



Active
Building
Centre

ABC Case Study: Cross Hands East Strategic Employment Site



Cross Hands East Strategic Employment Site

Location: Cross Hands, Carmarthenshire

Client: Carmarthenshire County Borough Council, in partnership with Welsh Government

Project managers: Blake Morgan

Architects: Stride Treglown

Mechanical and electrical consultant: Auxilium Engineering Services

Civil and structural: Curtains

Active Buildings Advisor: SPECIFIC IKC

Principal contractor: Andrew Scott Ltd

Background

Cross Hands East is part of the Welsh Government's drive to create better business facilities in more rural parts of Wales. It comprises 32,500 square feet of low-carbon offices, light industrial units and hybrid spaces for letting across three buildings.

The project has been delivered via a joint venture between the Welsh Government and Carmarthenshire County Council, comprising a large programme of infrastructure works. With support from ABC, it will help transform the way commercial buildings are powered and heated using innovative technology and ABC's design principles. The new buildings will generate electricity using on-site renewables and incorporate high levels of insulation to deliver a low-carbon development with reduced running costs. The ultimate aim is to achieve 'net zero carbon in-use standard', which would see the development produce enough renewable energy to meet the lighting and heating needs of the buildings.

The development is due for completion April 2023 and ABC will be supporting the client with data collection and analysis, including in-use data monitoring. Ongoing learning will come from the metering and monitoring from this site once completed.



'Businesses of all sizes across Wales need modern sites and premises that will enable them to expand and grow. This is a key part of our Economic Action Plan, which sets out our vision for inclusive growth built on strong foundations, supercharged industries of the future and productive regions.'

Vaughan Gething, Economy Minister

Project information

- Exemplar low-carbon, mixed-use development with industrial and office spaces.
- Aims to achieve operational energy use set out in *RIBA 2030 Climate Challenge* (<55 kWh/m²/a). This is an ambitious target that the industry needs to meet in order to decarbonise society. All new builds should be aiming for this target or better.
- Proposed area for development of 3707 m²
- The focus the development has placed upon its position in environmental terms is remarkable. The whole zone has been sympathetically shaped to allow commercial developments and ecology to live side by side.

ABC activity

- ABC funding investment of £800K.
- Preparation of project brief, including project and sustainability outcomes.
- Supporting project delivery by organising workshops for the delivery team, including mechanical and electrical consultants and contractors.
- Reviewing and supporting the mechanical and electrical consultant with energy modelling and energy-management strategy.
- Supporting the client in data collection and analysis across the RIBA stages, including in-use data monitoring.
- ABC has been the focal point for all the consultants and tradespeople involved to deliver collaboratively against the targets, including:
 - energy modelling
 - monitoring and metering specification
 - electricity connection (approach).

Benefits

- This is an exemplar project that will help transform the way commercial buildings are powered and heated using innovative technology. It also showcases what can and should be done to help tackle the challenge of net zero.
- Designing integrated structures and energy systems to be part of the solution around decarbonisation, with active technologies built in from the start, will mean that buildings are not just users of energy but can play an integral part in meeting the challenges of climate change.

Lessons learned

- CIBSE TM 54 modelling should be undertaken at early stages to deliver against the design targets and aspirations.
- Compliance tools are currently hinderance to net-zero carbon buildings.
- Work packages are off-loaded to large corporations who are seen as a safe pair of hands. In reality, this quite often means that solutions are restricted. If appropriately experienced companies are identified who can offer integrated solutions, the performance of buildings is likely to improve.

This development has already seen new businesses establish themselves here and begin to flourish with the potential for the site to create hundreds of quality jobs. This second phase of developing Cross Hands East will deliver more sustainable economic growth that will have a positive impact on people, businesses and communities in the area and wider region.

Cllr Gareth John, Cabinet Member for Regeneration, Leisure Culture and Tourism

For further information on the work of ABC, download the
ABC Blueprint - Our approach to net zero

