

DEFINING QUALITY

Standards in construction clearly need to be raised – so how can the industry go about improving quality, and how exactly do we define it? **Hamish Champ** reports on a roundtable by the STA



Striving for quality in construction, not least in housing, has been a mantra ever since the first ever brick was laid. But customer confidence has been knocked in recent times as standards around build quality have been found wanting, even from some of those firms operating at the top end of the industry.

Added to this – and with the industry's desire to meet the highest standards around safety, performance and building excellence uppermost in everyone's mind – government plans to restrict the use of combustible materials on certain buildings have prompted concern among many in the sector.

It was timely, then, that a roundtable discussion hosted by the Structural Timber Association (STA) and held earlier this month in London sought to share views on the issues of quality, safety and performance, including what a tightening of legislation might mean for new technologies designed to boost output, such as offsite manufacturing.

What exactly is quality?

Chaired by Thomas Lane, Building magazine's group technical editor, the discussion kicked off around the subject of quality. Lane asked: what do people actually mean by quality, and what are the challenges in

Above: The round table attendees sit down to lunch

Left: Left to right: Build UK's Suzannah Nicol; HTA's Matt Hoad; Alex Goodfellow, Stewart Milne Group

Opposite page, clockwise from top left: Alan Robb of Benx and Sam Hart of Construction Scotland Innovation Centre; KLH UK's Nic Clark and Robert Pannell of the Building Hub; Alex Goodfellow of Stewart Milne Group and Bouygues UK's Steve Green; Stora Enso's Kevin Riley, Building's Thomas Lane and Andrew Carpenter of the STA



terms of delivering it?

Kevin Riley, laminated veneer lumber sales director at timber specialist Stora Enso and head of the STA's PR committee, said quality ought to be "looked at in the round". Quality means different things to different people, he said, but "a key issue is eliminating inconsistencies in the end-product, not least given the strain on resources such as labour".

This idea that what quality means varies depending on whom in the sector one talks to became one of several themes throughout the discussion. Andrew Carpenter, the STA's chief executive, said that very often the culture of the UK construction industry plays a part in both the perception of quality and eventual outcomes. "It's our insistence on focusing on the lowest price which determines quality and a lot of the other issues we have to deal with. I'd start with behaviours - and that means addressing procurement, which determines behaviours right the way through the supply chain," Carpenter said.

Short-termism is another key area, said Mark Stevenson, managing director of insulation specialist Kingspan and recently elected chair of the STA. "Are we thinking about what a building will look like in 40, 50, 60 years' time? And how do you factor that into what quality is and how you ensure you're building for longevity?"

For Robert Pannell, who works

We can measure cost in the construction industry, but much else around the quality thresholds is about perception

Steve Green, Bouygues UK



with housebuilders' body NHBC and runs his own business, the Buildings Hub, the definition of quality is a combination of three elements: performance, aesthetics and cost. "They have to be in balance with each other. It has to do the job, look good and be cost-effective. It'll always be about price. We're not going to get away from that and say we'll pay any amount we like for it. That's not going to happen."

Having gained experience in an sector renowned for its focus on quality, namely the automotive industry, Peter Blunt, managing director of Innovare and STA Assure director, said construction could take a leaf out of other sectors' books. "We talk about quality in subjective terms. In the automotive industry you can be objective around build quality, tolerances and the like. We can measure cost in the construction industry, but much else around the quality thresholds is about perception."

Collaboration is crucial

to the industry's future as a deliverer of quality, believes Steve Green, Bouygues UK's head of knowledge sharing: "Yes, addressing procurement and behaviours is part of it. Mutual understanding... the designer understanding what the contractor wants, the contractor understanding why the architect can't provide it, and then understanding what the supply chain wants and so on. If we don't get together to fix it collaboratively we won't fix it at all."

The issue of quality sometimes gets bound up with building regulations. But as Richard Whittaker, development director with affordable housebuilder WM Housing, pointed out, those regulations are merely prescribing the minimum that has to be achieved on a building site. "People have been trained to Building Regulations standard as a minimum; they have skill tests which are higher than Build Regs standards. And they get out on

It'll always be about price. We're not going to get away from that and say we'll pay any amount we like for it

Robert Pannell, Buildings Hub

site and all of a sudden the skills test standards have gone. It's about 'What can I get away with?'

Paul Kempton, founder and managing director of insurance specialist Sennocke, said he believes Building Control does not give assurances around a quality build. "It said it's 'compliant with'. And that is a huge issue." The other headache is a churn of staff among approved inspectors and local authorities, Kempton argued. "There's no new blood coming into the industry. Approved inspectors are earning more now not because they're doing »



Left: Sennocke's Paul Kempton; Mark Stevenson of Kingspan; WM Housing's Richard Whittaker; Alan Robb of Benx and Sam Hart of the Construction Scotland Innovation Centre



Left, below: Bouygues' Steve Green and Peter Blunt, Innovare

» a better job, but because of supply and demand.”

There is indeed a shortage of resources, acknowledged Paul Overall, chief executive of Local Authority Building Control. “Local authority resources have been squeezed a great deal over the years. Whether the Building Regulations are right or not is another issue. They are there for minimum standards for health and safety. They don't deal with quality issues, although you can argue that they should.”

There is, said Overall, “a real opportunity for everyone to say what they think needs to be improved and how, and hopefully government will take those things on board”.

Can modular methods help?

Building's Thomas Lane then asked whether modular manufacturing could help solve some of the issues facing the sector. Everyone around the table agreed it would play an important role in the future but that there had been instances where some such methods had produced very poor-quality results. The consensus view was that it is no panacea, and the quality of the modular elements – especially an absence of defects – when they arrive on site is as big a part of their success or otherwise as what happens on site during their assembly.

Nic Clark, managing director of KLH UK and chair

of the STA's health and safety committee, said that for offsite manufacturing to be truly effective collaboration is essential. “And it demands earlier collaboration, earlier integration with the supply chain, hand-in-hand with BIM protocols, which offsite naturally lends itself to. You get the expertise delivered when it's needed, and you can drive in the right detailing that can then flow through onto site. You're also getting the right price for the right product with the right levels of expertise at the right stage of the job.”

At this point the STA's Carpenter brought up the subject of the Hackitt report, researched and written in the wake of the terrible fire at Grenfell Tower two years ago. Carpenter said Hackitt's findings present “a wonderful opportunity for us all. We need to talk about the asset management side of things. Getting the people who are going to run the building up front in the design process. Instead of measuring cost, we should be measuring outcomes and outputs. So that when we build hospitals they make patients better more quickly. We need to assess what constitutes value

before we can determine what quality looks like.”

Building's Lane then highlighted the age-old situation whereby once a building is finished and the keys are handed over it becomes a case of “here endeth the problem” as far as the industry is concerned. That prompted a discussion about proposed restrictions on certain materials deemed by politicians to be a high risk.

Alan Robb, a partner in cladding specialist Benx, said the outer shell of a building is often regarded as an afterthought, rather than being an integral part of the building process. Subjectivity around quality aside, people who live in a building “want to be reassured that what they've got is going to last and do the job it's supposed to”.

So, is banning any combustible material as part of the wall structure an appropriate response, given the quality issues the industry is facing? Robb's view is unequivocal: “The problem is no one knows. Post-Grenfell everyone's trying to work out and cover every

The Building Regulations [...] are there for minimum standards for health and safety. They don't deal with quality issues

Paul Overall, LABC

single angle in case something happens again. It's almost gone so far in the other direction that now people will reject something which makes no sense to reject, purely in the absence of certification."

Suzannah Nicol, chief executive of trade body Build UK, argued that now is a pivotal moment for the domestic construction industry, with the collapse of Carillion, Grenfell and of course Brexit all combining to produce the perfect storm. The industry must do more to manage client expectations better, she said. "What does the client expect? What is the

We need to assess what constitutes value before we can determine what quality looks like

Andrew Carpenter, STA

industry capable of delivering? Clients often want a Rolls-Royce but can only afford a Mini. As an industry we're really good at saying 'OK, we'll try and give you a Rolls-Royce', when what we should be saying is 'I'll give you a fantastic Mini. It'll do what you want, but it ain't a Rolls-Royce.'"

Nicol believes Hackitt will force the industry to implement the changes needed to become more effective. "Her golden thread of brief, design, manufacture, how you buy, the sort of contracts that get drawn up, these are things we can work on. How the supply chain gets smarter, how cash flow gets smarter. We build amazing buildings despite the systems we have. There's been one Grenfell. We're doing something right." Hackitt's golden thread was a "really good summary of how accountability and passing the baton has to work", she added.

The question of quality on

building sites and who is working on them was raised by KLH UK's Clark. "I sometimes come away from a site so angry because of what I've seen. You need barriers to entry to stop certain products - but also certain firms - from getting into the market. As has been mentioned, we need to get away from the lowest-price culture, and clients have to take some responsibility too."

Pannell said quality on site ultimately rests with the builder. "Not everything that starts off as an error ends up as a defect. Then there's communications and process. We fail drastically in the former and must do better to understand the latter. Processes vary hugely across different companies, and that can have an impact on quality."

What materials can be used and where was another topic discussed. While acknowledging a fundamental need to improve in some areas, Alex Goodfellow,

The restriction won't hit buildings under 18m. There's no scientific, technical or other data available suggesting it's an issue

Alex Goodfellow, Stewart Milne Group

managing director of Stewart Milne Group, argued that a knee-jerk reaction to certain materials should be avoided at all costs. Any restriction on the use of those materials should be tested by the evidence, not by emotion, he said. "We manufactured 9,000 homes in our factories in the past year and none were over 18m. Most of the 300,000 homes commitment from the government won't be either.

"The restriction won't hit buildings under 18m. There's no scientific, technical or other data available suggesting it's an issue. I understand the response to Grenfell, absolutely. But we should always rely on science and data when deciding to build. Government has to take a lot on board before making a decision, but dismissing science, data and technical performance would not be anything I'd wish to support," Goodfellow added.

Matt Hoad, an architect with HTA, agreed, while noting the issue affects not only external structures but things going on inside a building as well. "We're going to continue using timber fire doors. There's no question of changing from that; it's a very well tested system, and you've got to look at means of escape, everything, in a coherent review. It's wrong to pick on timber."

And as Richard Whittaker said: "The first recorded use of timber in construction in the UK was in 855BC. Of course it's fit for purpose."

How STA Assure ensures quality

A members' quality standard assessment, STA Assure is a scheme that offers reassurance to the construction community that its members meet or exceed current legislation and regulatory requirements across the structural timber spectrum.

Peter Blunt, STA Assure director and managing director of Innovare, said the industry has a responsibility to raise the bar itself, rather than rely on others: "The purpose of STA Assure is to inspire confidence in all stakeholders in structural timber and how we do that through our members."

Three key areas

There are three key areas, explained Blunt:

- Product compliance - proving a product's suitability and being "right first time"
- Project quality - being "right on time"
- Process effectiveness - getting it "right every time".

"We want to build an understanding of the whole process," he said. "It's a combination of elements and there is no single silver bullet. Confidence in the product and in those who supply and install it is vital and we want to make sure structural timber is at the heart of that."

The STA's chief executive, Andrew Carpenter, agreed. He pointed out the association has worked on the Timberframe Competency Scheme with the CITB in recent years to make sure erectors are delivering to an agreed quality of best practice.

Proof of competency

"We brought in a rule this year that all STA erectors have to have two-thirds of their personnel pass the competency scheme," he said. "And STA manufacturers can only use STA erectors. The quality process is right through the chain. We've done the work with the CITB and have a similar scheme for manufacturers and designers and we're about to go into an online testing programme to follow that all the way through the scheme."

It's about giving confidence to everyone, Carpenter said: architects, contractors, clients. "We're confident in our direction of travel and that it will put STA Assure in that same place.

"We've an opportunity to put our house in order and be held up as an industry in possession of best practice. Help us to help you, by only using STA members."