



Green Gown
Awards 2016



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Finalist's case study

Swansea University Built Environment ESRI - The First BREEAM OUTSTANDING Educational Building in Wales

About the project

Summary

ESRI is a project showcasing the driving ambition of Swansea University. Whilst funding arrangements for the construction demanded attainment of the challenging BREEAM Excellent award, the University and its partners planned to exceed this from the beginning and set out to successfully develop the first BREEAM Outstanding educational building in Wales. What has been achieved is an outstanding example of architecture, design and sustainable construction and an excellent environment for work, study and research befitting of, and aligned to, the building's purpose as an international centre for research into sustainable energy.

Project partners

Swansea University (Client)
Bouygues UK (Contractor)
Stride Treglown (Design)
Arup (M&E)
WSP (Civils)
AECOM (Cost & CDM)
Provelio (PM)

The results

The problem

ESRI had extremely demanding technical and programme requirements. Its funding (UK Research Partnership Investment Fund through Central Government) was contingent on achieving a BREEAM 'Outstanding' rating via a commitment to sustainability and efficiency. The building was high profile. It was to be the centrepiece of Swansea University's research into renewable and alternative energy production, and would provide a focus to its work in this innovative and important field.

The approach

ESRI demanded a truly collaborative approach with extraordinary commitment and support of all project team members (Designers, Contractor and Client). High environmental performance and sensitivity is fundamental to the design of ESRI. Its orientation, layout and natural ventilation help to achieve passive low energy. In addition, it incorporates a micro CHP unit as well as solar PV, rainwater harvesting and full LED lighting.



Swansea University
Prifysgol Abertawe

Profile

- Established 1920
- Higher Education
- 19,709 students (includes full and part time students at all levels)
- 2510 staff
- Suburban/Coastal



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Our goals

- Develop the first BREEAM Outstanding educational building in Wales
- Create a unique encapsulation of the University's ambition as a world leader in the future of energy research
- Pursue sensitive ecological design next to the Crymlyn Burrows SSSI
- Create a world-class facility to develop University-Industry partnerships
- Encourage major regeneration impact to Swansea Bay and Wales
- Develop an environment to foster health and wellbeing
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Obstacles and solutions

Developing an industrial research facility to very high sustainable specification.	<ul style="list-style-type: none"> • Clear vision and rigorous planning • Experienced and dedicated project team • 'Bought in' supply chain
Achieving construction goals whilst creating an outstanding working environment.	<ul style="list-style-type: none"> • User experience interface throughout planning, design and construction
Construction on the boundary of a sensitive SSSI	<ul style="list-style-type: none"> • Early engagement with stakeholders • Embedded environmental sensitivity with project

Performance and results

The entire ESRI project has been a success from construction through to occupation. Despite an inflexible project end date, the building was completed on time in September 2015 and within the £12.6million allocated budget. The building achieved the target level of sustainability during construction with 88.8% BREEAM score at design stage. Since opening, the building has become home to 60 staff and students, with excellent satisfaction ratings and is operating in line with expected efficiencies to produce savings of 39.5 tCO₂/yr.

The future

Lessons learned

- Don't underestimate the level of detail required to fulfil BREEAM Outstanding requirements over those of BREEAM Excellent.
- Striving to achieve BREEAM Outstanding requires a truly collaborative approach.
- Identify and provide resource to 'champion' the BREEAM element of the project.

Sharing your project

The success achieved by the project construction teams in realising the ambitious ESRI project has already been widely circulated and disseminated. Both the University and the constructing project teams have raised the profile and exposure of ESRI through various articles, case studies, stakeholder presentations and award submissions (RICS Winner, BREEAM Award Shortlisted 2016).



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What has it meant to your institution to be a Green Gown Award finalist?

"It says 'diolch yn fawr iawn' (thank you very much) to a University community that works to continually improve the positive environmental and social impacts of our institution. This award celebrates our hard work, and recognises Swansea University as a responsible member of our city and regional community."

Professor Richard B. Davies
Vice-Chancellor

Further information

For further information on this project contact Ben Lucas, Head of Development, Swansea University

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<http://www.swansea.ac.uk/campus-development/>