + AC:2020	D
	Sampling of concrete by dust drilling	BS EN 14629:2007 Documented In-House Method TP/F/11	D
	Location of reinforcement	BS 1881-204:1988 Documented In-House Method TP/F/12	D
	Half -cell potential of uncoated reinforcing steel in concrete	ASTM C876-22b	D
MORTAR for bricklaying, plastering and rendering	Chemical analysis	BS 4551:2005 +A2:2013	A
	Mix proportions	DIHM No 34.1	A
CONCRETE PAVING FLAGS	Transverse strength	BS EN 1339:2003	A
	Abrasion Resistance	BS EN 1339:2003 Annex G	A
	Unpolished slip resistance value	BS EN 1339:2003 Annex I	A
PRECAST CONCRETE KERB UNITS	Abrasion Resistance	BS EN 1340:2003 Annex G	A
	Unpolished slip resistance value	BS EN 1340:2003 Annex I	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
PAVED SURFACES, FLOORS and FLOOR COVERINGS	Slip resistance (pendulum tester)	BS EN 1341:2012 BS EN 1342:2012 BS EN 14231:2003	A, D
	Determination of slip resistance of pedestrian surfaces – pendulum test	BS EN 16165:2021	A, D
	Slip resistance value and coefficient of friction	BS 7976-2:2002 +A1:2013 (Withdrawn)	A, D
	Surface roughness	The Assessment of Floor Slip Resistance, The UK Slip Resistance Group Guidelines Issue 5/2016	A, D
PAVED SURFACES, FLOORS and FLOOR COVERINGS (Terrazzo tiles for internal use)	Abrasion Resistance	BS EN 13748-1:2004+A1:2005	A
	Unpolished slip resistance value	BS EN 13748-1:2004+A1:2005	A
	Water absorption	BS EN 13748-1:2004+A1:2005	A
	Breaking strength and breaking load	BS EN 13748-1:2004+A1:2005	A
	Abrasion Resistance	BS EN 13748-2:2004	A
	Unpolished slip resistance value	BS EN 13748-2:2004	A
PAVED SURFACES, FLOORS and FLOOR COVERINGS (Terrazzo tiles for external use)	Breaking strength and breaking load	BS EN 13748-2:2004	A
PRECAST CONCRETE PAVING BLOCKS	Abrasion Resistance	BS EN 1338: 2003 Annex G	A
	Unpolished slip resistance value	BS EN 1338:2003 Annex I	A
GLASS	Glass fracture and inclusions	Documented In-House Method TPG31-2,Feb 2015 using SEM	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
ROCK	Description and classification	BS 5930: 2015 + A1:2020 Clause 36BS EN ISO 14689:2018	A
	Petrographic description	ISRM Suggested Methods - Rock Characterization Testing and Monitoring, Ed. E T Brown-1981	A
	Microcrack dye testing of granite	Documented In-House Method TPG27-01, Apr 2006	A, D
CRUSHED ROCK FILL	Petrographic analysis and semi-quantitative analysis of crushed rock	Documented In-House Method TPG30-12, Feb 2026, using SEM	A
SLATE AND STONE PRODUCTS for discontinuous roofing and cladding	Petrographic examination (excluding X-ray diffraction)	BS EN 12326-2:2011:clause16	A
	Failure load in bending	BS EN 12326-2:2011:clause 10	A
	Length and width	BS EN 12326-2:2011:clause 5	A
	Edge deviation	BS EN 12326-2:2011:clause 6	A
	Rectangularity	BS EN 12326-2:2011:clause 7	A
	Thickness	BS EN 12326-2:2011:clause 8	A
	Flatness deviation	BS EN 12326-2:2011:clause 9	A
	Thermal cycling	BS EN 12326-2:2011:clause 15	A
	Water absorption	BS EN 12326-2:2011:clause 11	A
	Sulfur dioxide exposure (CaCO3 <= 20%)	BS EN 12326-2:2011:clause 14	A
MASONRY UNITS	Compressive strength	BS EN 772-1:2011+A1:2015	A
	Apparent density and open porosity	BS EN 772-4:1998	A
	Water absorption coefficient by capillarity	BS EN 772-11:2011	A
	Dimensions	BS EN 772-16:2011	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
NATURAL STONE (natural stone products for building purposes)	Dimensions	BS EN 1341:2012 BS EN 1342:2012 BS EN 1343:2012	A
	Petrographic description	BS EN 12407:2019	A
	Standard guide for petrographic examination of dimension stone	ASTM C1721-22	A
	Determination of the resistance of marble to thermal and moisture cycles	BS EN 16306: 2022: Annex C	A
	Flexural strength under concentrated load (3 point loading method)	BS EN 12372:2022	A
	Flexural strength under constant moment	BS EN 13161:2008	A
	Compressive strength	BS EN 1926:2006 BS EN 1342:2012	A
	Breaking load at dowel hole	BS EN 13364:2002	A
	Standard test method for strength of individual stone anchorages in dimension stone	ASTM C1354/C 1354M-22	A
	Abrasion resistance	BS EN 1341:2012 Annex C BS EN 1342:2012 Annex B BS EN 14157:2017 Method A (wide wheel)	A
	Resistance to salt crystallisation	BS EN 12370:2020	A
	Water absorption coefficient by capillarity	BS EN 1925:1999	A
	Real density and total porosity	BS EN 1936:2006	A
	Water absorption at atmospheric pressure	BS EN 13755:2008 BS EN 1341:2012 BS EN 1342:2012 BS EN 1343:2012	A
	Apparent density and open porosity	BS EN 1936:2006	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
NATURAL STONE (natural stone products for building purposes) (cont'd)	Frost resistance	BS EN 12371: 2010	A
	Ageing by thermal cycling	BS EN 14066:2013	A
	Unpolished slip resistance (pendulum tester)	BS EN 1341:2012 BS EN 1342:2012 BS EN 14231:2003	A, D
	Dynamic modulus of elasticity (by fundamental resonant frequency)	BS EN 14146:2004	A
	Static elastic modulus	BS EN 14580:2005	A
	Linear thermal expansion coefficient (Method A)	BS EN 14581:2004	A
	Sensitivity to changes in appearance produced by thermal cycles	BS EN 16140:2019	A
	Sound speed propagation	BS EN 14579:2004	A
	Surface friction (pendulum tester)	ASTM E303-22	A
	Sensitivity to accidental staining	BS EN 16301:2021	A
	Tensile load of Kerf clips or channel fixings	Documented In-House Method TPG36, Apr 2022	A
	Tensile load of undercut anchor fixing	Documented In-House Method TPG37, Apr 2022	A
	Shear load of undercut anchor fixing	Documented In-House Method TPG38, Apr 2022	A
	Combined shear and tensile load of undercut anchor fixing	Documented In-House Method TPG39, Apr 2022	A
	Pre-cast pull off tests	Documented In-House Method TPG35, Apr 2022	A
	Abrasion Resistance (Taber)	ASTM C1353/C1353M-20e1	A
	Compressive strength	ASTM C170/C170M-24a	A
	Flexural strength	ASTM C880/C880M-25	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
NATURAL STONE (natural stone products for building purposes) (cont'd)	Modulus of rupture	ASTM C99/C99M-24	A
	Absorption and specific gravity	ASTM C97/C97M-25	A
	Saturation coefficient and porosity	Durability Tests for Building Stone (BRE Report BR141:1989)	A
PAINT and AIR FILTERS used in air monitoring	Lead content	Documented In-House Method 40.3 using atomic absorption spectrophotometry	A
SALT for spreading on highways for winter maintenance	Matter insoluble in water	BS 3247:2011+A1:2016	A
	Chloride content	BS 3247:2011+A1:2016	A
	Soluble sulphate compounds	BS 3247:2011+A1:2016	A
	Moisture content	BS 3247:2011+A1:2016	A
	Grading by sieve analysis	BS 3247:2011+A1:2016	A
WATER for making concrete	Suitability	BS EN 1008:2002	A
METALS, ALLOYS and METAL PRODUCTS	Tensile test up to 300KN (ambient temperature)	BS EN ISO 6892-1:2019 Methods A & B	A
	Tensile test up to 1000KN (ambient temperature)	BS EN ISO 6892-1:2019 Method B	A
	Vickers hardness	BS EN ISO 6507-1: 2023	A
	Brinell Hardness (HB 1/10 and HB 1/30)	BS EN ISO 6506-1:2014	A
	Charpy impact testing up to 300 joules and from 233 K to ambient temperature	BS EN ISO 148-1:2016	A
	Micrographic determination of the grain size of steel (comparative method only)	BS EN ISO 643:2024	A
	Micrographic determination of the morphology of graphite in cast iron	BS EN ISO 945-1:2019	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
METALS, ALLOYS and METAL PRODUCTS (cont'd)	Metallographic examination and identification of materials	Documented In-House Method MS/LG/TP M/13 using acid etching and light microscopy; MS/LG/TP M/13A etching of samples in preparation for metallography	A
WELDMENTS	Tests designated in specified welding codes - as detailed below:-	BS EN ISO 9606-1:2017 BS EN ISO 9606-2:2004 BS EN ISO 15614-1:2017+A1:2019 BS EN ISO 15614-2:2025	A
	Bend, Fracture, Hardness, Impact, Tensile, Visual-examination, Macro-examination, Micro-examination	BS EN ISO 9016:2022 BS EN ISO 5178:2019 BS EN ISO 4136:2022 BS EN ISO 5173:2023 BS EN ISO 9015-1:2011 BS EN ISO 9017:2018 BS EN ISO 17639:2022	
REINFORCING STEELS	Tensile strength up to 40 mm diameter	BS 4449:2005 +A3 2016 BS 4449:1997 (withdrawn)	A
	Tensile properties	BS 4482:2005 BS 4483:2025 BS EN ISO 15630-1:2019	A
	Weld test	BS EN ISO 17660-1:2006 Cl14 BS EN ISO 17660-2:2006 Cl14 BS EN ISO 15630-1:2019 BS EN ISO 15630-2:2019	A
FASTENERS - bolts only	Tensile strength	BS EN ISO 898-1:2013	A
	Proof loading	BS EN ISO 898-1:2013	A
CURTAIN WALLING RAINSCREENS SLOPE GLAZING		CWCT Standards for Systemised Building Envelopes and Test Methods for Building Envelopes, December 2005 NHBC Standards 2021, Chapter 6.9 S17 and S18	
	Water Penetration - Hose Test	Section 9	D
	Water Penetration – Spraybar	Section 10	D

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
CURTAIN WALLING	Watertightness	BS EN 13051:2001	D
	Field hose test	AAMA 501.2-15	D
	Impact resistance (double tyre)	BS EN 14019:2016	D
CLADDING PANELS	Impact resistance (bag)	CWCT Technical Note 76, June 2012	D
END			