



## Press Information

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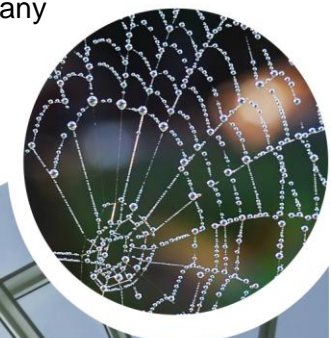
### **Want to tackle fuel poverty? Choose Passivhaus as the key to Code level 4, says Inbuilt**

Designing family homes to Passivhaus standards could be the most effective approach for social housing developers to reach the energy standard of level 4 of the Code for Sustainable Homes when tackling fuel poverty, according to new research published today by sustainability consultancy Inbuilt.

Code level 4 is a lower carbon housing standard required on some social housing projects already and is due to become the minimum standard for all new publicly-funded housing by 2011. However, Inbuilt's research shows that a Passivhaus can have a space heating requirement 90% lower than a home of the same dimensions built to Code level 4.

Paul Smyth, a Passivhaus consultant at Inbuilt, says: "Our research shows that lower carbon homes do not necessarily mean lower heating bills for the occupants. This is a critical issue given the growing problems of fuel poverty in the UK. Genuine sustainability includes economic sustainability – we need to be thinking about much more than low or zero carbon. Our findings suggest that Passivhaus potentially makes an ideal standard to aim for if we are building homes for fuel-poor families."

Inbuilt's technical team carried out extensive modelling of two house types with more than 70 different permutations of floor sizes, locations and heating systems using the Passivhaus Planning Package (PHPP) and SAP software. They found that it is possible to design a family home which meets the Passivhaus standard, does not require a conventional heating system or any sort of 'bolt on' electricity generation such as PV panels, and achieves a Dwelling Emissions Rate (DER) which complies with Code level 4.



Paul Smyth says: “Passivhaus helps to reduce fuel bills and it also ticks all the regulatory boxes for carbon saving. Once a dwelling complies with Passivhaus its heat loss is so low, and associated carbon emissions so few, that compliance with Code level 4 becomes significantly easier to achieve, and in many cases it can even be achieved automatically.

“That is not to say Passivhaus compliance guarantees Code level 4 in all possible scenarios, but certainly in all the dwellings we modelled it was true: once the home achieved Passivhaus compliance, it achieved all the energy requirements for Code level 4 without any extra onsite electricity generation. Although the opposite is certainly not true: just complying with Code level 4 would not necessarily meet the higher performance you get with Passivhaus.”

Inbuilt warns that Passivhaus design must be considered from the outset of planning any new homes development and cannot be chased once site layouts, orientation and home designs have already been fixed.

Paul Smyth adds: “It is unlikely that builders’ current standard house types could simply be pushed through Passivhaus compliance. We would normally work closely with the developer on significant redesigns and would need to provide assistance on practical issues such as reducing thermal bridging. Using the PHPP and other design tools we can also take into account the careful sizing and orienting of glazing, improved room layouts, the airtightness of the building fabric and local climatic conditions which can significantly affect energy demand.”

Inbuilt is one of the UK’s leading advisers on Passivhaus and the use of the Passivhaus Planning Package to design healthy, comfortable, ultra low-energy buildings, including new homes and refurbishment projects, schools, offices, prisons, sports centres and care homes. Further information at: [www.inbuilt.co.uk/html/passivhaus.htm](http://www.inbuilt.co.uk/html/passivhaus.htm)

## **Ends**

Issued on behalf of Inbuilt by Liz Male Consulting Ltd.

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## About Inbuilt

Inbuilt is the UK's first major consultancy specialising exclusively in sustainable buildings, communities and construction. Launched in December 2007, Inbuilt is a young and innovative company providing technical and consulting excellence in the research, planning, design and delivery of sustainable built environments. It aims to ensure that sustainability becomes 'inbuilt', by providing integrated solutions. Drawing inspiration from nature and natural systems, Inbuilt's objective is to 'design out' technical complexity and cost, by continuously rethinking, challenging and improving accepted practices. Working in partnership with its clients, Inbuilt delivers spaces, places and buildings which are genuinely sustainable - healthy, safe, productive and inspiring - fit both for people and the environment. It is part of the RES Group, one of the world's leading renewable energy companies.

[www.inbuilt.co.uk](http://www.inbuilt.co.uk)

