

HOUSING



S333'S NEW TERRACE HOUSES AT THE OLD DAIRY PAGE 12



Bere Architects' BRE competition-winning Passivhaus house design.

A Passivhaus for everyone

The barriers to using Passivhaus for affordable housing are slowly being overcome, says **Pamela Buxton**

With fuel poverty on the rise, the energy-saving benefits of Passivhaus housing have never made so much sense for affordable housing. Yet take-up has been slow.

The main barrier is cost, according to Kym Mead, head of Passivhaus at the BRE, which recently ran a competition to demonstrate that Passivhaus can deliver affordable low-energy housing. Entrants, including winner Bere Architects, had to demonstrate that their schemes could be built for £1,100/sq m — a tough challenge for Passivhaus given the extra costs of insulation, triple-glazing and

achieving airtightness.

"I do believe it can be delivered at that cost," says Mead, adding that Passivhaus is "just starting to creep into social housing". He expects it to pick up steadily. "Fuel security concerns will become more and more important and people will look at Passivhaus in more detail."

But the BRE, which plans to introduce a Passivhaus training course for tradesmen, acknowledges that there are stiff challenges.

"There's a lot of technical expertise that goes into Passivhaus that's probably above best practice in the UK,

although this is getting better," says Mead. "There is a missing link when it comes to implementing it on site — contractors aren't used to working to the level of detail and attention needed, especially when it comes to airtightness."

Yet, compared with achieving Code 4 housing, the extra cost of Passivhaus is marginal, maintains Justin Bere of Bere Architects, which has pioneered Passivhaus in the UK. "It's a no-brainer," he says. "The additional building cost is almost completely absorbed by savings the occupant makes on fuel bills."

Bere attributes the slow take-up to housing associations feeling they don't yet have enough evidence of the comparable costs and benefits of achieving Passivhaus. He is working with Orbit and Hastoe on a Passivhaus cost project to contribute to a knowledge database



Parsons & Whittle's scheme at Wimbish is the first rural affordable Passivhaus housing.

that might convince more to build to those standards.

He also thinks architects can help contractors and subcontractors achieve Passivhaus standards on site.

"It needs architects to lead and get to grips with technical issues," he says, "taking time to go into collaborative approach

with a contractor right from the drawing stage — doing careful design, making sure it's understood at tender stage, adjusting the programme to achieve airtightness and training on site."

Even for committed clients, achieving affordable Passivhaus standard housing is a challenge. Hastoe's 14-unit development in

Wimbish, Essex, designed by Parsons & Whittle and billed as the first rural Passivhaus affordable scheme, was 12% more expensive to build than comparable Code Level 4 schemes but produced an "amazing" final product with minimal fuel bills, according to Hastoe development manager Ulrike Maccariello, who says higher costs were to be expected in early schemes. Hastoe intends to build 10% of its programme to Passivhaus standards, although these won't necessarily be accredited.

"We wouldn't want to water it down but the accreditation process does have cost implications," she says. "Even if it isn't Passivhaus accredited, it will still have the benefits."

Passivhaus is still at the pioneer stage in the UK owing to a lack of understanding in the industry and the supply

chain, according to John Barnham, head of sustainable investment for Orbit Heart of England, which has built one of the largest UK Passivhaus affordable housing developments at Sampson Close in Bell Green, Coventry, designed by Baily Garner.

Although committed to the "fabric first" principle of Passivhaus, Orbit Heart of England has contacted the Passivhaus Trust, of which it is a member, to suggest the possibility of a UK version of the standard.

"It's a German accreditation system which is fine in Germany but we have [smaller] sized houses in the UK which means we end up over-engineering and that's a cost," he says. "We want to obtain accreditation but it's an extra cost we feel cannot be justified, so we follow the principles but won't necessarily



Baily Garner's Sampson Close in Bell Green, Coventry is one of the largest UK schemes to make use of Passivhaus.

achieve accreditation."

Others share the view that a UK-tailored standard may be the way forward rather than full Passivhaus accreditation.

"It is stretching the industry," says Chris Wilford, associate director of PRP, which has built to Code 6 but not Passivhaus

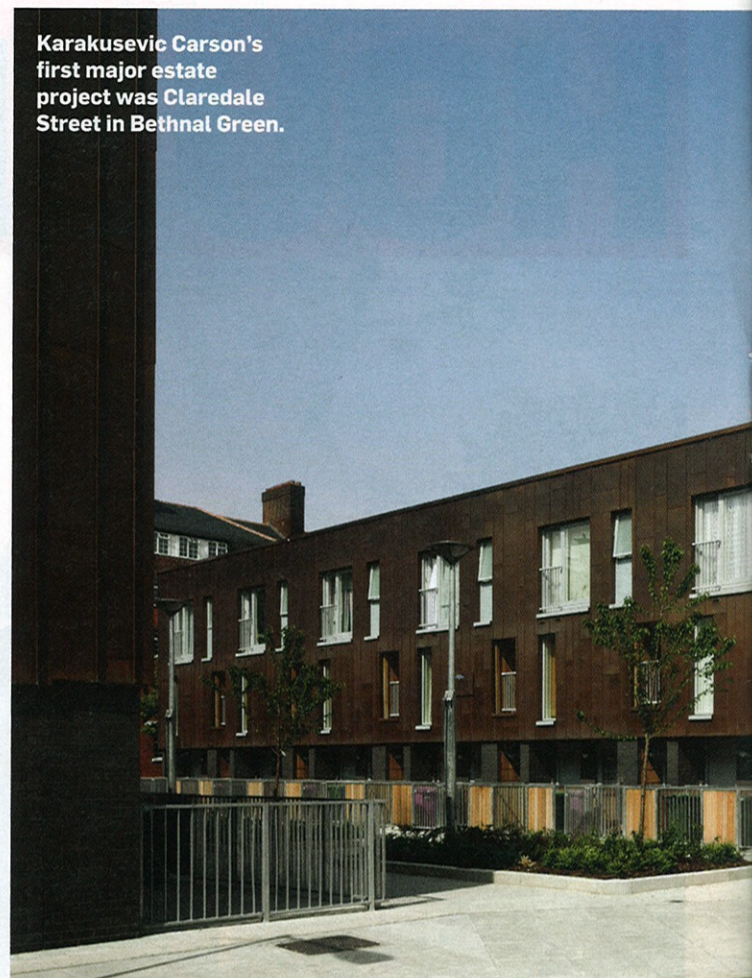
standard. "What the right standard is for the UK I'm not sure. It might be one we have to develop for ourselves... we can achieve great things without necessarily going as far as Passivhaus."

He adds: "One of the barriers is the [Passivhaus] accreditation

system. A lot of our supply chain in the UK doesn't have that. I'd say that airtightness is [another] barrier. It is feasible to produce much better airtight houses but I think we'll have to change our system of measuring and controlling airtightness."

Levitt Bernstein, which is building to Passivhaus targets on airtightness and insulation on a project at Loudoun Road in South Hampstead, is also considering the best balance of investment and performance.

"You have to spend an awful lot of extra time, effort and money to achieve that extra bit of performance," says director Irene Craik. "Is full Passivhaus going to give optimum performance, or would it be better to go a bit shy of that, to something that isn't full Passivhaus but gives great energy-efficiency benefits? That's something we'd like to explore."



Karakusevic Carson's first major estate project was Claredale Street in Bethnal Green.

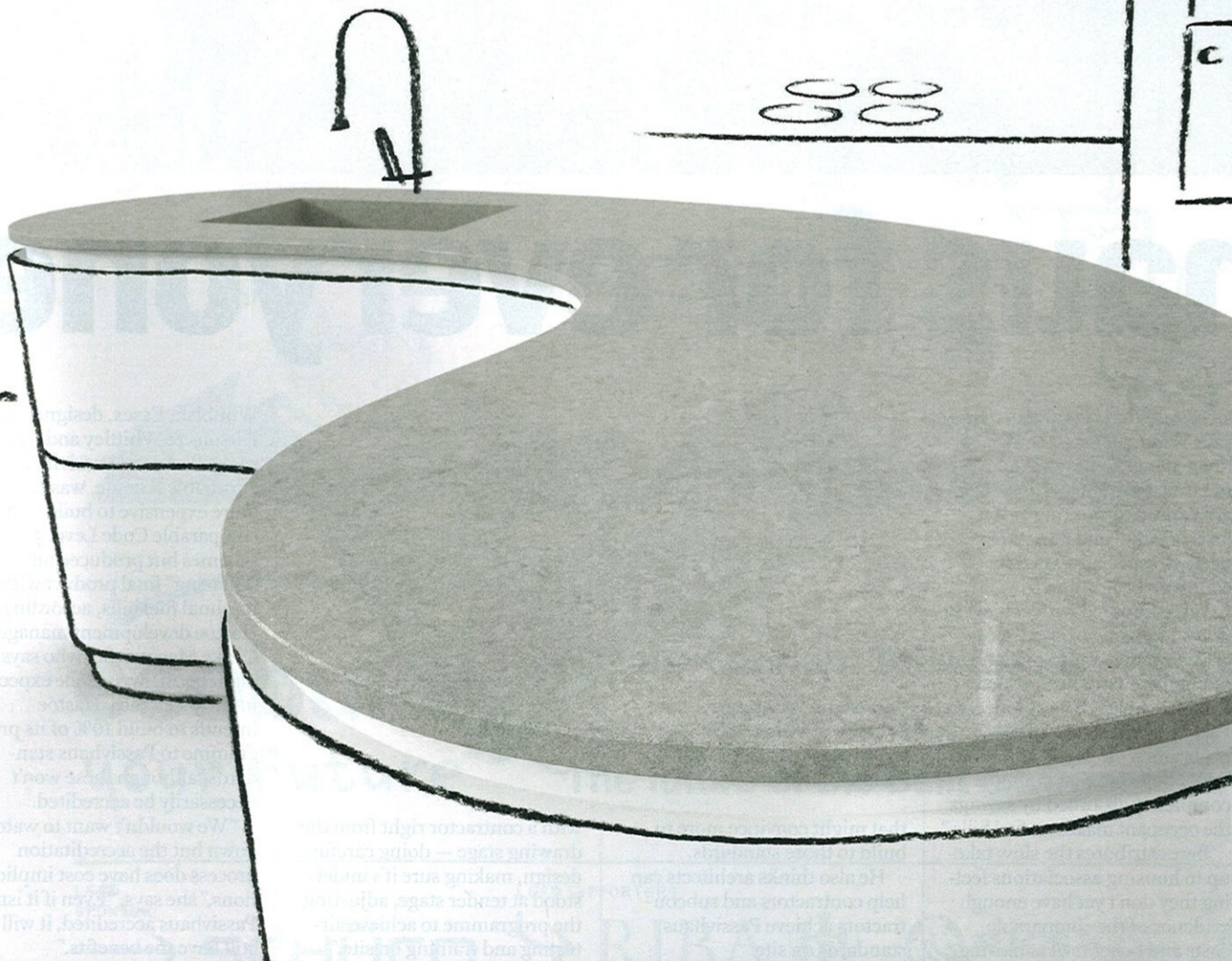
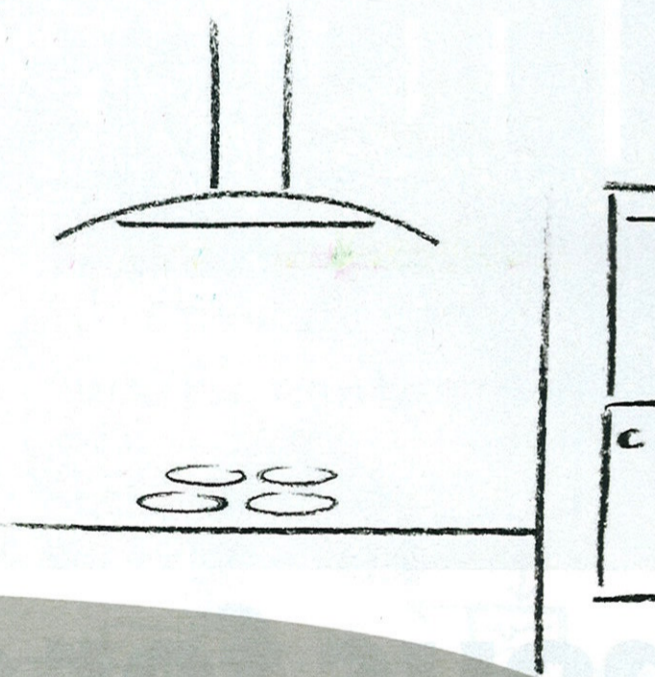
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'It's about building to a high quality'

Karakusevic Carson's passion for improving public housing is winning through, even in times of austerity

By Pamela Buxton

Paul Karakusevic of Karakusevic Carson is on something of a mission to eradicate the "meanness" that has characterised so much public housing.

"We're passionate about improving housing design. It's been so overlooked for so long and residents have been experimented on for too long," he says with a zeal that reflects the practice's early decision to eschew private house extensions and focus instead on public work and in particular, housing. "In the UK, so little good has been built."

Karakusevic trained at the Royal College of Art and the University of Manchester and set up in practice 15 years ago, forming Karakusevic Carson in 2004 with Iain Carson, whom he met when working for Zaha Hadid on the Cardiff Bay Opera House.

Now 24-strong, the Clerkenwell practice is fast growing in stature, winning the BD Housing Architect of the Year Award shortly after completing

its first major estate project, the 77-unit Claredale Street on the Mansford Estate in Bethnal Green, east London.

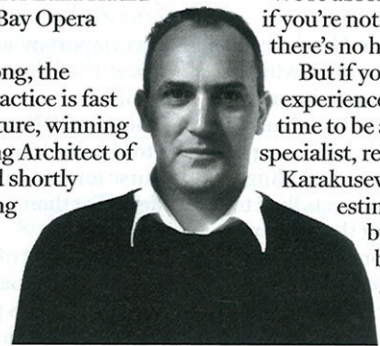
Karakusevic Carson landed the job seven years ago because of its willingness to take a risk by responding to a Tower Hamlets Community Housing brief for two new homes by proposing an estate-wide plan for 180 new units. The gamble paid off and turned into a major break for the practice, which ended up with eight separate projects on the estate.

Karakusevic is thankful that the practice concentrated so early on housing, enabling it to gain the vital track record in built housing projects so crucial for meeting today's increasingly exacting prequalification requirements.

"We're absolutely focused... if you're not a specialist, there's no hope," he says.

But if you do have the experience, it's a great time to be a housing specialist, reckons

Karakusevic, despite estimating that budgets have been cut by 25-30% within the last three years or so.



Karakusevic: "Austerity might push quality up."



TOWN & TERRACED HOUSING – FOR AFFORDABILITY AND SUSTAINABILITY
By Avi Friedman
Routledge, £29.99, 272pp

Charting the evolution of the terraced house and townhouse from the 19th century to today, the Montreal-based author analyses how these perennial typologies might be adapted for future use. The book details examples from across the world and provides further information on issues ranging from construction to parking.



ATOMIC DWELLING – ANXIETY, DOMESTICITY AND POSTWAR ARCHITECTURE
Edited by Robin Schuldenfrei
Routledge, £29.99, 306pp

This book brings together a dozen essays which consider the relationship between the social effects of the cold war and the development of post-war housing. Among subjects discussed are the Italian practice Archizoom, the early houses of Peter Eisenman and the domestic furnishings of the sixties British working class.



100 CONTEMPORARY HOUSES
By Philip Jodidio
Taschen, £34.99, 688pp

This survey of the most interesting private homes completed in the past decade includes designs by Herzog & de Meuron, Alvaro Siza and Zaha Hadid. Coming in at 688 pages — which are split between two volumes — the publication is a characteristically epic Taschen production, lavishly illustrated if light on criticism.



DWELLING WITH ARCHITECTURE
By Roderick Kemsley and Christopher Platt
Routledge, £29.99, 236pp

Co-authored by directors of the Glasgow-based architect Studio KAP, this book analyses the relationship between landscape and the domestic interior. Kemsley and Platt use the private house as a springboard for a discussion of the nature of architecture and the role of the architect in making buildings that are meaningful to their users.

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The brick-clad Bridport House on Hackney's Colville Estate.

He thinks that framework agreements can mean more opportunities for a broader range of practices to gain work, unlike a generation ago when a handful of housing architects dominated.

"The austerity drive might push quality up as local authorities want whatever they do build to be of the highest possible quality. Before, it was all about numbers," he says. "Informed clients are really pushing for high quality although they may be doing a lot less."

Quality is hugely important to Karakusevic, who is determined

to help address the wrongs of the past which have led to so many failed estates — namely badly oriented buildings, too tight windows, low ceilings, small spaces and lack of storage.

"We're working with residents to ensure there's a generosity put back into new housing," he says. "A lot of residents are there for life. It's their one opportunity to live in a nice home... Designing housing is quite a simple process. It's about getting the principles right from day one and if that requires a degree of masterplanning, that has to happen."

On projects such as the recently completed brick-clad Bridport House on the Colville Estate in Hackney, one of his top priorities has been ensuring that buildings are robust and age gracefully. Instead of experimental lightweight systems, he advocates well-proportioned buildings that are built to last with a simple palette of good quality materials done well.

"There's a lot of discussion about innovation. But more often than not it's about working with things that work well and doing them better. Building to as high a quality as possible is fundamental. It has to last."

Winning RIBA, Civic Trust and Housing Design awards for Claredale Street in 2011 raised the practice's profile and its workload is looking healthy. As well as further projects on the Colville Estate, work includes the five to 13 storey Faircharm Creative Quarter in Deptford, a feasibility study to revive a 1960s housing estate in Gospel Oak and an 80-home scheme for Brentford Lock West as part of a competition-winning collaboration with Duggan Morris and Riches Hawley Mikhail.

Karakusevic is delighted with the kind of work the practice's growing reputation has brought and hopes for much more of the same: "It's so exciting to be given these brilliant opportunities. We'd be very happy to have more of these and see them through."

REFERENCE POINTS

- **Biggest influences**
Hans Kollhoff, early years of Herzog & de Meuron, Wiel Arets, Sanaa.
- **Favourite housing scheme**
Probably the Piraeus Building by Hans Kollhoff in Amsterdam.
- **Dream commission**
A housing project with ambitious public clients and engaged residents built by a great contractor.