

GREENLED - CASE STUDY



Saving energy through sustainable lighting

Court Farm Road Social Housing Project



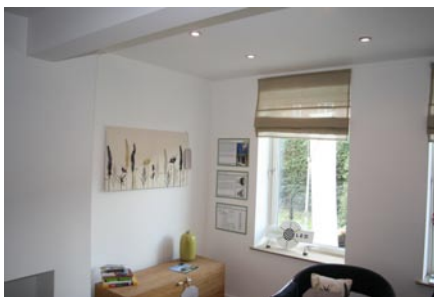
DESCRIPTION:

To illustrate how to make existing social housing stock truly sustainable, respected London-based environmental architects ECD worked with London's Hyde Housing Association to refurbish a 1930's 3 bedroom house. ECD asked Greenled to design and supply the lighting at the site at Court Farm Road in Mottingham, south east London.

SUSTAINABILITY CRITERIA:

This has significant social and environmental implications ([cf: the Forum for the Future article on greening social housing](#)). Built cheaply simply to house a large number for a limited lifetime, most of Britain's social housing stock has a very poor carbon rating.

ECD Architects and Hyde Housing Association's work illustrates what steps can be taken by every social housing operation to refurbish their stock effectively in line with carbon reduction obligations.



Living Room



Bedroom



Sustainability Data (Measurable)

ECONOMIC BENEFITS:

Total Annual Costs: Saving £222.95 pa @ 17p / kWh

ENVIRONMENTAL BENEFITS:

Energy Use: 1,771 kWh / yr saved
 Energy % Use: 75% saving
 CO2 Emissions: 4.76 tonnes CO2 saved over 5 years

NOTE: By using Greenled LED lamps, Hyde lit a three bedroom terraced house, with en suite bathroom and kitchen, using only 192W, 78% less than the previous 887W.

BUSINESS CASE:

Initial Cost: £1123.62

Comparative costs

	Annual Traditional Lamps	Annual Greenled Year 1 = Purchase cost + energy cost
Year 1	£399.16	£1,224.45
Year 2	£399.16	£100.83
Year 3	£399.16	£100.83
Year 4	£399.16	£100.83
Year 5	£399.16	£100.83
	£1,995.82	£1,627.78

Payback time: 4 years

Lighting life: 50,000 hours or over 15 years



BENEFITS ACHIEVED

In reality, measuring the exact difference between new and old lighting technology in social housing is extremely difficult as there are huge behavioural differences between one household and the next. What is clear is that Greenled has been able to light an entire household with 192W. The tungsten equivalent would have been 927W and the Compact Fluorescent approach would have been 241W.

- The payback is 4 years but there is a substantial difference in the longevity. Once the initial payment is made there is absolutely no need to make any further investment in lighting for approximately 15 years.
- Longevity also has a carbon reduction value. 10 halogen or tungsten lights would need to have been manufactured, bought and shipped for each task in that time.
- Safety – LEDs are solid state technology. There is no danger of glass breaking or shards causing damage. There is minimal heat and so the consumer will not get burned. No Mercury or other toxic contaminant is used in the product.
- Sustainable lighting. LEDs are not easily interchangeable. Once LEDs are in they are much less likely to be replaced than Compact Fluorescent “low energy” bulbs.

FURTHER OPPORTUNITIES ARISING

There are 5.2 million social housing units in the UK. These obviously vary greatly in size and occupational practice. This project showed a saving of 4.76 tonnes of CO₂ emissions over 5 years. Even if each social household saved only half of this, approximately 2,500,000 fewer tonnes of Carbon Dioxide would be emitted over 5 years.

ADDITIONAL NOTES

The finished site is now open and continues to garner national media interest.

<http://www.telegraph.co.uk/property/greenproperty/3452992/Eco-homes-Retro-green-your-house.html>