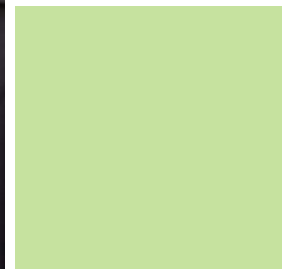




BEDFORD  
BOROUGH COUNCIL

# Sustainable Bedford Borough



## Overview of Projects

February 2015

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## Carbon Management Programme



### Carbon Management Plan

In May 2010, Bedford Borough Council was selected to take part in Phase 8 of the Carbon Trust's prestigious Local Authority Carbon Management Programme. The Council worked in collaboration with the Carbon Trust to develop a Carbon Management Plan.

This outlines how the Council will reduce the carbon emissions from its operations in order to reach its aspirational carbon reduction target of 40% by March 2015.



### Installation of Automatic Meter Reading Devices

Automatic Meter Reading devices (AMRs) have been rolled out across the Council's portfolio of buildings (including schools). Since 2010, 271 electricity and 170 gas devices have been installed. Data is automatically captured from the meters and tagged with a unique meter reference and time stamp.

Details of the Council's energy consumption is then transferred into a software package for interpretation and analysis.



### Lighting upgrade at Borough Hall

As part of the Council's Carbon Management Plan and part of the Borough Halls' refurbishment, new energy efficient lighting control upgrades were installed in the Borough Hall in May 2011.

It is estimated that this will save approximately £9,000 in electricity costs per year.



### Priory Country Park Visitor Centre - Eco-Technology Demonstration Project

The main aim of the project, in addition to reducing the carbon emissions of the Visitor Centre, was to raise awareness and understanding of the eco-technologies installed. The project brought together a range of energy and water saving measures in one building, which can be easily accessed by visitors, who are able to see the technology in action. Interpretation boards are displayed in the Visitor Centre, to explain to the Borough's residents, communities and businesses how the systems that have been installed work and to help them to consider the technology for their own homes and buildings.

The project was made possible through funding from the Bedford and Marston Vale Growth Area Fund, which is administered by the Department of Communities and Local Government and supports the delivery of infrastructure in identified growth areas. The Mayor's Climate Change Fund provided 50% match-funding for the Solar Photovoltaic System, the Low Energy Lighting and the Loft Insulation.

For more information on the technologies that have been installed at the Visitor Centre, how they work and how they can be applied to homes, click on the links below to view fact sheets on each measure, or download the leaflet: [Eco Technology Demonstration Project leaflet](#).

The following measures have been installed at the Priory Country Park Visitor Centre to reduce the centre's energy and water consumption, carbon emissions and utility bills:

**Energy Efficiency Improvements:**

- [Low Energy Lighting](#)
- [Triple Glazed Windows and Doors](#)
- [Loft Insulation](#)
- [Cavity Wall Insulation](#)
- [Natural Daylight System](#) to provide natural daylight to increase the lighting level and reduce electricity consumption from lighting

**Renewable Energy System:**

- [Solar Photovoltaic System](#) (PV) to generate electricity

**Water Conserving Technology:**

- [Rainwater Harvesting System](#) to flush the public toilets
- [The Water Cycle](#)



## Evaporative Cooling

To replace the traditional, power intensive air conditioning system used to cool the data centre in Borough Hall, in May 2012 Bedford Borough Council installed four evaporative cooling units. The units use mechanical ventilation to provide fresh air into the data centre and only use evaporative cooling on hot days to cool the air before it enters the building. The simple technology uses 90% less energy than traditional air conditioning methods.

Monitoring of the system has revealed savings totaling 380,925 kWh and 170tCO<sub>2</sub> over the last two years (1st April 2012-31st March 2014) against 2011/2012.

In December 2012 the evaporative cooling project was recognised by the Public Sector Sustainability Awards, winning 'Best IT/E-Commerce Project'.





## Norse Road Crematorium Heat Recovery

Revised environmental legislation led to the decision by the Board of Bedford Bereavement Care to fit a filtration plant at Norse Road Crematorium in 2008.

In order to filter pollutants from exhaust emissions, a waste heat recovery boiler, which then discharged the waste heat to air through an air blast cooler, was included in the design. Noting the potential for the recovery of waste heat, the Board approved the inclusion of a plate heat exchanger in the system, ready to be used when the crematorium heating system was upgraded.

In 2012 the heat exchanger was connected to the crematorium heating system. This has significantly reduced heating costs across the site as waste heat, once blown out of the building, is circulated back around. Gas usage on site has dropped by 147,000 kWh and 27 tCO<sub>2</sub> have been saved over the last two years (1st April 2012- 31st March 2014) compared against 2011/2012.



## Server Virtualisation

In recent years, an increase in the number of virtual servers has been seen across the Council. By running multiple workloads on one physical host server, the Council's servers have been consolidated, avoiding significant increases in electricity consumption. The Council's IT hardware power consumption has remained constant since December 2012. If the Council had not initiated and implemented a programme of virtualization, electricity consumption would have increased by at least 50%.

## RE:FIT

In 2013 the Council entered into an Energy Performance Contract with MITIE through the [RE:FIT](#) Framework contract. Split into two phases, the scheme, worth a total of £3.310 million, will result in savings of 2,000 tCO<sub>2</sub> per year.

Tranche 1 projects include:

- The conversion of oil boilers to gas in the Council's headquarters. From 1st December 2013-31st August 2014 the conversion resulted in savings of approximately 331,148.88 kWh and 232 tCO<sub>2</sub> (against 2012/13 oil).
- The installation of a biomass boiler in the Council's headquarters. Once commissioned, this will save approximately £60,000 and 176 tCO<sub>2</sub> per annum.
- 6 Solar PV installations, with a combined capacity of 184 kW.
- Energy efficiency improvements including lighting upgrades and insulation.



## Solar Thermal Panels at Borough Hall



A retro-fit solar water heating system was installed on the roof of Borough Hall in 2004.

The system used an existing 2,000 litre storage cylinder and continues to help the Council reduce its carbon emissions.

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## Combined Heat and Power System at Oasis Beach Pool

A combined heat and power system (CHP) was installed at Oasis Beach Pool, generating heat and electricity for the leisure site to use.

This project results in significant reductions in both fuel and operational costs.



## Hydro Power Project

A micro hydro power facility was installed on the River Ouse and was officially opened in June 2012. The facility, at the existing Boat Slide weir in Bedford is estimated to generate approximately 130,000 kWh of electricity per year. The facility consists of two Archimedean Screw Generators, each screw is 3 metres long and 2.4 metres in diameter.

The Generators use the same type of screw that Archimedes originally designed to pump water, except water is allowed to flow down the screw causing it to rotate. Archimedes screws turn relatively slowly so a gearbox is attached to the screw to drive the generator. The whole setup produces a highly efficient source of renewable energy. The renewable energy produced from this facility will be used to power the amenity lighting on the river as well as exporting spare electricity to the national grid.

In addition, the screws are the most environmentally friendly hydro electric generators; being safe for fish and other creatures to swim down. The design also incorporates a special Elver & Eel Pass to assist with their upstream and downstream migration. The construction of the hydro power facility has enabled the Council to restore this previously derelict site and recover the full construction costs, and will save 58 tonnes of CO<sub>2</sub>.



## Collaborative Low Carbon Schools Service

In May 2011 Bedford Borough Council successfully gained a place on the Collaborative Low Carbon Schools Service (CLCSS) programme, delivered by the Carbon Trust. The Council was one of 43 local authorities that participated in the programme, the aim of which was to support carbon reduction and resource efficiency in schools across England.

The Council worked with 10 pilot schools during the 2011 Autumn Term, providing them with a number of resources to engage the whole school in energy saving. The results of the pilot were very encouraging and case studies were created and shared on the Council's webpages. The Council continues to encourage schools in the Borough to reduce their energy consumption and carbon emissions.



## Water

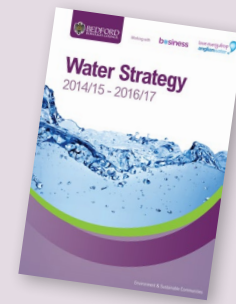


### Anglian Water Promise

Bedford Borough Council became the first local authority to sign the Anglian Water Promise at a ceremony on the 27th of March 2012. By signing the Promise, Bedford Borough Council demonstrated its commitment to reducing water usage by 20% by 2015/16, across all Council buildings. In addition, the Council has also pledged to cut wastewater by 20%, reduce its carbon footprint by 24 tonnes and reduce water and energy costs.

### Water Strategy

Since signing the Water Promise in 2012, Bedford Borough Council has worked in collaboration with Anglian Water to produce a Water Strategy which outlines the steps the Council will take to reduce its water and wastewater usage. A copy of the strategy can be found [here](#). The Council believes it is one of the first Council's in England to have a water efficiency strategy.



A number of key pieces of work have already been completed to help the Council reduce costs and consumption, including:

- **Water Efficiency Audits (WEAs):** Anglian Water completed a number of audits of the Council's sites to determine where improvements could be made. The audits have informed the development of the Council's Water Strategy.
- **Tariff optimisation:** Anglian Water reviewed the Council's water and wastewater tariffs. 19 sites were being charged incorrectly. By optimising the tariffs, approximately £2,500 has been saved.
- **Consolidated billing:** All water bills now come directly to the Council's accounts department rather than to individual sites. This move to 'bulk billing' has reduced the administrative time and cost required to process bills. The bills are sent electronically; reducing the number of paper bills produced and providing the Council with the opportunity to analyse and scrutinise the bills using the Councils Energy Management Software. Improved visibility of billing information has enabled the Council to validate bills, resulting in a number of financial savings. For example, a credit for £1,300 has been received for one site which had been incorrectly charged VAT.
- **Leakage reduction:** Improving the visibility of where water is being used across the Council's estate continues to allow the Council to work with Anglian Water to identify and check for leaks. For example, a leak which was rectified at one of the Council's changing rooms resulted in a saving of 583m<sup>3</sup> water over 6 months.
- **Benchmarking:** The Council is now able to benchmark sites to monitor and target sites of highest usage.





## Subsidised Water Butts Scheme

Bedford Borough Council has subsidised the cost of [Rainsaver Water Butt Kits](#) (190 litres) for residents of the Borough at the special price of £30 (limited to 1 per household).

## Internal Communications



### 'Watt a difference' Campaign

The 'Watt a difference' campaign is an internal energy awareness campaign that has been developed to raise awareness amongst staff regarding energy and carbon reduction.



### Green Office Guide

Bedford Borough Council's first Green Office Guide was launched in 2010 and aims to answer any sustainability related questions staff may have and provide staff with advice on no- cost actions that they can take to help the Council reduce its carbon emissions.

A [business version of the Green Office Guide](#) was also made available on the Council's website to local businesses and residents to help them reduce energy consumption and improve their sustainability. Businesses can use the guide as a template for their own guide or can follow the tips to help them reduce their emissions and costs in their own business.



### Energy Champions

A network of Energy Champions currently exists across all areas of the Council, working to increase staff awareness by providing information and advice to colleagues on energy saving in the workplace.

Energy Champions help carry out Energy Walkrounds which take place to coincide with campaign weeks such as Green Office Week, to establish how successful the awareness raising had been in encouraging staff to save energy in the workplace by switching off equipment when not in use.



### Stationery Purchasing

The Council rationalised its stationery purchases in 2012, from 1600 product lines to 160 core items, which are, wherever possible, 'green' alternatives, resulting in financial and resource savings.

The number of deliveries to the Council of stationery supplies was also reduced from daily, to twice a week resulting in carbon savings for the Borough.

### Climate Change Fund

The Mayor's [Climate Change Fund](#) was launched in January 2010 and provides 50% match-funding to support community group projects which will contribute to the reduction of carbon emissions within the Borough.

Voluntary & community groups, not for profit organisations, the public sector including schools, parish councils and charities can apply for a minimum grant level of £5,000 and a maximum of £20,000 to 50% match-fund measures to reduce energy consumption such as insulation, heating improvements and lighting upgrades. Since the fund was launched in early 2010, nearly £350,000 has been allocated to projects.



## Campaigns



### 10:10

Bedford Borough Council signed up to the 10:10 Campaign, pledging to aim to reduce the Council's carbon emissions by 10% during 2010/11.

A public event was held on 06/10/10 to coincide with the 10:10:10 event campaign. Organisations were on hand to offer free advice to the public to help them to find ways to reduce their carbon footprint. Officially opened by the Mayor, 150 people attended the event and lots of attendees signed up to the 10:10 campaign, pledging to reduce their carbon emissions.



## Climate Local

Bedford Borough Council was one of the first local authorities in the country to sign the new [Climate Local Commitment](#), which was developed by the [Local Government Association \(LGA\)](#). It was designed to replace the [Nottingham Declaration](#) on Climate Change, which the Council signed in 2007, and aims to drive, inspire and support council action to a changing climate.

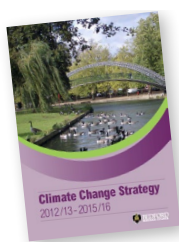
The [Climate Local Commitments and Actions](#) document sets out the commitments and actions that the Council intends to carry out over the next few years to mitigate and adapt to climate change. These actions will address the aims and objectives set out in the Council's [Climate Change Strategy 2012/13 – 2015/16](#). The Climate Local Commitments will be regularly reviewed and progress against actions monitored and reported on annually. Bedford Borough Council's progress towards achieving the chosen Climate Local commitments and actions: [Climate Local Bedford - Progress update - May 2014](#).

## External Events and Communications



### Awareness Raising Events

The Sustainability Team regularly attend events and hold information stands to provide information to the public on saving energy and water, reducing energy bills, renewable energy and keeping warm to coincide with national campaigns such as Big Energy Saving Week, Climate Week, World Environment Day, World Water Day and Cold Homes Week.



### Climate Change Strategy

The Council's first [Climate Change Strategy](#) was first produced in 2010. It was updated in 2012 covering the period 2012/13 to 2015/16. It contains an updated on the progress towards the previous strategy's actions and sets out the aims and objectives of the Council in order to mitigate and adapt to climate change.



### Biomass Workshop

Bedford Borough and Central Bedfordshire Council's jointly arranged a Biomass Workshop which was held at the Forest Centre at Marston Vale on the 5th of October 2011.

Local stakeholders were invited to attend and contribute to identifying the barriers to development, opportunities and actions to take to drive forward the biomass agenda in Bedfordshire.





## Green Borough Fair

Held at St. Mark's Community Centre on Sunday 6th of February 2011 and Sunday the 26th of February 2012, the Green Borough Fair was open to residents of the Borough and comprised a mixture of stalls, presentations and activities to encourage people to find activities, set up and join groups, leading to a more sustainable, greener way of living.

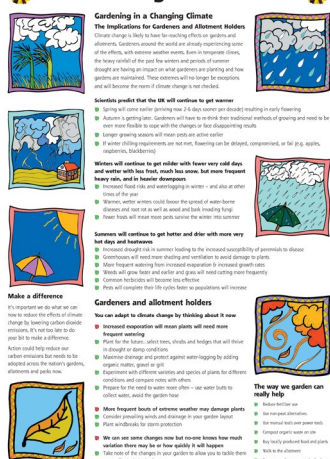


## Energy Auditing Train the Trainer Course

In partnership with Central Bedfordshire Council and Luton Borough Council, the Council was successful in securing £36,000 of funding through the Climate Change Skills Fund, administered by Sustainability East. An energy auditing training programme was commissioned and delivered during March 2012 by EiE at Oxford Brookes University and CREATE.

The training programme was promoted to schools, council building managers, community groups, Parish Councils and businesses and was designed to help these groups understand how to carry out energy audits and manage the energy use of their building to reduce bills. 6 free full-day training sessions were delivered across Bedfordshire during March to 126 attendees. Follow-up support and material was provided to the participants, to help them make changes in their buildings.

### Climate Change for Gardeners



## Climate Change for Gardeners

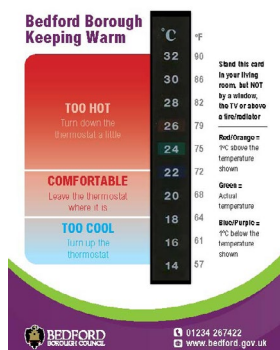
A poster titled 'Climate Change for Gardeners' was produced in 2010 explaining the possible impacts of climate change and what gardeners can do to adapt such as planting drought-resistant plants and crops. The poster is displayed on all allotment display boards across the Borough.



## Energy Monitors

[Energy monitors](#) are available to be borrowed from the Borough's libraries, at no charge for a period of three weeks, to enable local residents to monitor their personal energy use and make changes to reduce their consumption.

## Fuel Poverty



### Warm Homes Healthy People Fund

The aim of the Department of Health's fund was to support activities which would address the public health consequences of cold housing for the most vulnerable in our communities and support the Government's Cold Weather Plan, ultimately to reduce excess winter deaths. The Council, in partnership with local community and voluntary organisations, successfully applied to the Department of Health's Warm Homes, Healthy People Fund in 2011/12 and 2012/13.

Support that was made available as a result of the funding included:

- 35 boiler replacements through a loan scheme, for residents over 60 years old, with inefficient or broken boilers.
- 'Warm packs' were put together and distributed to vulnerable residents in the Borough, consisting of a fleece blanket or 'Snuggie', 'Thinsulate' hat and gloves set, packet soup, hot water bottle and cover and documentation promoting local services and advice on keeping warm.
- Funding for community groups to put together and distribute their own 'warm packs'.
- Production of a thermometer card to help residents to be aware of heating their home adequately and stay warm and healthy.
- Home energy audits for residents vulnerable to living in cold homes.
- The installation of small energy efficiency measures.
- Provision of advice and information on how to keep warm and how to access insulation offers and financial assistance to help with energy bills.
- The opening of the Night Café for rough sleepers on additional nights.



### Safe, Healthy and Well Leaflet

The Sustainability Team and Public Health department worked together on the [Safe, Health and Well leaflet](#), initially launched in December 2012, it was updated in January 2015.

The leaflet offers advice on how to reduce energy bills and keep warm during the winter; staying safe, healthy and well. The leaflet directs readers to a range of services and help available; including schemes offering insulation, heating and safety improvements, pension and benefits advice, plus details about keeping healthy during the cold winter months.

The leaflet is aimed at frontline staff and home visitors to ensure they are aware of all the services that can be provided to residents who may be vulnerable as a result of living in cold homes. The leaflet has been made available through the Council's Customer Service Centre, libraries and GP surgeries.

## Green Transport



### Plugged in Places

The East of England's bid to Plugged in Places, which includes Bedford Borough Council, was successful at the end of 2010 and a network of electric car charging points was developed across the region. The Council installed 7 electric charging points to be publicly available to encourage and assist residents of the Borough to use electric vehicles.

### Borough Bikes

### Council Bike Schemes

Bedford Borough Council has 4 'pool' bikes which can be borrowed under the 'Borough Bikes' scheme for staff business use during the day, enabling staff to cycle to meetings and site visits. Each Borough Bike comes with a helmet and a pannier containing equipment such as a high visibility kit, a first aid kit and a tool kit.

The 'Borough Cycle' scheme was launched in 2010, giving staff the opportunity to borrow a bicycle for a period of three weeks. Under the scheme, bikes can be borrowed for cycling to business meetings, as part of a full or part commute or for leisure purposes.



### Cycle to Work Scheme

Bedford Borough Council signed up to the Cycle to Work Scheme, enabling employees to claim a voucher to buy a new bike and equipment to cycle to work.

**Switch  
off engine  
when  
stationary  
DO NOT  
IDLE**

Idling wastes  
fuel and causes  
unnecessary air  
& noise pollution



### Fleet Telematics

The Council has installed a telematics system across the Environment and Sustainable Communities fleet. The Quartix's vehicle tracking system, has helped to dramatically reduce the fuel consumption by vehicles and improve productivity across their fleet including refuse trucks, road sweepers and parks vehicles. The reporting and live tracking also helps the Council make savings across the board and cut costly and environmentally damaging practices such as idling. This particular work stream is all about supporting employees through training and awareness, getting them to do their bit to help Bedford Borough reduce its fuel usage and reduce emissions.





## Recycling and Waste Services Route Optimisation

As part of the Carbon Management Plan and the Modernisation programme, Recycling and Waste Services implemented a Route Optimisation project for the Refuse Collections Vehicles (RCV) to optimise the route that waste collections take during the week, resulting in efficiency savings.

An in-cab software system also improves the efficiency of the rounds on a daily basis as RCVs can be re-routed if required, to ensure all waste is collected on a given-day.



## Electric Recycling Responders' Vehicles

Two electric vans were purchased, which was made possible from funding secured from the Weekly Collection Support Scheme from the DCLG. The vehicles are used on a daily basis by the Recycling team responding to complaints and issues residents have with bin collections and recycling provision and also to drive up recycling rates.



## Fleet Renewal and Electric Bin Lifts

The Refuse Collection Vehicle (RCV) fleet has been renewed on a rolling basis and have been replaced by more fuel efficient vehicles, meeting current emissions standards. The vehicles also have electric bin lifts which do not need to use the vehicles fuel to raise and lower the lifts to empty the bin.

## Recycling



## Town Centre Recycling Bins

New recycling bins were installed in Bedford town centre in 2010, collecting an average of 85 kilograms of plastic bottles and drink cans per bin in less than two months. Along with awareness raising by members of the Recycling Team encouraging people to 'recycle on the go' – the bins have been a great success.



## Upgrading of Council Office Recycling Points

All existing recycling points in Borough Hall were upgraded in 2010 and replaced with orange recycling bins to coincide with the Borough's recycling scheme provided to residents.



## Battery Recycling Scheme

Bedford Borough Council teamed up with 'BatteryBack', encouraging staff to recycle their used batteries. This popular staff battery recycling scheme was then extended to the public at the Borough Hall and the Customer Service Centre at Horne Lane and then the facility to recycle batteries with normal waste and recycling was introduced.

## Notes



## Finding out more

If you would like further copies or information about us and our services, please telephone or write to us at our address below.

Për Informacion

للمعلومات

Za Informacije

برای اطلاع

Per Informazione

Informacja

তথ্যের জন্য

ਜਾਣਕਾਰੀ ਲਈ

معلومات کے لئی



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