

Total Efficiency in practice: Lion House, Alnwick

Client: Defra | **Project:** Replacement of Lion House, Alnwick | **Value:** £4.2 million | **Sector:** Public Sector Offices | **Services:** Full cost management services, business case support | **Start date:** 2007 | **Completion date:** 2009

CHALLENGES

To develop a new modern office block to suit the future needs of Defra in Alnwick within the boundaries of the existing site whilst the present building known as Lion House remained fully operational throughout

To create a building that is respectful of its context strengthening the identity of the neighbourhood and its landscape

To create a secure modern open plan working environment using highly sustainable building methods and materials to achieve at least BREEAM Excellent standards

To incorporate as many sustainability initiatives as possible within the available budget

To future proof the building to accommodate the anticipated long term changes to the Defra operational requirements

To create a building capable of achieving carbon neutrality in use

SOLUTIONS

Creation of a mainly naturally ventilated open plan working environment throughout

The sustainability initiatives chosen to potentially deliver carbon neutrality in use were: biomass boiler, wind turbines, rainwater recycling, solar thermal water heating, photovoltaic power generating panels doubling as solar shading

Each sustainability initiative was assessed on a whole life cost basis and had to demonstrate a pay back period of not exceeding 25 years before being selected

The provision of a building capable of accommodating the implementation of "smart working" practices

The incorporation of systems to enable the occupiers to take personal responsibility for the environmental control of the work areas

The installation of extensive BMS controls to monitor and report on the outputs of the sustainability initiatives regarding carbon usage of the building

RESULTS

Turning the liability of the outdated existing Lion House building into a long term asset with increased business efficiency

Significant reduction on running costs due to the sustainability initiatives targeting carbon neutrality in use

A change of culture for staff with new ways of working and flexible use of space

Not only was BREEAM Excellent achieved but the building has, post occupation, achieved BREEAM Outstanding

REFLECTIONS

The project has delivered a sustainability benchmark beyond the original expectations and has become a flagship for what can be economically achieved given a whole life cost approach

A significant improvement in staff well-being has been achieved with the provision of this new, inviting, safe, stimulating, challenging, secure and enjoyable place of work

The project has reinforced and improved the accessibility, presence and corporate image of Defra



The project has now achieved the following awards:-

- Sustainable Achievement of the Year 2008 - Property Week
- Highest scoring BREEAM offices 2006 assessment – for buildings completed in 2008 - BREEAM Awards
- New Build Project of the year 2009 - CIBSE Low Carbon Awards
- Green Apple Award 2009
- Sustainability - RICS North East Renaissance Awards
- CIBSE Environmental Initiative of the Year - Constructing Excellence in the North East Awards
- Sustainability Legacy - Constructing Excellence in the North East Awards
- Project of the Year - Building Services Awards
- Environmental Initiative - Building Services Awards
- Project of the Year - British Construction Industry Awards

Global construction consultants