

Construction Materials Testing

The Materials Testing Division of ESG delivers independent, high quality testing inspection services and advice associated with the built and natural environments. With over 30 years experience via a network of UK based laboratories we are able to establish whether a material is compliant with a project specification, industry standard and/or legislation.

From simple soil testing to the provision of fully equipped site laboratories, our directly employed site and laboratory technicians are trained to undertake a comprehensive range of construction materials tests. Operating to UKAS accredited procedures and test methods, ESG provides information that enables our clients to make well informed cost and programme decisions.

Areas of expertise include:

- O* Aggregates
- O* Bituminous materials
- O* Concrete
- O* Construction chemistry
- O* Earthworks and soils
- O* Failure/forensic investigations
- O* Hydraulically bound materials
- O* Landfill CQA
- O* Metallurgical and mechanical investigations
- O* Pavement and reinstatement assessments
- O* Plate testing
- O* Site laboratories
- O* Specification review and consultancy



Construction Materials Testing

As the UK's largest independent construction materials testing laboratory we understand that quality assurance is vital. ESG's wide scope of sampling and testing methods is based upon current British and European Standards and is accredited by UKAS to comply with ISO/IEC 17025, the management standard for testing and calibration laboratories. In addition, our quality management system meets the principles of ISO 9001:2000 and we hold 'Link-Up' accreditation.

Aggregates (incl WRAP)

ESG supports aggregate suppliers, contractors and consultants by sampling materials and carrying out mechanical, physical and chemical tests. Whether the testing is on primary (natural) or secondary (recycled) aggregates the test data can be used to establish compliance with a relevant specification, such as SHW or the WRAP Quality Protocol.

Bituminous Materials

Working closely with suppliers and contractors, ESG provides the quality assurance that is required to demonstrate that a bituminous material has been produced, delivered, placed and compacted in accordance with relevant specifications and procedures.

Concrete

ESG offers a comprehensive service to prove the quality of fresh and hardened concrete. This includes nationwide cube collections, on-site manufacture of cube samples, covermeter surveys, diamond tipped coring and laboratory testing. In addition, we hire or sell calibrated equipment, such as cube moulds, tamping bars, slump kits and curing tanks.

Construction Chemistry

Our chemistry sections carry out a range of tests to establish the chemical composition of soils, aggregates, mortar and concrete. Typical testing includes topsoil analysis, organic content, TRL 447 suite, chloride ion determination, mix proportions of mortar and High Alumina Cement (HAC) content.

Earthworks and Soils

ESG offers a broad scope of soil classification tests from plasticity index & gradings to shearboxes and effective stress analysis. Our technicians are employed at the initial ground investigation and materials classification stage of a project as well as during the placement and compaction stages. Insitu control measures include density, strength and moisture determination utilising methods such as MCV, NDM, CBRs and dynamic plates.

Metallurgical and Mechanical Investigations

ESG has extensive experience of insitu and laboratory metallurgical and mechanical tests for ascertaining material characterisation and identifying likely reasons for product failure. In addition, we offer welder approval, chemical analysis of raw materials and product testing.

Pavement and Reinstatement Assessments

Covering a range of pavement materials, our services include utility core sampling, material identification, measurement of material depths and laboratory testing. In addition, our field teams carry out dynamic plate testing, TRL probes and Ground Penetrating Radar (GPR).

Plate Testing

Incremental plate bearing tests are utilised to establish insitu ground properties and to verify pile mat parameters. In addition, plate California Bearing Ratio (CBR) tests are employed to confirm pavement design. ESG's methods for incremental plate bearing and plate CBR tests are fully accredited by UKAS.

Site Laboratories

In addition to our permanent facilities we operate UKAS accredited site based laboratories that are managed and delivered by our 'Special Projects' division. These site laboratories provide our clients with construction materials testing support in disciplines that include; concrete, soils, aggregates and bituminous materials.

Additional Services

In addition to laboratory and insitu construction material testing ESG is able to provide, in-house, contamination testing, structural investigations, asbestos surveys and environmental/occupational monitoring services.

For More Information

If you would like more detailed information on the services that ESG provides please do not hesitate to call us on **0845 603 2112**. Alternatively, please email sales@esg.co.uk and a member of our team will contact you directly.

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