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Cosy Homes Oxfordshire is a whole house retrofit service aiming to make it simple for homeowners in Oxfordshire to improve energy efficiency in their homes.

The service has been in pilot phase for two years (2019-2021), funded by the UK Department of Business, Energy, and Industrial Strategy (BEIS). This funding has allowed us to design and test an end-to-end domestic whole house retrofit service for the able-to-pay market in Oxfordshire, building on existing experience of this model from project partner RetrofitWorks.

1. A whole house approach
Taking a fabric first, whole house approach to bring the house as close to net zero emissions as possible through a Whole House Plan. This ensures improvements are working together to make the house as efficient as possible, which piecemeal improvements cannot achieve, including taking factors such as damp, ventilation, and air quality into consideration.

2. Project coordination
The service includes coordination and project management of the entire home retrofit by the Cosy Homes team and expert Retrofit Coordinators, from start to finish. This includes working with trusted and vetted contractors, and quality assurance to check the delivery and anticipated savings.

3. Building the local low carbon economy
Throughout the pilot phase we have been building up our network of trusted contractors to deliver work. Wherever possible we work with contractors based in Oxfordshire, supporting the local economy and reducing travel. We also prioritise suppliers using environmentally friendly materials to ensure our service is low carbon throughout.

4. Community partnerships
Project partner the Low Carbon Hub already had strong ties with local community groups, including their 30+ Community Shareholders. This network of motivated communities was the main channel for building up demand from homeowners and gaining feedback, with a number of groups becoming Cosy Homes Oxfordshire community advocates.

5. Private rental
Alongside the core focus of building up the able-to-pay homeowner market for retrofit in Oxfordshire, the pilot also included a private rental strand aiming to work with landlords to increase the uptake of energy efficiency measures across privately rented properties. This was led by the National Energy Foundation.
The Oxfordshire Energy Strategy was published in 2019, led by OxLEP in collaboration with others. It lays out a framework to enable Oxfordshire to deliver carbon emission reductions whilst also being at the forefront of energy innovation to foster clean growth.

As part of the objective to reduce energy demand and improve energy efficiency, the Strategy includes the need to retrofit 4,000 homes in Oxfordshire every year until 2030 in order to meet emissions reduction targets – building on the aspiration within the government’s Clean Growth Strategy to retrofit as many homes as possible by 2035. The Strategy also cites the need for a retrofit programme to deliver this.

"The pathway to a low carbon future set out in our greenhouse gas emission projections, assumes that by 2030 4,000 existing homes must be renovated every year to reduce energy requirements to 60 kWh / m2 per year. To meet this, or an equivalent ambition, will require a coherent retrofit programme to bring all homes in the county up to a minimum of EPC band C by 2035."

The need for retrofit was clear, as was the ambition within Oxfordshire. But, current levels of housing retrofit activity were low, and no such coherent retrofit programme existed.
The pilot phase of Cosy Homes Oxfordshire (2019-21) is just the beginning of our journey to create a robust business model for delivering home retrofit that works for both homeowners and contractors - but we’re proud of how far we’ve come and what we’ve achieved over the first two years of that journey.

**What we’ve delivered**
- 548 homes registered
- 233 home assessments
- 220 Whole House Plans
- 23 retrofits in progress

**Who we’ve reached**
- 9335 website visits
- 882 social media followers
- 552 newsletter subscribers
- 12 advocate groups

**Carbon savings to date**
- 2 retrofits completed
- 5 tonnes CO₂ saved

**Supply chain impact**
- 9 Retrofit Coordinators
- 95 Trusted Contractors

**Other pilot outputs**

**The Cosy Homes process**
- Cosy Homes Plan Builder (developed by Parity Projects)
- Whole House Plan template
- Client Service Agreement template
- Building Performance Specification template.

**Marketing resources**

**Video**
- How retrofit can transform a cold, draughty home (animation)
- How to heat your home without oil or gas (animation)
- The importance of retrofit in the climate emergency
- Behind-the-scenes at a home assessment
- 3x home retrofit case study
- 5x webinar recording.

**Digital material**
- 2x home retrofit case study PDF
- Interactive house tool
- 45 blogs on topics relating to home energy use and retrofit
- A suite of photography, particularly homes in Oxfordshire
- Communications pack for community groups, including cross-channel promotional material
- Rental communications pack.

**Printed material**
- A suite of printed material for use at events, including: promotional fliers for homeowners and contractors, pop-up banners, foamex model homes, branded Chilly’s bottles, and more.
Customers are more open to whole house retrofit than we expected

The whole house approach to retrofit is at the heart of the Cosy Homes Oxfordshire service, to ensure high quality retrofits that bring down carbon emissions as efficiently as possible.

This decision has only been reinforced by our findings from piloting the scheme:

- A higher number of customers than anticipated are opting for a complex mixture of multiple retrofit measures for their final project.

- Feedback from customers shows that they recognise and appreciate the high level of expertise in the recommendations given, especially in the Whole House Plan - and even if they only carry out a handful of the recommended measures, they gain a good understanding of their home's overall needs and how the measures they choose fit into this.

Initially, we were offering packages of measures such as 'greening your home' on our website, because we thought customers might find it difficult to engage with the whole house approach. Separately we had also assumed that a lack of demand for larger more complex projects might mean that we would need to start with simpler low-cost measures such as emergency boiler replacements and single, one-off retrofit measures.

As we have tested the model with real-life customers, we've found that our clients were happy to engage with the whole house approach and to use the Whole House Plan as the starting point of what combination of measures work best for their home.

At the same time, we've also come to the conclusion that delivering simpler projects or individual retrofit measures is not financially viable for us at the moment. This is because it takes a significant amount of time for a Retrofit Coordinator to coordinate any project (largely due to the fragmented supply chain for retrofit at the current time) which results in more coordination costs than a typical customer would be willing to pay on a smaller project. As it stands, a project needs to be over a value of £10,000 to be right for our scheme.

These findings have enabled us to better define our service and target audience, as well as to filter enquiries as they come in.
The key barrier to delivering home retrofit targets is the readiness of the supply chain

Throughout the pilot phase, the biggest barrier for Cosy Homes has been the readiness of the supply chain for retrofit in Oxfordshire to work in a coordinated way to deliver a whole house approach to retrofit such as ours.

It has been fairly easy to identify with specialists (such as heat pump installers) who are already engaged in the retrofit market. For generalist builders and contractors, though, we’ve found it to be difficult for them to see the potential in working with us, largely because those who come highly recommended are already extremely busy and have no need for additional customers.

This has caused issues with progressing customers through the process and matching their desired measures up with contractors. It has meant that we have had to act reactively in terms of which projects can be taken forward, depending on the measures and availability of contractors.

The launch of the Green Homes Grant scheme by the Government in 2020, with it’s very short timescales, poor administrative processes and focus on single measures, disappointingly, has only made this situation worse. For contractors, the scheme has a high amount of administration and bureaucracy involved, and there have also been payment delays which threaten the cash flow of construction businesses. Many of those who were interested in delivering retrofit projects have been completely put off by the experience.

Arguably, this is the most complicated aspect of delivering home retrofit. Other BEIS-funded pilots have stopped at this point, instead leaving homeowners to find their own contractors to deliver on the recommendations made. But, we feel it’s an important part of the service, particularly to ensure the quality of delivery.

Despite this landscape, we have made positive steps forward in the supply chain for Cosy Homes - whilst recognizing that there is more to be done. This includes:

- Employing a full-time Membership Development Manager, focused on supply chain recruitment, bringing experience from the construction industry and commercial understanding.
- Streamlining the RetrofitWorks onboarding for new contractors to remove any barrier to entry.
- Tweaking our website and sales messaging to focus more on the benefits of reduced admin and streamlining processes through becoming an approved contractor, rather than access to customers.
- Connecting with local and national projects and schemes working on solving the supply chain problem e.g. Abingdon & Witney College’s Green Construction Centre, Retrofit Get-in in Manchester.
- Hosting a Low Carbon Homes retrofit event focused on the need to build up the supply chain for retrofit in Oxfordshire – bringing together key local stakeholders and opening solutions-focused conversations.
Finding customers has been fairly easy, but progressing them from lead to project hasn’t been as straightforward.

From the start of the pilot we have had no issue with homeowner demand. Indeed, as of March 2021, we have over 550 homeowners registered with Cosy Homes, and over 50 of these on a waiting list.

Lead project partner the Low Carbon Hub already had a well embedded presence in the low carbon community of Oxfordshire. One key marketing strategy was to work with low carbon groups who we knew were keen to improve the energy efficiency of homes in their local area. They would become Cosy Homes Oxfordshire community advocate groups and would promote the service to their members, supported by our marketing team. Early on, we shifted our messaging and visuals from an initial focus on health and comfort towards the need to address the climate emergency, as it was clear this was the market we were talking to.

The level of uptake from these groups (as well as from customers who found us through our organic marketing) has been impressive. We’ve also seen considerable appetite to support the scheme from local councils and related organisations. However, we have often struggled to progress new customers. This has been due to the difficulties with the supply chain outlined previously, which have meant we’ve been unable to move some projects to delivery. It’s also because we have been in a pilot phase, and have been building our processes as a team whilst working with real customers.

The planned customer journey assumed eight weeks between a customer registering and deciding which measures to go ahead with. This hasn’t been the reality, and we have seen disappointment from some customers who expected a quicker process.

To address this, we have had to scale back our marketing through the community advocate groups at several points. We have continued to focus on educational and informative content around home retrofit, but have reduced focus on driving registrations. We’ve also been able to use the time to develop a comprehensive suite of marketing materials and content, and feel confident that we now have everything in place to continue to promote the scheme and build our pipeline of customers – once the delivery side is moving smoothly.

As of March 2021 we expect at least 12 weeks between a new customer registering and being able to book them in for a home assessment. The implementation of the free Plan Builder has helped with this, offering an initial idea of the scope of retrofit for an individual’s home before they register with us – so the customer is receiving something of valuable from the word go.

With the gift of hindsight, we could have reduced this issue through aiming to build up homeowner demand more slowly, working with one community advocate group at a time rather than starting with six groups who were all raring to go on the topic of retrofit. We would also have emphasized the fact that we were in a pilot phase. This would have allowed us to focus on building up our list of approved contractors at the same time, without causing delay for our customers. At the same time, having sufficient customer demand to appeal to contractors has also been important. It’s a careful balancing act.

We’ve also found that clear customer communications throughout the entire process are key, and that all members of the marketing and delivery team need to be aligned on this. Factors such as delays on timing, lack of contractors, points of contact etc all need careful communication to avoid frustration for the customer. This is an area we continue to work on improving.

More recently, we’ve also had to implement a waiting list – this has been particularly since the launch of the Green Homes Grant which saw an increased influx of new registrations.
Even with our service up and running, there’s a long way to go to bring down the carbon emissions from all homes in Oxfordshire

As we’ve developed Cosy Homes Oxfordshire through the pilot phase it’s become clear that there are limitations to our work. Even with our service up and running, significant gaps remain if we are to be able to retrofit all homes in our county.

We hope to explore ways to expand our service to serve these needs in the future, once we’re comfortable that the core model is functioning well and is financially sustainable. We will also continue to work collaboratively with other local organisations and schemes to identify other ways to mitigate these gaps.

**behavioural change**

Our ‘fabric first’ approach to retrofit focuses on the building itself, rather than the users and residents of this building. We therefore don’t take into account behavioral change to reduce energy consumption, which it is also important to address.

**affordability of projects**

Our service is only available for an able-to-pay market. We’ve identified that projects need to be above £10,000 in value to be viable for our business model, with our average project value being around £25,000. Homeowners would need to have access to significant amounts of capital to engage with our service.

There are other schemes in Oxfordshire providing support to those in fuel poverty who cannot afford to make any improvements to their home, such as Better Housing Better Health run by the National Energy Foundation. However, there remains a huge gap between these two provisions, and the question of how to move beyond the able-to-pay market for retrofit remains. This has been particularly tricky due to the close involvement of our community advocate groups, who tend to have a focus on inclusivity in their climate action work.

**nationwide strategy**

There is a clear need for a nationwide, long-term, government scheme to address the energy efficiency of UK homes on a wider scale. Cosy Homes Oxfordshire is one part of a large problem, and if we are to see widespread retrofit of millions of homes there must be political backing – including a commitment to building the supply chain for retrofit, and funding or access to capital for those not in the able-to-pay market.

**rental properties**

Our Private Rental Strand, aiming to engage with landlords of rental properties, has been largely unsuccessful. Although we’ve made several relevant contacts in Oxford City Council, Oxford Brookes University, Aspire and more, we are yet to engage with a landlord about improving the energy efficiency of their properties.
Getting a Hook Norton cottage off fossil fuels

Cosy Homes clients Tim and Trish live in an end-of-terrace cottage in the village of Hook Norton. The cottage dates from pre-1900, but has more modern parts at the back, where work was done in the 1970s. It had been a well-loved family home for many years, but with their children now moved out the homeowners were keen to address several issues with the building fabric. The couple were also motivated by their passion for sustainability and a desire to get their house off fossil fuels, replacing their oil-fired boiler.

Based on recommendations in their Whole House Plan, they undertook the following measures:

- Replacing a condensing oil-fired boiler and oil tank with an Air Source Heat Pump (ASHP)
- Installing a new pressured hot water system with feed in from existing solar thermal panels and the new ASHP
- Replace kitchen and install underfloor heating
- Replace material at the outside rear of the house with insulated material to reduce heat loss
- Upgrade insulation in the main bedroom, dating from 1996, to reduce heat loss
- Replace single glazed and failed double glazed windows.

EPC rating
the home began with a EPC rating D and is now an estimated B rating

Carbon emissions
the home has reduced from 5.363 tonnes of CO2 equivalent each year to 2.149 tonnes - an estimated saving of 3.2 tonnes per year.

Comfort
before the retrofit the house was cold in the winter due to draughts and a lack of insulation - it's now comfortable and warm in every room.

*Estimates based on the Whole House Plan for this home.

"We are delighted to have our lovely home back warm and comfortable and ready for the winter."
Retrofitting an end-of-terrace family home in east Oxford

Energy expert Jan Rosenow has reiterated the importance of home retrofit in the media countless times, and it was important that he practice what he preaches, reducing energy use in his own home to cut the carbon footprint.

The home dates from the 1880s, but the family had extended the ground and first floor and converted the loft soon after they moved in in 2014. This left the older areas of the home cold and draughty, whereas the newer areas were much more comfortable.

The family had already installed an Air Source Heat Pump to reduce the carbon impact of their heating system. Further work was needed to ensure the home was well-insulated and not losing heat through gaps in the building's fabric, ensuring the heat pump was as effective as possible.

Therefore, based on recommendations in their Whole House Plan, the following measures were installed through Cosy Homes:

- Wood fibre Internal Wall Insulation (IWI) was installed in the front of the house, including a bay window which was previously completely uninsulated.

- Some windows were replaced with new triple glazed windows - especially older sash windows.

- The front door was replaced to reduce draughts.

Cost savings
60% estimated savings on energy bills

Carbon emissions
2 tonnes of CO2e emissions saved every year - from 4.001t to 2.185t*

EPC rating
the home went from EPC D to EPC C

Comfort
before the retrofit the house was noticeably colder in the older parts - it's now warm and comfortable throughout.

*based on 2019 Whole House Plan estimates

If you want a proper retrofit survey and support with project management and making the right decisions, Cosy Homes Oxfordshire is the way to go.
testimonials

Cosy Homes customers

“The Whole House Plan provided a holistic view of where we could make energy saving improvements. Excellent value for money, and I have already recommended Cosy Homes to several other people!”

“I now have a road map for making my home green and cosy, and a phased plan to suit both my lifestyle and my budget. I can’t thank my Retrofit Coordinator enough for his impartial and expert advice and ensuring I avoid the pitfalls of retrofitting an old house!”

“Not only did the plan give us advice on how to proceed with our ideas to make our home better insulated, but it also gave us information and suggestions for the longer term - such as heat pumps.”

“I was delighted to hear about Cosy Homes. We had wanted to improve the thermal efficiency of our home to reduce our carbon footprint, and finding this dedicated service that provided great expertise and are able to organise & supervise contractors was brilliant.”

Cosy Homes contractors

“I wanted to be part of a retrofit movement to achieve warmer, healthier, less polluting homes for people and Cosy Homes Oxfordshire offered this. Joining as a Retrofit Coordinator has exposed me to different specialists, ideas, products, techniques etc and as a result I feel more confident in my knowledge and the advice I give. It feels great to feel part of a team working towards a common goal.”

– Natasha Ginks, Retrofit Coordinator

“Joining RetrofitWorks has helped us surpass our goals as a business, as well as setting new broader goals for the future. The ability to learn from expert Retrofit Coordinators is of great help. We have also further streamlined some of our administration processes, such as using their standardised tools for quality control on all our RetrofitWorks jobs. We’ve expanded our network, and have been able to learn at a fast pace by working with retrofit coordinators. This has provided us with the confidence to broaden the number of services we offer, so we can better support residents.”

- Andrei Tartza, Managing Director, Pioneer Wall Cladding & Building Insulation Ltd
We’re in it for the long haul

There’s a clear need for retrofit in Oxfordshire to bring down the carbon emissions of our homes and respond to the climate emergency – as well as creating jobs in the green construction sector and improving the health of our homes. Our pilot phase has proved the demand is there from homeowners.

But there is still work to be done to ensure our business model is financially sustainable without grant-funding. And there’s a huge amount of work to be done to retrofit every home in our community.

So we aren’t stopping here. Our service will continue beyond the BEIS grant-funded period which ends in March 2021, with project partners RetrofitWorks and the Low Carbon Hub continuing at risk.

Saying goodbye to the National Energy Foundation

Unfortunately, the National Energy Foundation is unable to continue as a partner as they rely on grant funding as a charity. We’re sad to say goodbye but will continue to work with them as collaborators. Particularly, we will continue to signpost our audience to their Better Housing Better Health scheme which provides funding and support for those vulnerable to the cold. We also hope to develop reciprocal links with their SuperHomes network (due to be relaunched soon) which highlights homes with the highest standards of energy efficiency.

A sustainable business model

Our focus now is to build a sustainable business model for retrofit without the need for external funding. That means a minimum of five projects completed each month – a total of 60 per year - at an average of £23,500 per project.

There are elements of the service that will change with the end of grant funding, including:

- Increasing the cost of the Whole House Plan. This was subsidised to some extent by grant funding and will need to increase in price to fully cover our costs.

- All queries which were handled by the National Energy Foundation will be handed over to the Cosy Homes office in Charlbury (run by RetrofitWorks).

- The Plan Builder will become the point of entry for customers. This will support the team with filtering new customers to make sure Cosy Homes is the right route for them, as well as reducing our admin.

- The focus will lie on getting the core delivery of the service running smoothly, meaning there will be less proactive marketing support to keep costs low – though there will be some level of support from the Low Carbon Hub team to maintain existing marketing channels and respond to any needs.

We’re excited to see how it goes.