

What is it?

The Thames Gateway Institute for Sustainability is a centre of research excellence for sustainable technologies. Its entire focus is to bring forward practical, commercial innovations to measurably reduce our environmental impact.

This private sector-led initiative is the only one of its kind in the UK. It brings together leading businesses, academic institutions and research organisations to develop, test and demonstrate new solutions for sustainable living.

The Institute will create a central hub of expertise that will match research projects, organisations and skills to facilitate a truly collaborative approach to sustainability research. Partnered with China's eco-city project in Shanghai, it marks the emergence of a global network to share best practice in environmental technology.

Located in Europe's largest urban regeneration programme, the Institute is central to the government's plan to establish the Thames Gateway as the world's first eco-region. The Institute has established facilities at Dagenham and Dartford, with plans for a third facility at Shellhaven.

It is a living laboratory, providing a unique opportunity to field test and implement new technologies at active development sites across the region. Research findings will be shared with the public, ensuring the benefits of the Institute's work are felt far beyond the Thames Gateway.

Who is involved?

The Thames Gateway Institute for Sustainability is a private sector-led collaboration between government, industry and academia. It is open to all those committed to addressing the environmental agenda.

The Institute is working in partnership with organisations including:

Private sector:

Arup, Biffa, BT, EDF, HSBC, ICI/Akzo Nobel, Jones Lang Lasalle, Land Securities, National Physical Laboratory, Pera, Pilkington, ProLogis, QinetiQ, Sustainable Development Capital LLP, Thames Water, TWI.

Academic institutions:

Imperial College, King's College London, Oxford Brookes University, Queen Mary and Westfield College, University College London, University of East London, University of Greenwich, University of Southampton, University of Surrey.

Public sector:

Communities and Local Government, Dartford Borough Council, East of England Development Agency, London Borough of Barking and Dagenham, London Development Agency, London Thames Gateway Development Corporation, South East England Development Agency.

Membership proposals for the Institute are also under development.

Contact

To obtain further information about research initiatives and membership of the Institute, please email info@instituteforsustainability.co.uk

www.instituteforsustainability.co.uk



Thames Gateway
Institute for Sustainability

A world-class centre of research excellence
for sustainable technologies



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Why is it important?

Our environment

There is huge scope to tackle climate change, but a real need to focus on action rather than policy.

Buildings account for 45 per cent of present CO₂ emissions; households in the UK account for over a third of all energy use; and the UK alone produces 330 million tonnes of waste annually – a quarter of which is from homes and businesses. Collectively, even small improvements to how we use resources and energy have enormous impact.

Our economy

Environmental technologies are worth £24 billion to the UK economy – a figure expected to double by 2015. World-class research at the Institute will enable the Thames Gateway to exploit market opportunities, generate new business, attract inward investment and create jobs in the region. Business incubation space at the Institute will also help to stimulate local enterprise.

Our community

The Institute will act as a catalyst for regeneration and will capitalise on the billions of pounds already being invested in sustainable development in the Thames Gateway. It will explore the social side of sustainability to increase our understanding of how communities interact with their environment. The Institute will also provide education services for the local community, working with local schools and colleges to encourage young people into environmental technologies and create new skilled job opportunities in an area of high unemployment.



Research focus

Research at the Institute is focused on sustainable living. This covers everything from the retrofit of existing buildings, the design and build of new properties, to how we use resources around us in our everyday lives at home and at work.

Our research focus includes:

- Construction** **Retrofit of existing buildings, design and build of new properties to improve efficiency and reduce environmental impact**
- Energy** **Renewable sources, efficiency and better management**
- Waste** **Re-use and recycling of materials**

Early research projects

Energy from landfill gases

This three year investigation will explore how to improve gas capture from landfill sites. This captures damaging greenhouse gas before it escapes into the atmosphere, and provides a source of fuel (methane). It will result in a demonstration of techniques for improving yields of gas from landfill sites to develop commercially viable systems.

The project will build on work currently funded by the Engineering and Physical Sciences Research Council (EPSRC) and is conducted in collaboration with Veolia at the Rainham landfill site.

Green roofs

This two year study will identify the most practical and environmentally friendly green roofs, suited to the London climate. They will be trialled and tested at Barking Riverside, with the aim that 40 per cent of the 10,800 new homes will feature a green roof.

The project aims to enhance the environment through the addition of significant green-space within the built environment. Results will be published to provide information and guidance to the industry.

Partners include Barking Riverside, Eco-Green Roofing, Living Roofs and University of East London.

Retrofit envelope

This project will research, test and trial airtight 'house envelopes', insulation, renewable energy and water saving technologies on existing houses in the Thames Gateway. The aim is to deliver practical, affordable solutions that meet the higher level requirements of the Code for Sustainable Homes already in place for new build housing.

The trial will use a range of innovative British products and systems. It will provide credible, independent data on performance in use to build confidence in the market for these innovations and support their business growth in both UK and international markets.

Partners include Arup Associates, Dartford Borough Council, Eaga Group, National Physical Laboratory, Oxford Brookes University, Stroma Technology and Taylor Wimpey.

Behavioural dimensions of sustainability

This project is investigating the social and behavioural aspects of sustainability: how people interact with and respond to different urban infrastructures. The research aims to unravel the complex links between lifestyles, values and the environment. It will link closely to practical initiatives and seek to understand how communities negotiate sustainability.

The Economic and Social Research Council funded project is hosted by University of Surrey and involves four departments: the Centre for Environmental Strategy, the Department of Sociology, the Environmental Psychology Research Group and the Surrey Energy Economics Centre.

