



Spotlight on Orbit's

Stratford-on-Avon
decarbonisation project



This £3.6 million project, which has received £1.45 million in government funding, is making 69 homes in the Stratford area more energy efficient. The scheme is part of the government's SHDF Demonstrator, a UK-wide scheme which will upgrade around 2,000 social homes currently EPC rating D or below using a whole house retrofit approach.

Alongside the SHDF fund, Orbit is investing a further £2.2 million into the project to help better understand the scale of the challenge ahead and explore the impact of selected sustainable technologies in a retrofit application. Jeanette Hodges, Head of Carbon and Operations at Orbit, shares her learnings from the project, outlining the practical challenges of achieving net zero carbon emissions.

Jeanette Hodges, Head of Carbon and Operations at Orbit

November 2021



“This project involves a large programme of works being delivered in one go. It includes hard to treat homes, for example homes with solid walls and bungalows which have a high external gross to net internal area, and commits to a whole house retrofit while customers remain living in their home.

The works can be disruptive for customers with this approach, as the energy efficiency measures we install include external wall insulation, floor insulation, replacing doors and windows, as well as new systems and smart heating controls, with renewable technologies as required. But, so far, no-one has dropped out of the project or complained about the hassle or complexity involved. Customers are looking forward to the benefits of a warmer, more affordable home that will also be better ventilated and cooler in the Summer months.

A hugely important element of the project will be explaining and providing support on the systems we are installing and ensuring that the technology and the advice provided is tailored, intuitive and simple. Critical for our customers is what the changes look like, how the technology - such as smart thermostats - works, and how their energy bills will be impacted.

Working with us on this project is ‘Act on Energy’ (AoE), a locally-based independent energy advice charity, which is providing our customers with support throughout the project. The AoE teams are explaining benefits of the work and listening to and feeding back any concerns or issues that customers are experiencing with their homes before the works are completed such as draughty windows or doors. They’re also undertaking home visits to demonstrate the technology, sharing instructional videos and providing energy saving advice to lessen bills, and have a telephone helpline for customers and online support.

This engagement is so important in ensuring customers are supported both throughout the process and in the subsequent ongoing usage of the new technology. One consequence that’s already been observed by the sector is that, either from a lack of understanding of how to use the technology or because affordability issues are eased, customers can leave the heating on for longer or turn the levels up higher, which can mean there is then little change in the cost of their heating bills. This is something that we will be monitoring at the end of the project as well as undertaking research to explore the different ways in which customers understand or interpret thermal comfort.”

Planning critical to success

“The project, which got underway in the early months of 2021, began with a thorough property assessment and the creation of a medium to long-term plan for each individual home. This was key because there were some real challenges to be overcome that we weren’t aware of prior to commencing the project, such as poorly fitted conservatories and ‘lean to’s. Some homes also had small passageways running between properties, which made external wall insulation impossible due to reduced accessibility.

Also challenging has been managing the implications of local authority planning requirements. Looking after our built heritage is a key concern and this particular project includes a mix of 69 properties set within 75 designated conservation areas, areas of outstanding natural interest and over 3,000 listed buildings.

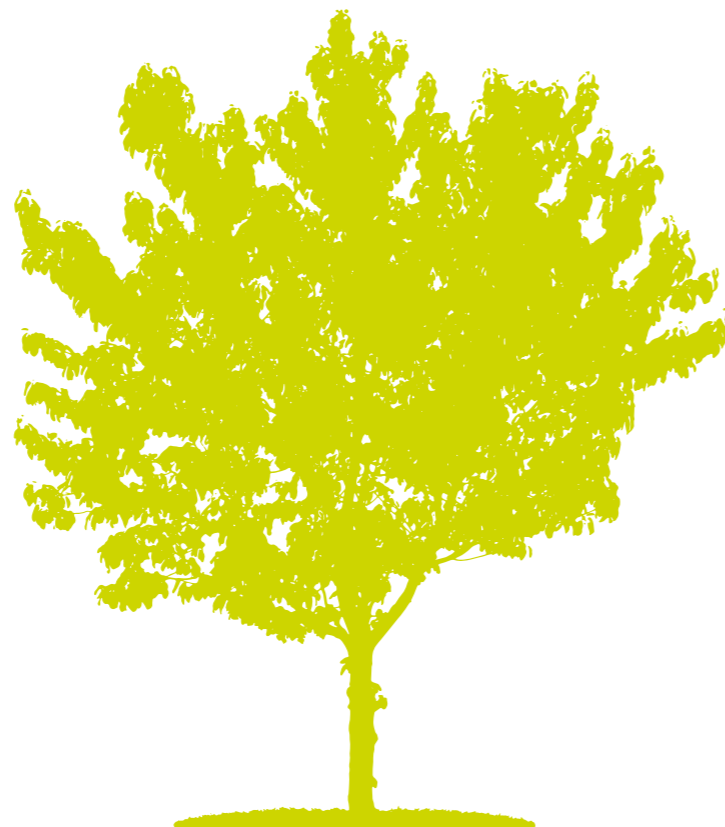
Because of this, Stratford-on-Avon planning department has required full planning applications or lawful development certificates for the majority of the work, and in many properties a brick effect render or brick slips for the external wall insulation has been required, all of which has impacted project timelines and costs.

Demonstrating how we scale up the work and drive efficiencies are both key project criterion set by BEIS, and the lessons being learned from this pilot project are proving to be significant. Understandably planning has to be approached with sensitivity - especially in designated conservation areas - but local planning requirements can add another layer of complexity, creating delays and cost implications which could prove prohibitive and clog up the already overloaded planning system. We need to look at how we make the process simpler for both parties, for example potentially creating a ‘permitted development right’ for these works to alleviate planning delays.”

Market variables

“Whilst the Stratford-on-Avon demonstrator project is one of 19 projects around the country, it is one of the very few which has been launched from scratch in 2021 and has therefore perhaps had the most experience of the impact of market dynamics on its delivery.

The supply chain is under particular stress as a result of the pandemic, BREXIT and a number of government-funded large projects, such as HS2, coming together at the same time, all of which has impacted materials and resources. Shortages have resulted in price increases of between 30% to 80%, with the average cost of an ASHP nearly doubling. These stresses in the supply chain have also caused delays and our original project completion deadline became unfeasible. We have worked with the Department for Business, Energy and Industrial Strategy (BEIS) who are co-funding the project to overcome these challenges and this has meant an agreed change to timescales and scope.”



Consistency

“There are also growing problems in identifying steady and secure funding. The average cost of the retrofit works in the trial, which includes insulation and ventilation, is £40,000 for each individual property, with the annual energy demand for each of these newly insulated properties targeted at 50 kWh per square metre per annum, a 75% reduction on the annual figure for the average Orbit home. Baseline modelling indicates that £600 million may be required to retrofit the entire Orbit property portfolio to these energy efficient standards, and this will all need to be achieved in what is, in the short-term, a volatile market.

Whilst there continue to be a number of extraordinary factors which have come together to impact this project, we need greater consistency on funding timelines, messaging and contract length to

support delivery. Markets and supply chains don’t like uncertainty and contractors will price risk in or ‘opt out ‘of projects if there are easier, longer or less complex contracts elsewhere.

Consistency is also needed around VAT. Local authorities have different rules to housing associations, which adds a layer of complexity to government funding. VAT varies from 5 - 20% depending on the goods being procured. Additionally retrofit works do not benefit from the tax breaks received by the new build market. Overall, we believe that there are clear and positive benefits from creating a simple and set process for retrofitting homes, for example, a government policy that supported 0% VAT on measures delivering net zero carbon works would reduce red tape and simplify the process for all parties.”

Key recommendations from the learnings so far:

- Developing a communications approach in conjunction with customers which puts customer engagement at the heart of the retrofit programme
- Sectoral collaboration to create a simple and set process for retrofitting homes, maximising cost savings and consistency
- Planning guidance to ensure a consistent approach and minimise complexity
- Technology should be intuitive and simple to use
- Clarity over government funding commitments
- Availability of longer-term funding tranches to provide market confidence and support delivery
- The creation of a national retrofit strategy which considers VAT and market dynamics to support delivery at scale
- Collaboration across the sector to create the right market supply and demand conditions and generate long-term public and supply chain confidence in the retrofitting homes agenda.



Note to editors

Orbit is one of the UK's foremost housing groups creating thriving communities within a growing portfolio of over 45,500 affordable and social rent homes largely throughout the Midlands, East and South of England. For over 50 years we've been a force for positive changes, particularly during the country's continuing housing and residential challenges.

We manage a portfolio of high quality, sustainable homes to over 100,000 customers in differing stages of life, from first timers to enhanced supported living, and are one of the largest builders of affordable homes in the UK.

Our vision is to lead in building thriving communities, and we believe everyone is entitled to a good quality home that they can afford in a place that they are proud to live.

We invest over £5 million each year in our communities to make a positive difference in people's lives. Through our social value programme we work to create a better society, building affordable homes and doing business in more socially responsible and sustainable ways while lessening the impact we have on our environment, customers, employees, partners, suppliers, investors, and funders.

Orbit's dedication to providing value to its customers and employees has won recognition in the Sunday Times Top 100 Best Companies to Work For in the not-for-profit sector. We have been awarded RoSPA (Royal Society for the Prevention of Accidents) Gold awards for health and safety and customer safety for the last three consecutive years, and are proud to have achieved BS9997, fire risk management system (FRMS).



orbitgroup.org.uk



[Orbit Group](https://www.linkedin.com/company/orbit-group)



[@OrbitGroup](https://twitter.com/OrbitGroup)