

# Case Study

## Apartment blocks benefit from energy efficient LED solution

Lighting Specialist: Matthew Darrington

REXEL

ENERGY  
SOLUTIONS

### Project Overview

#### Company

Town & City Management Co Ltd. Installed by Comtech Green Energy

#### End Market/ Industry Sector

Residential – Managed apartment blocks.

#### Financial Impact

69% Energy saving  
Annual saving of £5,445 including maintenance costs

#### Products

55 x LG 6" LED downlight  
88 x Aurora adapter rings  
31 x Kosnic 2D LED plate  
18 x Iviti LED T8 tube  
3 x Robus 7W LED Drum

#### Timeline

Start of project: February 2014  
End of project: August 2014

#### Environmental Impact

Reduced energy consumption by 24,900KwH (69% reduction)  
Carbon emissions reduced by 13,165Kg

#### Rexel's added value

- Product recommendation
- Extended warranties
- Project management

## King Cole Mills, Bingley



Town & City Management Co Ltd is the management agent for King Cole Mills apartments in Bingley, West Yorkshire. The site is a converted mill comprising 4 separate apartment blocks containing 122 individual apartments. Town & City is responsible for the maintenance and management of all the communal areas both internally and externally. The aim of the project was to reduce the energy costs of the communal lighting so that the savings could be diverted to improve the amenities of the site in future years.

### The Challenge

Town and City had been asked by the residents to find solutions that would help reduce the overall energy and maintenance costs at King Cole Mills as well as the carbon footprint. Town & City was already working with Co<sub>2</sub>conut Consulting, who had undertaken a site audit to identify areas of highest energy consumption. They introduced Comtech Green Energy to Town and City with a view to finding solutions to the problem. Rexel Energy Solutions worked with Comtech to source the right products for each area.



## The Project

**Town and City is a property management company with a portfolio of over 170 sites across the north of England.** As part of their strategy, they were looking to provide energy reduction solutions to their clients primarily via LED lighting solutions. King Cole Mills at Bingley was selected as a pilot site for lighting improvements that could be replicated at other sites.

### High maintenance costs

**King Cole Mills is made up of 4 separate apartment blocks of varying sizes.** The main internal corridor lighting was controlled via ceiling presence detectors. The existing lighting was provided by G24 CFL bulbs, which when operated, had a short delay before illuminating. This meant that for the residents, as they entered the corridors which had no natural light, they were in darkness until the lights switched on. In addition, due to the continued switching cycles, the lifespan of the bulbs was significantly reduced leading to a relatively high maintenance bill for continued bulb replacement. In addition, the stairwells had 2D bulkhead fittings operating 24hrs a day.

### Value for money solution required

Town and City needed to ensure that any proposed solution would provide a long term, value for money solution for the residents who were ultimately paying for the improvements. Comtech Green Energy, selected Rexel Energy Solutions as supplier for the project, as they could provide a long term LED solution with robust product warranties. Rexel's Lighting Specialist worked closely with lighting manufacturers to source the appropriate fittings for the project and negotiated on behalf of Comtech Green Energy and Town and City to secure the costs and extended warranties required.

Comtech and Rexel made joint site visits to survey each apartment block to ensure the appropriate lighting solution was found for each of the designated areas. Once the replacement fittings had been agreed the feasibility study was finalised with the project costs. Once agreed in principle, the next challenge was finding a way of financing the project.



*Corridor before and after installation of LED*

## The Solution

**In total just under 300 fittings were either fully replaced or upgraded to LED.** These included LG 6" ceiling downlights reducing the lamp consumption from 36w and 48w to 13w. Kosnic 2D LED plates with microwave sensors reducing the lamp consumption from 28w 15W LED 6ft Tubes and a small number of external Robus fittings.

### Presence detection and dimming for safety

From the site visits it was established that retrofit LED plates with occupancy sensors were the best option for the stairwells, as the existing fittings were on 24 hours per day. Not only was the energy consumption of each fitting reduced but additional savings were also achieved by the fittings operating at 10% when the area was unoccupied. For health and safety reasons, sensors that dimmed to 10% were utilised rather than turning off completely, as these stairwells were also used for emergency exits so it was important to ensure a certain level of light was present at all times.

### Extended guarantee

For the corridors the LG downlighter was selected. LG had agreed to increase the standard 3 year guarantee to 5 years, which was part of the requirement at the start of the project. Whilst choosing this product we also had to locate an adaptor ring to suit as the existing CFL downlighters that were installed were significantly larger in diameter.

The underground car park had existing fluorescent fittings which were in good condition. As a cost-effective solution was sought, it was proposed that the existing tubes be replaced with LED tubes, which would reduce energy consumption at a low cost.

Whilst the main aim of the project was to reduce energy, existing light levels had to be met, installing the LG LED Downlighter, Kosnic LED plates and IVITI LED tubes, all light levels were actually increased, providing a brighter, safer environment for all the residents.

Novus 1 Limited provided the finance solutions with a 5 year Leasing plan including a final balloon payment to transfer ownership back to King Coles Mills Management Co Limited. Robin Dummet director of Novus 1 Limited commented: *'Novus Energy is delighted to have provided the finance for the installation of LED lighting across King Cole Mills. This is a perfect example of how to flexibly invest in energy saving installations utilising the financial savings that they will make to avoid the upfront investment required by the end user.'*



*Car park utilised existing fittings with replacement LED tubes*

## The Results

- **69% energy saving**
- **Annual saving of £5,445 including maintenance costs.**
- **Reduced energy consumption by 24,900KwH (69% reduction)**
- **Carbon emissions reduced by 13,165Kg**
- **Enhanced light output**
- **Energy saving without compromising safety**

### Customer Quote

*'I would like to state that the residents and the directors are delighted with the overall finished article. The issue we were left to deal with prior to these works being carried out was regular replacement of bulbs and inadequate lighting. With the 5 year warranty on the fittings, this will be a thing of the past. Improved lighting on the development has made the communal areas seem warmer and more welcoming.*

*We have had nothing but positives from all leaseholders who have said that they're more than happy to bring visitors to the development now.'*

**Mike Willans of Town and City on behalf of the Residents estates.**

### More About

#### Rexel and Comtech Green Energy

As part of the ongoing project for Town & City, Comtech Green Energy as Town & Cities preferred installer is proud to work alongside Rexel Energy solutions. Rob Ramsay of Comtech Green Energy commented 'The support that Matthew Darrington has provided for the first project and continuous support going forward was the key deciding factor why Rexel Energy Solutions was chosen to be our partner for these projects.'



For more information, please contact:

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**Comtech Green Energy** – An established business with over 25 years electrical experience, bringing the latest in green technologies and renewable energy solutions.