

# CONSTRUCTION MANAGEMENT

MAY 2023

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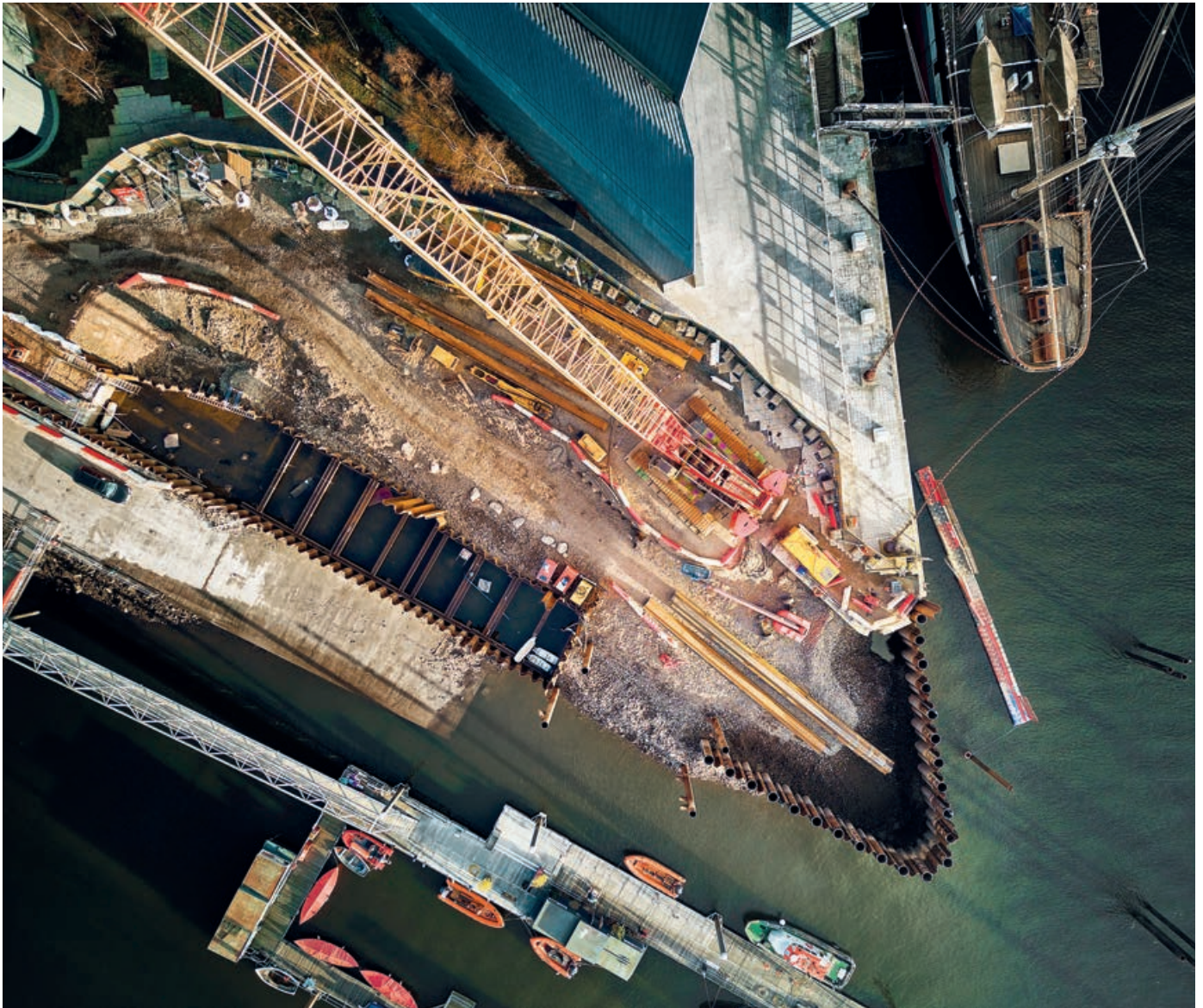
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### ▲ Marking a year milestone

Farrans celebrated the first anniversary since breaking ground on Glasgow's Govan-Partick swing bridge. The contractor has installed a sheet-piled cofferdam in the River Clyde ahead of construction of the South Pier, on which the bridge will pivot.



Will Mackie,  
project director at  
McLaren, speaks  
to CM about the  
new territorial HQ  
of The Salvation  
Army, p20-24



HS2

### ▲ New HS2 TBM is named Lydia

Former teacher Lydia Gandaa stands in front of the latest HS2 tunnel boring machine (TBM), which has been named after her by the local community in Old Oak, west London. The TBM will be used to dig an 853m logistics tunnel.

### ▼ Cycling underground

Tideway staff working at London's super sewer cycled 10km through the giant tunnel after raising more than £1,500 in a charity raffle in what is thought to be the capital's deepest ever bike ride.

### ▼ Steel by sea from Rotterdam

The second and third major steel sections of the Gull Wing bridge in Lowestoft, Suffolk, arrived at the site following an eight-hour crossing on a barge from the Netherlands.



BCS GROUP

### ▲ Giving safety a digital thumbs up

Barhale has started using an AI system that gives a digital 'thumbs up' to advise people when it is safe to approach excavators. The 'digital shield' can detect when someone steps into an unsafe area around a machine, producing an audible alert.



Can construction help with 'levelling up'? See p16-19

# Only 1 in 5 adults think construction is well paid

Outdated perceptions of construction jobs as dangerous and low paid prevail in the UK, according to CIOB survey. By **Cristina Lago**

**Barely a fifth (21%) of adults in the UK** think that construction jobs are well paid – despite official figures showing the average annual earnings in the industry are 5.5% higher than across all other sectors.

Research by CIOB found that although construction's average annual earnings in 2022 were £36,000 – £3,000 higher than across all other sectors – more than half of people (57%) perceived average earnings to be lower than the true figure.

Construction workers saw average earnings rise by 24% between 2012 and 2022 – nine percentage points above other sectors – but perceptions of construction jobs as low-paid and with low prospects prevail.

Sixteen percent of respondents said that they were “very unlikely” to recommend a career in construction to their children or young people they know. Only 7% said they were “very likely” to recommend that path.

When asked to choose words to describe construction jobs, the top answers were “overly physical”, “highly skilled” and “dangerous”. Men were more likely to recommend construction careers than women.

Geographically, people in London are the most inclined to recommend careers in construction (38%), while those in Wales the least likely (20%). People over 55 years old are least likely to recommend construction careers.

▼ Many of those surveyed failed to see the benefits of working in construction

**Construction must be promoted as a sector in which people can make a positive difference, drive sustainability, improve their communities and leave a real legacy**

Caroline Gumble, CIOB



## Misconceptions 'a major concern'

Data from the Construction Industry Training Board suggests that an extra 224,900 people need to take construction jobs by 2027 (or 44,980 a year) to meet expected demand.

The misconceptions around the sector are a major concern for UK economic growth and the government's levelling up and net zero objectives, according to CIOB.

CEO Caroline Gumble said: “As an industry we must take the lead in promoting construction as a viable career with strong financial and career growth prospects, but we also need the support of education leaders, including careers advisers, to change attitudes and this needs to start with government.

“Construction must be promoted as a sector in which people can make a positive difference, drive sustainability, improve their communities and leave a real legacy.”

The survey of 2,000 UK adults was carried out in February 2023 by Opinion Matters. ●





# CIOB People

Construction's new people  
development resource



CIOB People weekly newsletter  
Sign up for news, interviews, expert  
guides, case studies and much more at:  
[www.ciobpeople.com/newsletter](http://www.ciobpeople.com/newsletter)



## Social value 'can give SMEs a competitive edge'

Research by CIOB among construction SMEs shows evidence of companies benefiting from social value strategies, writes **Nadine Buddoo**

**CIOB has published a new report** which sets out the advantages construction SMEs can attain by embracing social value rules.

Published in April, *Social Value and SMEs: It's not going away*, explores the opportunities and challenges SMEs can face on the social value journey. It provides insight from SMEs that are already embedding social value in project delivery, plus practical advice and resources.

Social value is increasingly a priority throughout the procurement process. According to the report, SMEs can achieve a competitive edge by gaining social value competence.

Social value is defined as the economic, social and environmental

benefits a public contract can bring beyond the function of the asset procured. Improvements to local ecosystems, recruiting apprentices, facilitating community events and buying local goods and services are common social value provisions.

Of the devolved governments, Northern Ireland formalised its social value policy most recently, with PPN 01/21 in June 2022.

Yvonne Conway, social value manager at SME Woodvale Construction, based in Omagh, County Tyrone, said the company is determined to make social value work, despite the challenges.

"For instance, it's not clear whether companies who promise a social



**We remain determined, and we do see instances of social value making a positive difference**

**Yvonne Conway,  
Woodvale  
Construction**

value outcome but fail to deliver it are sanctioned. Will they pay money in compensation, or be marked down when they bid for the next project? We don't know," she said.

"It's unfair competition when companies do not fulfil the commitments made when they tender for a contract. We incur costs by complying with PPN 01/21 that competitors may not.

"Despite the issues, we remain determined, and we do see instances of social value making a positive difference, but there need to be fair negotiations over outcomes." ●

***Social Value and SMEs: It's not going away* is published at [www.ciob.org](http://www.ciob.org).**

▼ A still from *Grenfell*, directed by Steve McQueen, courtesy of the artist (images of the tower were not released out of respect)



STEVE MCQUEEN, *GRENFELL*, 2019 (STILL), COURTESY THE ARTIST

# Steve McQueen film is a solemn Grenfell reminder

Filmmaker remembers the 2017 tragedy in a powerful short film showing at London's Serpentine Gallery. By **Cristina Lago**

**On 14 June 2017, 72 people died** in the most devastating residential blaze in Britain since World War II.

Six months after the disaster, British filmmaker Steve McQueen took his camera to capture the remains of the high-rise before it would get wrapped in the white protective plastic that still covers the 67m-high structure.

The Building Safety Act has begun addressing many of the failings that led to the Grenfell tragedy, and the film provides a solemn reminder of why the legislative changes are necessary.

"I feared once the tower was covered up it would only be a matter of time before it faded from the public's memory," McQueen wrote in

his introduction to *Grenfell*. "In fact, I imagine there were people who were counting on that being the case. I was determined that it never be forgotten."

The result was a 24-minute film, shot in one long aerial take from a helicopter, which takes us from the leafy suburbs of north-west London to the site of the Grenfell Tower.

Through this slow bird's-eye view, we pass iconic landmarks like Wembley stadium and the Shri Swaminarayan Temple and hear the busy transport arteries of the Westway and Great Western Railway tracks.

Then – silence, as the Grenfell Tower looms into focus. The camera begins rotating around the block,

capturing the interiors of every flat in the burnt skeleton of the high-rise.

Where a kitchen or bedroom would once have been, there are sacks filled with rubble, and propping supporting the structure.

Most jarring perhaps are the charred remains of the combustible aluminium composite cladding that fatally condemned the 72 victims on that day in 2017.

The film finishes with a cut to black.

Outside the screening room, a white wall displays the 72 names of the people who were killed in the fire. Coincidentally, this June will mark 72 months since those lives were lost.

A panel in the gallery reminds us that four years after the publication of phase one of the government inquiry, the recommendations have not yet been implemented, "meaning a similar tragedy could happen again". ●

**Daily screenings of *Grenfell* will take place until 10 May. Tickets can be booked for free at: <https://ticketing.serpentinegalleries.org>.**



**I feared once the tower was covered up it would only be a matter of time before it faded from the public's memory**  
Steve McQueen

PORTRAIT: JAMES STOPFORTH



# Fire Classification of Bonded Insulation Materials

A ROCKWOOL  
Technical Bulletin

Introducing the new Technical Bulletin from ROCKWOOL, designed to support compliance for bonded construction materials and composite products.

'Fire Classification of Bonded Insulation Materials' covers and clarifies:



Application-specific details of the 2018 ban on combustible materials



Euroclass reaction-to-fire classifications



Fire implications for bonded insulation materials and composite products



Best practice for ensuring fire safety in critical areas of building construction



Download the  
Technical Bulletin:



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flat-roof-hub](https://rockwool.com/uk/flat-roof-hub)



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# Why insolvencies will not slow down any time soon

Despite avoiding a recession in 2022, the construction sector must brace itself for the likelihood of rising insolvencies, writes **Pablo Cristi Worm**



Gross domestic product figures released at the end of March 2023 revealed that the UK narrowly avoided entering a

recession in 2022. However, the economy is not in the clear yet. Growth remains subdued and, regardless of whether the country enters a technical recession, the impact of high inflation, rising interest rates and faltering demand means that construction must brace for the prospect of insolvencies to continue to climb.

Historically, insolvencies tend to rise during recession and peak thereafter as cashflows hollow out during market contractions and companies then lack the capital to deliver on increased demand as workloads recover. The Covid-19 recession bucked this trend. While economic activity fell by over a fifth between Q1 and Q2 of 2020, business failures dropped to levels not seen since 1989.

This contrast was fuelled by the fiscal incentives and emergency measures that managed to protect the economy in the short term. This, however, only prolonged the inevitable. In 2021 Q1, insolvencies started to rise as assistance was phased out. In 2022 Q4 they stood at their highest levels since 2007, with 6,251 recorded – 1,112 from the construction industry.

With further interest rate hikes anticipated this year, the current trajectory is following previous trends. Though the support measures delayed the usual increase in insolvencies, these are now

expected to continue growing irrespective of whether the UK enters a recession. Rising interest rates – now at a level not seen in over two decades – combined with inflated costs, add further pressure at a time when demand and investment show signs of slowing. This all points towards the likelihood that there is a while to go before the rate of insolvencies will noticeably fall.

Traditionally, construction insolvencies reflect the pattern of the broader economy, albeit slightly amplified. The whole economy is grappling with cost escalation of materials, energy and labour, alongside supply chain challenges and rising interest rates. But construction is particularly vulnerable, in part due to its high number of small and medium enterprises (SMEs).

A number of unique challenges cause SMEs to be more exposed to economic disruption, including more limited access typically to liquidity and less consistent pipelines of work making it more difficult to secure financing at good rates. Earlier this year, industry monitor Red Flag Alert issued a staggering warning that more than 100 firms within the sector could collapse each week in 2023.

Construction must therefore brace for the probability that insolvency levels may continue to rise. Early engagement of contractors and suppliers can be critical to mitigating the risk of insolvencies. This can provide greater visibility of pipelines of work, allowing time to adjust resources to suit demand. In addition, clients should take a collaborative approach to risk allocation within contracts – considering where risk can be balanced and shared, helping to keep the supply chain solvent.

There are still headwinds to come but embracing ways of working to mitigate insolvencies now will help to ensure the industry has the capacity to deliver on investment now – and, crucially, when the economy returns to growth.

Pablo Cristi Worm is an economist at Turner & Townsend.

“Earlier this year, industry monitor Red Flag Alert issued a staggering warning that more than 100 firms within the sector could collapse each week in 2023

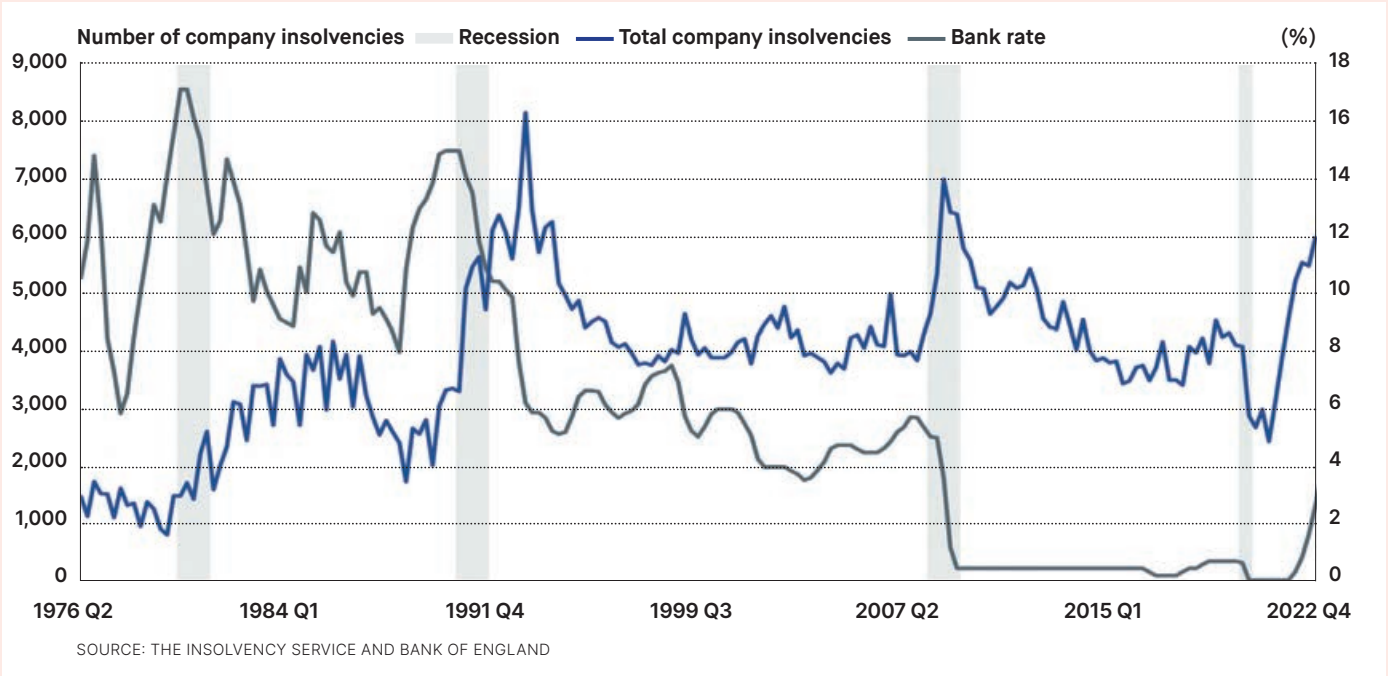




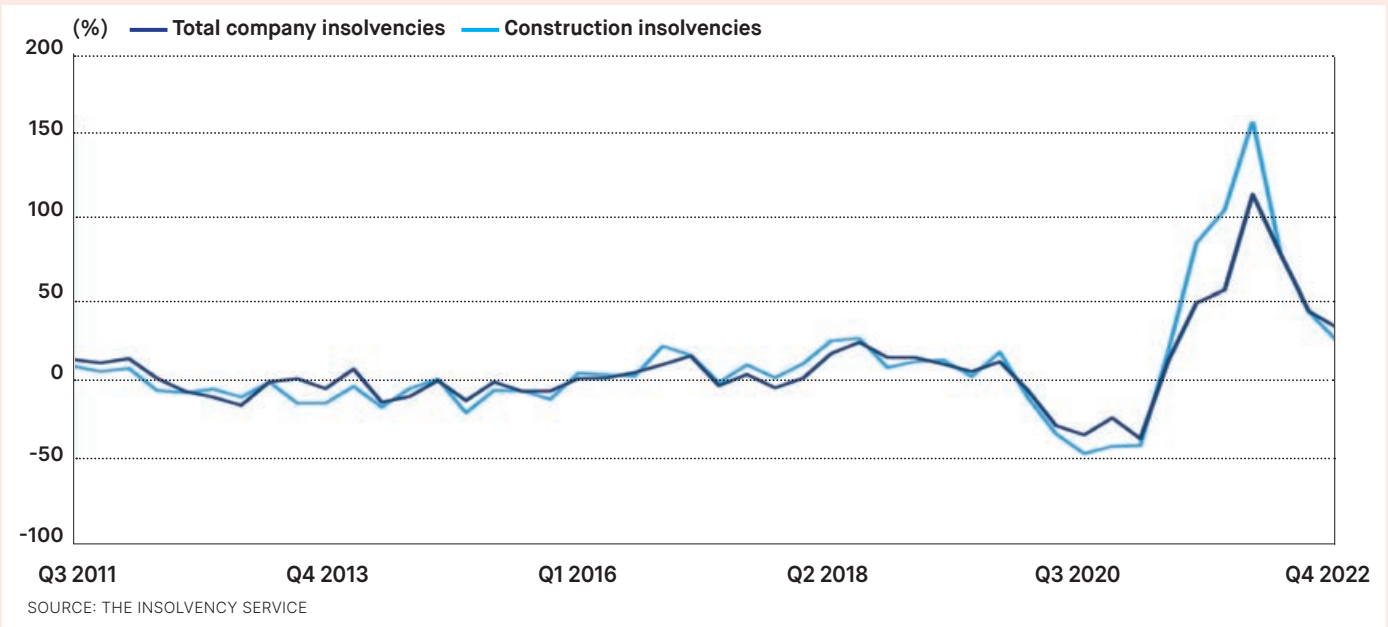
Quarter-on-year  
percentage increase  
in construction  
insolvencies in  
Q4 2022

21.4

Total company insolvencies and Bank of England interest rate



Total company insolvencies and construction insolvencies, quarter-on-year percentage change

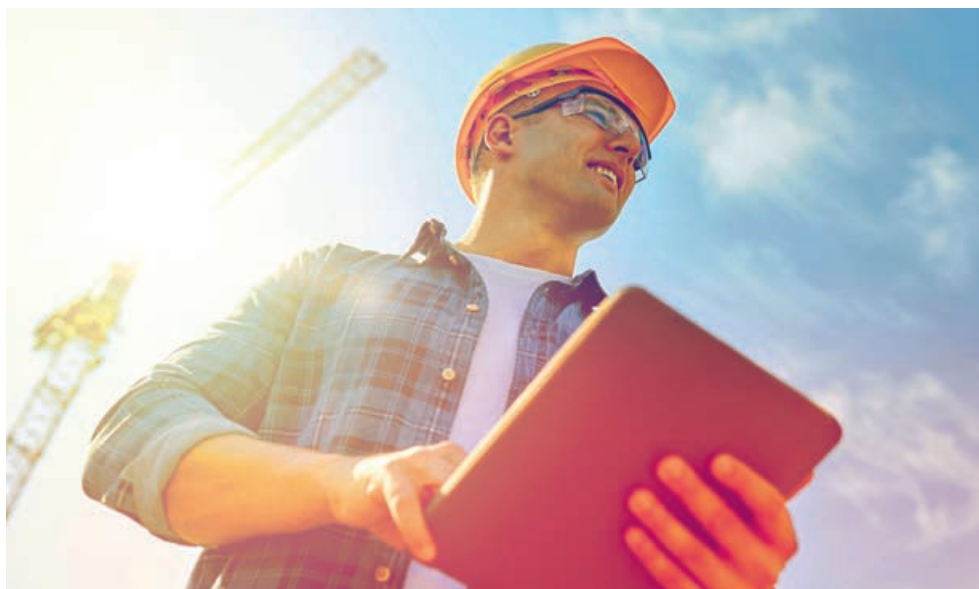




**Caroline Gumble**  
CIOB

# TechCIOB grade takes membership to another level

Institute's new membership grade extends support to construction's technical specialists, writes **Caroline Gumble**



**Just a few weeks ago, I was** delighted to attend CIOB's first ever graduation ceremony at which we were able to recognise TechCIOB members, which is very exciting. It was a privilege to be able to welcome them into the CIOB community.

CIOB's new TechCIOB grade is a significant development for us. Some of you may have read the piece about it in January's *Construction Management*, in which it explains the purpose of the new, non-chartered, grade – our director of education and standards, Ros Thorpe, put it simply and concisely: "To provide a validation of competencies at non-managerial level."

The introduction of the TechCIOB grade is important as it allows

▲ CIOB's new TechCIOB grade validates the competencies of technical specialists

CIOB to extend our support to even more professionals working in our industry. It is a hugely positive development that we are now able to recognise and award post-nominals to technical specialists, who have become experienced professionals and are often thought leaders in their area of expertise.

The decision to introduce a new grade for technicians and specialists was originally driven by members and has taken time to put in place, with the final step of Privy Council approval coming through last year and the completion of our pilot programme.

In keeping with our corporate plan theme of modern professionalism, offering a route for technicians and specialists to gain a globally

**The introduction of the TechCIOB grade is important as it allows CIOB to extend our support to even more professionals working in our industry**

recognised qualification (and the TechCIOB post-nominal) is of value in an environment in which we want to support those who set the standards and offer leadership in their fields.

In the speech that I give at our graduation events, I sometimes reflect on the fact that, as built environment professionals, those who are graduating and have taken on the challenge of earning a professional qualification, have done so against the background of having particularly demanding jobs, with exacting standards and often challenging timetables. Gaining a CIOB post-nominal is a real accomplishment and I hope those who achieve it feel proud.

They join a growing global community, all of whom are important to our industry. As modern professionals, our members have a much-needed role in helping to set and maintain the high standards we need to leave a positive legacy.

The new grade is now open for applications and we have produced some new resources to explain more. You can read further about the TechCIOB grade on CIOB's website, in the Membership Grades section. ●  
**Caroline Gumble is CEO of CIOB.**



# KNAUF



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We believe everyone has the right to live in safety. That's why we rigorously apply the toughest safety standards to every product and system we make and our SYSTEM Performance Guarantee ensures it performs to its specification for the entire lifetime of the building.

***Together, let's build for the world we live in.***



**Jason Stapley**  
Pagabo



# Why we put mental health provision into our contracts

Including mental health provisions in construction contracts can help normalise a taboo topic and improve worker wellbeing, writes Pagabo's **Jason Stapley**

**May is Mental Health Awareness Month.** For the construction industry, it is a sober reminder of its ongoing struggles with mental health, holding one of the worst rates for worker suicide.

Following a call by the All Party Parliamentary Group on Issues Affecting Men and Boys for strengthened mental health provisions within construction contracts, Pagabo has changed its procurement documents.

Prioritising mental health through strengthened terms and conditions in all framework contracts means that businesses in our supply chain are made to demonstrate and be held

accountable for how they are looking after their people during projects.

Advancements and industry growth have no place without improving support for people that have lives outside an office or construction site. This is why the inclusion of mental health provisions will bring accountability, supporting the wellbeing of each individual worker.

Our charity arm, the Pagabo Foundation, has regular fundraising events and this is reinvested in mental health first aid training which is then free for the industry – proving there are accessible initiatives available.

Mates In Mind states in its 2022 study that more than two-thirds of

▲ Accountability will support the wellbeing of individual workers

**Businesses in our supply chain are made to demonstrate and be held accountable for how they are looking after their people during projects**

Jason Stapley, Pagabo



construction workers believe there is a stigma surrounding mental health which stops them from talking about it. Removing the idea of mental health as a taboo topic in the industry is rectified by industry leaders talking about it first. But including provisions within contracts to ensure staff wellbeing is essential if this figure is to decrease.

It is our mission, and one that should be shared, to normalise mental health and wellbeing support. We must improve all areas of our industry, from technology to our people, to be sustainable and mindful.

The same Mates In Mind report revealed that 91% of construction workers have felt overwhelmed, with 26% experiencing suicidal thoughts. These figures highlight that the risk is too high for us not to place the improvement of mental health support at the forefront of our minds.

As a leading national framework provider, we accept responsibility for building mental health awareness in the industry and will continually look to highlight the areas for change that are needed.

It is up to us to not only be involved in the collective push for improvement, but also in solidifying mental health and wellbeing support as a key component of the built environment. ●

**Jason Stapley is chief procurement officer at The 55 Group and chairman of the Pagabo Foundation.**



# Feedback

A selection of readers' comments about news and issues in the industry from [www.constructionmanagement.co.uk](http://www.constructionmanagement.co.uk)

## CM 03/04

### MCIOB hits the right note on *The Piano*

Harry Hussey

I just wanted to send my congratulations to Zethan Anderson MCIOB, who appeared on the show. Had I known he was a member, I would have introduced myself and taken him for a drink, since I was another CIOB member at St Pancras on the same day. Perhaps we could have played a duet – 'Anything You Can Build, I Can Build Better' from *Annie Get Your CPDs*.



## CM 22/03

### Balfour Beatty chief pledges support for apprenticeships

Sean Seal

Over 20 years ago, I started my apprenticeship with Balfour Beatty and it was the best entry into construction and the rail industry I could have wished for. More companies should be following suit.

In particular, the National Construction College at Bircham Newton, being the jewel in the crown, is not being fully utilised at present – and needs to be.

## CM 28/03

### How can chartered builders educate domestic clients?

Nicholas Everett

There are fewer and fewer building contractors willing or interested in smaller domestic refurbishments. This is because there are so many self-employed individuals who can do it cheaper.

However, these people tend to be skilled in one trade. The homeowner has to decide whether to trust their bricklayer to find roofers or carpenters for them or find their own.

A chartered builder can then step in as a qualified project manager. You then have a professional using subcontractors instead of direct employees, which is what he would have done 20 years ago.

So, the question is: how does the general public learn about qualified managers and employ them?

## CM 06/03

### Timber and fire safety

John Burgis

I read with interest the article on high-rise timber buildings by David Hopkins of Timber Development UK (*CM*, March). I was puzzled by the complete absence of detail on how fire protection for these buildings is achieved. Asserting that timber is environmentally friendly is not enough. It is also a flammable material. Fire protection is a central issue after Grenfell Tower.

*Reply from David Hopkins, CEO of Timber Development UK*  
The article was not intended to be a technical 'how to' but rather to explore why we are not seeing taller timber buildings in the UK – which is down to economic factors as much as anything. However, fire safety is of course paramount with timber – as it is with any building material. Like any building, all these structures must be designed to meet relevant safety regulations and with appropriate knowledge of materials and techniques from competent professionals.

Timber Development UK has just launched a new website articulating

*timber fire safety principles for a variety of different situations. It has been developed by fire design and engineering experts and will be professionally curated on an ongoing basis.*

*As noted in the article, education is a big barrier to the use of timber in the UK and understanding the fire safety implications is a part of this. When designed and managed appropriately, timber is no more dangerous than any other material, as evidenced by its widespread use in other countries.*

## CM 03/04

### Can we replicate the speed of the Empire State Building construction?

Mervyn Richards OBE

Read Alfred Bossum's report on the state of the construction industry at the time of the building of the Empire State building. The methods and processes then are applicable to construction projects today, no matter how complex and indeed complicated they are.

Our industry seems incapable of learning from the past and rushes headlong into the future without stopping, thinking and applying best practice today.



**Our industry seems incapable of learning from the past and rushes headlong into the future without stopping, thinking and applying best practice today**  
Mervyn Richards  
OBE

@ Share your views on the latest industry issues by posting comments online at [www.constructionmanagement.co.uk](http://www.constructionmanagement.co.uk) or by emailing the editor at [construction-management@atompublishing.co.uk](mailto:construction-management@atompublishing.co.uk)

# How can construction help deliver ‘levelling up’?

The built environment could play a significant role in rebalancing the economy across UK regions – but there are challenges ahead for policymakers and industry. Economist Brian Green speaks to **Will Mann** about his new CIOB-commissioned report





7.9 East of England has the highest proportion of its workforce engaged in the construction sector at 7.9% in 2022

Construction faces its biggest challenge since World War Two,” says Brian Green. The industry economist and author of *The Real Face of Construction*, first published in April 2020 and now updated for 2023, pulls no punches in an interview with CM.

“The three Ds of demographic change, digitalisation and decarbonisation will have a fundamental impact on society and the economy,” he says. “UK politicians and industry leaders will need to look hard at how best construction can play its role. This means looking not just at the national viewpoint but the regional picture too.

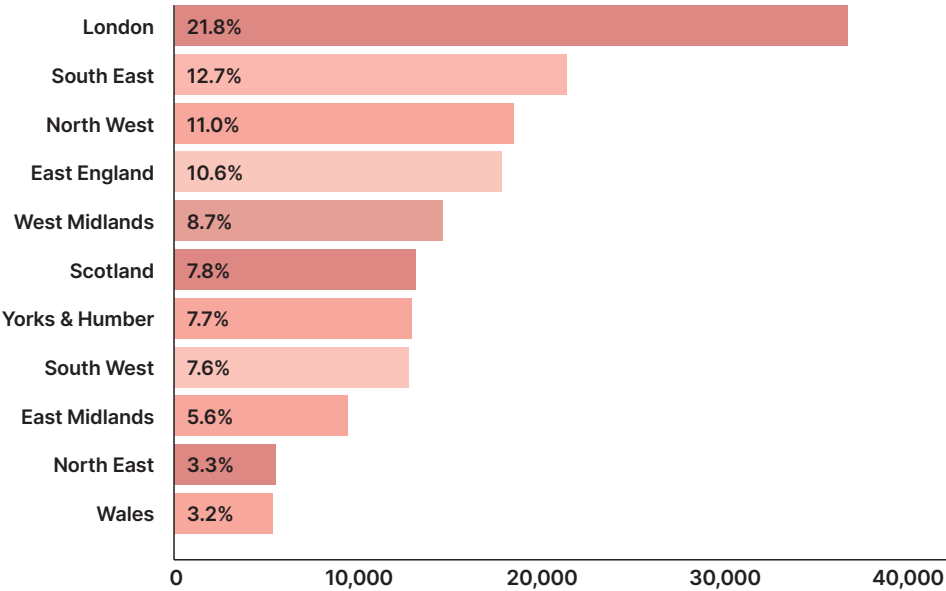
“The longstanding debate over how to rebalance the UK economy has lingered for more than a century. Once described as the north-south divide, it is now captured in the phrase ‘levelling up.’”

Green’s 2020 report, commissioned by CIOB, examined the regional imbalances in the UK economy and the construction industry and suggested measures for how to counter them, such as different regions becoming specialists in particular sectors.

“Insight on how construction is faring in the regions is critical to informed debates ahead,” says Green. “Local knowledge and understanding will be crucial if the construction sector is to rise to the challenges of climate change, an ageing population, technological disruption to the social and economic fabric, and the fairer spread of wealth and opportunity across the UK.

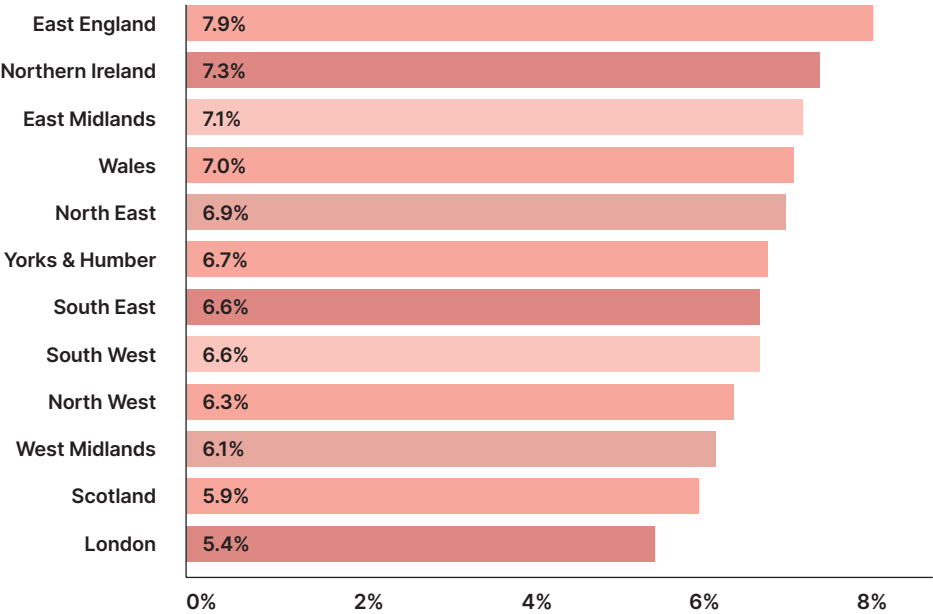
“Given the current turmoil, it could be even more important to have regional specialisms for construction – and join it with the levelling up agenda.” ►

Regional distribution of construction output 2022



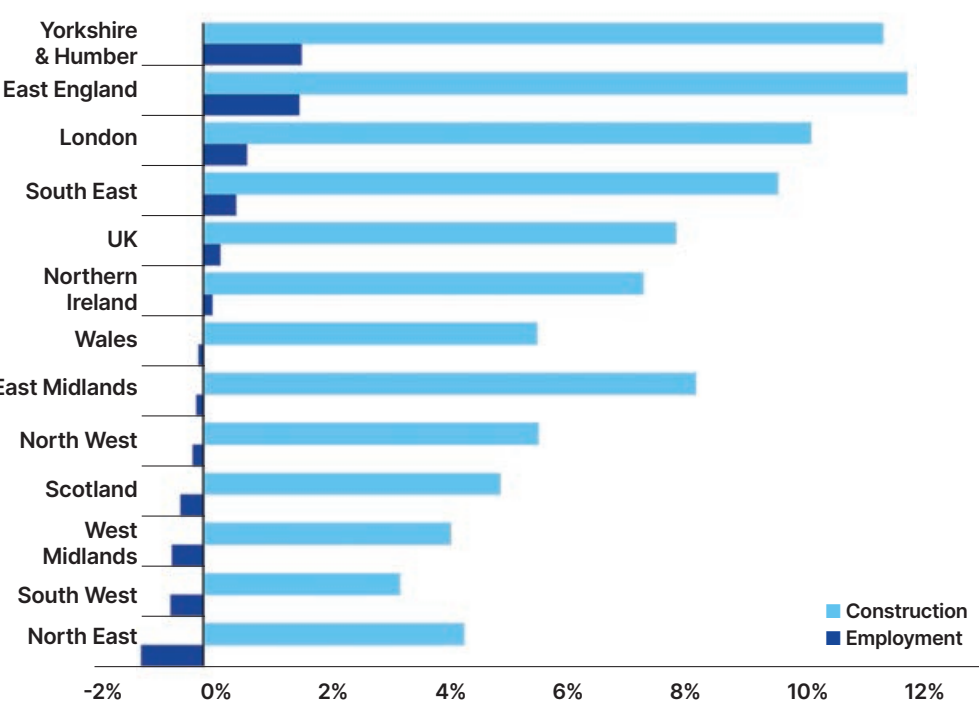
SOURCE: ONS OUTPUT IN THE CONSTRUCTION INDUSTRY

Construction’s share of the total employment in each region



SOURCE: ONS CROWN COPYRIGHT RESERVED [FROM NOMIS ON 27 SEPTEMBER 2019]

Forecast growth output and employment 2022-2027



SOURCE: CITB, CONSTRUCTION SKILLS NETWORK, FORECASTS 2022 TO 2027

As Green notes, construction operates from a local level, with small builders and trades who work mainly in their communities, though to the national level, with major businesses delivering megaprojects like Hinkley Point nuclear power station in Somerset or the HS2 railway which will cut across many regions.

London dominates construction output among UK regions (see top chart, p17). However, it is bottom when construction's percentage share of total employment is measured (see lower chart, p17).

"This is because construction differs from most industries in that its firms and the workforce move to where the product is needed, rather than being sited in a fixed place," Green explains. "Work in one region

can benefit another, particularly in terms of employment."

The East of England has the highest proportion of its workforce engaged in the construction sector. At 7.9% in 2022, this compares with 5.4% in neighbouring London. But a large cohort of workers from the East will travel to work on projects in London.

Construction and land value

"The nature of investment in the built environment means that the mix of activity, scale and fortunes of construction vary from region to region, and over time," Green says. "But it is important to note that there are long-term differences in activity between regions."

This is a point made often in the levelling up debate and has been a

There is a clash between two policies – levelling up and decarbonisation – in a way it appears that policymakers haven't really considered as carefully as they might

Brian Green

regular complaint about the north-south divide, Green adds.

"Look closely and we can recognise at least two factors that create regional imbalances in construction activity and impact on the long-term levels of activity: land values and population growth. The link with population is easy to appreciate. With more people or faster population growth there will inevitably be higher demand, all other things equal.

"The link between construction activity and land values is less clear. But if we were to plot on a graph average land value against the level of construction activity per capita for each region we would see a very clear correlation between higher land values and higher levels of construction. London, where land prices are extremely high, stands out."

He continues: "The more investment a location receives, particularly in infrastructure, the more attractive it becomes, both to incomers and future investors. The land value inevitably increases as does the population. This virtuous circle is increasingly well recognised and present in the current debate on levelling up."

In the context of decarbonisation, among Green's concerns is a surge in 'stranded assets' – property or buildings in areas of low land value where the cost of meeting energy requirements makes investment to meet minimum energy efficiency requirements, repurpose the building,



40

East Midlands, the South West and West Midlands represent about a quarter of the national population, but they are projected to absorb about 40% of population growth over the next 20 years

or redevelop the site unattractive to investors. This could result in poorer areas losing valuable buildings, such as offices or shops, essential for the prosperity of the local economy.

"This is a clash between two policies – levelling up and decarbonisation – in a way it appears that policymakers haven't really considered as carefully as they might," says Green.

The problem of stranded assets could be further exacerbated by the high inflation currently affecting the construction sector.

"The impact of higher labour and materials cost will have a disproportionate impact on locations with low land values," says Green. "This means, in general, that regionally inflation will hit the devolved nations and the North East hardest. The reason is that, by and large, materials and labour represent a larger share of the development cost where land values and property prices are low."

#### Forecast for next five years

So, what can we expect regional output in construction to look like over the next five years?

The forecast underpinning the CITB's Construction Skills Network (CSN) employment expectations provides a starting point. The chart on p18 outlines the forecasts for construction output and the change in the level of employment needed to deliver that workload.

"It's worth noting that other forecasts, such as from the Construction Products Association (CPA) in January 2023, paint a darker picture of the future for construction than the CSN forecast, notably in new housebuilding, where CSN sees a minor dip while CPA sees a fall of 11% in its main forecast," Green says.

Population growth is a long-term driver of construction activity. East Midlands, the South West, and West Midlands represent about a quarter of the national population, but they are projected to absorb about 40% of population growth over the next 20 years, which points to a growing share of construction activity.

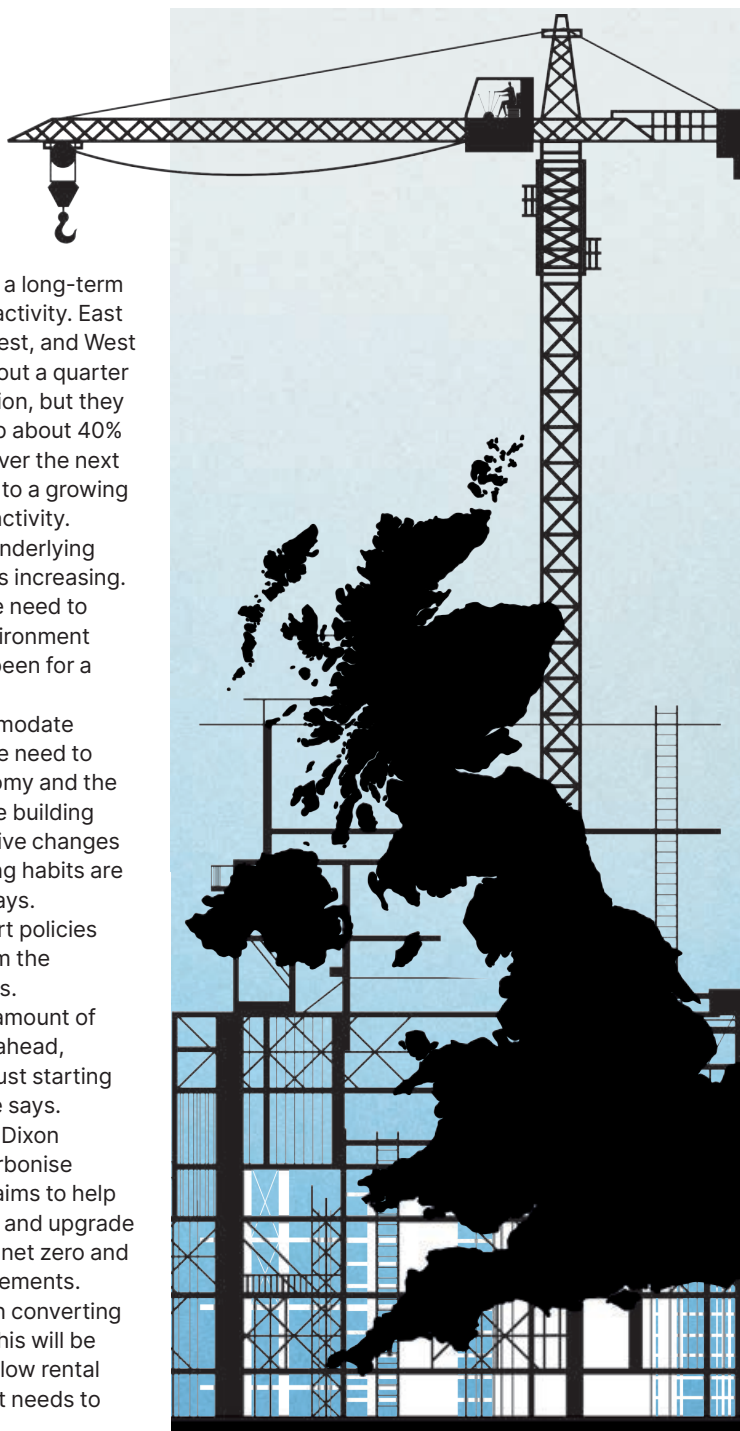
Green believes the underlying need for construction is increasing. He also argues that the need to transform the built environment is "greater than it has been for a generation or two".

"The need to accommodate an older population, the need to decarbonise the economy and the need to reconfigure the building stock to address massive changes in working and shopping habits are all very pressing," he says.

This will require smart policies and smart thinking from the industry, Green reasons.

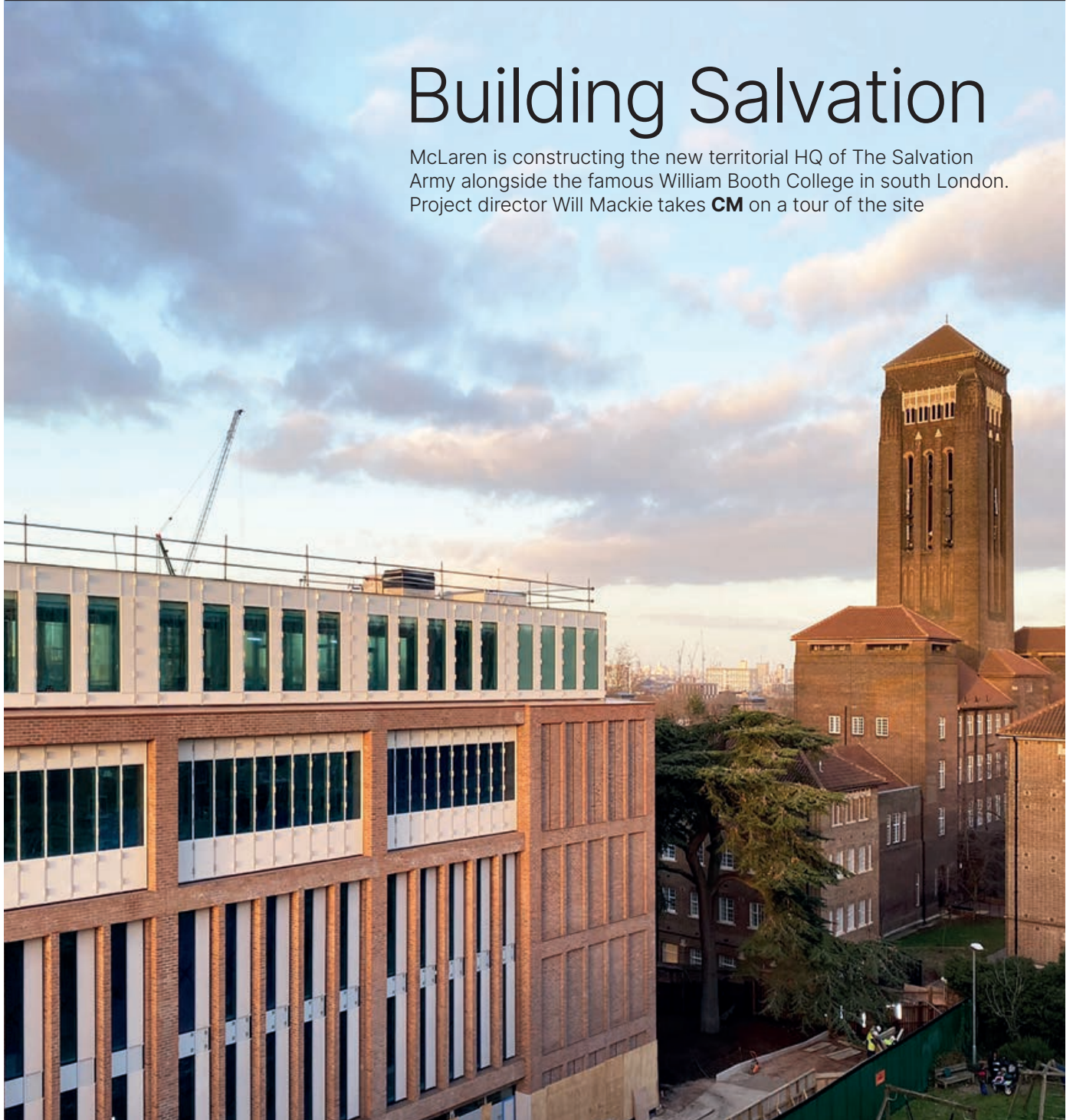
"There is a massive amount of decarbonisation work ahead, which construction is just starting to get to grips with," he says. "For example, Willmott Dixon has launched its 'Decarbonise Today' service, which aims to help customers understand and upgrade their buildings to meet net zero and decarbonisation requirements.

"There is also work in converting offices and retail, but this will be a challenge in areas of low rental value – the government needs to recognise this." ●



# Building Salvation

McLaren is constructing the new territorial HQ of The Salvation Army alongside the famous William Booth College in south London. Project director Will Mackie takes **CM** on a tour of the site





A new 5,110 sq m office for the church and charity is taking shape

# 5,110

**T**he Salvation Army was founded in 1865 by Methodist preacher William Booth at the Blind Beggar tavern in east London. Since then, it has become one of the world's largest charitable Christian organisations, with 1.7 million members who help the poor, destitute and hungry in some 133 countries.

Recently, its UK and Ireland territorial headquarters in the Elephant & Castle has become uneconomical, so it will shortly move two miles south to Denmark Hill, site of William Booth College, arguably the Salvation Army's spiritual home and its training and education centre since opening in 1929.

Here, a new 5,110 sq m office for the church and charity is taking shape. While not opulent, it will be an elegant, high quality and sustainable building – in line with Booth's values of “soup, soap and salvation”.

McLaren Construction project director Will Mackie is charged with delivering the six-storey scheme.

“The Salvation Army is a church and a charity, so they do not want a lavish headquarters but a practical and flexible building. It is a high-specification building and delivering the required quality in the finishes has been one of our main challenges,” he explains.

Aesthetically, the new building will be sympathetic to the college

◀ The new office building is adjacent to the 1929 college

▶ A cross is designed into the south-western corner of the new headquarters



buildings, designed by Sir Giles Gilbert Scott and the iconic 60m brick tower which looms large over this corner of south London.

It sits on the western side of the site, and architect TateHindle has mirrored the scale of the blocks to the east of the main college entrance. The outside of the building is also clad in brick, in a lighter tone than the Gilbert Scott buildings but with darker flecks. Colonnades of vertical brick piers alternating with glazing run along the front and rear.

Main contractor McLaren began working under a pre-construction services agreement (PCSA) and was close to starting on site when the Covid-19 pandemic struck in March 2020. The Salvation Army paused the project and decided to review the design. “The interior office areas were remodelled into more of an open-plan layout to suit flexible working,” Mackie explains.

After the design revision, McLaren started work on another three-month PCSA, which included a significant amount of value engineering.

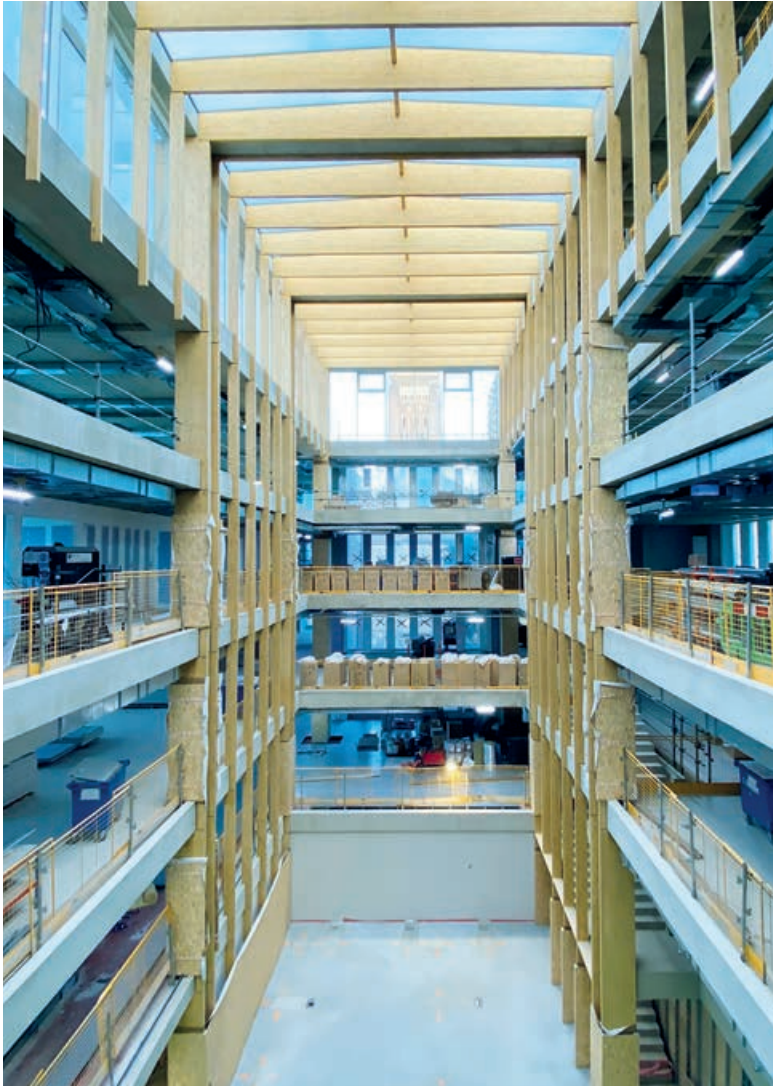
“This included exposing considerable areas of structural concrete, which will contribute to the thermal mass properties of the building – we are targeted a BREEAM rating of Excellent,” says Mackie.

Other BREEAM points will come from the 50% GGBS concrete mix, around 100 solar photovoltaic panels on the roof and point-of-use electric heaters to reduce the amount of central plant.

McLaren finally began on site in August 2021. Two non-listed residential buildings had been demolished prior to the pandemic and the contractor reused the demolition waste to construct the piling mat, following an ordnance survey.

The new headquarters is built into the steep sides of Denmark Hill, with a considerable drop of 5m between the north-facing front of the building and the south-facing rear. The foundations are a combination of bearing piles and a contiguous piled embedded retaining wall, topped with a capping beam. There are 137 bearing piles, ranging from ▶

**“It is a high-specification building and delivering the required quality in the finishes has been one of our main challenges”**  
Will Mackie, McLaren Construction



450mm to 600mm in diameter, with an average depth of 19m. The contiguous wall comprises 99 600mm-diameter piles.

The building has a reinforced concrete frame, which was constructed in situ, one central core with passenger lifts and another core to the south with the goods lift. "Both cores were built traditionally," adds Mackie.

The signature interior feature of the new headquarters is the full-building-height atrium, designed to frame the William Booth College tower through the east-facing windows. This is lined with spruce panelling and exposed concrete walls, with a roof light overhead. Getting the concrete finishes right was tough, Mackie says.

"The GGBS mix dries quite slowly, so we weren't getting the strike times

#### Project team

Client: The Salvation Army  
Main contractor: McLaren Construction  
Architect: TateHindle  
Structural engineer: Davies Maguire  
M&E/sustainability engineer: MTT  
Quantity surveyor/project manager: Randall Simmonds  
Facade engineer: Eckersley O'Callaghan  
Key subcontractors:  
Concrete frame: Mitchellson  
Precast: Thorp  
Facade: NA  
Curtain Walling  
Contract value: £32m  
Contract: JCT  
Programme: August 2021 to July 2023

◀ The timber-lined atrium has eastward views of the William Booth College tower

**The GGBS mix dries quite slowly, so we weren't getting the strike times we wanted. What we did was break each floor down into smaller but more frequent pours**

**Will Mackie,  
McLaren Construction**



we wanted," he explains. "So, what we did was break each floor down into smaller but more frequent pours: six pours for a floor, rather than the four we'd planned originally.

"Another issue was the Cordek polystyrene formwork we were using. We'd chosen this instead of the usual GRP for cost reasons. But there was a lot of preparation work required; Cordek comes in 1.5m lengths which we had to tape together. Unfortunately, these got displaced whenever anyone walked over the formwork to lay the reinforcement bar. So we prefabricated the reinforcement cages, which reduced the number of times anyone walked on the Cordek."

The value-engineered concrete frame design features troughs in the soffits, which accommodate services. "This reduced the volume of concrete required," Mackie explains. "Troughs without services feature acoustic ceiling panels to aid the acoustic performance of the building.

"We agreed a quality benchmark with the client on the lower ground floor soffit before we completed the concrete frame," he adds.

The atrium's timber panelling and roof beams were supplied by Wiehag. "They came in and did a 3D laser scan first, because the tolerances in the design are quite high," explains Mackie. "After that, it took only two weeks to install."



# 296

There were 296 precast panels used in total

A concrete ring beam at level four forms the primary support for the timber and glazing of the roof light structure. McLaren erected a bird cage scaffold inside the atrium, based out from level three, to install the roof light, allowing work to continue on lower floors. The timber beams were lowered in by tower crane.

Externally, the brick facade is built from precast panels faced with brick slips, supplied by Thorp Precast. There were 296 precast panels used in total, the largest weighing 6,916kg, measuring 7.7m by 2.7m.

"We engaged Thorp pretty early in the PCSA process," says Mackie, "and the tower crane was sized to lift the heaviest panel. It's a big crane for a relatively small footprint.

"The two-storey-high pillars of the colonnade are each a single unit, approximately 7m in height, brought in on an artic."

The windows along the colonnade are a 'stick' curtain walling system supplied by Schuco. It was tricky to achieve a watertight finish where the rainscreen interfaced with the precast sections, Mackie says.

"For architectural reasons, on the facade, we used two combinations for making the building watertight: with face-sealed precast panels, the panel works as the watertight line; where the precast panel is a rainscreen, the curtain walling acts as the watertight line behind the precast," he explains. "This caused quite a few headaches in design as we had to manage ►

► The tight site is located on a TfL 'red route', complicating logistics

▼ The facade is a mix of precast panels faced with brick slips and glazing





**We had to agree a BAPA (Basic Asset Protection Agreement) with Network Rail because we are working in the vicinity of a railway line**

Will Mackie,  
McLaren Construction



the interface where the systems transitioned from one to another."

The facade was erected using MEWPs, working off a temporary concrete path constructed by frame contractor Mitchellson all the way round the building. "Three-quarters of that will stay as a sub-base for the paving," says Mackie.

As expected on an inner London site, there have been a few logistical headaches. The footprint measures just 80m wide by 48m deep and is constrained by Transport for London 'red routes' on two sides, plus a housing estate and the college.

Denmark Hill station is directly opposite and King's College Hospital a few hundred metres away. "We've got one vehicle entrance and all

deliveries are booked in, with two full-time traffic marshals," Mackie says. "We had to agree a BAPA (Basic Asset Protection Agreement) with Network Rail because we are working in the vicinity of a railway line. Although it's on the other side of the road from us, our tower crane could conceivably have fallen across onto the track. It took four months to secure that agreement."

Mackie's team is now approaching practical completion. "We are contracted through to Cat B/C fit out; we don't procure the furniture, but we do manage the installation," he says.

Although the pandemic put the schedule back a year, Salvation Army staff will be able to move into their new territorial headquarters this summer. ●

▲ McLaren will install around 100 solar photovoltaic panels on the roof



**Will Mackie MCIQB, project director, McLaren Construction**

- Will Mackie has been a construction manager for 16 years, and a CIOB member for half that time.
- He took a degree at Oxford Brookes University, then joined Sir Robert McAlpine. For the last 10 years, he has been with McLaren Construction.
- His first projects were two offices and a shopping centre in Bath for McAlpine. He then delivered a combination of commercial and residential schemes, before moving back into the office sector with The Salvation Army territorial headquarters.



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► Modular builds offer particular benefits for constrained sites, or where labour is in short supply

# Can modular make it?

Is modular housing finally about to go mainstream – or remain a niche player? **Kristina Smith** speaks to trade body Make UK Modular and other industry players

**D**epending on who you talk to, modular housing is either “the unsung success story of the construction industry” or “on a bit of a knife edge”.

The former view is that of Steve Cole, director of Make UK Modular, which represents seven modular housing manufacturers. The latter comes from David Johnson, director of preconstruction at Volumetric Building Companies (VBC).

According to Make UK Modular, which is part of manufacturing trade body Make UK, 3,300 modular homes were built in the UK in 2022. And it says that its members are on track to produce 10,000 homes a year by 2025. Between them, those members (see box) account for over 70% of the UK’s modular housing market.

VBC, founded in Philadelphia in 2009, is a new entrant to the UK market which is looking to expand further in the US and in Europe. Having recently purchased Polish steel modular company Polcom and the assets of failed US modular builder Katerra, it hopes

to work in a variety of sectors in the UK, including build-to-rent, affordable housing and student accommodation.

Johnson’s more cautious view of the wider industry is well informed. He was preconstruction director at Caledonian Modular until March 2022 when it went into administration, shocking many. Andy Smith, also ex-Caledonian, now heads up VBC in the UK.

“We went into administration with the largest order book that an MMC company had secured, £300m with well-established clients,” Smith recalls.

But Caledonian suffered because it was underfinanced, he says.

“There was a massive drive for revenue generation that led to corners being cut in terms of getting product signed off and ready for manufacture, and rushing through the manufacturing process and not delivering it very well on site. That was an individual business failure rather than a sector failure.”

Getting the right volume of work is a tricky business for modular suppliers. Too little and you can’t

## Make UK Modular members

- Ilke Homes
- Legal & General Modular Homes
- TopHat
- Laing O’Rourke
- Vision Modular Systems
- Stelling Properties
- M-AR Offsite

pay the bills. Too much, and standards can start to slip.

In May 2022, Urban Splash Modular, a joint venture between Urban Splash, Sekisui House and Homes England, went into administration. A report into the failure cited underutilisation of the manufacturing facility and design issues as the main factors leading to the company’s demise.

Deep pockets are a must for anyone wanting to make it in modular in the UK. VBC has the backing of private equity company Pimco. The likes of Legal and General, Ilke and TopHat are also well financed and investing significantly, while forecasting returns in the longer term.

## The case for modular

There are lots of reasons why it could make sense to use modular to increase our housebuilding output. Make UK Modular’s latest report, *Who Will be the Builders?*, published in March 2023, focuses on how building more modular houses could help counter labour shortages.

Modular homes require fewer people to build them, and the ►



**The big gains in modular are in speed and quality but the cost is competitive. We're seeing that as companies mature**

Steve Cole, Make UK Modular



workforce can be drawn from a more diverse pool since it doesn't require people to be able to move from site to site, following the work.

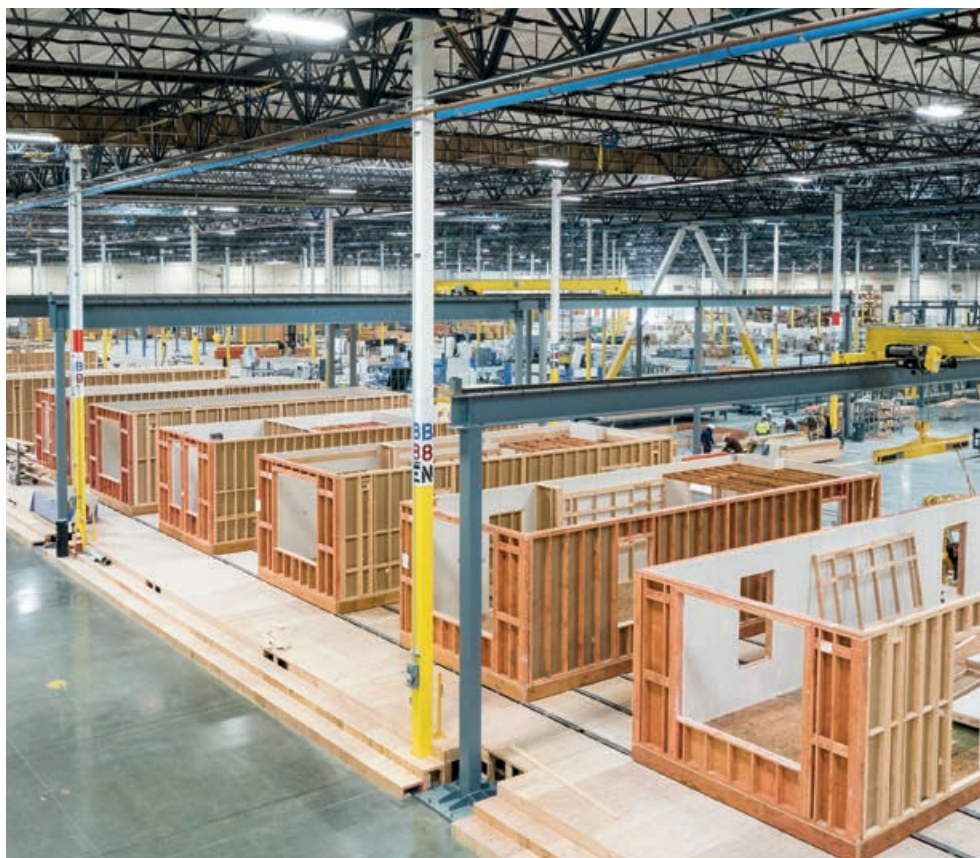
Clearly, modular makes most sense when speed to market is key. For instance, developments such as Greystar's Greenford Quay (see p30) for the private rental sector or affordable schemes such as Cunninghame Housing Association's 101-home development in Kilmarnock (see p31).

"The big gains in modular are in speed and quality but the cost is competitive," says Cole. "We're seeing that as companies mature."

Johnson reckons that with a decent scale of building – say 50 homes or upwards – modular can deliver cost parity with a traditional build.

But, he says, there has to be a compelling reason why modular trumps traditional. This could be a constrained site where a modular build works better or a region, such as the south west, where labour is in very scarce supply.

As the carbon market emerges, modular homes could offer advantages. It is easier to produce lower carbon homes – both in production and operation – in a factory environment, argues Cole. Ilke Homes has a zero carbon homes brand, Ilke Zero, which is being deployed to build the first ever guaranteed zero energy bills homes in Essex (see p31).



**Hurdles to clear**

The biggest challenge for companies is how to ensure that steady flow of projects. Put bluntly, the UK modular housing industry needs more volume, and it needs it soon.

Planning, though a problem for all housebuilders, is more of an issue for modular schemes. "There is a lack of resource in the planning system and then you add into that unfamiliarity with modular construction. That's a problem when one of your major benefits is speed," says Cole.

In the US, a different approach helps to deliver greater efficiency, says Smith. There VBC sells a pre-designed solution which means the planning process is far quicker.

▲ Construction in progress at Volumetric Building Companies' factory in Tracy, California

There have also been concerns over quality and standards. In December 2022, the National Fire Chiefs Council (NFCC) published a position paper on modern methods of construction (MMC), singling out volumetric modular buildings as an area for particular concern. The NFCC claims there is a lack of competency around building regulations and MMC, a lack of research, and potential issues with tall modular buildings.

The government is keen to see modular and other forms of MMC succeed and is funding measures to help manufacturers get it right.

In September 2022 the Construction Innovation Hub –



Make UK Modular would also like to see 40% of the Affordable Homes Programme dedicated to MMC

40

a government-funded organisation founded by the Manufacturing Technology Centre and BRE to help push transformation in construction – launched the Construction Product Quality Planning (CPQP) framework. Aimed at offsite manufacturers, this is a set of guides written to help them comply with the latest standards and with the Building Safety Act.

### New standard for MMC homes

In January this year the Department for Levelling Up, Housing and Communities (DLUHC) announced that it had commissioned the British Standards Institute (BSI) to develop a new standard for homes built using MMC in a bid to give homeowners a wider choice of warranties, insurance and mortgages.

Cole points out that modular homes can already gain warranties, insurance and mortgages. All Make UK Modular's members are accredited by the Build Offsite Property Assurance Scheme (BOPAS) and some of them use NHBC Accepts, the National House Building Council's review service for innovative systems.

VBC would like to counter some of the concerns around building regulations and quality with a platform design approach deployed across the modular sector.

"At the moment every manufacturer is developing their own solution and getting everything individually tested in terms of thermal, acoustic, fire, structural performance," says Johnson. "It's costing a fortune in R&D. That is one of the things that is making modular more expensive."

Some individual companies already claim to be using a platform design approach – but a platform used by just one company is missing the point, he says.



**We need clients to get everything right virtually, so mistakes are not made practically**  
David Johnson,  
Volumetric Building  
Companies

Smith thinks that platform design would increase confidence in the sector.

"One of the benefits of the platform design philosophy is that if someone ceases to trade another company can easily pick it up. It also leads to a more collaborative approach between manufacturers in the sector. There's enough business for everybody to be successful and to develop a healthy pipeline, working in an open platform design."

Some quality issues are down to a basic lack of understanding among clients and designers, says Johnson, which also erodes some of the benefits of modular.

Standard designs can get modified as clients, designers and planners get involved. Or production is rushed through in a bid to hit deadlines without all the necessary information in place. "We need to educate clients so that they don't truncate the design time, and instead ensure they get everything right virtually so mistakes are not made practically," says Johnson.

### Creating a pipeline

With the government's housebuilding target of 300,000 homes a year still looking unachievable – we were nearly 100,000 shy in the year to March 2022 – modular could help, says Cole. He thinks that ramping up to 30,000 modular homes a year by 2030 would be a "pragmatic" target rather than an aspirational one.

Make UK Modular would also like to see 40% of the Affordable Homes Programme dedicated to MMC, with half of that going to modular. That too would be eminently achievable, says Cole. The programme's target for MMC is 20%, but he reckons the MMC proportion might already be at 40%. "It has gone further and faster than the government expected."

Cole is hopeful that metro mayors could find ways to band together to create the necessary housing demand – and to deliver employment where needed: "The principle is about looking at connecting areas where there is a high demand for employment with areas where there is high demand for housing." ●

► One of Ilke Homes' modular units is craned into place



ILKE HOMES

# In pictures: Five leading modular housing schemes

**Kristina Smith** picks out five projects showcasing the benefits of modular housing systems

## ► Greenford Quay, Ealing

One of the UK's largest build-to-rent schemes, Greenford Quay in west London will provide over 2,000 apartments, with 1,439 available to rent from Greystar. Modular supplier Vision and developer/contractor Tide Construction teamed up on this scheme with architect HTA.



RICHARD SOUTHALL / TIDE CONSTRUCTION





## Ten Degrees Croydon

Croydon can now boast the world's tallest modular housing scheme. Ten Degrees Croydon consists of 546 homes in two tower blocks of 38 and 44 storeys, the highest of the two reaching 135m. Modular supplier Vision and developer/contractor Tide Construction built the HTA-designed scheme.

HTA

## Reuben House, Peckham

Charity Centrepont developed a 33-home development in Peckham, south London, for young people where the rent will be capped at one-third of their salary. The two-storey apartment building is made up of repeatable units, supplied by M-AR and designed by Modularize.

## Bridgehousehill Road, Kilmarnock

This project to build 101 affordable homes is Cunninghame Housing Association's first foray into modular and will be the largest low-rise modular housing development in Scotland. Connect Modular is both supplier and design & build contractor, while the architect is Robert Potter & Partners.



M-AR - CENTREPOINT



WEE HOUSE COMPANY

## Hope Green, Stanford-le-Hope

Claimed as a world first, modular manufacturer and developer ilke Homes is delivering 101 homes that will be guaranteed to have zero energy bills, in partnership with asset manager Gresham House and Octopus Energy.



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▼ Construction phases must be planned meticulously because all materials have to be shipped from the UK

# Project Antarctica

54 people battled harsh conditions to finish the cladding at Rothera Research Station's new Discovery Building in Antarctica in this year's short construction season. By **Rod Sweet**



**I**n April, a far-from-home construction team managed to make a major new research building at the British Antarctic Survey's (BAS's) Rothera Research Station weathertight before winter descended on the Earth's coldest continent.

In its fourth summertime construction season, contractor BAM, with technical adviser Ramboll and designer Sweco, managed to finish the cladding and install an operations tower on the new Discovery Building before making the long journey back to springtime Europe.

The team of around 54 people battled harsh conditions to complete this milestone, BAS said. They'll

return to the station on Adelaide Island in November this year for the penultimate building season, with completion scheduled for 2025.

## Past fame and future challenges

Ninety metres long and with a total area of 4,500 sq m, the two-storey Discovery Building will replace several buildings at the end of their lives and will bring scientific and operations functions together under one roof.

Rothera is the UK's largest Antarctic research hub. Scientists there study climate, biodiversity and ocean science. The new building is named after the Royal Research Ship (RRS) Discovery, which made its

## Project team

Construction partner: BAM  
Concept design: Norr Architects  
Delivery design: Hugh Broughton Architects  
Design consultant: Sweco  
Technical adviser: Ramboll  
Fire consultant: OFR  
Cost consultant: Turner & Townsend

first scientific research expedition from 1901 to 1904, commanded by Captain Robert Falcon Scott with famous explorers Ernest Shackleton, Edward Wilson and Frank Wild on board.

The building's design looks to the future with BAS's 2040 net zero ambitions in mind.

Its combined heat and power plant should cut the station's carbon emissions by 25%. This, along with photovoltaic solar panels, a thermally efficient building envelope and triple glazing, will make the building an exemplar for energy efficiency in the extreme setting.

Other features include a wind deflector – the largest of its kind in



The two-storey  
Discovery  
Building has  
a total area of  
4,500 sq m

4,500

Antarctica – to prevent thousands of tonnes of snow accumulating around the building, and an octagonal operations tower to provide 360-degree views of the runway, wharf and station buildings.

### One chance to get it right

Work began on the new building in 2019. Construction phases must be planned meticulously because all materials have to be shipped from the UK. Every nut and bolt must be accounted for as the nearest builders' merchant is thousands of miles away.

The construction team practised full-scale assembly of the 45-tonne steel frames in Southampton to identify unexpected challenges or additional pieces of equipment needed while still in the UK.

Ahead of the 2020-21 construction season amid the Covid pandemic, the crew had to quarantine for two weeks before travelling by ship to Antarctica.

"Reaching this milestone safely on such a complex construction project

in such an extreme environment is testament to the dedication and motivation of the highly skilled project teams within BAM, BAS, Ramboll and Sweco and our supply chain partners," says Graham Hopper, project director at BAM.

Architect Hugh Broughton adds: "The works completed this season demonstrate the benefits of a collaborative approach to design and construction and are a testament to the skill and perseverance of a committed team, working on the project in Antarctica and in the UK."

When complete, the new building will make work and life easier for BAS's staff at Rothera, who number around 100 in summer and 20 in winter.

Its plant room and energy centre will recover heat and distribute power and water to the station, as well as housing fire suppression pumps. A new central store will consolidate equipment and cargo for more effective stock control and management, with reduced manual handling.



▲ The building will bring scientific and operations functions together under one roof

**The construction team practised full-scale assembly of the 45-tonne steel frames in Southampton to identify unexpected challenges or additional pieces of equipment needed** ”

### Interior design

New workshops, operations hub and offices will help scientists prepare for field expeditions, while a new communications tower will maintain better contact with aircraft and groups in the field.

The medical centre is designed to modern healthcare standards. Improved training facilities include a climbing wall and education centre. Enhanced wellbeing areas include a gym, breakout areas, a music centre and an arts and crafts facility.

An end-to-end corridor cuts the need to access different parts of the building from outside, thus minimising heat loss. A central store in the middle of the building provides easier access for building users.

Health and safety features include transparent glazed screens between spaces to increase visibility, and colours to quickly identify sections of the building. Its modular design can be adapted for future needs.

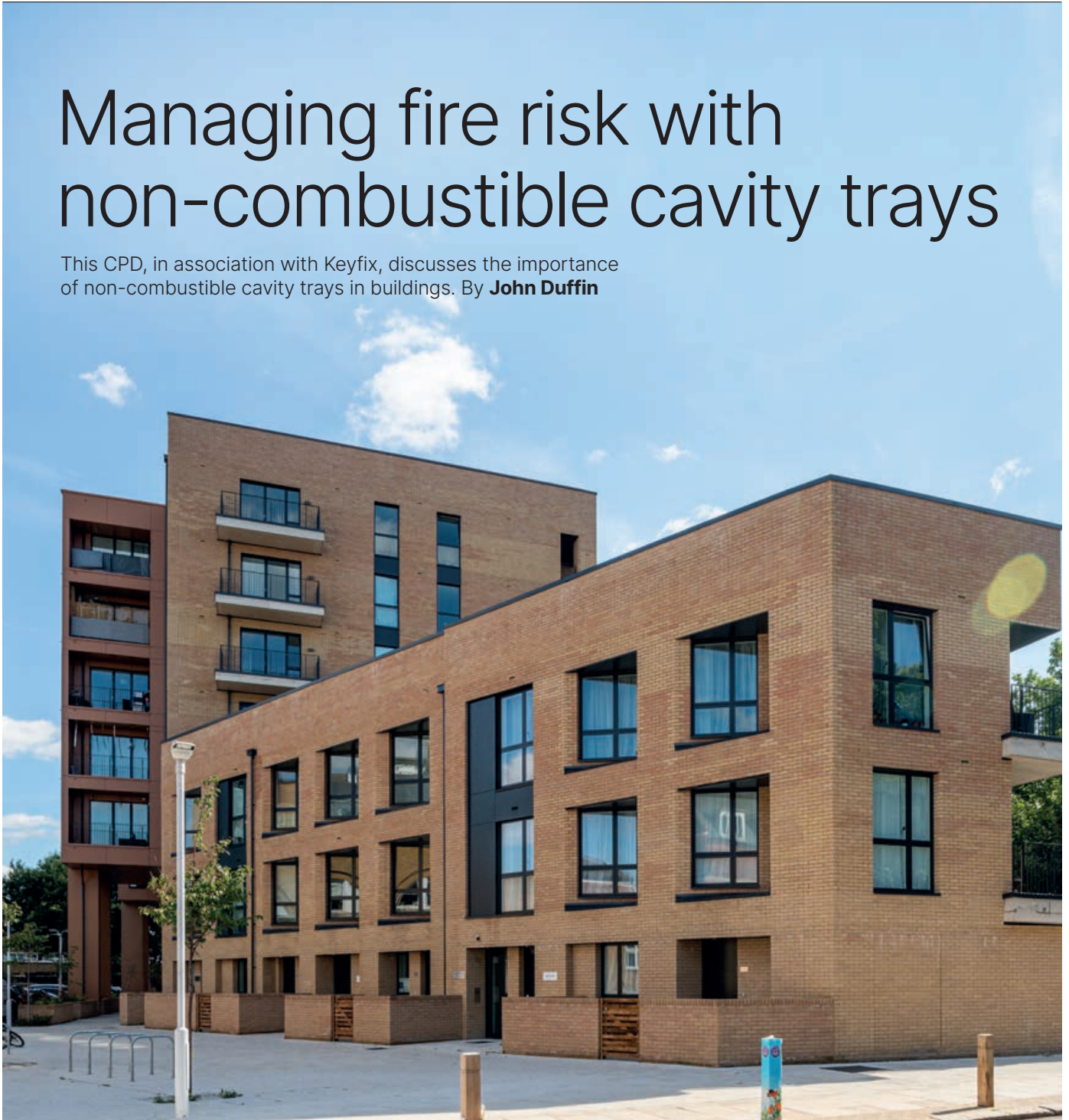
Elen Jones, director of BAS's infrastructure modernisation programme, called the enclosure this season a "major milestone". ●

▼ An octagonal operations tower will give 360-degree views of the runway, wharf and station buildings



# Managing fire risk with non-combustible cavity trays

This CPD, in association with Keyfix, discusses the importance of non-combustible cavity trays in buildings. By **John Duffin**





**Correct specification is crucial to ensure that buildings built in the future exceed standards rather than meeting the minimum standards required at the time of the build**



**O**n 14 June 2017, the fire that broke out in the Grenfell Tower apartment building rapidly spread to other floors via the building's exterior, tragically leading to the deaths of 72 people. The Grenfell Tower tragedy highlighted mistakes made by the industry and led to many regulatory changes.

The Hackitt report identified failures within the construction sector that culminated in the Grenfell Tower fire. These findings were incorporated in the Building Safety Act with a view to resolving the systemic issues in the industry.

The fire rose due to the materials and fabrics which were housed in the cavity, but in this case it was also able to work its way down the cavity due to the presence of flaming droplets.

While reviews are ongoing and further legislation is expected to be introduced, the initial regulatory response came in the form of Building Regulations Approved Document B [ADB] (Fire Safety) 2019 edition, which banned combustible materials in the external wall of buildings over 18m. In 2022, the regulations became more stringent, banning combustible materials in the external wall of buildings over 11m.

More recently, and alarmingly, there has been an update to the regulations which announced a

temporary relaxation for cavity trays in June 2022 for 18 months. This exemption was based on a consultation in January 2020 when there were no viable alternatives available. The exemption was granted two and a half years later, at a time when there was a variety of alternatives available.

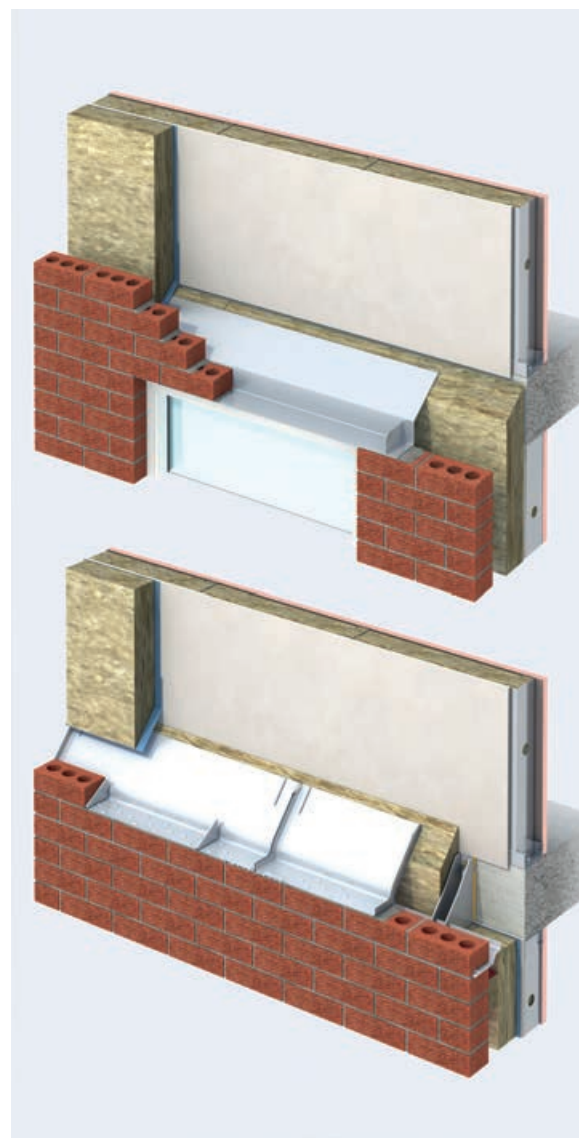
#### **Impact on housebuilders**

Despite the exemption, warranty providers are calling for the use of non-combustible cavity tray systems to futureproof their stock.

There have been situations where properties cannot be sold or attain mortgages due to the use of poor materials in the external facade of the building. Therefore, correct specification is crucial to ensure that buildings built in the future exceed standards rather than meeting the minimum standards required at that particular time of the build.

Warranty providers are now requesting that, where an alternative is available, all materials in the external cavity should achieve a minimum European Classification A2-s1, d0 or Class A1, classified in accordance with BS EN 13501-1:2007+A1:2009.

This outdated and fundamentally inaccurate exemption compromises fire safety standards and provides a significant risk to public safety. Moreover, the exemption has prompted confusion in the industry ►



▲ The Keyfix Non-combustible Cavity Tray Lintel (top) and Cavity Tray

◀ Keyfix NCCTs were fitted on the Shuttleworth Road development in south-west London

125

The Keyfix NCCT was manufactured using class A1 non-combustible grade 304 austenitic stainless steel, ensuring a lifespan of 125+ years

as it is being told to actively take a step back by installing combustible materials back into the cavity.

The National House Building Council (NHBC) and Premier Guarantee have issued a response saying they will only be warranting projects that continue to use non-combustible products in buildings 18m and above. Many major contractors and developers still plan to use non-combustible cavity trays going forward despite the temporary exemption.

#### Ensuring best practice

Keyfix firmly believes that manufacturers have an obligation to develop products that exceed

standards as there is always the risk that those regulations could become outdated.

Therefore, when it developed the Keyfix Non-combustible Cavity Tray (NCCT) system, the company consulted and worked with leading architects and brickwork contractors in conjunction with the Building Research Establishment, British Board of Agrément (BBA), NHBC and Premier Guarantee to develop a unique non-combustible cavity tray system that meets the needs of regulators, insurers, developers and installers.

On the basis of the industry consultation, Keyfix concluded that the cavity tray should be:

▼ Offsite fabrication of NCCT units saved installation time at Verdo – Kew Bridge







**Installed in the outer leaf, with no connection with the inner skin, this system does not create a thermal bridge and eliminates all issues associated with differential movement**

helped to simultaneously meet and exceed regulatory requirements.

Located close to the River Thames in Brentford, this new mixed-use development, designed by Broadway Malyan and built by developer EcoWorld, forms part of a major new regeneration scheme that includes the new community stadium for Brentford FC. In order to safeguard the future of the development, Keyfix supplied 765m of Keyfix NCCTs to the development.

One of the key challenges for Keyfix was the tight brickwork build programme. Working to a tight schedule, the offsite fabrication and preforming of bespoke Non-combustible Cavity Tray units in line with the brickwork set-out drawings saved time for the installation team at brickwork contractor DWG.

The Keyfix stainless steel NCCT was specified due to its self-supporting system. It requires no additional fixings, sealants or onsite fabrication by the brickwork contractor. Therefore, installation of the trays did not impede the speed of bricklaying even when compared to a traditional damp proof course (DPC).

Installed in the outer leaf, with no connection with the inner skin, this system does not create a thermal bridge and eliminates all issues associated with differential movement. ►

- Fully non-combustible
- A1 fire rated
- Holding a lifespan of 125+ years
- Weather-tight with BBA testing
- Free of thermal transmission
- Free of issues associated with differential movement
- Free of condensation formation
- Slip plane resistant
- Accompanied by detailed installation drawing and component schedule
- Preformed without the need for tapes, sealants and mastics.

The Keyfix NCCT was manufactured using class A1 non-combustible grade 304 austenitic stainless steel, ensuring a lifespan of 125+ years for the entire system and making it the enduring, cost-effective and maintenance-free cavity tray solution.

The design of the Keyfix NCCT means that it requires no sealants or mastics. It is the only cavity tray of its type on the market with a mechanical dry seal at joints. This means that it is not only

designed to last, but the patented ribbed joint overlap eliminates the use of any sealants at joints, which also removes the possibility of installation errors caused by onsite conditions.

Additionally, the Keyfix NCCT has rigid self-support. The design enables the stainless-steel tray to be self-supporting across the cavity and requires no support from the internal structure, eliminating clashes with other components.

The Keyfix NCCT has also been subjected to rigorous third-party testing and is BBA certified.

### Closing the gap

The infamous 'gap between design and build' is constantly discussed by the industry, and the use of combustible or low-fire-rated products is one prominent example.

Keyfix has worked to close this gap with its NCCT, which is made evident by its employment on the Verdo – Kew Bridge high-rise residential development in west London, where it

▲ Keyfix NCCTs were specified at Chobham Manor in London's Olympic Park



Furthermore, the NCCT is manufactured with integral Stop Ends on each cavity tray to ensure water is trapped and channelled outwards via a Keyfix Non-combustible Weep.

With a lifespan of over 125 years, it is the only non-combustible cavity tray system that does not rely on tapes and mastics to make watertight joints, therefore eliminating one of the main reasons for product failure.

Commenting on the project, Kieran Coyle, general manager at Keyfix, says: "Verdo – Kew Bridge was the first project in which we created and used a component schedule and this is now the same component schedule template we use on every project. It allows installers to use new component codes to identify the different components and install the system to its full integrity."

Holding an A1 fire rating, the Keyfix NCCT solution exceeds the minimum standards set out in ADB, while ensuring this major new development meets and exceeds the latest regulations.

If the regulations become stricter, it will also be futureproofed, maximising the whole-life value of the development. Verdo – Kew Bridge is now complete, with the Keyfix NCCT meeting contractors' requirements and enabling the creation of a development that has safety built in.

#### Best practice in fire safety

Ultimately, the industry must not cut corners as there is no place for second best in our built environment. Our buildings must be robust and resilient – and this starts with the correct specification of materials.

Keyfix does not believe that the target for product development should be the minimum allowable standard, as this does not allow for any 'onsite tolerances'.

If a system is designed to achieve the minimum allowable standard and then encounters conditions on site that further challenge its performance, it can easily drop below the minimum required standard. This results in a return to the 'gap' between what has been designed and what has been built,

▲ Keyfix NCCTs provided a bespoke solution at phase 1B of Southmere Village, Thamesmead

which has dominated the headlines for the last few years.

Keyfix's external cavity wall solutions provide full assurance that the entire system has been designed and tested to achieve the highest industry standards. ●

**John Duffin is managing director of Keyfix.**

### CPD Questions

- 1) How did the Grenfell Tower fire work its way down the building?
  - a) Due to the presence of flaming droplets
  - b) Due to convection
  - c) Due to backdraught
  - d) Due to radiation
- 2) Which regulatory change did the Hackitt report lead to?
  - a) Building Regulation Act
  - b) Fire and Rescue Services Act
  - c) Building Safety Act
  - d) Fire Prevention Act
- 3) Which standard are warranty providers requesting that all materials in the external cavity align with?
  - a) BS EN 13501-1:2007+A1:2009
  - b) BS 9251: 2021
  - c) BS 5306:3 2017
  - d) BS 5839-6:2013
- 4) What does Keyfix recommend for achieving best practice in building safety?
  - a) Meeting the minimum standard
  - b) Exceeding standards
  - c) Specifying combustible products
  - d) Specifying the least expensive products
- 5) Which material is the Keyfix Non-combustible Cavity Tray made of?
  - a) Bitumen
  - b) Polyethylene
  - c) Rubber
  - d) Grade 304 austenitic stainless steel

To test yourself on the questions, go to [www.constructionmanagement.co.uk/cpd-modules](http://www.constructionmanagement.co.uk/cpd-modules).



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Find out what makes us champions at: [www.keyfix.com](http://www.keyfix.com)

**Keyfix**<sup>®</sup>



**Anthony Hayes**  
Decipher

# 'Can our client introduce the delay and disruption protocol?'

This month's contract clinic comes from a contractor worried about the SCL Delay and Disruption Protocol, which its client wishes to introduce on their contract. **Anthony Hayes** provides an answer



## THE QUESTION

Our client wants to incorporate the Society of Construction Law (SCL) *Delay and Disruption Protocol* into the building contract and make it a contract. Are they entitled to do so, and what are the risks of doing so?

## THE ANSWER

The SCL *Delay and Disruption Protocol* provides guidance on how to manage and resolve construction project delays and disruptions. The latest version is the second edition, which was published in February 2017.

It is a firmly established legal principle that the parties involved

in a contract have the freedom to negotiate the terms of an agreement. Therefore, if your client wants to incorporate the protocol into their building contract, they are free to do so, if the other party agrees.

However, there are some risks to incorporating the protocol into the building contract:

- **A lack of clarity.** Because the protocol is a relatively complex document, some of its provisions may be unclear or ambiguous. This could lead to disagreements and delays in resolving issues. In addition, while the document is well written so anybody can understand it, those not familiar with delay and disruption may misinterpret its provisions.
- **The costs of incorporating the protocol into the contract.** Incorporating the protocol into the contract may incur additional costs, both in terms of legal fees and the costs of implementing the protocol itself. The standard building forms are complex enough as they are. Adding further terms to these standard provisions inevitably makes a contract more administratively burdensome.
- **Inflexibility.** The protocol is a prescriptive document that outlines specific procedures and requirements for dealing with delays and disruptions. This may limit the parties' ability to adapt to

changing circumstances. It may also hinder resolution of issues in the most appropriate manner for the project. For example, the protocol lists six ways in which delay analysis should be performed but it is possible that another method may be more suitable.

- **Inconsistencies or conflicts with other contract provisions.**

Including the protocol in a building contract may cause inconsistencies or conflicts with other contract provisions. This could lead to misunderstandings and disagreements about how to interpret and apply the contract.

For example, the NEC guidance notes provide prescriptive direction on how delays should be calculated using prospective analysis (time impact analysis – TIA). If a delay arises which has not been assessed using the NEC guidance, the protocol may recommend a retrospective analysis be applied.

Before incorporating the SCL *Delay and Disruption Protocol* into the building contract, these risks should be carefully considered and balanced against the potential benefits.

I would advise you and your client to seek legal advice to ensure that the protocol is incorporated in a clear, unambiguous and appropriate manner for the specific project at hand. ●

**Anthony Hayes is an associate specialising in delay analysis at Decipher.**





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# Fieldwire puts a spring in construction's productivity step

San Francisco-based tech firm Fieldwire was bought by Hilti to help address the built environment's productivity problem. **Hamish Champ** finds out how it works

**T**he construction industry is well aware it has a productivity issue. The problem is illustrated by well-researched figures that show a typical craftsperson spends just 30% of their working day on what we like to call 'direct wrench time'. The rest is taken up with 'field coordination' – that is to say, preparing for a job, transitioning, waiting for material, equipment or information.

Other issues holding construction back include a reliance on paper-based documentation, poor communication and hit-and-miss progress reporting.

Such challenges are what Fieldwire, the San Francisco-based construction technology company which Hilti bought in 2021, was created to address.

Founded in 2013 by former video games designer (and ex-French paratrooper) Yves Frinault and Javid Singha, a supply chain management graduate from MIT, Fieldwire offers an easy-to-use software solution that enables customers to improve onsite productivity, and more besides.

Since it launched, Fieldwire has proved to be a big hit with users. Why? Well, those involved in delivering a project often struggle with a number of issues – design

▲ Subcontractors can run the system to oversee and manage construction crews

problems, communications glitches, reporting challenges etc – which can potentially delay a scheme's successful delivery.

They need a single source of truth, guiding them through the process, helping them best manage their teams in the field.

Fieldwire fulfils this need. It gives customers the ability to access up-to-date information on the go, whenever they need it, helping them to plan and manage work through a process of effective communication, and easy-to-access documentation.

Says Fieldwire business owner Gordon Hunter: "At Hilti we already provide customers with high-quality



10

Research shows that customers using Fieldwire saved between five and 10 hours per worker per week

In association with



tools, together with a support network, that significantly improve their productivity. We also believe the key to driving productivity improvements in the construction industry is greater use of software and digitalisation, reducing the reliance on paper plans and improving communication between teams in the office and in the field.

"This is why we decided to extend Hilti's offering into software by acquiring Fieldwire."

In adopting better and more capable solutions, such as those offered by Fieldwire, the construction sector has a great opportunity to improve. Time saved is just one of Fieldwire's benefits. Research shows that customers using Fieldwire saved between five and 10 hours per worker per week. Saving time, using it more efficiently, is hugely important in a project's development and viability.

One such business is Midlands-based contractor Speller Metcalfe, which has been using the service for the last six years: "Any new technology means investment – both in time and money – but we

▼ Fieldwire offers better task management and easy messaging



## Any new technology means investment – both in time and money – but we have recouped it in spades

Laurence Speller,  
Speller Metcalfe



have recouped it in spades with Fieldwire," says Laurence Speller, process manager and trainer at Speller Metcalfe.

He continues: "On average, we think our sites are saving around eight hours a week in rolling out processes and undertaking quality inspections. That is a whole working day on site, every week, and it means that time can be put to use elsewhere."

As well as time savings, Fieldwire empowers companies to work within the array of regulations that are applied in jurisdictions around the world. The software smooths the compliance process, since a contractor will have access to all the regulatory information they need.

Being able to demonstrate to clients and to building owners that a project has been completed properly – the golden thread element – is paramount.

Transparency is another of Fieldwire's benefits. When a building's owner deploys the software, they can see what's happening at the subcontractor level. In turn, subcontractors can run the system to oversee and manage construction crews, as well as work they need to do on their own. Meanwhile main contractors can use it to communicate the key bits of information and organise a project in the way they want.

Fieldwire is effectively a one-stop shop for project management in the field, says Hunter. "It enables

users to see plans and markups easily and provides access to BIM documentation and 3D drawings. Fieldwire means better task management, easy messaging and the creation of checklists that reflect the needs of the job. Users can create custom forms and files and log images, ranging from ordinary photos to 360-degree images and video clips."

It helps that Fieldwire is easy to operate, says Niels Goos, Hilti's head of marketing for northern Europe. "Its design is based on being user friendly and, while we have a 24/7 customer support team on call, even without such assistance a customer can get to grips with it inside just a few hours. It's that intuitive."

One of the key advantages of the product is its adoptability. Fieldwire can be scaled up through a whole company within four weeks if required; it's that simple to put in place, thanks to a series of tutorials which guide a new user, step-by-step, through the process.

Adds Hunter: "How long it takes you to get on board just depends on how quickly you want to get up and running with the technology."

"We regularly hear that those using Fieldwire day in, day out, really enjoy the experience. We know it saves our customers time and money, helping them deliver their projects to the satisfaction of everyone."

"These are our value propositions. We are very proud of them." ●

# ‘The industry is far more inclusive and welcoming than when I started’

Danielle Dasgupta FCIOB, project manager at Barratt Developments, tells **CM** about her career journey



## What made you go into construction?

Having gone to an all-girls school and with an interest in engineering at the time, I found a construction engineering management degree through luck. I had never heard of site management and – as I like to be different – I thought it would be a more unique type of career to choose working in a male-dominated industry with a view to bringing more female presence to it. I wanted an active job with varying responsibilities, which my construction career has not failed to provide.

## What do you remember from your first project?

The importance of having drawings and checking works and progress on site against those drawings. I also learned the significance of building up rapport with the workforce, who were not only teaching me while I was working but also allowing me develop management and conversational skills. You are only as strong as your workforce, so it has always been important to treat them with respect.

## What was the best advice you were given?

Be patient and things will happen. I never wanted to be one to chase after the next rung on the career ladder and, from seeing how former colleagues had worked while I was on placements, I mapped out my career against a realistic timeframe that allowed me to develop the

knowledge, experience and skill set I felt I needed to be able to work towards a promotion.

### How do you think becoming a fellow has helped you in your career?’

It gave me a new challenge to work towards, and it has helped to build up my self-confidence and keep me actively working through items on my continual professional development plan. The industry is always changing and I enjoy continuing to learn.

### Is there a specific project or achievement you are most proud of?

I have built two shopping centres and I admit I still get excited about visiting them. Part of my role included overseeing facade works and I still like to take a giggle over marking circa 60 nice and colourful drawings to append to documents I had prepared for the scaffolding tender pack. They were both delivered against tight programmes but to a high standard.

### Is there anything in your career you would do differently now?

Reach out to a mentor or someone I felt could be a mentor. It is so important to have some to speak to impartially (separate to a line manager). While I do not regret some decisions I made with my career in the past, things may have been different had I consulted someone for their opinion.



**Danielle Dasgupta CV**

#### Employment:

● Barratt Developments

Project manager, Jul 2021-present

Senior site manager, Jul 2017-Jun 2021

Site manager, Aug 2015-Jun 2017

● Package manager, Sir Robert McAlpine, May-Aug 2015

● Senior site manager, Berkeley Group Holdings, Aug 2014-May 2015

● Site manager, Bouygues, Sep 2013-Aug 2014

● Site manager, John Sisk & Son, Apr 2012-Sep 2013

#### Education:

● Construction Engineering Management, Loughborough University, 2003-2007

### Who do you most admire in the construction industry, past or present?

There is a former contracts manager that I worked for just over 10 years ago who is now an MD at that company. I enjoyed working with him and have taken away people management skills that I continue to initiate. He seemed to have an art of working through the stresses of a project with us and, no matter how busy he was, he always made time to speak to his team as well as making us all feel valued within his team.

### What advice would you give to someone starting in construction today?

You will never get judged by what you do not know. Everyone has to start somewhere and develop their technical knowledge and skills. I found it extremely useful even going out on site with a senior site manager who taught me how to read bar bending schedules and rebar details. I am still friends with him now, all these years on. Even now, I still ask questions if I am ever unsure of something.

### What one thing would you change to make careers in construction more appealing?

When I mentor, I like to be honest about the good and bad side of construction. Nothing is perfect – but to help make mentees resilient they need to understand challenges

**Never compare yourself to others. Everyone is unique and on their own journey. You will have your own measure of success and that should be appreciated**

Danielle Dasgupta,  
Barratt Developments



and know that there will always be a way for them to conquer those.

### What has changed the most about construction since you've been working in it?

The attitude of the workforce, and the industry in general, is far more diverse and welcoming than it was when I chose my career and it is still continuing to change in a positive manner.

### What's the most valuable training you've received and why?

Possibly my Powerproject training. I was never a fan of Gantt charts at university, but now it is so useful being able to produce programmes. Whether it is for a bid document, at preconstruction stage or short-term programme, it has been so useful and versatile.

### Do you have a motto that applies to your work and, if so, what is it?

Never compare yourself to others. Everyone is unique and on their own journey. You will have your own measure of success and that should be appreciated, albeit celebrating small wins, daily gratitude or undertaking periodic self-reflection.

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# CIOB Community



## CIOB reveals finalists for 2023 Global Student Challenge

Shortlist of 10 teams from around the world battle it out on a new virtual platform to present their project to CIOB Members’ Forum

The annual CIOB Global Student Challenge (GSC) is now hotting up: the final 10 teams competing for the title have been announced.

This year’s finalists represent 10 institutes from six different countries (see box, right).

Since 2014, the competition has challenged the global community of built environment students to run their own virtual construction company and compete against other student teams. Each team is made up of students studying on built environment HNC, HND or degree courses.

The winner is to be announced in April, after CM goes to press. The winning team will then be invited to attend part of the CIOB Members’

University	Project	Location
Chongqing University	Intelligence Symbiosis	China
Nottingham Trent University	NTU with us	UK
Sheffield Hallam University	Hallam CPM	UK
Tunku Abdul Rahman University of Management and Technology	Student Facilities Centre	Malaysia
Taylor's University	Taylor's Sports Oasis	Malaysia
Tongji University	Green Haven	China
Universitas Indonesia	Askara Victoria	Indonesia
Universitas Tarumanagara	Untar Hub	Indonesia
University of Wales Trinity Saint David	Student Union Building	UK
Western Carolina University	Catamount Project	USA

The winning team will be invited to attend the CIOB Members’ Forum to present their project in front of the world’s construction professionals

Forum to present their project in front of the world’s construction professionals and leaders from the CIOB community. There is a cash prize for the winning team of £2,000.

The challenge takes place in stages over a number of months. For the next stage of the competition the finalists will develop the work they have done so far and present detailed project proposals to an international panel of judges online.

The final stage requires teams to provide, among other things, a completed design and build programme, together with costs for each aspect of the build.

Teams will also need to share a payment statement, listing what payments will be required and when, and giving detail on the key environmental and sustainability benefits, which demonstrate a long-term community legacy for the project.

This year’s competition has seen the move to a new virtual platform for the competition. SimVenture Validate is an online platform that is already currently used by a wide range of universities to build employability and enterprise skills.

The platform aims to help develop an individual’s creative thinking, business planning and communication skills, and also aligns with CIOB’s corporate plan themes – encouraging focus on sustainability, quality and the users of the built environment. ●

# Bright times ahead for Portsmouth students

University team takes home prizes in Bright Futures Student Challenge



**The annual CIOB Tomorrow's Leaders** London and South Bright Futures Student Challenge (BFSC), sponsored by VolkerFitzpatrick and Reef Group, once again proved that there is a wealth of talent waiting to come into the construction industry.

Teams from universities and colleges in London and the south, all studying construction-based courses, came together to showcase their skills and knowledge to win the title BFSC 2023 Champions.

The competition was based around a £29m project by VolkerFitzpatrick for client Reef Group in King's Cross, London. The Apex is one of six mixed-use new builds forming the Tribeca development.

The teams were invited to a site tour of The Apex by the VolkerFitzpatrick project team after which they had to produce a 10-minute presentation to a panel of judges on a specific question about the project.

Judges for the competition came from Baxall, Willmott Dixon,

Barr Group, RW Armstrong, Walter Lilly and VolkerFitzpatrick.

The team from University of Portsmouth – comprising Aleena Paracha, Wayne Kelly, Max McLean, and Toby Davis – was the winner. The University of West London team – Milda Klimanskyte, Alfred Amedume, Daniele Cappadona and Shafin Mohammad – came in a close second.

Aleena Paracha (University of Portsmouth) was recognised as the Outstanding Student of the day and was presented with a trophy, certificate, voucher and an opportunity for a week of work experience with VolkerFitzpatrick.

Milda Klimanskyte (University of West London) and Justice Ohene Asiamah (Royal School of Military Engineering) were recognised as Highly Commended and will also have an opportunity to accept work experience with one of the companies represented by the judges.

VolkerFitzpatrick was sponsor of the BFSC and Reef Group sponsored the prizes for the event. ●

◀ The winners from the University of Portsmouth, with Stuart Deverill, managing director of VolkerFitzpatrick's building division



**Teams from universities and colleges in London and the south, all studying construction-based courses, came together to showcase their skills**

## CIOB Assist offers someone to turn to

Financial and wellbeing support is available

For 30 years CIOB has been working to support its members and their families when they need a helping hand.

CIOB Assist helps hundreds of members who find themselves facing unexpected challenges. It can be anyone from early career starters to retirees, and as diverse as health issues to financial concerns. And without someone to turn to, their future is uncertain.

In 2022 CIOB Assist provided support to 484 members and their families, amounting to nearly £89,000. It offered over £20,000 worth of mental health and wellbeing support and raised over £55,500 from donations and fundraising.

If you need our support please reach out to us. And if you can support us, we want to hear from you. See [assist.ciob.org](https://assist.ciob.org).

In 2022 CIOB Assist provided support to **484 members** and their families.

£88,826  
Financial support provided

£20,419  
Mental Health & Wellbeing support

£55,564  
Raised from donations /fundraising

**CIOB**  
Assist

# MCIQB collects award for Building of the Year

Aecom project director David Maiden is recognised for his work on Greater Manchester's all-weather research centre Energy House 2.0 in Salford

**Greater Manchester Chamber of Commerce** named Energy House 2.0 as its Building of the Year 2022 at the recent Property & Construction Awards at Emirates Old Trafford.

Project director David Maiden MCIQB, working for CIOB training partner Aecom, was there to collect the award, which was presented by Derek Humphreys FCIOB.

The award recognises a building's contribution to Greater Manchester both in terms of construction and development. Energy House 2.0, which is part of the University of Salford, was completed in February 2022 and is the 'world's first' all-weather research centre.

The unique facility provides the UK and the wider world with an

▲ David Maiden collects his award at the Manchester ceremony

▼ Energy House 2.0 offers facilities for testing products in climatic conditions



environment for testing complete buildings and all types of products in the exact climatic conditions that 95% of the world's population live in.

Domestic and international media have shown a huge interest in what Energy House 2.0 can do and it has received massive interest from across the globe.

Companies of all sizes will use Energy House 2.0 to test products from whole buildings to individual components and technologies such as EV charging, renewables and building management systems. Early users include Barratt Homes and Muse Developments.

Other finalists were: the £50m Crusader Mill residential conversion in Piccadilly East; Castlefield Viaduct – the conversion of a Grade II-listed Victorian railway bridge into a green public space; Base, the specialist hub for industry 4.0 computer engineering, materials science, gaming and animation businesses in Manchester Science Park; and The Science Engineering & Environment Building (SEE) at the University of Salford. ●



DAVID MAIDEN, CENTRE HOLDING CERTIFICATE

## Bauder hosts roofing seminar

Ipswich Hub event tackles technical topics

Bauder Roofing hosted a technical seminar organised by CIOB's Ipswich Hub at its operation in Ipswich in April.

This technical seminar discussed how providing problem-free roofs isn't just a case of choosing a good waterproofing material. It also

covered topics from the deck up to PV and green roofs.

Bauder is one of Europe's leading manufacturers and suppliers of modern waterproofing systems, thermal insulation, green and blue roofs and photovoltaic systems.





## Built environment students join CIOB annual festival

More than 100 people from 25 countries take home career tips from the institute's third online Student Festival

Construction students from across the world gathered online in March for CIOB's annual Student Festival.

The festival, now in its third year, aims to help students build upon their competence, confidence and knowledge of the built environment sector, develop skills and take away tips to succeed in their career.

The two-day event was attended by more than 100 people from 25 countries. They heard from speakers including CIOB's CEO Caroline Gumble and director of education and standards Rosalind Thorpe, as well as academics, experts and members of CIOB's Tomorrow's Leaders community.

Topics ranged from degree apprenticeships to project management and wellbeing and inclusivity. Attendees

also received advice on dissertations, job interviews and developing their own personal brand – and had the opportunity to join in with an employability workshop.

Tadiwa Taimu, a student at the University of Cape Town, attended the event: "I gained a widened understanding of the built environment and construction industry from the CIOB Student Festival.

"I enjoyed the fact that there was an array of global perspectives from industry professionals, educators, and lots more. The wealth of knowledge is undeniable and such an asset for students. I would definitely recommend this to my peers."

Content from the festival is now available at <https://tinyurl.com/yckjdruc>.



## One to watch

**Nouman Qadir**

Junior associate, Quigg Golden

**Why did you choose a career in construction? What else would you have done?**

It's the feeling that comes when one sees the final result: it is very tangible, and the opportunity it provides to leave a mark on the world. If you look at the seven wonders of the world – almost all of them are related to construction.

Being a history fanatic means that I was always fascinated by such structures and wished to be involved in building one, so I chose to become a civil engineer. Later my affiliation with literature, mathematics and history pushed me towards the legal side of construction – so here I am aspiring to be a construction lawyer.

If I hadn't been a civil engineer, then I may have pursued a career in writing. During my bachelor's degree, I was involved in editing my university's annual magazine. I was lucky and very proud to win the provincial short story writing contest by submitting one on 'Intellectual Prostitution'.

**What made you want to become a Tomorrow's Leader?**

When I was in Pakistan, I tried to create a platform that assigns mentees to civil engineers who aim to enhance their professional skills levels.

After attending a few CIOB events I realised it focuses on knowledge sharing, helping others, constant growth and growing together. This is exactly what I wanted to achieve back in Pakistan, but on a much larger scale.

Becoming Tomorrow's Leaders champion seemed to me the perfect opportunity to live up to Mahatma Gandhi's quote: "Be the change you want to see in the world."

It provides me with opportunities to network with industry experts; to transfer my passion, knowledge and experience to my colleagues and future leaders; to stimulate international students like me to associate themselves with professional bodies like CIOB; and to enhance my knowledge of industry practices and keep up to date with developments.

**What are your ambitions for your career?**

My career ambition is to be counted among the best construction lawyers



**“My career ambition is to be counted among the best construction lawyers of my time and maybe write a book or two on construction law as I grow old**

of my time and maybe write a book or two on construction law as I grow old. Also, I am working in Pakistan to promote alternate dispute resolution along with evolving arbitration and adjudication process so would like to make a difference there.


In terms of short-term goal: becoming a chartered member of CIOB, doing a PhD in Construction Law and becoming a construction adjudicator.

**What changes would you like to see in the industry?**

I would like to make the industry more sustainable by promoting better collaboration and cooperation among different departments. Also, a more gender and culturally diverse industry would result in a better variety of ideas that may quicken our stride towards sustainability. The other change I would like to see in the construction sector is the increased use of alternate dispute resolution methods.

**What do you do in your spare time?**

I am a reading fanatic so in my spare time I love reading about history, international relations and politics. Also, sometimes I could be found playing chess or exploring stars with the astronomy club.



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A woman with curly hair is looking out at a city at night. The background is a blurred view of city buildings and streetlights, with a warm orange glow from the lights.

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# Industry leaders call for action

Leading professional bodies spark discussion at West Midlands Great Debate

**Strategies that prioritise health, biodiversity, strong leadership and good design** were all among topics discussed at the West Midlands Great Debate 2023.

The event in March, which attracted over 100 guests, featured a panel of experts representing the UK's leading built environment professional bodies including CIOB.

The event 'Making the Most of What We've Got: How to Improve the Existing Built Environment' was chaired by Professor Carl Chinn.

The panel discussion was kicked off by Susan Bridge, RTPI president, who emphasised the need for plans grounded in strong leadership, vision and community empowerment.

▼ CIOB's Sandi Rhys Jones (second from left) was a speaker at the event



Jane Findlay, immediate past president at the Landscape Institute, then provided insights on how best to tackle the issue of climate emergency and biodiversity.

Next up, Vicky Bache, representing ICE, shared her views on how the industry can best utilise existing infrastructure. Josh Foster, RIBA representative, spoke about the critical role of good design. Randip Singh Bahra, representing RICS, addressed decarbonisation and the need for a common language.

Finally, Sandi Rhys Jones, CIOB senior vice president, delivered a passionate speech on the need for a retrofit strategy that prioritises skills and health. She stressed the need for the industry to foster collaboration and understand each other's approaches to sustainability: "Modern professionals in the built environment have the skills to help deliver the sustainability solutions we face – let's seize the moment."

Rhys Jones highlighted the recent governmental funding allocated towards retrofitting social housing, and highlighted the significance of sustainability skills and inspiring the next generation to 'look up'.

As the evening drew to a close, she delivered a message to the audience, emphasising that every individual can contribute towards sustainability, and even small changes in our personal lives can yield substantial positive effects. ●



▲ The Dundee & Angus College winners

## Scottish students rise to challenge

Dundee students take home top three prizes

Dundee & Angus College took first place in the CIOB in Scotland Student Challenge held at the Apex Hotel, Dundee, in February.

It was a great day for the Angus area with Dundee University teams 1 and 2 taking second and third place. Eight teams from further education colleges and universities across Scotland took part.

The event involves the students working in their own groups competing against other teams. The project brief gives them the opportunity to implement creative thinking, tests analytical skills and requires a professional presentation to the judges, BBC Apprentice style.

The winning team – Adam McArtney, Helen Cran, Jessica Dursley and Andrew Elliott – received the prize of one week's work experience, donated by the main sponsor, Robertson Group, along with vouchers, a trophy and a winner's cup.

The event finished with a networking careers fair provided by Robertson Construction, CCG (Scotland), McLaughlin & Harvey, Tilbury Douglas, Morgan Sindall, Balfour Beatty and McTaggart Construction.

## Why FLOS?

Northampton Hub looks at biggest building regs change in 40 years

In April the Northampton Hub organised an evening CPD session looking at the new standards for Parts F, L, O & S of the Approved Documents.

With climate change high on the agenda, this CPD, hosted by Coventry University, provided a better understanding of why the

changes have been made, how they can be achieved, a snapshot of the requirements and an insight into some of the challenges.

Speakers included Paul Hurst MCIQB, inspection manager for NHBC, and Tom Reynolds MCIQB, operations director at MES Building Solutions.

The new building regulations came into force on 15 June 2022, including amendments to Part F (ventilation), Part L (conservation of fuel and power), the release of a new Approved Document Part O (Overheating) and Approved Document Part S (infrastructure for the charging of electric vehicles).

# Site visit offers chance to view Birmingham's Octagon Tower

Midgard and MEPC to host behind-the-scenes tour of Midlands landmark

**CIOB members are invited to join** contractor Midgard and development manager MEPC for an exclusive behind-the-scenes tour of Birmingham's ground-breaking octagonal tower on 18 May.

Standing tall at 155m, the 49-storey building is set for completion in 2025 and is claimed to be the world's first purely octagonal residential tower. It will offer up to 370 new rental homes as part of the Paradise Birmingham redevelopment.

The development, designed by Glenn Howells Architects and Grant Associates, will be built off Great Charles Street Queensway and Paradise Circus.

Residents in each of the building's 370 apartments will benefit from a 13m frontage with views over the city, and some 8% of the apartments are set to be made affordable – a total of 30.

The visit will offer the opportunity to experience the site up close and hear from the dedicated project team about the work under way, as well as the unique challenges they have faced during this complex build. ●

**To book please visit [www.ciob.org/events](http://www.ciob.org/events) or contact Georgina Floyd: [gffloyd@ciob.org.uk](mailto:gffloyd@ciob.org.uk).**



## CBC helps 'change the narrative' of school pupils

Burmor hosts primary school events and visits



Chartered Building Company Burmor Construction is working to encourage young people from disadvantaged backgrounds to consider construction by lending its support to IntoUniversity in Peterborough.

IntoUniversity opened in autumn 2022 in partnership with the new Anglia Ruskin University campus. An extension of school and home, providing resources that some students wouldn't otherwise have, the initiative aims to break cycles of disadvantage.

The centre offers children from disadvantaged backgrounds the opportunity to start a journey towards a brighter, more inclusive future.

Burmor's first step with the centre involved Scott Drewery, quantity surveyor at Burmor Construction and Tomorrow's Leaders champion, hosting an interactive 'perimeters' activity with a group of primary school children at one of their after-school academic support sessions.

In June Burmor will welcome 30 primary school students to spend the morning visiting its sites across Peterborough, followed by a related activity at the IntoUniversity centre in the afternoon.

They will experience a live site at the groundworks stage, then visit one of the housing developments to understand what is involved in building homes for their community.

"We want to give them an insight into what their futures can look like and help to change their pre-existing narrative by providing opportunities they would not otherwise have had," said Harriet Hosking, assistant business manager at Burmor.

"IntoUniversity has centres UK-wide, and we encourage our industry to get involved in the great work they are doing."

► The 49-storey building is set for completion in 2025



In association with

# COP27: Can construction keep 1.5 alive?

**Premierline** explores what the construction industry needs to see in order to keep the COP27 agreement



**The 2022 United Nations Climate Change Conference**, also known as COP27, took place in Sharm el-Sheikh, Egypt, in November last year and saw a gathering of world economies who came together to discuss the climate.

One of its major breakthroughs came in the form of an agreement which sees COP member countries commit to limit the global temperature rise to 1.5 degrees celsius above pre-industrial levels.

This will be achieved through a package of decisions which will see each country play a particular role in contributing to this goal, with wealthier countries working to support developing nations in achieving it. This is because developed nations have recognised their part in contributing to the devastating environmental impacts we are now seeing across developing nations.

## COP27 and construction

It's clear that internationally, the construction industry has a major impact on global emissions. It is widely accepted that up to 40% of global emissions come directly as a result of building and construction and therefore it's an industry that is going to be heavily scrutinised over the coming years. Businesses and governments worldwide have a responsibility to help change the impact construction has on the planet.

How can we assure this? There's got to be a shift in the way the industry operates, from sourcing materials to developing innovative building practices, such as moving from building new to focusing more on the repair and maintenance of existing buildings and structures to limit the amount of resources needed on building projects, even if it costs more to do so.

There's got to be a shift in the way the industry operates, from sourcing materials to developing innovative building practices, such as focusing more on the repair and maintenance of existing buildings



## Funding and support needed

Government funding and support is going to be needed if legislators want to ensure the UK is able to meet its climate commitments. The UK is a major player within the United Nations and is expected to set a precedent to other COP member states. The government needs to support its own industries, as well as the industries of developing nations, in order to help achieve the overall goal.

Importantly, the funding needs to hit the right places to ensure every penny is being spent on green and sustainable initiatives so the industry can move away from using fossil fuels to using renewable energy and more sustainable building materials.

Decarbonising is one thing, but legislators also need to consider how buildings in the future can ensure decarbonisation is a long-term reality – what's the point in building carbon-neutral buildings now if they are only going to be inhabited by people who are eating up fossil fuels in the future?

By working together in the present, builders, governments and COP member parties can improve the emissions of the global construction industry and can take the leap of faith that is needed in order to secure a better future for our planet.

A more sustainable construction industry is something we all want to be a part of. ●

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## Diary dates

Highlights of the CIOB Calendar for the coming month

### SocEnv and Chartered Environmentalist Awareness

► 10 May, 1-2pm, online

This CIOB webinar is about the Society for the Environment and the benefits of becoming a chartered environmentalist (CEnv).

Across the world, CEnv registrants utilise their environmental expertise to instil client trust, transition to sustainable practices, lead departments, make strategic decisions, advise governments and work as highly skilled practitioners.

Over 7,500 professionals from a spectrum of fields including engineering, forestry, ecology, resource management, agriculture, consulting, planning, environmental assessment and air quality have achieved CEnv registration so far. Chartership is a globally recognised mark of achievement that enhances career prospects.

Everyone is welcome to attend. However, you must be MCI0B or FCI0B to apply to become a chartered environmentalist.

Register via [www.ciob.org/events](http://www.ciob.org/events).

### Site visit: The Octagon Tower

► 18 May, 3.30-5.30pm, Birmingham

Join Midgard and MEPC for a behind-the-scenes tour of Birmingham's 'world first' octagonal tower, designed by local architect Glenn Howells Architects.

The 155m tall tower, due for completion in 2025, will provide up to 370 new build-to-rent homes as part of the Paradise Birmingham redevelopment.

You will have the opportunity to take a look at the site and hear from the project team about the challenges of this complex build. See p55 for more details.

Contact: [gffloyd@ciob.org.uk](mailto:gffloyd@ciob.org.uk)

### Northern Ireland Annual Dinner

► 19 May, 7-11.30pm, Belfast

The Northern Ireland CIOB Hub is holding its 2023 Annual Dinner on Friday 19 May at the Hilton Hotel Belfast.

The Annual Dinner attracts over 200 attendees with the opportunity to network with the leaders of the Northern Ireland construction sector.

Northern Irish comedian Paddy Raff will entertain guests after the dinner. MC for the evening is John Campbell, economics and business editor with BBC Northern Ireland.

Contact: [assist@ciob.org.uk](mailto:assist@ciob.org.uk)

### Site visit: Kenilworth School and Sixth Form

► 23 May, 9-10.30am, Kenilworth

Join Morgan Sindall for a site visit to the new Kenilworth School and Sixth Form in Warwickshire.

The project comprises the design and construction of a new-build secondary school and sixth form on farmland on Glasshouse Lane in Kenilworth.

The existing school and sixth form are presently located on two separate sites within a 3km radius of the new premises, which will consolidate both in one location.

The site will provide education space for 2,200 pupils over circa 18,000 sq m gross internal area, plus extensive external sports provisions.

Contact: [sshort@ciob.org.uk](mailto:sshort@ciob.org.uk)

### Bristol quiz and get-together

► 23 May, 6-9.30pm, Bristol

Join Bristol CIOB Tomorrow's Leaders and RICS Matrics for an early summer get-together, networking and quiz.

The evening will include tapas platters and drink on arrival. Enter in teams of four to six or be teamed up on the night. There will also be a business card draw, sponsored by SetSquare Recruitment.

The first prize will be £60 (£10pp) shopping vouchers),

and there will also be a novelty booby prize.

A donation from the ticket sales will go to the Lighthouse charity.

Contact: [nbreakspear@ciob.org.uk](mailto:nbreakspear@ciob.org.uk)

### Understanding the Construction Contracts Act 2013

► 25 May, 1-2pm, online, Ireland

Understand your rights and obligations under the Construction Contracts Act 2013 and implications on contracting in this webinar by Quigg Golden.

Quigg Golden's Andrew McKinley will introduce the general principles of the act and its intention and effectiveness, as well as discussing payment, adjudication, suspension of works and enforcement of adjudication decisions.

McKinley will outline key questions about the interpretation of the act and discuss his experience as party representative for both referring and responding parties in the adjudication process.

At present, adjudication is less popular in Ireland than in the UK and we hope to provide some more understanding on how the act and adjudication can help Irish construction industry professionals.

Register via [www.ciob.org/events](http://www.ciob.org/events).

For a full list of events and to register visit [www.ciob.org/events](http://www.ciob.org/events).



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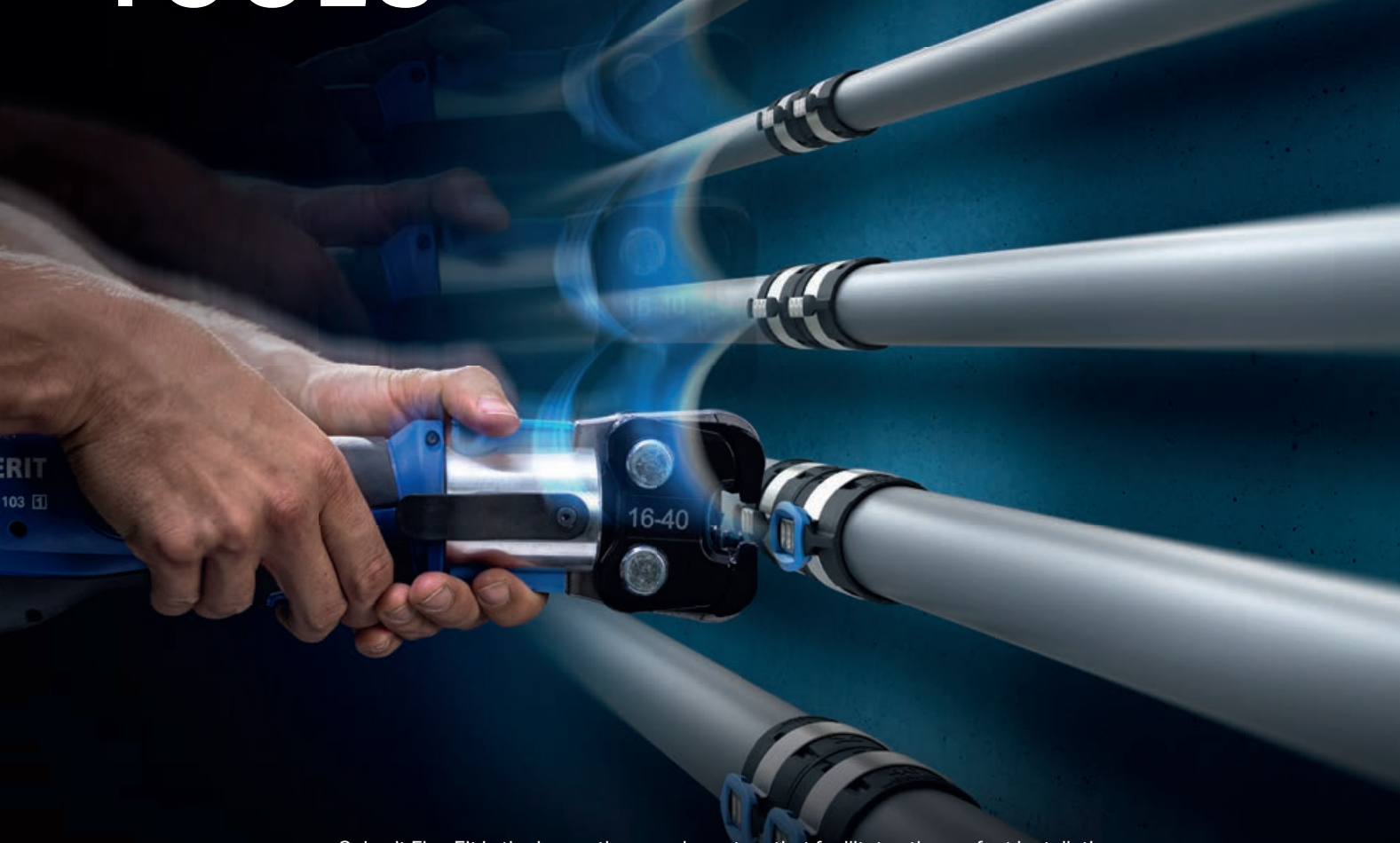
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