

# SOLARLUX ROUNDTABLE

Earlier collaboration between architects, contractors and manufacturers was seen as vital by panellists at an AJ debate on high-performance glazing specification

AJ  
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TABLE



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Architects, manufacturers and contractors must collaborate much earlier on to avoid cost surprises and ensure materials are specified correctly to meet performance targets. This was the conclusion of leading architects and façade experts who joined forces earlier this month for a debate on high-performance glazing specification, hosted by the AJ on behalf of Solarlux.

Top of the panel's recommendations was a new culture of early-stage collaboration between architects, manufacturers and contractors to ensure specifications are robustly costed and can be delivered as intended later on. This would reduce the need for cost savings at later stages where the appointment of cheaper and less-knowledgeable subcontractors can risk compromising the building's overall appearance and performance.

The panel identified key aims as: improving confidence

in the abilities of specialist and approved subcontractors; providing holistic specifications covering the entire building envelope; and supplying a finer grain of performance data – extending to individual components. Its other principal recommendations were to communicate materials' technical information in a clear and upfront way, boost the transparency of test data, and provide longer warranties.

Allford Hall Monaghan Morris sustainability specialist Craig Robertson opened the discussion by explaining how newly tightened regulatory requirements – such as Part L and the London Plan – meant architects were now considering U-values and projects' air tightness and solar thermal gain 'much, much earlier in the design process'. He said: 'We are having to give our engineering teams much greater comfort in the details we are proposing, even at the pre-planning stage,

to ensure it is buildable to a high performance standard. This is changing how we're working.'

CZWG partner Adam West – who specified Solarlux on his studio's Rathbone Market residential scheme in Canning Town – agreed, and explained that rising land prices in the capital were also pushing up performance requirements for facades. 'In London, land pressure and values are driving sites to be considered for residential which wouldn't have been only five or 10 years ago,' he said. 'Sometimes you're asked to look at sites and you think: residential here, really?'

Myles Taylor, director at Squire & Partners, added: 'A city environment like London certainly throws up challenges for facades and that's also quite exciting.'

Chris Jarvis, technical director at Sheppard Robson, believes these pressures mean architects are now collaborating hand-in-glove with service engineers and

## Delegates

- Barry Clarke, associate, Scott Brownrigg
- Ange Francis, facade manager, John Sisk & Son
- Hattie Hartman, sustainability editor, *The Architects' Journal* (chair)
- Chris Jarvis, technical director, Sheppard Robson
- Daniel Knott, senior building physics engineer, Buro Happold
- Sarah Lewis, associate architect, Barron + Smith Architects
- Craig Robertson, sustainability specialist, Allford Hall Monaghan Morris
- Myles Taylor, director, Squire & Partners
- Martijn Venema, commercial director, Solarlux France, UK and Ireland
- Adam West, partner, CZWG
- Kenneth Zammitt, associate director, Buro Happold
- Gary Newbold, senior project sales manager, Solarlux
- Alfredo Dimeo, national specification manager, Solarlux



'Most people in northern Europe buy a house to live in, so they want the best materials they can afford, whereas in the UK people buy a house to make a profit' Martijn Venema



Chris Jarvis



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Myles Taylor



Sarah Lewis

suppliers, and investing in 'smart thinking about types of glazing' right at the outset of projects. 'We're now testing the form of designs, how the shading works and the proportion of solid to glazed areas,' he explained. 'All this needs to happen from the first conceptual models. Leaving it till post-planning can just give you problems later.'

The result, said Scott Brownrigg associate Barry Clarke, has been to flip the design process on its head by introducing new technical decisions at the beginning. Architects must now start by investigating which products meet their performance requirements before developing a design.

'There's no point in specifying something that cannot be achieved,' Clarke said. 'That's where the involvement of the subcontractor comes and we ask: I've got to do this. How can you help me achieve it, and what's it going to look like? Can I massage

it and get it to look this way because that's what I want?'

Buro Happold associate director Kenneth Zammit agreed. 'Whereas previously it was just a matter of selecting one product against another, we are now needing to do quite a bit more analysis prior to the planning stage because that information will affect the elevations and saleability,' he said. His colleague, Buro Happold senior building physics engineer Daniel Knott, added: 'Whereas before Part L Criterion 3 you had a more adaptive approach to facade design, now you are forced at an early stage to think about shading and the form of a building even on competitions – because they're so keen on getting that right at the beginning.'

Despite this new focus on early-stage collaboration, there nevertheless remain major risks – particularly concerning cost overruns – when a project goes out to tender. Ange Francis, facade manager at contractor John Sisk & Son explained: 'It's almost like

we're selling a dream, but all of this performance means nothing when your client can't afford it. I spend a huge and inordinate amount of time trying not to burst clients' or architects' bubbles, but end up having to make an awful lot of compromises.'

Achieving a building's intended performance often becomes more difficult when cost reductions at later stages see envelope packages divided between cheaper subcontractors, she warned. 'We can bring the cost of a building down, but we have to bring in subcontractors who don't have the knowledge to produce thermal and acoustic calculations ... There are simply too many people out there within the facade industry that really just haven't got a clue what they're doing.'

Managing multiple subcontractors and checking individual player's calculations can furthermore be time-consuming for a contractor and very expensive when prelim costs start to go up, Francis added.

She described how manufacturers such as Solarlux can boost confidence in facade products and systems by completing independent inspections of subcontractors' installation work.

'The people installing it give the warranty,' Francis said, 'so if the manufacturer is telling me: it's installed in the exact way and it's done to our recommendations, then there's that level of trust.'

The panel agreed that more early collaboration between architects, manufacturers and contractors was a likely way forward. West explained how Sisk's early involvement on Rathbone Market – where the recession meant design had to start again from scratch after tendering – helped control costs while maintaining performance.

Jarvis added: 'At the design stage we can approach different suppliers to get information, but whether they are on a contractor's approved list can cause a lot of problems. It's difficult to see how

this can be avoided, apart from getting a contractor on board very early days.'

Sarah Lewis, associate architect at Barron + Smith Architects said setting performance criteria for individual components could safeguard building performance but a 'holistic specification considering the whole envelope of the building as one element' would then be required.

Clarke said early agreement on which environmental standard is sought could also allow greater flexibility when substituting elements during cost reductions at later stages.

Looking ahead, the panellists agreed closer relationships between all parties could deliver the greatest boost to building performance and cost control.

Solarlux France, UK and Ireland commercial director Martijn Venema questioned whether the recession might lead to a new culture focusing on building lifecycles and higher

specification materials.

'Most people in northern Europe buy a house to live in,' he said, 'so when they redevelop it they want the best materials they can afford, whereas in the UK people tend to buy a house to make a profit and move on. During the recession, however, people realised maybe it's not a bad thing to live in a house for more than five years, and that has impacted on wider things like communities as well.'

Recognising the new pressures placed on design teams by increasingly demanding performance requirements, Venema said: 'Partnering and working in teams with various client, developers and design manufacturers is something that seems to be more and more coming to the forefront.'

In conclusion, he added: 'Dialogue around the table is something I see becoming more and more important. I would encourage all of you to embrace those conversations.'



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