

LED lighting upgrade offers Trust big savings and carbon reduction

The Trust used just over £740,000 of Salix 100% interest-free funding to implement a site-wide LED upgrade. This investment in high efficiency LED lighting is estimated to achieve annual financial savings of more than £160,000 per year.

Maidstone and Tunbridge Wells NHS Trust

Energy & Finance

What was the issue being addressed?

Maidstone and Tunbridge Wells NHS Trust has in place an ambitious carbon reduction target of reducing their scope 1 and 2 emissions by 28% by 2020/21 against a 2013/14 baseline. This target forms part of the Trust's Sustainable Development Management Plan and is being met by a combination of energy efficiency projects. One opportunity identified at Maidstone hospital was to upgrade inefficient compact fluorescent lighting with high efficiency LED lighting.

What action was taken to overcome the issue?

A lighting survey highlighted the potential for LED alternatives to reduce energy consumption and carbon emissions. The Trust used just over £740,000 of Salix interest-free funding to implement an LED upgrade programme replacing around 50% of the lighting at Maidstone hospital. The installation was split into three phases and carried out overnight to minimise disruption to services.



New lighting in wards at Maidstone hospital

Replacements were undertaken in small batches to ensure that a suitable level of light was provided at all times.

What was the impact?

The LED upgrade programme has reduced electrical consumption, carbon emissions and improved patient experience through enhanced lighting levels with increased uniformity.

The lighting upgrade is expected to reduce annual energy consumption by 1.27 million KWh and is estimated to save the Trust over £160,000 per year.

The financial savings will pay back the original investment in under five years and the Trust will benefit from a decrease in maintenance costs.

The project is predicted to save 520 tCO₂e* per year and will contribute to the Trust's carbon reduction strategy. The Trust are now applying for further Salix funds to complete the remaining 50% of the hospital lighting as well as developing further energy efficiency projects, including heat recovery, boiler optimisation and upgrading their building management system.

*Calculated using emissions factors published by government for carbon footprinting.

Lessons learned / success factors?

- The Salix application process was straightforward, methodical with a rapid turnaround.
- Ensure that you have a detailed plan to minimise disruption to hospital staff and services, and that this is clearly communicated and that stakeholders are involved in the planning process
- Start in easy access communal areas (waiting rooms, corridors) to cement site specific methods of working, to gain stakeholder trust in the implementation and to introduce change to stakeholders slowly before moving into offices, clinical and sensitive areas.
- Ensure that there are alternative / backup areas for working in to allow the project to respond to site operational fluctuations and including contingency for projected timescales to mitigate any delays.
- A phased approach can help to minimise disruption and ensure greater control is maintained. This will allow a balance between the day-to-day running with the need to upgrade lighting and save money on energy.

“The LED lighting upgrade has allowed us to reduce operational costs and our carbon footprint whilst enhancing the patient experience. We have improved the lighting levels whilst reducing the maintenance burden and have achieved this with no capital expenditure through interest free funding from Salix. It's a win win.”

Jeanette Batten, Director Estates and Facilities Management

Scaling up

The NHS estate is extremely energy intensive and Trusts are under increasing pressure to reduce their energy spend. Both the Carter Report and Naylor Review highlighted the importance of investing in the NHS estate, with improved energy efficiency to reduce revenue spend.

Replacing old lighting with LED alternatives is an effective way of reducing energy consumption and carbon emissions. This coupled with the fact that there are still ample opportunities to upgrade lighting across the NHS estate means Trusts have the potential to achieve significant financial savings. There is also a growing awareness of the health and well-being benefits associated with upgrading to LED lighting.

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