



UK Trade & Investment

## Low Carbon Environment and Water Mission to India



- Water and Wastewater Treatment
- Municipal Solid Waste Management
- Hazardous Waste
- E-Waste
- Air Pollution
- Environmental Monitoring
- Environmental Consulting

**Dates: 7-8 February, Mumbai**  
**9-10 February, New Delhi**  
**11 February, Kolkata**



LEADING THE  
LOW CARBON  
TRANSITION

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## UK Know How – The UK’s low carbon expertise

Low carbon – both in terms of increased efficiencies and new opportunities – makes business sense. That’s why businesses are leading the way on this agenda; in November last year, the UK-India Business Leaders Climate Group released a report setting out the opportunity for the UK and India to form a collaborative and prosperous low carbon economy together.

The UK Government’s proactive focus on legislation to tackle climate change has ensured that UK businesses are ahead of the curve in examining ways of becoming energy and resource efficient.

There are particular opportunities for partnership with India in the environment and water sectors, where the UK has strong expertise. For example:

- Waste to energy
- Air pollution and emissions monitoring and control
- Environmental instrumentation
- Municipal solid waste management
- Carbon footprinting and consulting
- Environmental education and training

India has the second highest number of CDM (Clean Development Mechanism) projects in the world (almost 25% projects registered with UNFCCC so far). Indian corporates are embracing low carbon, and are developing a large number of CDM projects which offer interesting opportunities for companies with carbon reduction technologies. CDM projects being developed include renewable energy, fuel switch, waste management, waste to energy projects amongst others.

UKTI’s Environment and Water mission showcases UK expertise in low carbon technologies and services relevant to the Environment and Water sector. Companies on this mission have specialities ranging from sustainability planning, emissions monitoring, wastewater treatment and energy reduction consultation.

### Background:

The UK low carbon and environmental goods and services sector is the 6th largest globally, worth over £112 billion in sales per annum. More than 900,000 people in Britain already work in this sector. This means that the UK has the knowledge, innovation and practical expertise to work with India on building a low carbon economy.

Collaboration with India on Low Carbon is a priority for the UK Government and UK companies. Our future trade will be increasingly low carbon - there is huge potential for the two countries to share expertise and grow trade and investment.

The timing has never been better UK and Indian trade and investment on low carbon goods and services.

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**ARUP (Mumbai & Delhi only)**

# ARUP

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Arup is a global firm of designers, engineers, planners and business consultants, providing a diverse range of professional services to clients around the world. The firm has over 10,000 staff working in 90 offices in more than 35 countries.

At any one time, Arup have over 10,000 diverse projects running concurrently.

Arup Water has a track record going back over 100 years and offers the full spectrum of consulting services in the water sector - from asset management and feasibility studies through to design, site supervision, commissioning and project management.

Our multi-disciplinary approach covers all aspects of the water cycle including:

- Asset Management Planning and Strategic Business services;
- River engineering, flood defence and land drainage;
- Dams & reservoirs
- Water and wastewater treatment;
- Water resources, treatment and distribution;
- Water management strategy and infrastructure planning.

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## Bluewater Bio Limited



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Bluewater Bio provides a high-performance, yet highly cost-effective proprietary biological nutrient removal wastewater treatment process, called HYBACS.

HYBACS, denoting Hybrid Bacillus Activated Sludge, treats municipal and commercial effluents and complies with amongst the most stringent legislation in the world:

the Urban Wastewater Treatment Directive, 1991/1998 and the Water Framework Directive, 2000.

The HYBACS system:

- reduces Capex by up to 30% and Opex by up to 45%
- produces a high-quality treated effluent for reuse
- reduces power consumption by up to 50%
- is ideal for retro-fit and upgrade scenarios
- removes offensive odour
- offers footprint savings of up to 40%
- leverages 100% of existing activated sludge infrastructure
- offers a greater reduction of e-coli bacteria.

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## Enviro Technology Services plc



### Enviro Technology

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At ET we believe that a vital step in reducing our environmental impact on our planet is to understand what we are currently emitting before we can assess how we can improve things. We need to be able to measure air pollution at source and then monitor how it impacts on our towns and cities, and the lives of those living in them.

How can you fix it if you can't measure it? As world leading suppliers of AQM (Air Quality Monitoring) and CEM (Continuous Emissions Monitoring) systems for industrial emissions and air pollution monitoring, we can provide the solution.

Since the company was formed in 1983, ET has completed many hundreds of projects in the UK and over-seas, the majority of which fall under the Ambient Air Quality Monitoring and Continuous Emissions Monitoring sectors for which the company is most well known.

ET has installed air quality monitoring systems on almost every continent and has a proven track-record in designing and engineering systems to operate under the harshest environmental conditions, from the heat of the Middle East, the sweltering humidity of the Philippines to the frozen barren plains of Kazakhstan.

Our client base is diverse including UK and overseas Government departments, power stations, environmental regulators, universities, scientific research institutes and blue chip industrial companies such as GDF Suez, United Utilities and BAE Systems.

ET employs 45 technical, commercial and administrative staff and has service centres throughout the UK as well as satellite offices in Ireland and Qatar.

ET is an ISO 9001 (2008) Quality Assured Company and is audited twice per year by BSI.

The company has annual turnover of approx £7m from its sales, rental and service contract revenue streams and has a secure financial standing.

## Geotech



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**Measuring Methane – A Natural, Valuable & Renewable Energy Source**  
Geotech is the market-leading manufacturer and supplier of portable and fixed-position landfill gas and biogas analysers. It supplies equipment worldwide to landfill operators, landfill gas extractors and applications in waste-to-energy, renewable energy, anaerobic digester (AD) biogas optimisation, clean development mechanism (CDM) and carbon credit trading. Widely used are the GA2000 portable landfill gas analyser and the portable Biogas Check.

Geotech has a recognised capability in landfill/biogas analysis, measurement and monitoring. Worldwide Geotech biogas analysers are rapidly becoming even more important with growing focus on renewable energy from waste (EfW) from landfill gas and AD biogas from food or farm waste or wastewater sludge.

Recently Geotech introduced a new fixed-position biogas analyser - the GA3000.


It uses the same robust, field-proven technology as our other analysers but gives new, tight-budget economy to automated monitoring of methane-rich gas with 4-20mA local data outputs. Easily operator installed and calibrated, the compact, self-contained GA3000 has gas conditioning as standard. It analyses CH<sub>4</sub>, CO<sub>2</sub>, O<sub>2</sub> and optionally, H<sub>2</sub>S at 0-5000ppm. Screen-displayed readings have user-selectable alarm settings. It is ATEX Zone 2 certified.

For anaerobic digestion biogas analysis the portable Geotech Biogas Check is popular for its accuracy, reliability and robustness within a package, which suits user budgets. The components used by Geotech in its gas analysers, including the Biogas Check, are tried, tested and proven in demanding conditions on biogas and landfill sites globally.

Central to Geotech analysers is 'Geotech design' which gives continuous development of gas monitoring products. One key Geotech design standard was that, 'Anyone can pick up an analyser and use it without opening the manual'.

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## Green Collar Group



Green Collar

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Green Collar Group is a strategic sustainability and environmental consultancy which operates in 3 core areas (including specialisms of climate change, energy, water, biodiversity and land use, chemicals, toxics, and heavy metals, air pollution, waste management, ozone layer depletion, ocean and fisheries and deforestation):

1. Experienced Strategic Management Consulting aimed at the decision makers of organisations both in the private and public sector.
2. Design and Planning Consulting aimed at clients (land owners) to enable them to implement their design vision knowing at the concept stage the design constraints and limitations that they may encounter as part of the Green Agenda, enabling them to overcome and account for these hurdles.
3. Development and deployment of Green Software on mobile phone and windows platforms on a commercial basis which integrates actual business green performance against internal/external targets or competitors and provides decision-making capabilities for the client and its teams.

We are partners with Microsoft and Corporate Members of IEMA

**Halcrow**



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Halcrow delivers planning, design and management services for developing infrastructure and buildings worldwide. We contribute to the construction, operation and maintenance of the built environment, and the protection, enhancement and maintenance of the natural environment. With headquarters in UK, Halcrow operates a cross sectoral infrastructure and project development consultancy through its Indian subsidiary, which has four offices in India besides various project offices across the country.

Halcrow also has vast experience in carbon footprinting of large infrastructure projects and has undertaken several research projects in relation to low carbon construction. These infrastructure projects ranged from pumping stations to entire sewage treatment works, buildings, roads, pipes as well as major mechanical and electrical equipment. This process of carbon footprinting and accounting is paramount in ensuring that civil and mechanical assets to be constructed are truly low carbon, with both capex and opex carbon taken into consideration within a complete life cycle analysis. A related research project has resulted in the production of over 200 carbon footprint models which are now utilized in Environment Agency Construction Projects as well as Water Cycle Studies to ensure that the lowest carbon option is taken through to the construction stage. (BREEAM (Building Research Establishment's Environmental Assessment Method) and LEED (US GBC's Leadership in Energy and Environmental Development) have been in use for over a decade and are the leading environmental assessment methods for buildings that we utilise.

## MEL Chemicals (Kolkata only)



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MEL Chemicals is a producer and supplier of inorganic chemicals, specialising in zirconium based materials. We are headquartered in the UK, with R&D and manufacturing on three continents. MEL Chemicals manufacture products for the removal of trace metal contaminants from waste and drinking water. Initially developed for the removal of arsenic, our Isolux units are making drinking water safe throughout the USA; meanwhile, our MELSorbs material removes harmful metal ions from industrial wastewater streams. Our materials have demonstrated efficient removal of ions of, not only arsenic, but chromium, boron and lead amongst others. Our proprietary adsorption system removes metal ions quickly, with 90% removal in the first 10 – 15 seconds. Additionally, ionic species adsorbed by the media are not released back into the environment; spent media is classified as non-hazardous waste. Isolux and MELSorbs are currently supplied in cartridge-based systems that are simple to operate and require no special training.

MEL is part of the Luxfer group, a UK based company owned by private equity investors. It is an international group of businesses that specialise in the design and manufacture of materials for environmental, health and security applications. Luxfer is a global supplier to a wide range of markets including automotive, aerospace, defence, medical, emergency services and rail.

MEL hopes to develop contacts throughout India to expand our water treatment area and to provide safe and clean water throughout the country.

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## Organic Power North West Ltd (Mumbai & Delhi only)



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Globalization places small and medium sized enterprises at a distinct disadvantage compared to large transnational enterprises.

Organic Power North West is a catalyst working with leading British technologies in water treatment, organic waste management, Eco-technology and Project management. Organic Power provides a revolutionary energy production system. Biomethane: renewable natural gas from organic materials and wastes. Organic Power's technology combines aerobic and anaerobic digestion in a series of minimum energy shaped tanks. The result is maximum energy production and the complete conversion of organic materials into biomethane, fertilizers and other valuable products. OPL technology delivers positive environmental improvement giving a whole new meaning to the concept of climate change.

The company selects regional licenses and develops their business plans and their marketing synergy. The marketing and management of the plant licences is subject to international quality control and support linked to leading universities and experts in the field of waste to energy economics.

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## Scotmas Environmental Sciences PVT. LTD.

### Scotmas Group

Purify • Protect • Perform

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Scotmas Group manufacture a wide range of innovative and effective products for water treatment, hygiene and environmental care. Best known for our extensive range of chlorine dioxide systems, developed with over 25 years experience in the market, we are now actively involved in developing microbial biotechnology, insect repellents, insecticidal textiles and consumer product ingredients.

Operating in many distinct markets, and with offices in Scotland, Portugal, Turkey, Egypt, India and Chile, Scotmas are well placed to offer not only the right product, but also the experience and expertise to provide support when you need it most.

Today, our businesses provide solutions for a variety of industries:

Agriculture, Aquaculture, Buildings Services, Food Processing, Formulators, Healthcare, Horticulture, Industrial, Water Treatment, Retail Markets

We have a continuing commitment to research and development, and make strategic investments in other companies and projects where our experience and capabilities will add value. We have active partnerships with several academic institutions, where we work to commercialise research or early-stage ventures in the fields of water treatment, hygiene and environmental care.

We also work alongside local consultants, engineers and service companies, combining our technical skills and products, with their application and local expertise in order to provide the best possible levels of service to clients.

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## Signal-Group Limited



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### **Automotive, combustion and industrial emissions, air quality, process and research monitoring**

Signal Group is an independent company. With over 25 years of innovative design and manufacturing together with many more years of in-depth application knowledge our expanding client list is extensive throughout the world.

All our analysers are designed, built and tested, to ISO9001 quality, at our UK manufacturing sites at Camberley and Faringdon. The analysers and systems are supported throughout the world by a network of distributors, partners and joint venture companies.

Signal's range of analysers incorporate the latest ideas and technology for a range of applications spanning from automotive and aero engine development through combustion research to compliance monitoring and air quality.

Gases that can be measured by Signal analysers are too many to list here, but include:

CO, CO<sub>2</sub>, NO, NO<sub>2</sub>, N<sub>2</sub>O, NO<sub>x</sub>, SO<sub>2</sub>, O<sub>2</sub>, O<sub>3</sub>, VOCs, H<sub>2</sub>S, NH<sub>3</sub>, the list goes on, our development personnel can advise on your application.

Our customers include almost every small and major company requiring gas analysis. We also supply many governments, both local and national as well as their affiliates, consultants and experts.

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**Environment & Water Team (EWT)**  
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The Environment & Water Team (EWT) is responsible for supporting and promoting the UK's environmental industries overseas and is part of the Sectors Group of UK Trade & Investment.

On this occasion, EWT is leading a group of environmental companies specialising in waste management, project management, environmental management, water and wastewater management, engineering consultancy, air pollution control, and renewable energy to the Philippines. Our objective for this visit is to forge further links between the UK's environmental industry and partners in the Philippines.

Please contact Ricky Belgrave for further information.

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UKTI India is the arm of the British government that helps UK companies trade in India. We provide various types of support such as tailored industry research, events organisation and market introductions to help UK companies develop good local contacts and maximise business opportunities.

UKTI India also help Indian companies who want to do business with Britain, whether to source British products and services or to invest in the United Kingdom. UKTI investment specialists provide tailored advice for customer requirements, including information on professional advisers, site locations and potential business partners.



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