



# BARNESVILLE CLOSE

## A pilot project

EnveoVent is an insulated structural system offering a full-wall solution with internal plasterboard, insulated timber panel, and lightweight external façade system, plus a choice of internal and external finishes.





## OFFSITE SOCIAL HOUSING SOLUTION DELIVERS SPEED AND SUSTAINABILITY

The UK faces a triple challenge to tackle the severe affordable housing shortage, cut carbon emissions, and ramp up housebuilding to meet the government's target of 1.5 million homes in the next five years.

These issues are felt acutely in the social housing sector, where more than 1.3 million families are currently waiting for a home. Government figures show a total loss of 177,487 social homes in the last ten years.

A shortage of skilled labour for traditional housebuilding adds to the challenge of building enough new homes. At the same time, we urgently need to reduce carbon emissions in the built environment and construction sector, which accounts for 38% globally.



From the residents' perspective, new rising energy costs are continuing to add pressure, leaving many families struggling to heat their homes. Properties that are more energy efficient and inexpensive to heat are also set to become a legal requirement in 2025.

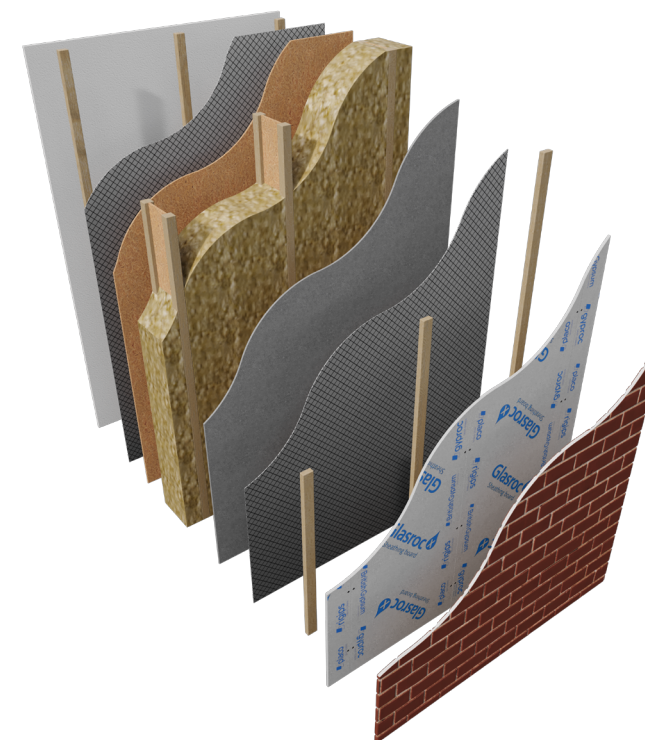
Recognising these issues, Saint-Gobain developed EnveoVent – a complete structural external wall system, manufactured offsite and designed to provide high-quality, sustainable housing faster and more efficiently.

## A PILOT PROJECT FOR NEW SOCIAL HOUSING

Midland Heart is one of the Midlands' largest housing associations. With an estate of 35,000 homes, the organisation has committed to delivering a further 2,250 affordable homes by 2030.

"There is a shortfall of decent, affordable homes across the UK, and the Midlands is no exception," explains **Tony Hopkin**, Head of Development at **Midland Heart**. "We want to play our part in reducing the housing shortage by building the quality, affordable homes that our region desperately needs."

Looking for new approaches to this challenge, Midland Heart teamed with Saint-Gobain Off-Site Solutions (OSS) and contractor TR Partnership Homes to pilot Saint-Gobain's through-the-wall solution, EnveoVent, at Barnesville Close in Small Heath, Birmingham. The new development of 12, two- and three-bedroom energy-efficient homes has been built to meet and exceed the upcoming Future Homes Standard – a set of new regulations requiring significant improvements in energy efficiency. As a result, residents move into warmer homes that are less expensive to heat.



## AN OFFSITE SOLUTION FOR SAFETY, QUALITY AND EFFICIENCY

EnveoVent is a collaboration of five Saint-Gobain brands – British Gypsum, Isover, Weber, Scotframe, and Okarno – and is the first fully tested solution of its type from a single manufacturer. This insulated structural system offers a full-wall solution with internal plasterboard, insulated timber panel, and lightweight external façade system, plus a choice of internal and external finishes.

Manufacturing panels in a controlled environment means Saint-Gobain can ensure consistent quality, reduced waste, and faster project timelines.

On site, once the concrete slab is laid, each EnveoVent panel is craned into place, reducing the time to build a wind and watertight shell to as little as six days, compared with 12-16 weeks for a traditional masonry build.

Used for low-rise buildings of up to three storeys or 11 metres, the offsite solution also delivers significant on-site safety benefits, cutting the time spent working at height and the number of trades working in a single location at once.

*With EnveoVent, we've created a solution that not only meets today's housing challenges but also prepares us for the future. It's about building better homes, faster, while also making a real difference for communities.*

**Lauren Arthur**, Solutions Manager at Saint-Gobain, outlines the ethos behind EnveoVent.







## MODERN METHODS OF CONSTRUCTION FOR HOUSEBUILDING

For small and regional housebuilders, often constrained by limited resources, offsite solutions like EnveoVent can help them compete more easily with larger developers.

**Steve Thompson**, Director at **TR Partnership Homes** explained why the speed of build at Barnesville Close was a key factor for Midland Heart, which needed to complete the development in a short timescale to meet Homes England Affordable Housing Grant funding requirements.

Traditional builds take weeks to get to the same stage, with weather delays, material shortages, and complex logistics slowing progress. With EnveoVent, using a timber-frame structure, we had homes going up within a week, which was not only faster but also safer and cleaner for everyone involved. Moreover, the tender requirements meant that we needed to complete the build by March 2025 and EnveoVent was the only solution that allowed us to meet that tight timescale.

The Barnesville Close project is in a residential area with narrow roads, tight access and a limited construction footprint. By building with panels in a shorter timeframe, these challenges were minimised throughout the build.

*Traditional builds take weeks to get to the same stage, with weather delays, material shortages, and complex logistics slowing progress.*

## SAVING ENERGY AND RESOURCES

The properties have been designed to meet and exceed the Future Homes Standard to provide well-insulated homes that stay warmer for longer. Each also includes an air source heat pump and solar panels.

“With traditional building methods, there are so many ways to achieve building regulations and SAP (standard assessment procedures) requirements for energy efficiency, which means it can be very complex,” continues Steve.

*It becomes far more straightforward to hit the Future Homes Standard using EnveoVent.*

**Gemma Davey**, Development Manager at **Midland Heart**, describes the impact of greater energy efficiency on residents:

“Affordability is about more than just rent – it’s about ensuring homes are energy-efficient and cheaper to run. EnveoVent offers superior thermal performance, keeping residents warm while reducing their energy bills. It means we can give people homes they can truly afford to live in.”

EnveoVent has a high thermal performance with U-values of 0.16 to 0.13 W/m<sup>2</sup>K that meet and exceed the proposed 0.18 W/m<sup>2</sup>K under the Future Homes Standard. The solution was trialled in eHome2 at the University of Salford, with tests showing the home could be heated constantly via air source heat pump for as little as £2.83/day\*.

Using more recycled products and more sustainable mineral wool insulation, EnveoVent is also lower in embodied CO<sub>2</sub> compared to traditional masonry construction.

*There is a desperate need for more housing in our region, and delivering homes at pace is critical.*

says Steve. “Offsite construction allows us to build more efficiently and safely, while still maintaining the high standards our residents expect. It allows us to deliver quality homes faster and more cost-effectively, particularly on smaller parcels of land where traditional methods would be too slow or expensive.



## A DIGITAL JOURNEY

EnveoVent's use of prefabricated panels also supports the Golden Thread of information required under the Building Safety Act 2022. By providing a complete digital record of the materials and processes used, EnveoVent ensures transparency and accountability throughout the lifecycle of each home, with details on products, testing and accreditations.

Gemma explains why this is important to housing providers: "EnveoVent offers housebuilders and social housing providers the reassurance of a high-performing, tried and tested product, designed and delivered by a single source/manufacturer with a digital trail of products used".

*This means we can be confident that there have been no site-based design or product changes that could impact on the quality and safety of the home being built.*

## A SCALABLE SOLUTION FOR THE FUTURE

Following the success of Barnesville Close, Midland Heart plans to replicate the system across future projects, while TR Partnership Homes has embraced offsite construction as a core part of its business strategy. The scalability of EnveoVent, suitable for developments of 10 to 500 homes, ensures its potential to address the UK's housing needs on a national scale.

Saint-Gobain UK & Ireland Chief Financial Officer, **Nick Cammack** said: "This is a Saint-Gobain first in the UK. We are incredibly proud to be launching a complete wall solution that has been rigorously tested as a system to deliver the required levels of fire, acoustic and thermal performance.

*EnveoVent demonstrates our commitment to lightweight construction methods and our clear purpose to make the world a better home.*



### Sources:

[www.saint-gobain.co.uk/enveovent](http://www.saint-gobain.co.uk/enveovent)

Carbon emissions

Social housing waiting list

\*Heat pump study



Saint-Gobain House,  
East Leake, Loughborough,  
Leicestershire, LE12 6JU

[sgukinfo@saint-gobain.com](mailto:sgukinfo@saint-gobain.com)  
[www.saint-gobain.co.uk](http://www.saint-gobain.co.uk)