



Leisure Portfolio Energy Assessment for Durham County Council

BSSEC were commissioned by Durham County Council to undertake a comprehensive energy review to its leisure portfolio consisting of 18 leisure centres, 1 golf club, 2 school swimming pools and an indoor bowling club.

Client Requirements

Durham County Council is the local authority of County Durham (excluding Darlington, Hartlepool and Stockton-on-Tees) in North East England. It serves a population of over 500,000, which makes it one of the most-populous local authorities in England.

The council wanted to explore if a 40% carbon and energy saving could be made across its sites at the same time as reviewing the condition and energy performance ratings of all M&E systems. The scope of the review was to include staff practices, management systems, technology energy savings, building fabric upgrades and renewable energy including low and zero carbon technologies and also consider compliant funding options to the Salix loans finance scheme.

Methodology

BSSEC developed a multi stage site evaluation process to deliver:

- A pre-audit questionnaire to develop site specific information, asset register and energy use information related to each site
- A Desk top study to establish energy profiles across the year, month and day and how these compared with sector benchmarks. The review also considered the sites DEC (Display Energy Certificate assessment and grading)

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CASE STUDY

- An on-site audit collaborating with site management and Facilities Management to review operational, technical and maintenance operations.
- An energy management assessment to grade sites against their current practices and recognised best practice.
- An energy savings opportunities assessment to provide a schedule of spend to save measures suitable for the site and develop an investment plan with savings mapped out against whole life costs.
- An assessment of M&E condition and energy ratings.

Outcomes

A detailed energy audit report was prepared for each site providing detailing energy profiles, energy benchmarking, an energy management assessment and detailed invest to save recommendations including supporting calculations including the following areas:

- Behaviour change opportunities
- Building fabric upgrades
- Building management and control
- Controls upgrades
- Motor efficiencies:
- Higher efficiencies to plant and equipment
- Heat recovery solutions
- Improved maintenance practices
- Zero and low carbon technologies
- Natural and artificial lighting efficiencies
- Power network optimisation.

Gaining a full understanding of the client Lei, sure portfolio, BSSEC were able to identify 180 energy saving measures across the 22 sites of which 85 were Salix finance compliant. Potential savings identified were 47% Carbon reduction, £920k.pa energy saving to a 6.5-year payback. Other benefits include reduced maintenance spend, income from Renewable Heat Incentives and feed in tariffs.

"We have an active programme to reduce carbon emissions from its buildings and vehicle fleet. During 2015/16 our CO2 Equivalent (CO2e) emissions totalled 80,460 tonnes. This is a reduction of over 5% (4,757 tonnes) compared to 2014/15."

Durham County Council – Tackling our Carbon Footprint

