

Case Study

Retrofit for Social Housing – Solihull, Birmingham



The project partners are:

- Beattie Passive - inventors of the patented TCosy™ Retrofit build system
- Encraft: energy consultants and Passivhaus designers, who are the TSB lead partner
- Coventry University: for tenant involvement and assessment
- Solihull Community Housing: a subsidiary of Solihull Metropolitan Borough Council, who own the block of 6 flats to be retrofitted.

Beattie Passive is actively involved with a project for Social Housing in the Midlands using its innovative Retrofit solution TCosy™ which provides a fast, low cost and highly replicable solution for a wide range of buildings. The TCosy™ dramatically reduces energy requirements, creates a healthier living environment and can be delivered whilst residents remain in their home.

The project has a three stage approach:

- Analysis of tenant energy usage pre-retrofit
- Retrofit of apartments block containing 6 flats
- Analysis of tenant energy usage post-retrofit

Project Background: Work to date has largely involved Coventry University who have installed monitoring equipment for the acquisition and analysis of pre-retrofit data of tenants' energy usage.

Once Beattie Passive has completed the physical TCosy™ retrofit in mid-2015, the tenants' energy usage will be re-assessed during the subsequent winter heating period.



“Beattie Passive TCosy™ are working with Solihull Community Housing to transform a block of 1960s 3-storey flats into a highly energy efficient building with a dramatically improved living environment for tenants.”

Benedict O'Halloran, Project Manager

Retrofit Stages using TCosy™:

- **Contractor completes Retrofit:** Beattie Passive certified contractors manufacture and erect the TCosy™ frame and system, fit passive standard windows and doors, install MVHR and fit external finish
- **On-site compliance checks:** Every Retrofit is tested at structural completion including structural compliance, thermal continuity testing and air testing
- **Beattie Passive Certification:** Beattie Passive undertake detailed checks to ensure the retrofit is delivered as designed
- **Completed Retrofit:** Delivering a new energy efficient, healthier, more comfortable home.



Retrofit Customer Journey

Project Benefits:



The project will deliver CO₂ savings, typically in the range 2-4t CO₂ per year per dwelling. On realistic assumptions of rapid scale up to 1000-5000 properties a year, will contribute up to 20,000t CO₂ savings a year to the national effort to reduce CO₂ emissions.



There is minimal disruption to residents as they remain in their homes for the duration of the retrofit process.



Energy bills will be dramatically reduced and residents will also benefit from an enhanced and healthier living environment.



The approach provides training and labour opportunities local to projects which will have positive impacts on social inclusion and long-term economic benefits for local communities.



The project will develop models for best practice in tenant and community engagement, ongoing liaison and feedback loops which ensure energy use is optimised but also ensures tenants and communities are happy with the outcomes of the project.

For more information on TCosy™ for the Retrofit market, visit www.beattiepassiveretrofit.com

Energy Efficiency Rating		Current	Potential
Very energy efficient - lower running costs			100
(92-100)	A		
(81-91)	B		
(69-80)	C		
(55-68)	D		
(39-54)	E		
(21-38)	F	38	
(1-20)	G		
Not energy efficient - higher running costs			
England, Scotland & Wales			EU Directive 2002/91/EC

“What every retrofit project needs is a low risk, whole building approach, capable of delivering superior thermal protection and air tightness, as well as fit for purpose heat recovery ventilation. Beattie Passive’s TCosy™ does all of this and more.”

Helen Brown: Head of Building Physics, Encraft