

Case Study



Sustainability

LED Lights

Sustainability is the driving force behind operating principles at the Charnwood Campus, and we take great care and consideration when it comes to the environment. We strive to create green environment by lowering carbon emissions and upgrading existing infrastructure by introducing energy efficient solutions.

THE BRIEF

Building 24 and 80 lampposts around the campus were running on old fluorescent lights which were both ineffective and highly inefficient. The aim was to find a solution to remove these problems and ultimately reduce energy consumptions and CO2 emissions.

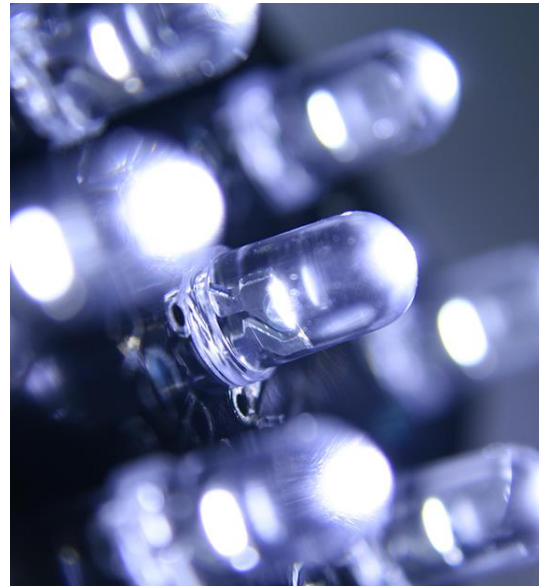
THE SOLUTION

After thorough research and various meetings with manufacturers, Charnwood Campus took on the project to replace **100 rhapsody lights**. The selection of LED light source facilitates the **reduction in energy consumptions, CO2 emissions and energy waste** throughout. Expert advice from the manufacturer allowed for phased project planning and project implementation. The project improved the visual environment of the building and increased **office morale and ergonomics**.

LED's produce high levels of brightness using a significantly reduced amounts of power, and with an extremely long life expectancy the effects on the environment are minimised.

BENEFITS OF LED

- Benefits of LED:
- Use about **85% less energy** than other light sources
- **Reduce CO2** emissions
- Longer lifespan – up to **100,000 hours** – **11 years** of continuous use
- Reach **maximum brightness** immediately
- Are ecologically friendly (free from toxic chemicals such as mercury or lead) and 100% recyclable
- Are resistant to shock, vibrations and adverse weather conditions
- Produce zero UV emissions
- Operate at low-voltage power supply



THE RESULTS

The results were stunning. The grounds maintenance team reported improved visibility on the site and significant reduction in repair maintenance costs. The investment summary can be found below:

Annual Energy Usage – Previous	21,840 kWh
Annual Energy Usage – LED	5,030 kWh
Projected Annual Energy Savings	16,810 kWh
Projected Annual Energy Savings (%)	77%
Projected Annual CO2 Savings	9.6 tonnes
Annual Running Costs - Previous	£3,917
Annual Running Costs - LED	£503
Projected Annual Cost Savings	£3,414
Projected Annual Costs Savings (%)	87%
Projected Cost Savings over 10 years	£34,143
OUTLAY	£5,040
Project Return	1.48 years
Project Payback after ECA Tax Benefit	1.03 years

