

## Why Should Architects Adopt Passivhaus?

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While still a student of architecture, I took the same approach to sustainability as I did to structural design – first design my building, then think about how these ‘concepts’ would be implemented.

The bigger influence for me developing an understanding of, and an interest in sustainable design was my newly built, one bed flat by the quayside – it was always freezing and I paid extortionate electricity bills for the privilege! I knew there had to be a better way to building homes and as a budding Architect, it was my duty to find out.

Local authorities still ask for the axed Code for Sustainable Homes (CfSH) that didn’t quite succeed at tackling fuel poverty and brought in a complexity that still boggles the mind. Part L building regulations (2013 amendments) have started to head in the right direction by addressing the Target Fabric Energy Efficiency (TFEE) but as insulation manufacturers have highlighted, adopting an area-weighted calculation (increasing the insulation in one element allowing one to reduce it in another) doesn’t go far enough. The BRE’s answer to The Code’s problem, the recently launched (2015) Home Quality Mark, is a voluntary sustainability standard aimed at developers’ homes’ standing out from the crowd, while commendable, developers have to *choose* to get on-board with the scheme.

So what about Architects? We do the thoughtful designing, the aspiring. What’s our stand on the issue of performance standards? In my opinion, with all this flux and less than ideal standards bandying about, isn’t now the best time to push forward with the tried, tested and long-standing Passivhaus? The principles are simple, standards robust and quality proven. While most completed Passivhaus projects are in German-speaking countries and Scandinavia, the number of Passivhaus developments in the UK has grown from 2 in 2009/2010 to 250 certified buildings by the end of 2013, with many more in the pipeline for completion in 2016/2017. Local Authorities such as Camden Council who commissioned Willmott Dixon to complete their 53no. Chester Balmore Hackney development, developers such as Citu are on-board with their recently completed 107 homes in Little Kelham, Sheffield (completed earlier this year) and ArchiHaus (Architects turned developers) who gained planning approval for the 150 home Kingstone development in

Herefordshire. With time, this number is set to increase as more developers and local authorities come to require Passivhaus standards. I think this spells a real opportunity for Architects to position themselves to lead the industry – and not scramble around when the inevitable arrives.

Shouldn't *all* Architects be adopting and promoting Passivhaus principles? From house extension client to city developer, not only does this mean that our housing quality is vastly improved, but also that Architects take ownership of this problem/opportunity, producing work that is rewarding for their users, as well as themselves.

**The main barriers I see for adopting Passivhaus principles and standards:**

- Minimal demand from the client – With profit margins outweighing higher quality housing, this seems the obvious choice. But with large contractor/developers, housing associations and local authorities waking up to the clatter of better design for not too much more cost and in some cases same cost, this growing force could demand better buildings from Architects sooner rather than later
- The Governments' minimum guides – Building regulations and CfSH leaves plenty room for improvement. We need to raise the bottom line
- A lack of understanding of the true benefits of Passivhaus design. Comfort, yes, but also the environmental, social, and economic benefits
- A lack of awareness from the public – Passivhaus is still in its development stages in the UK as I find myself explaining to many-a-friend at dinner parties, so the public are simply not yet aware of what they are missing. Once they clock-on, demand will follow
- The technical abilities to achieve this standard. Implementing Passivhaus standards will need an investment in staff and a passion to see it through
- The supply chain is still seriously lacking – especially when it comes to larger developments

**For now though, I believe Architects should become conversant with the Passivhaus principles of:**

- Good levels of insulation with minimal thermal bridges
- Passive solar gains and internal heat sources
- Excellent level of airtightness
- Good indoor air quality, through a whole house mechanical ventilation system with heat recovery

The next step is to encourage clients (big and small) to see the benefits of adopting them. Once an Architect knows better, it's difficult not to design better details in naturally.

### **Advantages to Architects:**

- Happier Clients – means repeat work, new work through word-of-mouth, market leaders
- Better buildings, better world – the all-important performance gap
- Increased fees for increased abilities and skills
- Happier Architects – challenging projects, personal growth, and job satisfaction means happier employers and employees, which means happier clients.

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**Tara is an Architect with over 8 years' experience in the construction industry and a passion for sustainable design, particularly Passivhaus. She has a background in residential, commercial, and mixed-use developments and writes her passivhaus blog: [www.taragbolade.com](http://www.taragbolade.com)**