

# Offsite Retrofit Project Birmingham



## Description:

As one of the partners of the Innovate UK initiative for 'Scaling up retrofit of the nation's homes, we were asked to retrofit two semi-detached houses to EnerPHit performance standards.

Using the innovative offsite TCosy™ system, two of Birmingham City Council's semi-detached homes were quickly and easily retrofitted, lifting the performance of the houses, reducing energy bills and making the homes a more comfortable and healthier environment for the residents to live in.

## The TCosy™ project delivered the following benefits for the council and their tenants:

- **2 houses retrofitted to Passivhaus standard** – TCosy™ achieves Passivhaus standards of build and incorporates Passivhaus Certified windows and doors and a Mechanical Heat Recovery and Ventilation system. This delivers a high performance, high quality home
- **Fast build** - the Passive Panel system was manufactured offsite and installed onsite in a few weeks
- **Limited disturbance** - residents remained in their homes for the duration of the retrofit
- **Lifting tenants out of fuel poverty** - reduced heating requirements and energy bills by up to 85%
- **Created healthier, more comfortable** homes to live in
- **A new look home** - we worked with the council to provide a new external façade. Birmingham City Council were keen that the newly retrofitted properties blended in with the other houses in the cul-de-sac
- **Regular engagement with the tenants** to ensure they understood the process and benefits of the Retrofit
- **Increased Asset Value** of the housing stock



Thermal image of the building prior to work commencement, bright colours indicate high heat losses from central heating radiators

*“Following on from the initial selection process for the two houses to be retrofitted by the Beattie Passive TCosy™ system, we will be carrying out evaluations to monitor the buildings from both the council's perspective as well as the tenants'. We can see the benefit and are fully on board with the reasons to encase or 'TCosy' a property as this reduces our building repair commitment due to a brand new exterior and changes such as removing gas fires eliminates the need and cost of annual gas checks. This system does also address our social responsibility commitments when targeting fuel poverty, which remains a major issue affecting tenants in our region.”*

Joe Muxlow - Contract Team Manager

## Interview with Birmingham City Council's Residents

The residents share their thoughts and views on the process of their newly retrofitted homes

### Elisabete - Gressel Lane Resident

**1. What was your perception of your house prior to the Retrofit.**

Before the retrofit my house was cold all the time, even with the heating on and we did not feel very comfortable living here in the winter.

**2. What was your perception of your house after the Retrofit?**

We now have a very nice atmosphere in our house. We don't need to have the heating on all the time and only need to switch the heating on once a day if it is very cold outside.

**3. How would you rate the overall performance of the house including comfort and energy?**

The overall performance after the retrofit is excellent. The house is really warm and quiet as we don't hear noise from planes anymore (house is under the flight path). We sleep very well nowadays and feel very comfortable. With the MVHR we have fresh air all the time and there are no bad smells or mold. I can't ask for more, well done good work!

**4. How did you feel living in the house when the retrofit was in progress?**

I felt very comfortable as I was in my own home and didn't have to move somewhere else during the project. I didn't have any disruption from the workmen, I was out during the day most of the time and didn't experience anything bad.

**5. What do you think the best thing is about the retrofit?**

Having a warm house and reduced energy bills is the best thing about this project. Energy is now not lost from the building and I have started to save money already, which is very important to us. Also the fact that we essentially have a new house with a new door, triple glazing, new roof and new walls. There are many good things that have happened to us. Thank you for the opportunity, there are so many changes for the better.

**6. What do you think is the worst thing about this retrofit?**

Nothing. Only minor things like the dust.

**7. Are there any matters you wish to tell us about?**

I don't have any problems, thank you very much for letting us be a part of this project. I am so grateful for everything that has been done. I am happy to live here now.

### Catherine – Gressel Lane Resident

**1. What was your perception of your house prior to the Retrofit?**

We used to be very cold and use the heating a lot, the heating didn't stay in the house for very long. To keep warm, we would often spend most of our time in the living room with blankets. Now it feels warmer. It is nice.

**2. What was your perception of your house after the Retrofit?**

Now we don't use very much heating and the rooms stay warmer for longer. We used to top up the gas all the time. Now we don't need to. It feels good and we are very happy with the house.

**3. How would you rate the overall performance of the house including comfort and energy?**

All good! Before the retrofit some of the rooms felt colder than others, now we have a nice temperature throughout the house.

**4. How did you feel living in the house when the retrofit was in progress?**

It was ok, the workmen were nice and very helpful throughout the process.

**5. What do you think the best thing is about the retrofit?**

I think the best things is that the house now looks really good outside and it is warmer.

**6. What do you think is the worst thing about this retrofit?**

I can not think of anything.



Gressel Lane Residents