



Coventry Eco House

Location: Coventry

Completion Status: March 2013

Occupancy: Occupied November 2013

Architect: Pre-tender design: Vagdia & Holmes and Callingham Associates; As built design: ASD Architecture

Consultant: Encraft

Contractor: Beattie Passive Construction Ltd

Client: Orbit Homes & FORCE

Winner in Cost & Build-ability category of the UK Passivhaus Awards 2014. The Coventry ECO House project was a collaborative, learning legacy project which aimed to develop and demonstrate local capability for the design, build and operation of sustainable homes. The original vision was to engage the local supply chain in a project which sought to compare and contrast the differences between the Code for Sustainable Homes and the Passivhaus standard.



We had planned to build two detached homes, one Passivhaus and the other Code 6, but use of the Beattie Passive Build System in the end ensured that both houses achieved the stringent requirements of Passivhaus within budget. At the time of press the Code Assessment is not yet confirmed, but one of the dwellings should meet Level 6 and the other Level 4.

The project was first conceived and subsequently led by the local Forum for Constructing Excellence (FORCE). Members of FORCE and other partners involved with the project include Orbit Homes, Coventry City Council, Coventry University, Coventry City College and Coventry and Warwickshire Chamber of Commerce. FORCE members and local contractors were employed on the project team wherever this was feasible. Further, open days and tours of the site were held during construction so that the wider local supply chain could learn from the experience of the project team.



The innovative patented Beattie Passive Build System keeps costs low due to the simple structural, thermal and air tight detailing which has been fully developed for walls, floors, and roofs. The system delivers Passivhaus principles in a simple, methodical way

that can be easily replicated and scaled up into large developments. Quality control is ensured with independent structural sign off, thermal imaging and air tightness testing, all provided as standard. This adaptable system transforms any design into high-performance, low-cost homes using semi-skilled labour as well as traditional and readily available construction materials.

In this project, a site foreman was given two weeks training on the build system, enabling him to train two new carpenters on site for the whole build. The project team worked with Coventry City College and trained four 17 year olds to manufacture the Beattie Passive house frames. They completed the frames for the two dwellings in just 5 days, enabling them to progress onto site, erecting the frames and learning not only the Beattie Passive Build System but also additional skills such as air tightness detailing.

You can watch a video on this award winner [here](#).

Further Information:

[Beattie Passive](#)

[PROJECT FACTFILE](#)