CONSTRUCTION ANAGER 2021 For members of the GIOB

JERSEY SURE HOW THE 2021 CONSTRUCTION MANAGER OF THE YEAR BUILT A NIGHTINGALE HOSPITAL IN THE CHANNEL ISLAND



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▲ Contractor starts work restoring Grade I-listed railway building

Contractor KN Circet has started work to refurbish the Grade I-listed Old Curzon Street station in Birmingham, as part of the HS2 project. The building, designed by architect Philip Hardwick and opened in 1838, originally served as the Birmingham terminus for the London and Birmingham Railway Company line that connected to London's Euston station.

Jetpack prototype for inspections unveiled

A new jetpack prototype could be used to tackle challenging construction tasks, according to its creators. Hollywood animatronics expert Matt Denton and Royal Navy commander Antony Quinn say the jetpack can be operated handsfree, to allow safer flights, and reconfigured as a heavy lift drone for remote operation.



▲ Skanska supports development of new construction robot

Skanska has been working with technology companies to develop a prototype robotic platform that can navigate sites and carry out pre-programmed activities such as drilling at height. The Collaborative On-Site Construction Robot (COSCR) platform comprises a mobile base, site sensing technology and BIM-linked software systems.

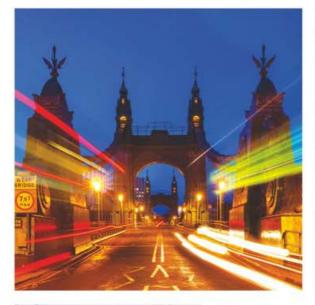
NEWS

Wates has appointed corporate development director Esther English to help deliver its diversity and sustainability goals



▼ Mott MacDonald plan to stabilise Hammersmith Bridge approved

A £6m plan devised by Mott MacDonald to stabilise Hammersmith Bridge in London has been approved by Hammersmith & Fulham Council. The 134-year-old cast iron structure has been closed to traffic amid concerns about its deterioration. Mott MacDonald's alternative to the original stabilisation scheme by Pell Frischmann is expected to cost £24m less to implement.





▲ BAM Construct UK suicide awareness video release

A powerful new video that aims to raise awareness around the issue of suicide among construction workers, produced with the support of BAM Construct UK, has been released. On The Edge urges construction workers not to ignore colleagues who they think may be experiencing mental ill-health, but to talk to them and listen.

► Tungsten mining waste made into aggregate

Materials supplier GRS has secured an exclusive deal to bring to market millions of tonnes of granite from British tungsten mining for use as construction aggregate. GRS has joined forces with Tungsten West, which operates Hemerdon tungsten-tin mine near Plympton, Devon, to sell high-quality secondary aggregate and transport it nationwide by sea and rail.



▲ Ainscough lifts 38m bridge into London neighbourhood

Ainscough Crane Hire's heavy cranes team has installed a new bridge at Sugar House Island, a canal-side neighbourhood in London. The 38m Matilda's Bridge, built by Wood Beton, is a prefabricated, concrete and glulam structure. It was built in a factory in northern Italy and transported in large sections to the Sugar House Island development.



Housing minister wants industry to help homeless into building careers

Ahead of World Homeless Day, Eddie Hughes reveals plans to connect construction firms with 'alternative giving' charities



Eddie Hughes wants to link up construction companies with 'alternative giving' charities that support homeless people into new careers.

Speaking ahead of World Homeless Day on 10 October, the housing and rough sleeping minister told *CM* he had recently made donations Eddie Hughes plans to connect job brokerage organisations with the industry to Beam, an organisation which crowdfunds new job opportunities for homeless men and women.

"Through Beam, you have a range of options for helping people, some of whom are looking to get into the construction industry," Hughes explained. "But there are barriers to entry, such as the training required for a CSCS card, for example, or buying your own PPE for your first day on a site. These are all significant barriers for homeless people.

"So I have made a couple of donations to help people get a start in the construction industry through Beam."

Hughes, who was asset management director at YMCA Birmingham before joining parliament, plans to do more work connecting Beam and other job brokerage organisations with the construction industry, alongside ministers from the Department of Work and Pensions.

"One of the great things about construction is people can enter at one level and then progress once they have a degree of confidence through "One of the great things about construction is people can enter at one level and then progress once they have a degree of confidence" Eddie Hughes MP

college learning," he said. "We can fund that training through an organisation like Beam."

Hughes also feels modular technology is another way the construction industry can help homeless people rebuild their lives. He recently supported the launch of SoloHaus, a new modular housing product launched by the Salvation Army and Hill Group to support people experiencing homelessness. The homes are designed to Future Homes Standards and have running costs of less than £5 a week.

"We know people from low incomes have fuel poverty and these energyefficient modular homes are cheaper for them to occupy, which also links to our net zero commitments," Hughes explained. "The homes can be built quickly on small pockets of land that bigger developers might not be interested in.

"It's a great example of how the construction industry's problemsolving ability can be used to help a societal issue."

CM remains highest circulating magazine in UK construction

Construction Manager has retained its position as the circulation market leader in UK construction, according to auditor ABC (Audited Bureau of Circulation).

CM's circulation was 31,275 for 2020-21 according to ABC, the publishing industry standard for measuring magazine circulation. This puts CM comfortably ahead of other industry titles Building and Construction News.

The last independently audited circulation published by *Building* was 10,858 in 2014. PricewaterhouseCoopers was the auditor. *Construction News* has not published an independently audited figure since 2013-14, when its circulation was 8,595 according to ABC. As well as its high print circulation, CM's website reaches an even bigger audience of

construction professionals, with

over 58,000 subscribers to its

email newsletters.



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geberit.co.uk/Mepla

Pump action: Delivering the heat pumps needed to meet the government's net zero strategy, p40-41



Grenfell Inquiry theatre production will 'call failings to account'

'Verbatim theatre' production to dramatise key evidence from the Grenfell Tower Inquiry



"We are giving people more information. We are not making anything up, and we are trying to be as unbiased as possible" Nicolas Kent, theatre director

The Grenfell Tower Inquiry will be

dramatised in a new theatre production starting in October, which will highlight the failings from the tragedy to a non-technical audience, the director told *CM*.

The not-for-profit dramatisation, called Value Engineering – Scenes from the Grenfell Inquiry, has been created by theatre director Nicolas Kent and former Guardian security editor Richard Norton-Taylor. It aims to offer a succinct explanation of how 72 people died in a fire at the building on 14 June 2017.

Kent and Norton-Taylor have previously worked together on verbatim theatre productions based on inquiries into Bloody Sunday, the murder of Stephen Lawrence, and the death of Baha Mousa.

Kent told *CM* that he hoped the production, which was based on an edited version of more than three years of testimony, would give a clear overview of the second phase of the inquiry and look at what went wrong with the refurbishment and what can be learned for the future.

It focuses on testimony from the architects, main contractor Rydon, the cladding subcontractors, building control and the Kensington and Chelsea Tenant Management Organisation (KCTMO), under questioning from counsel to the inquiry.

"It has been about trying to make it understandable and not to make it too technical, to give an overview of what went on, which is very complex," Kent said. "The pith of what we wanted to do was looking at the failure of Building Regulations and the failure of those people who should have done their jobs better.

"It will obviously affect people who went through the devastating fire and whose lives were forever affected. We have tried to be as sensitive as possible – we have anonymised particular incidents and changed floor numbers, sexes and names, so that we are protecting people in those particular cases."

Kent added that he appreciated the dramatisation would also be difficult for those who had been involved in the refurbishment.

He said: "Raking over what they did will not be easy for them either but on the other hand, people have to be called to account for their failings. I think it is something that theatre can do rather well. We are giving people more information. We are not making anything up, and we are trying to be as unbiased as possible."

The show is at The Tabernacle theatre in London's Notting Hill from 13 October until 13 November and the Birmingham Rep from 16-20 November 2021.



CIOB subscription notices go digital

Members to receive notices via email as part of moves to reduce the CIOB's carbon footprint

The Chartered Institute of Building (CIOB) is going digital for all 2022 subscription notices.

The forthcoming renewals season will see all members who have provided email addresses to the CIOB receive their notices via email as part of the CIOB's moves to reduce its carbon footprint and energy use. Last year's subscriptions were sent with an opt-in for digital subscriptions, which was received well by members, and this step builds on that.

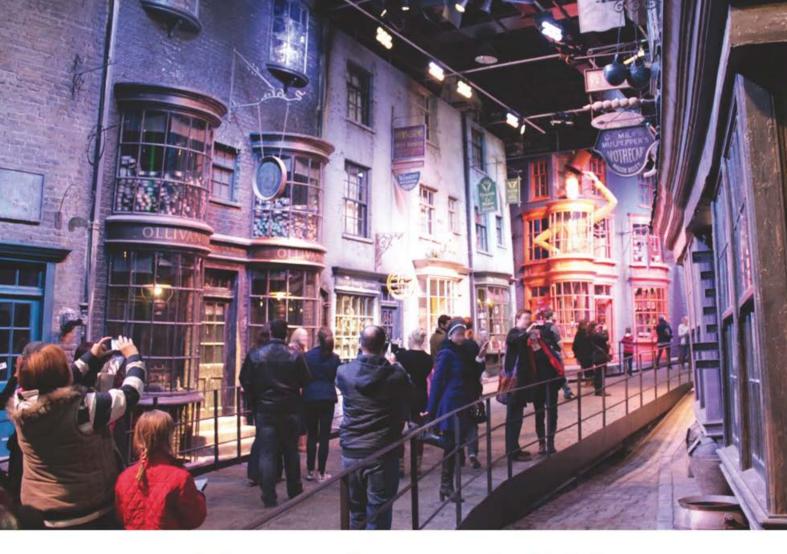
Any member wanting to check the email address held by the CIOB – or even update it – can do so via the online Members' Portal. The few members who have not supplied the CIOB with an email address will get subscription paperwork sent via the post.

The first subscriptions notices for 2022 will be sent at the start of November.

The CIOB has also confirmed that the Covid-19 Support Fund, set up in 2020 specifically for members facing financial difficulties as a result of the pandemic, will be available to those who may need a concession on 2022 subscriptions.

The support is available to those who were furloughed, are on reduced pay or facing redundancy and hold one of the following grades of CIOB membership: MCIOB (member of the Chartered Institute of Building)

- FCIOB (fellow of the Chartered Institute of Building)
- ACIOB (associate member)
- ICIOB (incorporated member)
- Applicant member.



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Number of years that labour supply problems across the economy could persist for, as warned by Confederation of British Industry directorgeneral Tony Danker



🕒 Data

New work offers optimism as labour shortages bite

Recent ONS data shows new orders rising significantly, but finding talent to fill the skills gap is likely to require long-term investment, writes **Kris Hudson**



As the construction sector and the wider economy continues to recover post Covid, with construction

leading the way, it remains to be seen whether green shoots will convert into deep roots. Despite new positive data on construction output and new orders, manifesting labour shortages and ongoing cost increases remain a threat to the sector's recovery, and could hamper long-term growth prospects.

Recent Office for National Statistics (ONS) data shows new orders rising significantly, increasing by 17.6% on the quarter and 135.2% on the year as of 02 2021 as demand climbs out of its pandemic trough at pace. It's worth bearing in mind that this is from a much lower base than even during a global recession such as 2008, and shows a rapid return of investor appetite.

This should bode well for construction output – which tends to lag a couple of quarters behind new orders' progress. But this is far from certain, and labour availability to deliver these new orders remains a significant challenge. Unless demand declines, productivity improves, or labour supply increases we will only see the ongoing undersupply of labour persist.

Recessions tend to cause a reduction in construction employment but in this case we're starting from an especially challenging position.

News in numbers

86%

The amount of construction sector supplier respondents to a Builders Merchants Federation survey reporting that they are being impacted by haulage issues – their number one concern. The Covid-19 induced recession, coupled with Brexit and a reduction in the availability of foreign workers has seen construction employment fall 8.2% below pre-pandemic levels seen in Q4 2019.

With construction output and new orders exceeding expectations so soon after recession, labour resource is under considerable strain.

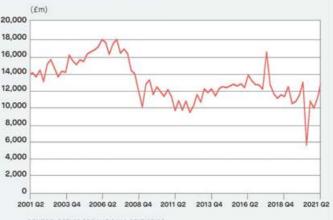
Finding and training new talent to plug the gap is likely to have a substantial time lag, which in turn may sustain high labour costs. Over the last 10 years, the average weekly earnings in construction increased by an average month-on-year rate of 2.2%. Current figures are far in excess of that – reaching 14.1% month on year in June 2021. In turn, further upward pressure on costs could take its toll on output growth.

In the short term, labour is likely to remain expensive and businesses should prepare for the fact that while order books may be growing, so will the costs of construction. Longer term, the industry must dig deep to resolve legacy employment constraints. This means investing in people and working hard to diversify the talent pool – recruiting, training and retaining workers from as wide a group as possible to secure future labour capacity.

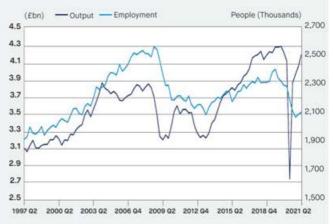
Kris Hudson is an economist and associate director at Turner & Townsend.

4%

UK building cost inflation as reported by Berkeley in its 2021 annual report. New construction work in the UK (£m)



SOURCE: OFFICE FOR NATIONAL STATISTICS



UK construction output (£bn) and employment (,000s)

SOURCE: OFFICE FOR NATIONAL STATISTICS

43%

Increase in health sector construction project starts bookending the pandemic, from July 2019 to July 2021, as reported by Glenigan.

£1,000

The bonus 530 eligible Buckingham Group employees will receive, tax free, after the company switched to employee ownership via an employee ownership trust.

10 CONSTRUCTION MANAGER OCTOBER 2021



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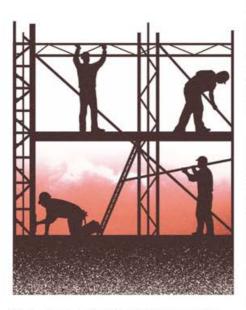
🔘 Opinion



Alison Ramsey

How SMEs can help to stamp out modern slavery in construction

Ahead of Anti-Slavery Day 2021 on 18 October, **Alison Ramsey** explains how construction SMEs can protect and support their employees



Sadly, the exploitation of people remains an issue across many areas of business, including the construction industry.

The effects of the recent lockdowns, coupled with the need to speed up project delivery, have only amplified this. The charity Unseen, which runs a 24-hour modern slavery helpline, highlighted how the shutdown of other industries put the spotlight on exploitative construction work. A total of 57 cases with 209 victims were recorded between 23 March and 23 September 2020 – higher than in any other industry in the UK.

Subcontractors especially can find themselves targeted by unscrupulous criminal groups supplying labour at low rates and often lack the resources of larger firms to operate rigorous due diligence.

SMEs employ more than 60% of those working in the private sector, which places them in a critical position to respond to modern slavery. To do this, SMEs need the right tools to support them in assessing and managing their own risks, recognising the warning signs and knowing how to deal with concerns if modern slavery is suspected.

Mitigate the risks of exploitation

Modern slavery operates in plain sight and could affect construction businesses without them knowing. Clear procedures and communication channels in place with workers – to allow them to safely report grievances or whistle-blow without fear – are vital and should be common practice among SMEs.

It's also important that SMEs help to raise awareness of the rights their employees have. To ensure this, every employee must be provided with a written contract in a language they understand that outlines their working hours, pay and overtime rates as well as holiday and sick pay entitlements. Workers' rights posters displayed on site and within office buildings can be used to reaffirm the message and encourage them to come forward if they don't feel safe.

The pressures to complete projects delayed by the pandemic can sometimes result in thorough workforce checks being cut short. It is in the main contractors' interests to confirm that SMEs conduct the correct right-to-work checks on people they employ. Regular payroll reviews, to make sure that workers' wages are being directly paid into their bank accounts instead of those of third parties, can also help to raise potential red flags. "Subcontractors especially can find themselves targeted by unscrupulous criminal groups supplying labour at low rates and often lack the resources of larger firms to operate rigorous due diligence"

Watch for the signs

Even when the necessary steps to reduce the chance of onsite exploitation are taken, it can still happen. It is important to be aware of the tell-tale signs to spot any potential exploitation. These can include a frightened or confused physical appearance, few or no personal possessions, a reluctance to seek help for day-to-day tasks or even unusual travel times to and from the site.

Contractor support for SMEs

While it is important that SMEs remain supported, and informed of how best to mitigate the risks of modern slavery, tier 1 contractors have a responsibility to the supply chain workers that operate on their sites.

Appointing a modern slavery welfare officer to oversee movements during the development of a project can help to identify any unusual activity and provide a visible point of contact for help and advice.

As a framework provider, we work closely with our delivery partners, which are tier 1 contractors and their supply chains, to help prevent and protect workers from exploitation or abuse, with appropriate safeguarding measures and regular checks put in place to ensure that any exploitative practice is identified and remedied.

Modern slavery is unacceptable in any form. Increasing awareness and raising the profile of the routes for reporting suspicions is a shared responsibility right across the construction industry.

Alison Ramsey is social value and performance manager at public sector procurement authority Scape.



Caroline Gumble

How inclusion can make construction a more attractive place to work

The CIOB is paving the way for the next generation of construction leaders to be heard, writes **Caroline Gumble**



"Many in our industry already show leadership on driving diversity and inclusion – the CIOB Equality, Diversity and Inclusion Charter is also an opportunity to promote what you are doing"

You may have seen in last month's CM

a thoughtful piece from Scape on steps the construction industry must take to be more inclusive. I've made the case for diversity and inclusivity on many occasions. I sense that we now have some momentum in improving how we recruit, given the wide acceptance that our industry needs new recruits and that we must attract the best talent. As a priority, that means expanding the pool of talent to bring in more women, people from ethnic minority backgrounds, people with disabilities and other underrepresented groups.

As part of the CIOB's journey, we have been working with our members, sister professional bodies and across the industry to promote inclusion and play our part in enacting positive change. I'm pleased to announce that we are now preparing to launch a *CIOB Equality, Diversity and Inclusion (EDI) Charter,* to stand alongside the *Action Plan* published earlier this year. The charter has been created to be practical, outlining behaviours we can all work towards to make our industry more inclusive. It offers a direction of travel, recognising that we are all at different points on this journey.

When the charter, and the accompanying *Special Report*, are published in a few weeks, I would like to encourage all employers in the sector to sign up to it, to help make a difference. I know many in our industry already show leadership on driving diversity and inclusion – the charter is also an opportunity to promote what you are doing and show your commitment to helping make the industry a more attractive place to work. It sends a clear message, not just to your existing employees, but to potential future recruits and clients too.

In short, the charter can help an employer build its reputation as being a business that is socially aware and conscious of its impact.

I'm also mindful of the fact that the majority of construction companies are SMEs – the charter has been created for use by any size of business. By signing up, a company is saying we want to do more, whatever the starting point, and we are in the company of others who feel the same.

My thanks to Scape and to Willmott Dixon for supporting us in this piece of work and for their encouragement in keeping diversity and inclusion on the agenda.

OPINION

🔘 Feedback

A selection of readers' comments about news and issues in the industry from www.construction managermagazine.com

O CM 04/09

Housing minister in call for quality

Ken Hubble

I have been in the construction industry for 60 years and find the interview with [housing minister] Eddie Hughes sadly relevant in today's construction industry.

However, I would add that his views and legislation alone will not bring about better and safer buildings, particularly in house developments.

I have witnessed major failings by volume housebuilders, where the average house owner would not be aware of the defect, such as concrete footings not being to the correct depth, soil and vent pipes discharging into the roof void, and internal walls that should be load bearing that were in fact non load bearing. I could go on.

These types of errors and bad workmanship practices can only be addressed at site level during the build process by an independent inspection system.

It's simply knowing what happens on site that counts and will produce a better workforce and better building.

O CM 31/08

Ray O'Rourke: 'Construction still in the dark ages'

Jack Ostrofsky

Entertaining comment regarding autocracies which are usually quite dysfunctional and stiffing towards innovation and free expression. I think Mr O'Rourke's reference to changing ministers is a fair criticism about government's lack of consistency, which has us driving towards demographic capacity with an MMC parachute that is still not suitable nor sufficient for clients and UK context.

Chris Todd

Ray had me nodding in agreement until I got to the last two paragraphs. I'd hoped he would focus the end of the article on building relationships with clients, ensuring we become the high-quality employer of choice for those focused on driving genuine improvement and identifying clearly everything we do is about people and relationships.

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Construction Manager of the Year Awards 2021





* Marc Burton MCIOB Garenne Construction Group

Project: Jersey General Hospital – Nightingale Wing Scope: Construction of 180-bed field hospital, completed in four weeks Client: Government of Jersey Contract: NEC 3, option E (cost-reimbursable) Value: £6.6m

NIGHTINGALES SING

GARENNE CONSTRUCTION GROUP'S MARC BURTON TOOK THE OVERALL CONSTRUCTION MANAGER OF THE YEAR AWARD FOR HIS ROLE IN BUILDING JERSEY'S NIGHTINGALE HOSPITAL. OVER THE NEXT 20 PAGES **CM** REPORTS ON ALL THE WINNERS

Build a fully functional 180-bed

hospital in just 25 days? Pre-Covid, laughter might have been the likely response, but for Marc Burton, along with the whole island of Jersey, the urgency was entirely justified. Marc's expertise and ability to galvanise the island's construction sector saw the completed building handed over, significantly under budget, after just 25 days on site. The excellence of Marc's achievement was recognised by the award of an MBE.

Speaking about his MBE, Marc said: "Whilst this is a personal award, this project was truly a team effort and I really must say thank you to a fantastic team, which saw Jersey's construction industry pull together and work collaboratively with many government departments."

Category sponsored by



It was Marc's extensive local knowledge that made this scheme so successful. With local lockdown creating an available pool of 6,000 construction workers on the island, he knew that site labour would not present a risk. But he also realised the need for the innovative approach of competing suppliers working collaboratively. No single local company was able to cover all of a specific trade task. Five floor-laying companies had to work together to install the vinyl in 24 hours, and it was a similar story for carpenters, service contractors and so on.

No local subcontractors had ever done this before, but the process ended up being hugely successful and has given local trades the confidence to work together on future large projects. The same spirit of innovation was demonstrated by Marc's prefabrication of all the MEP bed modules off site in Jersey, using the experience in his own team to pass on new knowledge to a local supply chain unversed in the processes. With other UK Nightingales and surge centres also under construction or in planning at the time, creating competition for materials, Marc used the Manchester Nightingale being built by Garenne's UK partner company as his template. He placed orders for key items in the first 72 hours of getting the project go-ahead, and shrank design time by reproducing much of the Manchester layout and specification.

Right from the start, when he came up with the key greenfield location for the site rather than the conference centres typically used for the UK Nightingales, Marc took hold of this project and made it work. The rotunda design of Jersey's own conference centre site option would have been inefficient and required much more remedial work, compared with Marc's greenfield site. The land, which was owned by an old client of his who concluded the deal in less than an hour, met all the location criteria, including being no more than four minutes from the main hospital.





Healthcare

Highly commended

Peter Sharpe Laing O'Rourke, Grange University Hospital, Cwmbran

Other finalists

Stephen Harnett MCIOB Willmott Dixon, The Tessa Jowell Health Centre, London

Martin James Willmott Dixon, Transitional Care Unit – Singleton Hospital, Swansea

Andy Shepherd MCIOB Kier Construction, Lighthouse Labs, Plymouth

Adam Watts Vinci Construction, Royal Preston Hospital Critical Care Unit

Aerial view of the completed Jersey Nightingale (far left), construction of the frame (top), and the interior



★ Vince Kesterton MCIOB Tilbury Douglas

Project: The Birmingham Nightingale Scope: Construction of emergency hospital, completed in four weeks. Client: University Hospitals Birmingham and NHS Contract: NEC 3 On this mission impossible to build

a hospital with 800 critical care beds in a month, Vince Kesterton leveraged 30 years of experience delivering high-value healthcare projects. His coordination, sequencing and communication triggered an excellent response from his supply chain, delivering not just the facility, but also excellent quality and programme.

He brought the innovation and nimbleness badly needed on such a fast-track scheme, finding alternatives and solutions to protect the project budget. The client's project manager declared it "the best example of teamwork I've ever known, and I've worked in the health service since 1979".



Accommodation over 4 Storeys



★ Steven Vaux Morgan Sindall

Project: Residence Inn/ Moxy Hotel, Slough Scope: Construction of two stacked hotels with adjoining 64-unit apartment block, completed in 87 weeks Clients: Slough Council, Slough Urban Regeneration, Cycas Contract: JCT, design and build Value: £48m

Delivering three months ahead of

schedule, lockdown notwithstanding, on budget and scoring 10/10 for customer satisfaction, Steve Vaux pulled off this three-in-one scheme in some style. The development sees two hotel brands stacked on top of each other, with an apartment block next door.

The build took up 95% of the site footprint, and was surrounded by one-way roads, bus lanes and a live residential block that shared an access road with the site. Steve applied hard work, robust planning and determined



management to tackle these logistics challenges, keeping the site's two tower cranes, two hoists and 15 mast climbers constantly in action through a robust booking system aligned with the delivery schedule.

With fittings and furnishings coming in from Spain, China and all points in between, Steve funnelled them all into an offsite space where they were checked in and grouped on the basis of their installation position, before being distributed around the build.

The bedroom types of both hotel brands differ substantially – the Moxy is targeted at short stays and so has smaller rooms than the Residence, which focuses on extended stays. Steve gained build efficiencies by grouping rooms together into zones and slightly enlarging the Moxy rooms to streamline the vertical riser setout.



Jordan Allingham MCIOB EHA Group, Derry's Cross Plymouth

Henry Camillus MCIOB Durkan,

Southmere, London

Jon Clayden MCIOB ISG UK Construction London, The Chimes, London

Paul Consterdine Tolent Construction, Hadrian's Tower, Newcastle

Ger Hayes MCIOB John Sisk and Son,

E03 Canada Gardens, London

Ciaran McCallion MCIOB McAleer & Rushe Contracts UK, The Gate, Sheffield





Project: Onyx, Birmingham Scope: Construction of 1,025 units of student accommodation, completed in 70 weeks Client: AIG

Contract: JCT 2011, design and build Value: £59m

Project Smart methodology and

clever sequencing were John Higgins' constant companions on this ambitious scheme on a city-centre island site for a 1,000-unit block crowned by a 24-storey tower.

Jumpform core construction and double-stacked mast climbers were just two of John's key initiatives. He also offered technical insight that eliminated risk and cost. He standardised the building's internal columns to minimise bespoke formwork and bulked up the structural framing system to support the full-height windows to avoid overloading the slab edge of the post-tensioned concrete frame.

His hard work, clear thinking and calm approach delivered this very complex design.

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Accommodation up to 4 Storeys



★ Jack Wells MCIOB Willmott Dixon

Project: The Homestead Building, St Albans Scope: Construction of student accommodation with 83 bedrooms and social/amenity spaces, completed in 58 weeks Client: Oaklands College Contract: NEC 4, option A Value: £9m

When Jack Wells told the client's project manager that he intended to hand this student housing scheme over with zero defects, she was understandably sceptical, especially

understandably sceptical, especially since the project had started six months later than scheduled after the original contractor pulled out.

Jack seized every opportunity to surpass what was expected, through rigorous planning, timely action and meticulous monitoring. He rose to the challenge of eight different bedroom types, 14 wall types and 13 window types by managing the supply chain



ultra-carefully. His decision to change from traditional concrete blocks to a clay version that was lighter and faster to install saved the client £80,000.

His re-engineering of the car park attenuation delivered another big saving. Equally significant was his introduction of bathroom pods for the 83 ensuites which were fundamental in ensuring the unmovable project deadline was met. As the commissioning phase began, the pandemic struck. Jack revised the programme to dedicate specific zones of the building to individual trades teams. And while Jack himself had to suddenly self-isolate for a fortnight and remote-manage the project, he still handed over on time – and defect free. His success has won him the further job of a 50-classroom block for the client.

Other finalists

lan Green Barratt Developments, B5 Central, Birmingham

Jon Kelly MCIOB Mears New Homes, The Paddocks, Hemel Hempstead

Kirk Raine Barratt and David Wilson Homes Mercia, Doseley Park, Telford



* Mick Hill MCIOB Willmott Dixon

Project: The Beeches and The Nevilles, Leeds Scope: Construction of 59 homes across two sites, completed in 74 weeks Client: Leeds City Council Contract: NEC Value: £9.5m

On this 'prover' project of 59 houses, Mick Hill had the added challenge of winning over a client that had grown increasingly disillusioned about the ability of construction to deliver.

Mick's dedication to quality and programming remained constant despite the logistics constraints of lockdown. With deliveries affected, he met deadlines by switching materials and trades between the two sites.

Consistently professional, calm and respectful, he resolved problems fast. He smoothly managed the substantial technical difficulties on two tight sites, planning meticulously while showing the flexibility to overcome the unscheduled. With quality expectations exceeded, the client wants Mick to lead its following schemes.







* Nick Preedy MCIOB Willmott Dixon

Project: Interdisciplinary Biomedical Research Building, University of Warwick Scope: Construction of 7,000 sq m research and teaching block, completed in 118 weeks Client: University of Warwick Contract: JCT, design and build Value: £36m

On this five-storey showcase for

modern methods of construction, Nick Preedy took his passion for prefabrication to new heights, cutting six weeks off the programme while delivering to a consistently high quality.

He championed a hybrid precast concrete frame tied to a glulam and cross-laminated timber frame. When Covid-related delays held up deliveries of the 2,000 sq m of preglazed double-storey concrete units, Nick installed temporary weather protection and rerouted perimeter services affected by the need to keep the scaffolding in place for the cladding.

Nick's innovation derisked installation and programme. He instigated the design of a 27m-tall factory-assembled mega riser that could be dropped into the shaft off a single tower crane in just two days, compared to 18 weeks on a traditional programme.

More than 2,000 penetrations were created off site and over 100 horizontal multiservice module frames.

The volume use of factorymanufactured products halved the number of deliveries to around 2,200 when compared to a traditional build.

Far fewer workers were needed to complete the works – eight installers and two supervisors assembled the entire precast concrete frame on site, three people put the timber frame together, and four installed the 2,000 sq m of concrete cladding using one tower crane.



Project: The Sir Michael Uren Hub, Imperial College London Scope: Fit-out of three upper storeys of a new-build office block as research labs and offices.

completed in 54 weeks Client: Imperial College London Contract: NEC 3, option A, design and build Value: £13m

On this state-of-the-art fast-track

fit-out, Jack Pitt delivered early handover, budget and quality. A champion of modern methods of construction, he based his success on the use of 4D BIM.

His value engineering was equally significant. He saved £80,000 by replacing 72 bespoke metal service poles for proprietary anodised equivalents, also saving on installation time. And he identified an alternative floor screed that could be installed more economically.

By modelling resource and sequencing, Jack demonstrated that the scheme could go forward in lockdown with socially distanced working. Reliable and proactive, he showed great technical and leadership skills in delivering the scheme.



Higher Education

Other finalists

Richie Carter MCIOB Beard Construction, Dr Lee Shau Kee Building, Wadham College, Oxford

Nick Claessen Willmott Dixon, Institute of Sport, University of Hertfordshire

Rob Cooper MCIOB

Laing O'Rourke, Biochemistry Completion, Oxford

Ashley Dale MCIOB Sir Robert McAlpine, Durham University – Mathematical Sciences and Computer Science Building

Liam Davies

ISG, University of Wolverhampton School of Architecture and the Built Environment

Andrew Greaves MCIOB

MCIOB Henry Boot Construction, Royce Discovery Centre, Harry Brearley Building

Darren Hancock

MCIOB Willmott Dixon, Aberystwyth Innovation Enterprise Campus

Steve Lambourne MCIOB

Beard Construction, St Hilda's College, Anniversary Building and Riverside Pavilion, Oxford

Nick Proverbs MCIOB

Willmott Dixon, University of Birmingham, Engineering Building

Neil Sleigh Henry Brothers Midlands, Nottingham Trent University – Dryden Enterprise Centre

Office



Emily Hoggins MCIOB BAM Construction

Project: 22 Handyside Street, London Scope: Construction of 36,000 sq ft mixed-use office block, completed in 85 weeks Client: Argent Contract: JCT, design and build Value: £19m

On this King's Cross regeneration

scheme, Emily Hoggins found herself running one of the highest-risk jobs in the UK at the time. And it was her first job as project manager.

With three rail tunnels – all Grade II-listed and two of them live – running Im below the strip foundations for the light-steel-frame three-storey block, the potential for catastrophe was only too apparent. Emily oversaw a complex foundation installation programme which deployed super-lightweight concrete, poured in sections of no more than 7m.

Extinction Rebellion protests taking place in London at the time



caused huge delays in concrete delivery, rendering some of it unusable on the project by the time it arrived. Emily inspired the site teams to push through and complete the groundworks and the steel frame in time for the curtain walling to commence.

The superstructure was equally complex. Diagonally arranged to balance the weight better, the build replicates the line of the tunnels, as do the series of parallel standingseam roofs. Emily introduced BIM to model each coping to ensure it matched the extremely difficult twists and 45-degree pitches involved.

With the project delivered on programme and within budget, she was commended by both client and architect for her performance on this technically challenging build.

Highly commended

Tony Northcott MCIOB Kier Construction, Oceansgate phase 2, Plymouth

Other finalists

Tony Boorer MCIOB Skanska, Sixty London Wall

Andrew Feighery MCIOB Multiplex Construction Europe, 22 Bishopsgate



★ David John MCIOB Willmott Dixon

Project: Llys Cadwyn/Taff Vale Redevelopment, Rhondda Scope: Construction of two fivestorey office blocks and a librarycum-gym, completed in 134 weeks Client: Rhondda Cynon Taf County Council Contract: JCT, design and build Value: £45m With this high-profile project hit by a

once-in-a-millennium flood and the threat of a retaining wall collapsing, David John deployed his technical insight and site experience to manage out risk. He identified the buildability and budget issues of the proposed precast concrete cladding and switched to a time and money-saving combination of steel frame and traditional brickwork.

By building a significant sample panel of the envelope, he eliminated air leakage risks for the building. It allowed the site team to understand the detailing issues and practise installation of the various elements.



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Public & Leisure



Shaun Burrows MCIOB Willmott Dixon

Project: Delamere Forest Visitors Centre, Northwich, Cheshire Scope: Construction of welcome hub, completed in 75 weeks **Client:** Forestry England Contract: NEC, option A Value: £9.6m

On this huge, 100,000 sq m site, Shaun Burrows did extensive research into the landscape and ground conditions to minimise the project's environmental impact. With several protected species, he delivered regular onsite watching briefs and collaborative toolbox talks.

To deal with the flooding potential created by poor ground conditions. Shaun installed a rainwater harvesting tank to recycle surface water for toilet flushing. He value-engineered the cut and fill and changed from a traditional slab to a raft foundation to reduce



substructure works. Shaun changed the original tarmac specification to a more durable, hardwearing product for heavily trafficked areas at no extra cost.

Although the new kitchen was designed, manufactured and installed by others, he did not simply sit back and watch the client's subcontractor - instead stepping in to assist with the design and programming.

And when, at a very late stage, the water utility announced it couldn't guarantee that the pressure of a new water main would be high enough for firefighting, Shaun carried out extensive research to find a temporary solution to prevent handover delay - and eventually succeeded in securing a permanent system from a specialist supplier.





Greater Manchester

Project: Specialist Operations Centralised Hub, Manchester Scope: Construction of threestorey police operations building, completed in 91 weeks Contract: JCT 2016, with quantities Value: £7.7m

The success of this project owed

much to Robert Sankey's decision to construct the dedicated road from the new complex early to give direct access to the site, eliminating a vast amount of security vetting. This in itself was a complicated civil engineering scheme, cutting through a retaining wall with a steep gradient to street level.

Robert futureproofed the main building by constructing its flat roof to the same specification as the floors, extending the stairwells and lift shafts to roof level, and strengthening the foundations and frame to take a prefabricated fourth-storey block in the future.

Other finalists

Christian Clues MCIOB BAM Construction. King's Cross Sports Hall

Mark Gibson MCIOB ISG Construction, **Chester Fire Station**

Andy Howarth MCIOB Willmott Dixon.

Rochdale Riverside Dafydd Morris Willmott Dixon.

The Foodworks SW, Westonsuper-Mare

Paul Purser **Kier Construction Regional Western** and Wales,

PDev Physical

Dartmouth

Training Centre

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zation of Construction published in June, 2020 (<u>The 2021 version is coming soon in September</u>), the future scenario of building houses is depicted thoroughly. This report will give you a concrete and vivid idea about the exciting prospect of construction in the digital age, following with technical innovation and evolutions in industry best practice of digital building.

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Refurbishment & Restoration over £10m





* Chris Linfoot MCIOB Willmott Dixon Interiors

Project: Old Admiralty Building, Westminster, London Scope: Refurbishment of grade Illisted building into 250,000 sq ft of office space across five floors, completed in 176 weeks Client: Department for Education Contract: NEC, option A Value: £54m

At the building where James Bond author Ian Fleming once worked as a naval intelligence officer, Chris Linfoot proved he had a licence to thrill. When asbestos was discovered, he reined back the potential time and cost consequences through fast action, regular resequencing and smart solutions.

To turn the cellular office spaces into a modern working environment, extensive new services were required which demanded frequent penetrations through load-bearing masonry. Chris saved time by developing a scheme of steel props surrounded by reinforcement to support the structure while shuttering was installed and concrete poured.

He also came up with a clever alternative for levelling the uneven slabs of the pot-and-beam floors. Rather than laying large timber packers in the low areas, adding significant weight, he switched to cementitious pads laid at one level to support the pedestals for the raised access flooring. The lighter pads also eliminated shimming time.

Chris marshalled the supply chain and professional team with his technical knowledge and a detailed understanding of the intricate challenges they faced, and ensured they understood the quality demanded. His commitment and energy were key to turning a beautiful but neglected building on a constrained site into a modern and efficient facility.



* Dale Harris MCIOB Morgan Sindall Construction Central

Project: Pantycelyn Halls, Aberystwyth Scope: External restoration and internal refurbishment of grade II-listed building, completed in 67 weeks Client: Aberystwyth University Contract: JCT 2011, design and build Value: £16m

This refurbishment of a grade IIlisted building on a limited budget required extensive value engineering. Dale Harris's careful challenges to the design saved nearly £1m.

Changes included ditching offsite bathroom pods, because there would have been few standard sizes, changes to acoustic insulation and different internal finishes. He showed his mastery of modern construction techniques with the offsite fabrication of the reception and main entrance in modular components.

Tenacious and enthusiastic, Dale brought the best out of the delivery team to ensure the start-of-term deadline was not missed. With a no-defects completion, the client awarded him a 10/10 score.



Other finalists

Anojkumar Canagasundaram MCIOB Galliard Homes, New Capital Quay, London

Stuart Cowan Glencar Construction, Project Hawk, Ocado, Andover

Jeremy Mann Kier Construction, Shire Hall, Gloucestershire

Jocelyn Whittaker-Smith Willmott Dixon Interiors, Riverside House, London

Mark Wolverson MCIOB Willmott Dixon, The Globe, Stockton-on-Tees



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Refurbishment & Restoration under £10m



* Megan Forster MCIOB Coniston Limited

Project: Royal Norwegian Embassy, 10 Palace Green, London Scope: Refurbishment of 20,000 sq ft, Grade II*-listed mansion, completed in 81 weeks Client: Statsbygg Contract: JCT Value: £4.8m

Megan Forster was the perfect

fit for this refurbishment of a Grade II*-listed mansion. Her understanding of construction was combined with a deep appreciation of heritage and a measured and meticulous approach.

As the contractor delivering external works ran into significant delay, she took over the whole project as principal contractor, accommodating the phase one works while undertaking her own. When £2m of additional works were added mid-project, she minimised the impact by vigorous resequencing.

There were several setbacks along the way, among them the removal of a wartime bomb shelter which proved impossible with breakers. Megan devised a system of diamond drilling to break the mesh within the wall and give a starting point for the breakers.

When parquet floors were lifted, it became clear that cores through joists made previously for services were threatening the structural integrity. Megan ensured that each room was logged so that strengthening measures could be designed.

Given the high-class finish of the specification, there was minimal scope to cut costs. However, she still managed to value engineer, finding a cost-efficient and longerlasting alternative to a bespoke handwoven stair carpet. The client and end user are both delighted with the quality of the project.







* Sam O'Neill Oakmont Construction

Project: Union Stockley Park, Uxbridge Scope: Structural refurbishment and fit-out of 72,000 sq ft office building, completed in 54 weeks Client: Tritax

Contract: JCT 2016, design and build, with amendments Value: £9.4m

Sam O'Neill's technical knowledge,

experience and commitment won this major strip-out and structural refurbishment contract for Oakmont. He did not disappoint.

Sam worked tirelessly to find the best solutions for the client. He changed from scaffolding to MEWPs to avoid damage to the fabric of the building; he took over the management of the electricity supply upgrade; and he elected to strip back and reapply the base plaster coat on a full-height feature wall when he decided that it didn't meet the grade.

Diligent, proactive and attentive to detail, he instilled peace of mind and delivered a very successful project for the client.



Brian Cole Willmott Dixon Interiors, DHSC Quarry House, Leeds

Laurence Courtney WW Martin Ltd, Megger Instruments Phase 1B, Dover

Mike Garrett Modus Workspace, Verisk, London

Ronald Hening MCIOB Glencar (now with Magrock), Hackney Bridge

Tristam Lithgow MCIOB Willmott Dixon, Somerset County Hall - A Block Refurbishment

Peter Marks MCIOB Greendale Construction, The Priest's House

The Priest's House Museum, Dorset Stuart Peace MCIOB

William Birch & Sons, Lincoln Cathedral Connected

Andy Stamford

Robert Woodhead Ltd, Wentworth Woodhouse, Rotherham

Mick Ward MCIOB Pexhurst Services, Chillbox, Thurrock



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Schools over £20m



* Fergus Brown MCIOB Heron Bros

Project: Early Years Expansion 2020, East Renfrewshire Scope: Construction of five 120-place nursery schools, completed in 76 weeks Client: East Renfrewshire Council Contract: JCT, design and build Value: £22m

With six successful projects for the

client already under his belt, Fergus Brown won the tender for this one – five nursery schools at different sites – by challenging the piling assumption. He identified that precast concrete-driven piles for the Eaglesham scheme would be noisy and disruptive, suggesting quieter vibro compaction instead.

Staggering the start date of each project by two weeks meant he could be on site for each of the initial site setups and lessons learned could be cascaded through. The result was minimal defects at practical completion.



He repeatedly shrank time, cost and risk. He overcame storm water discharge problems at three of the sites and substituted a dry stack with a geogrid retaining wall in place of a bulky brick retaining wall at two of the schools, cutting cost, time and earthworks.

On a project that involved the concurrent delivery of five buildings on five sites, the complexity and challenge were high. Fergus's leadership of a 34-strong professional team including five site managers, five engineers and five foremen – not to mention five head teachers – demonstrated an open, collaborative and determined ethos that again brought success with his seventh project for the client.

Other finalists

Roderick Graham MCIOB

Kier Construction, Ponteland Schools & Leisure

James Gray MCIOB BAM Construction, School of Science and Technology, Maidstone

Ben Harvey MCIOB

Willmott Dixon, St Nicholas SEN School, Wiltshire

Martin Horton MCIOB

VINCI Construction UK, King's School, Macclesfield

Dale Parker MCIOB Willmott Dixon, Green School for Boys, Hounslow

David Tomlin MCIOB

Kier Construction, Regional Building Eastern, Katherine Warington School, Harpenden





★ Lianne Lawson Willmott Dixon

Project: Dixons Trinity Chapeltown, Leeds Scope: Construction of combined 420-place primary and 560-place secondary school, completed in 64 weeks Client: Department for Education

Contract: JCT bespoke design and build Value: £22m

Lianne Lawson's determination and

inspiration on a school scheme with myriad stakeholders was rewarded with early completion, a 10/10 quality score from the client, and an elated end user.

Probably the biggest change headache of all came from the lastminute instruction to include a bridge across the A58, which separated the school's car park from its main building. She found the extra cost within the existing budget by value-engineering the foundations, changing the steel erection sequencing and rethinking an extensive cut and fill operation.

The client has awarded her another school project following her success on this one.

Schools under £20m



★ James Wood MCIOB Morgan Sindall Construction

Project: Vandyke Upper School, Leighton Buzzard, Bedfordshire Scope: Construction of three-storey teaching block and remodelling and refurbishment of existing school, completed in 33 weeks Client: Vandyke Upper School Contract: JCT, design and build Value: £11m

This three-storey new-build

project demanded a fearsomely fast construction programme to open in time for the new academic year. James Wood met it by turning to modular construction to achieve a 20-week improvement compared to a traditional build. By splitting the erection sequence for the 87 modules into two complete halves, he was able to start external critical path works earlier.

James worked closely with the modules supplier to tailor the factory work processes so that risks associated



with installations could be minimised. He also sent at least two team members to the factory every week to witness quality assurance processes.

James made major time gains in the new build's ground by using the existing stone surface for the piling mat. Likewise, he tweaked site levels for four netball courts, eliminating hundreds of muck-away lorry movements, and changed the position of the attenuation tank to enable installation early in the programme.

On a super-tight programme, James delivered on time – handing over the new build fully commissioned and snag-free on the Friday, with students starting classes the following Monday – and to a standard that matched the client's high expectations.

Other finalists

Andy Barlow MCIOB Skanska, Kingsweston SEN School, Bristol

Finlay Black MCIOB Robertson Construction (Northern), Merkinch Primary School & Family Centre, Inverness

Nigel Hayes Kier Construction, Treorchy Comprehensive School, Phase 3B

Wayne Stokes Stepnell, The Cornerstone Academy, Poole

Mark Turner Willmott Dixon, Hornchurch High School, Essex



★ Andy Mitchell MCIOB Willmott Dixon

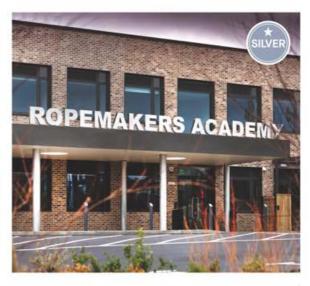
Project: Ropemakers' Academy, Hailsham, East Sussex Scope: Construction of two-storey school, completed in 66 weeks Client: East Sussex County Council Contract: JCT 2016, design and build Value: £13m

On a difficult site, Andy Mitchell

meticulously planned a fine success. He visualised the entire build in his head – from the piled foundations and concrete raft to the steel frame, composite floors, single-ply roof and brick cladding.

He engaged the supply chain with collaborative leadership and had thoroughly detailed the design before even getting to site. Changes to groundworks, drainage, roof details and swapping an in-situ concrete staircase for a precast one were some measures that improved the ease of build.

The project finished two weeks early, delivering budget savings and a level of quality that delighted the client.



Rising Star



* Winner Lydia McGuinness, Henry Boot Construction (now with Wates)

Lydia McGuinness has packed an awful lot into her six years in the construction industry. As well as proving herself to be a competent professional and a diligent student, she is a fierce ambassador for the industry.

Lydia started working for Henry Boot at the age of 18, studying as she worked to gain an HNC in the Built Environment, distinction, followed by a first-class BSc Honours in Construction Project Management. She has worked on multiple projects and, during the Covid-19 pandemic, ran a section of The Glass Works project in Barnsley for eight weeks while other colleagues were furloughed. Despite also finishing the dissertation for her degree during this period, and losing her grandfather to Covid, she pushed the project ahead of programme.

Beyond her project responsibilities, Lydia works hard for the industry and for local communities. She has been the chair of Generation for Change (G4C) for three years, organising awards, seminars, CPDs, talks and, more recently, webinars and podcasts. She is a STEM and CIOB ambassador and was on Henry Boot's charity committee for three years, organising and taking part in many events and programmes over that time. Truly a bright, shining star. ★ Highly Commended Megan Haslam, Sir Robert McAlpine

Coming to the construction

industry in 2016 as a trainee engineer with a Geography degree, Megan Haslam has gained technical and management expertise while showing leadership on sustainability.

While working full time for Sir Robert McAlpine, she studied for an MSc in Construction Management at Salford University, graduating with a distinction. In 2020 she became a chartered construction manager.

As well as demonstrating prowess as a package manager, Megan has worked as a sustainability manager, researching plastic waste in construction for her degree dissertation. In January this year she began a Sustainability Scholarship with the Worshipful Company of Constructors.



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Other finalists

King Wai Jason Cheung Hip Hing Construction Company, HKSAR

Ryan Greenidge London Borough of Lambeth

Magda Miazga ISG

George Parsons Gleeds

Alexandra Roche Halesowen College

David Smith Turner & Townsend, United Arab Emirates

Jack Turner BAM Construction Matt Williams

Faithful+Gould

Client of the Year



★ Alun Evans Merthyr Tydfil County Borough Council

The construction of a new bus

station in Merthyr Tydfil was already well advanced when a change in Welsh government policy caused Merthyr Tydfil County Borough Council to reconsider its plans. The Welsh government announced its goal of electrifying all public transport by 2028 and so, rather than proceed with the project as planned, the council took the bold decision to move to ultra-low emission vehicles (ULEVs) and electrify the station itself.

The result is Wales' first bus station with ULEV charging for both

buses and taxis. Led by Alun Evans, infrastructure project manager at the council, the project team elected to go much further, deploying renewable energy, rainwater harvesting and designing the facility for dismantling at the end of its service life.

Making such significant changes to the scheme, after it had been designed and framework contractor Morgan Sindall had been appointed, required cooperation and collaboration between the many parties involved. Alun, supported by the council's head of regeneration Chris Long, the Capita design team with project manager Stephen Phillips and Morgan Sindall project manager Ross Williams, set the behaviours and ethos which would help deliver success. Contractual change was managed using NEC3 Option A with 19 Contractor Design Portions (CDP). Risks were fairly apportioned and dealt with; for instance, the council retained risks associated to existing infrastructure which led to it replacing fragile utilities that ran across the site.

The new bus station – Wales' third busiest – was always going to be important for Merthyr Tydfil. Situated next to the railway station, it will be an integral part of a new transport hub and a vital step in wider plans to reinvigorate the town centre. Now it has also become a trail blazer, with lessons learned shared with other councils, the Welsh government and the Cardiff Capital Regional Transport Authority which co-designed the scheme.

Other finalists Jonothan Cooil

Almac Group

Hannah Capel Aneurin Bevan University Health Board

David Ayres AstraZeneca Macclesfield, FM Campus Project Solutions

Steven Lamb University of Wolverhampton

Rodney Hing Wokingham Borough Council

Team of the Year





BAM Construction's winning T-Zone team (top) and the 11-21 Canal Reach scheme

* Winner

BAM Construction, T-Zone, 11-21 Canal Reach, Construction Project Delivery

BAM Construction's project team for 11-21 Canal Reach is the deserved first winner of the CIOB's Team of the Year Award.

The project was delivered three weeks early during lockdown in February 2021 and client King's Cross Central Limited Partnership was so pleased they are negotiating with the same team for their next project on the north London site.

Construction manager Peter Spears created a 'one team' ethos, building relationships that extended beyond individual companies and using lessons learned from BAM's 20 years of experience at King's Cross.

The £200m 11-21 Canal Reach scheme is a 12-storey high, 585,999 sq ft mixed-use building with four internal atriums, cycle parking, panoramic lifts, private terraces and communal roof gardens. Construction challenges included close proximity to HS1 – with a penalty of £10,000 per minute for any interruption to the live railway – though not a single incident was reported. Despite complex logistics on a tight city-centre site, one million worker-hours were completed on the project with zero reportable incidents.

Innovations included a 3D-printed tool to install unitised cladding and the use of HoloLens technology to monitor progress against programme in BIM, shared in real time via an app with the client.

Part of BAM's legacy will be the 347 apprenticeships delivered through the project, while community engagement included 248 hours of volunteering and virtual site tours for locals.

Alan Crane CBE and PPCIOB, now a consultant with project architect Bennetts Associates, described BAM's approach on 11-21 Canal Reach as "collaborative, and exhilarating... truly one team".

Highly commended

BAM Construction Q-Zone, King's Cross Construction Project Delivery

Build UK Representative Organisation for UK Construction Industry

Other finalists

ISG, Sky Labs project team Construction Project Delivery

Placemakers London Sustainable Home Building

Heron Bros Leisure and Stadia Project Delivery

Skanska Project Pre-

Construction & Enabling

VolkerFitzpatrick Emerging Talent Team

Morgan Sindall Construction Construction Project Delivery

President's Award



Mark Beard FCIOB

THE MODERNISER

MARK FARMER IS THE SECOND RECIPIENT OF THE CIOB PRESIDENT'S AWARD FOR HIS EXCEPTIONAL WORK IN DRIVING THE CONSTRUCTION INDUSTRY'S MODERNISING AGENDA, EXPLAINS **MARK BEARD**

Supporting the construction industry to deliver high-quality buildings for its customers is central to the Chartered Institute of Building's (CIOB) Royal Charter and has been a core part of our research, training and qualifications

for many generations. During the last two years we have proudly published our very own quality code and quality guide, which are now widely used across the industry. I am delighted to have supported during my presidential year the CIOB's push to improve the quality of output from our industry.

Past presidents Paul Nash and Roger Flanagan have driven this work over many years and I pay tribute to their wonderful contribution to our industry.

However, there is one person who has done more than anyone else to introduce new ways of working into our industry, with a relentless focus on promoting modern methods of construction, with all its benefits for our industry's profile, productivity, long-term profitability and overall product quality.

The CEO and founding director of consultant Cast, with over 30 years

"There is one person who has done more than anyone else to introduce new ways of working into our industry"



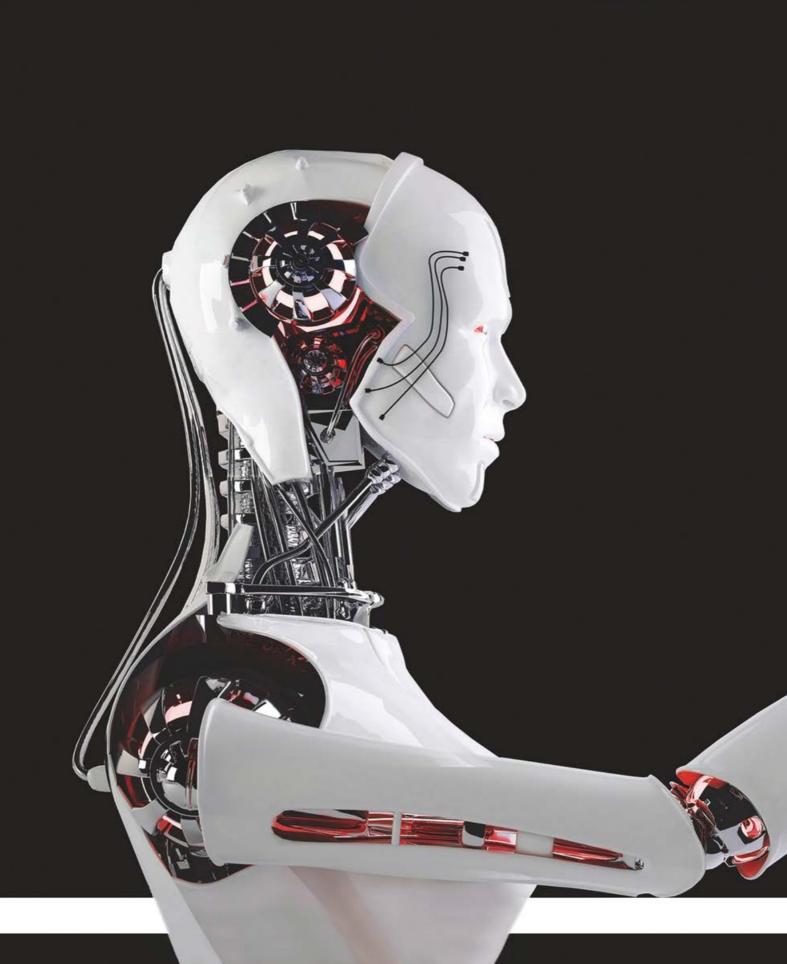
Mark Farmer: "A relentless focus on promoting modern methods of construction"

of experience in construction and real estate, Mark Farmer has become a recognised expert on a variety of industry and policy-related issues. Perhaps most famously, he authored the Farmer Review, an influential 2016 independent government review of the UK's construction labour model, entitled *Modernise or Die*.

In 2019, he was appointed as the government's champion for modern methods of construction in housebuilding. His many other roles include being a member of the Construction Innovation Hub Industry Board, the Construction Leadership Council senior advisors group, a board member for Construction Scotland Innovation Centre, national co-chair of Constructing Excellence, while being a trustee of the MOBIE educational charity. Mark is also an honorary professor at the University of Salford's School of Built Environment and holds honorary doctorates from the University College of Estate Management and the University of Wolverhampton.

As an acknowledgment of his work in driving real long-term change in our industry and lifting quality standards, I am delighted to award Mark Farmer the CIOB's 2020/2021 President's Award.

Mark Beard FCIOB is chair of Beard Group and past president of the CIOB.





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TELEMATICS, MOBILE AND 24-HOUR SERVICING CAN IMPROVE UPTIME AND REDUCE THE CHANCE OF BREAKDOWNS FOR CONSTRUCTION FLEETS, EXPLAINS FORD FLEET MANAGEMENT'S **MATT SAUNDERS**



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The construction industry is a

no-nonsense sector where everyone wants to do a good job and go home safely at the end of the day. Being out on site for days, weeks or months can be challenging and operators want things to work with as little hassle as possible. Vehicles are no different and getting them serviced or repaired miles from the office, in unfamiliar locations or at unusual times can be considered a problem.

That's when telematics, mobile servicing and 24-hour servicing come into their own. The ability to check vehicle health statuses remotely and provide information to servicing agents who can proactively come to site, any time of day or night to resolve the issue, is a massive advantage over a phone call from a driver broken down on a cold wet Friday night on their 200-mile trip back around the M25.

Keeping a 'real-time' check on the vehicle's health via mobile apps such as FordPass Pro or Telematics helps to ensure your vehicles are good to go every time, improving uptime and reducing the chance of breakdowns and accidents, therefore maintaining focus on the welfare of your staff.

Don't compromise

Coupled to vehicle health is employee health and the importance of having the right vehicle for the job, whether it's loading heights for manual handling or a place to store clothes warm and dry. Don't compromise for the sake of a few pounds is my advice - talk to your leasing provider, spec the vehicle for the job and if this means a bespoke conversion with sliding trays, lockable cabinets and night heaters, do it!

Wrapping this cost up into an easy-to-budget regular monthly payment is simple but effective. Remotely maintaining the vehicle health of the fleet improves uptime, cost savings and staff welfare

"Keeping a 'real-time' check on the vehicle's health via mobile apps such as FordPass Pro or Telematics helps to ensure your vehicles are good to go every time" Matt Saunders, Ford Fleet Management



While you're at it, why not consider the green credentials of your next vehicle? For years, we've been lured by low monthly rentals or cheap purchase prices, but this doesn't do any favours for hybrids or pure battery electric vehicles (BEVs), whose monthly rentals and purchase prices are typically higher.

Well now is the time to consider the total cost of ownership (TCO), which takes into account all costs associated with running a vehicle. You could be surprised at just how level the playing field actually is.

Big savings on fuel and BIK (if applicable) can more than outweigh the difference in rentals. Some leasing companies offer free TCO analysis across all makes and models so you can easily drill down to what works for you, your drivers and your business.

Help is also available when transitioning to BEVs. Taking a BEV flexible leasing vehicle allows you to try before committing long term and test your charging infrastructure - along with tackling range anxiety and offering suitable driver training.

Impartial advice on all of the above issues is only a phone call away – speak to Ford Fleet Management and we can point you in the right direction. For more information, call Matt Saunders on 07545 648184 or email Matt.Saunders@ fordfleetmanagement.co.uk.





PUMP UP THE VOLUME

AS GLASGOW GEARS UP TO HOST THE UN CONFERENCE ON CLIMATE CHANGE, **NEIL GERRARD** EXAMINES HOW WELL PREPARED CONSTRUCTION IS TO DELIVER THE HEAT PUMPS THAT THE GOVERNMENT HOPES WILL FORM A KEY PLANK OF ITS NET ZERO EMISSIONS STRATEGY

The government's much-heralded 'green revolution' is coming. As the UK prepares to host the UK's Climate Change Conference (also known as COP26) in Glasgow this month, it has already set out targets to achieve net zero carbon emissions by 2050.

The built environment – and in particular low-carbon technologies such as heat pumps within buildings both new and existing – is key to the government's ambition (see box).

The government has set an ambition for 600,000 heat pumps, both ground source and air source, to be installed a year by 2028.

But there are fears a skills gap exists. A survey conducted by *CM* in June this year found that four in five professionals saw net zero training as "inadequate". A CITB-commissioned report on construction skills for net zero, published earlier this year, warned that "immediate action" is required and called for "radical change" in the sector, with more support across the board for retrofit skills.

Ambition or policy?

The Heat Pump Association (HPA) says that it can bridge the gap between the current shortage in skills and training, to meet the government's ambition of 600,000 heat pumps a year in 2028. Recently the body, which represents heat pump manufacturers, announced a new training course run by training sites and colleges, across which over 40,000 heat pump installers could theoretically be trained each year. To meet government targets, around 30,000 qualified installers will be required by 2028 in the domestic market However, a spokesperson for the HPA notes: "This would be enough to reach net zero however it is important that the government puts in place a stable, long-term policy framework that provides installers with the clarity and confidence they need to want to invest in this training. The HPA is hopeful that this certainly will be provided in the Heat and Buildings Strategy." The delayed strategy is due to be published imminently.

That is a point echoed by Ian Rippin, chief executive of the Microgeneration Certification Scheme (MCS), which certifies installers of microgeneration retrofits up to 45KW, mainly in the domestic market.

He warns: "Training providers are reluctant to take these courses on because it is about bums on seats. If there is not the demand, you are not going to get the provision. The government needs to back up its ambitions with robust policy. We need to incentivise the market's conversion to clean heat."

Rippin suggests one-off payments to consumers to offset the larger capital cost of heat pumps as a key measure to kickstart demand in the market.

Growing demand

Rippin says: "The market for heat pumps is key but it is very small." He points out that there are around 1,000 contractor businesses registered with MCS today, mostly offering air source heat pumps (around 30% also install ground source heat pumps).

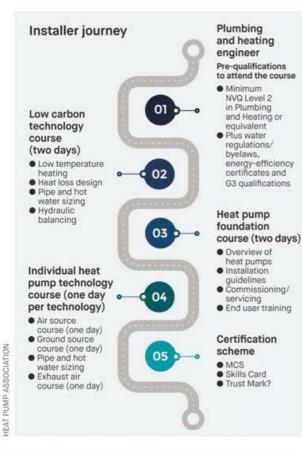
Most businesses are small and on average can manage around two to three installations at once. To meet the government ambition of 600,000 heat pumps a year by 2028, Rippin calculates that around 30,000 qualified installers will be required in the domestic market, equating to around 10,000-15,000 contractor businesses.

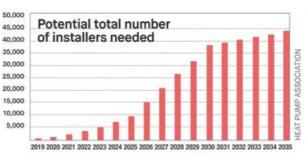
government's ambition is to see 600,000 heat pumps installed a year

By 2028 the 600,000

While some large "super-installers" may emerge in the coming years, training so many people is a huge challenge. Rippin says the MCS has helped facilitate the development of a conversion installation course for existing plumbers and heating engineers, as well as trailblazing a new apprenticeship. It is also working with Exeter University on a design course - another key component.

The co-ordination of training is also a concern for Actuate UK, the building services alliance made up of organisations including the Building **Engineering Services Association** (BESA), BSRIA, the Chartered Institute of Building Services Engineers (CIBSE) and the ECA.





Helen Yeulet, spokesperson for Actuate UK and director of training and skills at BESA, warns that the government hasn't fully considered how new technologies will require cross-discipline experience among installers - for example air source heat pumps that require both electrical and plumbing knowledge.

Yeulet says: "Achieving government net zero targets puts unprecedented pressure on our sector. It broadens the requirement for new 'green collar' skills. It shows the importance of collaboration, with separate technical skills needing to be applied as part of whole building solutions and not as individual components. This poses a new type of training challenge, but plays to Actuate UK's strengths as a cross-industry organisation that focuses on moving away from the 'silo mentality' that has weakened our response to the climate challenge so far."

Meanwhile, Luke Osborne, energy and emerging technologies solutions adviser at the Electrical Contractors Association (ECA), points out that scepticism towards new technologies among some trainers, perhaps late in their careers, needs to change.

"There are some very good employers who have apprenticeship programmes but they are expensive and there should be some additional support for employers," he says, adding: "Industry should have more of a say in how training is delivered to freshen it up." 🔴

The consultant's perspective



"We are aware of a skills shortage at all stages, from understanding and specifying zero-carbon

technologies through to their installation and maintenance. At RLB, we are aiming to embed sustainability into each of our different disciplines, training all of our consultants to be able to have at least a five-minute initial conversation with the client to get sustainability on the agenda early.

"We have an issue in terms of issue of resource across the board - consultants, installers, everyone. We need to work on incentivisation and how to attract people into the industry early on."

Heather Evans, national head of sustainability, RLB

The contractor's perspective



"Heat pumps are a significantly more complex technology than solar, battery storage and EV charging

points, particularly in the retrofit scenario. We face a potential supply chain pinch point because we have the challenge of retrofitting a significant number of homes but also delivering what the new build industry needs.

"To what extent the government supports individuals financially to install heat pumps is a political question but there is no doubt that heat pumps is the way it is going. From a training point of view, the industry should lead the government. The construction industry should invest in training now because there is no doubt it will be needed." Alasdair Donn, head of building performance, group sustainability, Willmott Dixon





IMPLEMENTING EFFECTIVE GREASE MANAGEMENT

THIS CPD, IN ASSOCIATION WITH ACO, CONSIDERS THE BEST METHODS FOR TACKLING THE BUILD-UP OF FAT, OIL AND GREASE IN DRAINAGE SYSTEMS

Above: Installing grease management systems around developments aids best practice in waste water management The build-up of fat, oil and grease (FOG) in drainage systems is a major issue affecting both commercial kitchens and the UK's sewer system. Food service establishments continuously discharge wastewater that contains FOG through kitchen drainage systems and into the sewer network. Over time the FOG accumulates and causes blockages in the drainage pipes and sewers.

As a result of these blockages, untreated FOG poses serious ramifications to infrastructure, health and assets for both commercial food businesses and water companies managing the sewer system. This is why it is vital that kitchen operators become more aware of FOG build-up and how it can be prevented. To treat FOG, grease management systems must be put in place to cleanse wastewater as it travels through drainage systems. Different sizes and types of commercial kitchens will require different grease management solutions, but by applying methodical guidance and specification, effective grease management can be successfully implemented.

What is FOG?

FOG is created from food debris, fats and oils used in the cooking process and the washing of food equipment, utensils and crockery. Sinks, dishwashers, cooking facilities and food waste all contribute to kitchen wastewater containing FOG that is fed into the drainage system. D To see past CPD articles visit www.constructionmanagermagazine.com/cpd-articles

The problem with grease

Accumulation of FOG leads to wastewater discharge through kitchen drains becoming restricted which in turn reduces the hydraulic capacity of the drainage system. Not only does this increase the likelihood of the kitchen flooding but it also affects hygiene as foul odours, infections and pests emerge.

The problems continue to mount as the build-up of FOG can create congealed masses called fatbergs. Fatbergs are a combination of non-biodegradable solid matter that form in sewers and clog the sewer network. Their formation leaves water companies with reduced efficiency in sewage plants and watercourse pollution.

Every year, the UK spends around £100m clearing an estimated 300,000 fatbergs, as water companies struggle to keep sewer systems clear. The impediment to sewage networks understandably leads to kitchen operators being held accountable.

Every food service outlet in the UK has a legal obligation to "manage effluent content" under the Water Industry Act (1991). Section 111 of the Water Industry Act gives water companies the power to bring a criminal proceeding against anyone who causes injury or inhibits the free flow of the sewer network.

Guidance

Despite the heavy consequences, many kitchen operators take an 'out of sight, out of mind' approach and continue to pour FOG down sinks and drains. Part of the problem is that UK building regulations do not mandate the use of FOG mitigation systems and it is left up to the food service outlet or kitchen end-user to determine whether to install a grease management system. As a result, only around 20% of the 400,000 commercial kitchens in the UK have any form of FOG mitigation in place.

Legislation needs to be adhered to by food service establishments in order to avoid prosecution for FOG build-up. The Water Industries Act concerns premises that are connected to the public sewer, outlining that it is a criminal offence to knowingly put matter into drains that cause blockages or damages the sewer.

Building regulations say that commercial hot food premises should have an effective means of grease removal, compliant to BS EN 1825 or other effective means. A large number of outlets come within this bracket and must ensure their facilities have a grease management system installed.

When implementing grease management systems, specifiers must make certain they comply with local building regulations, as mandates can differ across the UK. In addition, new legislation in the form of the Inland Waterways Act is currently being debated in parliament that will make the need for FOG management a focus for food service establishments.

What options are available?

As FOG becomes an increasing issue, contractors need to understand the different systems available.

A typical grease management installation sees wastewater flow from the food preparation or kitchen area to the system and out to the foul sewer. It is essential that a periodic check is made to ensure the system is running as expected and to make any adjustments, such as to the dosing rate or frequency.

Four principal methods are used for modern grease management systems: **Grease traps (GTs):** GTs are mainly under-sink units which use gravity to separate FOG and food particles from the wastewater. GTs are usually compact with limited capacity, meaning daily maintenance is required to ensure they run efficiently. However, GTs can be combined with biological dosing to increase the daily maintenance interval.

Grease recovery units (GRUs): These are available in two types: hydromechanical and passive systems. Hydro-mechanical units remove FOG wastewater using mechanical ►

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Regular maintenance of grease separator units is crucial to their ongoing effectiveness

"Different sizes

different grease

management

and types of

commercial

will require

solutions"

kitchens





Case study: ACO clears the FOG for King's College

A traditional Cambridge building presented challenges



King's College Cambridge was founded in 1441 by Henry VI and is one of the 31 colleges in the University of Cambridge. World-famous for academic prowess as well as its chapel and choir, the college has many catering facilities to support its student accommodation throughout the city.

The project

In 2018, King's College commissioned new catering facilities for restaurants located below ground level underneath the Bene't Street Hostel, a student accommodation facility housed in the old offices of a national bank.

The project involved the creation of two new areas, one now occupied by restaurant chain Zizzi. Reflecting the college's commitment to being a responsible commercial landlord and commercial kitchen operator, effective management of fats, oils and grease (FOG) was a critical requirement.

The brief

ACO Building Drainage was approached by project consultant Richard Jackson Limited to specify an effective grease management solution for the new Zizzi restaurant.

As well as managing the FOG created by the new facility, any grease management solution had to operate within the traditional design of the building and to fit within the limited and unusually shaped space of the old bank vaults where the Zizzi restaurant is located. ACO also had to consider how installation and commissioning could be managed for a below-ground application with limited site access.

The solution

ACO Building Drainage's technical design team specified an ACO LipuJet above-ground grease separator unit, an ACO lifting station and related control boxes. ACO LipuJet separators are certified to BS EN 1825 and designed for applications where a freestanding grease separator unit is required.

Manufactured from polyethylene for optimum durability, the ACO LipuJet separator was perfect for use in the relatively confined space of Zizzi's commercial kitchen.

Available in a range of sizes, a NS4 sized separator unit was specified to meet the FOG management requirements of the number of covers and the type of food prepared.

Certified to EN 12050-2, ACO lifting stations are specified when the grease separator is installed below street level to prevent backflow and to ensure effective removal of wastewater.

In a range of sizes to suit different project requirements, the ACO lifting station comprises a twin pump system for improved operational reliability. It also benefits from an energy-saving channel impeller on the pump to reduce blockages. Its horizontal installation also meant that there was no need to ventilate the pump.

Installation and commissioning Installing a grease management system below street level within the confines of an unusually shaped traditional building presented unique challenges. The team had to cut through the ceiling above the restaurant then rebuild the ceiling/floor above after installation.

Commissioning was handled by ACO's service partner, Aqua Mundus, which specialises in the installation, commissioning and maintenance of FOG management systems. This article is based on an ACO Building Drainage CPD. assistance, such as rotating wheels, oleophilic drums or wastewater flow events to skim off any surface FOG.

In a passive system, collected FOG is heated to ensure it keeps a liquid form, making it easier to remove from the unit. Similarly to bio-chemical direct dosing units, there are no standards or performance data to guide the user on how to size the systems or what to expect. However, many UK devices are tested to the American standards ASME A112.14.3 and A112.14.4.

It is worth noting that preventing solidified fat from forming can be problematic; GRUs may need to be kept warm to ensure FOG remains liquid. **Grease separators:** Similar to GTs, grease separators can be used for both above- and below-ground applications and this is the only system with a British Standard – BS EN 1825. Primarily used in undersink applications, grease separators prevent most FOG and sludge deposits from entering the sewage system.

Grease separators can be sited below sewer or street level in developments if they have a lifting station installed

The contents of the separator must be emptied once per month, either manually or automatically removing the FOG and sludge. One key benefit





of a grease separator is that it is the only unit, according to BS EN 1825, that can be sized on either the volume of food produced per day or the hydraulic throughput generated from the type and quantity of kitchen equipment installed. **Bio-chemical direct dosing units** (**BDDUs**): While some catering establishments select BDDUs, they can often be seen to only shift the problem.

BDDUs use a chemical activator which forms emulsions of FOG to ensure wastewater does not solidify. It is worth noting that the FOG discharged to the sewer system may de-emulsify and form solid material downstream, and cause blockages for the water companies to deal with.

The systems are suitable for aboveground applications only, and there are no British or European standards which cover their use and sizing, but it is advised that standalone use of bio-dosing is avoided.

Selecting and installing the system

Planners should look out for systems which are certified to BS EN 1825 standards, as they reduce risk to the specifier and operator. Reference should be made to water company network requirements for new build properties, as connection to the water supply can be affected by the specification of a grease separator.

Once the system has been selected, it is important to understand the installation process where there is operational best practice guidance to follow. Separators or grease traps, for example, should not be placed in unventilated rooms or close to opening windows. Access must all be factored in at the design stage, as maintenance is non-negotiable.

Installations below sewer level should either have a lifting station, where the separator wastewater is collected, or a sump where all the building's wastewater is collected before pumping it out to the sewer. The lifting station also acts as a backflow preventer, if installed with a backflow loop in the pressure pipe.

Installations below backflow level (usually street level) require backflow preventers. Often, a valve is installed to prevent backflow to the building.

However, should backflow occur, the wastewater inside the building can

Installing a grease management system aids the smooth running of a commercial kitchen

"Separators

should not

be placed in

unventilated

to opening

windows"

rooms or close

or grease traps

overflow, particularly if the facilities that create the wastewater are still used by occupants. For these applications, it is recommended that a lifting station is used. ACO recommends using backflow preventers in residential and in non-essential applications for multiple user dwellings. • www.aco.co.uk/grease-management

CPD Questions

1: How much is spent each year in the UK on clearing fatbergs caused by fats oils and grease (FOG) being poured into the sewers?

a) £10m b) £35m c) £100m d) £200m

2: Building regulations say that commercial hot food premises should have an effective means of grease removal, compliant to what standard? a) American standards ASME A112.14.3 and A112.14.4 b) BS EN 1825 c) BS ISO 11009 d) BS ISO 23572

3: Every food service outlet in the UK has a legal obligation to "manage effluent content" under what piece of legislation?

a) The Water Industries Act 1991

- b) Building Regulations Part H c) The Inland Waterways Act
- d) The Environment Act

4: Which of these is recognised best practice for grease management? a) Installing a strainer in the sink

b) Biological dosing

- c) Installing a grease trap
- or grease recovery unit
- d) Pouring grease down the sink

5: What is recommended in addition to a grease separator when installing in an area below sewer level

- a) An under-sink unit
- b) A lifting station
- c) Syphoning unit
- d) A bucket

To test yourself on the questions above, visit www.constructionmanager magazine com/cpd-articles.





FROM THE HEIGHTS TO THE DEPTHS

Construction in major cities can present many challenges in delivering projects. Making efficient use of the space is always vital on each floor of a building whether that is many storeys below street level or in the upper reaches of a skyscraper. With the pandemic the use of available space has become even more important with the added emphasis of distancing and green space.

Effective drainage and wastewater management plays a vital role in the sustainable running of a modern city. Whether it is supplying a blue green roof to mitigate urban heat island effect from an office block or manufacturing drainage gullies for a swimming pool located on the 52nd floor of a major high rise building. Likewise to help dispose of waste water for a hotel commercial kitchen located six floors below street level ACO delivered a modern grease management solution with a lifting station.

ACO understand how to deliver sustainable drainage and grease management solutions for commercial and residential buildings across major cities whatever floor they are needed on.

ACO. creating the future of drainage







Stainless steel channels

www.aco.co.uk/aco-building-drainage



'IT'S A PROJECT THE SIZE OF BELGIUM'

BOB HOPE IS THE NEW SAUDI ARABIA MANAGING DIRECTOR OF CONSULTANT EGIS. HE TELLS **ROD SWEET** HOW THE KINGDOM'S 'GIGA PROJECTS' WILL DRIVE BUSINESS GROWTH

"I've not really executed major

acquisitions in my career to date, so it's a really exciting strategy," says Bob Hope FCIOB, a Gulf construction veteran and, since May, managing director of France's Egis Group in the Kingdom of Saudi Arabia, responsible for an ambitious growth plan there.

After graduating from the University of Salford with a BSc (Hons) in construction management in 1992, Hope found his way to Dubai in 1997, working as a project manager for Balfour Beatty on the Wild Wadi Water Park at Jumeirah Beach Hotel. He's been in the region ever since. He went on to be managing director of WS Atkins' Northern Gulf, Middle East and India business before taking the helm of multidisciplinary firm SSH Design. Below: The Neom economic zone is being built from scratch over more than 26,500 sq km Right: Riyadh at night: Egis is project managing four lines of the Riyadh Metro He joins Egis just as momentum builds on a series of super-largescale schemes, called 'giga projects', outlined in Crown Prince Mohammed bin Salman's Vision 2030 plan to attract investment and diversify the economy away from oil.

These include Neom, a \$500bn high-tech economic zone to be built from scratch, covering over 26,500 sq km in the country's north west. The Red Sea Project is a vast development that by 2030 will comprise 50 high-end resorts on the Red Sea coast and 22 islands. In south-west Riyadh, Qiddiya is an \$8bn city for entertainment, sports and the arts that is set to cover some 334 sq km.



\$500bn



"Saudi Arabia is Egis' largest business outside France and it's

a growing market" Bob Hope, Egis

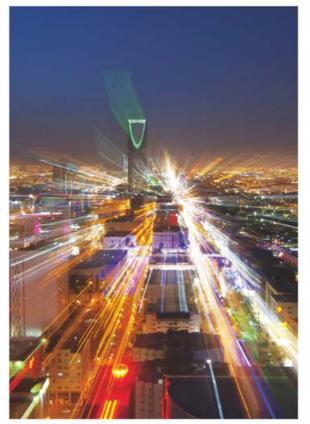
These eye-catching plans are mirrored in Egis' own; it has a fiveyear strategy of nearly doubling global turnover by 2026.

"The plan is to bring in a key investor partner," Hope says. "The group is 75% owned by Caisse des Dépôts, an investment arm of the French state, and 25% by partner executives and employees, so the idea is to bring some equity in to give a more aggressive and commercial edge to the expansion."

To prepare for this, Hope will spend the rest of the year getting the Egis house in order in the Kingdom. All of Egis' businesses there will be integrated in the Riyadh new headquarters, along with its training academy and with extra business support.

"In some ways, until now we've been a major projects team with a bit of support and now we need to turn ourselves into a long-term business with the correct structure. So I'm assembling a team of people who've been in the region for the last 15 to 20 years with experience of the Saudi market, and we're going to build the right head-office structure. That's a priority for the next six months."

Egis focuses now on project management and in Riyadh it is project managing four of the lines of the new Riyadh Metro, and advising on the Green Riyadh urban reforestation project. It has a project management consultancy contract with Riyadh Airports Company, and advises Riyadh Municipality.



"Saudi Arabia is Egis' largest business outside France and it's a growing market," Hope says. "Our relationship with the Royal Commission for Riyadh City (RCRC), which is responsible for planning and development, is very important.

"We work with municipalities in the Western Region but there's more there to be had. We're picking up projects in Khobar in the east, we have some early commissions on the giga projects in the north and we've got a key account manager appointed to develop that business. We also have great experience in PPP projects and the kingdom is keen to implement those in most of the sectors."

Hope got a taste of the giga projects when, prior to joining Egis,

Bob Hope's Middle Eastern odyssey

 Project manager, Balfour Beatty, UAE, 1997-00
 Managing director, WS Atkins, Northern Gulf, Middle East and India, 2000-12
 Chief executive officer, SSH Design,

Middle East, 2012-18 • Executive director, Neom,

May 2019-November 2020

 Managing director of Egis in Saudi Arabia, May 2021 to present Neom is a \$500bn high-tech economic zone to be built in the north west of Saudi Arabia

he was executive director of Neom Industrial City for 18 months.

"It's a project the size of Belgium, he says. "My part was 2,000 square miles. It's a hugely significant investment and an amazing vision, like a country within a country.

"With Neom and the other giga projects increasing demand for construction services, we're beginning to feel the heat with heightened tendering activity and the hunt for talent.

"For design consultancy, video calls and online file sharing during the pandemic allowed us to access capability remotely and still deliver for clients, with really good results.

"The challenge is going to be in the contracting sector in terms of delivery. Our clients are looking at the logistics of this, how to manage the contracting element when these giga projects move beyond the infrastructure phase and into fullblown delivery."

Certain acquisitions are intended to quickly increase Egis' capacity to meet the demand. The company has islands of specialist strategic expertise already through majority stakes in 10 Design, a boutique architectural practice, and Voltere by Egis, a strategic planning and management consultant in the hospitality sector. It also owns Inhabit, a leading facade engineering company in the region. It operates 17 airports worldwide and 4,400km of highways and roads, including 81km of tunnels. Now it wants to fill in the gaps and make it all work as an integrated whole.

"I'm a business growth guy, it's what I do. I'd previously undertaken my expansions organically, when I was building SSH and Atkins, but you can't expand rapidly without buying. With the board behind us, I knew this was the right place to be in the coming years."



This much I know Jaimie Johnston Board director and head of global systems, Bryden Wood

'I talk about innovation, really it's about people'

Jaimie Johnston was awarded an MBE in the 2021 Queen's Birthday Honours for services to the construction industry, in recognition of his pioneering work on MMC. He shares his wisdom and love of Charles Eames with **CM**

Are there important relationships you have built in your career? What have you learned from them?

Absolutely. My career has been defined by the incredible people I've had the privilege to work with and learn from. I've learned that as much as I talk about innovation and technology, really, it's all about people. If you're working with like-minded people that inspire and stretch you then anything seems, and probably is, possible.

Have you ever experienced failure on a project that you learned from?

Construction projects can be unpredictable and early on in my career Mark Bryden told me that if a project goes well you'll never know if you were good or just lucky; it's when the unexpected happens that you really start to learn the job. I quickly learned that trying to apportion blame is pointless: it's better and more rewarding to work the problem and start looking for solutions, not scapegoats.

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

Charles Eames. He was an architect but he was equally adept at furniture and industrial design, film-making and photography. The Eames House (which my wife and I



visited on honeymoon) was made from off-the-shelf components, with the kit being reconfigured on site to create a totally different building to the one designed. I love that Eames was using an early version of construction platforms 70 years ago.

What was the best advice you were given? Always get it in writing. But that can be easier said than done. "If you're working with like-minded people that inspire and stretch you then anything seems, and probably is, possible" Jaimie Johnston, Bryden Wood

Job spotlight George Parsons Graduate project manager, Gleeds

Peruvian blend



George Parsons, Gleeds graduate project manager, has been working in Peru on an extended placement, part of the ARCC programme

which, among other projects, is reconstructing infrastructure after 2017's El Niño flooding

What is a typical work day like for you?

Knowledge transfer to the local Peruvian teams is a key part of the reconstruction programme that we're working on. So activities like putting together training talks and help for workshops are a big part of my day, along with providing cost and contract management support to a huge programme of infrastructure works spanning just under 200 projects across Peru.

Part of it involves reconstruction of infrastructure destroyed by the flooding caused by El Niño, to help futureproof the country with defences in a bid to avoid seeing that level of damage again.

I am also part of Gleeds' digital team in Peru, who are working on a number of exciting initiatives to help bring the business forward on a global basis.

You've begun your career on a challenging and unusual project. What are you finding challenging and what rewarding? Being offered the opportunity to work in Peru has been my proudest career achievement to date.

Progress is good. At times, it has been challenging. Sometimes there are language barriers, which does make integration tricky, although there is a really good translation tool that has helped.

Because the reconstruction programme falls under a government-to-government agreement with the UK, we're teaching the local workforce to use cost management contracts they wouldn't have encountered before, such as the NEC3, which is quite technical.

It can be hard to teach someone to use a new contract straight away; it takes time to learn and embed. That's why part of our job is to guide them through any difficulties they might have. There are training courses, a knowledge transfer department, community practice page, forums and audits, which are all helping – and we're working towards a stage where the local teams can become more self-reliant in carrying out the projects. So far, so good.

How has this experience shaped your career plans?

The sheer scale of the project and working on aspects I never thought I would has helped me discover areas I might like to explore going forward.

I've learned things I never thought I would and there's no better way to learn than on a programme with so many moving parts. In some ways, the challenges that come from the huge scope help you to learn even faster.

Looking ahead to my future career, I want to continue working on global infrastructure projects, not only to broaden my work horizons but my life experience too. I would like to have a digital edge as well as to be a project manager of the future.



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Factory settings

Gary O'Brien argues that modern methods of construction (MMC) will close the skills gap but clients need to lead the way



In the late 1990s I was a client project manager at BAA. Sir John Egan was chief executive, and *Rethinking Construction* was hot off the

press, so the company started its journey with long-term framework partnerships.

The objective was to collaborate with industry leaders to achieve continuous and sustained improvement. BAA was seen as a leading client back then and, with Sir John as CEO, the focus started to switch to manufacturing off site to reduce programme, improve quality and health and safety.

All three would lead to savings, better predictability and more profit for the supply chain and, with small working windows at BAA's busy airports, it became more important to transfer as much work off site as possible. We achieved early success with offsite modules to deliver new facilities at both Heathrow and Gatwick.

That was nearly 25 years ago, and I am puzzled to why the industry is still struggling with taking work off site in factory environments, like the car and aerospace industries. Not only can MMC reduce programme, but it reduces the risk of onsite work and improves health and safety, and quality, through standardisation of components built in controlled environments.

Digitisation also plays a big part, with BIM used to design the components and interfaces and ensure everything fits together, with modelling and 3D walkthroughs.

With the industry on the brink of a severe skills shortage, there is no better time to embrace MMC. Train a diverse workforce for working in factories, knitting the parts together on site, with emphasis on digital skills and quality, and we know better quality leads to better health, safety and wellbeing.

We also need to achieve UK net zero carbon targets and MMC will play a big part with less congestion on the roads with reduced deliveries, and design of energyefficient parts, modules and buildings.

Clients will need to play a major role by showing strong leadership and collaborating with the leading industry players.

There is no better time as we start to navigate our way out of the pandemic on the roadmap to recovery. The Never Waste a Good Crisis Wolstenholme Report followed Rethinking Construction in 2009 and here we are 12 years later. I believe there is never going to be a better opportunity to embrace MMC. Gary O'Brien is director of the Construction Clients' Leadership Group: www.cclg.co.uk.





CIOB gears up for launch of Tomorrow's Leaders

Next generation of professionals targeted

The CIOB's launch plans for

Tomorrow's Leaders have taken another step forward.

The new initiative will replace Novus and is designed to inspire the next generation of construction professionals. It will widen membership to include students and comes as a result of research among the membership.

The transition positions previous Novus representatives as Tomorrow's Leaders representatives and in 'champion' roles. Over the coming months Tomorrow's Leaders champions will play an integral role in helping to shape and test the community in preparation for its introduction to the wider membership later in 2022.

In the meantime Tomorrow's Leaders champions will continue to deliver activity aimed at the Tomorrow's Leaders audience through engagement with the CIOB hub committees. And all members looking for networking opportunities can download the CIOB Connect app, providing opportunities to connect with members across the globe.

"This is an exciting time as we grow this community," says Sophie Cox at the CIOB.

"These individuals are the future of the industry and an integral part of CIOB. Members should look out for the Tomorrow's Leaders logo on events and activities taking place in their local area and across social media too, as well as more information to come over the coming months."

Event

Book now for CIOB North West annual dinner

CIOB president and CEO to attend annual event

The CIOB in the North West is holding its 2021 Annual Dinner on 12 November. Held at the Park Suite at Haydock Park Racecourse, it will feature VIP guests CIOB president Mike Foy and CIOB CEO Caroline Gumble.

Above: Tomorrows'

Leaders will widen

membership to

include students

The entertainment on the evening will be from Live Lounge Duo, an acoustic guitar act that uses specially designed guitars and a kick drum to give a full band effect.

The event will support Claire House children's hospice charity. The ticket prices is £85 or £800 for a table of 10. Sponsorship packages are also available.

To book tickets for the evening, call 07827 803809 or 01344 630868 or email: kpercival@ciob.org.uk.



Acoustic act Live Lounge Duo

Story for Community? Email Nicky Roger nicky@atompublishing.co.uk

Seminar series

Expert webinars introduce students to the industry

'Introduction to' series will cover social value, BIM, project management and law among other topics

The CIOB in the East of England is

creating a webinar series to provide academic staff and construction management students an insight into the industry.

The 'Introduction to...' series will feature industry experts providing 30-minute seminars on topics such as BIM, construction law, social value and project management.

Experts lined up include: Melanie Robinson, project manager at BIM Academy; Sam Bawden and Lawrence Pearce from Holmes & Hills solicitors; Hannah Lamont, social value coordinator at McLaughlin & Harvey Construction; Jane McRobbie, Alexander Stadium Social Value, McLaughlin & Harvey Construction; Francesca Lofiego, BIM coordinator, UK Fit Out ISG; and Toby Vowels, senior recruitment consultant at Harper Harrison.

The series will also provide direction to further resources such as online platforms, blogs, podcasts and additional reading.

The series will align with the CIOB's new Tomorrow's Leaders strategy to create a community that helps to equip our emerging talents with the skills they need to excel in their studies and continue on to have a successful future within the construction industry. If you have any topic suggestions, would like to put yourself forward as a speaker or have any questions about the series, please contact hhosking@ciob.org.uk.



Left from top: Hannah Lamont, McLaughlin & Harvey: Lawrence Pearce, Holmes & Hills; Francesca Lofiego, ISG; Melanie Robinson, BIM Academy







Northern Ireland

CIOB responds to NI skills strategy

Institute offers perspective on government consultation



City Hall, Belfast

The CIOB has responded to the Skills Strategy for Northern Ireland: Skills for a 10x Economy consultation.

The consultation, which closed on 19 August, sets the themes and proposed commitments for a new skills strategy for Northern Ireland. Intended to launch in the autumn, it will set the strategic direction for the development of Northern Ireland's skills system to 2030.

Joseph Kilroy, policy and public affairs manager, Ireland, at the CIOB, said: "We welcome the creation of a single, overarching skills strategy for Northern Ireland. However, while we agree with the need for a joined-up approach, different sectors will require different interventions.

"The problems facing the construction sector include an ageing workforce, lack of diversity, a shortage of new entrants and misperceptions of careers in construction. Other sectors face different challenges and this strategy must address sectorspecific issues rather than employing a one-size-fits-all approach.

"Furthermore, from a policy perspective, the strategy would benefit from considering the role the government can play in creating an environment in which future skills are economically relevant."

He added: "As we outline in our response, creating demand for green skills in the form of a retrofitting strategy is one example, creating a clear pipeline of public housing and infrastructure projects is another.

"Whatever the approach taken, both the demand and supply sides of the equation – skills and the application thereof in the economy – need to be part of this strategy."

The CIOB's full response can be read on its website.



Webinars

Bumper line-up of events for autumn in Eastern & Midlands

Net zero, asbestos and Nottingham's Broadmarsh centre to feature

The Eastern & Midlands hubs are kicking off an autumn of diverse events in October with a Chelmsford Hub Asbestos Awareness webinar delivered by Rianne Scott and Mark Carter from Oracle Asbestos Solutions.

On 3 November, working with the Northampton Hub, the Buckingham Group will present a virtual session based on its company journey in

Above: Birmingham is hosting a Net Zero initiative with Eddie Hughes MP Right: Nottingham Hub offers a virtual visit to the Broadmarsh demolition phase

stadium development over the past 15 years. The team will focus on specific innovative solutions developed to overcome challenges in the sector.

Also in November is Net Zero: A View from all Sides – a Birmingham Hub initiative exploring how net zero will be delivered in practice across a range of Midlands schemes.

Awards CIOB presents Plymouth undergrad prizes

Virtual 2021 prizegiving

Every year the CIOB sponsors the Built Environment Awards at Plymouth University, issuing the winners with a certificate and prize vouchers.

This year's prizegiving was a virtual one.

"The awards are a way to celebrate the work of the students of the built environment project modules," said Dr João Alencastro, lecturer in built environment.

"The integrated approach enables students for all of our courses to work together in groups, resembling a company where each student "Eddie Hughes MP, minister with overall responsibility for net zero within MHCLG, will talk about government targets"

Eddie Hughes MCIOB, MP for Walsall North and minister with overall responsibility for net zero within the Ministry of Housing, Communities and Local Government (MHCLG), will talk about government targets and bring together speakers representing the designer and main contractor, including Cundall and David Cadiot, executive general manager for UK regions, Lendlease.

Finally, on 1 December, the Nottingham Hub plans a virtual site visit hosted by Willmott Dixon and Nottingham City Council to view the demolition phase of the Broadmarsh shopping centre. As a closed site, this is a unique opportunity to view the work and quiz the team in a Q&A session.



contributes with the core aspects of their courses," Alencastro explained.

"The subjects are based on real-life projects in Plymouth – for example, the refurbishment of the Babbage building in the campus or the former Royal Mail building [Emdeck building]."

Education **CBC** Greendale

starts on eighth SCOLA project

Hampshire recladding job



Building Equality rainbow JCB returns for Manchester Pride

CIOB takes part in event to showcase industry access for LGBTQ+ individuals

Building Equality, the construction

industry's LGBTQ+ alliance, brought the iconic Manchester Pride favourite - the rainbow JCB - back for its annual outreach event on Exchange Square in August.

"While Manchester Pride was a little different this year, Building Equality was determined to organise an event that enabled us to safely show our

Building Equality with the rainbow JCB at Manchester Pride

community," the organisers said. **Building Equality members** from more than 50 construction organisations, attended Exchange Square, Manchester to showcase the accessibility of the construction industry to LGBTQ+ individuals and other minority groups. Hazel Yorke, CIOB representative for BE Greater Manchester Group, and volunteer business development manager for the group, was among them.

support of Manchester's LGBTQ+

Members offered advice to anyone interested in construction, the work of Building Equality and career opportunities available in the sector. The Rainbow JCB was provided by longterm supporter Flannery Plant Hire.



Event

UK Construction Week takes to the stage in Birmingham



CIOB supports largest built environment exhibition

The CIOB will be supporting UK Construction Week (UKCW) in October.

The UK's largest built environment exhibition is held at the NEC Birmingham on 5-7 October, with a programme of events that includes seminars, a digital hub, an innovation zone and summits on quality in construction and wellbeing. Register and find more details at

www.ukconstructionweek.com.



Greendale surveyor and contracts manager Nick Child (left) with site manager Blake Lennan

Chartered Building Company Greendale Construction has won a 58-week contract from Hampshire **County Council involving** the recladding and internal remodelling and refurbishment of an existing two-storey SCOLAtype teaching block at Testbourne Community School, Whitchurch.

Due for completion by September 2022, the works will be carried out in four phases with minimum disruption to the school, staff and pupils.

SCOLA buildings for schools were introduced in the 1960s as an affordable and guick building method to meet the demands of expansions within the education sector. However, poor insulation and over-glazing can make the classrooms uncomfortable learning environments as well as consuming a lot of energy.

The recladding programme not only makes the learning environment more comfortable for students and teachers but also reduces the carbon footprint.

This is the eighth SCOLA project Greendale has worked on for Hampshire County Council. The contract was won through competitive open tender.

Premierline

Operation Partnership

Take cover

Construction sites are often at risk of being exposed to an influx of water from many sources. **Premierline** offers a guide to mitigating the risks of wet sites



A build-up of

increase the

standing water can

chances of many

types of accident

Construction sites are often at risk of being exposed to an influx of water, mainly from outdoor sites exposed to rain, or even indoor sites where a contractor may be fixing a leak.

Water on site can represent a significant risk to you, your team and visitors, so take a look at some of these tips to either prevent excess water or mitigate the risks of water at your site.

How water could become a hazard Rain

If your site is outdoors, it may be exposed to the weather. The UK is well known for wet weather, and rain can appear at any time of the year.

Flooding

If your site is close to a moving body of water, like a river, stream

or sea, it could experience a flood if that water escapes.

Leaking pipes

If you are working in a property, either building, demolishing or general plumbing work could run the risk of a water pipe leaking.

Spilled beverages

Your team must have access to drinking water. However, if you have a designated area for drinking, use can create spills. If your team have cups, mugs or drinking bottles on site, they could spill their drink by accident.

Washing down equipment

To keep your tools free from rust and dirt, they should be cleaned following use, but cleaning tools could also lead to standing water at your site.

Identifying and managing site risks Slips and trips

The most common workplace injury in the UK in 2019/20 was slips or falls (on level ground), according to the HSE.

A build-up of standing water can increase the chances of an accident from slipping. Encourage your team to report standing water, and act immediately by putting out signage so people are aware of the danger. Depending on how much water is present, a member of staff can try to get rid of it using cleaning equipment, but a sign should remain in place.

Electric shock risks

If you are working to fix electrical faults, you should be aware of any water on your worksite. The salt and metal ions in water are conductors of electricity, meaning that if electricity comes into contact with water it can be dangerous. It doesn't take a lot of water to conduct a fatal shock, so ensure the area you are working in is completely free of water.

Water-related erosion

If rain is heavy, water can erode surfaces, leading to unstable and

"Encourage your team to report standing water, and act immediately by putting out signage so people are aware of the danger"

potentially unsafe walkways. Unstable surfaces should be reported as soon as they are noticed, and signage placed to warn others.

Exposure to stagnant water

Stagnant water can be a breeding ground for parasites or bacteria and if accidentally ingested can make a team member or visitor very unwell. Ensure your site has good drainage to prevent both slip hazards and stagnation.

Legionnaires' disease

If you are working around cooling towers, dry or wet cooling systems, hot or cold water systems, spa pools, humidifiers, air washers and other hot water storage systems, you could be at risk of Legionnaires' disease, which causes respiratory illness in the form of swelling in the lungs. It is caused by *legionella* bacteria, which can grow in water where temperatures are between 20-45°C and can feed off rust, sludge, scale, organic matter and biofilms.

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Whatever type of work you do as a contractor, you need to ensure that you are protected should the worst happen. Different types of business have different insurance needs, whether employers' liability insurance required by law, or commercial vehicle insurance to protect their assets.

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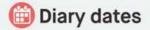


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Highlights of the CIOB Calendar for the coming month. All events are online webinars unless otherwise stated

Site visit to Bohunt School Horsham

5 October, 1.30-3pm, Horsham Bohunt Horsham is a co-educational school in the centre of Horsham, West Sussex, which opened in 2019. A new purpose-built school for the pupils is currently in development north of the town.

The school will provide places for 1,620 children aged from four to 16. Building works, being run by the Bohunt Education Trust, are part of a massive new 2,750-home estate on land off the A264.

The site visit offers an overview of the project from principal contractor Wates Construction and a chance to see the current work underway. bmilton@ciob.org.uk

Disperse: Improving Building Productivity

6 October, 1-2pm

Disperse is a building productivity system that uses artificial intelligence and computer vision to automate admin processes and give site teams insights so they can focus on driving construction. The webinar will run through the four main elements of the system. dthorpe@ciob.org.uk

CIOB: Defining Mental Illness

11 October, 6.30-7.30pm, London Everyone is talking about mental health and wellbeing, but what is it? Not just the generic term, but what are mental illnesses?

In this webinar we will hear from an expert on some of the most common mental illnesses affecting the construction industry. We will also have a panel discussion on how this knowledge can assist you in navigating this important topic.

Speakers are Sarah Wright, community liaison officer, Sisk; Priya Aiyer, project architect, Mace; and James Gilbert, managing director, Subby. bgrange@ciob.org.uk

Quality Across the Board

12 October, 6.30-8pm, Cardiff Please join us for our first faceto-face event since 2019. For this keynote talk on quality in construction we bring together three eminent experts in the field – each coming from a different standpoint.

Paul Nash, past CIOB president and chair of the Construction Quality commission, will talk about the work of the commission and the steps that the CIOB is taking to promote best practice and provide better education on quality management, for our members, the wider construction community and for the benefit of society.

He will be followed by Professor John Edwards, who will make the case why, particularly in Wales, retrofit should be an important part of the quality debate going forward.

The session will be rounded off by Francois Samuel, who will give the Welsh government's perspective and outline the work ongoing in this field. There will then be ample opportunity for a healthy debate on the issues raised. vcoxon@ciob.org.uk

Mental Health Within Construction Post Pandemic

19 October 8.30am-12.30pm, Leeds

The Covid-19 pandemic has had a catastrophic impact on everyone's lives, with the last year being an extremely difficult time for so many. However, while other industries stopped, construction continued – having to adapt to the new normal and rise to the challenge.

CIOB Leeds Hub has organised a half-day conference at Leeds Town Hall focusing on Mental Health within Construction Post Pandemic. With leading industry specialists and personal stories, this event aims to provide construction professionals and managers with the tools to support colleagues and themselves. kbarker@ciob.org.uk

Black Belt Negotiation: How much are you leaving on the table? 20 October, 1-2pm, Ireland

Join CIOB Dublin Hub for an inspiring lunchtime webinar with Teamworking International, entitled Black Belt Negotiation.

Tom Flatau, CEO of Teamworking International, combines business acumen and intimate knowledge of corporate culture with groundbreaking neuroscience research and brain-based coaching to transform the individual and deliver growth and profitability in world-class companies.

The Black Belt Negotiator has become the gold standard, adopted by multi-nationals including HSBC, American Express and Siemens. It has helped reduce costs, improve project delivery, win new business and increase profit, while at the same time building better relationships with key trading partners.

uhennigan@ciob.org.uk

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

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