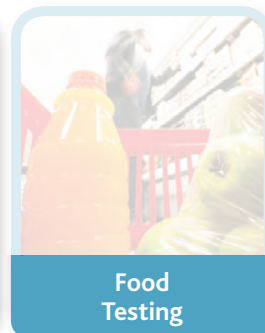
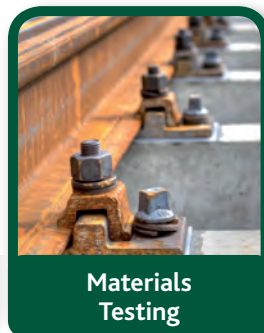
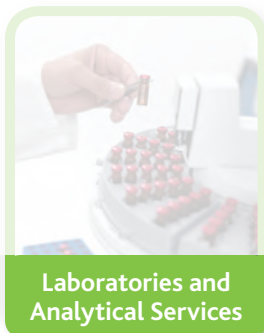


Materials Testing

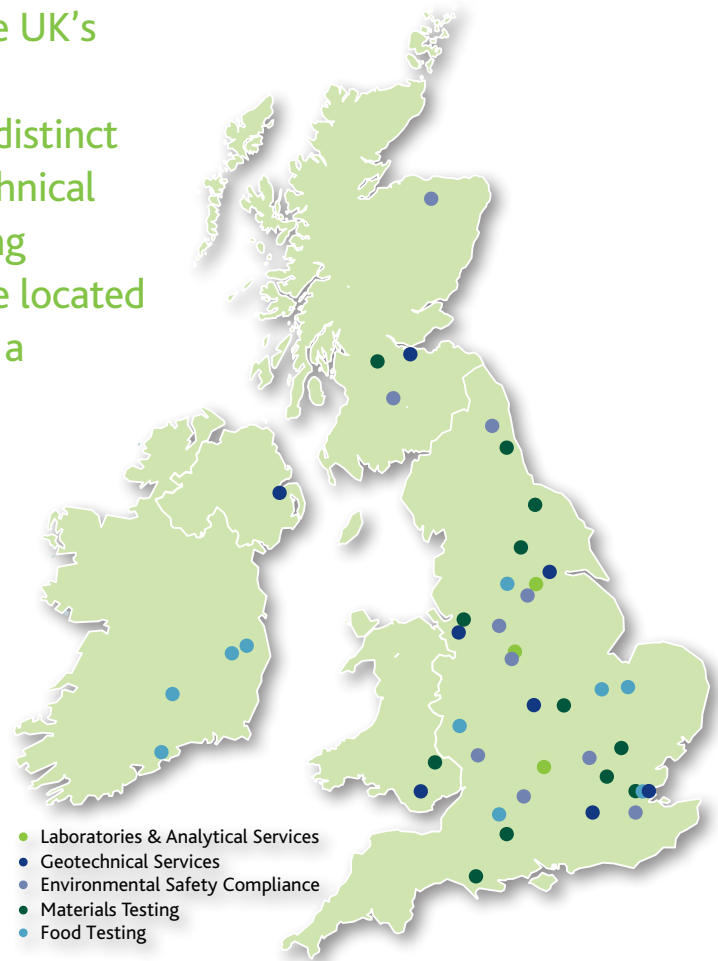


Environmental Scientifics Group (ESG) is the UK's leading provider of testing, inspection and compliance services. Operating across five distinct divisions we offer an unrivalled range of technical expertise and accredited services. Our strong network of UKAS accredited laboratories are located across the UK and Ireland and supported by a centralised head office.

With a history dating back more than 100 years, ESG prides itself on its innovative nature, customer focus and drive to continually improve. Our aim is to grow our capability and provide the most comprehensive range of environmental testing, inspection and consultancy services. Today, the business has more than 1,600 employees and serves over 7,000 customers.

Accredited Services

Quality is built-in to all our processes. We have a comprehensive range of accreditations covering all environmental compliance, quality and food safety issues and are particularly proud of our UKAS certificate numbered 0001.



Geotechnical Services

- Site Investigation
- Geotechnical Laboratory Testing
- Geotechnical and Environmental Consultancy
- Geophysical, Hydrographic and Topographic Surveys
- Structural Consultancy

Laboratories and Analytical Services

- Environmental Chemistry
- Oils, Fuels & Grease Analysis
- Speciality Chemistry
- Nuclear
- Paints & Coatings Consultancy
- Forensic Services

Environmental Safety Compliance

- Asbestos
- Stack Emissions
- Health and Safety
- Environmental Monitoring
- Occupational Hygiene
- Water Safety and Hygiene Services

Materials Testing

- Construction Materials Testing
- Demolition & Recycled Materials
- Energy Testing
- Foundation Testing
- Specialist Testing (e.g. metallurgy)
- Structural Investigations
- Pavement Assessments
- On-site Laboratories

Food & Drink Analysis

- Food & Drink Analysis
 - Microbiological
 - Nutritional
 - Vitamins/additives
 - Contaminants
- Dairy Testing
- Water Testing
- Pharmaceutical Testing

At ESG, we continually strive to improve everything we do. Our combined expertise enables us to deliver bespoke tailored solutions that meet each client's individual objectives whilst ensuring that quality and integrity is built-in as standard.



Materials Testing

Introduction

The Materials Testing Division delivers independent, high quality testing inspection services with advice and recommendations associated with the built and natural environments.

With over 30 years experience in establishing the physical and chemical properties of a diverse range of materials via our UK-wide network of facilities we can support contractors, suppliers, primary stakeholders and designers at all the key stages in a project.

All our permanent and site based laboratories are accredited by the United Kingdom Accreditation Service (UKAS) to BS EN ISO/IEC 17025, reference 0001.

Our services include:

- Construction materials testing
- Demolition and recycled materials
- Energy testing
- Foundation testing
- Specialist testing (e.g. metallurgy)
- Structural investigations
- Pavement assessments
- On-site laboratories

Construction Materials Testing



Our services include:

- Construction chemistry
- Earthworks and soil testing
- Failure and forensic investigations
- Hydraulically-bound material testing
- Landfill CQA
- Mechanical, physical and chemical testing for aggregates, bituminous materials, concrete
- Metallurgical and mechanical investigations
- Pavement and reinstatement assessments
- Specification review and consultancy

From simple soil testing to the provision of fully equipped on-site laboratories, our directly employed technicians are trained to undertake a comprehensive range of insitu and laboratory tests.

Our 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. Based upon the test data that we provide, our clients are able to make well informed cost /programme decisions.

Demolition and Recycled Materials



Our services include:

- Analytical chemistry
- Asbestos testing and surveys
- Determination of coatings
- Noise and dust monitoring
- Occupational and environmental monitoring
- Physical testing (WRAP Quality Protocol)
- Specialist advice
- Waste classification

We understand that maximising the potential for a recycled material can offer significant direct and indirect cost savings, particularly through waste recovery.

We provide a range of services including the visual, physical and chemical assessment of recycled materials as well as specialist advice to help determine the best option for re-use and how to gain maximum benefit from its properties.

Energy Services



Our services include:

- Coal and solid fuels sampling, preparation and analysis
- Solid biofuels and solid recovered fuels sampling, preparation and analysis
- Audit and inspection services
- Provision of on-site laboratories
- Seam section and coal stock evaluation
- Coal science – petrography, palynology and consultancy

ESG leads the market in the provision of sampling and analytical expertise to the UK energy industry, for both solid fossil fuels and biofuels.

We are the UK's largest independent laboratory capable of undertaking inspection, sampling, preparation and analysis of solid fuels, biomass and low carbon renewable fuels to UKAS accredited procedures. Our facilities have the capacity to process up to 35 tonnes of bulk material each day and can commercially evaluate over 50 million tonnes of internationally traded coal each year.

Foundation Testing



Our services include:

- Static pile load testing
- STATNAMIC and dynamic load testing
- Pile instrumentation and monitoring including horizontal displacement monitoring
- Sonic echo and sonic logging integrity assessments
- Noise and vibration assessments

As the leading independent provider of foundation testing services in the UK, we offer a comprehensive range of testing methods and data provision to the construction industry. Our pioneering approach has led to efficiency gains and considerable cost savings for clients.

Our fully accredited team perform a vital role in the design verification and quality control process required for the suitable installation of piled foundations. We can tailor our in-house services to all the major UK piling companies and offer a broad range of loading capacities up to 30 MN. This means we can handle any size of project and provide clients with the assurance they comply to exacting specifications.

Specialist Testing



Our services include:

- Chemical analysis
- Corrosion investigation
- Failure Investigations
- Fire damage assessment
- Material identification, selection, testing and analysis
- Mechanical testing
- Structural testing and monitoring
- Weld testing
- Third party quality assurance

As one of the UK's established providers of metallurgical and component testing services we carry out testing and inspection for a range of industry sectors including aerospace, automotive, petrochemical, medical, manufacturing, construction and rail.

With laboratory-based analysis and examination, or in-situ testing and monitoring, our experienced in-house team can assess performance in terms of fatigue, wear, crack propagation, corrosion resistance and defect tolerance to ensure the quality of products, structures and assemblies, and that the materials comply with regulations. We also offer investigation services as well as consultancy and expert witnesses if required.

Structural Investigations



Our services include:

- Asbestos testing and surveys
- Coating and paint surveys
- Condition surveys
- Consulting and advice
- Laboratory testing
- Material sampling
- Metallurgical and mechanical investigations
- Structural investigations

We are the largest independent construction materials testing laboratory in the UK with over 30 years' of structural investigation experience. Our specialist teams are able to establish the condition and details of a structure, including its physical and chemical properties, and provide factual, interpretative or forensic reports.

Our experienced teams assess bridges, tunnels, high-rise buildings and marine structures, whether they are constructed of timber, metal, concrete and/or masonry. We support architects, engineers, property owners and contractors and are qualified to work 'at height', within confined spaces, over water and on the rail or highway infrastructure.

Pavement Assessments



Our services include:

- California Bearing Ratio (CBR)
- Coring for Specification for Highways Works (SHW) Clause 929 testing
- Density testing
- Detection of tar
- Ground Penetrating Radar (GPR)
- Indirect tensile stiffness modulus testing
- Investigations and assessment of the sub-base and lower layers
- NAT tests
- Pavement condition surveys
- Plate load testing
- Rate of spread of binder and chippings
- Sampling bituminous materials
- Skid resistance and texture depth testing
- Soil stabilisation testing and mix design
- Surface irregularity testing

We use a combination of invasive and non-invasive pavement investigation, testing and monitoring techniques to assess the quality of a road construction and to establish the causes of failure; the subsequent findings are then issued as factual or interpretative reports.

We provide a wide range of services to enable the continual monitoring of road pavement conditions in order to minimise maintenance costs and to ensure the safety of road users.

On-site Laboratories



Our services include:

- Bituminous testing
- Concrete testing
- Earthworks testing
- Hydraulically bound material testing

In addition to our permanent facilities we operate site based laboratories that are managed and delivered by our 'Special Projects' division and are covered by our flexible scope of UKAS accreditation. The site laboratories provide focused testing support in disciplines that include; concrete, soils, aggregates and asphalt.

We would expect this on-site laboratory approach to deliver several significant benefits to the client, such as; far greater budget and testing programme certainty; total control of testing and monitoring quality, including data management and turnaround periods; an integrated and flexible solution to testing and efficient utilisation of site staff.



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