



LED SAVINGS CASE STUDY

Unlocking 53% Savings for an Insurance Client
in Leicester

At a Glance

01 **53% Drop**
in Lighting Energy Usage

02 **£3,113**
Saved Every Month

03 **31,740 KgCO₂**
Reduced per year

04 **78%**
Average Floor
Improvements

Issue:

The lighting systems across six floors of the client's Leicester facility were consuming excessive energy due to outdated fixtures and lack of efficient load control. Lighting was a passive cost driver, especially during idle and off-peak periods.

The Root Cause:

Conventional lighting systems were operational for extended hours without usage optimisation. The lack of real-time monitoring led to sustained energy waste, particularly in high-use areas like Floors L1 to L4.

What the data showed:

Between September 2024 and January 2025, lighting energy consumption dropped from 18,624 kWh to 7,743 kWh – a 53% reduction. This translated to £3,113 in monthly savings and a projected £36,317/year in reduced costs and 31,740 KgCO₂ offset.

The Solution

OAK conducted a site-wide audit, installed high-efficiency LED fixtures, and implemented real-time circuit-level monitoring. Floor-wise analytics and automated alerts enabled ongoing optimization and immediate anomaly resolution.

 [Learn More here](#)

Issue

18,624 kWh

total lighting energy usage in 1 month due to outdated lighting circuits and non-optimised operational scheduled

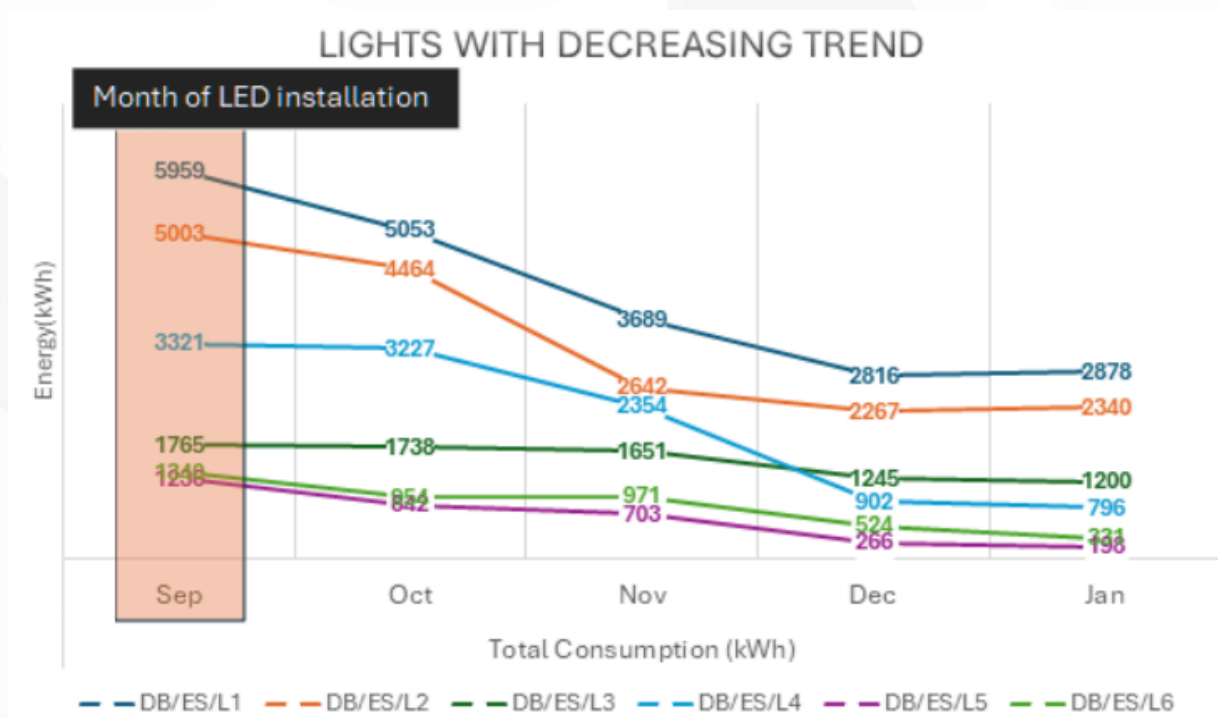


The Root Cause

The audit showed the lighting was running on habit, not on need. Traditional fixtures without automation or circuit-level monitoring meant corridors, stairwells and shared areas stayed lit for long periods with no way to spot or stop the waste. With no usage thresholds, alerts or control protocols in place, small inefficiencies quietly became a persistent cost driver.

What the Data Showed

- ⓘ Total lighting energy use dropped by 53% across all floors, from 18,624 kWh in September 2024 to 7,743 kWh in January 2025, resulting in annualized savings of 10,882 kWh, £3,113, and 2,720 kg of CO₂



L5 achieved the largest proportional reduction at 84%, while L4 and L6 also saw substantial decreases of 76% and 75%, respectively



The highest absolute savings were recorded on L1 and L2, with reductions of 3,081 kWh (£881) and 2,663 kWh (£762), delivering the greatest environmental and financial benefits



Cost Comparison:

Metric	Before OAK (Sept 2024)	After OAK (Jan 2025)	Monthly Savings	Projected Annual Savings
Total Lighting Energy (kWh)	18,624	7,743	10,882 kWh	126,984 kWh
Energy Cost (£)	£6,141 (est.)	£3,028 (actual)	£3,113	£36,317
Emissions (KgCO ₂)	~5,440	~2,720	~2,720 KgCO ₂	31,740 KgCO ₂



Impact



£6,100 per month flagged in lighting costs (18,624 kWh/month).



Level 5 wasted **84% idle-time** — a single-floor tweak with big, fast savings potential.



No floor-level visibility meant blindspots — adding circuit monitoring and simple off-peak controls unlocks quick wins and ongoing efficiency

Fix



LED swap across L1–L6 — immediate drop in baseline lighting draw, so savings appear from day one.



Floor-level monitoring & real-time alerts — pinpoints problem floors (like L5) and enables same-day fixes.

Resolve

On OAK's recommendation the client completed an LED swap across L1–L6 and introduced floor-level monitoring, real-time alerts and simple behavioural guidance. Those changes dropped the baseline lighting draw immediately, let technicians target same-week fixes (notably L5's 84% idle-time), and turned a previously opaque £6,100/month lighting bill into a clear, optimisable line item. With ROI forecasting now in place the business has fast payback visibility, ongoing floor-level control and measurable savings — all delivered with no disruption to day-to-day operations.



Want to uncover hidden savings in your energy bills?

Contact OAK today



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