

Case Study

Hackney Community College

- **Customer:** Hackney Community College
- **Technology:** LED lighting, boiler optimisation and Valve Wrap
- **Savings:** 320 tonnes of CO₂ a year, an ROI of 2.5 years



PROJECT OVERVIEW

Hackney Community College, which supports the success of over 9,000 students each year from its award-winning Shoreditch campus in the heart of east London, has converted 4,900 lamps to LED, as well as implementing boiler optimisation controls and specialist insulation – supplied and installed by Energys Group. The project forms part of a major energy efficiency upgrade, and will pay for itself in just over 2.5 years. The campus includes industry-standard specialist facilities and workshops as well as high-spec classrooms, for local people to get the skills they need for work and life.



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THE CHALLENGE

The need to minimise energy expenditure and reduce overall carbon footprint is leading an increasing number of further and higher education colleges to invest in retrofit technologies, which offer fast paybacks with reduced disruption. For Hackney Community College, which has a robust environmental strategy and a commitment to maximum cost-efficiency, the ability to tap into a Salix funding scheme proved to be a vital enabler in achieving its ambitious upgrade visions.

The project – which ultimately involved a collaboration with leading retrofit solutions provider Energys Group – is one of many that the College is planning to boost its overall energy efficiency and environmentally-friendly credentials.



EXTENSIVE LED UPGRADE

College facilities manager John Hunt earmarked a major lighting upgrade to be undertaken first, and an LED solution was naturally considered due to its cost saving potential. Energys' Business Development Manager Raj Gunasekaran was able to provide John with some compelling statistics: "Raj showed us a predicted annual energy saving of £70,000, which was a pretty persuasive argument" says John.

Before too long, John and College Deputy Chief Executive May Kunle 'Dare were confident that an Energys-based deployment would be able to deliver quality and consistency of output, as well as the project's other key priorities – defined by John as "quick payback, long-term financial savings and a reduced carbon footprint."

"I would recommend Energys to other colleges considering energy efficiency upgrades that pay back quickly."

John Hunt, Facilities Manager, Hackney Community College

FINANCING FACTOR

The other crucial element that Energys was able to bring to the table was a comprehensive knowledge of the Salix funding scheme. With Energys' guidance, the college was able to apply successfully for assistance under the Salix College Energy Fund. This eventually took place through two rounds of application: the first for the lighting itself; the second for additional energy-efficiency projects, including boiler optimisation and valve wrap that were also carried out by Energys.

The funding in place, the College pressed ahead with a specification based around retrofits of existing lighting – a move ensuring the paybacks will be as quick as possible. Underlining the extent to which the company is able to supply lighting products to suit all manner of spaces within the school and college environment, Energys provided no fewer than nine different product types across the 18-block, 9-acre estate: a blend of LED tubes, LED downlights and wall lights.

Of particular note was the conversion of 335 fluorescent tubes to LED in the sports hall, resulting in a dramatic improvement in overall quality and a pleasant daylight colour. The company also furnished a welcome increase in light output in the sole (staircase) area where the existing fittings were replaced due to their poor condition, in favour of wall-mounted LED fittings.

"The Salix funding application process can be complicated, but Energys took the hassle out of it for us, providing robust energy saving calculations and supporting us all the way through the process."

John Hunt, Facilities Manager, Hackney Community College

"We also made a point of helping the College to achieve the optimum colour temperature and glare – the latter being particularly important in the sports hall and ICT rooms. As has been well-documented at this stage, these factors can be a decisive influence on pupil concentration and the overall comfort of pupils and teachers," says Raj.

In total, 4,900 lamps were converted to LED. Despite the scale and scope of the project, the ROI is predicted to be just 2.8 years.



BOILER OPTIMISATION AND VALVE WRAP

With the lighting upgrade underway, Energys also participated in the College's successful second funding application to Salix. Having identified a possible annual saving of £18,000 per year and a ROI of 2.5 years, Energys was enlisted to install its boiler optimisers – which improve the efficiency of a boiler without affecting the temperature of the building – on 35 boilers across 18 plant rooms. Also part of this phase were Energys' Valve Wrap insulation covers, which have been attached to equipment in 18 plant rooms so that no heat is wasted. Once again, Energys was able to cite a substantial saving, equating to £10,000 per year, with a payback period of 2.5 years.

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RESULTS AND OUTCOMES

Work was carried out without disruption to services and within a short timeframe (May to September) – but the benefits to the College are set to be very long-term, says Raj: “The forecast is that 320 tonnes of carbon a year will be saved as a result of these upgrades, and there is a good chance that the Display Energy Certificate ratings for each building involved may be reduced from E to B. Beyond that, the College now has a lighting and boiler optimisation infrastructure that will allow it to achieve massive energy expenditure reductions over the long-run, as well as significantly enhance the experience of teachers and pupils on a day-to-day basis.”

“We are really pleased with the results and are looking forward to reaping the long-term cost benefits,” concludes John Hunt. “I would recommend Energys to other colleges considering energy efficiency upgrades that pay back quickly. The Salix funding application process can be complicated, but Energys took the hassle out of it for us, providing robust energy saving calculations and supporting us all the way through the process.”



“Despite the scale and scope of the project, it will pay for itself in just over 2.5 years”

John Hunt, Facilities Manager, Hackney Community College

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