

Overview

Buckinghamshire County Council (BCC) has a target to reduce carbon emissions by 10 per cent by 2017* to deliver improvements to its key public buildings. The project demonstrates the Council's commitment to energy efficiency and achieving value for money for the public sector.

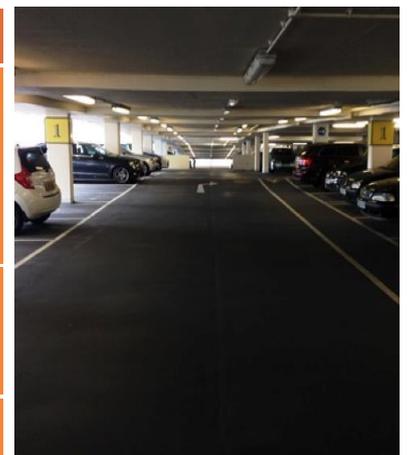
BCC has used the National Re:fit Programme to deliver an ambitious programme for energy efficiency across its estates. This flagship project launches the delivery of the Buckinghamshire Energy Strategy. While the Council has already made strong progress towards its carbon targets, Re:fit has allowed it to achieve economies of scale and bring improved efficiency to its smallest buildings under a guaranteed savings programme.

The Council, supported by Local Partnerships, ran a mini-competition under the Re:fit programme and Cofely was identified as preferred bidder in February 2015. Cofely completed Investment Grade Proposals for the first phase of 21 selected buildings at the end of summer 2015 and installation is planned for spring 2016.

Local Partnerships' team assisted throughout the process, providing a review of technical and commercial documentation to help gain approval to install the selected measures.

One of the buildings identified for improvements in spring 2016 is the Friars Square Car Park, a purpose-built 400-space multi-storey car park and bus station, offering direct access to the shopping centre in Aylesbury.

Project:	Friars Square Car Park	
Savings:	£25,800 energy spend reduction per annum (189%) Energy savings of 149.1kWh (113%)	Around 94.5 tonnes of CO ₂ per annum saved
Value:	£272,000 investment of retrofit works	Simple payback of 10.5 years
Timescale:	Installation commencing in spring 2016	



The Friars Square Car Park

"Local Partnerships' professional support has helped Buckinghamshire County Council through the project's internal approval stages to deliver a tailored approach. It has provided technical expertise to review the differing approaches offered for energy reduction and to select the most appropriate service provider for the Council."

Rachel Toresen-Owuor, Energy Manager

*2011-12 baseline in the BCC Carbon Management Plan

Summary of Energy Conservation Measures (ECMs)

The Council's Friars Square Car Park project encompasses a number of energy-efficiency measures. These are listed below.

Building Energy Management Systems (BEMS) and remote optimisation

Replacement of ineffective BEMS, as well as optimising existing systems and remotely managing controls. This will provide a full and clear understanding of the building's operation.

Building Management System (BMS) optimisation

Issues were identified with the setup of the existing systems and strategy scripts. BMS optimisation will ensure the building is set up to operate at optimum energy efficiency and that these optimum conditions persist throughout the payback period.

Solar PV and PV monitoring

The roof-mounted solar PV solution involves a 125kWp-sized system, which will provide 110,300kWh annual output. This solution is using 50 per cent of the site's roof space.

Time clocks

Installing time clocks in electrical "point-of-use" water heaters is an effective way to reduce energy and a number of these units will be installed across the site. This will save energy by reducing electricity used to overcome standing losses when the buildings are unoccupied.

Lighting upgrade

Installation of high-efficiency LED lighting, specified on a like-for-like replacement basis, will ensure that savings can be made as cost effective as possible by maximising the lifetime of the existing assets.



Energy efficiency and financial savings through Re:fit

Re:fit is a procurement framework and support service available to all public sector organisations in the UK. Since 2009 it has been helping organisations to deliver "spend-to-save" environmental retrofit projects that both improve their buildings and, importantly, make substantial guaranteed financial savings.

For further information

For more information about the National Re:fit Programme, contact robert.mckinnon@local.gov.uk or phone 07920 702 297.