RCT Homes, Ty Pennant
Meadow Prospect Energy
July 2015

Introduction

RCT Homes is Wales' largest housing association with an asset list of over 10,000 properties. The organisation is committed to providing an exemplary service to its tenants and communities throughout Rhondda Cynon Taff. RCT Homes prides itself on being committed to the environmental agenda, striving for improvement in all aspects of its operations.

In 2013, RCT Homes had an energy audit carried out on their head office in Pontypridd, south Wales which caters for 250 employees. Amongst other measures, the audit recommended that the old florescent lighting be upgraded to the latest LED technology.

RCT Homes were previously provided with a quote by a well known contractor, a quote which MPE subsequently reduced by a massive 55%.

The Project

As well as being relatively energy inefficient, the existing lighting had very narrow beams which made the walls dark. It had also become quite yellow and the offices were in danger of eventually becoming dingy and unappealing places to work.

Our lighting specialist from Energy at Work produced a tailored lighting design which produced a bespoke solution for office use, as well as meeting spaces, kitchen areas, display units and presentation suites.

Over a period of 2 weeks JR Services, the electrical contractor, worked out of hours to avoid disruption to staff and the general day to day running of the business. It was a seamless installation process which resulted in a complete overhaul of the lighting system in Ty Pennant.

In addition, JR Services upgraded the out of date, noncompliant emergency lighting system to ensure a safe, working environment.

Every light can detect staff and daylight so no light is on unnecessarily, this saves energy even if staff are working in other parts of the same room!

When daylight is sufficient or no staff are nearby, lights dim and eventually switch off individually.

There is no need to wave arms around as the detectors are a patented sensitive design. There is never a time when a person is working in their own small patch of light because neighbouring lights remain at a dimmed setting long after work colleagues have left the room.

Settings can be easily changed using the hand-held remote-control. This means each office can have different light-levels, dim-settings, sensitivity to daylight, light-durations and several more options.

It's even possible to dim lights temporarily for when presentations are taking place.

Each light used approximately 82 Watts and created unpleasant hot-spots and dark gloomy walls.

The new LED lighting uses approximately 28 Watts per light and gives an even, comfortable lighting. Illuminated walls are proven to reduce contrast/glare which can cause eyestrain. It is also said to make staff more awake/productive.

> "We are extremely pleased with the new lighting design at Ty Pennant. It has brightened the office areas and created a more comfortable environment to work in"

David Evans
RCT Homes, Facilities Manager

SAVINGS	Old Energy Costs	New Energy Costs	Energy Savings
Total kwhrs/yr	83,188.6	16,765.3	66,423
Total annual energy costs	£9,125.93	£1,865.84	£7,260.09
Energy cost over 5 years	£45,629.64	£9,329.19	£36,300.45

KEY FACTS

- Cost saving of 55% on previous quote.
- Intelligent bespoke lighting design for all in house operations
- 2 weeks, disruption free installation period
- Carbon reduction of **45.8** tons
- Reduction in KWHrs of **66,423** pa
- **79.6%** saving on lighting cost
- Easy to use interface for facilities management

MPE ROLE

- Client meetings
- A free Lighting survey
- A lighting report showing ROI/ payback and full business case and savings
- Technical Specification for retrofit compliant
- Supply & Installation costs and implementation plan
- All project management and verification of results
- Detailed project handover

BENEFITS

- Reduced annual running costs
- Sustainability for the business
- Future proofed the building
- Less maintenance
- Improved lighting and working conditions
- Increased energy awareness
- Less wasted lighting
- Controllability of individual lights

"Our first aim was to make staff feel more **alert** and **productive**. The second was to save energy by using the most efficient LED lights using a clever new detection system detecting presence and daylight, **inconspicuously and conveniently** for staff and visitors. **This is the first project in the UK to benefit from this improved technology.**"

Stephen Begg
Director, Energy at Work

JR SERVICES

energy at work

ENERGY