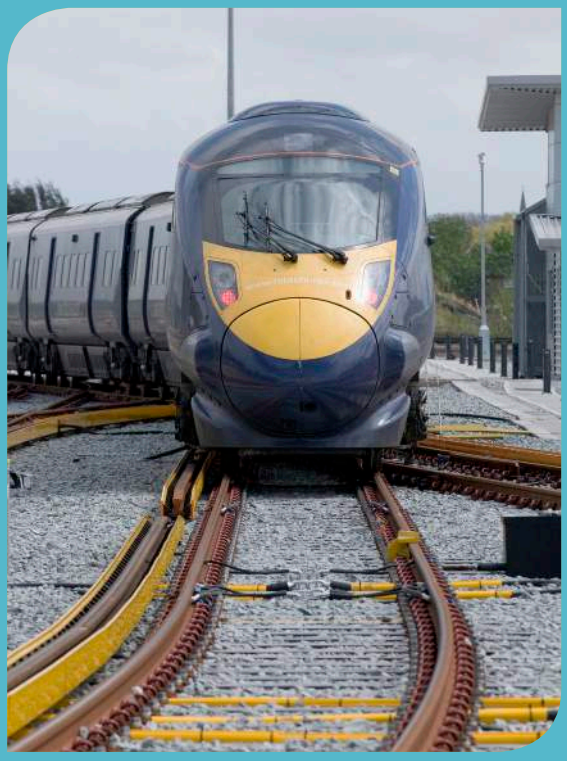
Climate Local Kent
2014 progress report



Foreword

In the two years since the launch of Climate Local Kent – our drive to reduce carbon emissions and increase resilience to climate change – we have seen significant, measurable progress. This includes lower energy bills for thousands of Kent households, rapid expansion of the low-carbon business sector, and multi-million pound investment in building flood defences to protect homes, business and our natural habitats – making Kent a better place to live and work.

Our Progress Report details these achievements and other successes since 2013, and outlines the next steps required to capitalise on this strong start and secure further benefits for the county's residents and businesses.

The work of Climate Local Kent contributes to goals of the Kent Environment Strategy, which marries the county's economic needs with those of our countryside, landscape and heritage. The aim of this work is to increase the county's prosperity while being responsible for the local environment.

These successes include:

- Average savings of £120 for 1,000 households benefitting from home improvements, such as insulation, which reduce energy bills and helps to address fuel poverty.
- Implementation of flood protection measures to support vulnerable communities and minimise disruption caused by severe weather.
- Growth in the low-carbon businesses, with £225,000 in grants awarded, unlocking more than £380,000 of private sector funds.
- Faster broadband delivered via the Make Kent Quicker project, which is working to ensure that at least 91% of properties have access to superfast services by the end of 2015.
- The wider public sector and Kent schools are saving money on energy bills and reducing carbon dioxide emissions by installing lower carbon technologies, such as LED lighting and Combined Heat and Power plant. This new technology is enabling us to become leaner and more efficient, whilst also improving our work and teaching spaces.

David Brazier, Cabinet Member for Environment & Transport

1 Saving money, delivering innovation

Reducing utility costs and minimising the environmental impacts of estates are two ongoing focus areas for the Kent public sector. We are investing in energy and water efficiencies, putting in place renewable energy solutions, and transforming the way services are delivered. Through this programme of sustainable investment we are delivering valuable cost savings.

Communities are also benefitting from this approach which includes projects to improve household energy efficiency performance, reducing the cost of home energy bills and helping to lift people out of fuel poverty. By taking advantage of government funded initiatives such as Kent & Medway's Warm Homes Scheme, we have been able to provide this service to some householders free of charge.

CLIMATE LOCAL TARGET: We will work towards the retrofitting of homes across Kent, beginning with 1,000 households in 2013, through the work of the Kent and Medway Green Deal Partnership: By September 2014 973 homes have had 1,000 energy efficiency measures installed

Kent and Medway Warm Homes Scheme – reducing fuel poverty through energy efficiency

The Warm Homes Scheme was launched in May 2013. Two of the first homes to benefit from energy efficiency measures were semi-detached properties in Rose Avenue, Gravesend. These were awarded Green Deal Pioneer Places funding for external wall insulation.

Retired chef Paul, aged 67, and his wife Dawn, 57, have lived in one of the properties for 25 years. Edita and Tomasz have lived in the second property with their two children since December 2010. Despite having modern boilers and double glazing, both families registered for the scheme because they were finding their homes very cold. The properties are of solid brick construction but did not benefit from external wall insulation which can significantly improve household energy efficiency levels. Under the Green Deal solid wall insulation is difficult to fund through Green Deal Finance alone. For this reason the two Rose Avenue properties were awarded a grant to cover the cost of this measure and have become a demonstration property for Warm Homes. The work was carried out by Beaumont Facades Limited, a Kent-based company, and took approximately two weeks to complete.

The Green Deal assessment estimates that the installation of external wall insulation could save residents up to £182 per year. Energy Saving Trust figures suggest that the average saving made from the installation of external solid wall insulation on a semi-detached property is £270 per year.

Paul and Dawn were using both their cold weather allowance and disability benefits just to keep the house heated to a comfortable temperature. "We've been through three recessions and this time round my wife, Dawn, and I are finding it much more of a struggle to find the heating money," said Paul. "The insulation will make a big difference to our spending on fuel and I'd encourage people to find out more about how to insulate your home."

Tomasz said of the programme:
"As it gets colder, I expect we could be paying £100 a month or more on our heating and energy. This will really help our family – and our pocket."

Before the insulation was installed, both families were spending approximately £700 each year to heat their home and water. Paul and Dawn estimate they have saved about £140 in the seven months since the walls were insulated.

On average it costs between £8,000 and £9,000 to install external wall insulation to a mid terraced property. Previously home owners could claim a grant of up to £6,000 towards these costs; new funding rules are expected to be announced by the end of 2014.

David Brazier, KCC Cabinet Member for Transport and Environment, attended the launch of the Warm Homes Scheme in Dartford and said: "Energy bills are inevitable for any homeowner and can be particularly burdensome during the harsh winter months. This scheme is all about helping homeowners in Kent to stop their homes from leaking money. I'd urge any interested homeowners to get in touch with us to find out if they or perhaps a relative, friend or neighbour are eligible and how they can save money in the long term."

Extending the reach of the programme further, Dartford Borough Council has been successful in securing Green Deal Communities funding totalling £4m, working in partnership with Sevenoaks and Dover District Councils and Kent County Council. This is a highly targeted, street-by-street scheme that will deliver Green Deal assessments and associated energy plans in specific areas of Dartford and Sevenoaks in "hard to treat" properties. The funding, which is primarily capital funding, will be used to significantly reduce the installation costs of energy efficiency measures for approximately 600 households.

The project is well under way, with a number of Show Homes and a Show Shop already identified.

The project extends beyond residential properties and a pilot study of 18 non-domestic green deal assessments has already been completed. This will form the basis of the non-domestic retrofit 'offer' which will address properties predominantly in Dartford town centre.

To encourage householders to take advantage of these energy efficiency measures, a detailed programme of community engagement is well under way. In addition, a proportion of the funding will be used to support a training and up-skilling programme for local people and SMEs in the retrofit sector. We will also carry out measurement monitoring and evaluation of some properties.

ECO measures installed in 973 households

Growing a Sustainable Sheppey

Funded by the Big Lottery Fund, Sustainable Sheppey is now well into its second year. Currently comprising seven projects, with three sub-projects covering renewable energy, the programme has been developed to help make Sheppey a more sustainable place, giving residents the information and skills to lead more sustainable lives. The following paragraphs detail the initiatives that fall under the Sustainable Sheppey umbrella.

Oilworks is collecting waste cooking oil from businesses and schools across the Island and turning it into bio diesel. This is used by Sheppey Prison Service and other organisations, based on the island. The company is hoping to include more collection points soon.

A series of community engagement workshops focusing on renewable energy has been held across the island. Through these local people have told us the type of renewable energy technology they'd like and where they'd like it to be located. Technologies covered have included wind, solar and biomass, and specific discussions have covered both seaweed biomass and wetland biomass as a potential new fuel source for the island, taking advantage of natural local habitats.

Sustainable Sheppey has published a report and feasibility study, listing the potential for renewable energy installations in a range of community buildings. The team is now looking for funding to take forward approximately 20 energy projects, including several within schools.

The community organisations within the scheme have also identified a need to set up an **Island Community Energy Trust.** This would take forward the work identified and would also be able to negotiate financial benefits with those larger renewable energy developers on the Island. This collaborative approach will help identify further community energy projects resulting in more opportunities to reduce both energy costs and emissions. The long term aim is for a more decentralised energy supply, with that energy coming from low carbon sources.

The **Green Doctor** service has another doctor on board. The doctor makes home visits, talking householders through energy and water saving initiatives. The aim is to save households money. Phone 01795 434222 to book an appointment.

Environmental workshops and visits for primary school children have been organised by the **Sustainable Schools project.** The children have been exploring the environmental impacts of the food they eat, designing low-carbon recipe books and environmentally friendly packaging. More visits are planned.

The focus of the **Green Skills** project is young people. By giving them a range of new green skills and knowledge, the project has helped young people on the road to employment and further education. This project is ongoing and more information is available from Ross Bell on 01795 434246.

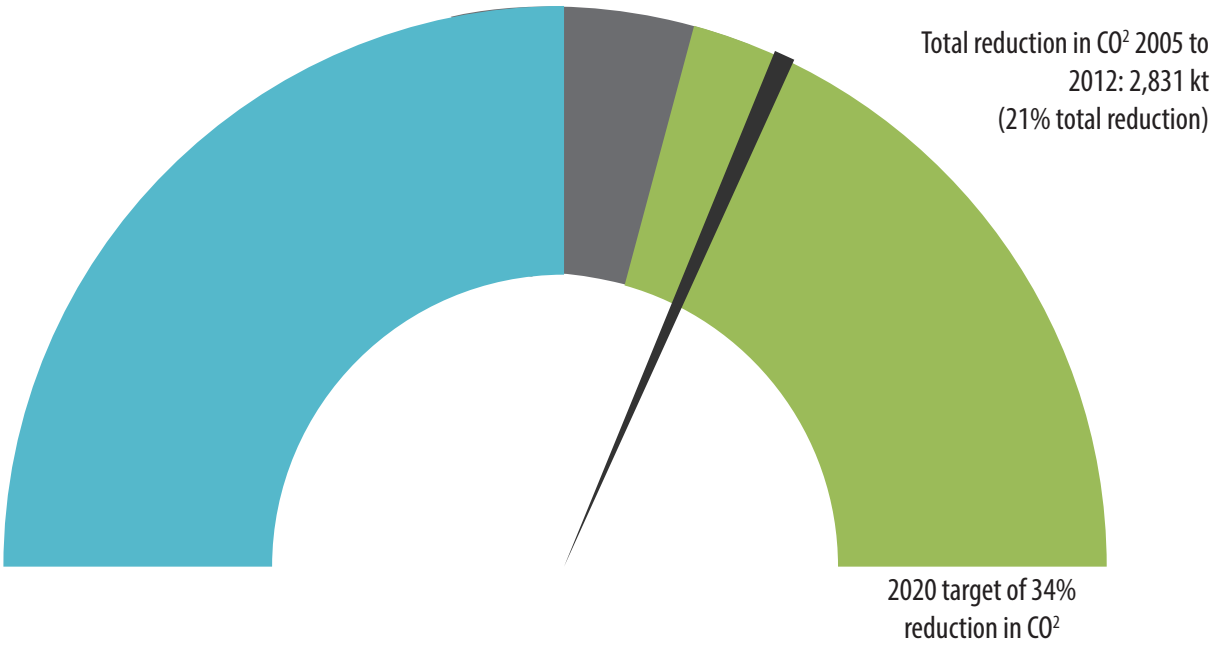
The first phase of **Coastal Communities 2150** is complete, with a toolkit and action plan developed to help Sheppey residents adapt to long-term coastal climate change. The community has taken this forward through a series of community meetings over the summer. More information about this project is available from Swale CVS which can be contacted on 01795 473828.

The Community Allotments continue to thrive, giving Islanders access to allotment plots, guidance on growing, and of course the friendship of like-minded people. Children and adults alike are enjoying these facilities. If you are interested in any of the projects, the feasibility reports, or would like more information please visit **www.sustainablesheppey.org.uk**

During Community Energy Week in September, Kent and East Sussex Councils will host a Community Energy conference to share experience and support others to deliver projects.

CLIMATE LOCAL TARGET: Delivering a 34% reduction in carbon dioxide emissions by 2020: Up to 2012[1], carbon dioxide emissions showed a <1% increase from 2011 levels, an increase of 0.5kt of carbon dioxide. Overall reductions year on year have met or exceeded the target 2.6% reductions.

The figure below displays progress within the KCC local authority area towards the overall 2020 target to reduce carbon dioxide emissions by 34%, based on a 2005 baseline. This shows we are two thirds of the way to meeting the 2020 target.



1: CO2 emissions estimates are based on DECC local authority statistics, which have a two year delay on reported data.

Safe and Sensible Street Lighting

Kent County Council is one of the largest lighting authorities in the UK with around 120,000 street lights and some 25,000 lit signs and bollards. Illuminating these uses approximately 51,000,000 kWh of electricity and produces 29,000 tonnes of carbon emissions. That's more than half of the County Council's total carbon footprint. With an annual electricity cost of £6.4m, a cost that continues to rise, energy efficiency measures are essential. We cannot afford to do nothing.

Most of our street lights use technology which is energy hungry. With the inclusion of street lighting electricity use in the Carbon Reduction Commitment (a government tax on carbon) from April 2014, street lighting energy costs are fast becoming unsustainable. In 2011, the County Council decided to implement the following measures:

- Upgrading lamps with energy efficient units and introducing photocells that switch on later and turn off earlier. Replacing some lanterns to dim at set times and replacing life-expired lanterns with light emitting diode (LED) lanterns.
- Turning off 2,500 surplus lights on a trial basis for a year. These sites are being carefully reviewed a year after switch-off to consider permanent removal.
- Converting 70,000 street lights to part-night operation, so that lights go off when they are least needed (between midnight to 5.30am GMT).

Most of this work has been completed and savings are already being realised. Completion is expected during summer 2014. These measures will reduce energy consumption to around 41,000,000 kWh, thus generating an annual saving of around £1M and reducing carbon emissions by some 5,000 tonnes.

This is just the first phase of energy reduction measures. We are exploring the possibility of converting our entire stock of street lighting to LED with a modern Central Management System (CMS), which can reduce energy consumption and carbon emissions by a further 60%. This will also enable complete remote management of street lighting including dimming, switch on/off, fault reporting and accurately measuring energy consumption.

Council's light the way to reducing electricity bills

It is not just street lighting that is benefitting from LED technology. Many of the Council's across Kent are now realising significant electricity savings by replacing traditional lamps with LED or other low energy technology alternatives. A selection of these projects is listed here:

Dover District Council Offices at Whitfield had old, inefficient, sub-standard lighting, including some corridor lighting which lacked controls and could not be turned off. In 2012/13 the corridor lighting was renewed with energy efficient T5 LED lighting units incorporating PIR motion and photo electric light sensors.

The project comprises 800 light fittings, each consuming 87 Watts of energy compared to the new LED fittings, which use just 29 Watts of energy each.

A bespoke retrofit solution was sought to avoid the need to refurbish parts of the ceiling grid. This was achieved using LED light fittings supplied with plugs compatible with the existing fittings' wiring, enabling civic wardens to install the LED light fittings themselves.

Previous lighting (lux) levels taken from some desks in the Whitfield Offices were as low as 115 lux; the new luminaires provide a more uniform light and improved lux levels (between 400-500 lux). The increase in light output has meant that desk lamps and uplighters are no longer needed.

Projected savings:

- Average power consumption reduction of 62% per luminaire.
- Carbon emissions reduction of 64 tonnes per year.
- Seven year payback period (based on current electricity prices and thereafter a return of £11,991.50 per annum).

Tunbridge Wells Sports Centre - tennis centre lighting

Councillor Dr Ronen Basu, marking the re-opening the tennis centre in March 2014 after the installation of new LED lighting

A new LED lighting system has been installed at the tennis centre at Tunbridge Wells Sports Centre, making it the first in the south east to use this type of technology.

Tunbridge Wells Borough Council has invested around £200,000 in the new lights. In the first month of operation the new lighting has delivered a 30% reduction in electricity consumption for the building and annual carbon dioxide emission savings are estimated to be in the region of 90 tonnes per year.

The new lighting is an innovative system which will reduce energy use and maintenance costs while improving the facilities for tennis centre users. It replaces the previous combination of fluorescent lights and metal halide floodlights, which were no longer fit for purpose and which had significant annual maintenance costs for replacement lamps. The new system is more controllable, making best use of natural light and with the ability to switch off lights on unused courts.

Kent Schools convert to LED

Several Kent schools are now benefitting from improved lighting and lower electricity bills as a result of upgrading to LED lighting. Annual savings vary from £600 for a small primary school to over £20,000 for a large secondary school. The following schools have completed projects:

Northborough Primary, Maidstone
The Churchill School, near Folkestone
Swadelands School, Lenham
Dymchurch Primary
Kemsing Primary, near Sevenoaks
Brookfields Infants & Juniors, Aylesford
Shoreham Primary, near Sevenoaks
Bean Primary, near Canterbury
Boughton Monchelsea Primary, near Maidstone
Snodland Primary

Churchill Primary case study

Before (left) - after (right)

The Churchill Primary School near Folkestone is a Kent County Council Community school, which opened in 2002. Colin Simpson, the school's business manager, was concerned about increasing energy costs and decided to replace 22 of the 60 Watt exterior halogen lights with 20 Watt LEDs. The perimeter lighting energy savings were instant and the school asked LASER Energy to carry out a free survey of the rest of the school to identify further efficiencies.

The survey revealed that the main hall alone had 19 yellow sodium 450 Watt lights which were replaced with seven high bay LED 90 Watt lights. At the flick of a switch, the school's energy consumption reduced by 7,920 Watts. Furthermore, the new emergency lights and fire escape signs were far more visible and easy to follow, both as an escape route in the corridors, and also for teachers leaving the building at night. However, by far the biggest benefit for the school has been the creation of additional useable space.

Key benefits delivered:

- Monthly energy consumption reduced by 19%.
- Energy savings amounting to £1,200 a year with 4.3 year payback.
- Lux levels were significantly increased from 190 lux to 330 lux.
- Creation of additional useable space – under-used, dark cloakroom spaces have been transformed into light additional teaching and 'mini library dens'.
- Additional classroom - by reconfiguring and utilising under-used areas, the school's central library area has been converted into an additional classroom.
- This school was also short-listed for the 2014 Ashden awards for "Most Exciting Low Carbon - School" with the upgrade to LED lighting featuring in their submission.

CLIMATE LOCAL TARGET: Deliver a 10% increase in energy from renewable sources by 2020: The total number of Kent renewable energy installations registered through the government's Feed-in-Tariff during September 2013 to May 2014 is 1,370 with a total installed capacity of 6.49MW. The majority are for the domestic sector at 1,326 and for solar photovoltaic, with Gravesham district continuing to have the highest number, with 193 installations.

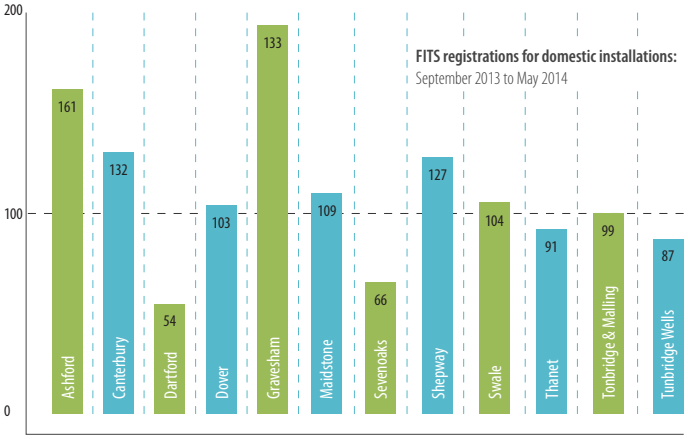
Three large solar PV installations on KCC buildings have outperformed estimates by saving £21,500 in year one, a 25% higher return than expected

Ashford saves with new Combined Heat and Power plant

Ashford Borough Council has significantly improved the fuel efficiency in its offices. A 400kW Combined Heat and Power (CHP) plant was lifted into the side of the Stour Centre on Monday 3rd February 2014, marking a milestone in the council's project to invest in a new power generation and heating system serving both the Stour Leisure Centre and Civic Centre.

The system went live in June 2014. The plant uses gas fuel to generate electricity while any residual heat produced by the engine is used to warm the buildings. The CHP plant will meet 70 per cent of the electricity needed to operate the buildings, and 60 per cent of the heating demand. This power and heating method is more cost effective than traditional methods and will reduce the council's utilities bill by approximately 25 per cent.

It is also a 'cleaner' method of generating electricity. It is estimated that the carbon dioxide emissions of the buildings will be reduced by 550 tonnes each year over the 15 year life of the plant.



Source data: Ofgem renewables and CHP register

Rural churches explore benefits of biomass heating

The church 'estate' in Kent is relatively large. Of the 539 properties, many are in rural locations and most of these are reliant on oil and electricity for space heating (if heating is installed at all).

Due to the nature of the building fabric, and the limited opportunity to improve thermal performance, heating solutions in churches are often sub-optimal. In most cases basic space heating is used intermittently to meet short-term demand and sustained heating regimes are usually prohibitively expensive. This can cause problems for church users and limits alternative uses.

The Kent Downs AONB Unit has partnered with the Diocese of Canterbury to explore how renewable heat systems could be deployed within the church estate. As with any other organisation, the technical and economic feasibility of renewable technologies needs to be established and compared to 'business as usual' benchmarks. Given the poor heating regimes in many churches, and the fact that many existing fossil fuel boilers are operating beyond their life expectancy, there is an opportunity to present a case for non-fossil fuel alternatives.

Phase I of the project narrowed down an initial 'long list' of twelve churches to five. The five shortlisted churches had

medium to significant heating bills; some were already looking at new heating options (and hence open to additional investment), and most (but not all) had existing infrastructure (e.g. wet radiator systems or a usable boiler room). Each of the churches were enthusiastic about the project and the associated fund-raising required.

The project delivered a series of options and recommendations to the Diocese Advisory Committee, the body responsible for overseeing the conservation of churches. The project was delivered in partnership with a range of experts from South East Wood Fuels Ltd, MCA Consulting Engineers Ltd and the Lee Evans Partnership (architects). The project is providing ongoing support at three churches, including Molash Church where an initial proposal for a wood pellet heating system is being prepared.

This work was made possible under the EU ERDF funded Interreg IVA France (Channel) England Cross-border Cooperation Programme 2007-2015.

Transport accounts for one third of carbon emissions in Kent

Kent and Medway Councils charging ahead

KCC, Medway and nine Kent District Councils are making good progress in completing the installation of 49 fast charge (top up from empty to full in 3-4 hours) electric charge points across Kent. This follows a successful Kent public sector bid to the Office of Low Emission Vehicles (OLEV), securing £273,000 over two years to fund 75% of the cost of installing charging points for electric and hybrid vehicles.

These units are being installed in town centre, work or leisure centre locations where users will visit for a few hours at a time.

Phase 1 has delivered 26 of these dual outlet fast chargers and these are now operational at Invicta House - Maidstone, KCC office at 31 Kings Hill Avenue – West Malling, KCC office Apollo House – Ramsgate, Canterbury City Council Offices, Leopold Street car park - Ramsgate, Mill Lane car park - Margate and Ashford Civic Centre. Locations for Phase 2 are now being planned, with all charge points due to be fully installed by March 2015.

In addition, The electric Vehicle South East (eVSE) Partnership was awarded a grant of £2.4m from OLEV to deliver a network of around 45 rapid charging points (charging in 20-30 minutes) across the south east of England by 31st March 2015. These are primarily to be installed close to the region's strategic road network and 10-15 will be installed in Kent. KCC is a member of the partnership and is contributing to the delivery of the scheme by identifying potential locations and facilitating discussions and agreements between landowners and eVSE.

The Partnership is offering to install and support the units for three years for free. After this, responsibility for the charge points will revert to the land owner.

These projects are developing a joined up, accessible charging network throughout Kent and the south east to encourage the use of electric vehicles (EVs) for personal and business use, promoted through the 'Charge Your Car' network. A major factor preventing people from purchasing EVs is range anxiety. The infrastructure network will help address this concern, encouraging EV take up, reducing carbon emissions, and helping to improve air quality in the county.

'Charge Your Car' is providing the back office provision (24/7 call centre, website and app for users) and APT Controls Ltd have supplied the units and will be responsible for their maintenance for three years.

The eVSE Partnership is made up of Lewes District Council, Kent County Council, Surrey County Council, Brighton and Hove City Council, East Sussex County Council and West Sussex County Council as well as the District / Borough Councils within these Counties. Elektromotive and 'Charge Your Car' are providing the additional 25% funding to allow the chargers to be offered for free.

To monitor the success of this project, base data for the period 2011-2014, from the Department of Transport will be used to show the growth in the number of EVs registered in Kent following the implementation of the charging infrastructure.

'Responsible Parking' campaign encourages greener transport

Kent County Council was aware that increasingly schools in Kent were experiencing issues with dangerous and inconsiderate parking around their sites. This is closely linked to travel choices.

To tackle this serious issue, Transport Innovations decided to create an off the shelf campaign package' which could be used by schools and other organisations to raise awareness and support schools in tackling dangerous and inconsiderate parking in the vicinity of school entrances.

A web-based toolkit was produced enabling schools to set up their own individual campaigns. The aim is to engage pupils to encourage parents/guardians to think about their travel choices and parking behavior and so maintain a safe environment in and around the school. The toolkit also promotes a healthier lifestyle as more pupils will walk, cycle or scoot to school.

The campaign is targeting primary schools and the toolkit signposts schools to additional support provided by Community Wardens, Kent Police and the parking offices of the Borough/District Councils.

Following a successful pilot at primary schools in Dartford and Gravesham, all Kent primary schools were invited to register on the new website www.responsibleparking.co.uk. Between March and May 2014 all schools were supplied with four posters to display and a 'Responsible Parking' leaflet for each parent. Schools were also able to loan banners to promote further awareness. To date, more than 135 schools have registered on the website and 83 schools have requested banners.

Local Sustainable Transport Fund (LSTF)

In July 2014 it was announced that Kent County Council had successfully secured LSTF revenue funding of £893,000 to be spent in the 2015/2016 financial year for the Kent Connected bid.

Kent Connected promotes good practice in mobility management and travel behaviour change. It comprises an integrated programme of measures to address peak congestion, improve travel choices, and support the provision of jobs and houses. The package has been designed to promote and simplify access to sustainable travel information, overcome the existing barriers against the use of sustainable transport, and engage with target groups to minimise peak congestion within the county.

The measures include:

- A website/app
- Marketing and branding
- Business support
- Schools support
- Transport interchange audits
- Discounts and promotions
- Ticketing
- Car drivers awareness raising
- Management and engagement.

Single Local Growth Fund (SLGF)

In July 2014 it was also announced that Kent County Council had successfully secured a Single Local Growth Fund of £194 million to tackle congestion and support economic growth in the county. This includes a number of sustainable transport projects such as:

- Kent Thameside LSTF - integrated door-to-door journeys
- Sustainable Access to Education and Employment (delivering Kent's right of way improvement plan)
- Kent Sustainable Interventions Programme for Growth
- Sustainable Access to Maidstone Employment Areas (River Medway cycle path, East Farleigh to Aylesford)
- West Kent Local Sustainable Transport - Tackling Congestion
- Integrated Transport Package Maidstone
- Thanet Parkway Railway Station

The delivery of these projects will support sustainable journeys across the county.

Thanet Parkway Railway Station

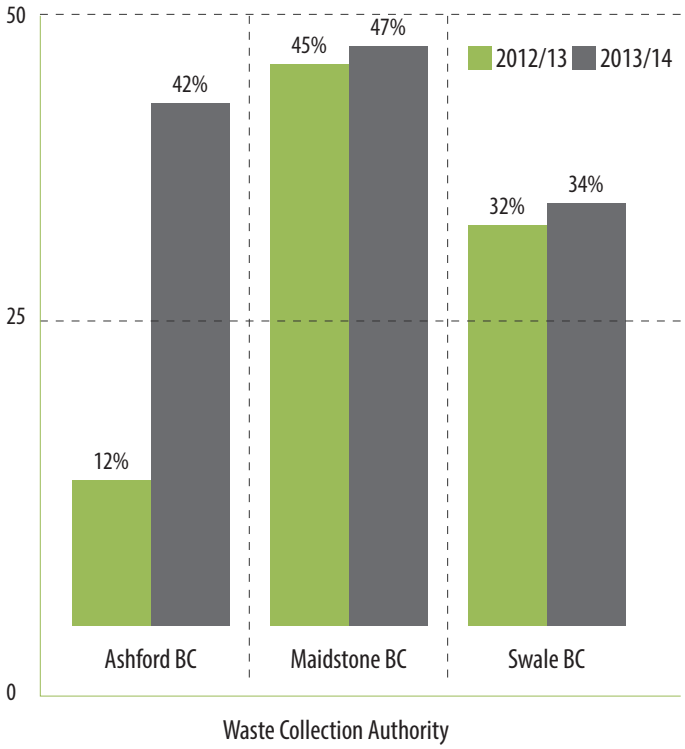
The Transport Strategy Delivery Team is currently progressing work towards the delivery of a new passenger railway station (Thanet Parkway) along the existing railway line between Ramsgate and Ashford. This project will support sustainable commercial and residential development in Thanet and part of Dover, including the Discovery Park Enterprise Zone. As the project will improve rail accessibility within East Kent, it will encourage more sustainable journeys by rail.

Waste Management

The Mid Kent Joint Waste Partnership encompasses three local authorities: Ashford, Maidstone and Swale. These three authorities have agreed a joint waste collection contract with Biffa and work closely with Kent County Council as the Disposal Authority. The new contract has delivered real benefits, with waste and recycling services standardised across the three areas and the majority of households now able to recycle plastic bottles, tubs and trays, glass, cans, cardboard and paper. All areas also have a weekly food waste collection and residents can recycle textiles and electrical items from home. The three authorities collectively recycled 44,418 tonnes in 2012/2013 rising to 58,653 tonnes in 2013/2014, an overall increase of 32%.

In addition to the recycling, a total of 83,568 tonnes of residual waste was collected on behalf of the three authorities in 2013-14. Of this, 98% was sent for waste to energy, with only 2% of all the waste arising in these three authorities disposed of at landfill. Since the introduction of borough-wide recycling in April 2013, all three council's have seen an increase in recycling rates, with Ashford's rate rising significantly from the poorest in the UK at 12% to a respectable 42% in just one year.

Mid Kent Joint Waste Partnership % of Household Waste sent for Recycling or Composting



2 Growing the economy

Growing the Kent economy is a key priority for Kent County Council, as is our drive to reduce dependence on natural resources and support the government to achieve its target to reduce the UK's greenhouse gas emissions by at least 80% by 2050.

The low carbon sector is still showing the greatest potential for business growth. Currently it employs up to 25,000 people and is growing between 4-5% annually. Being the gateway to Europe with excellent transport and port connections, Kent is the ideal location to attract investment from this rapidly expanding sector.

To exploit this opportunity, Kent County Council working in partnership with local councils, Locate in Kent, BSK-CIC and the University of Kent is delivering funding opportunities and SME business support to attract more innovative businesses to Kent.

This will help us achieve our vision of a Low Carbon Kent and support economic growth.

CLIMATE LOCAL TARGET: We will work with at least 500 local companies by 2015 to help them cut their energy, waste and water bills: To date, 222 businesses have been supported with average savings of £2,065 per business

Low Carbon Kent

Kent County Council's Low Carbon Kent business network was successfully launched in April 2013 and has grown to over 1,500 members. The aim of the network is to bring businesses together across Kent and Medway, supporting the growth of the Kent economy, whilst reducing the environmental impact of these activities. Network members benefit from a range of sustainable business support services, funded through European sources.

Through the network, we have helped businesses to improve their environmental performance and awareness of environmental risks and opportunities that may arise as a result of a changing climate. On average, we have identified that small and medium businesses could save up to £2,065 annually by doing things differently, such as reducing waste sent to landfill, implementing energy efficient lighting, and driving more efficiently.

The Council's Steps to Environmental Management (STEM) scheme, introduces businesses to Environmental Management Systems (EMS) and rewards them along the way for their achievements. The workshops provide a platform for the businesses not only to learn how to save money and win business from improved environmental credentials, but also provides an opportunity to network with each other and share best practice. Since June 2013, we have delivered seven STEM workshops to 83 businesses.

Showcasing Kent businesses and rewarding achievements

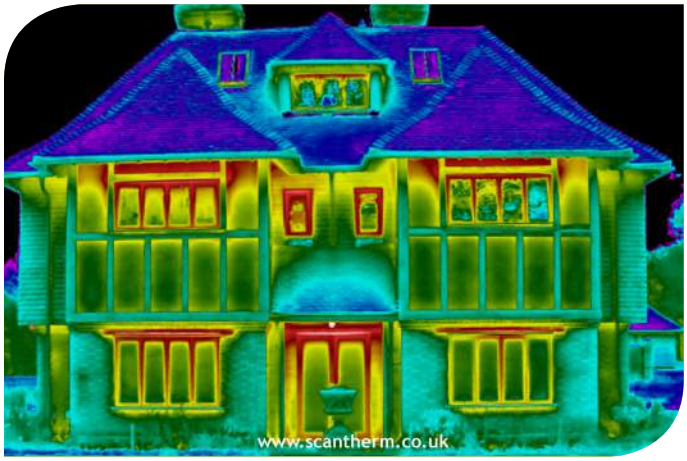
At the heart of our network is a directory of 169 businesses who supply low carbon goods and services ranging from renewable energy solutions to low carbon cheese manufacturers. We promote these businesses through various events and media publications, highlighting the benefits to consumers of opting for green alternative products. Within our dedicated Low Carbon Zone at Kent 2020, 18 businesses showcased their products.

In June 2014, together with UK Power Networks, we rewarded businesses who could demonstrate that environmental considerations were embedded into everything they do through the Commitment to the Environment category of the Kent Excellence in Business Awards (KEiBA). Our winner this year was Hadlow College who impressed us with the breadth of their environmental programme, involving both staff and students.

Funding growth

We were delighted to be awarded a £2.3 million project, part-funded by the South East European Regional Development Fund Competitiveness Programme, called Low Carbon Plus. The project is to provide grants to businesses who are offering a low carbon product or service in order to help them grow and expand. The project was launched in May and already we have approved 20 grants to the value of £225,000, unlocking over £380,000 of private sector funds.

Scantherm, a thermal imaging consultant based in Tonbridge, received a grant to purchase new cameras and carry out a marketing campaign. The grant will allow Scantherm to employ an additional salesperson and could potentially increase the turnover of the business by 15%. Thermal imaging allows property owners to effectively assess the energy efficiency of their building without expensive exploratory construction works.



Networking success

Our annual Green Business Conference in November 2013 attracted more than 100 delegates, bringing together our network members, politicians and experts from the low carbon sector. Delegates heard from the Carbon Trust about the importance of the low carbon economy. The Trust explained how it makes sound business sense to manage your environmental impacts and be aware of the risks and opportunities posed by the environment. Two of our businesses including our KEIBA 2013 winner, Canterbury College, described their environmental journey and highlights which included a 33% increase in turnover for Westerham-based bicycle storage company, Cyclepods Ltd.

Creating cycle storage with a difference

Cyclepods Ltd are a leading cycle storage company based in Kent specialising in bike storage products made from 100% recycled or recyclable materials, all of which are manufactured in the UK.

Initially, the company sourced aluminium frames from China which meant low profit, high environmental impact and long lead-in times. Working with the Waste and Resources Action Programme (WRAP) and with significant investment, Cyclepods decided to swap aluminium for plastic, specifically recycled plastic, and following this the company experienced a significant change of focus.

James Steward, Creative Director, states: "We believe that the use of recycled materials should not compromise quality and that bike parking should encourage cycling and a healthier way of life. Our products also boast a higher security level than traditional storage options; our Streetpods are even Police Approved and hold Secured-by-Design status. Unlike traditional bike racks, our products prevent overcrowding and damage to the bikes, making us very bike and cyclist friendly."

Through Low Carbon Kent, Cyclepods has received support to increase awareness of their product range within Kent and abroad. Following a site visit to Rotterdam, the company was introduced to 3D printing and shown how prototyping costs could be significantly reduced using this new technology. The company applied for a grant from Low Carbon Plus and was awarded £20,000 to help towards the purchase of a 3D printer as well as other initiatives that would lead to company growth.

The grant has also enabled Cyclepods to extend their market from schools, businesses, rail stations and hospitals to the home through the launch of a new product, the Lockerpod+. Made from recycled polyethylene, each new unit will hold up to four bikes and is available in a variety of colours. Lockerpod+ units have a three-point locking system and inner metal frame as well as options for ground anchors and are supplied with Gold Secure Status from Sold Secure, which allow cyclists a discount on bike insurance.

Fusion – a European project

Through the Fusion project, we have focused on understanding the principles of a circular economy and how best to support our network members in integrating some of those concepts into business as usual. A circular economy is one where organisations review their products and services and identify where changes can be made to maximise the value of our natural resources. The project is part-funded by the Interreg IVA Two Seas programme, which is a collaboration of organisations from the Netherlands, France, Belgium and the UK.

Fusion has also enabled us to build on our understanding of the opportunities and risks posed by a changing climate. We have, for example, assessed the opportunities available for local businesses to supply to the offshore wind and retrofitting markets. The launch of Green Deal and the Energy Company Obligation (ECO) saw us working with our Low Carbon Kent members to raise awareness of these new government initiatives, which aim to improve the UK housing stock. To do this, we ran information events and supported businesses to access opportunities. Some 62 businesses expressed an interest in being part of our partner Amey's supply chain to deliver ECO in Kent and Medway.

Alongside the Low Carbon Kent network, the Kent Wind Energy Network continues to grow in strength with 404 members. This online business directory and network (www.kentwindenergy.co.uk) is dedicated to the offshore wind industry and has been developed in partnership with leading offshore wind companies Vattenfall and London Array. The website is both a source of local business capability for project developers and an information resource to increase awareness of sector growth, latest developments, news and events.

Kent County Council, Locate in Kent and Business Support Kent provide further support to assist local supply chain development as well as putting offshore wind farm developers in touch with local businesses. This has included commissioning a supply chain development study from the University of Chichester to increase understanding of the breadth and requirements of the offshore wind industry.

Alongside this, and with the assistance of Vattenfall and the London Array, a number of knowledge transfer workshops and supply chain 'meet the buyer' events have been held to assist local businesses involved or wanting to become involved in the sector.

Making connections, supporting renewables

Kent-based H&Askham is a high voltage electrical installation company with a division, H&A Renewables, focusing solely on projects within the renewable energy and submarine sectors. Kent has proved to be a great base for the company as it has moved into the offshore wind market with an additional office operating in the Port of Ramsgate during the execution of the London Array project. This presence enabled H&A to engage with a number of local suppliers and employ many local personnel, providing them with the full training required for offshore works. H&Askham has worked on a number of off shore wind projects to date including: Kentish Flats, Thanet Offshore, London Array, Scroby Sands, Sheringham Shoal, Walney 2 and Gunfleet Sands Wind Farm. In addition to their work in the UK, the company has also secured work on the BARD and Borkum West II projects in Germany.

H&Askham Renewables continues to develop its business further in this sector, building on its successes in Kent over the past four years. Working in the offshore wind sector has enabled the company to grow significantly. Involvement with the Kent wind farms has been an excellent opportunity for H&A to showcase its services, providing a good platform to make new contacts within the industry. H&Askham first became involved in offshore wind after attending a meet the buyer event run by the Kent Wind Energy Network where they were able to talk directly to the developers' tier 1 and 2 contractors.

Potential to create over 9,000 new jobs in Kent in the next decade in construction and retrofitting, waste and recycling, offshore wind and land-based industries

Making Kent Quicker

The Making Kent Quicker Project is working to bring better broadband to parts of Kent and Medway that would not otherwise benefit from the commercial rollout of superfast broadband services. Kent County Council is working with BT and the government's broadband agency, Broadband Delivery UK (BDUK), to deliver this.

This means, when combined with existing rollout plans, that:

- At least 95% of all properties in Kent will have access to higher-speed fibre-based broadband infrastructure by the end of 2015
- Every property in the project area will be able to access a broadband service of at least 2Mbps
- A minimum of 91% of premises will get superfast broadband of at least 24Mbps

Improving access to higher speed broadband will support Kent businesses, enabling them to become more efficient and offer improved online services to customers.

Despite representing one of Kent's largest infrastructure investments, the project will take less than three years to deliver – and will involve laying 7,000km of fibre the length and breadth of the county. The build, which started in autumn 2013, is due to be completed by the end of 2015.

At the end of June, 143 new green cabinets had been installed across Kent, with 136 ready for customers to order service from their chosen Internet Service Provider. These cabinets collectively serve over 34,000 properties. Further information on the rollout can be found at www.kent.gov.uk/broadband

3 Valuing the natural and historic environment

Kent has a wealth of natural and historical assets, benefitting from 326 miles of coastline, 18,000 hectares of accessible green space, two Areas of Outstanding Natural Beauty and two World Heritage sites. Kent residents and visitors can take advantage of 4,200 miles of public rights of way to access all of this and more, including 440 wildlife sites, 442 scheduled monuments and 500 conservation areas. With 1.4 million visitors to our country parks, we know that the Kent countryside is an asset valued and enjoyed by many and that it provides a significant contribution to the Kent economy and local employment.

The Kent habitat survey carried out in 2012 identified the following:

- That natural and semi-natural habitats cover 27% of Kent's surface area
- Arable and horticulture is the land use covering the greatest area at 35%, followed by intensively managed Improved Grassland at 30%; there has been a small 2% decrease in this land area compared to 1990
- Woodlands are the largest semi-natural habitat covering 12% of the county, with 11% being broad-leaved, mixed or yew woodland
- Traditional orchards in Kent contribute 10% of the traditional orchard area in England
- Heathland is the county's most rare and fragmented habitat, although this has increased from 52ha in 2003 to 74ha in 2012
- Orchards and hops have suffered the most dramatic decline, with more than two thirds of the county's resource in 1961 being lost by 2008
- The county contains several nationally and internationally important habitats around the coastline including chalk cliffs and reefs, and vegetated shingle

Land covered by development has increased from 10.7% in 1961 and 14.4% in 1990 to 17.3% in 2008, an increase of around 62% of the original resource

Kent Nature Partnership

The Kent Nature Partnership was awarded Local Nature Partnership (LNP) status by the government in July 2012 to drive positive change in the local natural environment. The Partnership takes a strategic view of the challenges and opportunities involved in managing the natural environment as a system benefiting biodiversity, people and the local economy.

The vision of the partnership is for "The Garden of England to have a healthy natural environment that is rich in wildlife, is enjoyed and valued by all, and underpins our long-term economic, social and personal wellbeing". LNPs bring together a wide range of interest groups to create a shared vision for the natural environment and deliver integrated environmental outcomes. LNPs break away from the traditional approach of delivering biodiversity conservation by focusing on obtaining socio-economic benefits through conservation and good management of biodiversity. LNPs will have a strong strategic element and it is anticipated that they will work closely with Local Enterprise Partnerships and the newly created Health and Wellbeing Partnerships.

The Partnership is led by a Project Board, currently co-chaired by Caroline Jessel (a former GP and Lead for Sustainability and Health, NHS South East England) and Will Day (Sustainability Advisor to Pricewaterhouse Cooper). The work of the Board is supported by the Management Working Group and three delivery groups:

Habitat Improvement, Health & Wellbeing and Rural & Green Economy.

A series of reports have been produced including one on 'Business innovation in the land-based sector' and another on 'Using the natural environment to deliver better health'. Working groups are taking forward recommendations from these reports.

Kent guide for managing Ash dieback

Kent is among the first areas of England to be badly affected by Chalara Ash dieback. Since 2012 woodland managers have witnessed a well-established infection in East Kent and have subsequently found more infection further west. Today, natural regeneration in heavily infected woodlands is highly compromised and mature

ash trees are showing susceptibility to secondary infection.

The Kent Downs Area of Outstanding Natural Beauty (AONB) Unit has worked closely with partners in the Arboriculture Association, Forestry Commission and Kent County Council to produce a guide which offers practical advice for local councils, highways authorities, private tree and woodland owners, and contractors in Kent. The main aim was to provide practical advice that might help slow the spread of Ash dieback, particularly from woods in high infection areas in the east of Kent to other locations in the west of Kent, and beyond, where infection rates are currently low. This guidance can be found at www.kentbap.org.uk/resources/presentations/.

This work was included in an article in The Guardian newspaper and was also covered by BBC News South East where a representative of the AONB Unit was involved in a news feature, broadcast on May 1st 2014.

Woodland management refresh at Perry Wood

The Perry Woods 'complex' is comprised of five individual woods and extends to around 60 hectares overall. Collectively Perry Wood is designated as a Local Wildlife Site and is characterised by ancient woodland. It is a publicly-owned woodland and is managed for community benefit by Swale Borough Council (with support from the Mid Kent Downs Countryside Partnership).

A change in management regime in 2013 created a new opportunity to completely revise the existing management plan and develop new grants with the Forestry Commission that would enable management to continue uninterrupted.

The Kent Downs Woodland Pathfinder project supported this refresh process and enabled a thorough, detailed and updated analysis of the woodland resource. This resulted in suggestions for a revised approach that enabled timber extraction whilst retaining a primary focus on conservation.

The main outputs of this project were:

- Updated boundary and compartment maps. This involved the translation of on-the-ground surveys into a geographical information system (GIS). This mapping work underpins the compartment database and informs the operations plan.
- Compartment database. Data on area, species, habitat, management prescriptions and timber volumes.
- Operations plan. Practical management activities for each compartment split into six intervals (years 1 to 5, years 6 to 10).

The work on Ash Dieback guidance and Perry Wood support was made possible under the EU ERDF funded Interreg IVA France (Channel) England Cross-border Cooperation Programme 2007-2015.

Kent's Countryside Management Partnerships

There are nine Countryside Management Partnerships in Kent, delivering countryside improvement projects and offering a range of volunteering opportunities. In the last year this has included:

- 6,774 volunteer days across Kent and the London Borough of Bexley
- 38 River Wardens active along the River Medway
- Over 10,000 native trees planted by 38 groups in mid, north and west Kent
- Supporting more than 100 landowners along 200km of river through the Giant Hogweed invasive species control programme
- Over 125 community and environmental projects delivered, including river catchment improvement projects (see below)

The Partnerships have taken a leading role in river catchment planning and delivery. This is driven by the Water Framework Directive which requires rivers in the long-term to achieve good ecological status/potential. At the river catchment level it provides an opportunity to plan and deliver a better water environment through a collaborative approach. Catchment Improvement Groups

(CIGs) champion the catchment based approach and develop and deliver action planning with a wide range of statutory, non-statutory and community representatives, bringing knowledge, support and resources to the catchment.

Spotlight on the River Darent and Cray

Improving our rivers has significant benefits such as mitigating against issues of local flash flooding and bank erosion and providing additional habitats for a wide range of species.

The vast majority of materials are sourced through coppice management of local woodlands in Kent and much of the work is delivered by volunteers. Such work also benefits floral diversity at the coppiced woodland site, through increased light levels and enhanced carbon sequestration rates in the county owing to the vigorous early growth of native tree species. Finally fuel miles and transport costs are minimised by using locally sourced timber.

Co-ordinated by the North West Kent Countryside Partnership, both the Cray and Darent Catchment Improvement Groups are well established. Following extensive consultation and site visits carried out over 12 months, both have produced draft action plans. These plans are aimed at improving the ecology and connectivity of the river in the long-term, working in partnership with local communities and organisations.

In May 2013 the River Darent became the first river to have a Zoological Society of London (ZSL) Eel pass installed as part of the ZSL Citizen Science eel project. This project monitors the migration of elvers within the Thames and its tributaries. A pass was installed allowing elver passage over what was previously an impassable barrier.

Working with the Darent Valley Trout Fishers, we have delivered practical habitat enhancements to the Home Farm, Eynsford beat. The work involved installation of faggot bundles along a soft marginal area to prevent siltation and erosion; the installation of deflectors; and the creation of a new margin to an overly wide stretch below a bridge. The project involved two corporate days working with the Animal Health and Veterinary Laboratories Agency and Environment Agency teams.

In 2013 enhancements along the River Cray in partnership with the Environment Agency, World Wild Fund for Nature (WWF), London Borough of Bexley and Coca Cola Enterprises (CCE) Sidcup also began.

Here, 80 metres of faggot bundles were installed and planted to create a natural margin along the river wall at Hall Place Recreation Ground, with further work at Sidcup. In total, 176 volunteer days were completed.

This work has been supported by gravel shifting in the main channel to diversify the flow and provide more natural physical variation. The newly created islands and gravel berms (raised areas) were then protected by installing low flow deflectors.

Our Land, a sustainable tourism initiative

Tourism is the most important driver for many protected landscapes, more so than for farming and forestry. For this reason it is critical to ensure tourism is developed in a sensitive way, to conserve and enhance the natural beauty of these landscapes and generate local economic benefit, while integrating sustainable tourism activity into daily business practice.

Since its launch in 2011 covering nine protected landscapes in South East England, 'Our Land' has grown to represent 26 protected landscapes across the UK, in England, Northern Ireland, Scotland and Wales … and it's still growing.

Our Land is a true collaboration between the protected landscapes and the private sector, providing a national platform for marketing and for protected landscapes to contribute, share best practice, collaborate and come together on responsible tourism issues, now and into the future.

Our Land aims to make a collective stand against short haul international markets by reminding people, both businesses and visitors, that there's a wealth of distinctive cultural and natural experiences right here, on our doorstep, and by experiencing them, visitors are helping to conserve them for future generations. This is being delivered in two ways: through locally-led development initiatives that help businesses discover and celebrate the distinctiveness of their visitor experience; and via a national marketing platform that presents visitors with one place for all Our Land protected landscape experiences. And it's working.

Collaboration is key. Too often fragmentation and duplication in the marketing of UK destinations results in some of our finest landscapes being in competition with each other. This lack of 'joined up' thinking weakens our offer against international short breaks. UK tourism businesses as a whole do not yet recognise the full scope of their locally distinctive visitor experience nor yet realise the benefits this special offer can bring – for bookings, the environment, and the economy – in the face of fierce short haul competition.

Our Land represents over 1,000 businesses and has generated in the region of 30,000 bed nights since inception. With website traffic of over 370,000+ site visitors/month across www.our-land.co.uk and www.responsibletravel.com and a combined database size of over 172,000, www.our-land.co.uk delivers in excess of 800 booking enquiries directly to businesses each month.

Our Land is the only online site exclusively dedicated to promoting tourism in protected areas in the UK.

4 Adapting to climate change

The winter of 2013/14 demonstrated how disruptive and costly severe weather events can be, with the Kent public sector dealing with storms, a coastal storm surge, and flooding affecting many parts of the County over just a few months. Once again, Kent's emergency plans were activated and focused on keeping Kent moving on the roads, delivering essential public services, keeping schools open and ensuring vulnerable people were protected (in some cases providing alternative emergency accommodation).

These comprehensive plans are continually being developed, learning from past events and building this into training and plans. The cost to the public sector and businesses is significant; data recorded in 2012-2014 shows that these costs exceeded £6.8 million. With forecasts indicating these events will increase in both severity and frequency, the focus must be on future resilience to minimise impacts and the costs to our public services, who are now delivering services with much smaller budgets.

CLIMATE LOCAL TARGET: We will assess our services for risks and opportunities and build resilience to climate change into our work: Based on the evidence gathered through SWIMS, the Kent public sector plan to invest £11.2 million to address impacts of severe weather events in the long term

Helping Kent services to prepare for severe weather

Since the Severe Weather Impacts Monitoring System (SWIMS) launched in 2012, organisations across Kent and Medway have captured more than two years of evidence to demonstrate how the public services they deliver are being affected by severe weather events. Through this we have created our best evidence base yet to support decision making and longer term preparation for these events.

To date 32 events have been logged on SWIMS (25 storms, four ice/snow events, two heatwaves and one drought event) and £6.8 million costs captured through the tool. The most recent succession of events throughout the winter 2013-14 caused £4.4 million costs alone, with services investing a further £11.2 million to deal with the impacts of these events long-term. Across the winter period, 6 km of public rights of way were affected and over 700 homes and businesses were flooded, with services working for more than 1,200 days to prepare for and deal with the aftermath of these events.

Currently, 98 public and private service providers across Kent and Medway have signed up to SWIMS to capture the effects on local council services, the provision of emergency services (Kent Police, Kent Fire and Rescue, emergency planners) and the impact on large infrastructure and utilities (the rail, road and marine network and effect on water and gas provision).
This evidence base is already being used to inform planning, most recently contributing to Kent's (and the UK's) first sustainability chapter in a review of the health and wellbeing needs of the Kent community (Joint Strategic Needs Assessment). As pioneers of the tool in Kent, we are also supporting Climate UK in the national roll-out of SWIMS to 26 partnerships across the UK, as part of the Climate Ready Initiative and National Adaptation Programme (NAP).

Delivering sustainable health and wellbeing

Over the past year, partners from across health, social care and sustainability have been working together to identify how we can support and influence healthy, sustainable communities. An individual's health and wellbeing is influenced by a wide range of factors and there are clear links between health and the wider environment and economy, such as improving mental and physical wellbeing through access to green space; improving fitness and air quality through sustainable transport; and improving energy efficiency to provide warmer homes.

Partners have identified priorities to work on over the coming year as part of a Sustainability Assessment for the Joint Strategic Needs Assessment (JSNA), including housing, climate resilience, natural environment, workplace wellbeing, air quality and planning. This work has been showcased nationally through the Sustainable Development Unit of NHS England and Public Health England and a toolkit produced to help other public sector partnerships in supporting healthy, sustainable communities. www.sduhealth.org.uk/areas-of-focus/community-resilience.aspx.

Embedding these principles within the JSNA has raised awareness (and senior support) of the critical link between the natural environment and health and wellbeing, It has also highlighted the importance of adapting to the impacts of climate change.

Strategic Health Asset Planning Evaluation tool helps increase climate resilience

The Strategic Health Asset Planning and Evaluation (SHAPE) tool is a web-enabled application which informs and supports the strategic planning of services and physical assets across the whole health and social care system.

Kent County Council's Social Care, Health and Wellbeing Directorate worked with Public Health England's SHAPE programme to examine opportunities for using the application in a local authority social care setting. Effective strategic health and social care planning is essential for supporting, informing and managing future service design and delivery. The SHAPE application complements the range of tools used to support planning and commissioning decisions.

Using SHAPE to inform clinical commissioning:

Kent's strategic commissioners use SHAPE as a county-level interactive mapping resource, allowing current and future planned services to be presented along with other relevant social care and health activities. This has enabled commissioners to select relevant data and match it with demographic trends for better strategic planning and design of health and care services.

Using SHAPE to model future planned housing developments and projected client numbers will inform joint service and asset planning with strategic partners across the local health and social care system. SHAPE is being developed to include voluntary sector services in Kent, catchment areas, local population needs, and local demographic profiling. This will support commissioners and health and care strategists in improving health outcomes and reducing health inequalities amongst local communities. Voluntary organisations are key partners in delivering this goal.

Using SHAPE to improve community resilience and sustainability:

The UK adaptation sub-committee reported in 2014 that up to 14% of emergency service stations and up to 8% of hospitals, care homes and doctor's surgeries are located within areas vulnerable to river and coastal flooding. Flooding causes negative health impacts and is frequently associated with acute impacts on mental health and wellbeing. Understanding the exposure of health, emergency and social care infrastructure to flood risk will help to save money and lives, and protect business continuity.

SHAPE is being used in the development of flood exposure modelling to improve planning, increase preparedness, and emergency response management across health and social care. This will aid the development of more flood-resilient healthcare facilities and potentially reduce the health impacts of flooding.

Using an Integrated Emergency Management approach, the Directorate will use SHAPE to work with key partners across health and other local authorities to scope threats of flooding to premises crucial to the delivery of health and social care services. This will support the wider objective of business continuity planning and integrated care.

The tool will also provide staff with the evidence needed to improve service continuity, identify vulnerable communities, map critical health and care infrastructure, and plan the deployment of health and social care staff during emergencies. The ongoing development of Kent's SHAPE work streams are helping to increase efficiency, service integration, value for money and health outcomes. Such work is closely aligned to the Sustainable Development Unit's Strategy for Health, Public Health and Social Care (2014-20).

For more information on Kent's use of SHAPE please contact Alan FitzGerald.

CLIMATE LOCAL TARGET: We will support local communities in preparing for climate change through the development of 15 community plans for those most at risk or with greatest opportunities: Thirteen communities have developed community plans, including three particularly vulnerable communities at risk of coastal flooding

Coastal Communities 2150

Hamlet of Shellness, Isle of Sheppey

Coastal Communities 2150 (CC2150), part-funded by ERDF through the Interreg IVA Two Seas Programme, aims to address future climate and coastal change through engaging communities at risk (or with significant opportunities) and supporting them to develop local responses. Led by the Environment Agency, Kent County Council is a partner in the project and we are working with three communities, identified through a coastal and climate change risk assessment of the Kent coastline: Isle of Sheppey, Margate & Cliftonville, and Romney Marsh.

The project supports Kent County Council's priorities by enabling local communities to gain knowledge and skills to develop sustainable solutions to the long term impacts from coastal and climate change. Through CC2150, over 2,400 residents have provided 3,000 pieces of feedback on the priorities for their community. These comments have influenced a number a workshops leading to the development of nine visions and 133 actions across the three pilot areas. The project has produced a range of tools and techniques, which have been successfully implemented in Kent including: guidance on undertaking risk and vulnerability assessments, stakeholder management strategies, guidance on community engagement techniques and tools to use, and visions and action plans for each project community.

The action plans were launched with the communities in March 2014 and Kent County Council will be working with stakeholders to take these forward. Local parish councillors and environmental groups will be consulted in order to assess if the visions and action plans from the CC2150 project can be adopted across their respective areas.

In addition, KCC has sponsored a grant scheme to take forward 22 actions developed through the project and engagement work. A sum of £4,500 was available to each project community, and local organisations and community groups were invited to apply. Four bids were successful and announced at the CC2150 Kent Community Launch event and will deliver activity throughout 2014. Over the coming period, the activities and results from the successful awardees will be monitored.

Kent Spatial Risk Assessment for Water

In partnership with the Environment Agency, Kent County Council has led a review of the risks to Kent water systems that are likely to arise from the combined pressures of climate change, population growth and land use change up until the 2050s.

The work was undertaken by URS Infrastructure and Environment Ltd, with funding from the Interreg IVA FUSION project. It used a range of data sets on the physical geography of Kent (including the hydrogeology, soils, river systems and topography) to analyse and map how these pressures are likely to impact on local water systems and what the consequences might be for businesses, communities, agriculture and the environment.

The results show that the highest risks lie mainly within the Medway catchment and that, although the overall consequences are likely to be most severe for agriculture and the environment, there are also locations with high risks for businesses and communities. Further, the report highlights the adaptation measures that can go some way to addressing these consequences.

Future water risks for agriculture and horticulture

One of the high risks identified by the Kent Spatial Risk Assessment for Water concerns the availability of surface water for the agriculture and horticulture sector, particularly within the catchment of the River Medway. This is primarily as a result of the projected decreases in summer rainfall coupled with the impermeable nature of the soils in the upper catchment. The Medway catchment is particularly important for agricultural and horticultural production, but surveys have shown up to 50% of horticultural businesses are already being impacted by limited water availability for irrigation.

In 2012 the Kent Rural Board set up a Water Task Group to address this problem. Chaired by Kent County Council, it includes representatives from the National Farmers Union, East Malling Research, Environment Agency, Country Land and Business Association, Campaign for the Farmed Environment, South East Water, the Kent Leaders Group and the horticultural business sector. Its objectives are to deliver:

- Optimised output per unit of water
- Secure and resilient water supplies
- An enhanced local aquatic environment

The Water Task Group developed a comprehensive work programme and started implementation work in 2013. Examples of current work include:

- A programme of advice and support workshops focused on the specific problems reported by local irrigation businesses
- Research on improved irrigation efficiency
- Collaboration with water companies to develop shared water resources and provide alternatives to the use of treated mains water for irrigation
- Development of a guidance and advisory document on irrigation reservoirs aimed at cutting the cost of the planning work, providing maps of land suitability and securing environmental benefits

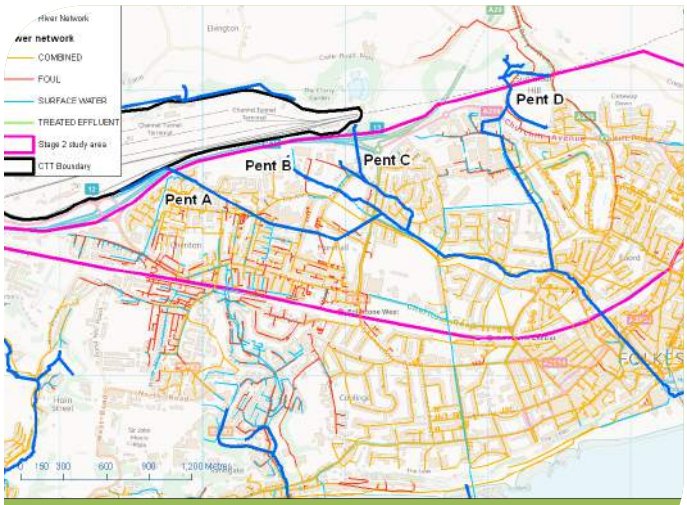
Surface Water Management Plans Folkestone SWMP

Following the adoption of the Local Flood Risk Management Strategy by Kent County Council in August 2013, we have continued to deliver Surface Water Management Plans (SWMPs) across the county. An SWMP is a study of the local flood risks in an area (that is flooding from surface water, groundwater and/or ordinary watercourses). In many areas of Kent this is often the most disruptive form of flooding, though it may not be as destructive as river or coastal flooding.

An SWMP can take many forms; whilst developing the Local Flood Risk Management Strategy we used them to give an overview of the local flood risks for large areas of the county and this information has now been used to identify areas that require more detailed studies. These areas include Margate, Ramsgate, Folkestone and Paddock Wood.

In these further studies we have undertaken integrated computer modelling of the local drainage infrastructure, which can include the sewers, ordinary watercourses, main rivers and sea to provide maps of the integrated flood risk. They help to identify areas where local improvements can be made to reduce flooding. In some of the studies the outputs have also identified a link between water quality and local drainage.

These projects will be finalised over the summer and autumn.



Folkestone Surface Water Management

Master planning guide for Sustainable Drainage

Kent County has been involved as a partner with other authorities across the south east to produce guidance which outlines the process for integrating sustainable drainage systems (SuDS) into the master planning of large and small developments. SuDS represent an opportunity to create great places, whilst also mitigating flood risk, moderating microclimate, benefiting ecology, providing new sources of water, and creating amenity spaces.

Consideration of the movement of water and its interaction with space at the earliest stage of design is crucial to the success of SuDS and allows the developer to maximise these wider benefits. The guidance defines the steps in the master planning process for development. It then demonstrates how SuDS would be considered within this process through different typologies. The process is designed to allow planners and designers to scope and embed opportunities for SuDS as land uses and design ideas evolve.

Property level flood protection in Lamberhurst

Flood Angel® Flood Defender™ Barrier

Tunbridge Wells Borough Council entered into a Collaborative Agreement with the Environment Agency in 2012 and was granted a sum of up to £50,000 to implement a Property Level Flood Protection Scheme in Brewer Street, Lamberhurst, Kent.

Lamberhurst lies in the valley of the River Teise and Brewer stream and has been affected by flooding in the past. A first phase of property flood protection was completed in 2010. With the provision of this further grant funding, Tunbridge Wells Borough Council was able to take the lead and support the installation of flood protection measures in 22 homes in Brewer Street. This second phase of Property Level Flood Protection was completed towards the end of 2013 and with all provided measures fitted and functioning correctly the properties have protection from flooding to a maximum depth of 0.5m above the property threshold.

Measures installed included door barriers and flood proof doors, automatic self closing air bricks, non-return valves on waste pipes, toilet bungs, temporary covers for vents, general brickwork pointing and water proofing. All residents were provided with training in the use, maintenance and deployment of flood protection measures and have signed up to the Environment Agency Flood Warning Scheme.

Recreating flood meadow in the Ashford Green Corridor

An area of flood meadow close to Ashford town centre has been recreated thanks to a partnership project between the Kentish Stour Countryside Partnership, Environment Agency, Ashford Borough Council and Kent County Council.

Situated close to the Stour Centre, beside the Sk8side skate park, the South Park Meadow project has transformed an area of amenity grass of approximately 8,000sq metres next to the East Stour River. The ground level has been lowered and sown with a native wet meadow wildflower seed mix and the river banks have been altered to improve flow conditions and benefit the river habitat. It will take approximately a year for the wildflower meadow to establish. This coming winter a new 190 metre long hedge will be planted along a new earth bank forming the back edge of the site. All of these actions will benefit wildlife, reduce flood risk, add value to the landscape and improve water quality.

The project has recreated a flood meadow similar to those that would have been a quintessential part of Ashford's landscape 100 years ago. Across the spring and summer months the meadow, which will include several scrapes (shallow depressions that seasonally hold water to provide habitat for a range of species such as dragonflies), should be awash with wildflowers and waving grasses - excellent for insects and birds and an important nectar source for bumble bees and other pollinating insects.

South Park Meadow will be a beautiful and peaceful space for local residents and visitors to the town, whilst providing a valuable area for storing floodwater during the winter months.

Barrie Neaves, Environment Agency Growth Manager, said: "We recognise that managing flood risk is not all about constructing expensive new flood defences. Sometimes the best solution for protecting people and property actually benefits wildlife and the wider environment. Flood meadows are valuable areas for flood storage; they are a reminder of a traditional landscape and have a critical role to play in the conservation of our natural heritage."

Diane Comley, Project Officer for the Kentish Stour Countryside Partnership, said: "We have been creating new meadows in the Ashford Green Corridor for some years now, including Watercress Fields, Queen Mother's Park and Little Burton. Creating a new flood meadow at South Park will be a fantastic addition and will provide continuity of habitat for the wildlife that currently lives and may one day return to inhabit the Ashford Green Corridor. Our experience confirms that local communities and visitors benefit enormously from this type of work, and value the 'wild' spaces - for bringing them closer to nature and also for their beauty."

Wildflower meadow]

Forest Management Adaptation (AdaFor) 2013 – 2015

Kent Woodland

The forestry sector today is under increasing pressure to adapt to expanding demand for timber and wood fuel, the impacts of climate change, the conservation requirements for woodland ecosystems, and the need to reduce management costs. To ensure that forests are sustainable into the future, woodland managers need to consider tree species selection, adapting planting regimes and technical innovations.

This two year project is a partnership between organisations in northern France and southern England under the Interreg IVA France (Channel) England Cross-border Cooperation Programme 2007-2015. Such cross-border collaborations integrate a broad knowledge base and expertise to facilitate enhanced forest management and adaptation. AdaFor builds on knowledge and experience developed by the MULTIFOR Interreg project.

The ultimate objective is to help deliver a vibrant, self-sustaining forestry sector that is able to respond well to changing market conditions and which uses sustainable and appropriate techniques to manage Kent's considerable woodland resource. In Kent AdaFor provides an opportunity to:

- Improve our knowledge and understanding of the forestry sector and to help inform how support should be provided in the future
- Increase awareness amongst foresters and woodland owners of new and expanding markets for timber, timber products and wood fuel
- Improve the quantity and quality of forest management to increase wood fuel production and renew/enhance ecosystem services
- Continue supporting decision making around biomass heating and the self-supply of wood fuel

The associated activities will be undertaken jointly through networks on either side of the Channel, with the Kent Downs AONB Unit's role in the Adafor project summarised as follows:

- **Activity VI: Mechanisation and harvesting**
  - **Audit** – undertake audit of forestry machinery, skills, training and development needs to ensure environmentally sensitive forest management and to help prepare the sector for increased demand as market conditions improve
  - **Demonstration** – deliver a series of field-based workshops and demonstration of machinery and techniques that contribute to sustainable production
  - **Training** – link prospective apprentices to existing contractors to increase new entrants and enhance skills within the workforce. Work with local training providers to enhance uptake of forestry-based training
- **Activity VII: Woodland management and renewal**
  - **Data** – trial data integration techniques to identify areas of unmanaged woodland on farm estates. Select trial areas to test approach and achieve 80% of woodlands in management (via referrals to the Forestry Commission)
  - **Estates** – pilot support for large estates with significant areas of woodland with the objective of progressing these estates further along the 'sustainability' journey via application of best practice and enhanced accreditation
  - **Feasibility** – continue to support private and public sector in their assessment of biomass heating and wood fuel self-supply. Deliver technical and economic feasibility support

KENT WARM HOMES

Co-funded by the Intelligent Energy Europe Programme of the European Union

SUSTAINABLE SHEPPEY

ASH DIEBACK AND PERRY WOOD

COASTAL COMMUNITIES 2150

LOW CARBON KENT/FUSION/LOW CARBON PLUS

ADAFOR

This report is available in alternative formats and can be explained in a range of languages.

Please call 0300 333 5539 or Text Relay 18001 0300 333 5539 for details.