

Cornwall House

Summer 2013



The Cornwall House refurbishment project used Revolving Green Fund funding to retrofit one of the worst performing buildings on the campus, improving its Target Energy Performance rating from a 'G' to a 'C'. The building, constructed in the 1960s is a multi-functional building housing Student Guild activity and meeting spaces, a commercial kitchen, café, bar and nightclub, and launderette.

Ahead of refurbishment, the Estate Development Service (EDS) team undertook extensive sub-metering, thermal modelling and infra-red thermography throughout the building, to understand where the main energy losses and wastage were occurring. This allowed EDS to derive the best strategies for reducing the carbon emissions resulting from energy use in the building. The techniques included:

- The complete overcladding of roof and walls, including the addition of thermal insulation and the replacement of windows and doors
- Solar control glazing to reduce the requirement for air conditioning
- Linking air conditioning systems to BMS and providing occupancy sensor control
- Providing demand controlled ventilation by CO₂ sensors
- Replacement of several light fittings and changes to the switching strategy

- Installing a rooftop solar thermal system to contribute to the launderette hot water system and the swimming pool water heating

Benefits of the refurbishment

EDS also consulted with stakeholders and engaged with the student population to ensure that the changes to the building would increase occupancy in this previously unpopular building. Cornwall House is now home to the Music Office and their practice rooms, a newly refurbished shop and a new American-style diner. Involving building users in the planning process meant that they were engaged with the energy saving programmes in place when the building was finished. The refurbishment works achieved a saving of £16,000 on energy bills and 92 tonnes CO₂ in the first seven months after construction. The team also shared the lessons learnt from the project and best practice with other institutions in the Higher Education sector on the HEFCE website. The project pipped other high profile projects from other UK universities to the post to win a 2014 Green Gown Award in the Construction and Refurbishment category.

