References

Flagship Homes project



Uponor involvement

- Uponor's pre-insulated pipe, Ecoflex, was specified due to its market leading thermal capabilities, making it ideal for meeting the project's demanding energy efficiency requirements while also providing a solution that was quick and easy to install
- During the consultancy stage of the project, Uponor advised that its plastic Q&E fittings should be specified instead of traditional brass alternatives, delivering substantial cost savings for the client, with no sacrifice on quality or performance
- The project was delivered on time and to a high standard, resulting in carbon emissions being cut by 70% and a significant reduction in energy bills for all tenants ground-breaking district heating network for a Flagship Homes development in Felixstowe

Flagship Homes project

Uponor products help ensure landmark district heating scheme cuts carbon emissions and reduces energy bills for residents. Uponor has supplied energy efficient piping solutions to renewable heating expert, Finn Geotherm, for use in housing association, Flagship Homes', ground-breaking development. Located in Felixstowe, the £1.4 million renewable heating project has transformed the way residents heat their homes and receive hot water, and dramatically cut heating bills and carbon emissions for more than 100 houses, flats and bungalows.

By installing six large scale district heating systems and Uponor piping, residents are now enjoying substantially cheaper heating bills – paying around 70% less than before. Energy use has also been cut by 70%, making a significant impact on carbon emissions and providing a more affordable and efficient living environment.

Owned and operated by Finn Geotherm in partnership with Flagship Homes, the new six-phase district heating scheme is the largest in the region. The piping solutions specified needed to be high performance to ensure no leakage and that the integrity of the distribution system would remain as efficient in 30 years as it was when installed.

Project Facts:

Location	Completion
Suffolk, United Kingdom	2021

Building Type

Single family home

Project Type

Renovation

Partners

Contractor:
Finn Geotherm
Client:
Flagship Homes

Design, specification and installation

Since it was founded in 2006, Finn Geotherm has used Uponor insulated piping for many of its projects where underground insulated piping has been required to link heat pump systems to the buildings they have been designed to heat.
For the Flagship Homes project, where previously the 113 houses, flats and bungalows on Runnacles Way, plus two private residences, had been heating their homes using expensive and inefficient electric storage heaters, maximising energy efficiency was key. Therefore, Finn Geotherm was challenged with specifying a solution that they were confident would minimise energy and heat loss as the water travelled through the pipes into individual properties.
This is always an important factor, but with large district heating schemes which link standalone plant rooms to multiple houses across large developments, this is essential. Due to its previous experience working with Uponor, Finn Geotherm had the trust and assurance that Ecoflex pre-insulated pipe system would deliver the right solution for this project.
At the offset of the project, Uponor provided consultancy to ensure that the design of the district heating systems and linking pipework would provide the required quality of heat to all 100+ houses on the development. At this stage, Uponor also advised that the project utilised plastic Q&E fittings to connect the pipework into each individual property, instead of the traditional brass alternatives which had been specified. With a high number of connections required across the project, opting for plastic fittings instead of brass resulted in significant cost savings for the client, with no sacrifice on quality or performance.
In total, around 700m of Uponor's pre-insulated Ecoflex pipe was used to link the district heating systems to each individual property. By combining market leading thermal performance with high flexibility properties and easy installation, the product was ideal for meeting the project's unique requirements.
The project did not come without challenges. All of the primary pipework had to be installed beneath roadways, parking areas, paths and gardens, whilst the residents remained in situ. The installation of the pipework through hundreds of metres of frequently reinforced concrete was a labour intensive and time-consuming task – all the more interesting when tight time scales had to be achieved for project completion notwithstanding the constraints of working during the COVID-19 pandemic.
Despite these challenges, however, the primary pipework was completed on time and to a high standard, with the quality of Uponor's Ecoflex piping and Q&E fittings helping to ensure system integrity for over 30 years. Importantly, the heating system has resulted in a reduction in carbon emissions by 70% as well as reduced energy bills for residents by the same percentage, providing a more affordable, sustainable and efficient living environment.

Benefits

- Improving energy efficiency was a primary consideration for the project. By using Uponor's pre-insulated Ecoflex pipe system and Q&E fittings, any distribution losses were minimised and Finn Geotherm could have complete confidence that the integrity of the distribution system will not be jeopardised
- Residents have seen a 70% reduction in their bills, helping to reduce fuel poverty and encouraging them to heat their homes, positively impacting on their health and wellbeing
- Carbon emissions have also been cut by 70% when compared to the previous storage heater system
- Because of the success of this ground-breaking development, Flagship Homes plans to roll out this approach across more of its sites

Flagship Homes project







"We used Uponor's EcoFlex system on this project as we found it to be the ideal solution to minimise heat loss through the piping system and achieve our energy efficiency goals. The experts at Uponor provide excellent technical assistance, suitable products and design input for our projects,

guaranteeing maximum benefit and longevity.”
David Alston, Technical Director at Fin Geotherm

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