

Parc Eirin

Winner of
**Residential Project
of the Year Award**



Project Details

Location	Tonyrefail, CF39 8JQ
Contract value	£18.23 million
Type of work	New build residential
Construction type	Timber Frame Housing
Client	Pobl
Start date	July 2019
End date	April 2022
Area	55,402m ²

Benefits

- carbon reduction
- renewable energy sources
- pollution prevention
- positive impact on the community
- collaborative approach
- retention of natural areas

Outcomes

Emissions savings forecast at 71.2 tCO₂/year due to renewable energy sources.

public open green space at the heart of the site provides properties with a closer connection to nature.

upskilled supply chain to enable all to interface with the new technologies at use across the project.

extensive water management plan was implemented, in collaboration with specialists, to avoid silt pollution.

continuous improvement enabled through best practise workshops to inform future projects and the collection of data to share with future developments and local government.



Project Background

Parc Eirin is an innovative new build development, delivered by Morganstone Ltd on behalf of Pobl Group in partnership with Sero. The development consists of 225 high quality, low carbon homes that will leave a clean legacy for South Wales. Nestled within the historic industrial heartland of Rhondda Cynon Taff, the development is surrounded by incredible landscapes and is designed to complement its environment.

This cutting edge project has been supported by £7m funding from the Welsh Government's Innovative Housing Programme to demonstrate how current technologies can be used to minimise carbon emission from new build homes and is set to reshape the way we integrate renewable energy sources into our homes.

Project Delivery

Built with the future in mind, Parc Eirin demonstrates the delivery of low carbon, new homes at scale. Due to the innovative nature of the approaches and technologies used, the development had to overcome a range of challenges, including untried technology, collective energy management, limited prior knowledge across the supply chain, covid impacts and difficult site geology.

These issues were tackled through a collaborative approach in which the whole project team worked together to foster a positive approach to problem solving and value engineering in order to meet project objectives. The openness of all partners was key to successful delivery, each element of the partnership bringing unique expertise which was integral to bridging the energy performance gap. Performance was closely monitored in Phase 1 of the development, capturing good practice and areas of improvement. This knowledge was then used to inform future phases.

Parc Eirin complies with many of the standards introduced alongside the Welsh Government's Net Zero aims. The homes benefit from an energy efficient thermal building envelope as a result of superior and enhanced insulation and combines a mix of renewable energy technologies including shared Ground Source Heat Pumps, solar panels, intelligent battery storage, intelligent thermal water tanks, optional smart appliances, and electric vehicle charging points, enabling a reduction in energy use. This allows the site to generate its own energy for consumption on site and export/import from the grid. This is a grid flexibility service where the home's energy production and storage mean that import from the grid can be limited to times when it is cheaper and from predominantly renewable sources, reducing strain on the national grid while reducing residents' energy costs and carbon emissions.

Due to the low carbon solutions, home owners faced challenges receiving and understanding the new technology. A dedicated customer care team was set up to support the new home owners. The key achievement of this project was feedback from residents of their happiness and comfort in their new low carbon homes, having quickly adapted to and fully embraced a new way of heating and running their homes.