

CASE STUDY | CHURCHILL PRIMARY SCHOOL

SERVICE OFFERING: LED LIGHTING

SECTOR: EDUCATION

The Churchill Primary School near Folkestone is a Kent County Council Community school with 420 pupils aged between four and eleven years. Named after Winston Churchill in recognition of the importance of the site in military and aviation history, the school was opened in 2002.

Key benefits delivered:

- Monthly electricity consumption reduced by 19%.
- Energy savings amounting to £1,200 a year.
- LUX levels were significantly increased from 190 LUX to 330 LUX.
- Creation of additional useable space – underused, dark cloakroom spaces have been transformed into light additional teaching areas and ‘mini library dens’.
- Staff sickness levels were reduced – headaches from harsh lighting are less frequent.
- Additional classroom – by reconfiguring and utilising underused areas, the school’s central library area has been converted into an additional classroom.
- Short-listed for the 2014 Ashden awards for “Most exciting low carbon – school”.

Key statistics:

4.3 Year payback

Load before **60,297 kWh**

£1,200 a year energy savings

Load after **48,883 kWh**



Before LED Installation



After LED Installation

1 The problem

Concerned about increasing energy costs, Colin Simpson, the schools' Business Manager, decided to replace 22 of the 60 watt exterior halogen lights with 20 watt LEDs. Having noticed the instant savings with the perimeter lights, the school asked LASER Energy to carry out a free survey of the rest of the school to identify further efficiencies.

2 The solution

Having carried out a full internal audit, LASER's lighting specialist questioned why in many rooms there were only wall-mounted lights and established that although the original construction plans included suspended ceilings for each of the 14 classrooms, these were never installed.

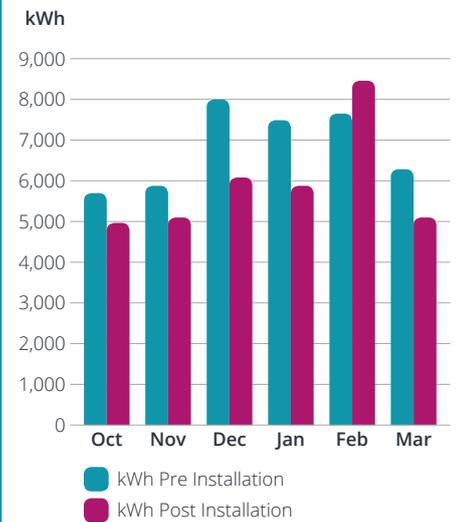
LASER recommended the following:

- Installation of LED suspended lighting in each classroom.
- Auto LED lighting in toilet and cupboard areas.
- Emergency lights and fire escape signs to be replaced with LED signs.

3 The results

The LASER Energy Buying Group's LED lighting service provided instant results and cost savings. The main hall alone had 19 yellow sodium 450 watt lights replaced with 7 high bay LED 90 watt lights, giving an instant reduction of 7920 watt consumption at the flick of a switch. The new emergency lights and fire escape signs created a more visible and easy to follow escape route in the corridors for teachers at night. However, the biggest benefit for the school has been the creation of additional usable space.

Churchill Primary School electricity use – before and after



The graph above shows a monthly kWh comparison between Pre Installation (2012 - 2013) and Post Installation (2013 - 2014)

“The LASER Energy Buying Group LED team did a great job, all my expectations were met, and not only have our consumption and costs been reduced but the installation has created new areas to teach in and fun places for the children to learn in.”

Colin Simpson
Business Manager,
Churchill Primary School

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