Case Study

Mechanical and Electrical

Project

Oxford Brookes University

Student Accommodation Development

Background

Oxford Brookes is one of the UK's leading modern universities, with an international reputation. Its popularity has lead to increased housing demands on their housing stock, to accommodate all of its enrolled students. Consequently, the University has set up a redevelopment project to provide high quality and affordable living conditions for students.

Solution

The creation of two new accommodation blocks; consisting of 318 en-suite bedrooms that will home a portion of the 18,000 students. The new buildings will incorporate modern designs that will improve energy efficiency, security and living conditions for the residents at the site.

npower has been appointed to design, build and install all the mechanical and electrical installations for the new accommodation blocks. This will include installing the following systems within both buildings:

- heating
- lighting
- power
- water
- data
- plumbing
- sanitary
- fire
- security and access controls

The **npower** delivery team commenced work at Oxford Brookes in August 2011, with the project lasting approximately 6 months.

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At npower we recognise that energy management is a journey. We have designed our products to help businesses with each stage of this journey – from initial measurement of the energy, to understanding how it is being used, right through to looking at options for sustainable energy generation.

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David Molde, Senior Contracts Manager at npower, comments: "After completing a successful refurbishment project at Aston University in 2010, **npower** has the necessary expertise and experience to deliver the mechanical and electrical installations for the project here at Oxford Brookes. Fundamental to the development is improved access, security, safety, and facilities for the students, so working with the University and its consultants allows us to work with the end users' needs front of mind."

Energy savings

The building design of the accommodation blocks aims to reduce energy costs by maximising energy efficiency measures.

The plan is to create an 'Energy Centre' that will contain a Combined Heat and Power (CHP) plant. This on-site self generation technology will help to reduce energy usage by providing usable heat as a by-product of electricity generation.

The buildings will also incorporate other energy-saving technologies, for example, Passive Infrared (PIR) radiators. These innovative radiators are motion activated, so they only switch on when a room is occupied.

'Green roofs' made of grass and small plants will be incorporated into the building design. Green roofs have a number of benefits, compared to traditional roofs, such as thermal and sound insulation and an extended lifespan, due to vegetation absorbing water and protecting the roof below.

All these measures will help ensure the new accommodation blocks are environmentally friendly, whilst still providing secure accommodation for the students of Oxford Brookes.

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