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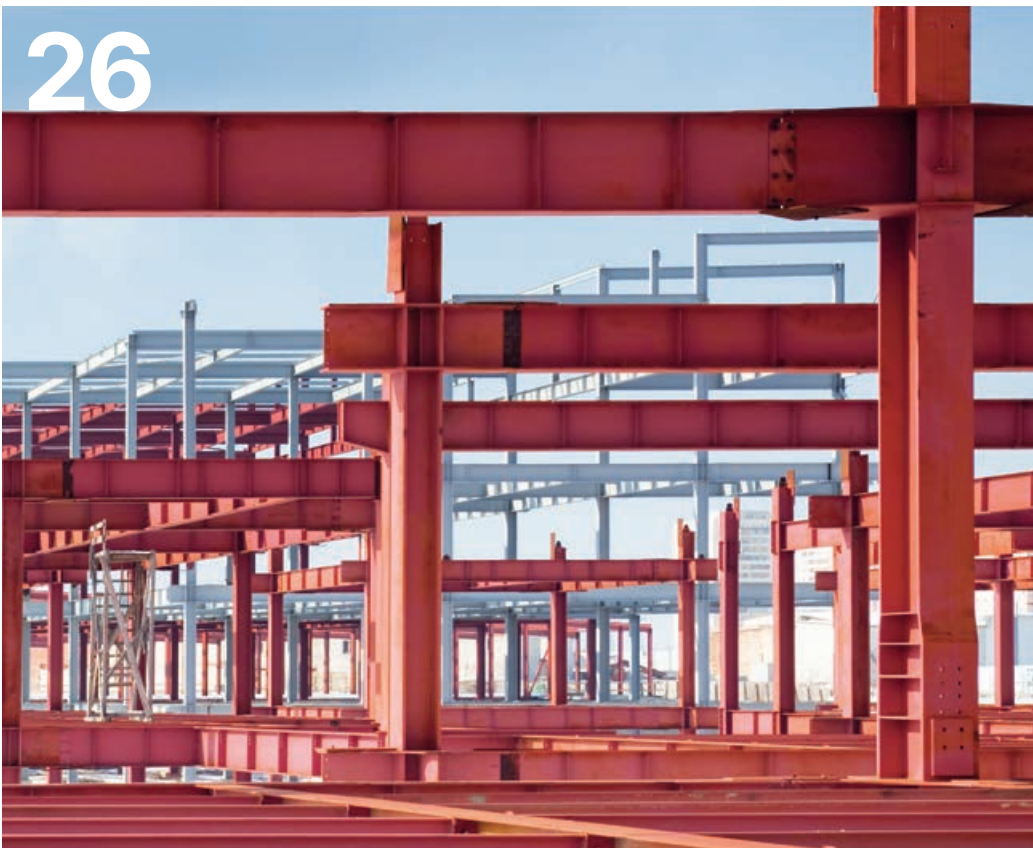
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03/24

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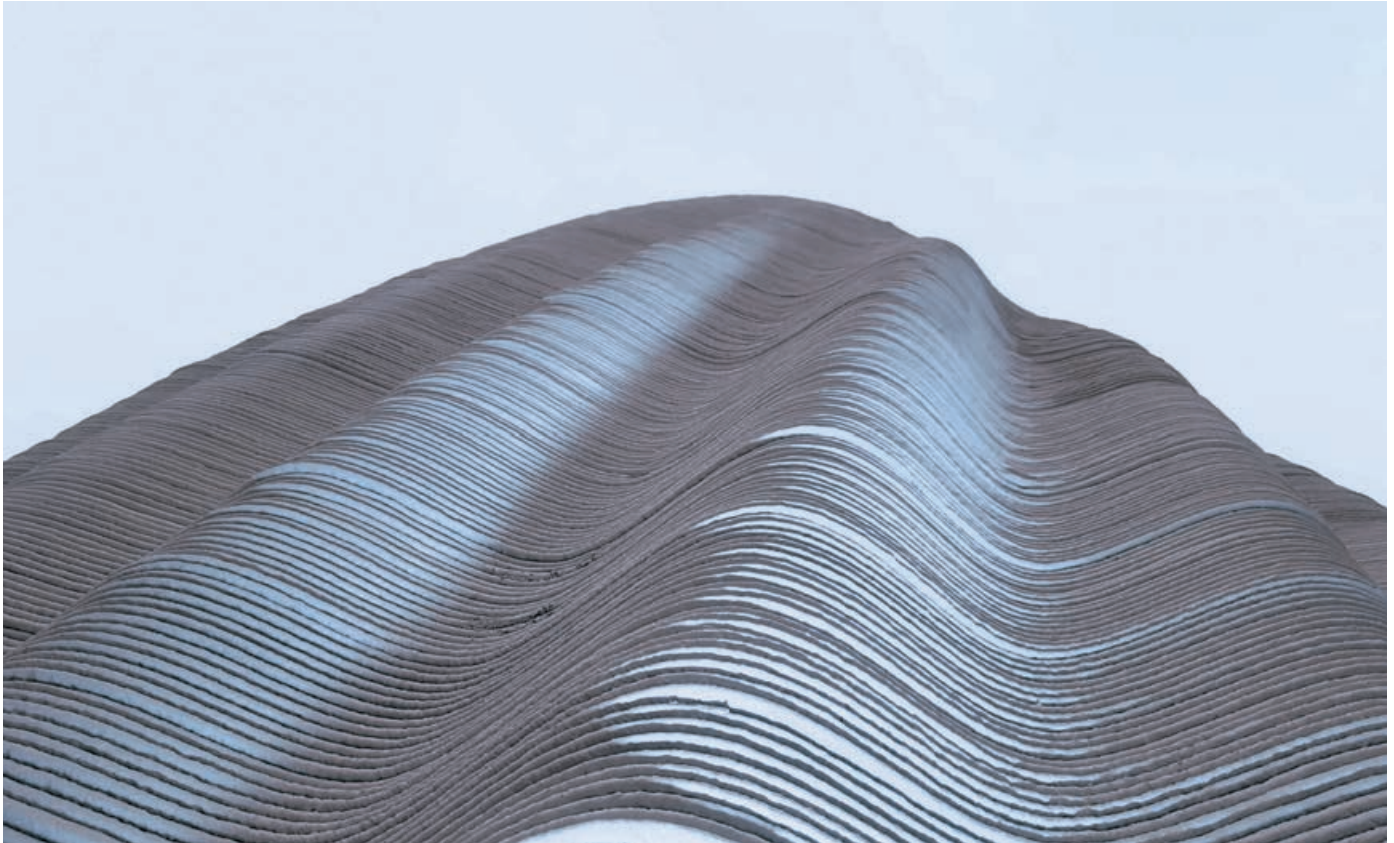
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Highlights of the CIOB calendar



DAN SWINHOE

▲ Europe's biggest 3D-printed data centre

Builder Krausgruppe led the construction of a 600 sq m 3D-printed data centre in Heidelberg, Germany, for cloud provider Heidelberg IT Management. Named the Wavehouse, the building is 54m long, 11m wide and 9m high.

► Women's PPE champion

Leena Begum, civil engineering apprentice with HS2's London contractor, Skanska Costain STRABAG joint venture, won an Inspiration Award after developing a range of PPE for Muslim women and improving the PPE maternity range at HS2 sites.



Sophie Baker, senior construction manager at Skanska, is one of four female professionals who tell CM what women want on site, see p14



▲ 'Worcestershire's King Canute' self-builds flood defence

Worcestershire resident Nick Lupton built his own flood defence after his house was flooded 11 times. He built it using Stepoc, a precast concrete block retaining wall system, developed by clay and concrete building materials manufacturer Ibstock.



◀ Penzance's Market House wrapped in pink scaffolding sheeting

Local firm Chris Sedgeman has wrapped pink scaffold sheeting around the Grade-I listed Market House in Penzance, Cornwall, for a renovation project where ISG is main contractor.

▲ Total revamp of Real Madrid FC's stadium home

FCC Construcción is in the final stages of building the new Santiago Bernabéu stadium in Spain's capital. The €1bn (£850m) project included making the old stadium 12m bigger and 57m high. It will also include 3,000 new seats for a total capacity of 82,000.

AI will make industry 'safer and greener' says CIOB innovation panel chair

The institute held its first online event on AI and the future of construction ahead of the publication of a report on AI for the built environment



AI is supporting construction's need to build safer, more sustainably and with higher quality, according to David Philp, chief value officer at Cohesive and chair of CIOB's innovation advisory panel.

Opening CIOB's AI conference last month, he said: "Whether we recognise it or not, the construction

▲ The construction industry is already in the age of AI

industry is in the age of AI and it's already prevalent in all walks of our life and business. The arrival of ChatGPT has caused an upsurge in interest in AI and its benefits and practical applications, both among CIOB members and across the industry.

"As a CIOB working group, we recognise that the needs of industry and wider society are no longer serviceable using traditional methods," he said. "We need to change quickly and AI will increasingly become a catalyst for new ways of working and decision-making."

The CIOB working group has highlighted that some of the best AI use cases are within asset management, where asset availability and resilience are critical. For example, CIOB members at Loughborough University have developed an AI tool to help mitigate the problems caused by RAAC.

A 'white box approach'

A significant part of the CIOB AI report will focus on the legal and ethical approaches that need careful consideration, such as intellectual property and ownership.

Philp said: "We need to consider the AI black box problem – AI can do amazing things that humans can't, but in many cases we have no idea how AI systems make their

AI can do amazing things that humans can't, but in many cases we have no idea how AI systems make their decisions. We need a 'white box approach' that offers transparency

David Philp, Cohesive



decisions. We need a 'white box approach' that offers transparency – understanding of the AI model decision-making, understanding of the reasoning behind each decision and provability behind decisions as key considerations."

Eddie Tuttle, director of policy, external affairs and research at CIOB, added: "The construction sector by its nature is innovative and has often been at the forefront of technological advances and in adopting new ways of working."

"AI will play a key role in several sectors going forward, and leaders in the construction industry must act to understand how it can benefit the overall quality, safety, and productivity of construction. This particularly will apply to SMEs, given their demographic in the sector."

"Our recent AI conference and forthcoming guide will be just one part of a wider push to understand the impact of this technology and the importance of data in enabling this." ●

▼ David Bucksley: 'It's about focusing on the things that make the biggest difference'



We need to keep asking: is what we are doing adding value or are we just ticking boxes? Are we creating environments for people to succeed?

David Bucksley,
Sir Robert McAlpine



disciplines, not just health and safety professionals. I think that extra perspective will add a lot of value to the group.

What are the greatest misconceptions around health, safety and wellbeing?

It is a very broad subject matter which affects every part of an organisation and society, and I think there's a real danger of making broad subjects really complicated. I'm a big believer that world-class performance comes from doing the basics better than anyone else.

We need to keep asking: is what we are doing adding value or are we just ticking boxes? Are we creating environments for people to succeed? Historically, performance in health and safety has been defined by lagging indicators or how many times something's gone wrong, but that doesn't show whether you are managing risk well or creating the right environment for people.

I think we often overcomplicate wellbeing as well; wellbeing for me is treating people with respect and creating psychologically safe environments for people to thrive in. I am really looking forward to exploring this important subject with the group.

Good health, safety and wellbeing is simply an output of operational excellence. It's about focusing on the things that make the biggest difference and making sure that everyone is involved.

I'm looking forward to recruiting some new members to offer fresh perspective to support this important group. ●

If you are interested in joining CIOB's Health, Safety and Wellbeing Advisory Panel or finding out more, please contact David Bucksley at policy@ciob.org.uk.

'Good health and safety comes from operational excellence'

David Bucksley, health, safety and wellbeing director at Sir Robert McAlpine, tells **CM** how he became involved in this area and what are the greatest misconceptions around his work

What is your professional background?

I've been in construction health and safety for 17 years, although at the start I didn't have a construction background at all: my education was in law and marketing. I came into the industry as a graduate of Skanska's graduate programme.

Why did you specialise in health, safety and wellbeing?

My stepdad, who was working in health and safety after a career in the Royal Marines, said to me: why don't you look at construction health and safety?

He convinced me to go on a site with him and it was totally different to what I had expected. Everyone was happy to see him

because he was there to support people and enable others to succeed. Contractors on site came to him for advice. I worked to fund my NEBOSH construction certificate and it all started from there.

How did you become involved with the CIOB Health, Safety & Wellbeing Advisory Panel?

I was asked if I would like to chair the CIOB HS&W policy group and felt honoured to be able to support the institute and its members. The next step for me will be meeting with the health and safety advisory panel and setting a strategy. I want to ensure the group has a diverse membership with people from different



CIOB joins call for action on embodied carbon regulations

Institute wants next government to take firm action on embodied carbon in the construction industry

CIOB has joined a group of built environment organisations demanding party leaders make manifesto commitments for embodied carbon regulations in the UK.

Experts from 11 built environment organisations, including CIOB, issued a policy position paper asking the next prime minister to reduce embodied carbon emissions in construction within two years of starting government. They say UK policy in this area has stalled and urgent action is needed.

The joint call includes the following action steps:

- Within six months of taking office: policy signalled to confirm the dates and interventions below.

- By 2026: mandate the measurement and reporting of whole-life carbon emissions for all projects with a gross internal area of more than 1,000 sq m, or that create more than 10 dwellings.

- By 2028: introduce legal limits on the upfront embodied carbon emissions [those emissions due to the use of materials in the initial construction] of such projects, with a view to future revision and tightening as required.

▲ Construction groups have united to lobby a new government

The group says these actions are essential as around one in 10 tonnes of the UK's total greenhouse gas emissions are "embodied carbon" emissions. These relate to the production and use of construction materials, which account for a substantial part of the UK's overall carbon emissions.

Amanda Williams, CIOB's head of environmental sustainability, said: "There have been numerous industry initiatives over recent years, calling for government action to reduce the construction industry's embodied carbon emissions.

"We now join forces as an expert group to pull these proposals together, uniting with one voice for change and asking government to ensure the UK keeps pace with those who are currently leading this agenda."

The authors note that these policy recommendations would be complementary to the carbon pricing mechanism, announced by the government in 2023 and due to be introduced in 2027, as well to existing UK initiatives that incentivise the use of lower-carbon cement and steel.

The organisations behind the joint call include UK Green Building Council; Institution of Structural Engineers; Institution of Civil Engineers; CIOB; Construction Industry Council; Chartered Institution of Building Services Engineers; UK Architects Declare; RIBA; and RICS. ●

Construction 'unprepared' for BNG rules

Delayed 'nature positive' requirements finally come into force

New rules on biodiversity net gain (BNG) came into effect on 12 February after a three-month delay, with warnings that this has caused uncertainty in the built environment sector.

Introduced in the Environment Act 2021, BNG rules require new housing, commercial and infrastructure developments to

be 'nature positive'. This means developers in England must now deliver 10% BNG, for example by creating new habitats and green spaces, on residential projects with 10 or more dwellings, or where the site area is 0.5ha or more.

Amanda Williams, head of environmental sustainability

at CIOB, said: "Those delays and lack of a clear timeline have left many in the built environment sector feeling underprepared to successfully deliver biodiversity net gain.

"It will take time for our industry to adapt to the complex new legislation and understanding will need to be shown by regulators."

A dynamic splash of water forming an irregular oval frame around the event title.

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wavin

An Orbia business.

Women in construction: how are minoritised ethnicities represented

Although progress is steady, more needs to be done to encourage women from diverse backgrounds into the industry, explains **Ridha Shah**



International Women's Day (8 March) is an opportunity for construction to

reflect on diversity and inclusivity. Slowly but surely, the face of the industry is changing. Over the past decade, the proportion of the sector made up of women has increased by five percentage points, according to the Office of National Statistics (ONS). However, that needs to be seen in a context where women remain in the minority, at 15% of the workforce.

Of course, diversity means much more than this. Of that 15%, 89.3% are white, with 10.7% comprised of minoritised ethnic. This is in comparison with the 81.7% of the population made up of white people. In construction, the figures have moved in a positive direction, with minoritised ethnic representation up from 8.1% a decade ago.

An area where we are seeing encouraging change is in women's share of leadership positions. Compared to 2013, the representation of women in

managerial, senior and professional roles has increased by 8.4 percentage points. However, this still represents a small share of women in the construction industry – less than 20% in 2023.

Within this small share of women holding decision-making roles, the proportion of women from minoritised ethnicities has increased from 15.4% to 29.1% over the past decade. Looking ahead, this relative strength in leadership diversity could help accelerate the journey the industry is on by inspiring others to pursue the same paths.

Changing the image of the industry

However, the majority of women employed in the construction sector are working in personal, administrative and secretarial roles. While there has been some change over the last decade, the decrease of women in these roles from 79.3% to 73.4% means there still exists a notable gender disparity within the industry.

Of greater concern are the statistics regarding women in construction trade and operative roles. A decade ago, only 3.2%

Percentage of women holding decision-making roles from minoritised ethnicities

29.4

This relative strength in leadership diversity could help accelerate the journey that the industry is on by inspiring others to pursue the same paths

of women in the industry held these positions, a figure which has since dwindled to a mere 1.4% in 2023. Given the predicted 500,000 shortfall in construction workers over the next decade, it is essential that the industry attracts people from increasingly diverse backgrounds.

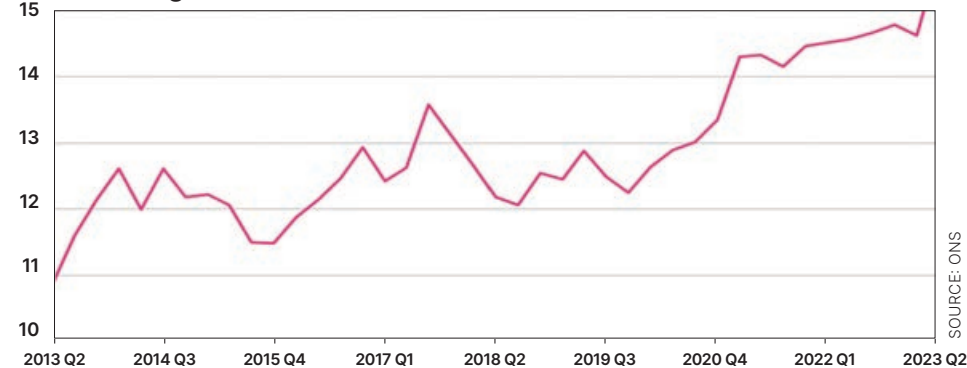
Initiatives like CIOB's #PPEthatfits campaign, which addresses the widespread inequalities in PPE provision across construction, will play an important role in helping to make the industry a more inclusive place to work.

Nonetheless, attracting a wider, more diverse cohort into construction will ultimately rely on telling strong stories about the opportunities on offer. This will come down to changing the industry's image from one just of tools and hard hats to a dynamic and innovative sector that is driving change with social purpose at its heart.

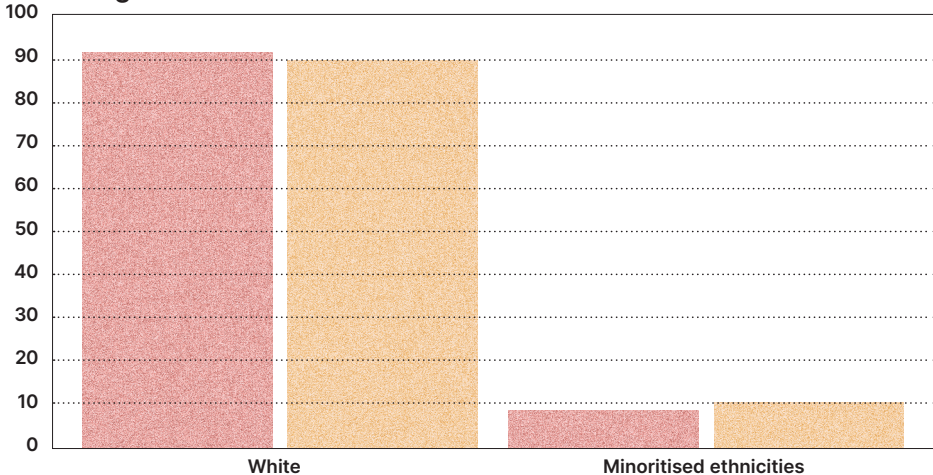
From cost management to data science to traditional trade roles, construction has something to offer for everyone – and to get the skills we need, we need to keep communicating that better.

Ridha Shah is economist and diversity and inclusion regional lead for Yorkshire at Turner & Townsend.

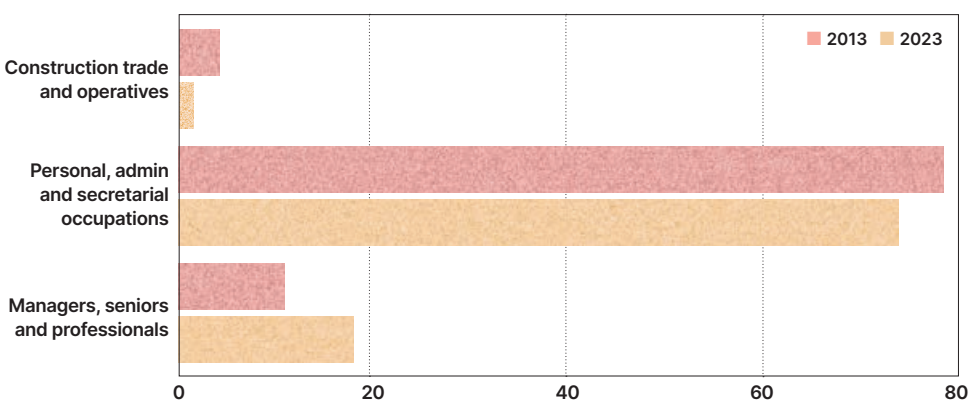
Percentage of women in construction over the last decade



Percentage of women in construction by ethnic background: white vs minoritised ethnic



Share of women in different construction roles





Caroline Gumble
CIOB

Leaving a legacy of leadership

Caroline Gumble shares her takeaways from an inspirational meeting with other social impact sector leaders



◀ Authors Samuel Kasumu (left) and Jonathan Eig sparked the conversation at the Civil Society Leaders Gathering

I was honoured to be invited to the inaugural Civil Society Leaders Gathering in London a few weeks ago. It was an inspiring evening which gave me a great deal to reflect on.

The discussions flowed from the two speakers: Jonathan Eig, author of *The Life of Martin Luther King*, and Samuel Kasumu, who talked about his book *The Power of the Outsider: A journey of discovery*.

The themes were transformational leadership and the role that anyone can play, even those who may consider themselves 'outsiders'. The key takeaway was that everyone has strengths, talents and skills to contribute.

Streatham MP Bell Ribeiro-Addy reflected on leadership and public service, which resonated with me,

and spoke about the power of civil society in serving communities across the country. She also said that social change happens when people stand together and collaborate.

Javed Khan OBE, former CEO of children's charity Barnardo's, had a call for the leaders present, urging us to try and prepare for the unpredictable. That's a challenging ask of anyone, but in the context of the voluntary sector and civil society being needed more than ever, a useful reminder that an organisation needs to maintain its resilience and develop its 'cultural competence' to anticipate the needs of the communities we serve.

The Diana Award's CEO, Tessy Ojo CBE, reminded us that achieving transformational leadership needs

The themes were transformational leadership and the role anyone can play. The key takeaway was that everyone has strengths, talents and skills to contribute



to outlive us – a shared vision with colleagues, with members and across the industry is the route to lasting and sustainable positive change.

Michael Adamson CBE, interim director of the Global Commission on Modern Slavery and Human Trafficking, talked about emotional intelligence and how it is particularly important for the social impact sector, where we need to be able to understand the needs of those we serve.

There was a line at the end – 'trust is an output of what you do' – which could be part of our corporate plan. Our members are expected to behave ethically and professionally and to have our public interest remit in mind: building trust is at the heart of that.

Above all, these discussions have reinforced ideas that our members are an important part of civil society and often work alongside the public sector and voluntary organisations, playing their part in delivering for communities across the country.

It was also a wonderful opportunity to reflect on my role and appreciate the leadership that we can offer within civil society. ●

Caroline Gumble is CEO of CIOB.

Feedback

A selection of readers' comments about news and issues in the industry from across the CIOB community and social media

CM 08/02

Obituary: Peter Willmott, visionary leader of Willmott Dixon



▲ Peter Willmott and Sir Ian Dixon shake hands on the creation of the Willmott Dixon name in 1987

Mark Tant

Fine words to remember a true gentleman. Peter always had an interest in people and an unassuming manner such that, even as a new trainee in the business, you always felt at ease. He was always genuinely interested in how you were getting on and will be much missed.

Stephen Coppin FCIOB

A great man and ambassador who supported a lot of people who were leaving the forces. Before and after I left the Royal Engineers, I got valuable work experience as a construction health and safety manager in the commercial world. I am always grateful to Willmott Dixon for providing those few months

of secondment during my army resettlement back to a full-time career back in civilian life.

Tony Brook MCIOB

A great man and a great company committed to their staff, local communities and the wider built environment.

Andrew Board

I have very fond memories of 'Mr Peter' from my time with the John Willmott Group. He was a gentleman with time for everyone and took a genuine interest in people.

In the mid-1980s, I was moved from Willmott's Hertfordshire regional business to help revive the main John Willmott Construction business at Shefford in the role of construction's senior surveyor.

Peter would call into my office whenever he was going to visit a client to ask for the most up-to-date position and the status of the on-site relationships. He cared deeply about his business and the clients equally.

During this period, Peter asked me to assist in Rick's [Willmott's son] training and 'teach Rick to be commercial'. In return, Rick taught me how to play pool. Happy memories. He well deserves this fine obituary for his great legacy. RIP, Mr Peter.

Karim Khan

A wonderful human being who has left a remarkable legacy, he will be remembered fondly by those that had the privilege to meet him.

CM Jan 2024

Construction must attract new talent or its productivity boom will falter

Helen Gawor

The fundamental issue is that only 48% of our workforce is directly employed. All sectors in the UK economy that are not 'employing' in the traditional sense struggle with skills. Until we create a sector economy of employers, we will never attract the numbers we need.

Future Homes Standard consultation

CIOB is compiling a response to the government's consultation on the Future Homes and Building Standards, which runs until 6 March

Stephen Fawcett MCIOB

This is a consultation which asks we consider a significant change to the way new buildings, including homes, are constructed and heated. It is extremely important that home builders and contractors have their views considered. We should take time to consider the proposal and respond accordingly.

CIOB People 31/01

Construction skills academy launched in West Midlands

Caroline Williams

Exciting movement in the Midlands. I've searched around for apprenticeship programmes at a higher level with a reputable company. I am hopeful our company will achieve this with its year-on-year growth and an eye for benefiting from educating aspiring professionals. The construction sector, in light of the latest legislation, would benefit from upskilling its employees who are passionate about work-based training.

Share your views on the latest industry issues by posting comments online at www.constructionmanagement.co.uk or by emailing the editor at construction-management@atompublishing.co.uk

What women want (on site)

How could construction sites be more welcoming to women?
Ahead of International Women's Day, former site engineer
Kristina Smith asked four female industry professionals
– and came up with seven points that need addressing...

It can be pretty uncomfortable to be considered a novelty in any situation. For a woman walking on to site for the first time, it will mean that you are looked at more than a man might be. If you are one of just a few women on the site team, your colleagues might get your name wrong, or even call every female by the same name (yes, this really does happen).

Without waving a magic wand to increase the proportion of women in operational roles on site, what can be done to make women – and other minorities in the industry – feel more welcome on site? This was the challenge that British Land project director Lynn Summerfield set for Skanska senior construction manager Sophie Baker on the Norton Folgate project in London.

"Having a female client was a first for me," recalls Baker, "and also one who was really willing to open up these conversations. I was given the opportunity to think about how you make the space welcoming and motivating for all sorts of people, whatever their background."

We asked Baker, Summerfield, CIOB president Sandi Rhys Jones

As a woman, you stand out, so if you put your head above the parapet and if you fail, you are way more visible
Sophie Baker, Skanska

and Construction Plant-hire Association technical and development officer Katie Kelleher – a former apprentice herself – for their ideas on how to make sites more welcoming. And they don't just apply to new female apprentices. People from other minority groups, those arriving at the site for the first time and visitors from any background could all feel a little more welcome walking through the turnstiles.

1 Onboarding

When Kelleher arrived on her first site as an apprentice, there was no one to greet her. "It was awful," she recalls. "I had been told to arrive a couple of hours before I needed to be there – unbeknown to me – and I ended up in somebody else's meeting with everyone staring at me. And the staring continued all day. Had I been younger, I would not have gone back."

Imagining arriving as a newbie to site, these are Baker's thoughts: "The initial feeling would be that you visibly stand out as being different from everyone else. You might feel alone, a bit disoriented."

For a smaller site, an improvement could simply be posting some

instructions at the entrance to site about how to get in or who to ask for. On bigger projects, it might be possible to have a female logistics person at the gate.

At Norton Folgate, those doing inductions alerted Baker or another female person if a woman was among the newcomers. They would then be walked round site by one of the female team members. "We used this as a mechanism to chat to the person and build a relationship with them, to find a commonality in an environment where there is little," says Baker.

2 Canteen

Canteens can be an intimidating place, especially if you look different to everyone else there. Walk in, and natural curiosity means that multiple heads will turn your way.

At Norton Folgate, one of the routes into site was through the canteen. A suggestion that came from the women working on that site was to partition the route off so that they didn't have to endure the daily rubbernecking which some of them found intimidating.

"That also went for other people coming to site," says Baker. "It might be a young architect, or our client ►



might be bringing a potential tenant to walk around the development. We want them to feel comfortable too."

3 Showers and toilets

When Sandi Rhys Jones was first talking about making construction sites inclusive, decades ago, there were often no toilets at all for females. That isn't the case now – at least on bigger sites.

"There are some major projects where they really do have decent facilities. That impressed me," she says, adding that, with an ageing workforce, men have just as great a need as women for private and decent facilities on site. "It's a bigger issue around how we look after people."

Baker's advice to anyone planning welfare facilities is to arrange for a peer review or ask the architect for 30 minutes of their time if there's no suitable person on the team. Things to consider include lines of sight through toilet and shower doors, routes and locations of facilities and whether people feel safe. Building owners are now installing alarms in all showers, notes Baker; this could be a cost-effective way to make people feel safer on sites too.

4 Networking groups

One way to prevent individuals from feeling isolated is to put them in touch with others like them. This

happened at Norton Folgate through a physical, quarterly breakfast meeting – primarily for women, although all were welcome – and with a WhatsApp group.

On bigger projects, such as Tideway and Crossrail, working groups of allies across projects worked really well, says Kelleher. "It's about putting people in touch with others who are the same as them."

Now Kelleher is part of a group on Instagram which links women working in trades. "I see the problems people come up against on sites. Without that group they would have no one else to talk to about it," she says.

For sites where there are few women, managers could set up networking opportunities with people from the wider project team, says Baker. "It gives you the sense of community and the confidence to know that somebody has your back. As a woman, you stand out, so if you put your head above the parapet and, if you fail, you are way more visible."

"A good construction manager will find ways to interconnect their team and other teams. That's about better comms and knowledge sharing," says Rhys Jones. "Make sure everybody is communicating and that there are all sorts of different people involved. It's a professional network that reduces isolation." ►



There are simple things you can do to make it better. 'Man hours' are working hours. 'Men at work' means people working

Sandi Rhys Jones, CIOB



Networking opportunities give you a sense of community and confidence to know that somebody has your back if you put your head above the parapet

Sophie Baker, Skanska



The #PPEthatfits campaign is important for safety reasons, and it affects your confidence if you look like you are wearing your dad's clothes

Katie Kelleher, Construction Plant-hire Association



Coaching of trades' contract leaders would show that small changes in attitude and actions can improve people's working lives

Lynn Summerfield, British Land

Become a Go Construct STEM Ambassador and help **shape the future of the construction industry.**

We are all passionate about what we do.

But if you, or someone you employ, could inspire and engage the next generation of construction professionals, then why not become a Go Construct STEM Ambassador?

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To find out more or join, register for one of our webinars at:

goconstruct.org/ambassadors





For more information on the CIOB's campaign, go to: www.ppethatfits.com

5 Validation

Rhys Jones' advice for projects with just one woman might seem surprising at first: "Start by referring to that woman by her proper name and recognising what their role is. Consolidate them as individuals."

She tells the story of an engineer who moved from a contractor to a consultancy and reported that, after three years of being called 'love' or 'duck', felt validated, simply because she was called by her actual name.

Baker echoes this. "Please get people's names right," she urges, remembering one project where the construction manager always called her and her one other female colleague by the same name. "You tend to lose your identity," she says.

6 #PPEthatfits

Providing PPE that fits properly is primarily an issue of safety, says Rhys Jones, who is one of the champions of CIOB's #PPEthatfits campaign. Ill-fitting clothing can cause trips or get caught in machinery. Boots made for men's feet can cause health problems for women, such as plantar fasciitis.

Kelleher, who also supports the campaign, recalls having to wear PPE that was far too big. "There was always something that wasn't proportionately right." As a crane driver, she had to remove her oversize jacket once in the cab to be able to move properly to operate the controls. "It affects your confidence too if you look like you are wearing your dad's clothes."

"The thing is, PPE designed for women does exist so why isn't it more available?" asks Rhys Jones, although she acknowledges that there can be issues around provision for the supply chain, and limitations due to procurement systems.



The thing is, PPE designed for women does exist, so why isn't it more available?

Sandi Rhys Jones, CIOB

"That's another opportunity for construction managers," says Rhys Jones. "They should be having conversations about how PPE procurement is done and how it can be possible to buy PPE that fits everybody. Then it's about people instead of survival of the fittest... It changes the dynamic on your project."

7 Language

Language can be a barrier to inclusion on many levels. Phrases such as 'man hours' send out subliminal messages to women that this is not a working environment for them.

"It is divisive," says Rhys Jones. "You can manage it without being clunky or precious or woke. There are simple things you can do to make

it better. 'Man hours' are working hours. 'Men at work' means people working." If you are highlighting helpful changes in language, employ a light touch or even humour if possible, she advises.

At Norton Folgate, Baker found that some of the women had limited spoken English skills. "That's an industry problem for all genders," she says. Just like putting women in touch with each other, so linking people with others from the same country or with the same mother tongue helps reduce isolation and make people feel more welcome, says Baker.

Looking back – and forwards

Looking back to when she first worked on sites in the 1990s, there have been massive changes, says Summerfield. "I used to be the only operational person but now, particularly in a big contractor's office, it is generally more diverse. And that increase in diversity has driven the environment to be better and more welcoming."

Rhys Jones remembers a time of 'saucy posters' on site. "It's only when I look back, that I think how that was the norm," she says, adding that improvements in health and safety have led to more professional management practices all round.

Outside the site office, however, the industry must work harder to change the culture on site, says Summerfield. Like the behavioural changes that have driven improvements in safety, she would like to see coaching of trades contract leaders so they understand how small changes in attitude and actions can improve people's working lives.

"We showed during Covid how quickly we could adapt. That's what we do. We have all the right skills to manage these changes." ●

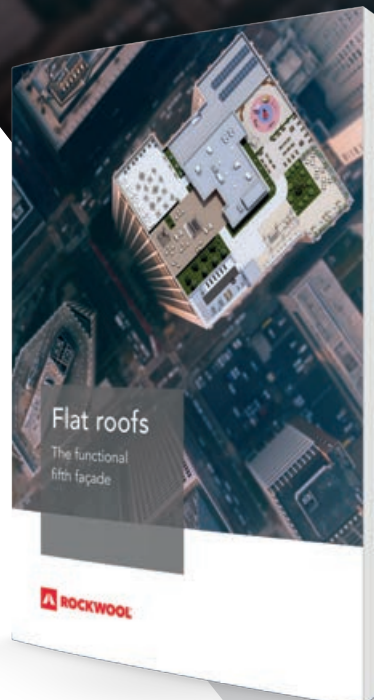
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'Building control will get a new status'

Next month is the deadline for building control surveyors to register with the Building Safety Regulator. A sometimes-marginalised profession has been undergoing sweeping changes, as **Will Mann** finds out from LABC CEO Lorna Stimpson

These are busy times for Lorna Stimpson FCIQB, CEO of Local Authority Building Control (LABC).

April is the deadline for building control surveyors to register with the Building Safety Regulator (BSR) and LABC's Building Safety Competence Foundation (BSCF) is one of three assessment bodies that can provide the necessary certification of competence.

"We're working incredibly hard to get as many people through in the timeframe as we possibly can," says Stimpson, who is an executive director for BSCF. "6 April is that hard stop. For those who haven't begun the process of gaining their certification, they need to get on with it right away. Today. There is no time to waste."

Registration with the BSR is one of many major changes sweeping a profession which Stimpson says has been "marginalised" in the past. That will change, she states confidently, helped by a suite of training and qualifications that LABC has been developing with

CIOB over the past eight years (see box, p24) which is bringing a new generation of talent into the sector.

But in the short term, "it's a difficult time for building control", Stimpson says. "The age demographic in the profession is very top heavy, and that's because of austerity following the 2008 recession, a lack of investment and education not matching what we needed in building control."

"Now, because of the new competency certification requirement, if you're a building control professional, public or private, you've got to prove that you're competent to do the job you've been doing for 40 years. That's a difficult pill to swallow. I wouldn't blame people who decide to retire."

"But I appeal to them not to leave the profession. These very experienced surveyors are the people who we desperately need in building control over the next couple of years. Because the influx of new people can only learn if they've got experienced people around them."

CV: Lorna Stimpson

- CEO, LABC, 2019-present
- Deputy CEO, LABC, 2019
- Deputy managing director, LABC, 2015-19
- Managing director, LABC Consult, 2011-15
- Business development director, LABC, 2008-11
- Building control surveyor, Oldham Metropolitan Borough Council, 2000-08
- Sheffield Hallam University, Building Surveying: 1990-95
- FCIQB, FCMI, CBuildE, FCABE

You don't learn building control out of a book, you learn it on site, experientially, as I did."

It was back in 2016 that LABC, which represents around 3,500 public sector building control surveyors, took the first steps towards reshaping the profession.

"We recognised there was a resourcing timebomb and approached CIOB about jointly developing building control training and qualifications," explains Stimpson. "This work predates Grenfell, but that tragedy, plus Dame Judith Hackitt's review and the Building Safety Act, has accelerated the process."

In 2017, LABC started work with the University of Wolverhampton to create a degree programme. A year later, its Building Control Apprenticeship was approved, its Level 4 and Level 5 Building Control Diplomas started, and it was approved as a CIOB training provider. In 2019, the Building Control apprenticeship degree started with over 100 students in its first intake. ►





Driven by the registration of the profession, building control surveyors will be regarded as a vital part of ensuring compliance

Lorna Stimpson, LABC



the building regulations, the legislative structure.”

Following the Building Safety Act, the government has recognised the need for greater capacity in building control. Last year, LABC was awarded over £20m by the Department for Levelling Up, Housing and Communities (DLUHC) to recruit 110 trainee building control surveyors. LABC received over 1,000 applications for the roles. These trainees – and many others – will have their competence validated by the BSCF.

With certification and registration, attitudes towards building control will change, Stimpson believes.

“Registration elevates building control, and makes people think ‘oh, right, actually, that’s a registered profession’. It now has a status and kudos that it didn’t in the past.

“Building control used to have its own degree, then it got subsumed into building surveying; now that degree qualification is back – it gives more self-respect for the profession.

“We’re also seeing different people come into the role and I think it will be a much more diverse profession going forward. Of the recent 110 trainees recruited, 29% were female – far higher than the overall construction industry average – and 66% are embarking on their second careers.”

Stimpson also thinks the culture around building control will change.

“Building control used to be seen as a commodity. ‘The least

Building control’s new era

- From April 2024 the profession will be regulated by the Building Safety Regulator (BSR). This will include a requirement for building control professionals to register with BSR.
- Before building inspectors apply to register with BSR they must have passed an independent competency assessment.
- This will evaluate their skills, knowledge, experience and behaviours against the building inspector competence framework (see below).
- Competency assessments are provided by three approved schemes, run by: LABC’s Building Safety Competence Foundation (BSCF); the Chartered Association of Building Engineers (CABE); and Total Training Development.
- All registered building inspectors in England must comply with a code of conduct.
- A directory of approved building inspectors will be published by the BSR. It will also keep a separate register of private sector businesses that carry out building control work which replaces the approved inspector register run by CICAIR.

Meanwhile, addressing Hackitt’s challenge to construction to prove its competence, LABC began working with the Institution of Fire Engineers on a building control surveyors competency validation assessment for fire safety in higher-risk buildings (HRBs). This led to the creation of the BSCF in 2021 as a separate ‘community interest company’ to provide competence certification.

Stimpson says the competency assessments will be necessarily rigorous. “The interviews and the assessments are not a walk in the park: anyone in building control – experienced or trainee – will need to spend a lot of time and effort in preparing.”

But that’s a good thing, she adds. “The new competency framework is defining what building control competence should look like. But it was never mapped in the way that it is now.

“And we know that our education programmes at LABC completely follow that competency framework – they are very much focused on

intervention at the least price’ was the way that it was treated.

“But now, driven by the registration of the profession, building control surveyors will be regarded as a vital part of ensuring compliance. They will be able to visit sites and say, ‘we need you to prove that this building complies with the building regulations’.

“They will have more time to do the job that they’re experts in, which is helping organisations comply with the legislation and the regulations.

“That’s an important culture change and it’s what Dame Judith Hackitt has called for.” ►

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Building control is undergoing an important culture change which is what Dame Judith Hackitt called for

Lorna Stimpson, LABC



Post Grenfell, the debate over building safety regulation has questioned whether there should be private sector building control.

Stimpson says she's "split" on the issue.

"There are excellent building control surveyors in both public and private sector. But there has been criticism about building control not having direct stewardship for a long time, and some will say that these changes are not a moment too soon.

"If everybody is working to a level playing field, if they are all registered and equally scrutinised, the debate about the public and private sector building control divide should go away."

As 6 April approaches, things will only get busier for Stimpson and BSCF.

"We've got 2,500 somewhere in our system, and we expect about 900 will be certified by April, although obviously I am not able to comment on those going through the other two assessment bodies," she says.

Looking past April, LABC's education work will continue.

"Construction is constantly evolving, so we've got to evolve with it," Stimpson says. "Our content can never stand still. We're already running bespoke level six learning courses that are accredited by CIOB, such as fire safety. We've also got an idea for a master's degree in building control surveying.

"And we'll continue working with CIOB on this. They've held our hands all the way through development of our education programme and been absolutely vital in helping LABC do what we can do now."

Further information:

www.ciob.org/learning/find-courses/building-control-qualifications
www.labc.co.uk/professionals/training

Building Inspector Competence Framework

The Building Safety Regulator has created four registration classes for building inspectors:

- ➊ **Trainee building inspector.** Works in a trainee capacity, must work supervised until they register in one of the other three classes.
- ➋ **Building inspector.** Can work on all building types other than those dealt with by class 3 specialist inspectors.
- ➌ **Specialist building inspector.** Has additional knowledge and experience required to work on all building types including non-standard and higher-risk buildings.
- ➍ **Building inspector (technical manager).** Has

the competence of a class 2 or 3 building inspector and is responsible for management of the building control function.

Building inspectors must demonstrate competence across nine subject areas: law; technology; building services; functions and activities; plans assessment and enforcement; inspection and enforcement; management and core skills; safety management; and ethics.

The required level of competence for each subject area varies according to registration class, with four competency levels defined: A Awareness; B Appreciation; C Understanding; D Comprehensive.

CIOB and LABC building control training and qualifications

CIOB and LABC have developed a suite of vocational building control qualifications, to demonstrate competence and raise standards.

- CIOB Level 3 Certificate in Technical Support for Public Service Building Standards
 - CIOB Level 4 Diploma in Public Service Building Control Surveying
 - CIOB Level 5 Diploma in Public Service Building Control Surveying
 - CIOB Level 6 Certificate in Fire Safety for Building Control – Complex Buildings
 - CIOB Level 6 Certificate in Managing Legislative Compliance in Building Control
 - CIOB Level 6 Certificate in Managing Public Service Building Control
 - CIOB Level 6 Certificate in Building Control for Safety at Sports Grounds and other Public Events
- Graduates at Levels 4 and 5 have direct routes to join the University of Wolverhampton's levy funded apprenticeship degree or the non-levy funded top-up degree. Graduates from both gain a BSc (Hons) Degree in Building Control Surveying.



architectural acoustic finishes

SonaSpray K-13 acoustic ceiling spray

Client ANZ choose fire-rated, recycled SonaSpray for reverberation control throughout their offices.

SonaSpray absorbs sound energy, allowing designers to create productive spaces, free of distraction where employees can thrive. The seamless and decorative spray finishes range from plaster smooth to textured.

Credit to TP Bennett. Photo by Hufton+Crow.



OSCAR
acoustics

► Carbon impact can be lessened by early engagement with the steelwork contractor

Sustainable steel and the 'dash for scrap'

There has been a surge in demand for scrap steel recently – but there are better ways of reducing carbon emissions in constructional steelwork, **Nick Barrett** says

Given the pressure on the construction industry to cut carbon emissions, the appeal of specifying scrap steel should come as no surprise.

Steelwork contractors are reporting a significant increase in client requests for steel manufactured using the electric arc furnace (EAF) method, which uses scrap steel, rather than the traditional basic oxygen steelmaking (BOS) process that creates steel mostly from iron ore, although it also uses a moderate amount of scrap steel in the process.

But the British Constructional Steelwork Association (BCSA) advises that simply insisting on EAF steel is not the best way to reduce global carbon emissions, although it is a necessary step towards decarbonising the steel sector.

CEO Dr David Moore says: "Clearly, clients wish to minimise the carbon impact of their projects today, which is a laudable aim and will provide further encouragement to the steelmaking industry to decarbonise.

"However, while EAF steel has a lower embodied carbon than BOS

steel today, there is not currently enough scrap to meet the global demand for steel through EAF manufacturing alone. So, while specifying EAF steel for one project will minimise the carbon footprint of that project, it will not reduce global carbon emissions as it will merely displace BOS steel to another project."

Mark Smith of steelwork contractor Billington Structures says: "Some clients see EAF steel as being more environmentally friendly than the BOS method, but BOS uses a lot of scrap steel itself – approximately 25% of the steel produced by BOS is from scrap. Scrap is vital to the BOS process.

"Insisting on EAF steel as a way of reducing carbon content shows a misunderstanding of steel manufacturing. The steel sector is on a route towards being carbon neutral and demanding EAF is a distraction from that."

Alan Dunsmore, CEO of Severfield, says: "It is just displacement because the overall mix of steel produced globally remains exactly the same, regardless of what steel is used on any individual project. And this mix



The steel sector is on a route towards being carbon neutral and demanding EAF is a distraction from that

Mark Smith, Billington Structures

cannot really change because of the requirement for scrap steel to support the EAF process, the supply of which is limited."

Manufacturer British Steel also warns about the dangers of a 'dash for scrap'. Commercial director for construction Ben Cunliffe says: "We can't produce more steel purely from scrap – we need to produce new steel. Asking for steel made only from scrap is being done increasingly for commercial reasons rather than for genuine reduction of CO₂ levels, perhaps making buildings superficially more attractive to people who don't understand what they are asking for."

Matthew Shimwell, managing director of steelwork contractor Caunton Engineering, says he welcomes the debate it generates: "When clients specify EAF steel they create healthy competition across the supply chain, which pushes others to improve."

He adds: "It's important that primary steel manufacturers (BOS) are supported during their transition to greener steel, as ultimately it's ►



20

As much as 20% of the steel requirement for some projects can be eliminated by more efficient design



Cost and sustainability are two of the driving concerns of developers of buildings and other structures. Both can be targeted by a single strategy – early engagement with your steelwork contractor

Dr David Moore, BCSA



▲ Demand is growing for steel manufactured in electric arc furnaces, which use scrap steel

their carbon reduction strategies that will have the biggest impact on reducing embodied carbon. Once out of this primary steelmaking phase, of creating virgin steel, we can then benefit more fully from steel's ability to be recycled endlessly."

BCSA published its *UK Structural Steelwork: 2050 Decarbonisation Roadmap* in November 2021, which shows a credible pathway to transition

to net zero by 2050. EAF steel is part of the solution, but BCSA says it is not a silver bullet. It encourages clients to talk to the industry to help understand the issues to consider.

Collaborating to cut carbon

BCSA argues that the best way to reduce the carbon footprint of projects is greater collaboration and early engagement, leading to increased design efficiency.

"Cost and sustainability are two of the driving concerns of developers of buildings and other structures. Both ambitions can be targeted by a single strategy – early engagement with your steelwork contractor," says Moore. "The price of steel itself is not under the control of steelwork contractors, but ours is a highly competitive sector, which ensures that the keenest prices for fabrication and erection of steelwork are always available.

"Developers, designers and contractors know this, which is why steel is the market leader in key sectors like multi-storey buildings and single-storey industrial buildings or sheds. They all increasingly need to ensure that the products and services they use are being produced to the highest possible sustainability standards."

There is a recognition of the need for greater collaboration across the industry. Smith says: "The spirit of collaboration that we saw as a response to the challenges of the pandemic is being maintained. Clients are taking a more strategic approach to procurement, with many of them having recognised the benefits of early engagement with their suppliers, rather than passing risk down the supply chain.

"The sustainability focus is ever increasing and that is coming from

our own direct clients as well as from their clients."

Cunliffe says steelmakers have faced a significant cost price squeeze since summer 2022, with prices falling month on month due to lacklustre demand, while raw material steelmaking input costs remained largely flat.

"Prices appear to have now bottomed as the market is accepting that price levels are no longer sustainable with the continued high levels of raw material costs," he says.

British Steel says there is no issue with capacity constraints or supply, and lead times for most types of steel sections are four to six weeks from placement of order.

Early engagement benefits

It is estimated that as much as 20% of the steel requirement for some projects can be eliminated by the more efficient design that a steelwork contractor can suggest if engaged early enough. Lead times can also be cut.

Shimwell says: "Early engagement of a steelwork contractor is the single best way to reduce carbon. Some clients have had intellectual property worries but trust comes into it, and pre-contract agreements can also help. I think we are winning the debate.

"Clients are moving away from the traditional way of procuring, which meant appointing designers, contractors and materials suppliers in a linear fashion, first one then the next and so on. This pushed key suppliers off the critical path, which is now recognised as a waste of time and money, as well as leading to less efficient designs and hence a sub-optimal carbon-related performance. More efficient design can also cut waste." ●

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Passport control

Mace's steel-framed Edenica office project at 100 Fetter Lane in London features the first use of Waterman's 'materials passports' system – which could transform the industry's ability to reuse materials.

Martin Cooper reports

A steel-framed office development in the City of London is pioneering a new concept known as 'materials passports' – helping to address the challenges of the climate emergency and advance the construction sector towards its net zero targets.

Developed by BauMont Real Estate and YardNine, Edenica at 100 Fetter Lane is the first project in the City of London to use these digital data sets. They describe characteristics of materials and components in products and systems, giving them value for present use, recovery and future use. In this way, a project such as Edenica is designed as a storage bank where materials are held for future reuse. Launched by Waterman Group, materials passports offer a standardised approach to documenting and managing materials throughout their life cycle. It is hoped they will become an industry standard, driving collaboration and sustainability.

"The Waterman team has been integral in helping us create and bring to life this truly exceptional scheme that pushes the boundaries of sustainable design," says Maxwell Shand, co-founder of YardNine.

The Edenica scheme has embraced the pioneering concept of materials passports to enable the circular reuse of materials and a design that minimises the environmental impact during the building's construction and its operation.



◀ Far left: Raking columns form a column-free zone for the main entrance

◀ Left: Terraces provide outdoor spaces for the upper floors

This digital asset stores every one of the project module's weight, dimension and component characteristics in a BIM database, which creates a robust platform for material circularity

Romain Dennison, Mace

concrete-framed office building had already been demolished. Preliminary works included deepening the existing basement and installing piled foundations to support the new steel-framed structure.

Steelwork was the preferred framing solution for the Edenica project as the material provided the necessary speed of construction. Another important consideration was the need for a lightweight design, as the project's footprint sits directly above a live and operational Thames Water sewer. A similar-sized concrete-framed structure might well have proved too heavy for the site.

The steel frame starts in the basement, with a series of columns founded on the subterranean level's slab. The columns, delivered to site as single-storey-high members, were installed early in the programme.

"They form part of the basement structure, and we installed them during an early visit to site," says Bourne Steel project manager Theodoros Pitrakkos.

"Once in place, they were encased in concrete and the ground floor slab was cast around the top of them, ►

"It's setting a new precedent for London," explains Mace senior project manager Romain Dennison. "This digital asset stores each and every one of the project module's weight, dimension and component characteristics in a BIM database, which creates a robust platform for material circularity, so they can be reused if and when the structure is refurbished or demolished."

Adding to this project's sustainability credentials, it is also targeting the highest environmental standards of BREEAM Outstanding, as well as WiredScore, SmartScore and WELL certifications.

Mace started on site in December 2022, inheriting a cleared plot where the previous six-storey

Project overview

- Client: BauMont Real Estate Capital, YardNine
- Architect: Fletcher Priest Architects
- Main contractor: Mace
- Structural engineer: Waterman Group
- Steelwork contractor: Bourne Steel
- Steel tonnage: 1,100 tonnes



leaving a small section protruding above the floor, in readiness for the main steel erection to begin."

Prior to the remainder of steelwork erection programme getting underway, the main stability-giving jump-formed concrete core was also begun. The core is offset, positioned on the eastern Fetter Lane elevation, which allows the internal floorplates to be opened up and maximised.

Above ground floor, the structure consists of steel beams and columns supporting a series of 4.5m x 1.8m precast floor planks. This solution was chosen as the design incorporates an exposed soffit and the planks have the desired smooth high-quality architectural finish to their undersides.

The exposed nature of the project extends to the majority of the internal steelwork as well as the building's services and the core, which will also be left exposed within the main reception area. Complementing the exposed

aesthetically pleasing look to the building's interior, the column's steel-to-steel connections are made with countersunk bolts, which provides a flush finish. Most of the steel frame has a decorative paint finish, which was applied on site.

The steel columns are predominantly based around a regular grid pattern, one that is dictated by the terrace setbacks at the upper levels. Internally, there are clear spans of up to 11m in some areas, providing the building with the desired open-plan floorplates.

Column-free space

Creating the main entrance, which is on the corner of Fetter Lane and Bream's Buildings, a clear column-free space has been formed by doing away with the corner column line below level five.

At the underside of this level, the corner member is replaced by two raking sections that splay inwards towards the adjacent bays, framing

▲ Steel erection proceeds adjacent to the project's offset core

► Exposed steel beams and columns will form an architectural feature in the entrance lobby

the entrance to the building and leaving a clear space for the entrance.

Aiding the project's wellbeing strategy, from level five upwards, Edenica features a number of setbacks, mostly on the southern and eastern elevations that accommodate outdoor terraces. With an abundance of plants and greenery, they will offer tenants plenty of welcoming breakout space.

Having terrace setbacks means the structure reduces in size towards the upper levels. This presents a less formidable block in an area of the City that, in contrast to the well-known eastern cluster, does not have many buildings above 15 storeys high.

"To maximise the number of floors within the structure, the transfer beams that support the terraces needed to be as slim as possible," explains Waterman Structures director Julian Traxler.

"Consequently, the slim transfer beams need to be supported by internal columns, which has been another factor in determining the project's steel grid pattern."

According to Bourne Steel, the transfer beams represented the heaviest individual members in the steel frame erection programme, with the uppermost section, supporting a terrace at level 12, weighing 10.9 tonnes.

Using the site's two tower cranes, the steel erection was coordinated around other onsite trades, which earlier in the programme included the

The heaviest steel members, supporting a terrace at level 12, weigh 10.9 tonnes

10.9

To maximise the number of floors within the structure, the transfer beams that support the terraces needed to be as slim as possible

Julian Traxler,
Waterman Structures



installation of the core. During the jump-forming process, Bourne Steel, the supplier of the embedment plates, progressively welded stubs to the plates to accept the frame's beams.

As well as erecting the steelwork, Bourne Steel also installed the precast planks. To coordinate both installation processes, the steel frame was erected two floors at a time. With five separate zones, two fed by one crane and three supplied by the other tower, the erection proceeded in a sequential manner, working around the site in a clockwise direction.

A temporary propping system was employed to support each phase of the precast plank installation. The props ensured the flooring units were aligned, which is vital for

the exposed and aesthetic finish. They remained in place during the pouring of the concrete topping that completed the 150mm-thick flooring solution.

"The completed scheme will have 100% electric building services, ensuring Edenica achieves carbon neutrality in use," says Dennison.

"Alongside our sustainability credentials, coordination between the project's different trades has also been key on this project. It's a very tight and confined site, bounded on two sides by busy streets, on which we have been able to accommodate our pit lanes, that feed our cranes with materials, keeping the job on schedule."

Edenica is due to complete by the end of 2024. ●



What are 'materials passports'?

Materials passports are structured as a pyramid, with various levels of passports aggregating and refining data, from capturing manufacturer-provided product details to presenting data for specific building element categories.

The pyramid approach is said to offer holistic overviews of building performance against sustainability metrics.

To add to their usefulness, Waterman Group is working with software developer Circuland to deliver a digital platform designed to host materials passports data and linked directly with BIM models.

The platform's transparency in material types, recycled content, disassembled materials for reuse and an online

marketplace for selling materials are all expected to enhance the resource-efficient use of materials and lead to a more sustainable future.

Mark Terndrup, Waterman's managing director for building services – south, says: "With the launch of our Materials Passports Framework, we aim to drive material circularity and kickstart the circular economy throughout the construction industry with a robust process any scheme can follow."

"The impacts of the climate emergency are more prevalent than ever, and extending material lifespans is fundamental to minimising the embodied and whole-life carbon impact of development schemes across every sector."



10 tips for a compelling awards entry

While Hollywood hands out its trophies, professionals in digital construction have less than a month to compete for their own Oscar. How best to compete? Here's what the judges say

It's time to get your entry ready for the digital construction's Oscars – the Digital Construction Awards. But first, read through these pointers from the judging panel on what to put in your submission.

- Study the criteria closely.
- There are 14 categories in the awards: make sure you're entering the correct one(s).
- Review who won last year and read about their winning entries to understand

what caught the judges' attention last year.

- The entry form sets out the story that your entry needs to tell. Answer the questions and provide the information requested.
- Take the time to draft a formal entry rather than simply uploading content from marketing collateral: your entry will be all the better for this.
- Use clear, plain English.
- Jargon – construction is awash with it, but avoid using too much of it in your entry.

● In the Challenge section, be mindful that, as experienced and knowledgeable as the judges are, they may not have heard of your firm or project before. Provide the necessary context.

● In most categories, the Benefits and Achievements section is worth up to 20 points, so make sure you share detailed results of your work here.

● Get a colleague to proof your entry before you submit it. ●





The Digital Construction Awards categories

- Digital Construction Project of the Year
- Digital Contractor of the Year
- Digital Consultancy of the Year
- Digital Multi-disciplinary Consultancy of the Year
- Digital Collaboration of the Year
- Digital Rising Star of the Year
- Digital Construction Champion of the Year
- Best Application of Technology
- Product Innovation of the Year
- Best Use of Data on a Project
- Delivering Sustainability with Digital Innovation
- Digital Innovation in Asset Management
- Digital Innovation in Health, Safety and Wellbeing
- Digital Innovation in Productivity

Remember the deadline

The deadline has been extended to 5.30pm on Friday 22 March. If the deadline is looming and you're worried that you'll be late, contact justin.stanton@atompublishing.co.uk.

Got a question?

If you've got a query about entering, please email: justin.stanton@atompublishing.co.uk.

Who organises the Digital Construction Awards and who sponsors them?

The awards are organised by Digital Construction Week, the

Chartered Institute of Building, and *Construction Management* and *BIMplus*. Sponsors already confirmed are Bluebeam, the Chartered Institute of Building and Procore. More will be announced in the coming weeks.

Celebrate your success

Watch out for the shortlist announcement on 13 May. And then book your table early to ensure you and your team will be at The Brewery on 2 July.

For more information, go to digitalconstructionawards.co.uk.

Who are the judges of the Digital Construction Awards?

The judging panel comprises experts drawn from across the built environment supply chain. Study their profiles closely at digitalconstructionawards.co.uk. They know what's business as usual and what's genuinely innovative or effective. Don't try to dazzle them or pull the wool over their eyes: it won't work.

Alex Small Digital platforms and innovation lead, Tata Steel Europe	Hadeel Saadoun Education sector lead – real estate digital, Turner & Townsend	commercial, legal and digital risks, Buro Happold
Alistair Kell Chief information officer, BDP	Harry Parnell Head of digital project delivery, Balfour Beatty	Melissa Zanocco Head of programmes, Infrastructure Client Group
Arun Thaneja Technical services and sustainability director, Winvic	Jack Dearlove Group digital information director, ISG	Mike Higgins National technical manager, Cemex UK
Ben Jowett Head of digital construction & engineering, Wates Group	James Daniel Head of digital engineering, HS2	Nick Leach Director of digital construction, Sir Robert McAlpine
Bola Abisogun Founder & CEO, Digital Twin Skills Academy CIC	Javed Edahtally Digital & IM lead, Bakerhicks – Defence Sector	Patricia Massey Digital & Technology Manager, BEAMA
Casey Rutland Director, digitalgreen.io & Workstream B champion, GII	Jill Guthrie Digital manager, Willmott Dixon	Paul Morrell Former chief government construction adviser
Cristina Sanchez BIM manager & digital engineer, Lendlease	John Ford Group BIM and digital delivery lead, Galliford Try	Prof Chris Gorse Chair of CIOB Sustainability Panel, Loughborough University
Cristina Savian Managing director, BE-WISE	Karen Alford Coastal risk manager – digital data and information, Environment Agency	Rob Jackson Information Manager / BIM consultant
Danny Clarke CITB	Kirsty Villiers Head of design and technical, Southern Housing	Sam Stacey Chief executive, Stacx International
David Philp Chief value officer, Cohesive Group	Lorna Killick Head of business operations, ODGroup	Sarah Keyte Technical director, HKA
Dr Marzia Bolpagni Head of BIM international – associate director, Mace Group	Lucy Rowsell Head of information management, Eiffage Kier Ferrovial BAM	Su Butcher Programme manager, BIM 4 Housing Associations
Emma Hooper Associate director, head of R&D, Bond Bryan Digital	May Winfield Global director of	Vicki Reynolds Chief technology officer, Catalyst & Obi
Fiona Moore Interoperability technical lead, GII		



Could MMC ever take off in Ireland?

After last month's spotlight on MMC in Australia, **Rod Sweet** looks at a new CIOB report on the building method's prospects in Ireland

A new report published by CIOB and TASC, an economic and social think-tank in Ireland, has examined the barriers to modern methods of construction (MMC) in the country.

Its author, Dr Robert Sweeney, said expanding MMC would get houses built faster and help Ireland

achieve its carbon emission targets. The report, *Modern Methods of Construction: Barriers and benefits for Irish housing*, calls for a concerted effort by the Irish government to change various policies to promote MMC.

"It would result in considerably less waste than conventional construction methods, enable construction to

be carried out more quickly and would reduce disruption such as noise and truck traffic in local neighbourhoods," he said.

In Ireland as in the UK, MMC is an umbrella term that includes a spectrum of approaches, from 3D volumetric modular or 2D panelised pre-manufacturing at one end, to technologically assisted conventional construction at the other.

This report uses 'MMC' and 'offsite manufacturing' interchangeably. It's based on interviews with 30 people working in construction, two-thirds of them in the private sector – a mix of contractors, architects and manufacturers – and about a third from local authorities.

▲ An apartment building in Cork – but MMC take-up in Ireland has been low

Manufacturers
will typically
ask for up to
60% of the total
cost up front

60

What's holding it back?

The supposed benefits of MMC are by now familiar: speed of delivery and better quality assurance are the most often cited. But the barriers the report reveals are as multifaceted and systemic in Ireland as they are in the UK, where problems have afflicted several modular builders.

Most of the barriers stem from the basic problem of weak and unstable demand. Factories are expensive to build, equip and staff, and the money spent on them won't be recouped if their production lines sit idle for even some of the time.

When it comes to private housing, demand for factory-made houses falls at the first hurdle because the major banks won't offer mortgages for modular homes, the report finds.

One manufacturer described the lengths it went to to try and engage their banker. First the bank demanded a certificate of completion. Then it demanded the house be fixed to the foundation. Then it required a 60-year guarantee.

The manufacturer met each demand but the bank still said no, the report said. Funding for big modular developments is tricky as well, because manufacturers will typically ask for up to 60% of the total cost up front, the report found, whereas in conventional projects banks release project funding in more gradual stages.

Insurance presents difficulties, too. After the 2017 Grenfell catastrophe, insurance is very expensive for MMC manufacturers because actuarial data on the risks of MMC is skimpy and skewed toward disaster.



▲ Dr Robert Sweeney: call for the government to promote MMC

MMC would mean construction could be carried out more quickly, with less waste and disruption

Dr Robert Sweeney,
Think-tank for Action
on Social Change (TASC)



MMC makes insurers especially jumpy about professional indemnity insurance for designers after Grenfell.

Vagaries of planning

Difficulties with financing led the report to conclude that public housing may be better for MMC, since local authorities can in theory build independently of market forces.

But local authorities are beholden to planning rules, and a number of interviewees said the vagaries of Ireland's planning system impedes the take-up of MMC.

The uncertainty in the MMC market means that delays in planning, which can amount to years, leave social housing developers at risk if the manufacturer who helped them work up their plans is unable to deliver when permission is finally granted.

And the report notes that switching manufacturers at the last minute is not straightforward. Perhaps the biggest barrier to MMC in Ireland and elsewhere is the lack of standard designs for social housing.

The manufacturing business model needs a high degree of standardisation. As Henry Ford quipped, customers could have his Model T in any colour they liked so long as it was black.

One MMC manufacturer complained of the huge variety

of designs among local authorities for social housing.

Big private housebuilders like Glenveagh and Cairn Homes were leaps ahead in this respect, the manufacturer said. They give architects strict guidelines on internal dimensions.

"So if the government adopted a similar approach to what the private entities like Glenveagh and like Cairn Homes do in really locking in design standards and not budging from them, and saying, right here's our modular house, we have two styles and we have two grades, Grade A and Grade B.

"Now modular manufacturers, there's three years worth of it in front of you, man up, invest and start delivering," the manufacturer said.

Faced with these difficulties, it's no wonder the MMC manufacturing market in Ireland is immature, as the report finds, with a limited number of firms trying to make a go of it. ●

Five policy changes that could prime the MMC pump

- 1 The government should review height restrictions for timber frame buildings, currently set at 10m.
- 2 The report urges government to include MMC components in building regulations and their accompanying Technical Guidance Documents to prevent manufacturers having repeatedly to test and prove their systems for each application.
- 3 The government should consider raising taxes on concrete for its embodied carbon content.
- 4 Local authorities should build more social housing directly to shape that market more toward MMC.
- 5 The government should develop MMC-friendly procurement models.

What you will learn in this CPD

- ▶ Why it is important that construction uses UK-grown resources
- ▶ How to demonstrate compliance with timber procurement policies
- ▶ Which timber products are available in the UK



JAMES JONES

How to procure UK-grown timber

This CPD, in association with PEFC UK, explains how construction can procure responsibly sourced UK-grown timber and reduce its carbon footprint. By **Charlie Law ICIOB**

The UK is the second largest net importer of timber after China. Forest Research figures show that, of the 15.8m cu m of timber consumed in the UK in 2022, almost 9.7m cu m (61%) was imported, mainly from northern Europe.

However, it is estimated that about 80% of the construction industry's requirements are being met by these imports, meaning much of our UK-grown resource is being used elsewhere. To ensure we have access to enough timber to meet the growing demand for timber-framed structures going forward, we need



Using more locally grown materials means we will have greater control over the source, which will help decrease an asset's embodied carbon footprint



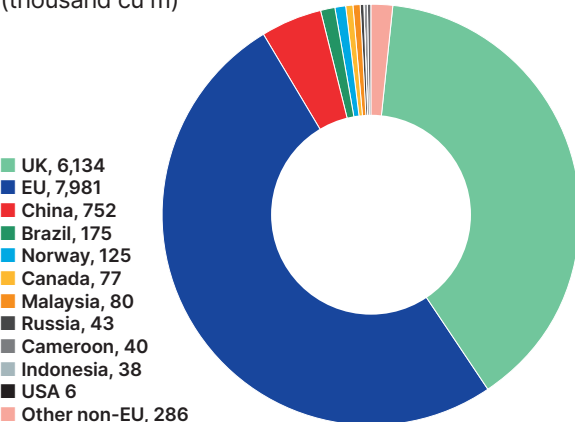
to increase the supply and use of our UK-grown resources.

According to the *State of Europe's Forests 2020* report and Forest Research's 2022 data, currently only around 63-67% of the UK net annual increment (NAI) is felled. The NAI is the net annual volume of timber available to harvest, considering any natural losses. The timber available to harvest is predicted to increase by around 20% by 2039, before falling back to current levels.

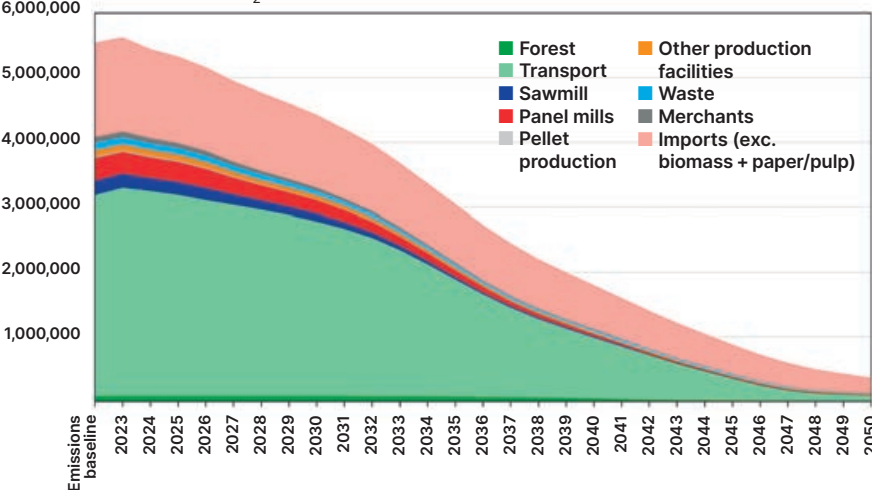
Government targets to increase tree planting mean we will also have more timber available for construction over the long term. All this suggests at least a third more of our UK-grown timber resource could be available for construction if the demand was there.

This stance is supported by the parliamentary Environmental Audit

UK timber imports in 2018
(thousand cu m)



Transition to net zero by subsector
Emissions (tco₂e)



Committee, which stated that:

“The long-term use of timber in construction offers longer-term carbon storage potential than other uses of harvested wood products and therefore has an important role to play in helping the UK to meet its net zero targets. Domestically grown timber resulting from the current drive to plant must be available for use in construction as far as possible.”

In addition, according to the *Timber Industry Net Zero Roadmap*, 73% of the timber industry's carbon footprint originates from embodied production emissions in imported material and the transport of these products to the UK. Using more locally grown materials means we will have greater control over the source, which will help decrease an asset's embodied carbon footprint.

For example, James Jones and Sons, one of the largest, most efficient and innovative timber processing groups in Europe, is trialling the use of electric HGVs to move timber products between its sites, helping to reduce the embodied transport emissions in its UK-grown timber.

Responsible sourcing

To ensure timber purchased is from responsibly managed woodlands in the UK, it is important to understand what to ask for. The UK government's Central Point of Expertise on Timber (CPET), a body that provides advice to the public sector, developed the UK Timber Procurement Policy (UK TPP), which states:

- Only timber and wood-derived products originating from an independently verifiable legal and sustainable source will be demanded for use on the government estate.
- Appropriate documentation will be required to prove it.
- It applies to all virgin timber and wood-derived products used on the government estate, including temporary site works and material supplied by suppliers.

CPET also developed the government's definition of legal and sustainable timber procurement, along with the two routes to demonstrate compliance with the UK TPP:

- Category A Evidence – independent, third-party forest certification schemes: ►

80

About 80% of the construction industry's timber requirements are being met by imports

- Programme for the Endorsement of Forest Certification (PEFC).
- Forest Stewardship Council (FSC).
- Category B Evidence – all other forms of evidence including:
 - UK Forestry Standard source (Grown in Britain [GiB] certification provides evidence of this).
 - Forest Law Enforcement Governance and Trade (FLEGT) licensed timber.

- Compliance with the *Framework for Evaluating Category B Evidence*.

It is important to understand that Category A evidence is not better than Category B. However, only the PEFC, FSC and GiB schemes provide a full 'chain of custody' to the site of use. Responsibly sourced, legal and sustainable timber should be a pre-requisite of any timber procurement policy.

Specifying and procuring UK-grown timber

To meet local sourcing requirements of building certification schemes such as BREEAM, SKA and LEED, it is important to understand what timber products are available from the UK.

Softwood

Over half of all the timber consumed in the UK is sawn softwood, so this should be a key area of focus for timber specification. Of the UK resource of just under 3m cu m, it is estimated that a third is used for pallets, a third for fencing and the final third for construction.

Trees are a natural product, so their properties vary depending on the climatic conditions under which they grow. In the UK, coniferous trees like spruce grow very well, maturing in around 40 years. This makes excellent structural timber at strength class C16, suitable for most general construction applications



VEYA HOMES

Case study: Veya Homes

Use of UK-grown timber for most of its timber requirements helped this development to win GiB project certification

The Elms project in Bristol by Veya Homes, consisting of four and three-bedroom homes, was able to use UK-grown timber for 82% of its timber requirements. Only 6% of material specifications required changes to accommodate UK supply.

The project – the first to achieve Grown in Britain project certification – used 108 cu m of UK-grown timber, including a C16 softwood and OSB timber frame, chipboard flooring and Brimstone thermally modified ash cladding.



Only the PEFC, FSC and GiB schemes provide a full 'chain of custody' to the site of use

like structural timber frames, floor joists, rafters and cut roof timbers, and internal partitions.

Coniferous trees in colder climates like the Nordic countries grow more slowly, coming to maturity in 60 years or more. This produces a higher proportion of timber meeting the properties of strength class C24/TR26 or higher – which makes them great for longer-span floor joists or trussed rafters. On average, the wholesale price of C16 timber is 10% less than C24.

To make the most efficient use of wood resources we need to use the whole range of wood products available, fully utilising both C16 and C24 timbers for the right situations. Timber Development UK (TDUK) publishes free span tables for C16 and C24 strength grades, so you can choose the right grade of timber for the right application.

For example, 45mm x 220mm C16 softwood timbers could be used as floor joists spanning up to 4.19m (assuming a dead load

<0.25kN/sq m and imposed load <1.5kN/sq m), whereas 45mm x 220mm C24 softwood timbers would only span a little more, at 4.66m.

One UK manufacturer, Alexanders Timber Design, is also producing roof trusses from UK-grown C16 softwood rather than the C24/TR26 that is normally used.

The specification of a strength class does not imply any specific level of durability. Therefore, if C16 or C24 structural timber is to be used anywhere other than in a Service Class 1 construction environment, durability requirements will need to be specified. The easiest route to achieve such durability specifications will generally be by using factory-applied preservative treatments, usually to Use Class 2 for applications within the building envelope.

By specifying the right strength grade for the right application instead of overspecifying we can ensure we make the most efficient use of the finite sustainable softwood timber resource available to us. ►

PEFC:

Engineer your Designs Responsibly

Photo © The Crown Estate

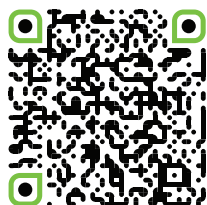
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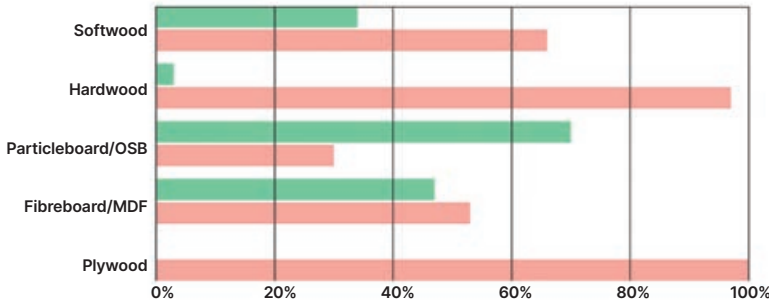


PEFC/16-01-01

PEFC – Programme for the Endorsement of Forest Certification

More oak was used in the UK than all other hardwood species combined, making up 57% of all specifications

57



2022 UK consumption

Softwood, chipboard, OSB and MDF are all readily available from UK-grown sources. However, UK hardwood is not as easily come by.

■ UK produced
■ Imported

Hardwood

Only around 5% of all timber consumed in the UK is sawn hardwood, of which only 3% comes from UK woodlands. A Grown in Britain *WoodStock* report found that more oak was used in the UK than all other hardwood species combined, making up a whopping 57% of all specifications. Utilising only one species of hardwood to this extent is not sustainable, and the report recommends an increased focus on UK grown hardwood resources and alternative species specified wherever possible.

Sheet materials

Much of the chipboard, OSB and MDF used in the UK is manufactured in the country, and these utilise many of the by-products from sawn softwood and hardwood processing that would otherwise go to waste.

For example, chipboard – used in everything from tongue-and-groove flooring to kitchen cabinets – incorporates both chip from the sawing of timber as well as post-consumer waste wood. OSB, on the other hand, uses the smaller-diameter thinnings from forests as well as the tops of sawlog trees.

As shown in the graphic at the top of this page, plywood isn't manufactured in the UK. We should therefore consider specifying

OSB as an alternative wherever possible, eg for roof sheeting or additional support within partition walls. There are now many different specifications of OSB that can be used for numerous applications.

Not only does this mean we use more of our homegrown resources, UK-manufactured OSB also has only a fifth of the embodied carbon of imported hardwood plywood. However, a growing percentage of this product is being sourced from non-UK and non-European sources, so be sure to check.

Summary

UK-grown timber can be used for many of the applications for which we currently use imported timber. By making informed choices, specifiers and purchasers can ensure that more of the timber used on their projects is locally sourced, which helps the UK economy and can lead to lower embodied carbon projects. There are five key points to consider:

- Design and specify C16 structural timber grades wherever these are suitable, rather than overspecifying to C24 or higher.

- Look to use alternative UK-supplied temperate hardwood species rather than automatically defaulting to oak. For example, ash, beech, or sycamore for internal applications and sweet chestnut

or thermally modified timber for external applications.

- Use UK-manufactured OSB in place of imported hardwood plywood, wherever this is suitable, to reduce your embodied carbon footprint.

- Check that your chipboard, MDF and OSB are from a UK supplier rather than imported from outside Europe.

- Make sure the timber you purchase is sourced responsibly by insisting on forest management certification with full chain of custody, such as PEFC's.

● **Charlie Law CEnv MIEMA ICIQB** is founder and managing director at Sustainable Construction Solutions and sustainability director at Timber Development UK.

Useful resources

PEFC UK: www.pefc.co.uk

Timber Development UK:

www.timberdevelopment.uk

Sustainable Construction

Solutions: www.susconsol.co.uk



Use UK-manufactured OSB in place of imported hardwood plywood, wherever this is suitable, to reduce your embodied carbon footprint

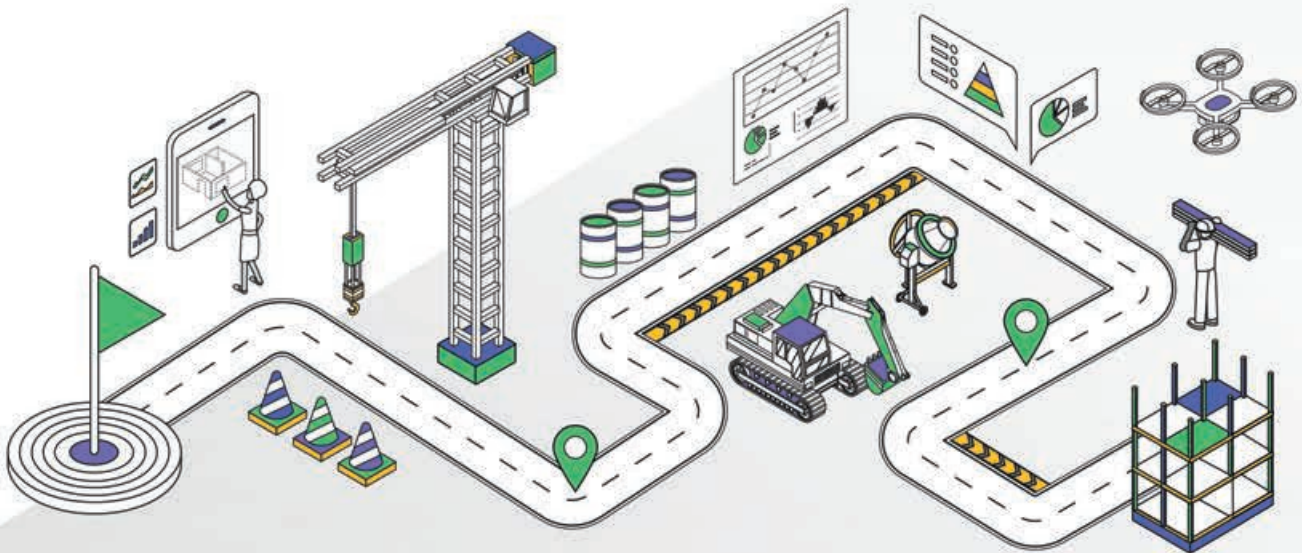
To test yourself on the questions on the right, go to www.constructionmanagement.co.uk/cpd-modules

CPD Questions

- 1) What percentage of the UK's timber consumption was imported in 2022?
a) 48% b) 61% c) 73%
- 2) What percentage of the timber industry's carbon footprint was from the embodied production emissions and transport of imported material?
a) 23% b) 52% c) 73%
- 3) What are the only three certification schemes that offer full chain of custody to the site of use?
a) PEFC, FSC and Grown in Britain
b) PEFC, FLEGT and Grown in Britain
c) PEFC, FSC and FLEGT
- 4) What structural grade is the majority of UK softwood supplied to?
a) C16 b) C24 c) TR26
- 5) What is the most specified hardwood species in the UK?
a) Ash b) Beech c) Oak



Mapping your digital transformation



Autodesk and the Chartered Institute of Building (CIOB) partnered to survey 65 companies from across the built environment to see how companies are embracing digital transformation.

The result? An in-depth insight report that enables you to benchmark yourself against your industry peers and plot your next steps on the road to digital maturity.

Read the report:

www.autode.sk/ciob-insight-report





Aqeel Haque
Decipher

'What do we pay a contractor we've sacked?'

This month's contract clinic question is from a client which has booted an underperforming contractor off a project – and wants to know what it should pay them. **Aqeel Haque** replies

THE QUESTION:

We're a developer of old factories in north Manchester and we're keen to ensure everyone performs to their best. The contractor we had working for us to redevelop one building was, in our view, underperforming. We therefore kicked them off the project for non-performance. How do we now establish the sums due to the contractor?

THE ANSWER:

In the intricate world of construction contracts, the termination of a contract is a pivotal yet complex manoeuvre. It's often viewed as a last resort. The decision to terminate, while necessary under certain circumstances, brings a multitude of legal, financial and practical implications.

Termination of a construction contract arises typically under dire circumstances. These include non-performance, insolvency or breach of a critical contract term. Termination is designed to protect against prolonged disputes and financial losses. However, it requires careful navigation to avoid complications.



The employer is entitled to withhold payments until all costs, losses and/or damages related to the completion of the works are determined

Calculating sums due to the contractor

Most standard construction contracts include provisions for terminating a contractor due to default or insolvency. Following termination, the contract administrator must calculate sums due to the contractor.

The process of calculating the amount due can vary across different contract forms. This article will examine differences across the JCT, FIDIC and NEC contracts.

Under the JCT Standard Building Contract 2016, the cost payable to a contractor post termination is determined after practical completion. Within three months, the architect/contract administrator compiles a final account statement.

This includes:

- the sum that would have been due for the works as per the contract terms;
- the expense incurred because of employing others to complete the works; and
- the expenses borne by the employer for any direct loss and/or damage for which the contractor is responsible.

Similarly, under FIDIC, the engineer/contract administrator must conduct a valuation post termination. This is set out in sub-clause 15.3.

The purpose of the valuation is to decide the sums owed to the contractor and define the extent of the remaining works. The employer is entitled to withhold payments until all costs, losses and/or damages related to the completion of the works are determined.

The employer can set off from monies owed to the contractor:

- the additional cost of completing the works;
- any losses and damages suffered by the employer in completing the works; and
- delay damages.

The NEC form of contracts takes a more prospective approach. In some instances, this requires the project manager to forecast the cost impact of termination. Under clause 53.1, the project manager assesses the final amount due and certifies a final payment. If payment is due, this happens no later than 13 weeks after the project manager issues a termination certificate.



Question for contract clinic? Email
construction-management@atompublishing.co.uk



The project manager in his assessment takes into consideration:

- the amounts due to the contractor at termination;
- a deduction of the forecast cost of removing equipment;
- a deduction of the forecast additional cost to the client of completing the whole of the works; and
- a fee percentage applied to the work done to date.

This prospective approach benefits the contractor by not delaying payment until finalisation of costs or the end of the project. However, it introduces inherent risks for both parties. Reliance on forecast and estimations adds unpredictability and subjectivity to the termination cost calculations. It also increases the risk of disputes.



Particularly where the employer is making deductions for additional expenses and losses, calculations should be robustly prepared

Practical advice

Regardless of whether the contract explicitly requires the parties to agree on the valuation of the works completed, try to reach an agreement swiftly. This approach provides clarity on remaining work and decreases the chances of a dispute.

The quantification of costs should come from evidence. It's important for both parties to keep adequate and accurate records. Particularly where the employer is making deductions for additional expenses and losses, calculations should be robustly prepared.

When the contract is being drafted, careful consideration should be given to termination. This includes establishing a clear procedure for handling termination and considering key contractual elements. These elements might include:

- rights to ownership of materials;
- provisions for stepping in with key suppliers and subcontractors;
- the option for direct payment to subcontractors; and
- requirements for evidence of payments made to subcontractors.

It may not be feasible to anticipate termination, but a contingency plan is wise. Consideration should be given to insurance policies, bonds, collateral warranties and project bank accounts to hedge against the impact. The latter are particularly useful where termination arises due to contractor insolvency.

Finally, despite the importance of prompt action, it is crucial not to act prematurely. Given the complexities and consequences of termination, it is vital to seek appropriate legal advice before proceeding with any contract termination. ●

Aqeel Haque is a senior consultant with Decipher – a DeSimone Company.

'This AI research is at the cutting edge of current industry thinking'

Tabarak Ballal FCIQB, professor of construction engineering and management at the University of Reading, is at the cutting edge of research in AI. She shares her insights with **CM**



What are you working on at present?

I am working on advancing research and knowledge in artificial intelligence (AI) applications in the construction industry. Specifically, a research project concerned with computational methodologies, using AI, for data-driven social value modelling.

This research is at the cutting edge of current industry thinking – particularly in relation to social value impact of built environment and infrastructure projects.

A second project is looking into digitalisation of construction contract drafting processes, adopting knowledge ontologies and AI modelling approaches. This is exciting research that has stemmed from a recent doctoral degree I supervised.

A third area, which I am discussing with an industry partner and a third stakeholder, relates to the development of an AI decision support tool for mapping risk and social value in healthcare projects.

Why is it important to the construction industry now?

The industry has struggled to take advantage of and reap the benefits from AI applications and technologies; in fact, plenty of evidence exists which demonstrates the industry position as one of the least digitised industries in the world.

At the same time, the industry faces challenges of significant magnitude: improving productivity; reducing inefficiencies; managing climate

Maintaining links between academia and practice is more important than ever because tackling the challenges that our industry faces requires a concerted joint effort

Tabarak Ballal FCIQB

resilience; impactful economic, social and environmental outcomes from projects; health, wellbeing and safety of construction professionals and end users of built facilities, etc.

The answer to this question is articulated eloquently in a recent white paper by the Construction Leadership Council (CLC), *Creating a Productive Environment for UK Construction*, in which there is emphasis on the importance of digital adoption in boosting productivity.

Are you working with any companies so they can apply your research on their projects?

I am currently working on a live project with an industry firm in pioneering research concerned with measuring social value impact of their projects using AI.

As this is ongoing research, I am unable to give any insights at this stage but we are looking to publish the outcome in the near future.

◀ Tabarak Ballal: 'The industry has struggled to reap the benefits of AI'

Beyond AI, what other areas of research do you think are most crucial for academics to focus on?

Mapping the impact of social value of built environment and infrastructure projects is a research agenda that is crucial in understanding economic, social and environmental benefits.

Health, wellbeing and safety continues to be an incredibly important area of research. The construction industry today has one of the worst outcomes for the workforce, with 507 construction people taking their own lives in 2021, according to the Office for National Statistics.

Academic researchers need to work alongside the industry and professional bodies such as CIOB to address this very important issue.

Interest in EDI continues to dominate discussions particularly in relation to diversifying the construction workforce, gender pay gap and career progression for women and ethnic minorities. Collaborative research between industry professionals and academic researchers is needed to better articulate the challenges of EDI and propose solutions.

How wide is the gap between academic research and industrial application? What needs to shift in the relationship?

The gap is wide and, while it is difficult to quantify, there is recognition that research in higher education institutions often sits on shelves and doesn't translate into applications in the real world.

There are exceptions, of course. Conversely, there is recognition that it is harder to capitalise on the UK's world-class universities because of a shortage in commercial lab space.

I think maintaining links between academia, industry and professional practice is more important than ever because tackling the challenges that our industry faces requires a concerted joint effort and commitment by all involved on taking a collaborative approach to problem-solving and generation of new thinking, new business models and new modes of delivery.

We can meet these challenges by creating academic/industry research forums for discussions of research needs. Two to three-year collaborative research projects could be facilitated through funding from institutions such as Innovate UK's Knowledge Transfer Partnerships, or industry sponsorship.

Another example is for companies to sponsor master and/or doctoral research projects where candidates could investigate issues pertinent to the needs of the company.

CIOB continues to provide opportunities through its scholarships schemes, which I have been involved with as chair of the Assessment Panel this year. ●

CV: Tabarak Ballal FCIQB

● School of the Built Environment, University of Reading: Professor of construction engineering and management, 2022-present

School director of teaching and learning, 2019-23

School director of academic tutoring, 2019-23

Associate professor, sustainable development in construction, 2014-22

Director of undergraduate programmes

(construction and surveying), 2012-15

Lecturer in building technology, 1998-2014

● Teaching assistant, Department of Civil and Building Engineering,

Loughborough University, 1995-98

● Site engineer, Middle East Construction Co Ltd, Khartoum, 1989-91

● Part-time teaching assistant, Department of Civil Engineering, University of Khartoum, 1989-91

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CIOB Community



It was nice to see many like-minded student members with a passion for the built environment and interesting to hear the opinion of industry professionals

Giovanni Bortolin, UCL

- Tomorrow's Leaders – views from early career and future leaders; and
- networking – making new professional contacts worldwide.

Tomorrow's Leaders champion Giovanni Bortolin, a master's student at UCL, attended the event when he was an undergraduate.

"This was a fantastic experience. It was nice to see many like-minded student members with a passion for the built environment and interesting to hear the opinion of industry professionals on the role of graduates and students in the industry," he said.

"As I was in the last year of my bachelor's degree, I found really useful tips for my dissertation too."

Bortolin added: "I would highly suggest to other students to participate in the CIOB Student Festival to feel more motivated and passionate about the possibilities in the industry at the end of their studies."

View keynote talks from last year and register for this year at www.ciob.org/events/student-festival.

Career support and study tips in CIOB virtual student festival

Two-day online event offers value to student members

CIOB's Student Festival, which is now in its fourth year, will take place on 6-7 March.

The purpose of the event – which will take place in one virtual space for all CIOB student members around the globe – is to inspire, inform and celebrate CIOB student members.

They can expect to benefit from technical and practical insights,

professional views and personal wisdom for their future careers.

The festival will include:

- industry leaders – thoughts and opinions from leaders in the sector;
- global careers – perspectives from global organisations in all areas of construction;
- learning essentials – dissertation tips and finding your next job;

▲ Student members worldwide can connect at the festival

'Networking is key for success'



Academic and hub chair offers wisdom to students

Dr Shu-Ling Lu, an academic at the University of Reading and chair of the CIOB Reading Hub, has supplied advice for students on construction-related courses to help them in their career journey.

Dr Lu (pictured) was invited to share her wisdom by Girls under Construction, a supportive community network for young

women pursuing construction industry careers.

Founded in 2021, its objective is to increase the number of diverse young women entering careers in the industry.

Dr Lu is associate professor in construction and project management at University of Reading, where she is

director of the MSc Project Management programme.

She moved from Taiwan and has worked in the UK since 2002 as a practitioner, student, researcher and now an academic.

Read her article at www.girlsunderconstruction.co.uk/post/advice-along-your-construction-career-journey.



GILES ROCHOLL PHOTOGRAPHY

Leeds decarbonisation leader heads new sustainability centre

Nazar Soofi MCIOSH appointed to lead new centre of excellence at Eddisons' HQ

CIOB member Nazar Soofi, former head of decarbonisation at Leeds City Council, has joined Eddisons as head of sustainability and decarbonisation.

Soofi will head a new sustainability centre of excellence for the growing property consultancy, based at its Leeds head offices.

The new centre will act as a hub to provide advice on carbon reduction

▲ Nazar Soofi MCIOSH is Eddisons' new head of sustainability and decarbonisation

I am looking forward to working with private and public sector organisations and steering sustainable and environmentally conscious practices in the UK
Nazar Soofi, Eddisons

and environmental best practice across the public and private sectors.

Credited with delivering the £50m decarbonisation programme at Leeds City Council, Soofi has led the transformation of more than 80 sites in the city since 2021, including Leeds Town Hall, Civic Hall and Central Library, transitioning them from fossil fuels reliance to renewable energy.

He is a regular keynote speaker for Salix, the government body that provides grant funding for public sector decarbonisation projects.

"The new centre of excellence will be an accessible one-stop shop providing practical advice on anything from a cradle-to-grave project to troubleshooting, and the most practical ways to achieve sustainability aims," said Soofi, who before working for the city council had a 25-year engineering career in the UK and internationally.

"I am looking forward to working with private and public sector organisations and steering sustainable and environmentally conscious practices right across the UK." ●

Member publishes children's book on dementia

Profits to be donated to Alzheimer's Society



Ben Levey, a member of CIOB and project manager at A2O Facades, has self-published a book about dementia for children.

Levey, whose father has dementia, says the book "covers dementia in a fun and informative way".

Lost and Found: Understanding Dementia is available from Amazon and all profits are being donated to Alzheimer's Society.

In 2020 CIOB partnered with Alzheimer's Society to support the construction sector to become more dementia-friendly in design and building.

CIOB provides free access to an e-course from Dementia Friends, Alzheimer's Society's awareness raising programme.

Members have two options to access the course:

- complete the short e-learning module at ciobacademy.org/course/dementia-awareness; or
- go to www.dementiafriends.org.uk/dforganisations and watch the videos using the code CIOB123.

You can buy Levey's book at <http://tinyurl.com/4w3tc998>.

▲ The cover of *Lost and Found*

▼ Author and project manager Ben Levey MCIOSH



Karting fun in Kent



Maidstone Tomorrow's Leaders Kent Construction Karting Cup set for summer

The Kent Construction Karting Cup held by Maidstone Hub takes place on 20 June at Bayford Meadows Kart Circuit in Sittingbourne.

Now in its 12th year, the competition is an endurance race with entries from individuals or teams of three. Last year over 13 teams from firms around Kent took part.

A meal will be served in between races and there will be ample opportunity to network with fellow racers. Teampol will again be the event sponsor.

For further information go to www.eventbrite.co.uk/e/799953260737.

For all bookings contact Beverley Lawrence at blawrence@ciob.org.uk.

Heron Bros secures significant contract wins

Chartered company adds large-scale projects across Scotland and Northern Ireland to its books



Chartered company Heron Bros has secured over £150m over three notable new contracts.

The projects include the £30m Edinburgh Innovation Hub, a joint venture between East Lothian Council and Queen Margaret University (DEVCO). The 7,200 sq m facility was granted planning permission

in September 2023 and is set to become a nationally significant hub supporting innovation-led enterprise in East Lothian and the wider area.

Additionally, Heron Bros has been awarded the £70m Ballycastle Shared Education Campus, which involves creating a state-of-the-art educational shared campus

▲ Heron Bros will deliver the £70m Ballycastle Shared Education Campus

for Cross & Passion College and Ballycastle High School in Northern Ireland.

The company has also been appointed to deliver the new £52m Dundonald International Ice Bowl project, east of Belfast.

The proposed facility will comprise an Olympic-sized ice rink with spectator seating, a ten-pin bowling facility, children's soft play and adventure play area, party rooms, a gymnasium, cafe and coffee shop, healthcare centre with pharmacy, multi-use community rooms, offices, general support accommodation and parkland with adventure and community play areas.

Damien O'Callaghan, group managing director of Heron Bros, said: "We are delighted to secure these significant contracts in Scotland and Northern Ireland, with each representing a unique opportunity to contribute to the growth and development of the communities we serve.

"The Edinburgh Innovation Hub, Dundonald International Ice Bowl and the Ballycastle Shared Education Campus each illustrate our ongoing commitment to excellence, innovation and sustainability.

"We look forward to delivering these state-of-the-art facilities, which will positively impact the lives of those within the local communities and beyond." ●

Factory tour explores future of MMC

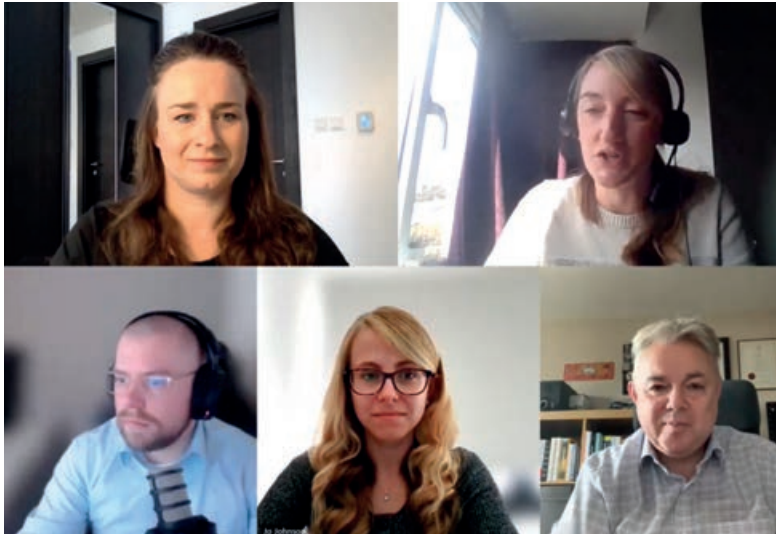
Vistry Works takes members around new facility

CIOB Nottingham Hub members took a tour of the Vistry Works East Midlands Factory in Coalville, Leicestershire, in January.

Reopened in July 2023, the 3,300 sq m facility has the capacity to deliver in excess of 6,000 homes per year.

Attendees heard from factory director Paul Bilbie about the capabilities of the facility, the benefits of MMC and plans for future expansion.





▲ Sophie Cox, top right, chairs the discussion in the first of the three webinars

Tomorrow's Leaders tackle the big issues

CIOB webinar series explored three key topics shaping the future of the built environment

In a three-part webinar series, representatives of the Tomorrow's Leaders Community, CIOB senior members and industry experts came together to discuss key issues facing the built environment.

The series covered technology, EDI and sustainability. The first webinar in the series explored

technology, the impact on future ways of working and how projects are completed and maintained.

Key takeaways included the importance of data quality, standardisation and technology strategies; the need to weave technology with organisational change; education around AI and

machine learning; and how to use storytelling for value optimisation.

Part two discussed diversity and inclusion, exploring the barriers that exist in the industry and how the industry is implementing EDI.

It was felt that a collaborative and strategic approach will bring forward more positive change. Panellists encouraged listeners to explore the work CIOB is doing around EDI (see www.ciob.org/industry/politics-government/campaigns/equality-diversity-inclusion).

The third webinar focused on sustainability. It questioned whether the industry is equipped with individuals with relevant skills. The importance of raising awareness was highlighted, along with the need for a culture change to attract new talent.

Sophie Cox, product owner, Tomorrow's Leaders, said: "While it was apparent from all three discussions that progress has been made, there is still work to be done. Education of those both inside and out of the industry and the importance of changing perceptions were consistent areas of focus."

To watch in full for free visit www.ciob.org/tomorrows-leaders. For information on Tomorrow's Leaders visit www.ciob.org/tomorrows-leaders or contact tomorrowsleaders@ciob.org.uk. A full version of this article is on CIOB People: www.ciobpeople.com.



AI debated at joint body event

The impact of AI on the built environment is up for discussion at Exploring AI Solutions, a cross-institute event in Birmingham, this month.

Collaborative Conversations: West Midlands 2024 (previously The Great Debate) is bringing together experts to discuss the practicalities of implementing AI in industry settings.

The event will provide a platform for experts to share insights and best practice.

CIOB will be joined by ICE, RIBA and RICS among others. See www.ciob.org/events or contact gfloyd@ciob.org.uk.

Vice-chair role on Professional Standards Committee

CIOB seeks professional for volunteer position

CIOB is seeking expressions of interest from suitably qualified members or fellows for the role of vice chair of the Professional Standards Committee from July 2024.

To apply for the position, you will need to be a practising industry professional and a current member or fellow of CIOB. You should have a

strong interest in professional standards, education and vocational training.

The committee meets three to four times a year in a hybrid fashion, both remotely via Microsoft Teams and at CIOB's London office.

It is responsible for the oversight of CIOB qualifications and apprenticeships and for

setting and maintaining the standards and quality assurance procedures for all levels of membership.

This is a volunteer position, but all travel and associated expenses will be reimbursed. **To apply for the role, please email an up-to-date copy of your CV to Lyndsey.Montgomery@ciob.org.uk**

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Building Services Engineers
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CIOB

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Manchester Building of the Year shortlist announced

Six nominated for CIOB-sponsored award

Greater Manchester Chamber of Commerce's Property and Construction Awards Dinner will be held on 29 February where the Building of the Year award sponsored by CIOB will be announced.

The Building of the Year Award will be presented to the commissioning body of a project nominated during 2023.

Six projects have made the shortlist:

- New Victoria;
- National Cycling Centre;
- Hello Future (Manchester Museum);
- Aviva Studios (The Factory);
- Angel Square (NOMA); and
- The Christie Paterson Building.

The award recognises a building's contribution to Greater Manchester

▲ The National Cycling Centre is one of six projects nominated for the Building of the Year award

both in terms of construction and development.

Last year's winner was Aecom's Energy House 2.0. Part of the University of Salford, it is the 'world's first' all-weather research centre. Project director David Maiden MCIOB collected the award, which was presented by Derek Humphreys FCIOB. ●



Past president to speak at Manchester conference

Paul Nash will headline at Construction Summit

Paul Nash, past president of CIOB, will deliver a talk on building safety at Greater Manchester Chamber of Commerce Construction Summit in March.

The half-day event will be held on 20 March at the Emirates Old Trafford.

Panel discussions and workshop options will explore key issues in the region. The event is hosted by presenter Andy Crane. www.gmchamber.co.uk/events/gm-chamber-construction-summit-2024-march

CIOB graduates celebrated at December ceremonies

Congratulations to new fellows, members and chartered companies who received their status at two graduation ceremonies in December

Morning ceremony

Fellows

Patrick Ochola
David Oloke
Kevin Saron

Members

Zain Aftab
Gavin Archer
Jamie Baines
Rishav Bardalai
Andrew Barker
Anthony Black
Neil Blackburn
Tom Brady
Sylvia Bugala
Vasile Bura
Joe Burke
Chris Callen
Chris Carter
Craig Collier

Chris Davidson
Ngozi Ekeke Frater
Kieran Epps
Anthony Goddard
Martino Guadalupi
Rebecca Harris
Steven Hider
Sally Hill

Lousie Hooley
James Johnson
Rebecca Jones
Ryan Kelly
Ben Levey
Karl McLean
Malcolm Murray
George Norris
Paul O'Connor
Grace Stigma Phiri
Ian Rudge
Adbulrahman Said
Paul Shakir
Karla Strudwick

Ryan Thomas
Tom Wright
Michael Wrighton

Afternoon ceremony

Chartered company
Peter Bonney

Chartered environmentalist
David Tomlin FCIOB

Members

Danny Anderson
Oloruntoba Ariyo
Sahra Asiaban
Dean Baldwin
Jason Bedford
Liam Brown
Muhammad Azam
Burdi Baloch

Steven Clarke
Adrian Croome
Ademola Dehinbo
Joanne Duggan
Nikolaos Georgopoulos
Jarlath Harley
Sarrah Hawes
John Heaphy
Jordan Hughes
Tom Hunt
Murtaza Hussain
Keith Husselbee
Christopher Jackson
Ian Jones
John Leitch
Daniel Mallen
Nick Marchi
Aidan McLouglin
Clyde Mitchell
Andrew Mullen

John Musham
Féilibh O'Cinnéide
Jamie O'Leary
Dharmen Panchal
Caroline Perrin
Petar Petrov
Paul Phillips

Wayne Pickford
Martin Ridgway
Gareth Ruston
Lawrence Ugwu
Katherine Vick
Zoe Walton
Kieron Wood
Tom Wraight
Caia Yeung

Tech CIOB
Agata Otto

▶ Graduates gather at Painters Hall in the City of London



▲ Paul Sinha (left) and CIOB vice president Mike Kagioglou

Book now for North East dinner

Black-tie event promises entertainment and networking

The CIOB North East Hub Annual Dinner will be held on Friday 12 April at the Crowne Plaza hotel in Newcastle.

The guest speaker and compere of the event will be Paul Sinha – perhaps best known as the ‘Sinnerman’ on the ITV quiz show *The Chase*.

Born in the UK to Bengali parents, comedian Sinha is a trained doctor who took his first steps on the stand-up comedy circuit in the 1990s before becoming a full-time comedian after nomination for the Edinburgh Comedy Award.

A lifetime of curiosity led him to yet another concurrent career, as a general knowledge expert on *The Chase*.

Special guest at the evening is CIOB vice president Mike Kagioglou.

Kagioglou is dean of Engineering, Design and Built Environment at Western Sydney University, where he also holds the role of pro-vice chancellor, global development (UK & EU). He will become the 121st president of CIOB this year.

Tickets for the black-tie event include a three-course meal, welcome drink and a chance to take part in the ‘Heads and Tails’ ice-breaker.

The event is sponsored by Competence Matters and Consortium Procurement Construction. To enquire about booking or sponsorship opportunities contact dmoore@ciob.org.uk.



In the zone

CIOB Academy Zones bring together themed content from industry experts on the topics of Environmental Sustainability and Innovation

CIOB Academy Zones serve as hubs, offering industry professionals free access to information and resources on core areas of built environment work and the latest tools and techniques used in the construction industry today.

Each zone is populated with free, easily accessible content from leading-edge companies, boasting specialisms in their respective fields.

In each zone you will have access to learning content including articles, webinars and other tools provided by experts. New content is updated frequently.

Explore sustainable construction

The Environmental Sustainability Zone is a recent addition. It brings together insights specifically tailored for the construction industry from experts in sustainability and green technologies.

Our contributors have provided content aimed at empowering you and your organisation to embrace sustainable methods of construction. Discover the profound benefits of adopting these practices for the betterment of both the environment and society.

Let the content inspire you on the journey towards a more sustainable and responsible future in construction.

Case studies with a green approach

In the Environmental Sustainability Zone you can find a range of content from CIOB which discusses the importance of sustainable thinking and a green approach, with some impressive case studies.

Our partner Axter explores innovations in roofing, particularly how roofs can be used to increase biodiverse habitats, generate electricity or create social spaces.

In each CIOB Academy Zone you will have access to learning content including articles, webinars and other tools provided by experts. New content is updated frequently



Innovation and digital skills

As digitalisation continues to grow, we need to understand how digital tools and processes can assist with projects and benefit the sector.

In the Innovation Zone CIOB has recognised a need for a focus on digital skills, upskilling and empowering the workforce of today and inspiring the digital experts of tomorrow.

Content from industry experts

We have collaborated with Autodesk, Glodon and PlanRadar to provide a series of resources aimed at providing insights for our members.

These organisations will provide their expertise on key digital tools, as well as exploring further avenues for research. Each contributor has its own dedicated section which contains a variety of information in different formats.

Learn how to drive the transformative changes essential to construction.

Get into the zone

Our collection of free content is suitable for anyone interested in expanding their knowledge of environmental sustainability and digitalisation and their pivotal roles in construction projects – all conveniently housed on one platform which can be accessed on any device. ●

Access the CIOB Academy Zones for free at www.ciobacademy.org/zones. Put the course in your basket for free to register and then access via My Courses as usual. If you would like further information about becoming a zone contributor please email sponsorship@ciob.org.uk.



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Diary dates

Highlights of the CIOB Calendar for the coming month

CIOB Student Festival 2024

► 6-7 March, 10am-2.30pm, online

Join the global student community in this two-day event where you'll gain invaluable insights from industry and academic leaders and where you will be able to learn and participate in an interactive way (see p48 for more details).

The agenda includes:

- Inspirational Industry Leaders;
- Inspirational Global Careers;
- Collaborative Learning;
- Tomorrow's Leaders;
- Student Wellbeing; and
- Networking.

Register at www.ciob.org/events.

Adopting F1 Mindset in Construction

► 13 March, 5.30-8pm, University of the West of England Bristol

The event will explore lessons from Formula 1 for the construction industry – focusing on digital programme management tools,

including examples of the digital tools used at AtkinsRéalis for programme management, as well as real life case studies.

It will include student networking and routes into the industry.

Contact: nbreakspear@ciob.org.uk

Exploring AI Solutions

► 14 March, 6-9pm, Birmingham

Collaborative Conversations (previously The Great Debate) will bring together experts from across the built environment to discuss and evaluate the practicalities of implementing AI in real industry settings (see p51).

These cross-institute events provide a valuable platform for experts to share their experiences, insights and best practices, encouraging further collaboration and innovation within the industry.

CIOB, ICE, LI, RIBA, RICS and RTPI represent a combined membership of over 360,000 skilled professionals.

Contact: gffloyd@ciob.org.uk

Glasgow Central Tunnel Tour

► 21 March, 5-10pm, Glasgow

Join us on a tour of the Glasgow Central Station underground tunnels and experience the station's architecture and history.

Glasgow Central is the largest of the two present mainline railway

terminals in Glasgow and was opened by the Caledonian Railway on 31 July 1879.

The station is steeped in history – with amazing architecture, incredible underground tunnels, catacombs and a glass roof consisting of 48,000 individual panes of glass.

The tour is followed by a networking opportunity to meet the CIOB committee and staff with some complimentary refreshments at the Station Bar.

The meeting point is at Boots inside Central Station.

Contact: wmarshall@ciob.org.uk

Maidstone Construction Professionals' Dinner

► 21 March, 7pm-12.30am, Marriott Tudor Park Hotel & Country Club, Bearsted, Kent

The Maidstone Hub invites guests to join us at the Marriott Tudor Park Hotel and Country Club, for this annual prestigious black-tie dinner.

The event will provide guests with the opportunity to network with the leaders of the south east's building environment sector – providing a unique opportunity for like-minded professionals to meet and entertain guests in a social setting.

The CIOB Maidstone Hub committee looks forward to hosting

you and your company at this event. The guest speaker is David Gower, former England cricketer and TV commentator.

Contact: blawrence@ciob.org.uk

Site visit: Anglia Ruskin University, Peterborough (phase three)

► 27 March, 4-6pm, Peterborough

Following on from our successful site visit to Anglia Ruskin University (ARU), Peterborough, in November to look at phase two, we are pleased to be able to visit the university during phase three development.

Peterborough is a known higher education 'cold spot', where 32% of the population have degree level qualifications, compared to a national average of 43%. It is also in the bottom 10% for skills levels nationally.

ARU Peterborough will help to address that inequality while also widening participation by attracting a diverse student population to improve social mobility and redress the skills gaps within businesses and industries across Peterborough and the region.

Contact: schalmers@ciob.org.uk

For a full list of events and to register visit www.ciob.org/events.



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