LED Lighting

Lowering Energy Use in our Churches

David Burch
Lighting Designer
CES Lighting & Electrical Specialists LLP

We have all been starkly aware of your hard work, dedication, kindness and commitment to a very high standard of work, and how you have stood out enormously from other companies that we have worked with in the past.

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Gabriel Anstis, St Augustine's, Highbury

The creativity and innovation which CES brought to our project was impressive as was your flexibility and value for money.

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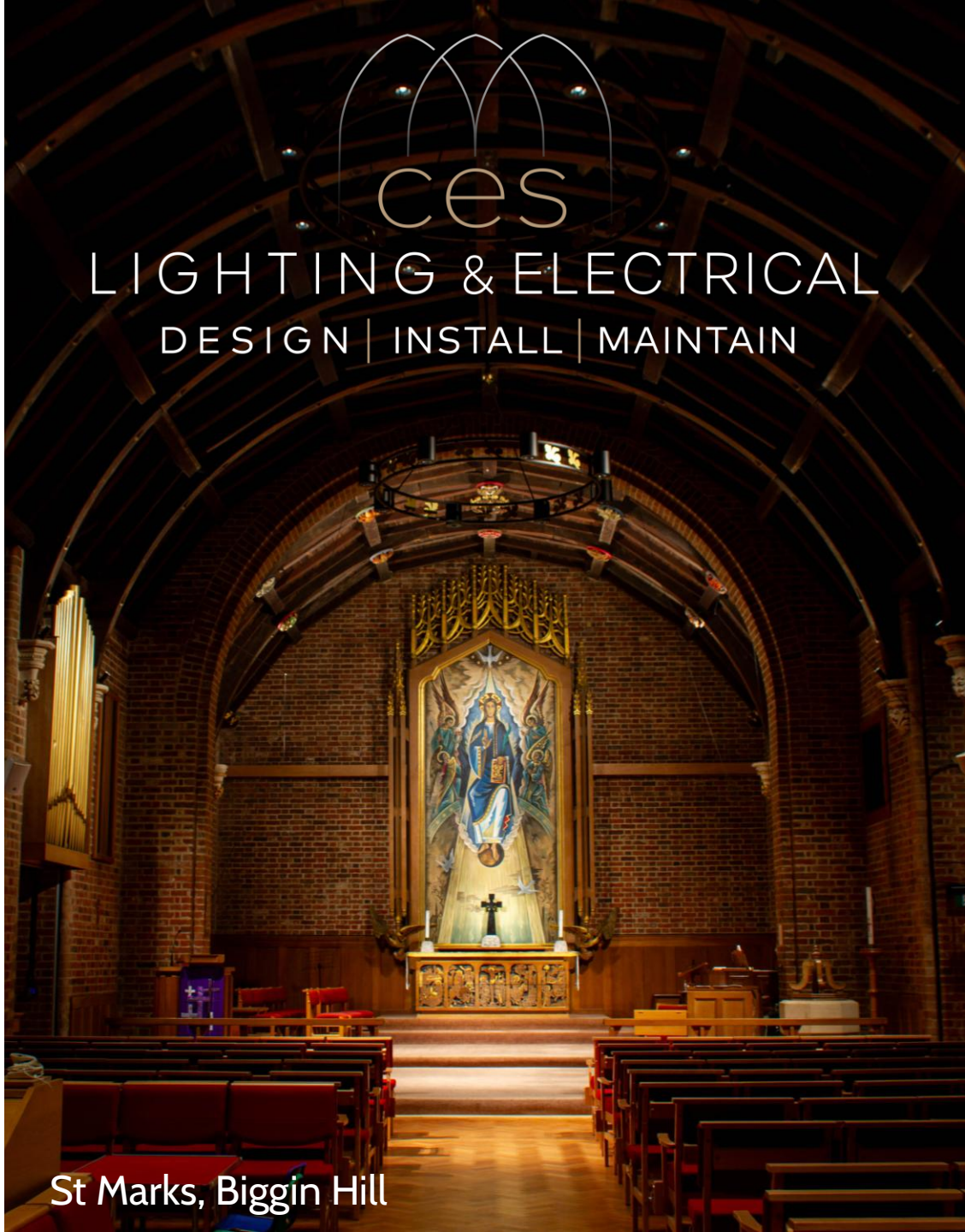
Simon Lace, Rochester Cathedral



St Marks, Biggin Hill

What is an LED

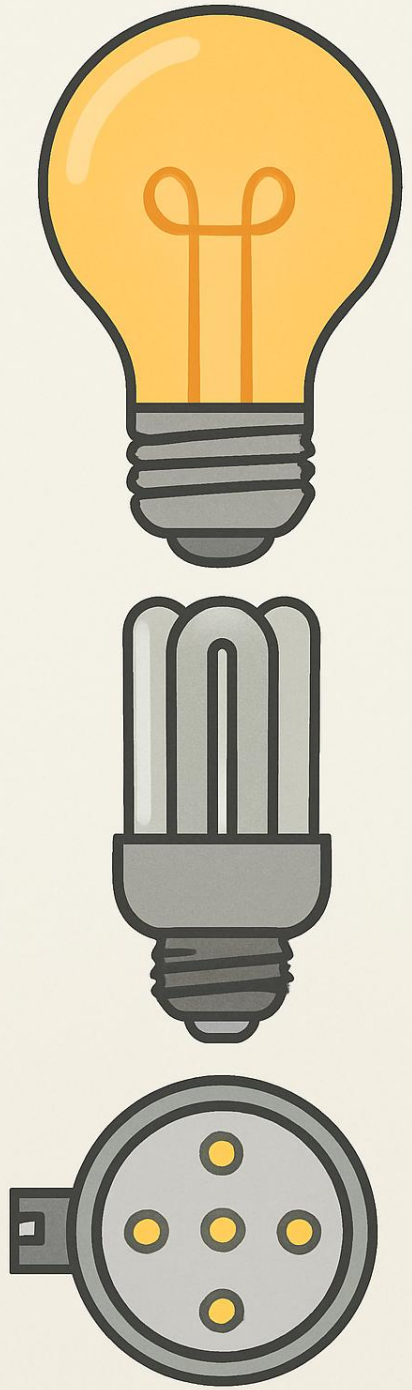
A Brief History of Electric Light
The first light bulb heated a thin wire until it glowed - Over 90% of the energy being lost as heat.

Evolving Technology
Fluorescent and halogen lamps heated gases or filaments to produce light more efficiently.
This helped but still used more energy than necessary, often containing hazardous materials like mercury.

The LED
Instead of heating things up, LEDs emit light by moving electrons in a semiconductor.

- Vastly more efficient – up to 90% less energy than Edison's bulb
- Long lifespan (25,000+ hrs)
- Fully dimmable (with compatible controls)
- Instant-on, no warm-up
- Excellent colour rendering – warm, natural, true-to-life tones
- No toxic materials – safer for people and the planet

LED technology is often packaged in familiar bulb shapes for easy retrofit.
But dedicated LED products offer even better performance and design flexibility.

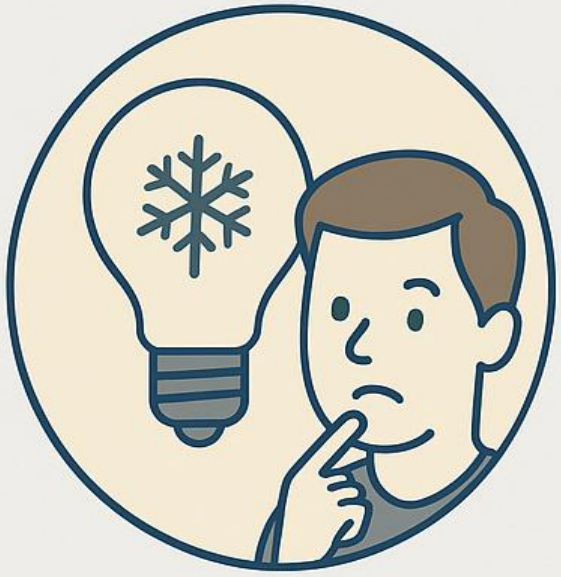


Why LED Matters

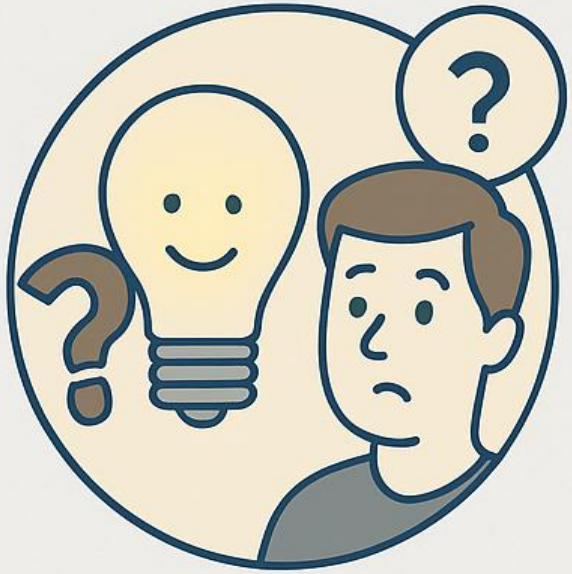
- Old Lamps have been phased out
- Hard to get hold of replacements
- Rising electricity Costs

- Improved Lighting for the next generation
- Reduced energy use

Common Misconceptions



“LEDs are harsh and cold”



“Swapping bulbs is simple”

“Upgrades are too expensive”

The Benefits

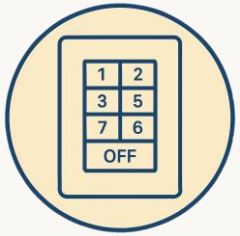
Why design matters

- Not all LED installations are equal
- Poor designs cause glare, shadows, or flicker
- Good design
  - fittings that do not dominate
  - light in the right place.
- One system, many uses: worship, concerts, community
- A designer helps you plan, budget, and future-proof
- A design will help with faculty approval and competitive pricing

Energy efficient – up to 90% savings Environmentally responsible

Long-term low maintenance

Better light quality –warm, natural tones and colour options



Simple flexible control

Heritage friendly

CONTROLS

Greater Flexibility and improved Energy Savings

- Controls help reduce energy use and running costs
- Control plates enable flexible use for services & events
- Simple control avoid lights being left on accidentally
- Movement sensors can welcome daytime visitors
- Exterior lighting: automatic on at dusk, off at night as well as PIR motion activated lighting

Portfolio Highlight: St Andrew, St Cuthman , Steyning

High Budget Project: £100k-120k + VAT

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Pre and Post project comparison (Internal)

Previous Lighting (Estimate)	Total Wattage
Total Wattage (W)	6,406.0

LED Lighting (Estimate)	Total Wattage
Total Wattage (W)	2,872.3

Running Cost Calculation	Value
Hours use per week	20 (h)
Estimated elec. cost	0.14p (per kWh)
Existing Total Cost per Week	£ 17.94
LED Total Cost per Week	£ 8.04
Total Running Cost Saving Per Year	£ 514.80

CO2 Emissions Calculation	
CO^2 produced per kWh	0.256 kg
Estimated Current Use Per Week	32.80 kg
Estimated Proposed Use Per Week	14.71 kg
Estimated Annual CO^2 Saving	940.68 kg

Portfolio Highlight: St Lawrence, Effingham

Medium Budget Project: £40k-50k + VAT

Portfolio Highlight: St Lawrence, Effingham

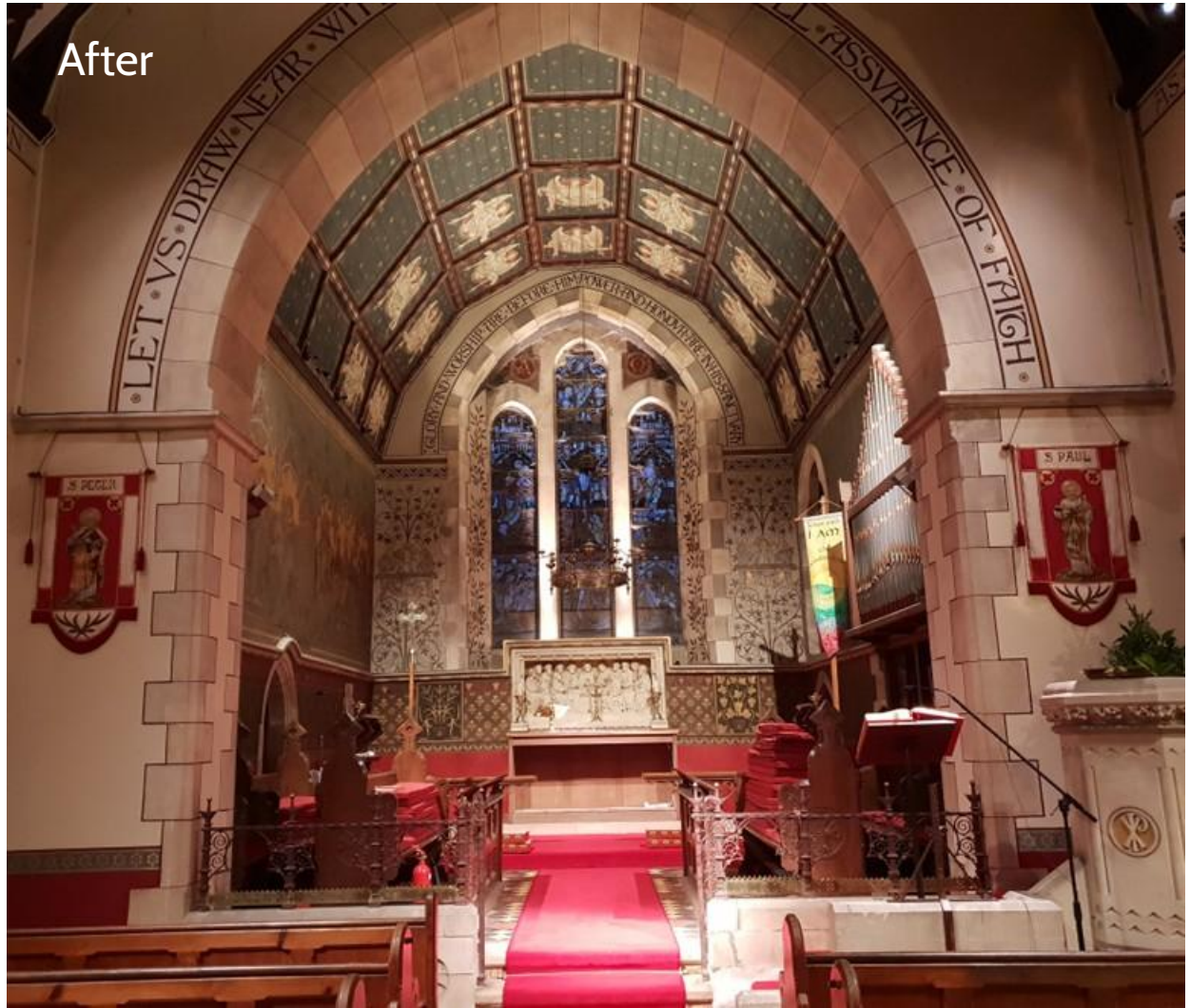
High Budget Project: £40k-50k + VAT

Bespoke Pendants

External Floodlighting

Portfolio Highlight: St Pauls, Luddesdowne

Low Budget Project: £10k-15k + VAT



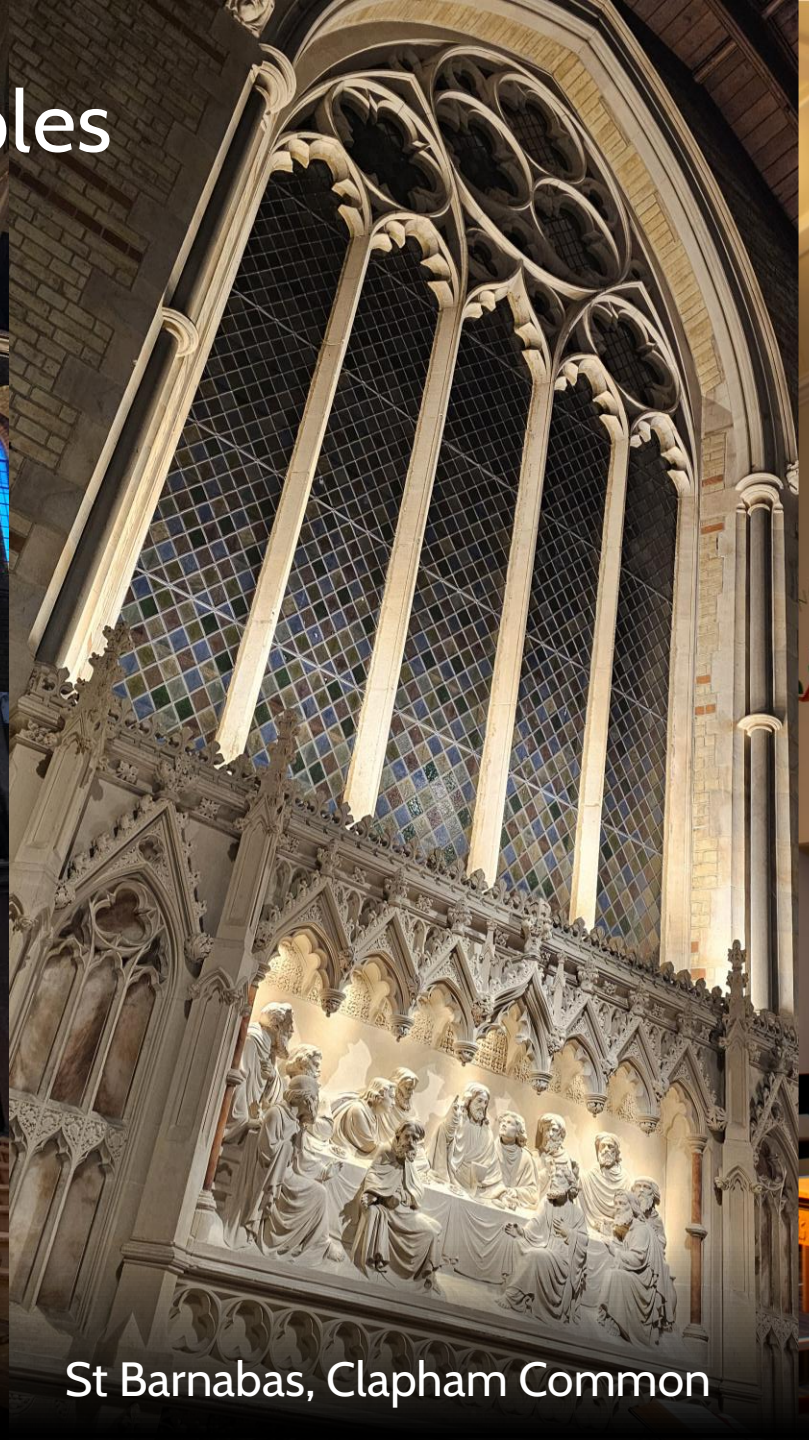
Portfolio Highlight: Otford Methodist Church

New Build Project

Other Feature Examples

High Budget Project: £40k-50k + VAT

St Thomas, Balham



St Barnabas, Clapham Common

Bessel's Green Baptist

Where to Start

ces
LIGHTING & ELECTRICAL
DESIGN | INSTALL | MAINTAIN

Contact Us: David@cesllp.co.uk 02088352816
We're happy to offer a no-obligation chat or site visit

1. Recognise your Need
   Lights are failing, costly to run, hard to maintain, or limiting use.

2. Engage a Lighting Designer – not a general contractor; design should serve the space and its future.
   Talk to your architect, ask your diocese, or get in touch with someone like us

3. With your Designer Define Your Brief and Budget
   What is the ambition? Worship? Community? Efficiency? Maintenance?

4. With your Designer Develop a Design
   Tailored to your building and needs; aesthetic, functional, and sustainable.

5. Seek Approvals
   The Design should be suitable for DAC, local authorities, and heritage planning bodies.

6. Prepare for Installation
   Got out for competitive pricing – phased installation can be designed in.
   Further advice can be provided by your lighting designer or Architect

QUESTIONS?

THANK YOU

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Please do be in touch for any further advice/information or a free no obligation site visit