

A MODEL FOR
SUSTAINABLE
COMMUNITY
ENERGY

TRENT BASIN



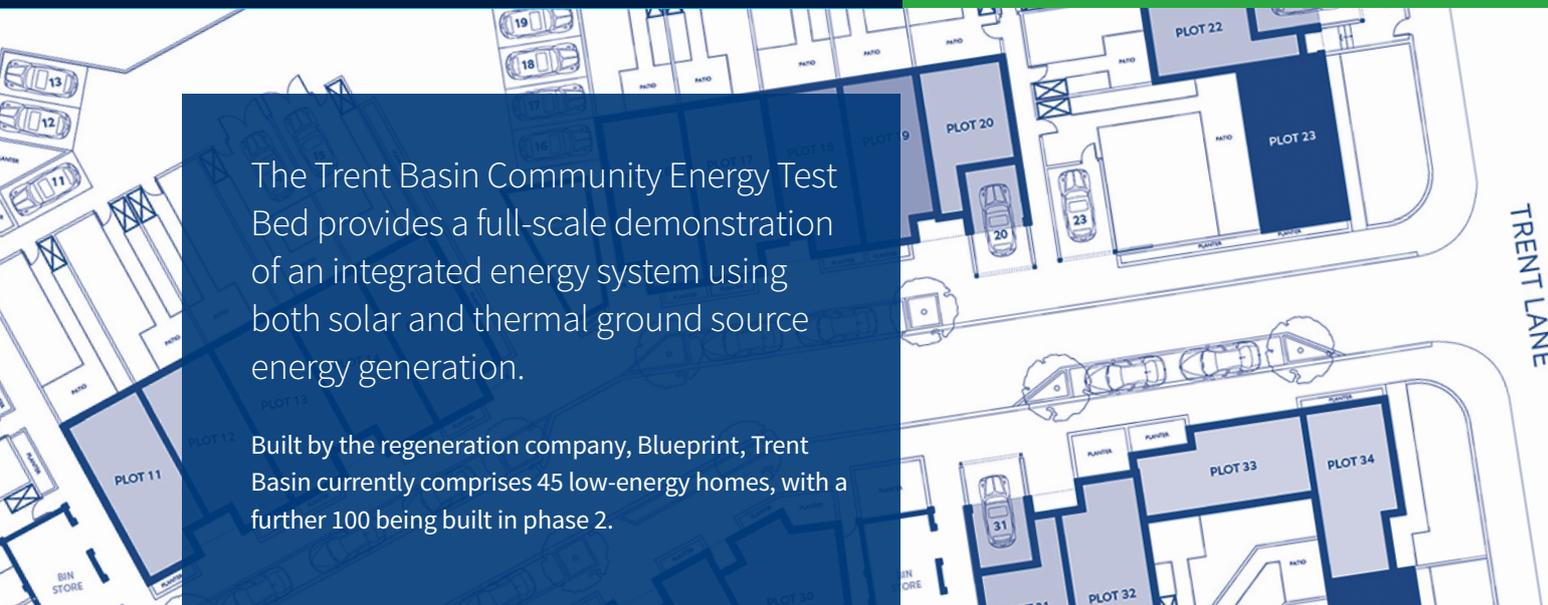
COMMUNITY ENERGY TEST BED

A GROUND BREAKING PILOT PROJECT

£3m of funding

FROM ERA

The Energy Research Accelerator



The Trent Basin Community Energy Test Bed provides a full-scale demonstration of an integrated energy system using both solar and thermal ground source energy generation.

Built by the regeneration company, Blueprint, Trent Basin currently comprises 45 low-energy homes, with a further 100 being built in phase 2.

HOW IT WORKS

Residents that opt into the scheme will have photovoltaic panels installed on their roofs, and will be provided with smart meters and voice controlled speakers for access to live data on energy generated and consumed. An urban solar panel farm will also be installed on the areas of the site yet to be developed, and, as houses are built, these panels will be transferred to each home.

Subsequent investment in the site includes ground source heat-pumps which will generate heat for local storage, distribution and use. Clean, green energy for the pumps will be sourced from the photovoltaic panels and community battery.

There is a need to find ways to store energy, typically at night when demand is slack, smoothing out the peaks and troughs of supply and demand. Trent Basin's distribution system will be connected to the grid. This means that in addition to being able to store energy generated from local renewable sources, the community battery can also be used to provide services to benefit the national grid, such as feeding energy into the grid to meet demand at peaks times.



Solar photovoltaics will generate clean renewable energy on site for storage, distribution and use.

THE PARTNERSHIP

The project involves a consortium of partners. In addition to the Energy Research Accelerator, other partners include Innovate UK's Project SCENe, Blueprint, the University of Nottingham, Loughborough University, AT Kearney, SmartKlub, Siemens, URBED, Slam Jam, Sticky World, Solar Ready. The project is also supported by Nottingham City Council.





Powered by
**Europe's
largest
community
battery** (2MWh)

THE IMPACT

The aim of the Trent Basin Community Energy project is to demonstrate how it is possible to provide a practical solution which can minimise the use of fossil fuel generated energy, lower energy costs and reduce carbon emissions.

The data gathered will enable the energy system to be optimised and made ready for widespread deployment in community energy schemes.

This unique project, the first of its kind in the UK, has the potential to make a huge impact on the country's energy sector for decades to come, by providing cheap renewable energy to communities.

ERA's aim is to demonstrate that the technology and associated business models are commercially viable, acting as a blueprint for other community energy schemes around the UK.

The Trent Basin project is informed by research undertaken at the Creative Energy Homes at the University of Nottingham.



ABOUT US

ERA is an Innovate UK funded programme within Midlands Innovation. ERA involves a consortium of six midlands based research intensive universities, together with the British Geological Survey, who are harnessing the Midlands' combined research excellence and industry expertise to play a critical role in tackling some of the biggest energy challenges facing the UK.

CONTACT US

ERA welcomes engagement with research, industry and policy-makers across the energy sector.

For more information visit:

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Over
40
industrial
partners

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industrial
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1,000
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