



seroenergy

**Tirion
Homes**

PRESS RELEASE – PARC EIRIN

The Parc Eirin Project will demonstrate at scale, a model for future housing that offers consumers extra low energy bills, clean air and huge carbon savings.

The Parc Eirin project is being delivered via a partnership between Tirion Homes, Pobl Group and Sero Energy. The project will provide a high-quality mixed tenure community where all residents benefit from energy efficient homes. The development will be entirely tenure neutral fostering a true sense of community. Tirion's innovative funding model will be used to deliver properties for affordable rent and Pobl will sell homes on an outright and shared ownership basis. The project exemplifies how collaboration can make a significant contribution to addressing housing need and fuel poverty.

The 15-acre site is situated about 2.5km south of Gilfach Goch and 3km west of Tonyrefail, at the head of the Ely Valley and will cater for 225 homes for rent and sale. The project was awarded planning consent in 2015 and has subsequently been proposed as an innovative development integrating low carbon technology seamlessly into the building fabric. The project has been awarded funding through the Welsh Government's Innovative Housing Programme to demonstrate and promote a new scalable housing model for Wales

Site preparation works are complete and house construction is planned to commence in August 2019. Morganstone has been appointed through a design and build contract to deliver these innovative new homes.

Tirion Homes and Pobl, in partnership with Sero Energy, will deliver low energy systems for the entire site which includes ground source heat pumps, photovoltaics, energy storage and smart electric vehicle charging. Tirion is seeking to prove the commercial proposition of low energy housing using innovative long-term investment structures. Tirion will roll out the technologies across their other projects once the commercial proposition has been proven at Parc Eirin and there is sufficient capacity in the required supply chains.

For Pobl Group this builds on the success of Loftus Garden Village: a mixed tenure development in Newport that's proved universally popular with renters and buyers. Parc Eirin is of a similar scale and will have the added benefit of the energy efficiency enhancements.

The project's overall goal is to provide high quality affordable homes, to save people money on their energy bills, reduce carbon in operation and help reduce stress on the National Grid to help support it to use more renewable power generally. The project will be driven by a combination of high efficiency housing design, on site renewable energy generation, energy storage and smart interactions with the National Grid and emerging Distribution System Operator. To achieve this, the homes' energy will be intelligently managed by Sero Energy utilising active energy management systems that optimise performance 24 hours a day. Whilst this management will be practically imperceptible to the occupants, Sero Energy will be able to manage system flexibility with the Grid, allowing them to help match the homes' energy demands to the National Grid's energy generation. This will help reduce carbon emissions whilst reducing the cost of the energy to occupants through a combination of buying energy at cheaper time and opening up the benefits from grid

balancing payments. Together this allows savings to be passed on to the occupants to drive their fuel bills down. The project will demonstrate that a more sophisticated understanding of the times of day when energy demands and generation occur, together with energy storage solutions, can likely yield better overall results.

James Williams, Managing Director of Sero Energy makes reference to recent political ambition to reduce carbon emissions: "The recent net zero carbon emissions target set by both Welsh Government and UK Government will require a dramatic change in our approach to energy in housing, Parc Eirin will demonstrate how we can better complement the electricity network as it moves to more intermittent, low carbon energy sources such as wind and solar".

Rhys Parry, Director of Development at Pobl, explains how this development is an important one on many levels: "The development at Parc Eirin will be the largest of its kind in the UK and Pobl's first in Rhondda Cynon Taff. It's a project we're all extremely excited about; the partnership is allowing us to increase the supply of affordable homes, and crucially they're homes that will stand the test of time; we'll become more experienced and confident in developing low carbon homes, enabling us to support the decarbonisation agenda, delivering clean growth and improving the well-being of Welsh communities."

The project is a response to the Welsh Government Carbon Agenda that aims to find innovative ways to reduce the impact of carbon emissions in the domestic sector, eradicate fuel poverty and deliver long term affordable homes. The flexibility of the development as an energy system will provide huge benefits in matching supply and demand to national renewable generation such as wind and solar, leading to greater deployment of these technologies.

Parc Eirin sits within beautiful surroundings where residents will walk out of their front doors and straight into the breath-taking hills and mountains of South Wales. Located in the region's historic industrial heartland, the site enjoys a surprising level of seclusion and tranquillity. Once developed, it will deliver high-quality low energy homes and a vibrant community, accessible to a large proportion of the population.

TESTIMONIALS

"Western Power Distribution (WPD) is delighted to be partnering Pobl and Sero Homes in the Parc Eirin project which provides the first example of the Low Carbon Technology connected homes that are expected to be seen in the future. WPD's role is to build and maintain an electricity network which is sufficient for today's demands and the emerging demands of the future.

One key area for WPD is the final service cable which takes electricity from the street into the home, and this project will allow WPD to trial / demonstrate the increased capacity this cable has to offer via better connectivity, in simple terms a sort of "superfast electricity" to use the broadband analogy."

Peter White, WPD Policy Engineer.

"Principality has worked with Tirion as a commercial lender on The Mill but Wales' largest Building Society acknowledges that future retail mortgage lending should place a greater emphasis on broader levels of affordability including energy costs / efficiency. To that end we will be working hard with Pobl Living and Sero Energy to develop a green mortgage product which shines a torch into this emerging area."

Peter Hughes, Managing Director, Commercial, Principality Building Society.

NOTES TO EDITORS

The Welsh Government Innovative Housing Programme

<https://gov.wales/topics/housing-and-regeneration/housing-supply/innovative-housing-programme/?lang=en>

The affordable housing projects delivering the houses of the future.

The programme aims to create demonstrator schemes to help inform us about the type of homes we should support in the future. The Programme, which is funded by £90m over three years, seeks to stimulate the design and delivery of new quality, affordable homes to:

- increase supply as part of the 20,000 target
- speed up delivery of homes to the market
- trial new housing models and methods of delivery that address issues such as pressing housing need; fuel poverty; demographic change; help carbon reduction targets
- prove the replicability of innovative housing models.

PROJECT PARTNERS

Pobl Group – (www.poblgroup.co.uk, @poblgroup) Pobl is the largest RSL in Wales with over 16,500 homes in management and a turnover of over £135 million. Pobl has a development target of 600 new homes per year and is also a significant provider of care and support services across Wales and south west England.

Tirion Homes – (www.tirionhomes.co.uk, @tirionhomes) Tirion Homes is an independent, not for profit residential developer, investor and estate manager owned by a registered charity, providing affordable homes for rent at a discounted rate.

Sero Energy

(www.SeroEnergy.com, @sero_energy)

Sero Energy is an energy service offering the UK's first comfort-based energy model (i.e. no kWh), simultaneously providing customers with lower energy bills whilst providing domestic Demand Side Response (DSR) services to the National Grid.

- Sero Energy works primarily with developers and landlords to assist them through the unfamiliar elements of enhancing their homes to include low/zero carbon technologies and enables them to have background smart energy management systems installed. These typically include energy storage, renewable generation, low carbon heating as well as electric vehicle charging.
- Once operational, the residential customer pays Sero Energy a fixed monthly energy bill based on selected preferences such as their choices of room temperature, water habits and lifestyle. Sero Energy monitor and operate the core systems in the home to deliver these preferences in the most cost or carbon efficient fashion (the customer can choose which), using weather, behaviour patterns and many more factors to inform self-learning algorithms that run the home energy management.
- Sero Energy's model takes the home into an aggregated energy model that can access the commercial half hourly tariffs from strategic licensed supplier partners that vary throughout the day and year. Through forecasting and demand shifting, the customer benefits from a lower bill than would be possible with any traditional residential energy tariff (these have flat energy prices throughout the day).
- This complexity is managed by Sero Energy, with the customer simply setting familiar lifestyle preferences that, provided they remain reasonably aligned, gives them a fixed, lower energy bill.

Sero Energy is led by Managing Director James Williams, who has considerable experience in the renewable energy markets and has led the development of large scale renewable energy plants, with Director of Design & Innovation Andy Sutton, an architect with considerable experience in zero carbon development. They lead a growing team currently operating primarily in South Wales but with ambitions to expand across the UK.

FLATLINE PROJECT – A project funded by the department of Business, Energy & Industrial Strategy (BEIS) of which Sero Energy is the lead applicant. See our website for more information
<http://www.seroenergy.com/flatline-project/>