

Kent



Centre of Excellence for Recycling & Advanced Reprocessing

Kent: A centre of excellence for recycling & advanced reprocessing

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1. Introduction to Kent: A strategic location for development in the recycling and advanced reprocessing sector

Kent is located in the SE of England and includes part of the Thames Gateway - the United Kingdom's largest regeneration area – within its boundaries.

Work in Kent is underway to support local businesses, attract investment, build infrastructure and to strengthen and develop communities.

Kent is a strategically important economic location positioned between London and mainland Europe. This unique advantage provides Kent with great potential for development and economic growth and prosperity.

Kent benefits also from its proximity to the greater Thames Gateway, which has been designated as **an Eco-Region**, in which:

- local communities shape, lead, own and benefit from sustainable development and supporting actions
- economic, social and environmental ambitions and actions are integrated and mutually supporting
- high environmental and ecological standards are sought for existing and new development and to make best use of natural resources
- innovation in response to environmental challenges is fostered and spread
- a wide range of partners - national, regional, local, international, business, public sector, third and community sector, academia etc - work together collaboratively and ambitiously to support and embed sustainable technologies, industries and communities.

This will be the UK's first eco-region.

The development of an eco-region will be enhanced by developments for the 2012 Olympics

The **Olympic** and **Paralympic Games** will be a showcase not only for sport but also for sustainable building, waste management, energy efficiency and renewable energy. The **Olympic Legacy Park in Stratford** will be a place that promotes and exemplifies the



benefits of a lower carbon footprint and a healthier way of life. The Olympic Delivery Authority has pledged to meet a target to recycle or reuse 90 per cent of waste from the main building phase for the Games – unprecedented for an event of this scale.

Kent will benefit from its close proximity to these activities

(see: <http://www.communities.gov.uk/publications/thamesgateway/ecoregion>)

2. The Context: Kent and SE/EU Market

The support mechanisms and incentives the UK government has put in place have created an exciting and attractive new investment proposition in this sector. Technologies are being developed in the UK and foreign direct investment projects are being attracted. The **Renewable Obligation Certificates** (ROC's) and the annual increases in **land fill tax** are the main drivers for investors. However, these market drivers are not unique to the Thames Gateway as they apply across the UK.

Local problems require local solutions and thus proximity principles apply. Supply routes must be short to reduce cost. Sites, premises, local support and planning authorities must buy-in for this sector to be able to grow. This has been demonstrated by the development of the Sustainable Industries Park in Dagenham.

Regarding waste, every year in the UK **106 million tonnes of construction and demolition material** is thrown away by the industry, representing approximately one third of all waste and making it the single largest waste stream. Of this, 34% is sent to landfill, 50% is reused (mainly aggregates) and only 16% is recycled.

Landfill tax is escalating - rising to £40 in April 2009 and increasing at £8 per tonne, per year to reach £48 in 2010. It is estimated that at current rates of disposal, the 10,000 sites in the UK will reach capacity within 6-15 years. (see: <http://www.secbe.org.uk/waste>).

3. The Opportunities and strengths of Kent

Opportunities in Kent are linked to the **large waste supply stream** in Kent and particularly in London, which exports much of its waste:

- By 2020 **London** will be producing over 27.5 million tonnes of waste material. 14 million tonnes from construction and demolition, 10 million tonnes from commerce and industry and 3.5 million tonnes from municipal solid waste.
- 69% of London's household waste is currently sent for landfill, mostly in counties surrounding London. Landfill capacity within London is extremely limited. London's largest landfill site at Rainham, east London, will be full in less than five years.
- It is estimated that in the south east, construction waste accounts for 50% of all landfill.
- **Kent** produces 800,000 tonnes of municipal solid waste per annum, which is 1.4 tonnes per household. With 193,000 households in Kent Thames Gateway, it is estimated that 270,000 tonnes of municipal solid waste are produced in Kent TG. Only 30% of waste is recycled in Kent. (see <http://www.kent.gov.uk/environment/recycling-rubbish-and-waste/managing-waste>)
- **London** Thames Gateway, with 170,000 households is estimated to produce 240,000 tonnes of municipal solid waste per annum.
- With an **estimated 660,000 tonnes of municipal solid waste produced each year in the Thames Gateway**, the incentive to recycle is great. In addition, the landfill tax acts as a disincentive to place waste in landfill. These figures show clearly that London Thames Gateway offers a massive material recovery opportunity that can be shared by Kent.
- Waste is the main environmental technology sector for the London Thames Gateway.
- In London, research carried out by London Remade, shows that at least 14 million tonnes of waste could be recycled, requiring a significant investment in collection and sorting facilities. The London Plan estimates that a further 308 Materials Recycling Facilities will be required by the year 2020, including 199 Materials Recovery Facilities, 57 in-vessel composting facilities, 16 Mechanical Biological Treatment facilities, 25 Anaerobic Digestion facilities and 11 gasification or pyrolysis facilities.

- Gateway to London figures show that the nine local authorities in east London collect over 1 million tonnes of municipal waste per annum. With an average household recycling rate of 9.6% (20% across the nine east London authorities), 37% of London's total waste, but 89% of London's municipal solid waste (MSW), is sent to landfill sites or incinerated. Since 2006, all local authorities have had to achieve a 25% recycling rate or face prohibitive landfill charges. In contrast to the UK's European neighbours, who are already recycling in excess of 90%, this is a low target. However, future aspirations are high and London urgently needs to upgrade and expand its capacity to recycle a range of materials including paper, plastic, aluminium, textiles and glass.
- A number of exemplar companies already exist in Kent and the Thames Gateway (see section 10), but these need to be supplemented by more companies that can diversify the recycling process and capitalise on the full quantity and quality of recyclable materials available.

Opportunities within Kent in this sector include:

- **Material recovery and material recycling**
- **Construction and demolition waste**
- **Organic waste**
- **Municipal waste**
- **Energy generation**

These are discussed in greater detail in section 4.

The **strengths of Kent** that support the development of the recycling and advanced reprocessing sector are centred upon the following:

- A large demand for new technologies to deal with waste and divert it from landfill.

- A core cluster of companies that are starting to respond to government incentives.
- Numerous key sites where innovative companies can locate to.
- Financial and business development support in the Thames Gateway
- A strong skills base in Kent and the wider Thames Gateway.

Further strengths are linked to organizations and initiatives in the Thames Gateway:

- The **Institute for Sustainability** – a Cross-Gateway initiative (based in the Nucleus, Dartford and at Dagenham) will:
 - Research sustainable development in the local context, bringing international best practice to bear
 - Put research outputs into demonstration, training and practice
 - Promote collaboration between industry, academic and international partners
 - Develop living demonstrators as a test bed for integrating current best practice technologies
 - Act as an economic hub and catalyst to bring regeneration to the areas where the institute is located.
- **Four universities** in Kent (The University of Greenwich, University of Kent, Canterbury Christ Church University and the University of Creative Arts), with Cambridge, Oxford, London, Reading and Surrey universities in the surrounding regions, provide research and training in many subjects that support the construction industry.
- **The 2012 Olympics** is a focus for development in the London and wider Thames Gateway. With a £21bn planned investment, this will provide a focus for companies and developers and opportunities to establish longer term company bases in the Thames Gateway. A strong business cluster will develop around the Olympic site, again, providing a strong platform for the future.



USPs of Kent (The "So what?")

- Through the government's incentives to reduce landfill waste, large incentives for recovery, recycling and reprocessing
- Large waste streams from Kent, London and the wider Thames Gateway
- A growing cluster of advanced recycling and reprocessing companies
- A focus on regeneration and development brought by the 2012 Olympics
- The London Sustainable Industries Park (SIP) is creating the UK's largest concentration of environmental industries and technologies.

4. Sub-Sectors

Material Recovery and Material Recycling

The market for materials recovery and recycling in Kent is large.

For example, EU Directives on End-of-Life Vehicles (ELV) and Waste Electrical and Electronic Equipment (WEEE) mean that London in itself, with its 8 million consumers, is now required to disassemble 245,000 vehicles and 370,000 tonnes of WEEE per annum. Companies with technological solutions can capitalise on a growing market and reliable supply of material. With the new vehicle scrappage scheme, the number of old vehicles requiring disassembly will increase.

Waste tyres

- London alone produces an estimated 30,000 tonnes of waste tyres per annum. The tyre recovery market is expanding in the UK but is not well represented in Kent and The Thames Gateway.

Waste electronics and electrical equipment (WEEE)

- Within the Thames Gateway, Waste Electronics and Electrical Equipment is expected to rise to over 160,000 tonnes by 2020.
- The European Union's Waste Electronics and Electrical Equipment (WEEE) Directive and the End of Life Vehicle Directive has forced manufacturers to recycle at least 75% of the weight of every electronic and electrical product from 2004.

Waste plastic

- It is estimated that in 2009 London produces 420,000 tonnes of waste plastic.
- Reprocessing facilities exist in Kent and the wider Thames Gateway (e.g. Closed Loop Reprocessing), but transporting waste plastic is environmentally and financially expensive, and so more opportunities exist for plastics reuse.

Wood polymer composite (WPC)

- The market for wood polymer composite is underdeveloped. The main opportunities for WPC engineered lumber reuse are decking, fencing and landscaping products and external joinery such as windowsills and door jams.

Glass

- Green glass represents the principal opportunity as capacity outstrips the glass collected and initiatives are starting to take advantage of this low-cost material.

Construction and Demolition Waste

- The scale of commercial and residential development in London today produces almost 7 million tonnes of construction and demolition waste every year. It is estimated that London's construction sector consumes 29 million tonnes of aggregates per annum. Rising landfill costs, and the UK Aggregates Levy, mean that The Thames Gateway needs to address its present capacity to recycle this material and produce secondary aggregates.
- It is estimated that to meet landfill reduction targets and the consequential reprocessing demand of London's construction and demolition waste (e.g. timber, concrete, asphalt, ceramics, insulation materials, plastics, packaging, metals, plaster, cement and other miscellaneous waste), the city requires no less than **74 additional inert reprocessing facilities**, each with an assumed capacity of 75,000 tonnes per annum.

Organic Waste

- Organic waste accounts for 33% of municipal solid waste. As collection systems for organic waste improve, a huge demand for additional processing capacity will follow. It is estimated that London alone could support 29 new in-vessel composting facilities each with a capacity of 40,000 tonnes per annum.
- **Veolia's** (see case study) composting facility in Rainham, processes 50,000 tonnes per annum. The facility generates a wide range of products for bioremediation, soil regeneration and landscaping projects, which have already been used in the development of the original Millennium Dome site and Canary Wharf.

Municipal waste

- London disposes of 40% of its municipal waste within the city, and has over 175 transfer stations for bulking, sorting and transferring waste and recycled materials. Kent also has large municipal waste operations.
- London also has 6 compost sites, 31 paper merchants, 3 glass merchants, 7 plastic merchants, 13 textile merchants, and 60 licensed metal recycling sites.
- London has 39 sites for bulky household waste, with Croydon, Ealing and Hillingdon each having three sites. Most of the other London boroughs have one or two sites.
- Waste management in particular is forecast to double in size over the 10 years to 2012. To meet EU directives, the UK must sharply reduce its landfill rate, currently Europe's highest. There is a major need for new recovery, sorting, reprocessing and conversion technologies.

5. Key Sites and Development Opportunities

Kent offers a sophisticated environment for innovation, along with good availability of high quality, competitively priced industrial, warehouse and R&D facilities. Globally significant R&D clusters in engineering and environmental technologies, along with attractive R&D incentives, make London an ideal base for leveraging technology transfer opportunities.

The Bridge

see: www.communities.gov.uk

The Bridge development in Dartford is transforming a 264 acre brown field site at the former Joyce Green Hospital site near the QEII Bridge into a vibrant new community. The Bridge will deliver 7,500 jobs across a broad range of skills. There will be an office development and a Science Park. Work began on site in March 2006. A total of 1,500 homes will form part of the development.

The full development will provide about 80 acres of public open space, as well as having the Dartford Marshes on its doorstep. Alongside the more formal landscaped areas, the development will provide space for sport and recreation facilities, with a nature reserve and two reclaimed lakes. All will be linked by a network of footpaths and cycle ways.

Each area of The Bridge will be linked by **Fastrack** (an innovative transport system), providing fast and reliable connections to Dartford town centre, neighbouring railway stations and to local amenities such as Darent Valley Hospital and Bluewater



Developers: ProLogis / Dartford Borough Council.

Building/Plot sizes: B1 Plots – 1.53 Acres to 4.58 acres

Site type: Regeneration Project.

Site description: 264 acre mixed use scheme. 500,000 sqft of offices. 740,000 Industrial & Distribution. 328,000 Science Park. 15,000 new homes.

Services/Utility Infrastructure: Fast track transport systems. Market leading power connectivity.

Planning situation: Outline permission granted.

Deliverability timescale for building start: Leasehold – currently seeking prelets

London Sustainable Industries Park - Dagenham

The London Sustainable Industries Park (SIP) at Dagenham Dock, in the London Borough of Barking & Dagenham, is being developed as the UK's largest concentration of environmental industries and technologies, planned to provide a national showcase for businesses delivering recycling and reprocessing facilities, waste-to-energy and combined heat and power schemes, and renewable energy technologies. The London Thames Gateway Development Corporation (LTGDC) has already invested £19 million and has committed a further £27.5 million to the SIP. On completion, the SIP will deliver over 1.3 million sq ft of BREEAM "Excellent" standard business space.



The SIP will include an onsite centre of excellence in the Thames Gateway Institute for Sustainability, which will provide tenants with access to national and international networks and world class research teams to support their businesses. Over the next 10 years, the Institute will provide over £10 million of research and demonstration projects that will contribute to the sustainable delivery of the Thames Gateway. It will focus on consumption (sustainable procurement and construction and energy management) and waste (materials re-use and recycling). The Institute will be multi-disciplinary, facilitating high-quality collaborative research through its university, corporate and Research & Technology Organisation partners, and will provide business incubation and support services.

The first tenant on the SIP is Closed Loop London, who offer recyclable plastic packaging solutions to clients such as Marks & Spencer and Nampak. In 2008, they opened the first facility in the UK to produce both food grade recycled polyethylene terephthalate (PET) and recycled high-density polyethylene (HDPE).

The site is located adjacent to the A13 dual-carriageway, 10 miles from Central London and 6 miles from the M25 Orbital motorway. Dagenham Dock station is a short walk away, for fast and frequent rail services to Central London (20 minutes) and destinations in East London and Essex. The East London Transit, a new modern bus

service, will be in service in early 2010, linking Dagenham Dock to Barking and Ilford. London Gateway, the new £1.5 billion deep sea container port and logistics park due to open in 2012, is 15 miles away.

Developers:	LTGDC/developers TBA
Building/plot sizes:	Sites from 1 acre upwards available on short or long leasehold terms. Alternatively, design-&-build packages on shell or turnkey basis from 2,000 sq ft
Site type:	Brownfield site in regeneration area
Site description:	60 acres to accommodate up to 1.3 million sq ft of recycling, reprocessing, waste management, renewable energy uses and related services
Services/utility Infrastructure:	Dagenham Dock station within 5-minute walk. New 21MW electricity substation.
Planning status:	Outline planning permission in place

6. Supply chain and routes to export

A significant proportion of recovered resources are currently being exported to either European or Asian markets. Demand for materials fluctuate, but exist for paper, tin, glass and plastics. The objective is to attract processors for materials close to where they are generated reducing the need for transport and landfill.

7. Incentives, regulation and sources of finance

UK legislative framework, which is designed to protect the environment and natural resources, drives the environmental industries sector. This includes: the EU landfill directive, The UK Waste and Emissions Trading Act, the Landfill Tax, legislation regarding green energy, use of brownfield sites, air pollution and the renewables obligation (RO):

- **EU Landfill Directive and Waste Strategy** requires the amount of biodegradable municipal waste going to landfill to be reduced to 75% of the 1995 total by 2010, 50% by 2013 and 35% by 2020. This is an enormous challenge.
- In order for the UK to meet these targets the Government, through the **Waste and Emissions Trading (WET) Act 2003**, has introduced the **Landfill Tax** and the **Landfill Allowance Trading Scheme (LATS)**. Under the LATS, County Councils (and unitary authorities) must divert significant amounts of biodegradable waste sent to landfill each year or buy allowances to cover the shortfall. From 2006 to 2020 (the current LATS period) the amount of biodegradable waste that must be diverted each year significantly increases over time. Failure to meet these landfill diversion targets will result in financial penalties and these are currently set by Government at £150 per tonne.
- UK legislation and Government targets include:
 - Reduction of Carbon Dioxide to 20% below 1990 levels by 2010.
 - Utility companies sourcing 10% of their power (18% in Scotland) from renewable sources by 2010/11. Currently the rate is 3%.
 - 60% of new housing developments to be located on brown field sites, requiring more land remediation.
 - The primary legislation affecting the air pollution industry and the noise and vibration control industry in the UK is the Environmental Protection Act 1990. The National Air Quality Strategy (1997) has placed specific targets for the reduction of different pollutants. This has implications for the construction and the building industry.

UK Pro-recycling legislation and energy generation

- UK Planning guidance requires new major developments to generate at least 10% of their energy needs from renewable sources – a low target.
- Energy efficiency ratings such as the BREEAM 'excellent' standard are being written in to the planning policies of many local authorities.
- The Mayor's Energy Strategy aims to generate at least 665GWh of electricity and 280GWh of heat from 40,000 renewable energy schemes by 2010. These capacities are expected to at least triple by 2020.

Renewables Obligation (RO)

The UK government's main measure for promoting the generation of renewable electricity is the Renewables Obligation (RO) system, introduced in 2002 and currently being reformed to encourage new technologies.

This requires electricity suppliers to source a growing percentage of the electricity they sell from renewable sources each year. This obligation is currently to provide 7.8% of electricity from renewable sources in 2008, rising to 10.4% in 2010 and 15.4% in 2015. Scotland has its own Renewables Obligation system, with targets to supply 18% of electricity from renewables by 2010. Suppliers meet this obligation by purchasing renewable electricity from an accredited generator, along with a Renewables Obligation Certificate (ROC) for each MWh (one MW expended for one hour) of energy purchased. The ROC demonstrates to Ofgem the supplier's compliance with their annual obligation to purchase renewable electricity. While the price of the renewable electricity remains pegged to the wholesale price of electricity regardless, the price of ROCs sold by generators is related to their availability compared to demand.

If the UK is a long way off its annual renewable electricity targets, ROCs will be expensive, but if the UK is meeting or beating its annual targets, prices will be generally low.

The system has a built-in cap on ROC prices in the form of a "buy-out" mechanism. Suppliers unable to get their hands on sufficient ROCs to meet their annual obligation can pay a buy-out fee, set by Ofgem each year based on its forecast for the issuing of ROCs in each year.

The total buy-out fees gathered each year are then shared out among those companies presenting ROCs to Ofgem - acting as an incentive to companies to buy ROCs, rather than opt for the buy-out option.

RO Reforms

From April 1, 2009, a new system of **"banded" ROCs** came into effect (including in Northern Ireland), after ministers feared that newer technologies were not getting enough support compared to more established renewable energy technologies.

Cheaper, more commercially-established technologies, such as **landfill gas** now have to generate 4MWh of power before it can sell a ROC. More expensive, less established technologies, such as **gasification, tidal** and **offshore wind power** can issue two ROCs per MWh of energy they produce - giving them effectively double subsidies.

Renewables projects built before the reforms came into force - and those that submitted planning applications before the new system was introduced - keep their existing ROC bandings under a "grandfathering" system until at least 2027.

After future reviews of the ROC bandings, technologies that have become more established could see their ROC subsidies reduced, but the grandfathering rules will mean existing installations will keep whichever ROC banding they had when they were built.

Other reforms to the system were also brought in under the Renewables Obligation Order 2009, seeking to cut red tape involved in ROCs, and reduce the risk of ROC prices collapsing at the end of an over-compliant year in order to reassure investors.

Although the government has now announced that the RO scheme will be extended through until 2037, a consultation will have to be carried out on this, which will form part of the 2010 Renewables Obligation Order.

(source http://www.newenergyfocus.com/go/legislation/renewables_obligation.html)

Sources of Finance

Access to grants and financial assistance

- Companies locating in Kent could be eligible for the Grants for Business Investment scheme, which can equate to around 15% of investment costs.
- There are also a number of specialist grants available to support environmental technology firms.

In addition, companies wishing to take advantage of Kent research and development opportunities are eligible for R&D tax credits, meaning that each £100 of R&D in the UK will now cost £62.50.

Financial assistance in Kent

Financial assistance may be available to support investment by businesses in Kent. Grants for Business Investment in England (GBI) is a form of financial assistance available in Assisted Areas of the UK, designed for businesses looking to make a capital investment but who need financial help to go ahead. GBI grants are available to different levels throughout Kent to both large companies and small and medium-sized Enterprises which serve or plan to serve more than a local market.

Grants are available to new and existing businesses looking to invest in capital equipment to expand and modernise facilities, introduce technological advancement, increase productivity and create skilled jobs. Projects can involve capital expenditure on fixed assets such as land and property, plant and machinery. They can be used to take a new product, service or process from the development stage and they can be used to launch a new business. The grant eligible areas in Kent fall into two categories, referred to as Tier 2 and Tier 3 (Assisted Areas).

Tier 2 grant covers up to 15% of eligible project costs plus an additional discretionary supplement of 10% for medium businesses and 20% for small businesses. Tier 3 grant covers up to 15% of eligible project costs for small businesses and up to 7.5% for medium-sized businesses.

GBI is a national grant scheme and delivered in Kent by the Regional Development Agencies - South East England Development Agency (SEEDA). The amount of support available is dependent on the size of business, eligible project expenditure, location of the investment, the quality of the project and its impact on productivity and skills. All grants are discretionary and your project must require financial support in order to go ahead as planned. The greater part of funding for the project should be provided by the company or come from private sources.

For full details of the GBI scheme and to discuss eligibility please contact Locate in Kent in first instance.

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- There are also a number of specialist grants available to support environmental technology firms.
- In addition, companies wishing to take advantage of London's research and development opportunities are eligible for R&D tax credits, meaning that each £100 of R&D in the UK will now cost £62.50.
- **R&D** Grants area available from SEEDA for SMEs carrying out step change development on technologically innovative products.

8. Business support

Business support is available in Kent, provided by specialist teams with comprehensive knowledge of the areas.

Locate in Kent

As the single point of contact for all companies looking to expand or relocate in Kent and Medway, Locate in Kent provides a range of company relocation services to both UK and foreign owned companies. All Locate in Kent's services are provided free of charge on a completely confidential basis.

SEEDA and Locate in Kent, in conjunction with key partners in Kent, provide business support including the innovative **Launchpad UK** programme providing a totally bespoke package of professional support designed to reduce the risks and costs for foreign companies entering the UK market.

The programme will launch your business into the Thames Gateway and provide an attractive package of business support services at no cost to clients.

EnviroBusiness offers a matrix of services to drive environmental enterprise (See <http://www.envirobusiness.co.uk/services.html>)

Envirobusiness combines detailed knowledge of environmental markets and an ability to identify opportunities and to form connections. The organisation assists businesses to become more successful whether they are established, just starting out, investing or looking to move into environmental markets.

On behalf of SEEDA, over 2009-11 EnviroBusiness is coordinating a new intensive package of support for high potential companies capable of serving growing global markets for environmental technologies and services. This will involve helping 600 companies to generate £60M of new commercial activity and to secure greater prominence world wide. Part of the programme is to focus on exploiting the commercial opportunities associated with the burgeoning demand for offshore wind and marine renewables in South East England. This will involve helping SE companies to identify how they can get involved in this sector, forming consortia to bid for contracts, working with top tier companies to facilitate strategic investments in the SE, building new supply chains and identifying

opportunities to create competitive advantage by undertaking R&D. This work will be delivered by BVG Associates, a specialist advisory company, on behalf of EnviroBusiness. In addition EnviroBusiness is forming collaborations with local authorities, Universities and specialist business support organisations to establish and expedite demand for marine renewables testing facilities and other key infrastructure.

Services to companies delivering environmental technologies, products and services

- Understanding global market opportunities
- Accessing support & funding to develop the business
- Improving products through R&D and collaboration
- Finding new business partners
- Accessing new sales opportunities

Businesses in the Kent Thames Gateway and wider South East England could qualify for FREE intensive support.

Services to companies not currently serving environmental markets with potential to do so

- Diagnosis of relevant environmental market opportunities
- Developing new products through R&D and collaboration
- Understanding & accessing new supply chains
- Action planning market entry
- Finding new business partners
- Accessing new sales opportunities

Services to entrepreneurs and innovators developing new environmental solutions

- Diagnosis of relevant environmental market opportunities
- Developing new products through R&D and collaboration
- Understanding & accessing new supply chains
- Action planning market entry
- Finding new business partners
- Accessing new sales opportunities

Services to large businesses exploring new environmental business opportunities

- Diagnosis of relevant environmental market opportunities

- Generating market intelligence & new contacts
- Developing bespoke market exploitation plans
- Accessing technology suppliers & acquisition targets

Services to investors in environmental, cleantech and low carbon business

- Identifying high potential investment opportunities
- Search & introduction to potential investee companies
- Opportunity identification, analysis & valuation
- Verifying market value estimates & forecasts

Services to public sector organisations supporting environmental industries

- Identification of opportunities to procure environmental technology, products and services
- Expert input to tender assessments of environmental technology, products and services suppliers
- Identification and facilitation of dialogue with potential suppliers
- Delivery of funding processes: design, tender invitation, assessment, contracting and monitoring
- Facilitation of business/sectoral engagement and network building
- Facilitation of public-private collaboration and dialogue
- Determination of environmental enterprise opportunities in regeneration areas in relation to local circumstances

Remade Southeast

The **Remade Southeast, Eco-Enterprise project** is funded by the European Union Regional Development Fund (ERDF) with the prime objective to support the development and growth of Eco-Enterprise Companies that offer products, services and technologies which enhance and sustain the natural environment. It is an inter-regional project (Interreg IIIa) supporting Eco-enterprises in the south east and Nord Pas de Calais region and focusing on the renewable energy, waste management and construction sectors

The project has helped develop the market for environmental solutions through promotional campaigns which highlight 'Best Practice' and the economy as well as environmental benefits. One of its key aims is to support and promote the SME's (Small to Medium-sized businesses) enrolled and to encourage further collaboration and development through several networking and partnering opportunities both cross sector and cross border.

Carbon Trust

The Carbon Trust's mission is to accelerate the move to a low carbon economy, by working with organisations to reduce carbon emissions now and develop commercial low carbon technologies for the future.

What is the Carbon Trust?

The Carbon Trust helps companies to cut carbon emissions now:

- by providing business and the public sector with expert advice, finance and accreditation
- by stimulating demand for low carbon products and services.

The Carbon Trust helps companies to cut future carbon emissions:

- by developing new low carbon technologies through project funding and management, investment and collaboration
- by identifying market barriers and practical ways to overcome them.

Investments

Carbon Trust Investments finance emerging clean energy technology businesses that demonstrate commercial potential. The Carbon Trust specialises in identifying and investing in early stage technologies and credible management teams with the ability to create and deliver clean energy businesses. It is a co-investor of choice in the low carbon technology field. The investments team is strongly supported by in-house technical and strategy groups.

<http://www.carbontrust.co.uk>

9. Kent's Cluster of Waste Recycling Companies

- Waste recycling and advanced reprocessing companies operating in Kent include:
 - **New Earth Solutions** (Maidstone)
 - **Viridor** (West Malling)
 - **Sweep** (Sittingbourne)
 - **Kent Enviro Power** (Allington)
 - **Countrystyle Group** in Swale is a leader in the application and use of green technology, being at the very forefront of "resource recovery", recycling both inert and organic waste material of all kinds into reusable, sustainable end products.
 -

10. Skills, education and training

Kent is on the doorstep of world's most diverse labour pool of over 7.6 million. With a labour pool of 3.6 million and a further 4 million around London, the region is able to supply not only highly educated, but well trained trades people and production staff.

Kent locations benefit from fast connections to London's vast commuting infrastructure, with the rail network in particular providing high accessibility for our major labour catchments.

The environmental technologies sector is increasingly demanding more graduates and highly technical staff, and London has a huge talent pool for environmental engineering and waste management. Local education institutions offering environmental related courses include: the University of East London, Queen Mary University of London and the University of Greenwich.

Regional Resource Centre for Environmental Technology Skills (RRCETS)

Research confirms that businesses are experiencing growing demand from their customers for **environmentally sustainable products** and services. Many companies however, have said they have difficulty in acquiring the necessary skills to apply these new technologies to their business. The **Regional Resource Centre for Environmental Technology Skills** addresses this gap by providing local, low-cost business training.

Key topics include:

- Renewable Energy
- Energy Efficiency
- Rain Water Harvesting
- Environmental Awareness for SMEs
- Waste Management

Kent is home to 4 universities and 6 Colleges of Further Education and is supported by further universities and colleges in the surrounding regions.

Institution	Relevant Courses
University of Greenwich	Ecology and Global Change Management, BSc Environmental Science, BSc Sustainable Development, BSc Sustainable Land Management, BSc Building Engineering, MSc Urban Design, MA Environmental and Earth Sciences - Research, MPhil/PhD Environmental Conservation, MSc Environmental Sciences, MSc by Research Sustainable Futures, PGDip/MSc

11. Case Studies

Exemplar Companies in Kent and the wider Thames Gateway

Closed Loop Recycling - Dagenham

Close Loop Recycling takes discarded soft drinks and water bottles made from polyethylene terephthalate (PET) and milk bottles made from high density polyethylene (HDPE) and recycles them to make food-grade plastic. The resulting rPET and rHDPE can be used to make new bottles and food packaging.

The CLR plant in Dagenham is the first to sort, wash and super clean these types of plastic meeting EU and US FDA standards. The facility is capable of recycling 35,000 tonnes of bottles each year, that otherwise would be exported.



This represents nearly 20% of the plastic bottles that are currently collected for recycling in the UK, saving approximately 52,500 tonnes of carbon dioxide per year.

http://www.gtlon.co.uk/case_studies/93_case_study_london_thames_gateway_closes_recycling_loop.html

Specialised Waste Electrical and Electronic Equipment Processor (SWEEEP) (Sittingbourne)

SWEEEP provides a complete service for the collection, processing and remarketing of electronic and electrical waste. The plant refurbishes or recycles all types of electrical and electronic equipment.



WEEE encompasses everything from electronic games, calculators, toasters and kettles to fridges, washing machines, audio systems, televisions, IT equipment and commercial and industrial equipment.

Under the WEEE directive, from July 2007 it has been illegal to dispose of waste electrical and electronic equipment to landfill.

The 5 million pound SWEEEP investment is one of the most sophisticated recycling plants in Europe. The plant is strategically located to enable processing waste from London and Southern England with minimum impact on the environment.

SWEEEP provides a complete service for the collection, processing and remarketing of electrical and electronic waste. Services include:

- Collection & processing of all business WEEE
- Processing of Municipal WEEE
- Data wiping of computers
- Refurbishment of suitable WEEE
- Disintegration to base materials
- Remarketing of sorted base materials
- Remarketing of suitable IT equipment.

The Allington Quarry Waste Management Facility

Kent Enviropower Limited is an integrated waste management facility at Allington Quarry on the outskirts of Maidstone.

The facility takes non-hazardous waste from households and businesses for recycling and energy recovery (electricity generation to power the facility and for the local supply network).

The facility will take up to 500,000 tonnes of non-hazardous waste a year for energy recovery and up to 65,000 tonnes of sorted materials a year for recycling.

The plant will be capable of generating up to 43MW per hour of power, 34 MW of which will go into the local electricity supply network. All emissions from the facility will meet the strictest limits in the UK and Europe. Emissions from the plant are continually monitored and the results checked regularly by the Government's independent regulator, the Environment Agency.

The plant is now in commercial operation, and both the Materials Recycling Facility (MRF) and the Energy from Waste (EfW) Facility are processing waste. The MRF separates materials that have been sent for recycling by Kent households. In February 2009 the MRF sent 955 tonnes of materials to be reprocessed.



Goutrystyle Group

Countrystyle is probably the fastest growing Waste Management and Recycling Company in the South East, providing a vast range of services to the public and private sector alike.

Plasterboard Recycling

Countrystyle Group has opened a dedicated plasterboard recycling and gypsum recovery operation at its facility in Ridham near Sittingbourne, Kent. The facility is expected to divert an annual capacity of between 20,000 and 40,000 tonnes.

Our site is adjacent to a neighbouring KNAUF plasterboard factory with whom we already work, therefore providing a very convenient and economical method of returning recovered gypsum back to a local company.



In-Vessel Composting

Countrystyle Composting Ltd is a leader in the application and use of GREEN technology, being at the very forefront of 'resource recovery', recycling organic waste materials into a range of reusable, peat free and sustainable end products.

New Earth Solutions (Maidstone)

New Earth Solutions' advanced biological waste treatment facility at Blaise Farm near Maidstone has recently produced and delivered its first batch of high quality recycled compost to the first of many local farmers in the area.

The facility (commissioned by Kent Country Council) provides a local solution for the recycling of up to 50,000 tonnes per year of source separated green and kitchen waste from southwest Kent houses. The Blaise site was opened in September 2008.

The new facility will produce a range of high quality composts that will be widely utilised across agriculture, land remediation and regeneration activities in the Kent region. The New Earth facility at Blaise Farm uniquely offers full enclosure of the entire composting

process and is complimented by a comprehensive emissions management system. The composting process is managed by an advanced computer controlled optimisation programme, ensuring that the perfect conditions for conversion of organic waste into compost are continuously maintained.

The technology is housed in low impact buildings and waste treatment is deliverable through processes that are acceptable to local communities.



Blaise Farm Site, Kent