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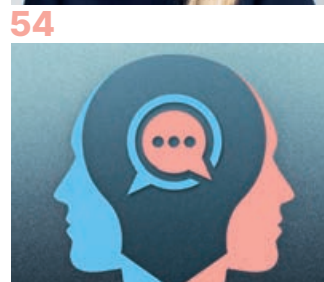
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Highlights of the CIOB calendar



▲ Concealed glass roof uncovered at Arding & Hobbs

Developer W.RE discovered a stained glass barrel roof that had been entirely concealed by paint in a restoration of the historical Arding & Hobbs department store at Clapham Junction, London. Conservationists from Easthope Stained Glass Studios are restoring the intricate glass work using vinegar and toothbrushes.

▶ Low-carbon aggregate shipped into London

The first sea shipment of construction aggregate derived from Cornish china clay waste has been brought into London by recycled materials firm GRS. This marks the start of a deal which enables GRS to import more than half a million tonnes of secondary granite – branded Enviroc – from Cornwall to London each year by ship.



TODD-WHITE ART PHOTOGRAPHY

Emma Hooper of Bond Bryan Digital is this year's Digital Construction Champion of the Year. For more coverage see our Digital Construction Awards special, p25



► Stanhope and Mitsui Fudosan to start phase two of Television Centre

Developers Mitsui Fudosan and Stanhope will start the £500m second phase of the redevelopment of Television Centre in London. It will comprise a total of 511 homes in four separate plots. It includes a crescent-shaped block of 180 apartments and a 25-storey tall building of 167 apartments for completion in 2026.



▲ Future Innovation Group holds first meeting

A new cross-specialism innovation group that promises to bring together construction's brightest young minds has held its first meeting. The 'hackathon' was aimed at identifying and creating solutions to the sector's challenges with diverse recruitment, talent retention and digitisation. Companies including Morgan Sindall, Wates, ISG, Pagabo, Pick Everard and Faithful+Gould back the group.



▲ Farringdon NCP car park converted to Premier Inn

Gilbert-Ash site manager Mohamed Dhallin at work at the site of a former NCP car park in London's Farringdon, which is being converted into a Hub by Premier Inn. The project presents a challenge, with a Network Rail tunnel running below the car park and a London Rail tunnel beside it.

► Wates competition showcases future builders

Architect and TV presenter George Clarke has announced the winners of the Wates Young Persons' Design Challenge for primary schools. The challenge, created in partnership with Wates and Clarke's education charity MOBIE, asked young people to let their imaginations run free by designing a home of the future. Pictured is a winning entry by Andre (eight), of Birchgrove School, Cardiff.



◀ Laing O'Rourke to train locals at Everton stadium

Laing O'Rourke is to provide free skills training and jobs for local people on its Bramley-Moore Dock Stadium project for Everton FC in a partnership with The Learning Foundry and The Skills Centre. Joanne Abraham (The Learning Foundry) and Gareth Jacques (Laing O'Rourke) are pictured with former Everton player Ian Snodin.

ANTHONY MCARDLE

CIOB: cut workplace stress to reduce construction suicides

Institute's response to government mental health call for evidence points finger at industry stress levels

CIOB has called for a reduction in workplace stress to reduce poor mental health in construction and cut the industry's high suicide rate.

Responding to the Department of Health and Social Care's call for evidence on its Mental Health and Wellbeing Plan, CIOB pointed to the need to understand the issues causing poor mental health.

It warned that as a male-dominated industry, mental health is still stigmatised in construction, meaning that many people stay silent. Its response to the call for evidence came ahead of World Suicide Prevention Day (10 September).

It builds on CIOB's 2019 report, *Understanding Mental Health in the Built Environment*, which received over 2,000 responses from those working in the industry. The report highlighted that due to the nature of construction work, almost all respondents were facing long periods of time where they felt stressed. Some 26% of respondents had suicidal thoughts at least once over the previous year.

CIOB's report echoed findings by the Office for National Statistics (ONS) on construction suicides. It reported that

more than 1,400 men in the industry died by suicide between 2011 and 2015.

If the tradition of not opening up does not change, CIOB warned, then the disturbing trend of men working in construction being three times more likely to die by suicide than the general population would continue.

Daisie Rees-Evans, policy officer at CIOB, said: "A strong focus on promoting wellbeing and health is needed at workplace and government levels to increase understanding of what mental health looks like and ways to manage mental wellbeing. This in turn will help to reduce the stigma in the industry and can have a positive impact on people seeking help and prevention."

CIOB called for the government to work with industries that suffer from high rates of poor mental health and suicide to address the work-related factors before it's too late.

Rees-Evans added: "Although many approaches to identifying and responding to signs of mental ill-health can be applied across the business



A strong focus on promoting wellbeing and health is needed at workplace and government levels to increase

understanding of what mental health is, what good and poor mental health looks like and ways to manage mental wellbeing

Daisie Rees-Evans, CIOB

sectors, hard-to-reach industries like construction that have complex supply chains and large numbers of self-employed people should receive additional focus."

CIOB urged the government to adopt better data collection to understand levels of poor mental health, how companies are trying to reduce contributing issues, and what support they need at a company level. The institute recommended better monitoring of interventions to understand best practices for implementing mental health prevention strategies. ●



CM is construction's highest circulating magazine

Construction Management has the highest circulation of any magazine in the UK construction sector, according to auditor ABC (Audited Bureau of Circulation). *CM*, which rebranded in January after previously being known

as *Construction Manager*, had an average circulation of 31,416 for 2021-22 according to ABC, the publishing industry standard for measuring magazine circulation.

As well as its high print circulation, *CM*'s

website – which has no paywall – reaches an even bigger audience of construction professionals, with 55,000 subscribers to its email newsletters.

CM's sister titles, digital construction title

BIMplus and the *Global Construction Review*, also reach a huge readership of CIOB and non CIOB members, giving the three titles a collective reach of more than 120,000 construction professionals.

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CIOB Awards finalists revealed

More than 70 nominated as prestigious awards recognise sustainability and equality, diversity and inclusion (EDI) for the first time

CIOB has named the finalists

for its annual awards. More than 70 construction managers and organisations have made the shortlist for 14 awards, including Rising Star, Team of the Year, and Construction Manager of the Year.

This is the first year in which CIOB will also present awards specifically for sustainability and equality, diversity and inclusion (ED&I), reflecting two of the biggest challenges currently facing the construction industry.

The CIOB Awards winners will be revealed at a glittering black-tie ceremony held in London on 28 September, sponsored by S&P Global Engineering and Elecosoft.

Radio and television presenter Anita Rani, best known for her work on the BBC's *Countryfile*, *The One Show* and BBC Radio 4, will host the awards.

Caroline Gumble, CEO at CIOB, added: "We have received lots of high-quality entries for this year's CIOB Awards, which showcase

CIOB Awards shortlist 2022

Healthcare

Matthew Adams
Willmott Dixon
Construction
Matt Davis
Kier Construction
Kieran Legg
Willmott Dixon
Interiors
Colin McCullogh
McLaughlin & Harvey
Daryl Parker
Kier Construction
Bob Swindle
MPMH Construction
Daron Walker
Sir Robert McAlpine
Andrew Witnall
BAM Construction

Higher Education

Paul Barrowcliffe
Sir Robert McAlpine
Matthew Friedmann
Eric Wright
Construction
Kevin O'Brien
Galliford Try
Construction
Christian Parton
BAM Construction
Christopher Purchase
Willmott Dixon
Construction
Martin Roberts
Willmott Dixon
Construction
Paul Southgate
Willmott Dixon
interiors

Junior and Primary Schools

Neil Branchflower
ISG
Amy Griffiths
Kier Construction
Blake Lennan
Greendale
Construction
Adrian Mills
ISG

Office

Tom Arkley
Willmott Dixon
Interiors
William Chambers
ISG
Andrew Hill
ISG

John McCarthy
BAM Construction
Conor O'Keeffe
Kier Construction
Colin Patterson
Henry Brothers
Midlands
Stephen Rafferty
McAlee & Rushe
Contracts UK

Public & Leisure

Nigel Griffiths
Jenner Contractors
Nick Hamersley
Kier Construction
Martin Keys
McLaughlin & Harvey
Mark McCormick
McAlee & Rushe

Stephen McDermott

Willmott Dixon
Construction
Steve Morris
McAlee & Rushe
Joe O'Connell
Kier Construction
Mital Patel
Willmott Dixon Interiors
Jessica Spain
Mace
Colin Tilley
Willmott Dixon
Construction

Refurb & Restoration

Azir Ali
Wates Construction
Thomas Biggins
Conamar Building
Services
Robert Brazier
Pexhurst
Patrick Coyle
McAlee & Rushe
Javier Fernandez
Nuevo
Knight Harwood
Ruslan Khisamutdinov
Durkan
Bill Taylor
Beard Construction

To receive the award at the gala evening in front of your peers was truly humbling, a fantastic experience and a career-defining accolade

Marc Burton, Construction Manager of the Year 2021



the very best leadership and talent in the built environment sector. Our congratulations go to all the finalists, and we hope they will join us at the awards ceremony in September, which is always such an inspirational event. It will be exciting to discover who the winners are."

In 2021 Marc Burton won Construction Manager of Year Award for his project to build a 180-bed Nightingale hospital on the island of Jersey during the Covid-19 pandemic. Burton and his team of locally based workers delivered the project under budget in only 25 days.

Almost a year on from winning the award, Burton said: "It was an incredible honour to win CMYA last year, particularly given the extremely strong entrants across the various categories. To receive the award at the gala evening in front of your peers was truly humbling, a fantastic experience and a career-defining accolade."

He added: "Promoting careers in construction and the built environment has been a real passion and focus of mine for several years and the award has really helped in highlighting the fantastic opportunities that exist in our industry using the experience of the Jersey Nightingale as an example."

"The Jersey Nightingale was a very special project and I've really enjoyed sharing the story, events and lessons learnt with a whole host of people, including those from other industries, highlighting the contribution the built environment makes to our communities."



The announcement of the 2022 finalists for each category follows a rigorous assessment process which sees judges assess written applications as well as conducting site visits and panel interviews. ●

▲ Marc Burton receives his CMYA award in 2021
◀ The 2021 awards ceremony

■ Residential & Accommodation

Martin Bennett
Willmott Dixon
Construction

Jon Kelly
Storey Homes

Robert Lanson
Eric Wright
Construction

Kevin Larkin
JJ Rhatigan

John O'Neill
Drew Smith

Stephen Pedro
Telford Homes

Stephen Sidebotham
Willmott Dixon
Construction

Jason Sims
Caddick Construction

■ Secondary Schools

Jess Barrett
Inside Out
Developments

James Cooper
Willmott Dixon
Construction

Ed (Edward) Dwight
Kier Construction

Ernestas Kupcikevicius
Morgan Sindall

Ryan McGreevy
Farrans Construction

Thomas Prince
Willmott Dixon
Construction

Mark Turner
Willmott Dixon
Construction

■ CIOB Rising Star Award

Jack Bennion
Redrow

Gary Dearden
Willmott Dixon

Reef Hillary
Morgan Sindall

Construction &
Infrastructure

Sophie Leake
Speller Metcalfe

Suzie McNicholas
Consilium Academies

Stephen Martin
In House Services
and Estates
(Parliament Estate)

Cameron Sanghera
Aecom

■ CIOB Team Award

Dylan Harvey
CMF

Tracey McGovern
Tracey Brothers

Joe O'Connell
Kier

■ CIOB Client Award

Ian Grimes
University of
Hertfordshire

Toby Ward
Sheffield Hallam
University

Annabelle Young
Quintain

■ CIOB Sustainability Award

Sean Connolly
Aquascapes

Prof Steve Goodhew
University of
Plymouth

Caron Johnson
Ministry of Justice

Saul Humphrey
Saul D Humphrey LLP

■ CIOB EDI Individual Award

Saheb Dhesi
DGP Logistics

Rebecca Lovelace
Building People

Amos Simbo
BPIC (Black
Professionals in
Construction)

■ CIOB EDI Company Award

St Modwen
Skanska
Fortel Group

The percentage of construction courses across England with a shortage of teaching staff in July 2022, according to a survey by the *Financial Times*

85

Insolvency risk adds to pressure on project delivery

In an already stretched industry, construction insolvencies are at their highest for a decade, writes **Kris Hudson**



Elevated build costs continue to contribute to the inflationary pressure on the construction supply chain, but other risks are also mounting.

The sector is experiencing a high rate of insolvencies as one enduring impact of the removal of the fiscal crutches put in place by the government during the pandemic. The furlough scheme ended in September 2021, and the temporary easing of insolvency rules finished in March 2022. Several months on the consequences are increasingly visible, with the danger of insolvency threatening to overtake inflation as the primary risk to successful project delivery.

The number of construction sector insolvencies in Q2 2022 remains at levels not seen since 2012. In the four quarters to Q2 2022, 3,850 construction firms across England, Scotland and Wales became insolvent. This means that the sector has suffered more company failures than any other – making up almost a fifth of insolvencies across the economy.

Back in 2012, Bank of England interest rates were flat at 0.5%. Now the rate is 1.75% and expected to increase. This puts additional strain on many firms as credit availability and affordability diminishes.

“The construction sector has suffered more company failures than any other – making up almost a fifth of insolvencies across the economy

Inflation and insolvencies are often intertwined, but programmes now face risk from both at once. Although the pace of growth in tender prices may soften – leaving insolvencies as potentially a more immediate threat.

Turner & Townsend's latest tender price inflation forecast anticipates that the rate of inflation growth in 2023 will be 3.8% for real estate, and 5% for infrastructure. This is lower than 2022's rates of 8.7% and 8% respectively, as set out in the firm's summer 2022 *UK Market Intelligence* report.

Meanwhile, indicators of insolvency risk give increasing cause for concern. Ninety-eight percent of construction firms are small and medium-sized enterprises (SMEs), which accrued the most debt over the pandemic and have borne much of the brunt of the enduring build cost inflation.

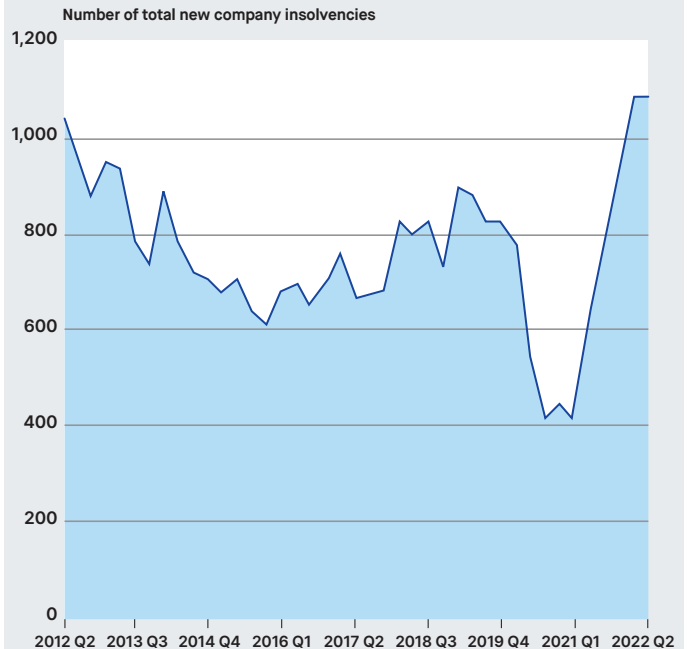
Since Q1 2020, SMEs' balance of outstanding loan payments has increased by 35.9% and now, as interest rates rise, the cost of these loans is increasing and making it harder to service debts.

Businesses faced with the twin threats of insolvency and inflation must be pragmatic. For those managing supply chains, insolvency risk can be mitigated by remaining wary of tell-tale signs in contracted firms, such as low productivity, difficulty securing labour or materials and failure to pay suppliers.

For contractors and clients alike, central to successful delivery is keeping an open, collaborative dialogue to collectively identify and tackle any issues as early as possible.

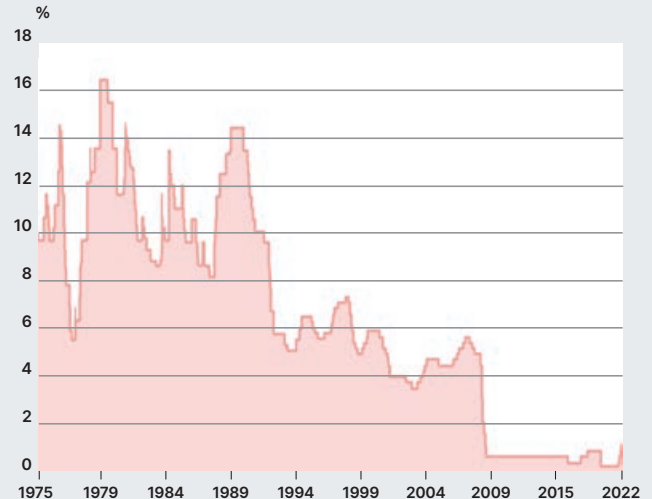
Kris Hudson is an economist and associate director at Turner & Townsend.

Timeline of total new company insolvencies in construction, number of companies



SOURCE: INSOLVENCY SERVICE

Historical official Bank of England interest rates



SOURCE: BANK OF ENGLAND



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Retail distribution centre, Peterborough

Contractor: FK Construction Ltd

Photo credit: Ivegate Ltd



Dave Stitt
DSA Building
Performance

Change management culture to fix the skills problem

The leadership of every construction company needs to take responsibility for the skills crisis, says **Dave Stitt**



▲ An inclusive coaching management culture can get better results from all members of the team

In June, the CITB predicted that the industry will need to recruit 266,000 extra people between now and 2026.

But it isn't 'the industry' that will solve the skills problem: that's down to the leadership of every company in it. Consider the drive to attract more women. We know companies struggle to recruit women, but a deeper problem is their difficulty in retaining them. Some 57% of female engineers drop off the professional register by the age of 45 compared to just 17% of male engineers, says the Royal Academy of Engineering.

Companies should retool their recruitment processes to cast the net more widely, but it won't bring real change if the environment new people enter pushes them back out the door.

For women, part of the problem is structural, to do with unequal pay and

Our default management culture, which can be described as 'command-and-control', prevents us from creating work environments that are inspiring and engaging

inflexible working hours. But much of it is cultural, the way we are with each other, and this is harder to tackle.

The culture issue goes deeper than hurtful banter and sexist or racist behaviour. It goes all the way to our default management culture, which can be described as 'command-and-control', and which prevents us from creating work environments that are inspiring and engaging.

A command-and-control manager sees their role as giving orders and monitoring compliance, a 'my-way-or-the-highway' stance that suppresses the talent, creativity and drive in teams. It also deprives people of a sense of autonomy, mastery and purpose.

But when managers incorporate simple coaching techniques into their management style, they stop giving orders and instead start conversations with their people about how they'll fulfil their responsibilities. This changes the dynamic.

I know it works because last year I created a fun online course for young construction professionals on the CIOB Academy, called 'Coach for Results'. Feedback from the first cohort of about 40 people was amazing.

Construction manager Alex Young told me that before the course he'd doubled down on command-and-control in response to mounting project pressures. Team morale suffered and he'd been burning out. When he tried coaching, his team responded positively and his load got lighter.

Alexandra Smith and Holly Williams, both business development managers for a national contractor, said coaching gave them the confidence to get buy-in from more senior technical people so they could serve the company's clients better.

Seeding a coaching management culture is quick and low impact. Anyone can see immediate benefits as relationships become more humane and productive. Coaching is inclusive and it makes things better for people – women and men. ●

Dave Stitt coaches company boards and project teams. His book, *Coach for Results*, is out now on Amazon. Email dave@dsabuilding.co.uk for a free copy.

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Caroline Gumble
CIOB



▲ Droughts in the UK this summer should focus construction minds on net zero

Climate emergency is here – and construction must help to mitigate it

Construction has an important role in ensuring new and existing buildings protect people from scorching summers and freezing winters, says **Caroline Gumble**

Earlier this summer saw the hottest day ever in the UK. Parts of England – some not far from where I live – were literally on fire.

I've written previously that the UK construction sector faces fundamental changes following the Royal Assent of the Building Safety Act in April. It feels like time for a fundamental shift on the link between the impacts of climate change and the built environment too.

We have talked for years about how construction processes and the specification of building materials have a role in the drive to net zero. But we do not talk enough about what the finished products can do to protect people and communities from the worst excesses of climate change – which, let's not forget, will be increasingly hotter summers and colder winters.

CIOB has just published a policy paper proposing a reform of the tax treatment of demolition – we want to encourage a shift towards a presumption in favour of retrofitting



This column isn't the place to list all the things construction can do to mitigate the effects of climate change. But two things leap to mind which need more focus.

New-build homes must have measures to design out heat and help protect people in increasingly harsher summers. Many require no technology or innovation: ensuring windows are oriented to limit direct sunlight, tree cover for shade, white walls, more natural ventilation.

But existing building stock also needs attention. CIOB has advocated for this many times before – the Construction Leadership Council first published a National Retrofit Strategy document two years ago. Part of the purpose of this, to which over 50 organisations signed up, is to make existing homes more energy and water efficient.

Furthermore, CIOB has just published a policy paper proposing a reform of the tax treatment of demolition – we want to encourage a shift towards a presumption in favour of retrofitting.

Not only will measures like this deliver better, more energy-efficient homes and contribute to our legally binding carbon targets, they also create jobs, help to deliver growth and have the potential to take many people out of fuel poverty. It is a ready-made policy that can deliver on social value, support the economy and improve health and wellbeing.

We already know that CIOB's next corporate plan will include sustainability as a priority theme. But we also know the climate emergency requires a collective response. A great starting point is the adoption of the National Retrofit Strategy. ●

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Seddon raises safety standard

The Building Safety Act and the Grenfell fire have put high-rise residential jobs in an uncomfortable spotlight. **Kristina Smith** meets the Seddon team refurbishing and recladding three residential towers in the West Midlands

Recladding residential tower blocks is challenging for any contractor in the current climate. Tough new laws on fire safety and the Grenfell legacy mean such projects attract forensic levels of scrutiny. And with the legislative landscape still changing, construction teams must think on their feet.

This was the context for Seddon on the recladding and refurbishment of Alfred Gunn House in Oldbury for Sandwell Metropolitan Borough Council in the West Midlands. And on top of the fire safety issues, there was the technical challenge of adding an external staircase to one of the three tower blocks and demolishing the corner to do so.

A key aspect was getting the risk allocation right, says Seddon regional director Rob Moore. "It is not only the project that's the challenge, so too is getting the contractual details agreed and the risk management right from the start, at the pre-tender stage," he explains.

Part of Seddon's detailed risk assessment and negotiation



It is not only the project that's the challenge, so too is getting the contractual details agreed and the risk management right from the start, at the pre-tender stage

Rob Moore, Seddon

process involved looking at who had design responsibilities for what. The contractor says it always considers the competency of the client in relation to the complexity of a project: "We have turned down similar schemes with organisations we did not think were ready for it," says Moore.

An evolving scope

When Seddon started work on the project in early 2020, it comprised installation of cladding to the three 1960s tower blocks, including enclosing balconies, the addition of 10 flats on the roof, creating new flats in the basement and the construction of 16 new homes, half of them two-bedroom and the other half four-bedroom.

Over the course of the project, the scope has evolved, as it became apparent that the buildings needed attention internally too; a BBC news story about residents living in damp conditions may have contributed to that decision. Seddon's contract now includes replastering, new electrics, new kitchens and bathrooms and new soil and ventilation pipes. The contract sum has risen from £14m to an estimated £21m.

The tenants would not have been in the blocks at all during the works, had all gone to plan. But, one week after Seddon started on site in March 2020, Covid-19 struck. Not only did this limit what could be done on the tower blocks, it meant the decant of tenants was halted; some were only moved out this summer. Work on the ►

Project team: Alfred Gunn House

| | | | |
|----------------------------|---------------------------------|------------------------------------------------------------------------|-------------------------------------|
| Client: Sandwell MBC | Sub-designer (M&E): Ridge | Form of contract: JCT with quantities and partial contractor design | H&H Fabrications |
| Main contractor: Seddon | Start: March 2020 | Subcontractors: Cladding and roofing works: | Steelwork: Reynolds & Litchfield |
| Designer: Sandwell MBC | Forecast finish: Summer 2023 | | M&E: Staffordshire |
| | Cost (forecast): £21m | | Plumbing and Heating |

21

The contract sum has risen from £14m to an estimated £21m

▼ Seddon is installing new cladding on all three of the 1960s tower blocks, along with enclosing balconies



PHOTOGRAPHS: OSBORNE PHOTOGRAPHY



new homes, built around the tower in former car parking and unused space, could continue. Seddon completed these and handed them over in August 2021; all are now occupied.

Work on the tower blocks began again in early 2021. Demolition and strip-out works took place on the roofs to make way for the lightweight steel structure for the 10 additional homes. In the basement, which is three-quarters underground, plant and bin storage facilities were removed. Seddon also carried out significant repairs to the external concrete of the building which had not been included in the original scope.

The demolition of the central tower corner to make way for the

▲ Seddon had to add an external staircase to the middle tower block and demolish the corner of the tower to do so

new external staircase demanded extensive temporary works and structural works. Working from the top down, Seddon propped and braced each floor before removing external walls using remote-controlled Brokk demolition robots and installing the new blockwork as they went.

Seddon regional operations manager Jim Reidy has over 40 years' experience in construction but has never done works quite like this before. "It's an interesting thing to do," he says. "Not only technically, but due to the fact we were working on a live block. You have to protect people and you are taking a chunk off the corner."

The extensive pre-planning has paid off, says Moore. Seddon lifted the steel stairs, which will be clad in

It's an interesting thing to do, Not only technically, but due to the fact we were working on a live block. You have to protect people and you are taking a chunk off the corner

Jim Reidy, Seddon



the same material as the rest of the building, into place in July 2022.

Fire safety

The fire safety works on the project are significant. They include fire stopping, fire doors, sprinkler systems, new water mains, removal of gas from the flats, fire breaks and fire protection to the replacement vertical drainage system. Sandwell MBC, as well as being the client, is the designer. The council took design liability for all the fire work and the cladding, all structural elements, plus the M&E, the design of which it subcontracted out to Ridge.

Seddon is installing a variety of insulation and cladding types. From the first to the ninth floor, accounting for 80% of the cladding, a natural cement finish 8mm compressed fibre cement Ceramapanel sits over 100mm of rock mineral wool slab insulation, Rocksilks RainScreen Slab.

The top floors will be clad in 8mm fibre cement panel, Boothbay Blue HardiePlank with 150mm of glass mineral wool, Earthwool OmniFit.

Meanwhile the ground floor and basement is clad in Staffordshire blue Corium slip bricks over 100mm mineral wool OmniFit insulation.

With changes to the Building Safety Bill happening right up to it coming into force in April 2022, the project's goal posts were changing as the work progressed. This was also the case with the 'golden thread' – how

Regional operations manager Jim Reidy has over 40 years' experience in construction

40

information is recorded throughout a project and made available to those who need it – which has still not officially been defined.

“The fire protection measures have not changed in the main. It is more around the design intricacies that have been enhanced with respect to testing, certificates and QA processes,” says Moore.

Part of Seddon's contract with the council saw it signing up to a design management process which included testing and inspection. Seddon has been able to work with the council to improve that process further, says Moore.

Seddon has divided the building up via a grid system, with every element of work inspected, photographed and signed off by supervisors, the client and a third party if necessary.

“The testing would always have happened,” says Moore. “Where it is better and stronger is that we are able to evidence every single element of the work that has been done: who installed it, when it was

installed, when it was signed off and who approved it. This was above and beyond Sandwell's original process.”

This has required investment on Seddon's part. “As well as investing in software such as SnagR, we have invested in additional site management resources and extra project administration on the scheme,” Moore says. “It's about us having the security and the comfort for the future.”

Seddon has also trained its subcontractors. “We are bringing the supply chain along with us and hopefully these practices will transfer in terms of good quality for future projects,” says Moore.

One more year

The original project schedule, which had completion in summer 2021, has been pushed back a whole year. It was not until summer 2022 that the final group of tenants were moved out, by which point Seddon was installing rails for the cladding.

There have also been delays to the works on the roof. To install

▼ Seddon has added a lightweight steel structure on top of the towers for 10 additional homes



CV: Jim Reidy, regional operations manager, Seddon

Jim Reidy started his construction career as an apprentice carpenter in 1977 for contractor Thomas Elvin in Birmingham.

Reidy has worked in construction and in private housing, for the likes of Bovis and Bellway, and in social housing as well. He has been construction director at Kingfisher Building and more recently worked for British Gas's construction arm, carrying out energy efficiency retrofit projects.

Now approaching retirement, he is helping bring on the next generation through Seddon's apprentice and trainee programme.



the lightweight steel framing for the additional homes on the roof, mobile phone antennae have to be moved. However, the design was not agreed with the company responsible for the antennae in time for the programme to progress as planned. This again is the council's risk, something Seddon was careful to tie down at the contract stage.

“This is a specialist project that incorporates lots of different elements of works,” says Moore. “It is attractive to us because we are not taking the design liability in key areas. What we can bring to the table is our experience and knowledge, our technical support and guidance and our delivery expertise.” ●



Landsec forges ahead

The Forge, Landsec's pioneering platform DfMA project, was the star performer at this year's Digital Construction Awards (see p32 and p34). How will the developer apply lessons from the scheme? Head of design innovation Neil Pennell explains to **Will Mann**

These are busy days for Neil Pennell. The head of design innovation at Landsec is chair of CIOB's Building Clients Group, sits on the Construction Productivity Taskforce – and he's focused on completing works at The Forge, Landsec's net zero office scheme in Southwark.

The project has won acclaim for its use of 'platform' design for manufacture and assembly (DfMA) – where a 'kit of parts' approach is applied to key building components – and Pennell says interest in the project has been "amazing".

"I've given tours to a wide range of client organisations, because the *Construction Playbook* talks a lot about

platform DfMA, and this is one of the only 'real life' examples," he explains.

Pennell is digesting the learning from the Forge, the data collected and how to apply that on future projects.

"Logistics is one key issue," he says. "Our core aim is building faster. If you can speed up installation of certain packages, then you need more products coming to site quicker."

"This is where construction managers come in. On traditional projects, a lot of responsibility is delegated to the trades. But with modern methods of construction (MMC), logistics is more important. You need to know about telematics, workflow optimisation and just-in-time deliveries.

Percentage of GGBS content used in the floor slabs to help reduce embodied carbon

40

“Because, as you compress time on a project, more and more things that weren’t critical become critical. You must actively manage that through continuous dialogue with the supply chain.”

On The Forge, Landsec wanted a ‘manufacturing and assembly manager’ – or ‘MAM’ – as their construction partner. The role went to Mace and Sir Robert McAlpine. Pennell expects the developer will use the role again on future projects.

“The MAM has to be looking at what’s happening in manufacturing locations, while understanding the assembly process on site. It’s an integrator role that demands the ability to reprioritise and be flexible.”

Reducing project risk

Platform DfMA worked extremely well for some packages on The Forge, Pennell says.

“We found cladding installation was very quick. Building services too. We think the M&E supply chain has a lot to gain from platform DfMA through early input into the process, due to the level of contractor design involved. If the different services can be integrated together and co-ordinated with the structural design, that removes a lot of project risk.

“The structure is key. Designing in BIM means high accuracy. And if you can build a structure that’s really accurate, then the services and other packages will follow, clashes and associated rework are avoided, and you don’t have specialist trades trying to make things fit on site with angle grinders.”

Besides BIM, work at The Forge features a tranche of digital tools, ranging from material tracking with QR codes to 360-degree photo capture with automated progress

◀ The project aims to be the UK’s first net zero commercial building

▼ Structural steel was standardised as widely as possible

The Forge: key players

Client: Landsec

Architect and engineer: Bryden Wood

Manufacturing and assembly manager: Mace and Sir Robert McAlpine

Building services: NG Bailey, Hotchkiss, Hall & Kay

Unitised cladding: Aluprof

Structural steelwork: DAM Structures (part of Severfield)

Lifts: Kone

Prototyping: Easi Space

reporting. During the concrete pours, IoT sensors monitored the strength, using live data from wireless sensors monitored by AI, which helped reduce strike times. Pennell expects more IoT technology to be incorporated on future platform projects.

“All the data collected from The Forge is being analysed by researchers from Cambridge University to look for opportunities to increase productivity,” Pennell adds.

Landsec is supporting the Construction Data Trust, which will help the industry benchmark productivity. “You will be able to check what is the norm for installing unitised glazing or steel beams, for example, and then test yourself on your own project,” he explains. “Contractors have this information from their own projects, but have only just started to share it, so benchmarks can now be developed from the anonymised data.”

The Forge is scheduled to complete by early 2023. The project programme has not been immune from the effects of Covid-19, supply chain delays and resource shortages, Pennell explains.



As you compress time on a project, more and more things that weren’t critical become critical

Neil Pennell, Landsec



“Our data shows that delivery of DfMA packages can be faster, safer and greener. We’ve reduced the amount of steel used in the scheme by 18.4%, compared to benchmark levels, and concrete by 13%, with 40% GGBS content in the floor slabs. Overall, we reduced embodied carbon by around a quarter compared with the design signed off at planning stage.

“The Forge aspires to be the first commercial building constructed and operated in line with the UKGBC’s net zero definition and is on course to achieve a NABERS UK 5-star rating.”

Landsec is growing its pipeline of mixed-use and residential developments, but Pennell says the platform principles and learnings from The Forge are transferrable to other building typologies.

“What we need now is more market maturity,” he says. “If the public sector goes for big programmes using platform DfMA, that will give the supply chain confidence to invest in the manufacturing capability and skills needed.” ●





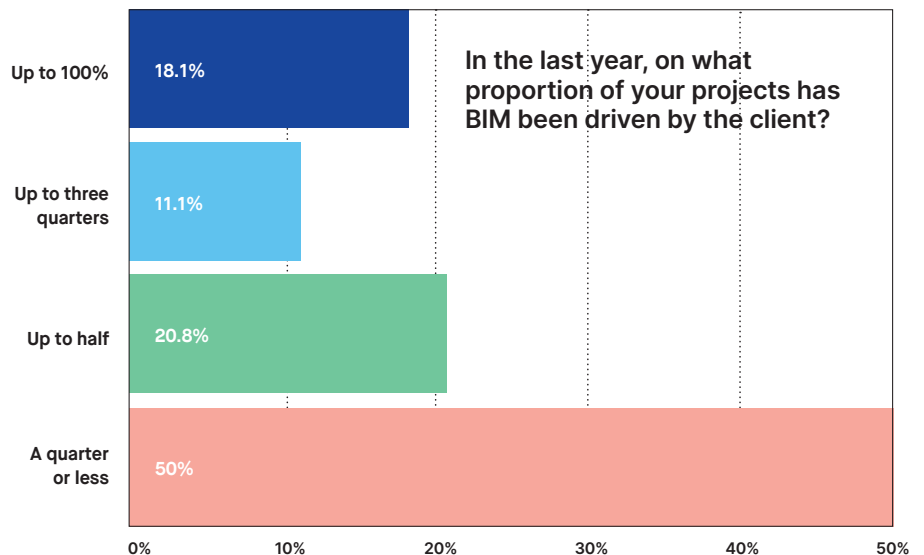
‘More human language, less tech talk’

The annual Construction Management and BIMplus survey asked how the adoption of BIM and digital construction could be improved – and readers gave their suggestions. **Justin Stanton** reports

Removing jargon, focusing on collaboration and greater interoperability of technology are the key solutions to improving the adoption rate of BIM and digital construction, according to respondents to this year’s annual *Construction Management and BIMplus* survey.

We asked respondents: what one change to process or one technology introduced to their operation could improve their approach to or the results from BIM and digital construction?

Dumping jargon and acronyms figured strongly among responses. “We work in an old-fashioned industry and constantly developing and changing terminology and processes



25

Half of the respondents said 25% or fewer of their projects in the last year featured BIM being driven by the client

are putting most colleagues I work with off of adopting a BIM mindset and instead are just sticking to what they know," said one respondent.

Another said: "Encourage conversations on BIM to occur in 'human' language rather than 'tech talk' and acronyms."

Another succinctly called for "simplicity and common sense".

Focusing on collaboration was seen as a key way forward. A respondent said: "Culture of collaboration – tech is relatively easy; sharing is more complicated. All stakeholders need to be consulted from the beginning."

Another echoed this: "Engage with representatives of all teams, even if they appear to be irrelevant."

Simpler interoperability

Also popular was a need to ensure greater and simpler interoperability of technology. One said: "Common data platforms – too much conflicting software that doesn't gel."

Another offered more detail: "Get software developers to standardise on a single common data environment technology upon which they build their vertical solutions. Too much project data when pushed into the cloud from on-premise server estates is dispersed now."

There were also calls for more case studies of the benefits of implementing BIM, and for clients to drive BIM. One respondent said: "It's back to clients investing to save in the medium to long term by stipulating the ISO 19650 management information and requirements in the contract to the design team and the principal contractor, together with ensuring monitoring of this data captured through the project stages, from inception through to completion of the asset and then during the life cycle of the asset. It's that simple."



Too many client project managers have little understanding of BIM still. It's just a paper exercise for them

Clients in the driving seat?

Half of the respondents said 25% or fewer of their projects in the last year featured BIM being driven by the client. Less than a fifth said the vast majority of their projects featured the client driving BIM.

One said: "Not enough clients understand the benefits of BIM. This is mostly due to main contractors being in control of BIM instead of the employer clients. Too many client project managers have little understanding of BIM still. It's just a paper exercise for them and they don't manage the BIM process properly."

An architect gave this insight: "Most clients mandate BIM Level 2 or PAS 1192 standards compliance now. Few are driving ISO 19650

implementation, but both we, and the larger contractors we work with, are driving ISO 19650 for new projects."

Sticking with clients, more than a quarter of respondents said they are often or very often required to hand over digital asset data on completion.

Supply chain in focus

Widening the focus, we asked our respondents how satisfied they were with the information management processes within their supply chain and client base. The vast majority (69%) said they were not satisfied.

One respondent offered: "Getting everyone to buy into the concepts and benefits of BIM remains difficult, and PAS 1192 is harder. ISO 19650 is likely to be much more difficult as it is very process-driven and puts a big onus on the appointing party and the lead appointed party to make it work. They need to know the processes and engage with them at a granular level to gain the benefits."

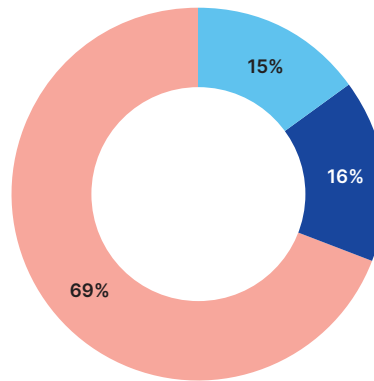
Another said: "With a greater degree of our clients looking to embrace asset management in the residential sector (in response to the golden thread), we have experienced a lack of 'maturity' with some suppliers/ supply chain partners in providing consistent and compliant data."

And thus we reach Dame Judith Hackitt's golden thread: it's pleasing to report that 59% of respondents are either prepared for it or have made preparations for it. A quarter said they have made no preparations.

One respondent, who has made some preparations, aired this warning: "Not enough organisations or people understand what this is let alone are engaging with it. There needs to be more publicity and promotion of the benefits of the golden thread, with specific case studies highlighting the cost benefits for clients."

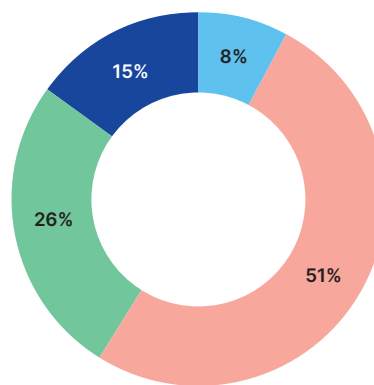
Are you satisfied with the information management process within your supply chain and client base?

■ Yes
■ Not sure
■ No



How prepared are you for the golden thread?

■ We're prepared
■ We've made some preparations
■ Not at all
■ Don't know





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Digital leaders

The pioneering projects, teams and individuals were celebrated at this year's Digital Construction Awards, organised by CIOB, DCW, CM and BIMplus and hosted by Russell Kane. Read on to find out about the winners



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PHOTOGRAPHY: ASV PHOTOGRAPHY

Emma Hooper is Digital Champion of 2022

Emma Hooper, associate director and head of R&D at Bond Bryan Digital, is the deserving recipient of the Digital Construction Champion of the Year accolade, sponsored by Solibri

The Digital Construction Champion of the Year award recognises an individual who has played a key role championing digital transformation on a project, in an organisation, or an industry sector, during their career.

Emma Hooper, this year's winner, has been championing the use of BIM and digital innovation across

the built environment for many years. After graduating with an architecture degree, she joined fit-out specialist Styles & Wood, where her interest and involvement in digitalisation began to blossom. From there, she took a role as BIM technologist at Metz Architects, before joining consultant Bond Bryan Digital, where

▲ Emma Hooper receives her trophy as Digital Champion of 2022 from host Russell Kane (far right) and Andrew Bellerby (second left) from sponsor Solibri

Emma is at the forefront of the digital revolution, delivering better information management for her clients while simultaneously researching and developing strategies that will benefit the whole industry

What the judges said



she is now associate director and head of research and development.

Along the way, Hooper has become an active and authoritative member of the wider digital construction community. She is especially passionate about IFC – the standard for open BIM data exchange – and has been on a mission to get everyone speaking the same data language.

She is a member of the BSI B/555 committee for BIM standards, part of the BuildingSMART UK & Ireland committee and an ambassador for the UK BIM Alliance. She is also one of only 10 people in the world certified as being proficient in COBie.

Her work has helped make construction projects more efficient by joining up the dots between people, process and technology to enable true collaboration with an emphasis on open linked data.

When reviewing the judges' nominees for this category, there was one name at the top of everyone's list. With her enthusiasm for the industry and the people working within it, not to mention her exceptional technical knowledge and expertise, Emma Hooper is our Digital Construction Champion of 2022.

On receiving the award, Hooper said: "When they said she championed open standards, I was, 'oh my god'. I was really shocked – I wasn't expecting it at all."

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◀ Digital Construction Technologies and Collen Construction receive their trophy from host Russell Kane (far right) and Matt Burke (third left) from sponsor Bluebeam.

DCT and Collen take Partnership prize

Digital Construction Technologies and Collen Construction worked together to develop and deploy an onsite 'BIM cave', The Digital Cube. It was the clear winner of the Partnership category, sponsored by Bluebeam

The senior management teams of BIM consultancy Digital Construction Technologies (DCT) and main contractor Collen Construction recognised that in working together they were not extracting the maximum benefit from digital tools. Office-based engineers excelled in digital tools

while site-based staff were not only unable to use some technology, but were losing out on developing their digital skills.

So DCT and Collen set about creating the Digital Cube, an onsite 'BIM cave'.

DCT and Collen describe the Cube as "an office environment with

Simple yet hugely affective. The team had very clear goals and benefits; tangible solution with a strong focus on people engagement; great client/contractor collaboration
What the judges said

the latest touch-activation systems by Avitor networked back to the cloud. The Cube enables both site team and office team to overcome the challenge of collaboration and work cohesively at the coal face where they are most effective, with real-time digital information and coordination platforms."

Software available in the Cube includes Navisworks, Bluebeam and Nureva Span Wall.

On the 20,000sq m data centre project on which the Cube was tested, a cumulative saving of 3,000 people hours was estimated over the 18-month construction period, thanks to the immediate onsite availability of the Cube's digital tools.

The use of the Cube was not limited to DCT and Collen – key subcontractors were trained in its use too.

Joseph Mady, CEO of DCT, reflected on winning the award: "It did and it didn't surprise me [that we won]. The way we've integrated the software and the hardware enables anybody to work in the middle of a field and move from 2D to 3D and back."

Other shortlisted organisations

- Bespoke fitted seating – Future Joinery Systems with South West Upholstery, 4D Routing, Sydenhams CNC
- Clarice Pears Institute of Health & Wellbeing building at The University of Glasgow – Qualis Flow with Multiplex and Zero Waste Scotland
- Goldeni's IoT influencing the design and fit out for commercial offices – Morgan Sindall with Goldeni and Microsoft
- The Forge – Landsec, Sir Robert McAlpine, Mace and Bryden Wood
- University of Glasgow ARC Research Hub – Multivista with Multiplex



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▲ The MWH team receive their award from host Russell Kane (far right) and sponsor Justin Stanton of BIMplus (second left)

MWH Treatment wins Digital Innovation in Design

MWH Treatment's digital strategy on the Thames Gateway (Desalination) Recovery Project facilitated collaboration and stakeholder engagement and secured victory in the Digital Innovation in Design category, sponsored by BIMplus

MWH Treatment was part of the SMB joint venture with Skanska and Balfour Beatty that was contracted by Thames Water to work on this project at the UK's only desalination plant.

The JV was tasked with making health and safety improvements, optimising maintenance procedures and consumable storage, and creating further efficiencies across the desalination process as part of a £23m investment.

The process is complex compared with a conventional water treatment plant, and limited data on existing assets or operational records were available at the outset. To address these challenges, MWH Treatment developed a digital strategy to facilitate a collaborative approach,

centred around its MView software, which was piloted on the project.

The digital journey started with a BlueSky aerial photogrammetry 3D model, used to generate the animation to communicate scope and hazards to stakeholders. The model was enhanced through 3D scanning, which provided point cloud data to support detailed engineering design.

MWH Treatment digitally validated the specification, condition and function of every asset and control system on the site. Asset data was collected in an app-based Autodesk BIM360 cloud database. A bespoke software test rig was built to verify existing processes and fault-find.

The data gathered was fed into the engineering design and plant

optimisation. Using MView, the design team created 3D animations that simulated water treatment processes. The simulations integrated process calculations and safety factors to visually demonstrate root causes of process failure.

Where solutions required heavy construction and logistics, 4D simulations were used to visualise the build programme and methodology to support collaborative planning.

Padraig McCormack, digital delivery manager, put their success down to "our ability to think outside the box, innovate, and our great technologists who take the gaming side of the software development and utilise that in construction to break the boundaries of what we can do".

Other shortlisted organisations

- Analysing human emotional responses to building and space design – Chetwoods
- East Bank, Queen Elizabeth Olympic Park – Allies and Morrison
- East Wick & Sweetwater – astudio & Etude
- Frilford Heath Staircase and Cabinetry – Future Joinery Systems with Casa Architects, JPT Carpentry, 4D Routing and Sydenhams
- LightSIM Controls App – Hoare Lea

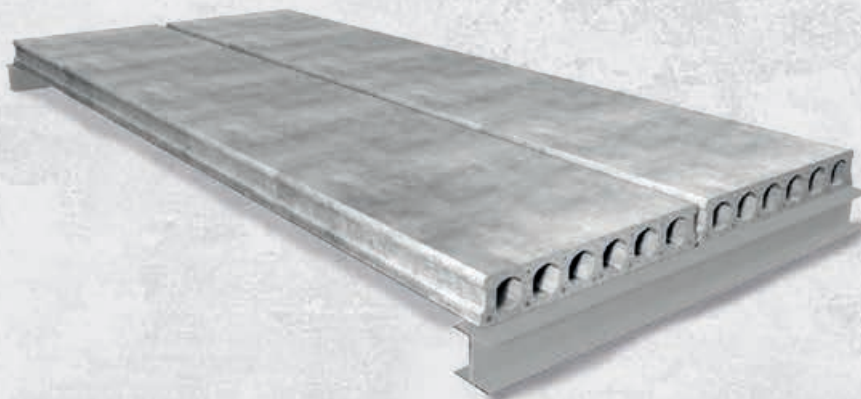


MView sounds like it has been a game changer, providing analysis to drive optimal design, which also mitigates health and safety risks. It will be interesting to see how this develops
What the judges said



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◀ The Forge project team from Sir Robert McAlpine and Mace receive the project of the year award from host Russell Kane (far right) and sponsor Rhys Lewis of Revizto (second left)

The Forge scoops Project of the Year

The Forge, where Sir Robert McAlpine and Mace worked with client Landsec and designer Bryden Wood, was the clear winner of the Digital Construction Project of the Year category, sponsored by Revizto

Digital tech underpinned the 'kit of parts' approach known as platform DfMA (design for manufacture and assembly) on this £95m, 150,000 sq ft office project in Southwark, London.

As client Landsec's appointed MAM (manufacturing and assembly manager), main contractors Sir Robert McAlpine (SRM) and Mace collaborated with architect Bryden Wood to deploy a huge range of digital tools.

These included:

- Disperse – 360 photo capture and automated progress reporting using AI;
- Converge – concrete strength monitoring, using live data from wireless sensors monitored by AI, which reduced strike times;

- Qflow – monitoring of waste and deliveries, with real-time reporting of waste removal non-conformance;
- Material tracking, with QR codes tracking the Comflor beams used in the frame construction;
- iFire – a fire-stopping monitoring tool to ensure the fire integrity of the building with a clear audit trail; and
- Robotics – BIM models linked to robotic welding machines to create temporary works kit.

Others included Datascope site access control, Dalux BIM model viewer for all stakeholders and Glider's BIM asset information model, with trade contractors exporting models to comply with required COBie outputs.

The MAM team, working with software vendors, provided training

to staff and key trade suppliers, creating a skills legacy for future projects. The open-source data generated means the learning from the digital tool suite can be shared across the wider industry.

Construction delivery required 20% fewer site operatives than for a traditional project, while the finished project achieved a 25% reduction in embodied carbon. The Forge becomes the first UK commercial building to be net zero carbon both in construction and operation.

Padraig Delaney, region digital construction lead for Sir Robert McAlpine, said: "They trusted us to deliver their innovation project, so we had to get the right culture embedded."

A comprehensive assessment of digital tools and their application – a strong step forward for the sector. Very good people engagement with a focus on sharing knowledge
What the judges said

Other shortlisted organisations

- Advanced Research Centre, University of Glasgow – Multiplex, University of Glasgow, HOK Architects, WSP
- East West Rail Alliance, Bletchley Flyover – Atkins, Laing O'Rourke, Network Rail, VolkerRail
- Thames Gateway (Desalination) Recovery Project, MWH Treatment – Skanska, Balfour Beatty, Mott MacDonald, Thames Water
- The Christie at Macclesfield – Vinci Construction
- Transpennine Route Upgrade West – Network Rail, BAM Nuttall, Arup, Amey



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The Forge takes Offsite gong

The Forge office project is pioneering proof of a platform design for manufacture and assembly strategy. Its team of Bryden Wood with Landsec, Sir Robert McAlpine, Mace and NG Bailey secured the Digital Innovation in Offsite Construction category, sponsored by CM

The Forge, a 139,000 sq ft office in Southwark, London, is Landsec's demonstrator project for its platform design for manufacture and assembly (DfMA) strategy.

The ambitious targets for Landsec's strategy included increased safety and collaboration, lower capital cost, reduced waste, a shorter programme and the use of fewer operatives.

To achieve these goals would require a comprehensive approach to design, procurement, manufacture and assembly, with a digital eco system that could combine numerous tools in an integrated workflow.

Bryden Wood ran two teams in parallel through to RIBA Stage 3: one using traditional methods and the other using platform DfMA.

The latter was chosen. This demonstrated that DfMA could be used for 80% of the project.

The project brought together new and existing technologies, linked through a central 'spine' of data, to ensure offsite benefits were transferred on site and evidence-based learnings were gathered to take on to future projects.

Elements included:

- platform design – the digital library of components had the construction process built-in, including integration of superstructure with temporary works, facade and MEP;
- algorithmic design – the library includes predefined interfaces and relationships facilitating automated design;

▲ The Forge Project team receive the trophy from host Russell Kane (far right) and sponsor Will Mann of CM (far left)

Other shortlisted organisations

- 33 Charterhouse Street – Prism & SES
- KOPE: Mace HRS

The collaboration and integration of alternative technologies and solutions to achieve the goal is impressive. It was a complex challenge with a great outcome
What the judges said

- cassette design – a workflow linking design to fabrication and logistics models ensured close coordination, each cassette having a unique identifier linking all key information and exact specifications;
- digital delivery – the likes of Qflow, Disperse and Converge were integrated to maintain the digital golden thread from design and manufacture into assembly; and
- automation – a range of machinery was prototyped and/or used for the first time in construction to create factory-like assemblies.

Ultimately, Bryden Wood's approach generated:

- a 2% increase in net lettable area (and an entire basement removed);
- improved safety (no work at height, no work in concrete);
- a 50% reduction in site operatives for superstructure and facade; and
- proof that a platform approach first adopted by the Ministry of Justice can be reused in other sectors.

Neil Pennell, head of design innovation and property solutions at Landsec, reflected on the reasons for the Forge's win: "Because this is a team, and because we've really pushed the boundaries of innovation and brought something forward for the industry that will make the world of construction a better place. It's all about the way you design, construct and deliver a building using digital tools within that process – combining them so they're working together."



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Vinci wins Best Use of Data

Vinci's clever use of data and AI at a cancer hospital project deservedly took top prize in the Best Use of Data category, sponsored by the UK BIM Alliance

Vinci Construction has made impressive productivity gains through its innovative approach to using project progress data.

In March 2021, working with US firm OpenSpace, the contractor introduced 360 data capture for recording site progress. After the initial implementation, Vinci looked at how it could link this data to the construction programme in real time.

On the HCA cancer care hospital in Birmingham, Vinci used AI to convert 360-degree images into a measurable record of progress for project elements including concrete, internal walls, ceilings and building services. After testing this system, Vinci examined how it could use this data and the AI system to identify other construction efficiencies.

The standard process for updating the programme on the HCA project was a weekly site inspection taking each construction manager 3.5 hours per week and the planner six hours.

To increase efficiency, the digital team developed a 'smart data connection' (SDC). This automates

data entry from any structured data source and connects this information into a new digital information hub, using Microsoft Azure infrastructure.

This only requires a weekly site walk. The AI platform's productivity analysis is also saved as a record and used as a baseline in project planning.

The introduction of the SDC has followed Vinci's 'Digital Driven

by Desire' principles, where staff receive a demonstration of any new technology's benefits before its introduction and are encouraged to propose changes and improvements.

The implementation of SDC has produced impressive gains for Vinci's team at the HCA project, with a 60% efficiency improvement in time taken by construction managers for site inspections and a 50% improvement for the planner. Vinci also managed to reduce the construction programme from 113 weeks to 110 weeks.

Marco Bonelli, lead digital engineer at Vinci Construction UK, said:

"We were able to save 60% on site inspections just by keeping data in one point and flowing it to different parts of the business."

Other shortlisted organisations

- 51 Moorgate – Skanska UK
- ARC (Automated Cable Routing Management System) – Bryden Wood with Transport for London
- 360 real-time reporting – Multiplex
- QFlow on SCS Railways – SCS Railways, QFlow, HS2
- The Forge – Sir Robert McAlpine, Mace, Landsec, Bryden Wood



◀ The Vinci team receive their award from host Russell Kane (far right) and sponsor Casey Rutland of the UK BIM Alliance (far left)

A great idea and the use of AI to extract data from the site provided real practical benefits. There was a people focus before it was launched, to get people to understand the 'why' first
What the judges said

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PROCORE

Atom AR headset is Productivity winner

XYZ Reality's augmented reality Atom headset, which helps prevent delays associated with rework, was the winner of the Digital Innovation in On-Site Productivity category, sponsored by Procore

The Atom, XYZ Reality's augmented reality (AR) headset has been developed to overcome the persistent productivity problems affecting construction, particularly the reduction of rework through greater accuracy. AR is not new, but the Atom – and the HoloSite software which enables it – was developed from a construction, opposed to generic technology perspective.

Launched in November 2021, its AR capability means the wearer can see a visualisation of the as-built digital twin, 3D rendered, within 3mm-5mm accuracy. Site teams can be confident they are building to the correct specifications and real-time, in-situ inspections can be conducted during the build.

Project teams use HoloSite software to upload data from

Autodesk Revit, Navisworks and other software, where it is converted into an XYZ format which plugs into The Atom. Data flow between The Atom and HoloSite allows site teams and the office to check if works are executed as detailed in the BIM model.

Cloud technology allows remote viewers to log into a live feed and troubleshoot issues. This reduces the need for travel to the site for inspections.

In a recent data project the tool was used by construction management firm PM Group during rainwater pipe installation. The Atom pinpointed multiple positional discrepancies in the surface water network connections and slab penetration positions – but before any major works were undertaken.

PM Group explained the issues to contractors who corrected the errors without significant delays. This saved over £250,000 and 3.5 weeks of predicted rework.

XYZ Reality supports the introduction of The Atom with staff training, onsite support and assistance in processing data.

Dan Houston of XYZ Reality said: "Traditionally in construction, there is a very reactive process using traditional means. We've shifted that mentality, because if you can see what you need to build, you get it right the first time. We've just scratched the surface of what we want to achieve."

Other shortlisted organisations

● Black Potts Weir, Flood Alleviation Scheme – L Lynch, BAM Nuttall

● Crane telematics – Skanska UK, Select Plant Hire

● Digital progress tracking with automated reporting – Taylor Woodrow

● SCS Railways JV work on HS2 – SCS Railways, HS2, Zutec

● The Forge – Bryden Wood, Landsec, Sir Robert McAlpine, Mace, NG Bailey



The Atom offers impressive, multi-faceted innovation. It offers a move away from a reactive approach to tackling errors, to a more proactive way of working and solving problems
What the judges said

◀ The XYZ team receive their trophy from Russell Kane (far right) and Ben Douglass (far left) from sponsor Procore



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CIOB



◀ The Visual 5D team receive their trophy from host Russell Kane (far right) and sponsor David Philp (second left) of the Chartered Institute of Building

A huge part of selling the benefits of digitalisation sits in how we can best communicate those to people who aren't technically minded. This solution is powerful in that respect. It will also act as a catalyst for skills development in the future. It is a very innovative and elegant solution to a perennial problem

What the judges said

Visual 5D secures SME award

Visual 5D, which has brought gaming technology to builders' bids, was named winner of the Digital Excellence in a Construction SME category, which was sponsored by the Chartered Institute of Building

Visual 5D was established with the aim of supporting building contractors with an effective communication platform during the tendering stages of a project.

Tender meetings are often marked by underwhelming presentations that lack dynamic content and can be difficult to understand for a non-technical audience. In contrast, Visual 5D brings projects to life with detailed 3D animations of the construction schedule and site logistics for presentation.

The company uses gaming technology, combined with its own software, that links the start and completion dates from the programme schedule to an animated 3D model. This combination results in a 'movie-style' animation that

combines the best of both worlds: high-quality visual graphics with technical data that accurately reflects the construction schedule.

Visual 5D's platform allows the contractor to demonstrate that all construction stages have been rigorously planned and considered, with its 3D models providing granular detail and identifying unforeseen inefficiencies at the planning stages. As well as creating a 'wow factor' at tender stage, the technology effectively showcases the benefits of digitalisation.

To develop the system, Visual 5D had to undertake a training process to bridge the two worlds from which modellers typically come:

- Construction - those experienced with BIM software such as Revit,

Other shortlisted organisations

- BIMBox
- Cooper Moss Rutland LLP
- MachineMax with HS2 and Align JV
- Nusan Flooring
- Royal Free London Property Services (Capital Projects PMO reporting tool)

Navisworks and Synchro, but with no experience of creative or gaming software; and

- The gaming industry – those with experience of Cinema 4D or Lumion, but no experience in construction or of construction software.

The judges were impressed by the company's focus on people and skills, in particular the development of a bespoke training process, which brought together experience and expertise from two industries.

In 2021/22, Visual 5D contributed to 13 winning construction bids with a total value of £3.8bn, among them work on the Houses of Parliament.

John Ferry, MD of Visual 5D, said: "We've put in lots of hard work to build our presence in the past 10 years, so it's great to have this recognition."

Lynch Plant Hire wins Net Zero category

Lynch used technology and engagement with its staff to meet targets set by the Skanska Costain Strabag JV on HS2, and thus secured victory in the Delivering Net Zero with Digital Innovation category, sponsored by Zero

Lynch Plant Hire's client on the south section of HS2, the Skanska Costain Strabag JV, asked it to reduce plant idling by 20% to improve the air quality for the community surrounding the construction site.

Lynch looked at its available resources, namely technology, data and its people. The development of its strategy began with its Eco Driver Training Programme, which blended telematics data with advanced operator training.

Lynch proposed to carry out a trial on site to identify the current idling and carbon emissions. In addition, it proposed to upskill and mentor 10% of its operators on site over three months. Lynch educated the operators on the importance of sustainable working and how they can impact fuel consumption and carbon emissions.

Furthermore, Lynch's data showed that individual upskilling was more effective in reducing machine idling than group presentations. It designed a Green Leadership Board based on the idling improvement per

driver and per machine type. This served as a friendly competition between the drivers, which ended up improving the overall results.

Lynch also presented the data results to each operator, which allowed them to become aware of their individual carbon footprint.

The overall goal was to move the driver idling percentage from red (above 60%), to amber (41%-59%) and then to green (below 40%).

The total average idling percentage for the focus group at the start of this exercise was 41% (amber). However, by the end of January it dropped to 24% (green). Additionally, the total

CO₂ consumption was 44,423kg in November, but 20,610kg in January – a 46% reduction.

A reduction in idling also leads to a substantial fuel cost saving for the client. The total fuel consumption was 17,124.6 litres in November and dropped to 7,944.9 litres in January.

Following the success of the programme, Lynch has made Eco Driver Training a mandatory module for all operators.

Paul Keenan, head of machine controls at Lynch, said: "It's just a sensible thing to do, the whole idea of being net zero – and it creates a better environment for our operators."

Other shortlisted organisations

- Advanced Research Centre, University of Glasgow – Multiplex, University of Glasgow, HOK Architects, WSP
- East West Rail Alliance, Bletchley Flyover – Atkins, Laing O'Rourke, Network Rail, VolkerRail
- Thames Gateway (Desalination) Recovery Project, MWH Treatment – Skanska, Balfour Beatty, Mott MacDonald, Thames Water
- The Christie at Macclesfield – Vinci Construction
- Transpennine Route Upgrade West – Network Rail, BAM Nuttall, Arup, Amey

▼ Lynch's team with Russell Kane (right) and Jonathan Munkley from Zero (second left)



A great example of how data and technology can change mindsets and training to deliver real results. Few projects will show a more immediate reduction in greenhouse gases
What the judges said

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Bryden Wood wins prize for Best Application of Technology

Bryden Wood's automated cable routing management system, which has generated significant time savings for Transport for London, won the Best Application of Technology category, sponsored by Digital Construction Week

London Underground's tunnels are tight and cluttered. Plotting the most effective route for new cabling requires a detailed survey of the existing tunnel surface, and then meticulous planning to allow for a wide range of complex variables: in other words, a time-consuming and labour-intensive manual process that puts teams of people in difficult, dirty and dangerous environments, while also disrupting public transport.

Bryden Wood, working with Transport for London (TfL), has

developed ARC: data-driven design automation technology for underground signal upgrades that makes cable routing faster, safer and smarter.

The ARC process starts with collation of as many input variables as possible to establish machine-readable rules. Then comes a point cloud survey of the tunnel, which is analysed. The rules then recommend the optimal routing of cables. ARC also outputs 2D information and 3D models offering various options for cable installation.

Bryden Wood and TfL successfully tested the process on sections of tunnel (from Liverpool Street to Moorgate, and from Bayswater to Notting Hill Gate), before the software was handed over to TfL.

The project was delivered on time and to budget. Cable routing design typically takes months or even years. Results from ARC tests show that once the point cloud survey is complete, TfL can provide design outputs in less than two days. ARC also reduces network disruption and safety risks for the workforce.

Giuseppe Miccoli, associate – creative technologies at Bryden Wood, said: "It's a project we've put a lot of effort into. It was groundbreaking, challenging. I think the award is great recognition of our work. Our solution is a great improvement on the way things are done in the tunnels, which is not a safe environment to work in, so technology can help a lot."

Other shortlisted organisations

- Social Value Digital Hub – VINCI Construction UK
- Digital progress tracking with automated reporting – Taylor Woodrow
- Improving the operational performance of higher and further education buildings – Integrated Environmental Solutions with the University of Edinburgh and Schneider Electric
- The Living Lab – Ethos Engineering
- Royal Free London NHS Capital Projects PMO reporting tool – Royal Free London Property Services, in conjunction with Royal Free London NHS Foundation Trust and Turner & Townsend

▼ The winning Bryden Wood team receive their award from host Russell Kane (far right) and sponsor Karolina Orecchini from Digital Construction Week



The solution is innovative and relevant. This is a real challenge solved using technology that exists in other sectors but used to its absolute strengths in this practical example. It has positive impact on finances, time, safety and quality
What the judges said

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▲ The Eurovia and Paperless Construction team receive their award from Russell Kane (far right) and sponsor Jonathan Moulam (second left) from the Association for Project Safety

Paperless Construction and Eurovia take health and safety award

Eurovia digitised its health and safety practices after a trial with Paperless Construction, helping the pair to win the Digital Innovation in Health, Safety & Wellbeing category, sponsored by the Association for Project Safety

Eurovia trialled Paperless

Construction on its Coventry City Council Retail Quarter project between March 2020 and October 2021.

As well as allowing Eurovia to digitise its construction activities, remove paper from its work processes and increase productivity, the technology allowed Eurovia to digitise health, safety and

environmental compliance, including site briefings, checking training competencies, issuing permits to work and capturing exposure hours.

The change means that safety briefings are now recorded in a fraction of the time, with a full digital audit trail. With an easy-to-use mobile app, everyone on site now has access to their own training

This demonstrated great examples and evidence of the benefits and achievements, and highlighted the opportunity for its use on future projects

What the judges said



records, and level-based access enables supervisors and site management to check all training records, competencies, fatigue hours and medical information through a simple search scanning QR codes.

Such was the success of the trial that Eurovia has now rolled out Paperless Construction to 120 of its projects. Nearly 6,000 user records and competencies have been digitised, and 500,000 working hours and 16,000 safety briefings recorded. Furthermore, data shows that supervisors save up to two hours per day, equivalent to a 20% efficiency gain.

Philip Reid, Eurovia Contracting's digital operations manager, said: "It's good that this has come out of Digital Construction Week because it was there where we first saw Raymond [Castelyn, founder of Paperless Construction], many years ago. After those first discussions, we've put Paperless Construction into all of our sites, across the board. It has improved safety, it has improved productivity, it has been great."

Raymond Castelyn, founder of Paperless Construction, added: "There are those people who will say, 'I've been doing it for 25 years on paper, why do you want me to change?' But actually, we find that a month into it they'll say, 'this is great, this has saved me time, this has made my life better'."

Other shortlisted organisations

- Fit For Work – fitforwork.ai
- Rochdale Town Hall Project: Phase 1/1A – Safer Sphere with Rochdale Borough Council, Rochdale Development Agency and HH Smith Contractor
- SkillShield – Make Real and Keltbray
- The Living Lab – Ethos Engineering
- UCL Pearl Project: A building to house the world – UCL Civil Engineering Dept & Estates Development Dept, Transport for London, with Penoyre & Prasad Architects, Aecom, Volker Fitzpatrick, Atkins, Turner & Townsend, Stantec, BIMSafes and Briggs & Forrester Facilities Management

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Skanska GeoBIM wins Digital Excellence award

Skanska's platform, which integrates two data sets that are not natively interoperable, GIS and BIM, won the Digital Excellence in a Construction Business category, sponsored by Autodesk Construction Cloud



Skanska faces three key challenges to the effective introduction of digital twins in transport infrastructure:

- interoperability – how to collate and analyse different data from different discipline;
- location-enabling – the linear characteristics of infrastructure require geospatial intelligence to predict clashes and manage interfaces; and
- connecting data, disciplines and organisations that enable holistic and integrated decision-making throughout the project life cycle.

The UK information mandate and the Geospatial Strategy aim to overcome these challenges, with geographic information science (GIS) and BIM being two promising data sources to realise a digital twin. However, GIS

Excellent recognition of the reality that data needs to flow and not be constrained by system boundaries or type. This is going to help drive efficiency in the way projects are planned and visibility of information

What the judges said



and BIM are not natively interoperable at a data, process or systems level.

As a result, Skanska created GeoBIM, a novel format- and software-agnostic geospatial solution that integrates GIS and BIM to enable the geospatial digital twin for infrastructure projects.

It focuses on the integration at a data and process level, enabling a bi-directional connection of the BIM and GEO common data environments (CDE). It is based on the Extract-Transform-Load process and Python.

The solution is capable of consuming a variety of file formats (.ifc, .rvt, .dwg, .dgn, .idgn, .skp, .las, .pod) directly from their native CDE (ProjectWise, BIM360), and manipulates the geometry, semantics and topology and loads the information to the GeoCDE. This is an automated process split in three parts: geometric conversion, semantic mapping and topological validation. The information is then shared to Skanska's enterprise GIS ecosystem.

Now a fully deployed solution across road and rail mega-projects within Skanska Infrastructure, it has reduced the time spent finding the single source of truth by 99%.

Among benefits, it has generated a cost saving of approximately £100,000 per year based on 12-plus file formats that Skanska GeoBIM brings together agnostically.

George Floros, the GIS lead for Skanska UK – Infrastructure, said: "This is the beginning for us. We have a fantastic team and this award is testament to our innovation. It was bringing it all together and putting innovation into practice. It was about all the different disciplines coming together and embracing innovation."

◀ The winning Skanska team receive their trophy from host Russell Kane (far right) and Michelle Jeffs (third right) from sponsor Autodesk Construction Cloud

Other shortlisted organisations

- AKT II software ecosystem Re.AKT – AKT II
- BIM360 Escape the hospital – Hoare Lea
- Digital Driven by Desire – Vinci Construction UK
- SCS Innovation – Leaving a Legacy – Skanska Costain Strabag JV working with HS2
- Working Smart – Ardmac

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To comply with Approved Document E (in England), some internal walls within habitable dwellings will be required to achieve 40dB (Rw)



- Ecology
- Pollution
- Waste
- Energy
- Management
- Water consumption
- Health and wellbeing
- Efficiency
- Materials
- Transport.

The scores under each category are weighted depending on the category of building being assessed. A building can be awarded a Pass, Good, Very Good, Excellent or Outstanding accreditation.

Improving design and building efficiencies

This CPD, in association with Knauf, examines opportunities for improving building design and efficiencies through the use of sustainable materials, ensuring compliance with building regulations and consideration for the acoustic and thermal performance of the building

This CPD is in five sections, all of which should be considered during the design phase of the building:

- Regulations, including BREEAM and Approved Documents;
- The impact of acoustics and their impact on mental health;
- Fire and the external building envelope, with specific reference to BS 8414 and BS EN 1364;
- Thermal performance, including preventing heat loss; and
- Sustainability.

1. BREEAM

Launched by the BRE in 1990, BREEAM is the most widely used sustainability assessment method for buildings and communities. There are various versions of BREEAM covering the construction of new and refurbishment of existing buildings and also community-level developments.

The BREEAM assessment method is a key factor in encouraging awareness of environmental sustainability across the construction industry. Under BREEAM, a scheme is given an overall BREEAM score based on its performance in each of the following categories:

▲ Knauf products were used in the Sir Robert Ogden Macmillan Centre in Northallerton, Yorkshire

Approved Documents

The Approved Documents provide guidance and practical examples and solutions on how a design might achieve compliance with the Building Regulations in common situations. The Building Regulations apply to the design and construction of most new buildings and alterations to existing buildings.

This CPD will provide greater insight on five of the Approved Documents: Parts B (fire safety), E (resistance to passage of sound), L (conservation of fuel and power), M (access to and use of building) and Q (security in dwellings).

2. Acoustics and wellbeing

Reverberation time is a key element in acoustic design. It is the time required for sound in a room to persist after



that sound has been produced. It is key in the education sector as it is important to provide a suitable reverberation time for each room/ space in a school for three reasons:

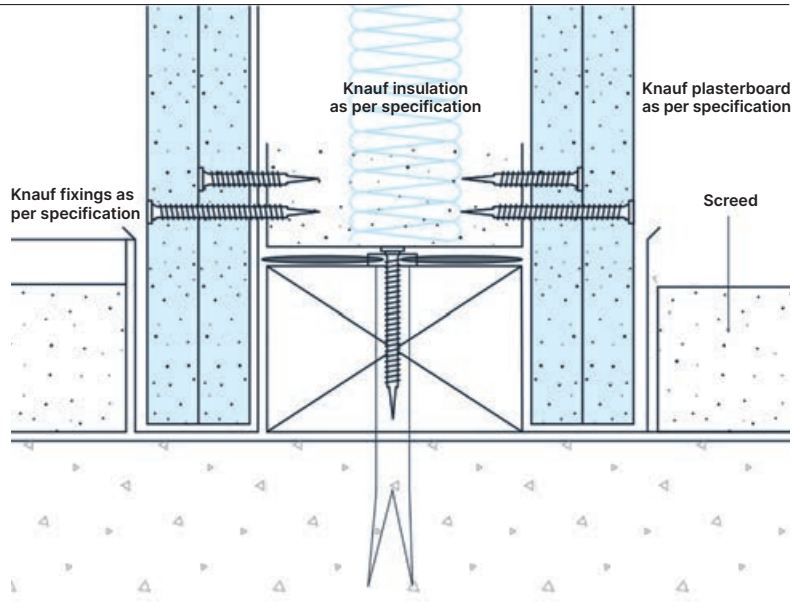
- It enables clear speech communication between teacher and student.
- It enables clear communication between students.
- It will allow the mix of music teaching and performance.

In general, music rooms and performance spaces require a higher reverberation time, typically around 1 second, whereas classrooms for general teaching will require a lower reverberation time, typically between 0.6-0.8 seconds. It is always a good idea to use an acoustician to ensure compliance with *Building Bulletin 93* (BB93), which provides designers with guidance on the acoustic design of schools.

Rw is a term that relates to the laboratory measured sound insulation

► Vertical section through the base of a wall. It shows how the addition of a timber sole plate could be used within the wall to provide a break in the floor screed between the two rooms, helping to prevent the passage of structure-borne sound between the two rooms

▼ Indicative plan of a typical T-junction in a party wall. Note the break in the board between the two apartments to prevent the passage of structure-borne sound. Please consult Knauf Technical for Knauf details



provided by a wall construction. To comply with Approved Document E (in England), some internal walls within habitable dwellings will be required to achieve 40dB (Rw).

For dwellings, Approved Document E uses the term DnTw + Ctr for onsite sound insulation. Dw relates to the onsite sound insulation provided by a wall or floor system.

Here the additional Ctr term is a low-frequency correction factor because low frequency noise transmission is harder to control, such as the sound from a bass speaker.

In addition to the Ctr, nT is the normalisation of reverberation time. This allows the sound insulation levels of partitions to be compared, irrespective of the reverberation time in a space. Because DnTw is an onsite measured figure, it is generally 5-8dB lower than the Rw figure.

Approved Document E gives minimum values for the airborne

sound insulation for the separating walls in dwelling houses and flats.

BREEAM credits are awarded for good acoustic performance. If a partition performs 3, 5 or 8dB better than Building Regulations minimum, 1, 2 or 4 additional BREEAM credits will be awarded respectively.

Typical acoustic details for metal stud internal partitions

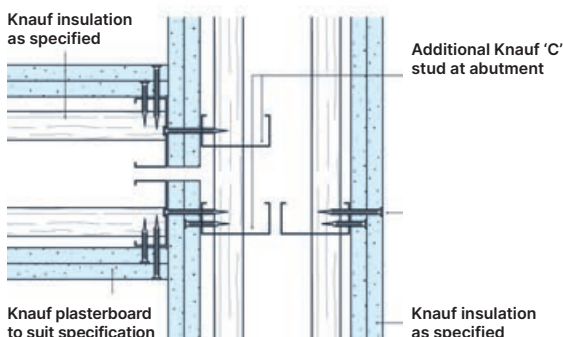
A critical element of acoustic performance is interface detailing (see diagrams, p45 and 46). Please consult Knauf Technical for detailing in relation to acoustic performance.

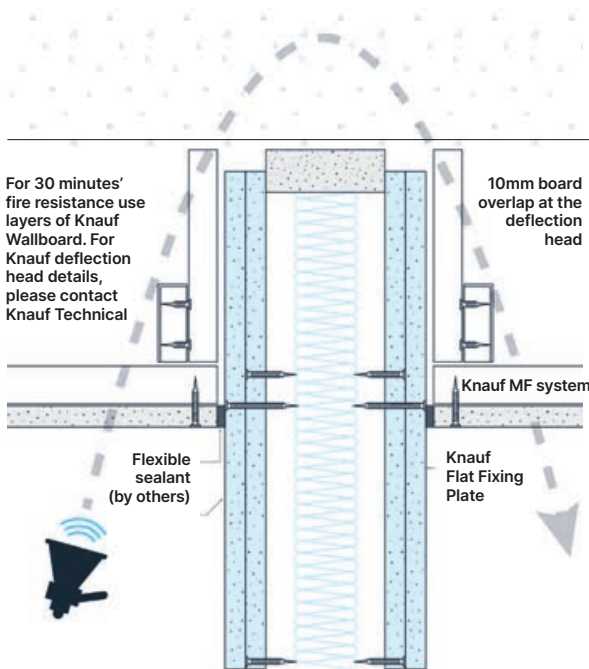
3. Fire

Part B is the key Approved Document that covers fire safety.

Internal walls

The standards most relevant to internal walls are BS 476 and BS EN 1364-1. The purpose of these tests is to measure the ability of a non-load-bearing wall to resist the spread of fire from one side to another. ►





◀ A typical partition detail for an office or school with a suspended metal frame plasterboard ceiling (MF ceiling) in place on either side. The ceiling helps reduce the flanking sound transmission over the top of the partition

Fire performance of exterior systems

It is important the exterior systems specified comply with the latest British and European standards and are fit for purpose.

● BS 8414 sets out a test method for determining the fire performance of non-loadbearing external cladding systems.

● BS 8414-2:2020 is intended solely to give an indication of the spread of fire across or within an external cladding system.

● BS EN 1364 sets out the fire resistance tests for non-loadbearing elements.

External walls

Using steel frame systems provides greater design flexibility in the location of openings and choice of finishes; generally, walls can also be thinner to provide greater floor space. Components are typically manufactured to a specific length, which helps reduce build time and waste on site.

The reduction in waste can help towards BREEAM credits for reducing construction waste while shorter build time will help minimise disturbance to the surrounding areas, which can also be reflected in BREEAM credits.

Traditionally, each of the elements identified in the image on p47 would be sold by different suppliers. This can result in a lack of data on the overall system

performance and obscurity as to which manufacturer is responsible in the event of a product/system failure.

It is advisable, instead, to use one manufacturer for the complete system with solutions that meet the project's acoustic, fire and thermal requirements.

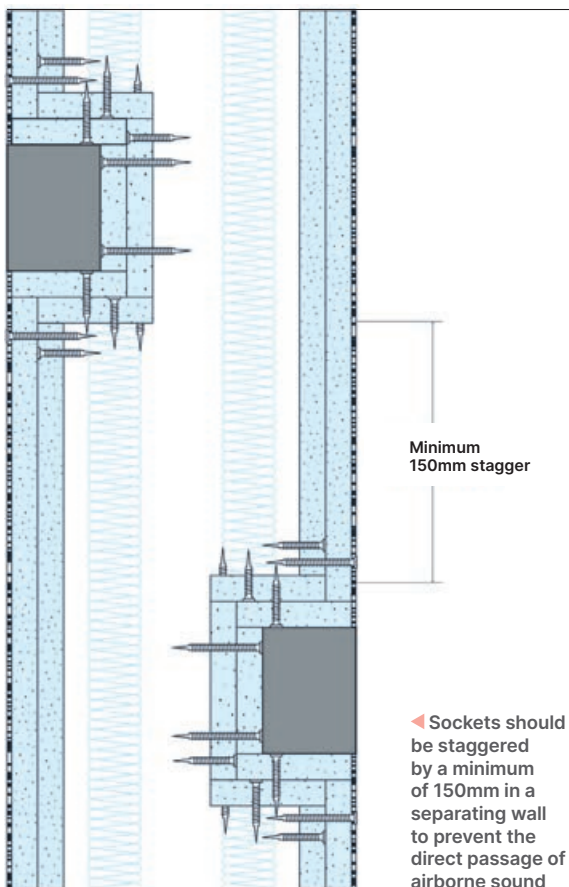
From a certification perspective, using one manufacturer's throughwall system allows for the system – rather than just the components – to have BBA approval.


4. Thermal efficiency

Approved Document L provides guidance on how to comply with the Conservation of Fuel and Power aspects of the Building Regulations. The document is in four parts:

- L1a Conservation of fuel and power for new dwellings
- L2a Conservation of fuel and power for new buildings other than dwellings
- L1b Conservation of fuel and power for existing dwellings
- L2b Conservation of fuel and power for existing buildings other than dwellings.

L1a includes guidance on party walls and potential routes for air flow in the wall cavity, which can provide a heat-loss mechanism. U-value is the term used for the rate of heat transfer through a single material or composite; the lower the U-value the lower the rate of heat transfer. An unfilled cavity can have a U-value as high as $0.5\text{W/m}^2\text{K}$ –



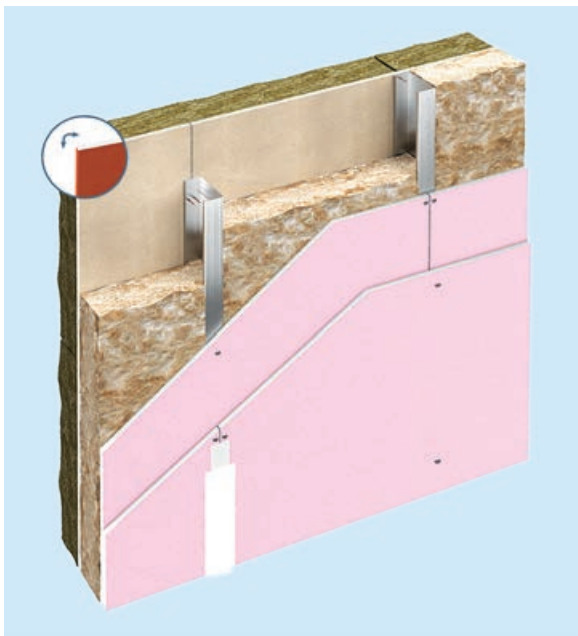
Plasterboard is eminently recyclable, and the plasterboard industry has been at the forefront of a drive to develop a circular economy for construction products 

this can be reduced by filling the cavity with thermal insulation.

The UK has set a target of net zero emissions by 2050. Newly constructed buildings are more energy efficient, but 80% of the buildings that will be in use in 2050 have already been built, so a major priority is insulating and decarbonising our existing stock.

It is important to note that different types of insulation have different properties. For example, glass mineral wool has good thermal, acoustic and fire properties while expanded polystyrene insulation only has good thermal properties.

▼ The different elements of the Knauf ThroughWall system are shown below:
1 External rainscreen slab insulation
2 Sheathing board attached to the outer face of the steel frame
3 Mineral fibre glass insulation in cavity
4 Steel frame system
5 Plasterboard



5. Sustainability

The purpose of sustainable construction is to maximise efficiency of all resources and energy used in the construction process, provide building occupants with maximum protection for all aspects of health and wellbeing and to minimise waste, carbon footprint and degradation.

There are five key areas to sustainable construction:

- Material efficiency
- Waste reduction
- Structural design
- Energy efficiency
- Water efficiency.

The plasterboard industry is working hard to address the challenges of sustainability, with strategies to improve the circularity of products, lower CO₂ emissions, minimise water usage and increase social value.

Gypsum, the basic material of plasterboard, is a plentiful and widely available material. Plasterboard production processes include the use of recycled content from plasterboard waste. Plasterboard is also eminently recyclable, and the plasterboard industry has been at the forefront of a drive to develop a circular economy for construction products.

To be sustainable construction should aim to use less concrete. According to *The Guardian*, if concrete were a country, it would be the third largest carbon emitter in the world. ●

CPD Questions

1. Which of the Approved Documents gives minimum values for the airborne sound insulation of separating walls in dwelling houses and flats?

- a) Approved Document Q
- b) Approved Document E
- c) Approved Document D
- d) Approved Document N

2. What is the basic material used in the manufacture of plasterboard?

- a) Wood fibre
- b) Cement
- c) Expanded polystyrene
- d) Gypsum

3. What is the target date for the UK to achieve net zero emissions?

- a) 2030
- b) 2040
- c) 2050
- d) 2060

4. Which British Standard sets out a test method for determining the fire performance of non-loadbearing external cladding systems?

- a) BS 8414
- b) BS 4184
- c) BS 1484
- d) BS 4418

5. What is the typical recommended reverberation time in seconds for a music room in a school?

- a) 0.1 seconds
- b) 1.0 seconds
- c) 10.0 seconds
- d) 0.01 seconds

To test yourself on the questions above, visit www.constructionmanagement.co.uk/cpd-modules.

In association with



Most thermally efficient stone wool insulation

Patented technology delivers improved thermal performance while maintaining non-combustibility and acoustic capabilities

Changes to Building Regulations and an increased focus on sustainability are placing greater pressure on the construction industry to deliver more thermally efficient buildings while preserving standards of fire and acoustic performance. In response to these evolving requirements, Rockwool has launched NyRock technology, an evolution in stone wool composition that delivers the lowest lambda stone wool insulation currently available in the UK.

Manufactured using a new patented production process, this next-generation stone wool insulation has a more efficient fibre

structure that can deliver thermal conductivity as low as 0.032W/mK. This means that U-values can be met with comparatively thinner constructions – which, in the case of external wall applications, creates the potential for additional interior floor space over a given building footprint.

Alongside its improved thermal efficiency, NyRock technology still delivers all the additional benefits of stone wool insulation. This includes acoustic absorption, dimensional stability that helps to deliver consistent thermal performance over decades, as well as the ability to be recycled indefinitely. Stone wool is manufactured from naturally occurring volcanic rock that is

▲ Stone wool is manufactured from naturally occurring volcanic rock

U-values can be met with comparatively thinner constructions – which, in the case of external wall applications, creates the potential for additional interior floor space

abundant in supply as it is continually replenished by the earth's crust.

It is this same volcanic rock that gives stone wool its innate non-combustibility, meaning that Rockwool stone wool solutions powered by NyRock technology achieve Euroclass A1 – the highest possible rating. They can also withstand temperatures in excess of 1,000°C.

NyRock technology will be rolled out across a range of Rockwool insulation solutions during 2022.

Paul Barrett, head of product management at Rockwool UK, said: "To limit the impact of climate change and support the delivery of net zero carbon in the UK by 2050, it's the responsibility of manufacturers like ourselves to go further, reinventing and improving on existing solutions. NyRock technology does just that."

"Whether building professionals need a solution to the lower U-values of England's new Approved Document L that also maximises floor space, or a non-combustible option for a high-rise property with enhanced thermal and acoustic performance, NyRock technology's industry-leading lambda value for stone wool and ability to reduce the thickness of a construction element support those requirements." ●

To register for updates on the launch of products featuring NyRock technology, visit rockwool.com/uk/nyrock.



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Queen of New York

Porie Saikia FCIOB, who spearheads sustainability on New York's Metropolitan Transportation Authority (MTA), recently received the prestigious Rockefeller Excelsior Award. **Rod Sweet** spoke to her



▲ The MTA is responsible for the New York subway system, as well as buses, trains and infrastructure

W hat does receiving the Nelson Aldrich Rockefeller Award mean for you personally?

Rockefeller was very focused on the built environment. He was also an exceptional champion of public architecture. The Nelson Aldrich Rockefeller Excelsior Award recognises licensed architects employed in the public sector in New York State whose work on projects within their jurisdiction has furthered the cause of design excellence in public architecture.

As the governor of the State of New York, he created the MTA, the organisation I've served for a good part of my professional career, previously as its chief architect and currently as head of environment, energy and sustainability. Nelson Rockefeller exemplified commitment to public service, a role he assumed despite its demands. This award for me is a validation of a professional career dedicated to public architecture.

Give us an idea of the progress MTA has made toward climate sustainability.

MTA is one of the few public transit agencies and certainly the largest to sit at the table on climate dialogue locally, nationally and internationally. Serving 8 million customers daily with a 24/7 operation and a \$52bn (£43bn) capital programme, we are actively developing sustainable strategies and policies in our

MTA serves
8 million customers
daily with a 24/7
operation and a
\$52bn (£43bn)
capital programme

43

operations and development. MTA has committed to the Paris Agreement's Science Based Target initiative (SBTi) and our plans to achieve them were approved by SBTi in November 2019.

What achievements are you most proud of so far in your MTA role?

First and foremost, my role has been to get the MTA as an organisation, along with its five operating agencies including the NYC subways and buses, two commuter railroads, bridges and tunnels and the capital construction and development, to acknowledge the climate issue and engage in the climate dialogue.

That initially was an arduous effort as public transportation authorities in general are very mission-focused, the mission here being "people moving".

After the first couple of years of working on amassing consensus, cooperation and agreements, I am grateful that sustainability is now not only a feature of MTA policy but is ingrained in its DNA. Given that transit agencies are by nature sustainable and are not as aggressively legislated to adhere to sustainable goals, this was an important first step.

Now that all five agencies are voluntarily applying new transit-based sustainable standards of Envision to new construction, and energy-efficiency guidelines to all operational and maintenance programmes, it is definitely a testament of our conscious attempt to adapt to adverse climate conditions.

Of specific note, my department's effort to set air quality goals through the United Nations programme and the Federal Transit Administration means the MTA now leads the surface transportation industry.

What lessons have you learned about instilling climate awareness in the MTA?

Working at an organisation that employs 55,000 people and serves a tri-state region with many tiers of local government, I've learned that you must present the issue of climate change in concrete, pragmatic terms, such as its negative effects on our operations, and then offer solutions for how they can be averted or reduced in time. This must be an informed process of realistic understanding of how the organisation and its agencies can benefit themselves, and the environment, by adjusting policies.



▲ Subway construction in New York City as part of the MTA's maintenance and construction plan

I've learned that you must present the issue of climate change in concrete terms, such as its negative effects on our operations, and then offer solutions
Porie Saikia, MTA

How would you rate the climate awareness levels of built-environment professionals and organisations in the US right now?

Design professionals have been tremendously aware of the climate issues for almost two decades if not more, which is well reflected in much of the profession's education programmes. Construction professionals are less so as they are on the other end of the development continuum and are very focused on constructability and cost. So, to create cohesiveness and continuation, there needs to be a concerted effort to build consciousness in the latter group.

Government organisations are moved by regulations which are only moved by legislative intent. Here, politics becomes central to the debate and, as we are aware, there is a lot of conflict associated with this issue in the political arena in the US. However, with the current administration's initiatives and aggressive push for climate awareness and adaptation technology, I am thrilled to see our industry taking that proverbial leap of faith. ●



CV: Porie Saikia FCIQB

● Metropolitan Transportation Authority, New York City: Currently senior environment, energy and sustainability director. Has held various other roles with the MTA since joining in 2014.

● State of New York: Transportation Advisory Committee member, Climate Leadership and Community Protection Act, since 2020.

● New York Building Congress: Building Foundation governor (2010-2017); chair, NYBC Council of Women (2012-2016); senior adviser (since 2017).

● Other organisations worked for (selected): New York City Department of Environmental Protection (1985-1990); New York City Department of Design and Construction (1990-1996); LIRO Group (1997-2003); MTA (2003-2006); CH2M Hill (2007-2012).

● CIOB: Ambassador for the Americas since 2010.



Bill Bordill
Decipher



Who can be an expert witness?

In our latest construction contract clinic, **Bill Bordill** explains the risks of using an expert consultant as an expert witness in a formal dispute

THE QUESTION

Can we use the same consultant who advised us on a contractual risk as an expert witness in a formal dispute?

THE ANSWER

There are a variety of reasons for appointing a consultant, which include reputation in the market, specialist knowledge or simply familiarity. In this instance, it sounds as if you are initially seeking an expert to advise on the merits of their case and which strategy to adopt, but you anticipate the dispute may later require a formal resolution procedure to resolve it.

At that stage, you will likely require an expert witness to provide an independent expert opinion to the court or tribunal. This is commonly known as a 'Part 35 expert'. The civil procedure rules (CPR 35.2(1)) clarify that an expert is "...a person who has been instructed to give or prepare expert evidence for the purpose of proceedings". Note that a Part 35 expert must be an individual and cannot be a consultancy.

So, while lay people can act as a witness to a fact – that they saw or heard something – they cannot give opinion evidence in a court. Only expert witnesses who have

specialist knowledge, recognised qualifications or experience in a particular field are permitted to give opinion evidence about facts and matters within their field of expertise. The role of the Part 35 expert is to assist the court to understand technical matters. Experts do this by providing expert opinion evidence.

Returning to the original question, can an advisory expert later become the Part 35 expert? The answer is yes, although this is not without considerable risks and challenges.

The role of an advisory expert is to assist the party who instructs them. Their duty is only to this party. This is in contrast with a Part 35 expert witness, who owes a duty to their instructing party but also has an overriding duty to the court.

Lord Dyson, in a landmark 2011 UK Supreme Court judgement on expert witnesses in *Jones v Kaney*, explained this as follows: "If the expert gives an independent and unbiased opinion which is within the range of reasonable expert opinions, he will have discharged his duty to both the court and his client."

However, it is generally desirable to separate the work of an advisory expert from the work of a Part 35 expert.

In all but very extreme circumstances, the court will allow a Part 35 expert to provide evidence where the appointment started as an advisory expert. However, at the mere whiff of a partisan opinion, the court will attach less weight to the evidence proffered. This is the inherent risk of using an expert appointed in an advisory capacity and then relying on the same individual to present expert opinion evidence to the court as a Part 35 expert. ●

Bill Bordill is a director at Decipher.



A Part 35 expert witness owes a duty to their instructing party but also has an overriding duty to the court

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Your company will need to consider the changes brought about by BS 7671:2018+A2:2022 and your installers/designers will need to have discussions with clients before starting work.

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This much I know

Helen Redfern

Chief people officer, Kier Group

'I'm determined to break down barriers'

Helen Redfern tells **CM** how she set out to make a difference to the industry



What made you join the construction industry?

I'd worked in various HR roles for well-known businesses, including Sainsbury's and Wolseley Group, and I was looking for a new challenge. Kier was looking for a HR director and I felt it was an organisation, and an industry, where I could help make a real difference.

What has been your biggest achievement since joining the construction industry?

When I first joined Kier, I was one of the only women in the leadership team, and at times that could feel quite overwhelming. When I was expecting my first child, I had to really hunt for the maternity policy,

and something clicked: if we wanted to attract and retain the best people, we needed to do more to be an inclusive business.

I'm proud of what we've achieved in the diversity and inclusion space since then. We've introduced new employee networks that act as safe spaces for employees to share their experiences from which we can all learn from; we've launched our Expect Respect campaign, which educates employees on the importance of respect in the workplace and communicates Kier's zero-tolerance approach to bullying and harassment; and introduced new and enhanced family-friendly policies, including the industry's first pregnancy loss policy.



Make sure you choose to work with a company whose purpose and values align to your own, be curious and always keep learning

Helen Redfern,
Kier Group

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

Construction is still seen by many as muddy, manual and male-dominated. It's not and I'm determined to challenge those stereotypes and break down barriers to show the industry is vibrant, inclusive and open to all, and that sustainability and digital delivery is at the forefront of what we do.

What has changed most since you've been working in construction?

Again, I come back to inclusion. The industry has always been full of passionate people who love what they do, but it really feels like we're turning the dial on encouraging people from a range of backgrounds to come and join us.

What advice would you give someone starting in the industry?

It's an exciting time to join the construction industry – or revolution – as I like to call it. Every person who joins can make a real difference, to skylines, people's lives and the planet.

I would say: make sure you choose to work with a company whose purpose and values align to your own, be curious and always keep learning.

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

Take every opportunity that makes sense for you. Opportunities that might not, on first sight, seem the most obvious choice can lead to fantastic and rewarding work. Alongside HR, I look after the health, safety and wellbeing of our people as well as our ESG agenda. It's still about supporting people, but with a wider remit. I hope my journey helps to inspire others to be bold, chase their dreams and realise their potential – the industry will be all the better for it. ●

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CIOB Community

Tongji University team wins CIOB Global Student Challenge

Four students from Tongji University in Shanghai, China, have taken the top place in this year's hard-fought annual competition

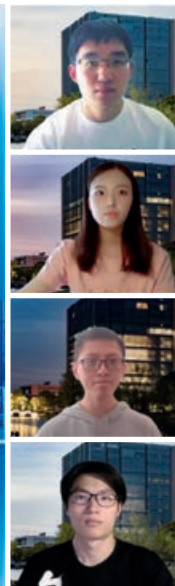


A team of four construction students from Tongji University, China have won this year's CIOB Global Student Challenge.

Team Tongjiem fought off competition from five other teams in the final, which was held virtually between June 20 and July 1, to win by just three points.

In total 41 teams from 18 universities and colleges entered the 2022 competition, which is now in its ninth year. This is the first year a team from Tongji has taken part.

Sharing the £2,000 cash prize are Bo Peng, Jingyan Li, Yuhang Wang and Xinyu Ju, who are studying engineering management.



▲ First-time competitors Team Tongjiem won £2,000 after fighting off five rivals in a close final

Rosalind Thorpe, director of education and standards at CIOB, said: "A huge congratulations to Team Tongjiem, who have demonstrated a high level of skill and professionalism to win this year's competition. All our finalists represent the construction industry's future leaders, who we're sure will go on to have very successful careers."

Teams from around the world compete over several months in realistic simulations, acting as boards of their own companies. They are assessed on key performance indicators including profit, turnover, share price and client satisfaction.

Team Tongjiem said: "It's the first time for our university to compete in the CIOB Global Student Challenge and we have experienced a breathtaking adventure. We put in a lot of effort to make every small difference and the small eventually turned into something huge."

Other finalists:

2nd place: Team Nawasena from Universitas Indonesia

3rd place: Team CQUNB from Chongqing University, China

4th place: Team Chan Tsz Kwan from Hong Kong Polytechnic University, China

5th place: Team TechnoEdge from Western Sydney University, Australia

6th place: Team GopherBuilt from University of Minnesota, USA ●

CIOB teams up for EDI action plan

Institute to work with other bodies in the sector on three-year strategy

The CIOB is one of six leading membership bodies from across the built environment sector to launch a 45-point action plan to jointly improve equity, diversity and inclusion (EDI).

The other bodies are: the Institution of Civil Engineers (ICE); the Landscape Institute (LI); the Royal Institute of British

Architects (RIBA); the Royal Institution of Chartered Surveyors (RICS); and the Royal Town Planning Institute (RTPI).

The plan sets out how they will collaborate to deliver the three objectives of data collection, improving understanding of transition from education into employment, and EDI standards.

The plan emphasises the role of governance and leadership. It stresses the significance of aligning strategies with EDI principles, values, beliefs and the experience of those in the sector.

The bodies will work together to deliver the plan over the next three years, with annual progress reviews every February.

Congratulations to new CIOB chartered members

New members and chartered building companies (CBCs) were among those celebrated at two graduation ceremonies in London on 27 May

In the morning the following graduates received their new status:

- Fellow:
Haitham Aref
- Members:
Andrew Abiona
Jeffrey Boateng
Adrian Buch
Balfour Burrell
Gary Cramp
Jason Davis
Armarjit Dhesi
Shane Dodds
Evgeni Gradev
Gary Hanks
James Hay
Benjamin Mackie
Richard McCann
Lindsey Platt

Atul Sreedharan
Chantal Stagno
Navarra
Wan Farhani
Mark Waller

- CBC:
ICW Technical Services

Graduates in the afternoon session:

- Members:
Paul Beddall
Lidia Bosa
Gary Brogan
Paul Creaven
Cosmin David
David Desnoes
Ashley Dray
Alex Eyland
Stephen Gilchrist
Michelle Glaser

Jack Glyn-Jones
Dale Hayward
Michael Hughes
Paul Jakeman
Ajesepe Jimo
Ryan Jordan
Narinder Kalsey
Ravi Karsan
Andrew Kielthy
Michael Kleios
Manjeave Singh
James Lowry
Alexander
MacFarlane
Matt Marinelli
Darren McDermott
Vanessa
McGarvey
Joseph McMorro
Ashisho Meggi
Kelvin Nagberi
Julie Norfield
Mark Oakley

Eseroghene
Odusola-Stevenson
John O'Neill
Steven Pallister
Colin Parker
Henry Quartey
Keith Reynolds
David Rutter
Hadeel Safaa
Saadoon
Craig Scott
Daniel Skudder
Chris Statham
Howard Timms
Hernan Vargas
Richard Wadley
Alexander Walker

- Chartered environmentalist:
Alistair Donaghhev
- CBC: Reynolds Associates

▼ Graduates celebrate their new status on 27 May

Opinion: Get on board

Matthew McKirgan on what construction managers share with school governors



When I became a school governor 12 years ago, I was keen to help shape the opportunities available to local young people. I didn't expect it

would help me to secure my first job as a construction manager, or that my career in construction would be so relevant to my role as a governor.

Governors and trustees are responsible for the strategic direction of a school or groups of schools and their decisions impact hundreds, if not thousands of pupils. Like construction managers, they need to develop a vision and strategy, monitor safety and wellbeing, ensure compliance with statutory requirements, take account of stakeholders' views, oversee the budget and be ready to adapt to stay on track.

New research from the National Governance Association (NGA) has found governing board vacancies are at their highest since 2016. With the typical board consisting of nine or 10 people, the high vacancy rate means some boards may struggle to drive improvement and provide sufficient scrutiny and financial oversight. Overall, the NGA estimates there are currently more than 20,000 vacancies.

I'd encourage construction managers to consider volunteering because our experience and expertise is very relevant and can really benefit a school. In turn, it's an opportunity to apply your skills in a different sector which is valuable professional development. It's also a chance to see how fellow governors, from different walks of life, 'do things'. Most importantly it's an opportunity to make a positive difference in a community and ensure young people flourish.

To find out more about volunteering as a school governor or trustee visit: www.nga.org.uk/News/Campaigns/Role-of-governors-and-trustees.aspx. Matthew McKirgan is a construction manager at Laing O'Rourke and a school governor.



ADAM DUKE PHOTOGRAPHY



David Bolton is the new Irish Construction Manager of the Year

Farrans project manager took home the top prize for his work on Derry's Altnagelvin Acute Hospital North Wing

David Bolton from Farrans

Construction was named Irish Construction Manager of the Year at CIOB Awards Ireland 2022, sponsored by Maor Scaffolding and Jan Janssens & Co.

Bolton, having taken the gold prize in the Healthcare category, won for his work on the Altnagelvin Acute Hospital North Wing in Derry, Northern Ireland.

The £42m facility, for the Western Health & Social Care Trust, is a new entrance block and three-storey ward block, comprising six wards with a total of 144 adult single-bed rooms, isolation rooms, a renal dialysis suite, basement plant rooms and service tunnels, which was

delivered during the peak of the Covid pandemic in 2020.

Following a request from the trust, to protect against a potential surge, Bolton fast-tracked three wards for Covid-19 facilities, handing them over eight weeks earlier than programmed.

CIOB Awards Ireland judges were impressed with his passion, dedication and expertise. Bolton completed the complex project to a high quality of finish and workmanship on a live campus while complying with all health and safety requirements in a demanding environment.

He displayed skills in site organisation and layout, construction planning, teamwork, supply chain management, communication, leadership and coordination, while

▲ The winning Altnagelvin Acute Hospital North Wing project

▶ David Bolton collects his award at CIOB Awards Ireland

ensuring architectural and technical requirements were fully realised.

Other winners were Owen Stynes of Walls Construction, who took the gold prize in the Commercial category for Dublin Landings Blocks 3, 4 and 5, and Tadhg Kelly MCIOB from BAM, who won the silver prize in the same category for the control tower building at Dublin Airport.

Pat O'Neill of Duggan Brothers took the silver prize in Healthcare for the Aberdeen Building at Peamount Healthcare.

Woodvale Construction dominated the Community category, with Robert Ewing FCIOB taking gold for his work on the NDFA Schools Bundle 5, and Paul Devine MCIOB winning silver for the St. Mary's Parish Lavey project. ●

The CIOB would like to thank the CIOB Awards Ireland sponsors for their support: Maor Scaffolding; Jan Janssens & Co; PJ Personnel; Arc Engineering; GDC Construction Services; Kilsaran; CITB NI; CIF; and Leonard Engineering.



PAUL SHERWOOD

“ Following a request from the trust, to protect against a potential surge, Bolton fast-tracked three wards for Covid-19 facilities, handing them over eight weeks earlier than programmed

McLaren shows visitors its new HQ for Cadent Gas

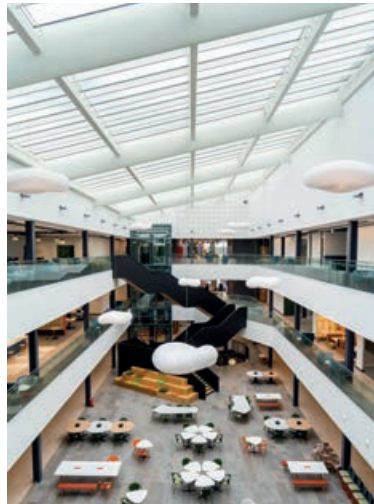
CIOB site visit takes a tour of new Coventry office building with unique bespoke interiors



McLaren Construction Group hosted a site visit in July to its recently completed build and fit out of the new headquarters for Cadent Gas in Coventry.

Simon Docker, David Boughey, Gavin Richardson and Simon Greaves took CIOB members on a tour of the new offices at Prospero Ansty Park and held a Q&A session.

Delivered on behalf of developer Manse & Opus Land, this new scheme comprises 100,000 sq ft of office space, with unique bespoke finishes throughout its four floors, including a partial basement with a gymnasium, leisure area and restaurant. ●



▲ The interior of McLaren's new HQ for Cadent Gas in Coventry features bespoke finishes throughout



Kent teams battle it out for Maidstone karting cup

Crashes and fierce competition define Tomorrow's Leaders cup

This year's Tomorrow's Leaders Maidstone Karting Cup was a close-fought competition between teams from construction-based companies across Kent – and featured some spectacular crashes.

The event, held at Sittingbourne in June, saw 13 teams vying to be the 2022 champions. London and South East Building Services was the winner, while BAM took the runner-up slot and third place went to the CIOB Members team.

NEWS IN BRIEF

EDI Roadshow proves popular

The EDI Roadshow came to the Nottingham hub in June with a large turnout from local companies following the success of similar events across the Midlands.

Mark Harrison, CIOB head of EDI, presented on the work CIOB is doing to push EDI to the top of the agenda and its EDI charter.

Steve Conopo, CIOB apprenticeship manager, updated local universities and businesses on CIOB's recent acceptance on the end point assessment register.

Liverpool to launch Tomorrow's Leaders

CIOB member Liam Hanlon will talk through his recent Everest climb at an October event to launch Tomorrow's Leaders in Liverpool.

Held at Liverpool John Moores University on 25 October, the event will welcome students, hub committee members and senior university staff.

CIOB CEO Caroline Gumble will also attend as part of her two-day visit to the city.

To find out more, or to secure a place, contact Katrina Percival: kpercival@ciob.org.uk

CIOB sponsors Teambuild 2022

Teambuild, the competition for new professionals across the construction industry, will take place on 18-20 November.

CIOB is once again the event sponsor and Rosalind Thorpe, director of education and standards, will join the judging panel.

This year's Teambuild 'live site' project will be focused on the town centre and how it may be adapted and reimaged to accommodate continued hybrid and remote working. The exact location will be revealed at the opening of the event.

To get involved contact admin@teambuilduk.com or www.teambuilduk.com.

Member's award for lifetime achievement

A CIOB member was presented with a lifetime membership award in recognition of his active contribution to CIOB for 50 years.

Angus Macleod MBE, former head of the School of Construction and Forestry at Inverness College, was presented with the accolade during an event held by the CIOB Highlands and Islands Hub.

During his 40-year career at the college Macleod developed courses to degree level as well as reintroducing the construction crafts course.

Mock arbitration tackles liability

CIOB, with CIARB and CICES, hosted a mock arbitration at Stockport Town Hall in June.

The arbitrator was Sir Rupert Jackson – who rejoined chambers as an arbitrator in March 2018 having served as a judge for 20 years.

More than 60 people attended the arbitration, which sought to resolve a fictional contractual dispute about a theatre lighting rig collapse.

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CIOB Awards 2022

The finalists have been revealed. Anticipation is starting to build. Join us for a night to remember, as we recognise the achievements of exceptional professionals that lead and shape our built environment.

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Venue: JW Marriott Grosvenor House, London

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CIOB Construction Manager of the Year



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Company and Individual



CIOB Rising Star Award



CIOB Sustainability Award



CIOB Team Award



CIOB
Awards

One to watch

Craig Shaw, director/senior building surveyor/project manager at Academy Estate Consultants and vice-chair for the CIOB Chelmsford Hub Committee



Why did you choose construction?

I always enjoyed helping my dad undertake various DIY tasks – I liked the sense of accomplishment that came at the end. As a teenager I also liked the idea of working with my hands so I trained as a carpenter when I left school and the rest is history.

You've made rapid progress in your career: MCIOB and vice chair of Chelmsford Hub in a short space of time. What are your goals for your career?

I am very fortunate to have been surrounded by team members that inspire me. I made a decision very early on in my career that I would make the most of opportunities put in front of me and take it as far as I can. Since becoming chartered, I have thought long term about fellowship as well as being in a position where I can implement positive change. Right now I am focused on my role at a regional level but I hope one

day to help the profession at a national and maybe, international level.

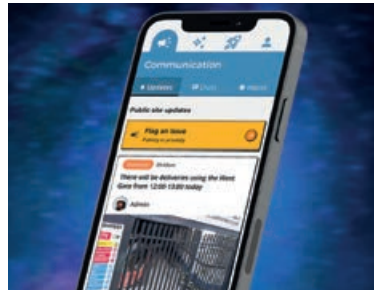
What do you love about this industry and what would you change if you could?

I love that no day is the same. Projects I run vary in size and complexity, and it keeps me wanting to continuously challenge myself and grow as an individual.

What frustrates me is some people's attitude towards the training and mentoring of the next generation. When I started, my outlook on the industry was formed by those people around me. I think it is so important that those responsible for the training and mentoring of apprentices and graduates not only remember what it was like to be in their position but to also be the person they would have wanted teaching them when they started out.

What do you do in your spare time?

I spend a great deal of my own time involved in one way shape or form within the industry. However, I also make time to attend the gym four to five times a week. I competed at a regional body building competition in 2019 (prior to Covid-19) and would like to compete again in the near future.



CIOB backs new community project platform

Worker Feedback Club aims to use tech to make sites better workplaces

CIOB is supporting a new platform that helps to build a community around a construction project.

Worker Feedback Club is the brainchild of Harrison Moore, a former electrician and design student whose final year research explored what makes a building site a great place to work.

"I wanted to use technology to help make sites better workplaces," said, "and came up with the idea for a digital platform that brings the benefits of employee engagement to a dispersed and disconnected construction workforce."

The platform is being used on a number of projects including a

large mixed-use commercial and residential complex that required recladding following the Grenfell Tower disaster.

It is a high-profile project for the main contractor and many third parties are involved in signing off the work. This means regular site visits and more pressure on the site team to be on top of everything happening on site.

Worker Feedback Club's updates feature enables the site team to let workers know if important visitors are expected and which parts of the site they'll access.

It also means that they can get messages and reports directly from workers if they have a problem, so the site team can demonstrate that they are on top of every detail of the job.

Moore has raised venture funding from social impact investors including the Resolution Foundation, and signed Willmott Dixon and Laing O'Rourke as its first customers and is in advanced discussions with other major contractors. ●

I came up with the idea for a digital platform that brings the benefits of employee engagement to a dispersed and disconnected workforce

Harrison Moore, Worker Feedback Club

Obituary: Lance Saunders

CIOB fellow, educator and rugby enthusiast will be missed

Lance Godfrey Saunders died on 28 May 2022 at St David's Hospice, Newport, aged 78.

Lance, a CIOB fellow for more than 30 years and chair of the Western Branch from 1995-98, died after a lengthy period living with myeloma cancer.

His career progressed from working as a surveyor underground in his native Gwent valley, to various

construction jobs, leading a European project linking universities across the continent and further afield, an adviser role for the Construction Industry Training Board, and, for the past 20 years, running his own business training construction managers.

Caroline Gumble, chief executive at the CIOB, said: "Lance was a great advocate for vocational education and

had the ability to support and coach people through their learning."

Away from work, rugby was another lifelong passion. He was a proud Welshman to the end, though a knee injury cut short his playing days.

Lance is survived by his wife Christine, children Kathryn and Mark, stepchildren Andrew and Rebecca, and nine grandchildren.

▼ A full refurbishment was delivered, with new floor finishes and decoration



PROFOTODESIGN.COM

Hitting a home run

Mike Vasiliou, founder of DoBuild, a full-service construction company specialising in high-end residential projects across London, talks us through a recent project

We recently completed an extension and refurbishment to a grand Victorian terrace in Chelsea, which I project managed. Having started working on this project during the lockdown period, it is wonderful to now see the project completed, as the build process was not straightforward due to the impact of the pandemic.

The owners of the home, a family with young children, wanted to significantly extend it to add space for the growing family, alongside a total refurbishment and environment upgrade.

With every project it is important to keep to the build schedule, to avoid delays, additional costs and disruption to our clients. With



▲ Mike Vasiliou project managed the Chelsea home

this project there were increased external factors, due to the challenges we all faced with supply chain issues, staffing and other impacts of the pandemic.

Thanks to our many years of experience we were able to positively problem solve, tackling issues as and when they arose.

We always work closely with our client and architect to ensure the smooth running of a project. This was even more important during this project as we experienced many material delays. We were able to quickly suggest and source alternatives that had short lead times – but more importantly that were in keeping with their strong scheme vision.

It is always so important to follow the project specifications and detailed drawings throughout a build, liaising with the architectural team to discuss any discrepancies we might find, or to quickly remedy any unforeseen issues – which happens quite regularly when working on historic buildings.

With this scheme we added a new mansard roof to create an extra floor of accommodation, and added a two-storey side extension to increase the living space. We reconfigured the internal layout to deliver a more flowing plan, with a large open-plan kitchen that enjoys large glazed sliding doors to connect the home with the tranquil, private garden.

As the home was in need of adaptations and alterations to the electrical layouts, we took the opportunity to complete a full refurbishment with new floor finishes and decoration. The windows were replaced and upgraded to increase the sustainability of the home while also being in keeping with the classical house style.

The project took nine months to complete, without any serious delays to the build timescales. The finished project is now a home finished in a distinctive classical style, with all the room the family could need. ●

Mike Vasiliou MCIOSB is founder and director at DoBuild.

▼ A large open-plan kitchen connects to the garden with glazed sliding doors





Through these activities we reach out to a global audience of diverse, ambitious and emerging professionals who are proactively looking to get ahead in their career



are opportunities for your businesses to get involved. These include:

- Participating in roundtable events;
- Showcasing new processes and new technologies;
- Presentations of case studies;
- Presentations of other built environment topics; and
- Reviewing and discussing student projects on the built environment.

Gold sponsorship offers an opportunity to present or run a workshop or activity with recognition on social media and logo placements across all marketing. The Gold package costs £5,000+VAT.

Silver sponsors can co-present a workshop or activity or be part of a panel discussion. This sponsorship package includes recognition on social media and logo placements across comms/marketing for £3,000+VAT.

Alternatively, become an event supporter with logo placements and a recognition on social media for £250+VAT. ●

For more information visit:
www.ciob.org/tomorrows-leaders.

If your organisation wishes to support one of these activities please contact sponsorship@ciob.org.uk or +44 (0)1344 630781.

Tomorrow's world

Connect with a pipeline of talent in the built environment

As an organisation CIOB runs many events and activities to inspire and support individuals in the early stages of their career.

Through these activities we reach out to a global audience of diverse, ambitious and emerging professionals who are proactively looking to get ahead in their career and make a difference to society through the built environment.

As an example of this, we recently celebrated a team of students from Tongji University, China, as winners of the 2022 Global Student Challenge. This was truly a global competition, with competing finalists from Indonesia, China, Australia, USA, Hong Kong and, for the first time, Nigeria.

Our next early careers global activity is a virtual webinar running from 24-27 October: Introducing Tomorrow's Leaders – Building Professionalism and the Pipeline of Construction Talent.

This is a global event to showcase career development, learning opportunities, new processes and technology. The key themes of the webinar are professionalism in construction and building the pipeline of construction talent.

Want to demonstrate your support for the industry?

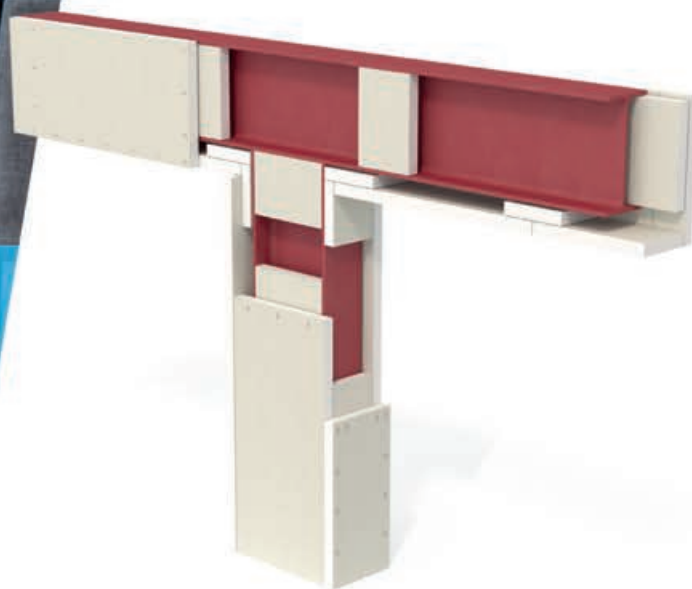
As well as encouraging your own Tomorrow's Leaders to come along to the webinar, there

▲ Sponsoring CIOB Tomorrow's Leaders activities can connect your company to a global audience of ambitious young professionals

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Diary dates

Highlights of the CIOB Calendar for the coming month

CIOB Academic Summit: Creating an inclusive global community

► 14 September, 9.30am-12pm, 2.30-5pm, online

This virtual conference will lead the way in transforming academics' connectability on a global scale, leading the way for cross-collaborations, sharing research and building community.

Topics include: digital transformation and information management in the post-Covid education era; promoting positive mental health among young construction workers from the global south; ethics in the architecture process; the adoption of sustainable practices in SMEs; and D&I initiatives on site.

The event will be available in two time slots to cater for different global time zones. On registration, you will be asked to state your time zone preference.

Contact: Ntando Teddy Khuzwayo (Teddy) via email at nkhuzwayo@ciob.co.za

CIOB Awards 2022

► 28 September, 7-11.30pm, JW Marriott Grosvenor House Hotel, London, See p8-9 for details.

CIOB site visit: Midland Metropolitan University Hospital, Smethwick

► 13 September, 10.45am-1pm Join the Balfour Beatty project team for this behind-the-scenes tour of the Midland Metropolitan University Hospital (MMUH).

MMUH will be the largest acute hospital in the region, serving a population of over 500,000. You will have the opportunity to hear from the project team about the challenges of this complex build.

Built on a 6.8ha brownfield site, the hospital will host 675 inpatient beds and 13 operating theatres. It will provide maternity, children's and inpatient adult services, and is a catalyst for local regeneration.

Contact: gflloyd@ciob.org.uk

Socially Responsible Public Procurement in Wales

► 13 September, 12-1.30pm, Cardiff

Join us for a discussion of the Social Partnership and Public Procurement (Wales) Bill with a distinguished panel of speakers.

The bill will create statutory obligations for publicly procured

construction projects over £2m.

It has the potential to modernise the procurement process in Wales, increasing competition and access to contracts for SMEs.

Speakers include Hannah Blythyn MS, deputy minister for social partnership with the Welsh government, and Mark Harrison, CIOB head of EDI transformation.

Contact: vcxon@ciob.org.uk

A30 Chiverton to Carland Cross scheme site visit

► 14 September, 10am-1.30pm, Newquay

The A30 provides a vital link between Penzance and the M5 motorway. The section between Chiverton and Carland Cross is the last remaining length of single carriageway and regularly experiences congestion and delays. This project will create a new dual carriageway.

The site visit will provide an overview of progress with a visit to the works at Carland Cross Junction. The team will give an insight into how they approach carbon reduction, demonstrate project innovations and share how they have managed archaeological challenges.

Places are limited to 20. Please book early to avoid disappointment.

Contact: estreames@ciob.org.uk

CIOB Scotland Awards Lunch

► 16 September, 12-5pm, Glasgow

Come celebrate the best in the nation at the CIOB in Scotland Awards Lunch, sponsored by Contract Scotland and Competence Matters.

Held at the DoubleTree by Hilton, Glasgow Central, the awards recognise excellence and celebrate the fantastic achievements of the industry in Scotland.

Event fees: Bronze package £750; Silver package £1,300; Individual £75.

Contact: wmarshall@ciob.org.uk

Royal Mail Super Hub site visit

► 19 September, 10am-12.30pm, Crick, Northants

Join Buckingham Group for a presentation and tour of the largest Royal Mail parcel hub.

The facility will provide Royal Mail with a BREEAM Excellent and Planet Mark accredited National Distribution Centre in Rugby, totalling more than 800,000 sq ft. The centre incorporates a single-storey warehouse unit, multi-storey car park, offices, vehicle servicing unit, and rail siding/platform.

Contact: sshort@ciob.org.uk

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



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