



Barker

eoportal 

STEP TOWARDS A GREENER

FUTURE

We transform your energy management and deliver sustainable outcomes so you can spend more time crafting successful futures.

The benefits of energy transformation:

- ☑ Substantially reduce your long term energy costs
- ☑ Generate your own power
- ☑ Starts your journey to net zero carbon emissions
- ☑ Engage learners in sustainability
- ☑ Raise the profile of your organisation
- ☑ Leaves a legacy for the community you serve



Let us be the leaders who secure the very health of the planet for our children, grandchildren and generations to come.

**BORIS JOHNSON, PRIME MINISTER,
SEPTEMBER 2020**

Case Study

Brooke Weston & Ormiston Academies Trusts, the numbers:

Pre-Transformation

- ☑ 13 academies
- ☑ Annual energy bill over £2.7 million a year

Implementation

- ☑ 15,000 lamps replaced with LED
- ☑ 50kw photovoltaic arrays (PV panels) on the roofs of each of the academies
- ☑ Majority of work conducted during holidays and out-of-hours

The Results

- ☑ PV panels generate over 700,000 kwh of electricity per annum
- ☑ Saving of £2 million after financing costsholidays and out-of-hours

Barker, your energy transformation partner

Barker is an integrated property consultancy and trusted advisor to schools, trusts, colleges and universities across the country. We help develop and implement energy management strategies that lower costs, reduce impact on the environment and create positive stakeholder engagement. Our many years of experience of energy transformation in

the education sector have helped to develop and refine a process that delivers carbon and budget savings. The Barker Energy 360 process supports and guides you on your sustainability journey. Barker manages the entire process, from start to finish — letting you focus on developing your organisation and building futures.

Energy transformation is vital in many ways

We all work in education to help shape a better future. Your energy management strategy can contribute to a greener planet for future generations. You may think that implementing an energy management strategy will be time consuming and expensive. Neither is true. Barker Energy 360 removes the hassle, identifies funding streams and will help you save money and achieve net zero carbon emissions over the long term.



Financial savings

Your energy bills are high increasing year on year, and probably considered to be a stubborn fixed overhead. However, energy costs are variable and can easily be brought down through some simple conscious changes. Small savings can be made by changing energy suppliers or by getting a better tariff from your existing suppliers. But substantial reductions are possible by re-thinking your complete energy strategy. Funding is available to support your energy management transformation and Barker can help to secure this. The savings you make from energy bills can then be invested back into the core business of education. It is even possible to turn energy into a revenue stream rather than a cost.



Learning opportunities

Incorporating your energy strategy into the curriculum, gives your learners the opportunity to experience real, positive and tangible energy conservation and carbon reduction in a real-life situation. This learning will be amplified when shared in the home environment. Energy strategy can even be widened to include the carbon cost of lifestyle choice, such as being driven or walking to the place of work or learning. We can even help you embed energy transformation into part of the curriculum.



Carbon reductions

The UK Climate Change Act 2008 places substantial pressure on the Government to radically reduce greenhouse gas emissions, reduce carbon production and thus protect the environment. It is estimated that a typical primary school releases 40 to 70 tonnes of carbon into the atmosphere each year, and a typical secondary school will release 200 to 300 tonnes.

Whilst there are no legislative targets currently for education providers, this is likely to change as pressure on the Government increases. However, there is a requirement for academy trusts to report on greenhouse gas emissions.



Corporate social responsibility reputation

In a social climate where delivering a net zero carbon environment is a major concern; students, parents and staff will increasingly look to the role the governors and senior leadership are playing in directing energy strategy. Simply complying with regulations is not enough - stakeholders want educators to lead the way. Barker will help deliver tangible and measurable energy and cost reductions that leadership can use to communicate to stakeholders.

Primary schools
produce 40 to 70
tonnes of carbon



Secondary schools
produce 200 to 300
tonnes of carbon

This amounts to over 4.6 million tonnes per annum by schools alone.

The Barker Energy 360 process

Barker Energy 360 is our process to help you craft a strategy for energy transformation, implement change & enjoy the benefits as a result of that change:



The Barker Energy 360 process

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Barker and EO Consulting provided us with a comprehensive, innovative and deliverable programme that will transform the way we use energy for the next twenty years. With projected savings of £9 million and 55,000 tonnes of carbon dioxide we cannot wait to get started.

KEITH WILSON, HEAD OF ESTATES & FACILITIES,
GREENSHAW LEARNING TRUST



Strategy

We recognise that resources are often tight and investments of time and money need to be justified. So, at the outset, Barker undertakes a desktop assessment of the potential benefits an energy management transformation process will generate and will produce a strategy to deliver the policy. Using existing knowledge of the built environment, experience of previous installations and standard parameters for energy prices, we will model the potential for energy saving schemes across the whole organisation. The strategy will include three main indicators:

- ☑ Cost of the project
- ☑ Total net savings
- ☑ Carbon dioxide saved



Policy

You may already have defined your energy policy and targets, but if not, Barker can help you create a compelling vision by reviewing where you are and advising on what can be achieved. This will help engage stakeholders and drive meaningful, urgent action. Whether your aim is reducing your carbon footprint, saving money, or both, Barker will help shape your goals and advise on the most effective strategy to meet them.



Energy survey

Once you are satisfied with the strategy, Barker will undertake a full energy audit of your entire estate across the following key areas;

- ☑ Collect energy usage & utilities data for each site
- ☑ Undertake detailed energy audits of each site
 - Conduct an assessment of solar photo-voltaic (PV) energy generation opportunities
- ☑ A full structural assessment of roofs where PV panels are to be located
- ☑ Conduct lighting surveys to identify where LED lighting can be installed
- ☑ Identify other key opportunities for energy improvements
- ☑ Assessment of planning and other statutory consents
- ☑ Asbestos survey
- ☑ Other relevant surveys



Energy transformation plan

Following the survey, Barker will produce a detailed energy transformation plan including a schedule of all of the energy efficiency projects which could be completed, with pre tender estimates [based on current market prices] with associated timing plans. The proposal will also consider the funding options available to you.



The Barker Energy 360 process



Analysis

Data can be daunting but using it in the right way can help organisations deliver their mission to improve education outcomes. So collecting, analysing and presenting data plays a key role in measuring the success of energy transformation.

Barker has a close collaboration with EO Portal – the industry leader in monitoring energy usage. A standard element of the EO Portal is the Energy Dashboard, which gives senior leaders actionable insights into energy usage across the estate.

Using real time data presented in a simple intuitive format, the EO Energy Portal monitors energy usage and costs across all your locations. EO Portal can bring significant value in addition to energy management. The system helps you collate, report and analyse your data collected from condition surveys, audits and the government's published data on finances and performance and presents it in easy to understand graphs and tables.

Leaders and executive boards can use this information to quickly understand the issues surrounding their organisations, benchmark the data against others and make the best strategic decisions to drive positive change. EO Portal is the quickest most effective best value way to manage your estate.



Funding

The investment required to undertake the energy transformation process could be prohibitive for many education providers. There are a range of funding options available to however at times the funding is limited and has to be bid for.

To overcome this barrier for LED lighting and photovoltaic panels installation, Barker appraise the available funding opportunities and recommend the optimum approach. A popular approach is to fund the energy transformation through an operating lease. A lease will spread the cost of the investment and the lease liability will be easily covered by the resulting energy cost savings.

BUILDING FUTURES TOGETHER



On-going support

Barker will be your strategic and trusted partner throughout your energy transformation process, making the whole experience easy and hassle-free. Once we have implemented the changes, we will continue to work with you to identify other ways to optimise the operation of your estate which could including;

- ☑ Streamline energy carbon reporting in partnership with the Confederation of School Trusts
- ☑ Internet of things sensors using the Microsoft IoT platform
- ☑ Solar thermal hot water generation
- ☑ Cloud-based IT systems
- ☑ Smart switching
- ☑ Voltage optimisation
- ☑ Battery storage
- ☑ Electric vehicle charging points

Whilst substantial benefits can be enjoyed from undertaking the Barker Energy 360 process, further incremental benefits are possible, and we will work with our partner schools, trusts, colleges and universities to deliver a process of on-going improvements.



Implementation

Once the scope of work is agreed and funding is approved, we will work closely with you to develop a procurement program and installation plan which causes minimal disruption to your operations.

Barker has a team of professional project managers who will oversee the delivery, working with a number of trusted and reputable suppliers. We also ensure that all installed equipment has a comprehensive warranty which matches or exceeds the duration of the funding.

This means that on the rare occasion a technical problem occurs, repairs or replacement will take place at no extra cost to the organisation.

During the implementation phase, Barker offers the following support:

- ☑ Named project manager
- ☑ Progress reporting at school, trust or campus level as required
- ☑ Technical quality monitoring of installations
- ☑ Project risk management
- ☑ Handover management
- ☑ CDM compliance
- ☑ Online document management platform
- ☑ Helpdesk to deal with warranty claims

Barker Services

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The solution offered by Barker was an innovative way to extend the life of the building. The refurbishment has made a major difference to the teaching environment which is benefiting students and staff. We are delighted with the results.”

MILESTONE ACADEMY, LEIGH ACADEMIES TRUST

Barker has over 30 years of experience working with education providers in delivering a comprehensive range of property consultancy services. Our team consists of Chartered Architects and Surveyors, qualified Project Managers and experienced Educational and Environmental Consultants. We are a passionate, enthusiastic and committed team and we love what we do! Making us your perfect partner for energy transformation.



An indicative list of the services we can provide are shown below:

Projects

- ☑ New build
- ☑ Extensions
- ☑ Remodelling
- ☑ Refurbishments
- ☑ Full project management
- ☑ Construction procurement

Surveys

- ☑ Condition surveys
- ☑ Capacity and curriculum planned
- ☑ Measured surveys
- ☑ Fire risk assessments
- ☑ Health and safety assessments
- ☑ Planned maintenance programmes

Estates & Facilities Management

- ☑ Estate planning/asset management
- ☑ Asset valuation
- ☑ Resource generation and management
- ☑ Statutory compliance
- ☑ Fire risk assessments
- ☑ Access audits, health & safety audits
- ☑ Planned maintenance programmes
- ☑ Defects analysis

Funding

- ☑ Capital funding applications
- ☑ Expansion
- ☑ Energy efficiency funding
- ☑ Emergency funding
- ☑ Sports funding

CASE STUDY

Reducing energy costs across 13 academies



Data gathered from the first 12 months has shown that the project delivers the initial vision and can leave a legacy of over £2m of free electricity.

MATT ISHERWOOD AND JAMES MILLER,
BROOKE WESTON AND ORMISTON ACADEMIES

With Brooke Weston and Ormiston Academies Trusts spending over £2.7m a year on energy and needing to spend over £1m on lighting replacement over the next five years, an energy efficiency programme was developed and implemented by Barker and EO Consulting.

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Detailed assessments indicated that replacing lighting with LED in 13 academies across both Trusts would reduce the electricity bill by 30% and installing 50kW photovoltaic arrays (PV Panels) on the roofs of each of the academies would see the Trusts use less electricity and generate their own.

The programme saw over 15,000 lamps replaced, with a substantial amount of the works undertaken during the holiday periods and out of hours working. The PV panels, which will have the capacity to generate over 700,000 kwh of electricity per annum for the next 25 years, will save the Trusts over £2m after the loan has been repaid.

Data gathered from the first 12 months has shown that the project delivers the initial vision and can leave a legacy of over £2m of free electricity for the life of the products installed across 13 academies.





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