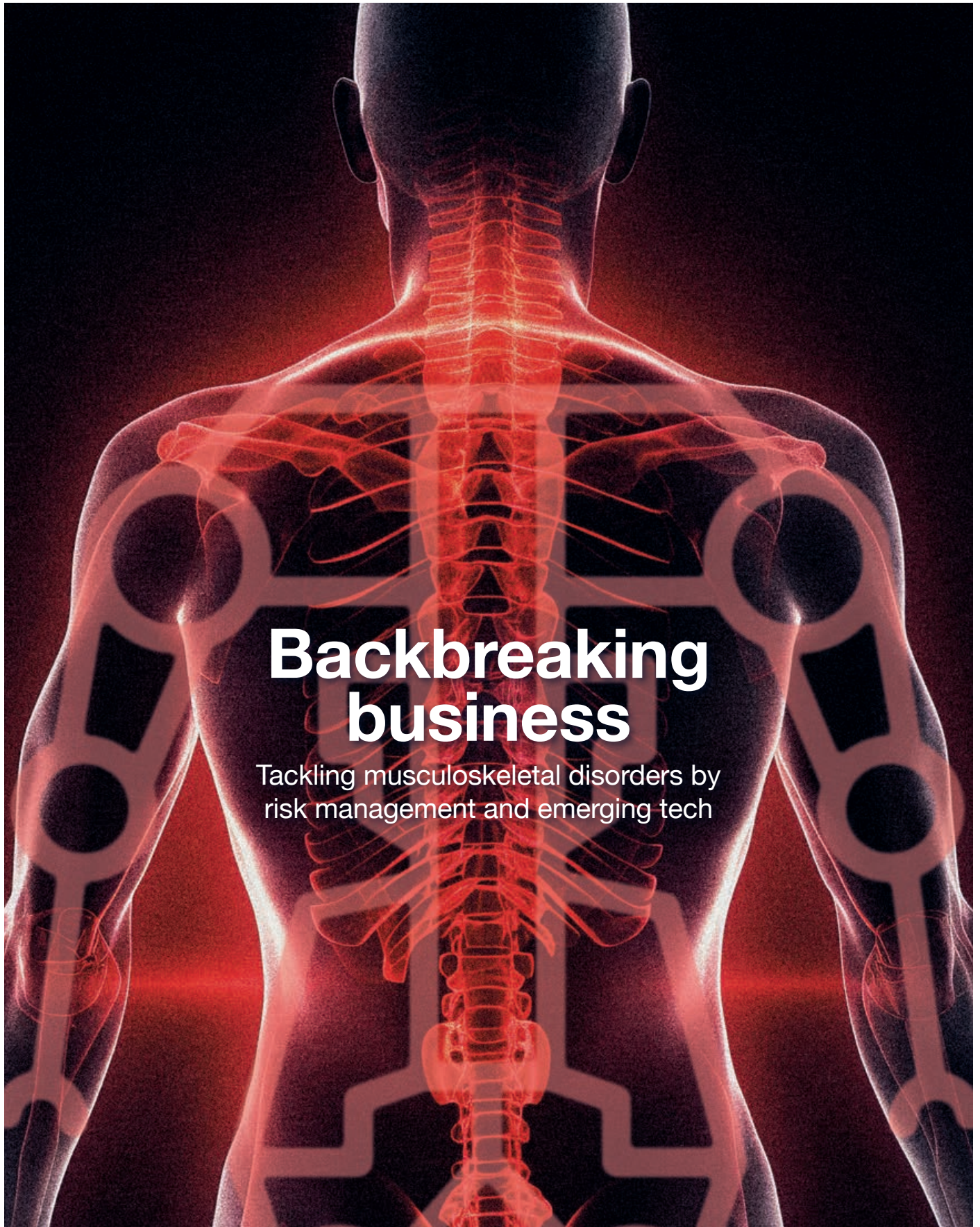


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Autumn 2024



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Tackling musculoskeletal disorders by risk management and emerging tech



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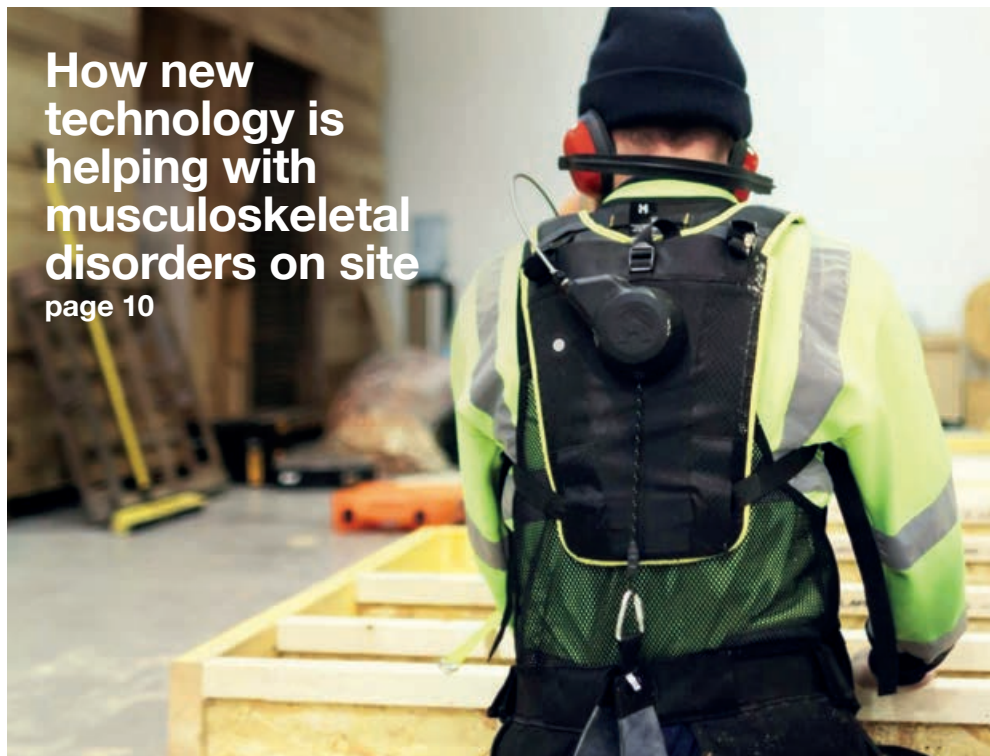
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How new technology is helping with musculoskeletal disorders on site
page 10



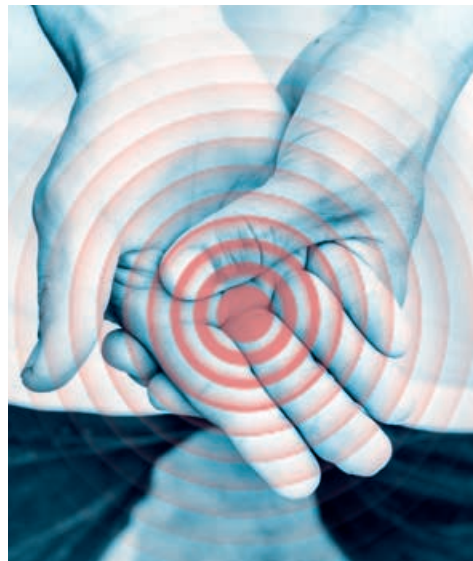
In this issue

- 05 Welcome
- 06 News: Investigation into CDM urged after rise in deaths
- 08 Opinion: Anthony Taylor
- 10 Cover feature: Tackling musculoskeletal disorders
- 14 Insurance and the new PD role
- 18 Legal: Mandatory occurrence reporting requirements
- 20 Member profile: Dan Cooke
- 22 CPD: Managing HAVS risks
- 26 H&S statistics and prosecutions
- 28 Regional focus: Scotland
- 30 Events: Autumn event series

While we aim to use images that demonstrate best practice in this magazine, some are for illustrative purposes only.



Mandatory occurrence reporting
page 18



CPD: Managing vibration risks
page 22

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Member profile

page 20



Try to work on projects that might at first be beyond what you're used to. I've often found that we can all be more capable in situations than perhaps we'd think was possible

Dan Cooke, Rider Levett Bucknall



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Welcome

With a new government in place and parliament returning after the summer recess, APS is making sure that its political message continues to get through – in all parts of the UK, says **Andrew Leslie**

I have been in post for just over two months, and it has been all go, clearing my old desk and getting my feet under the new one.

As we hit the holiday season, we celebrated American independence – and a certain Tom Cruise classic – by holding a UK general election on 4 July. No fireworks and no surprises at the outcome but some significant shifts in policy, not least in housing where the improbable target for new completions is 370,000 a year or 1.5 million over the term of this parliament.

As part of its pre-election manifesto, APS issued a series of ‘asks’ around skills availability and development. There is no point in setting up a target that you cannot reach – safely – and of course more completions suggests faster consents and build.

However, there is not currently a supporting administrative, regulatory or workforce infrastructure. There is already a reported increase in fatalities for 2023/24, and APS is concerned that the proposed speed of delivery could worsen the situation, as APS Fellow Steve Coppin says on our news pages.



Andrew Leslie
Association for
Project Safety

“
One of the outcomes of post-Grenfell lawmaking has been to emphasise that building regulation is a devolved matter

APS takes its political profile seriously and is making every attempt to make politicians in our devolved jurisdictions aware of our message and the value our members and those on our registers bring to the industry.

APS has had very well received meetings at the Welsh Senedd and has events at the Scottish Parliament in November 2024 and again at the Senedd in January 2025 in the diary.

Why bother, I hear some of you ask. One of the outcomes of post-Grenfell lawmaking has been to emphasise that building regulation is a devolved matter. Thus, we have CDM 2015 applying to the UK, but not so building regulations. Both of which have their foundations in safety.

APS, through Mark Snelling and others, has worked hard to let its voice be heard relating to the Building Safety Act etc in England, APS has launched a Register for the Principal Designer Building Regulations, a successful webinar series, The More You Know, with more announced for this coming autumn: Plan For Safety.

We will have to deliver a similar programme of events in Wales, Scotland and Northern Ireland. We are tracking progress on Wales and will make arrangements for a competence scheme once the nuts and bolts are sorted out.

In the spirit of Wallace and Bruce, Salmond and Sturgeon, Scotland is going a slightly different route and will not (currently) adopt PASs 8671-3, and most of the BSA requirements that apply in England. This issue of *PSJ* features a focus on Scotland Region from our NMRG representative, Callum Bunce.

Finally, we have some staff changes. Ellie Morrison has joined the team as marketing and communications officer to take the place of Konstantina Chiotelli.

We are sad to see Konstantina go and thank her very much for her work on social media and video platforms, but have a very warm welcome for Ellie, who will continue the good work with Laura and her team.

Andrew Leslie is interim CEO of the Association for Project Safety.

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Examine CDM in the light of death rises, HSE urged

APS fellow questions links between CDM dutyholder shortcomings and increased construction fatalities

A senior APS member has called on the HSE to re-examine the role of dutyholders under the CDM regulations in the light of an increase in fatalities in construction.

Figures released in July show 51 deaths recorded across England, Wales and Scotland in construction – up from 47 the previous year according to the new statistics. The average number over a five-year period was 42.

The 51 deaths figure is 70% higher than the 2018/2019 pre-Covid figure when fatalities dipped to 30.

In total there were 138 worker deaths in the period April 2023 to March 2024. Deaths in construction represented 37% of all the industries surveyed.

Stephen Coppin FaPS, founder and managing director of SJC Risk

Management Solutions, questioned whether the rise in fatalities could be a further sign that the execution of the CDM regulations was failing.

“Does this demonstrate that CDM 2015 is not being applied properly – and, if so, by whom? The client, the principal designer, the other designers, principal contractors and or contractors or all or some of these dutyholders?” he said.

He called for the HSE to revisit its June 2023 research paper *RR1198 Implementation of the principal designer role within CDM 2015* and take action over the shortcomings highlighted in it and in raw information in a separate technical annex.

The research, based on responses from 849 people surveyed by the HSE,



Stephen Coppin
SJC Risk
Management
Solutions

“Does this demonstrate that CDM 2015 is not being applied properly – and, if so, by whom?”
Stephen Coppin FaPS

showed the intended objectives of the role are not being fully realised. There was concern that it is misunderstood and inappropriate appointments made.

Questions were raised as to whether the role should just be involved in the preconstruction phase or if there should also be clear control of the design and preconstruction phase that more than likely continues during construction.

“We’re often seeing preconstruction information documents that have been submitted to principal contractors that have been deemed to be insufficient in terms of ‘designing out’ and/or flagging up the project-specific significant risks to health and safety,” said Coppin.

“This is especially the case where coordination and dialogue is necessary with regard to temporary works design, which is often overlooked. Given the wide-ranging interpretation of the planning, managing and monitoring duties, this may mean that clients are not getting the advice they need regarding safety-critical issues.”

He urged the HSE to examine some of the shortcomings highlighted, including the need for more designer-led design-risk management and the appointment of the right competent people at the right time.

Figures in health and safety across the built environment also expressed concerns about the statistics.

APS interim chief executive Andrew Leslie said: “This increase does not appear to be due to there just being more construction workers exposed to the same risks, as the incident rate has also increased.

“It would be useful to see the statistics analysed to show how many deaths were due to employers and dutyholders failing to meet their legal obligations under the Health and Safety at Work Act and CDM 2015 (and other relevant legislation).

“When we know more about why these deaths are occurring, APS can focus on appropriate actions and advice to our members, working in partnership with industry to eliminate deaths, tackle ill health and manage risks throughout the whole life of any project in the built environment.” ■

For more analysis, see p26.

APS to boost political lobbying

Focus will be on safety and remedying skills shortages



CHRIS MCANDREW

APS is gearing up for a renewed UK-wide lobbying effort in a bid to inform newly elected MPs of issues around building safety and other pressing issues in construction as well as the work of the organisation.

Devin Scobie, a long-established political consultant to APS on corporate affairs, has been talking to members of the Welsh parliament as they look to roll out new legislation on building safety, as well as to Scottish MSPs to help influence legislation.

APS's lobbying efforts, including a reception at Westminster later in the

Croydon West MP Sarah Jones will be working across two departments as minister for construction

autumn, will also raise issues around skills shortages, an area highlighted in its manifesto before the election.

Scobie said: "We are delighted that the new government is committed to increases in building new homes but it must be accompanied by investment in comprehensive training programmes and real, meaningful apprenticeships to build a skilled workforce capable of safely constructing the planned 1.5 million pledged over the next five years."

APS is also calling for the immediate allocation of funds and resources to training centres and educational institutions – with enforceable output targets. It wants to boost skills with a planned selective immigration policy to attract skilled workers, similar to the Australian model. This would be a short-term tactic for five years.

Government is yet to announce which minister is responsible for building safety and health and safety but Croydon West MP Sarah Jones is minister for construction. She has been appointed minister of state at the Department for Energy Security and Net Zero and at the Department for Business and Trade, with responsibility for construction.

The Construction Leadership Council will continue in its present form and Jones will co-chair from the government side. ■

News in brief

Lithium ion battery danger

A coroner has issued a prevention of future deaths report after a man fell to his death escaping a tower block fire started by an electric bike battery. Abdul Oryakhel died on 25 September trying to escape from the 16th floor of Twinnell House on Stapleton Road in Bristol.

Senior Avon coroner Maria Voisin outlined how the blaze began in a top-floor flat within the council-owned property in her report at the end of June. A lithium-ion battery pack overheated and ignited, causing four people to attempt to escape, only three of whom survived.

Voisin voiced concern at the "lack of understanding of the dangers" of lithium-ion batteries used for electric bikes and scooters and pointed out that there was no British or European standard to control the sale of such items in the UK.

The coroner wrote to the Department for Transport's head of private e-scooter regulation, the chief executive of the Office for Product Safety and Standards (OPSS) and the mayor of the West of England urging them to intervene.

Barratt's £192m cladding fixing bill

Housebuilder Barratt has set aside £192m to fix building safety defects affecting legacy properties in its portfolio: £12.8m more than in the previous financial year.

The costs include £62m to increase the fire safety and external wall systems contingency in those developments, as well as remediation costs for "atypical buildings" within Barratt's portfolio.

The remaining £130m relates to buildings previously identified as potentially requiring remediation work. This includes the remediation of issues with the reinforced concrete frames in two London developments.

Grenfell final report

The Grenfell Inquiry has said its final report will be published in the autumn.

It has written to core participants stating that the Phase 2 report will be published on 4 September 2024.

Phase 2 will examine how the block came to be in a condition that allowed the fire to spread. It is expected to be highly critical of the industry.

It comes as the Met Police and Crown Prosecution Service said no charges would be announced until late 2026 at the earliest due to the "complexity" of the inquiry.

The Phase 1 report was published in October 2019.



CARCHAROTH



Behaviours are key to competency

Acting with integrity is core to the new building safety regime. Organisations need to stamp out any poor behaviour and quickly, says **Anthony Taylor**, chair of the Building Safety Alliance

A core intent of the Building Safety Act and the consequent new building safety regime is to ensure that all work across the built environment is done by appropriately competent people – and that they adopt an attitude which brings personal and individual integrity to all the work they undertake.

We are used to evaluating and being evaluated ourselves in regard to competence. This has previously been defined as ‘skills, knowledge and experience’. To this has now been added ‘behaviours’ (SKEB), and a newish term ‘organisational capability’ has been enshrined in law.

Looking at behaviours first, these have been defined in the British Standard BS 8670-1:2024, *Competence frameworks for building safety part 1: Core criteria – Code of practice*. At the higher level these are defined as:

- act ethically and contribute to safe outcomes;
- manage individual and contribute to organisational competence;
- demonstrate personal responsibility and accountability; and
- understand and comply with duty of care to others.



Anthony Taylor
Chair, Building
Safety Alliance

It is the task of the Industry Competence Committee (ICC), a statutory committee advising the Building Safety Regulator (BSR), to assist and guide improvement in competence (SKEB) across the built environment.

This begs the question as to what ‘good’ looks like. This is often delivered by way of agreed standards being met, and being independently assessed (by, for example, UKAS or Engineering Council accredited auditor organisations), and placed on an appropriate register.

In the past there has been a fair amount of reliance on the competence-related questions in the recognised ISO or British Standards such as ISO 45001, ISO 9000/90001 and ISO 14001. There are many others.

However, these have tended to rely on evidence of management of CPD and continual improvement, rather than set out a specific management system for the competence of the workforce.

The BSR has been very clear that – other than the Register of Building Control Approvers, for which it is the governing body – it does not intend to maintain such registers. This is for industry to establish and manage.

“We need individuals to be competent, and we need their organisations to facilitate their staff doing the right thing though excellence in corporate culture

Currently there is a great deal of work going on within the sector. One such piece of work comes from the Building Safety Alliance (BSA), of which APS is a founding member.

It recently published BSAS 01:2024 *Organisational Capability Management System Standard – Management of Competence*. This has been designed to provide guidance to organisations on how to make a judgement that they are employing an organisation that is appropriate for the project/job, and the processes that need to be in place to enable the outcomes.

Importantly, like PAS 8673, it can also be used to evidence organisational capability to the regulator and interested parties. The BSA is working with several professional bodies to deliver a register in the near future. Nevertheless – only time, and probably the ICC, will establish what ‘good’ looks like.

Industry itself operates a sub-committee of the ICC, the Industry Competence Steering Group (ICSG), which will work very closely with the ICC to these joint aims.

My plea is for both individuals and organisations to take this very much greater focus on individual SKEB most seriously. Colleges and educational establishments should be very clear as to expectations of personal integrity and what this will mean to those coming into the built environment sector in the future, as well as for personal career progression.

I would also urge organisations of all sorts and sizes to begin work to establish a formal process to manage competency throughout their organisation. The writing is on the wall as to where ‘all this is going’ – we need individuals to be competent, and we need their organisations to facilitate their staff doing the right thing though excellence in corporate culture.

The Building Safety Act sets out very clear expectations as to what this means: not to turn ‘Nelson’s blind eye’. I have the pleasure in working with some who are proactively doing just this, hopefully more will follow their lead – promptly. ■

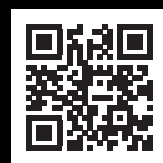


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Strengthening the workforce

Musculoskeletal disorders are one of the main causes of ill health in construction, affecting over 37,000 workers. Could innovative approaches to risk management or emerging tech like wearables, exoskeletons and computer vision make a difference? **Stephen Cousins** reports

Despite decades of research and development and the redesign of construction work and building sites, musculoskeletal disorders (MSDs) continue to plague the sector, accounting for the majority of workplace injuries.

An average of 37,000 workers had a new or longstanding work-related MSD between 2020/21 and 2022/23, according to HSE figures, equivalent to 54% of all ill health in construction.

Triggered by damage or injury to tissue or joints in the upper or lower limbs and back, MSDs are a source of chronic or acute pain that impacts workers' ability to perform tasks safely and efficiently. This can stunt careers and affect quality of life outside work.

Keen to identify viable solutions, researchers and safety professionals are trying new approaches to MSD risk management. Contractors are turning to emerging technologies – including wearables, computer vision, data analysis tools and exoskeletons – in a bid to eliminate or minimise worker exposure, often with positive results.

However, if cutting-edge systems are going to transform health and wellbeing at scale, experts also warn that means addressing barriers around the cost of investment in an industry operating on low margins, workplace culture and resistance to innovation.

Seb Corby, principal consultant at Safetytech Accelerator, a technology accelerator focusing on safety-critical industries, says: "One of the biggest drivers is regulation. It's also large clients like National Highways, HS2 and Network Rail, asset owners and managers who employ large numbers of people. Change won't come until they stipulate that tier 1 contractors need to be using certain pieces of PPE or low-hand arm vibration equipment etc. We need that external pressure."

Root causes

Despite the widespread impact of MSDs, identifying their root causes remains difficult. HSE research into the construction, healthcare and transportation and storage industries, from 2018, found that employers were typically unable to determine if MSDs were caused on the job, through daily tasks such as bending, awkward positions or lifting, or as a result of natural ageing and lifestyle choices.

Back pain was the MSD employers encountered most often, but many lacked detailed data to back this up.

Employers and workers in all three sectors had "fatalistic attitudes" towards MSDs, said HSE, believing they had little control over their occurrence. Employers were generally confident they were doing everything possible to tackle them via existing preventative and managerial approaches.

In addition, MSD-related injuries were often thought of as singular events requiring immediate action, in line with existing workplace health and safety policies, rather than cases with a gradual or cumulative onset that require other interventions.

Other research by Loughborough University, from 2020, found that construction employers were underestimating rates of MSDs and the impact on a worker's safety and productivity. It uncovered growing

“Change won't come until they stipulate that tier 1 contractors need to be using certain pieces of PPE or low-hand arm vibration equipment etc. We need that external pressure
Seb Corby, Safetytech Accelerator

Percentage of self-reported work-related musculoskeletal disorders by affected area: new and long-standing

■ 41% Upper limbs or neck
 ■ 41% Back
 ■ 17% Lower limbs

Source: LFS Annual estimate 2022/23



evidence of MSD presenteeism, with workers remaining at work despite pain, which researchers said might be more costly than absence because of the need for workplace interventions.

Addressing hazards at the design stage is the first line of defence when trying to eliminate or minimise manual handling risks. Designers and pre-construction planners are required to consider them under CDM regulations, but again evidence suggests more could be done.

Loughborough University concluded that risk assessments at all stages were too generic, and recommended pre-work risk assessments should include not only hazards but people, taking into account individuals' capabilities.

Improving risk assessments during planning and scheduling could, it said, create an opportunity for those suffering MSD-related pain or injuries to state what tasks they are comfortable with, and identify options for job rotation or 'tweaks' to jobs over the course of a day.

According to Lee Marsden, managing director of Majestic Site Management, the new change control process introduced under the Building Safety Act could help reduce worker exposure to MSD-related injuries by preventing the easy substitution of products and components.

Under the legislation, applying to all higher-risk buildings over 18m tall, the client must apply to the Building Safety Regulator (BSR) to make any 'major' or 'notifiable' changes to detailed design after a project has passed Gateway 2 and been signed off by the regulator.

"Where, before, the contractor might have tried to save money and go for a heavier material rather than a light material, or buy large sheets that workers need to cut on site, rather than smaller, manageable sheets, now they can't do it because it effectively has to go through the approvals process again," says Marsden, who adds that hopefully the same approach will filter down to smaller jobs too. ►

Kenoteq workers wear the Herowear Apex suits to provide support while moving bricks





Tech interventions

Improved guidance and regulation is important, but the pervasive nature of MSDs has led some companies to look to cutting-edge innovations like computer vision, wearable sensors, exoskeletons and extended reality to monitor and prevent MSD-related physical strain on workers, and improve ergonomics.

Some of the best examples of tech-enabled MSD prevention for construction were identified by the UK's Safetytech Accelerator in collaboration with the National Safety Council – the American equivalent to the HSE – at two recent Safety Innovation Challenge events in the US. The challenges took place in 2022 and 2023 and covered innovations designed to tackle manual material handling MSDs and upper body MSDs.

Finalists included a bionic glove designed to reduce hand injuries by enabling workers to use less grip force on repetitive tasks.

The Ironhand was developed by Bioservo on sites run by French

contractor Eiffage. It features pressure-sensitive sensors in the fingertips and artificial tendons that run down the sides of fingers connected to motors in a backpack. When workers grab an object, such as a rebar tray or a shovel, the glove provides a boost to grip, helping alleviate hand strain and pressure on the wrists.

Eiffage's tests on operatives, including fitters and welders, measured reductions in effort ranging from 25 to 80% depending on the task. The contractor said the system should help reduce occupational injuries.

Nadia Echchihab, head of innovation programmes at Safetytech Accelerator, tells *PSJ*: "The technology helps workers continue to work for longer without feeling fatigue, reducing exposure to MSDs... When you get older, your grip is not as strong as previously, so it means an older person could continue doing the task with the same strength as a younger one."

Other finalists included TuMeke Ergonomics, whose computer vision technology scans construction workers' movements during manual material handling activities to better identify MSD risks and assess targeted solutions.

UK-based Reactec's R-Link smart watch informs the wearer of exposure to hand-arm vibration (HAV) by displaying HSE HAV risk assessment exposure points in real time.

According to Echchihab, the watch satisfied judges' requirements for technologies that could be cheap to deploy and apply to multiple different



tasks. "Getting a special wearable for each worker is not very sustainable if you have to buy lots. R-Link can be shared – different workers can use the same device in separate sessions, helping cut the cost," she says.

Body bionics

One emerging MSD-prevention technology generating a buzz in construction is the exoskeleton, or exosuit. The blend of human intelligence and robotic strength has moved from concept to real-life deployments in various industries.

Exosuits aim to boost human performance and provide support for the back, legs, hands or other areas affected by prolonged strain that can trigger musculoskeletal disorders.

They can either be active, using machine components to drive physical movement, or passive, harnessing human movement, materials, springs and dampers to energise the system.

What is thought to be the first detailed empirical study of exoskeleton use in live construction was recently completed by Built Environment – Smarter Transformation (BE-ST, formerly the Construction Scotland Innovation Centre), the University of Strathclyde, and National Manufacturing Institute Scotland (NMIS).

Part of the EU's Exskallerate programme, established to test the benefits of exosuits for European SMEs, the initiative was divided into two phases. The first saw construction businesses trial two passive exoskeletons, the Herowear Apex and Auxivo Liftsuit, both designed to protect the upper body and back, in controlled factory conditions for manufacturing and loading.

Subsequent 'field lab' tests saw workers from Kenoteq, Ecosystems Technologies and Indeglas wear the exosuits while carrying out typical roofing, plasterboarding and offsite assembly activities over several days at BE-ST's facility in Blantyre, Scotland.

Researchers gathered qualitative data and feedback from six workers,

“The technology helps workers to work for longer without fatigue... an older person could continue the task with the same strength as a younger one

**Nadia Echchihab,
Safetytech Accelerator**

“Whether you’re a bricklayer, a window fitter or a roofer, there are lots of different factors to consider and it’s hard at the moment to say there is a suit suitable for all of these

Alan Johnston, BE-ST

four of whom had their movements captured using dimensional motion tracking cameras, to measure the effect of exosuits on motion when carrying out different tasks.

Analysis revealed that almost all recorded activities were affected in some way by the exosuits, whether reducing or increasing the users’ range of motion, changing their behaviour during bending and lifting or impacting productivity time.

Researchers concluded that the suits “went some way” to encourage safer postures, however this was highly dependent on the type of activity, the time spent in the suit, the suit type and the user. Some activities benefited from a productivity increase.

So could exoskeletons soon become a regular form of PPE, similar to hard hats? Alan Johnston, impact manager at BE-ST, says the answer is “possibly” but it will likely require another generation of suits before that.

“Construction is quite varied. Whether you’re a bricklayer, a window fitter or a roofer, there are lots of different factors to be considered and it’s hard at the moment to say there is a suit suitable for all of these,” he says.

Tough sell

The onsite trials revealed conflicting feedback from workers – while some said the suits were aiding lifting, or helping support their back, others said switching to different activities created a strain in another area of the body.

“Some became uncomfortable or hot, or said the straps were rubbing their shoulders. Some felt discomfort in the thigh, or on one in their hips,” says Johnston. Designs might need to evolve in future, he adds, to match suits to a particular task and individuals of different sizes and abilities, potentially by using adjustable straps.

According to Sam Chapman, managing director of brick manufacturer Kenotek, workers doing manual handling, lifting and building walls thought they were “a positive step” and they were “less tired at



the end of the day”. However, one worker who had to operate a forklift found them “really annoying” because moving into a seated position meant acting against the movement of the suit. “Although the principle of the exosuits was sound”, the benefits were not enough to justify investment at the current time, he added.

Some employers may be swayed to invest by the reported productivity gains – less tired employees should be able to work at a more consistent and efficient pace. However, the tech faces other barriers to uptake,

Workers from Stewart Milne Timber Systems (now part of Donaldson Group) wear Auxivo Liftsuit and GOM scanners to track motion at BE-ST Innovation Campus

for example, lacking certification demonstrating the health and wellbeing benefits to contractors or endorsement by the HSE as a recommended form of PPE.

Scaling up adoption of MSD innovations in general remains a difficult proposition given the conflicting priorities that still operate in construction. The HSE’s MSD research concluded that the industry had reached “a plateau in effective interventions” due to a lack of innovation, with “a stalemate” in place over who should take responsibility for making improvements.

Challenging contractual pressures, unhelpful workplace cultures and corner-cutting, including the use of incorrect equipment, remain commonplace. “When people are pricing for jobs, they need to factor in the cost of investment in systems to help with MSDs, but too often all the client sees is a bottom-line figure, so they go for the cheaper option,” says Marsden.

If employers can be convinced of the overall value proposition, also factoring in long-term benefits for health and wellbeing, things might change.

“A lot of technology still needs to be fully proven in terms of how it can be implemented into a workflow and create change,” says Corby at Safetytech Accelerator. “We’re at a point where we’re still proving the value and making sure technologies can be embedded well enough for people to want to take them up. ■

Exoskeleton suits trialled in air jack role



Stanley Handling supplied the exosuit used on the project

A major infrastructure project involving the “construction of train viaducts” in the UK has rolled out active exoskeleton suits to workers after successful trials of the technology.

According to exoskeleton supplier Stanley Handling, the exosuit was recommended to the client based on AI-powered

video scanning diagnosis designed to match the right exoskeleton suit to an activity.

A specialist safety consultancy visited the site and used the WearHealth technology to assess workers lifting 30kg air jacks from the floor onto one shoulder. The air jacks are used to attach large bolts onto metal splines that connect concrete sections of train viaduct.

Videos of workers performing the task were processed by an AI-driven algorithm to assess risk. An ergonomist then reviewed the data to take into consideration the weight carried, static movement and scheduled breaks.

The data informed a written report recommending the use

of an active exoskeleton suit designed to decompress the spine. The exosuit was then trialled by the contractor using body-mounted sensors to verify its effectiveness. The improvement was verified and exoskeletons were rolled out to the entire team.

Andre Jutel, head of ergonomic safety technology at Stanley Handling, says: “Getting workers involved from the trial stage not only helps them experience the improvements that this type of technology makes to their day-to-day activities, they can also see the data generated, which helps them understand how they can best safeguard their health going forward.”

Insurers weigh up the risk of covering the PD role

The industry is still getting to grips with the newly created dutyholder role of principal designer for building regulations. So are PII insurers.

Samantha Peat offers advice on keeping premiums down

Professional indemnity insurance (PII) has been in a state of crisis since 2020. This has been driven by increased loss ratios (where claims exceed those expected when premiums were set), the lack of risk appetite in the insurance market exacerbated by lockdown and the catastrophic systemic fire safety risk exposed by the Grenfell Tower tragedy.

While the insurance market has recovered a little in the last four years – premiums have started to at least plateau and cover for fire safety has been reintroduced – it now faces further uncertainty and risk in the form of a new dutyholder: the principal designer.

There are four things that you must understand to put this into context:

- PII is written on a 'claims made' basis. This means the insurer that you are with at the time you become aware of a problem pays any resulting claim, not the insurer that you were with when you made the error that resulted in or contributed to the claim.

“If a client sues everyone on a problem project, one firm could be 1% liable for the loss but end up paying 100% of the client's claim and asking insurers to cover this



Samantha Peat
Chair, Construction
Leadership Council
Professional
Indemnity Insurance
Working Group

- Parties to a project have joint and several liability. This means that if a client sues everyone involved on a problem project, one firm could be just 1% liable for the client's loss but end up paying 100% of the client's claim and asking insurers to cover this.

- Insurers have a duty to make a profit for their shareholders. Insurers are not charities, they are commercial entities in the business of risk transfer. If claims (and operating expenses) exceed premiums, they are failing in their duty to their shareholders. It should not be a surprise, therefore, when insurers increase premiums or put exclusions on policies to avoid large or systemic claims that they did not price into the premium and that affect profitability.

- PII cannot cover criminal liability but generally covers civil liabilities and contractual liabilities, so long as those contractual liabilities are no more onerous than the insured's liability would be in the absence of that contract.

So, let's think about how these four elements feed into insurers' appetite for covering the new dutyholders under the Building Safety Act 2022 (BSA) of principal designer (PD).

One thing first – there is a distinct difference between a PD under the Construction (Design and Management) Regulations 2015 (CDM) and a PD under the BSA. Both are concerned with safety (not just fire safety and not just for high-rise

buildings) and have criminal sanctions, including prison sentences.

However, while several different professionals could undertake the PD role under CDM, it is not yet clear whether the BSA drafting will make it difficult for anyone other than an architect or D&B contractor to fulfil the lead designer and PD role.

Insurers are receiving claims today arising out of work done years ago and changes in laws and regulations (like the BSA) or systemic problems (such as cladding) can make what was low-risk work higher risk in terms of frequency and severity of claims.

The insurance principle of risk transfer becomes problematic when assumptions are wrong, and uncertainty makes the profitability of the risks underwritten different to that envisaged.

Add to this the fact that insurers might end up paying 100% of the client's claim when their insured was only arguably 1% liable for the loss. This tends to happen if the other parties to the project that should be paying their fair share have stopped trading or don't have insurance cover or the assets to pay in the absence of insurance cover.

This explains why it was not just one or two insurers that increased premiums and put broad exclusions on cover relating to fire safety after the Grenfell Tower tragedy – not only did insurers have more claims than they expected coming through, but they ►

“Broadly, insurers welcome the steps taken to improve safety, so long as these do not create liabilities for their insureds that will increase risk or uncertainty





“The problem is that clients and their solicitors want to use heavily amended contracts. Often these contain onerous terms which are at best unfair and at worst not insured

might end up paying for the negligent acts of others if they kept cover in place while others did not. This would make them unprofitable and drive away support from investors.

So how do insurers view the new PD dutyholder role and how can you make sure you keep your premiums to a reasonable level for adequate cover?

Broadly, insurers welcome the steps that are being taken to improve safety, particularly fire safety and particularly for high-rise buildings, so long as these steps do not create new or greater liabilities for their insureds that will increase risk or uncertainty.

There were concerns in the drafting stages of the Act that PDs and principal contractors (PCs) would be asked to certify compliance with building regulations on behalf of the project team, but this is not the case. However, if section 84 of the Building Act is enforced, as government has suggested might be the case in future, this will introduce strict liability for compliance with the building regulations.

Underwriters and industry organisations are working together to ensure insurable contract terms

This is a problem for insurers because strict liability means that a defence of ‘I did not act negligently, I acted with reasonable care and skill’ cannot be used. This increases the risk and could lead insurers to increase premiums or exclude this risk from cover to protect their profits.

Insurers also broadly welcome the steps being taken by the construction industry to demonstrate competence around safety, particularly fire safe design.

In January 2024 the International Underwriting Association hosted an event for insurers and brokers to hear from the Construction Industry Council, the Building Safety Regulator (BSR), and the legal profession.

At that conference underwriters acknowledged that much had been done and would continue to be done around competence. However, two concerns arose from the discussions – the first was around the lack of resources at that point in time at the BSR and the second was around contractual liabilities.

Construction professionals cannot claim against insurance for their criminal liabilities (it is contrary to public policy to insure criminal activity) but criminal liabilities can be ‘dragged and dropped’ into contracts as contractual liabilities. Claims rarely go all the way to court and, putting the Defective Premises Act 1972 (DPA) to one side for a moment, professionals rarely face claims other than breach of contract.

If clients use a standard form contract (eg, one issued by the RIBA or RICS) unamended, the terms of the contract are both reasonable and covered by most professional indemnity policies. The problem is that, other than small-scale domestic projects, clients and their solicitors want to use heavily amended contracts. Often the amended contracts contain onerous terms which are at best unfair and at worst not insured.

If the liabilities written into the contract would not exist in the absence of the contract, claims arising from the contractual terms may well fall outside cover. This means that either the client will be unable to recover their claim because there is no insurance to fund the claim, or the uninsured will have to pay the claim and could go out of business as a result.

The Construction Leadership Council’s (CLC’s) PII Working Group is working with the CLC to endorse sensible guidance already out there (BuildUK, GIRI, CLC), to encourage the authors of standard contracts and the *Construction Playbook* to highlight this issue, and to ask government to lead by example by encouraging local authorities to issue and negotiate sensible and insurable contract terms. ■
Samantha Peat is chair of the Construction Leadership Council’s Professional Indemnity Insurance Working Group. She is a group board adviser to Meridian Risk Solutions and former senior underwriting director of the Wren Insurance Association.

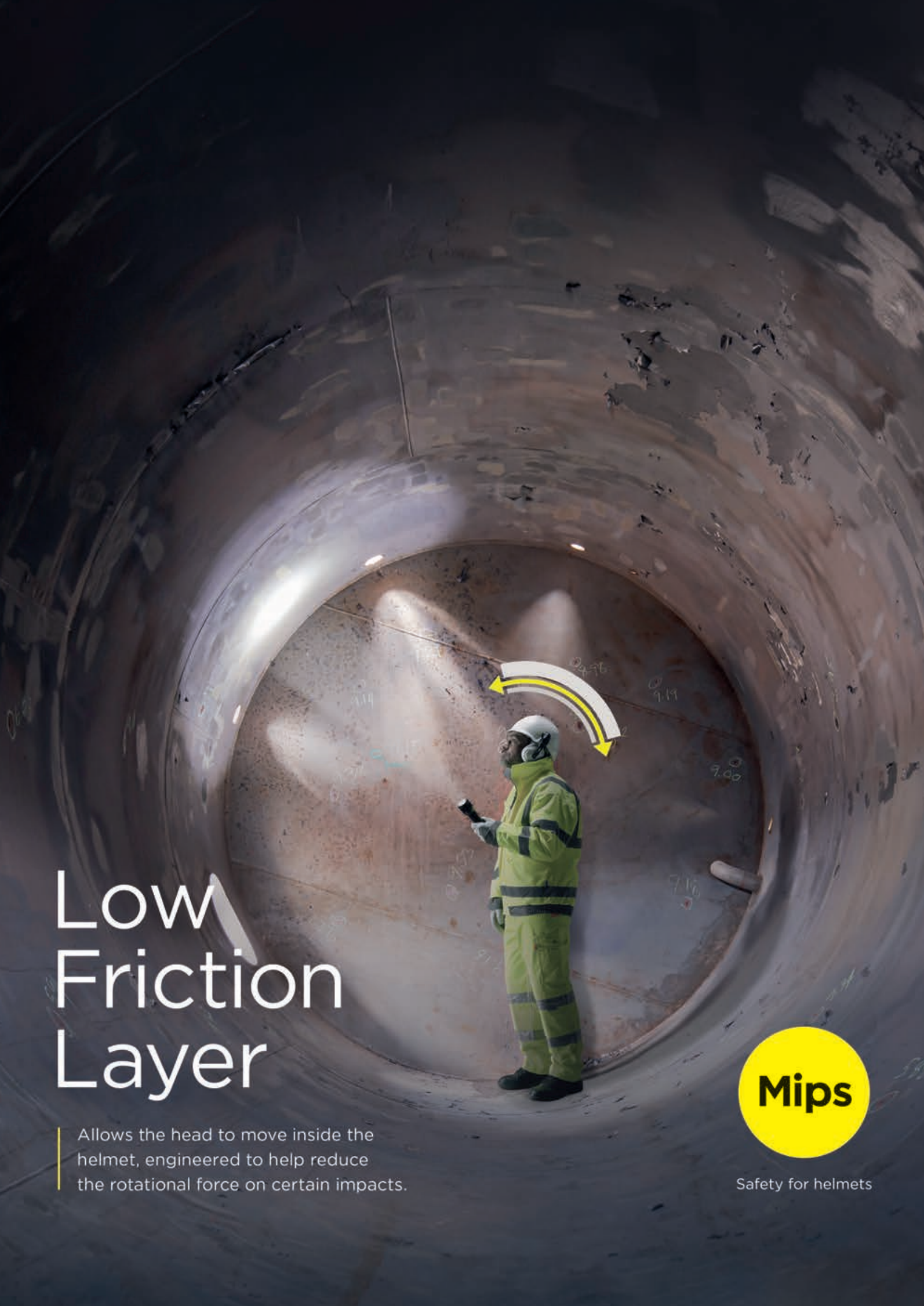
What can you do for your own PII?

- Try to use standard form contracts with little or no amendment and a clear responsibilities matrix.
- Ask to have a conversation with your broker and your insurer about what you are doing as a business to

adapt your work processes to fall in line with the new regulations.

- Ask your broker and insurer to work with you to identify and push back on onerous contract terms that could fall outside cover.

- Keep records for longer than you would normally (12-15 years) as the limitation period under the DPA is now 30 years retrospectively and 15 years prospectively. This will help insurers if you face a claim under the DPA.



Low Friction Layer

Allows the head to move inside the helmet, engineered to help reduce the rotational force on certain impacts.

Mips

Safety for helmets

What is mandatory occurrence reporting?

A new requirement under the Building Safety Act for higher-risk buildings is for mandatory occurrence reporting. **Michelle Essen** and **Kate Hanson** from international law firm Womble Bond Dickinson explain what it involves

Earlier this year a new mandatory occurrence reporting system was introduced in England through secondary legislation, under the overarching umbrella of the Building Safety Act 2022.

The secondary legislation in question is the Building (Higher-Risk Buildings Procedures) (England) Regulations 2023, referred to here as the Regulations.

These Regulations impact higher-risk buildings (HRBs) in England, which are essentially buildings that are 18m or seven storeys high or more, with two or more residential units.

Under the Regulations, “safety occurrences” relating to the structural integrity or fire safety of HRBs which could potentially pose a serious risk to people must be reported to the Building Safety Regulator (BSR) during the construction phase by principal designers and principal contractors.

Overview of the new mandatory occurrence reporting system

In brief, before construction begins, the principal dutyholders have to establish a system that enables “reporting persons” to promptly report every safety occurrence to the principal dutyholders.

“Before construction begins, the principal dutyholders have to establish a system that enables ‘reporting persons’ to promptly report every safety occurrence to the principal dutyholders



Michelle Essen
Womble Bond Dickinson



Kate Hanson
Womble Bond Dickinson

Unpacking this:

- the principal dutyholders are the principal contractor (or sole contractor) and principal designer (or sole or lead designer); and
- the reporting persons are any designer or contractor (including the principal designer or contractor) and anyone else who is a periodic visitor on the site.

Then, during the construction phase, those principal dutyholders must make sure they maintain this system and report any safety occurrences to the BSR.

The client also has a key role in this. In appointing the principal dutyholders, the client must take “all reasonable steps” to satisfy itself that those it appoints can actually fulfil the legislative requirements in relation to the mandatory occurrence reporting system and reporting to the BSR.

What occurrences need to be reported?

Every safety occurrence is to be reported to the BSR.

Broadly, under the Regulations, a safety occurrence is either:

- an aspect of the design (if built); or
- an incident or situation relating to the structural integrity or fire safety of an HRB that would (when the building is used) be likely to present a risk of a significant number of deaths, or serious injury to a significant number of people.

They do not relate to safety incidents relating to the construction site in general or any temporary structures.

On top of reporting safety occurrences, principal dutyholders must also ensure there is an “appropriate frequency of inspections” of the works (including design work) for any safety occurrences during the construction phase.

How to report to the BSR

A principal dutyholder has to report a safety occurrence when they become aware of it, notifying the BSR as quickly as possible.

Then they must provide a written report to the BSR within 10 days of the principal dutyholder becoming aware of the safety occurrence.

This written report to the BSR has to include certain information:

- the date and time of the safety occurrence;
- the address of the site where the safety occurrence happened;
- the name and contact details of the principal dutyholder who is making the report;
- the type and details of the safety occurrence, including the nature of the risk; and
- details of the remedial measures or mitigation carried out.

Overlap with other parts of the new building safety regime

It is also important to note that the new mandatory occurrence reporting system will not operate in a silo, and will interact with other parts of the new building safety regime, such as:

- Gateways: A “mandatory occurrence reporting plan” is submitted to the BSR (or in some cases requestable by the BSR) as part of the Gateway 2 building control approval application. It also forms part of the Gateway 3 completion certificate application.
- Change control: If there are any variations caught under the new change control regime for HRBs, the change control log would need to include the impacts (if any) of the proposed changes on the mandatory occurrence reporting



Higher-risk buildings must report safety occurrences on site under the new legislation

“A principal dutyholder has to report a safety occurrence when they become aware of it, notifying the BSR as quickly as possible

system. This could also be considered by the BSR in making its decision on whether to approve a change control application.

- **Golden thread:** The golden thread should include copies of any mandatory occurrence reports to the BSR, as soon as practicable after the report is provided.

Examples of safety occurrences

According to government, some examples that could meet the criteria of what to report to the BSR include:

- defective building work, including defective competent person scheme work which is part of the wider building work;
- fire safety issues likely to result in the spread of fire;
- the use of non-compliant products or incompatible compliant products in the construction of the building;
- inappropriate or incorrect installation of construction products;
- product failure against specification and claimed performance; and
- faults in the design plans, caused by either design software or human error.

Further guidance

To help the industry get on top of these changes, the Health and Safety Executive (HSE) has published some further guidance on the gov.uk website:

- *Operating a mandatory occurrence reporting system;*
- *Submitting mandatory occurrence notices and reports; and*
- *Submit a mandatory occurrence notice and report.* ■

Michelle Essen is legal director (construction) and Kate Hanson is a paralegal with Womble Bond Dickinson.

**Dan Cooke:**

“Trying to fit everything in is a constant juggling act, but I wouldn’t have it any other way”

Tell us about your job, and what you get involved with

I help to manage Rider Levett Bucknall’s Northwest, Northern Ireland and Scottish regional team in all matters health and safety related. We provide CDM services as well as helping people with understanding and working with the Building Safety Act.

I work out of our Manchester office, but there’s plenty of travel involved as I work across a myriad of projects – both large and small – with a huge range of clients. At the moment, I’m working on quite a few large major complex projects, including some high-rise residential developments.

While I’m largely involved in work relating to the Building Safety Act and compliance with CDM regulations, I’m also busy with other health and safety assurance services, such as our corporate risk management and fire safety and compliance services.

I really enjoy working with both design teams and construction teams and other stakeholders to deliver projects by overcoming the various technical challenges and site constraints.

What are the most challenging aspects of your role?

It’s making sure I get that classic work/life balance right. With the recent changes in building safety legislation, there is a lot of work for the industry to do – which can be challenging, but very rewarding.

My wife and I have four children and there’s lots of demands on my time there too. Trying to fit everything in is a constant juggling act, but I wouldn’t have it any other way.

How are you finding working with the Building Safety Act, and particularly the new principal designer role?

From what I’m seeing across the industry, there’s a lot of uncertainty

‘Don’t be afraid to take a risk – challenge yourself’

Rider Levett Bucknall associate Dan Cooke on getting to grips with the new dutyholder roles under the Building Safety Act, the importance of work-life balance and the inspiration for a career in health and safety

“I’m a big supporter of the new regulations. I’ve been involved with CDM for over 19 years and I think these changes were needed to create a safer culture
Dan Cooke, Rider Levett Bucknall

and ambiguity. The various new dutyholder roles are probably the biggest area of uncertainty.

There’s been a lot of focus on the new principal designer building regulations (PDBR) role, but perhaps not so much around the principal contractor role and how these dutyholder roles are delivered alongside the CDM regulations’ dutyholder roles.

It’s our job to provide our clients with clarity so everybody’s clear on what is being requested and what’s been provided.

We act as the PDBR dutyholder on non-higher-risk buildings for several clients, whereas for higher-risk buildings we act as adviser to the principal designer.

RLB does have a design function as well within the company, allowing us to support industry and clients with live projects as best we can to make sure that the projects are compliant.

I’m a big supporter of the new regulations. I’ve been involved with CDM for over 19 years and I think these changes were needed to create a new safer building culture.

CDM has always been about building for the future by considering the full life cycle of an asset from project conception stage. It’s right that we’re applying it to the design of buildings too – not just to avoid tragedies like Grenfell, but so people can feel safe in the buildings they’re living and working in.

That said, I think the industry still is playing catch-up and has to properly plan and organise itself.

I believe the way the changes were drip fed and then followed by a huge deluge of information wasn’t ideal and caught the industry out somewhat. But, as a sector, we are now beginning to chart our way forward.

How did you get into a career in safety?

It probably goes back to when I was a 15-year-old boy. I saw then

how my dad was made unwell through work pressures, and how that manifested itself at home. I just felt that was morally wrong.

It was a big influence on me deciding to study for a degree in understanding physical activity, exercise and health.

Then from there it led on to my postgraduate studies – a master’s degree in ergonomics. This is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, by applying theory, principles, data and methods to design to optimise the relationship between human wellbeing and overall system performance, including system safety.

That in turn led to me wanting to pursue my interest in the area of health and safety. I became a planning supervisor in 2005 under the 1994 CDM regulations.

How long have you been a member of APS?

I’ve been an incorporated member for five years. I’m in the process of finishing my IOSH chartership and then I’ll be moving to certified member of APS as well.

What advice would you give anyone who’s just coming into the health and safety industry?

This may sound counter-intuitive for a safety professional, but don’t be afraid to take a risk. Challenge yourself. Try to work on

projects that might at first be beyond what you’re used to. You can’t achieve anything if you don’t strive to push yourself.

I’ve often found that we can all be more capable in situations than perhaps we’d think was possible.

Do you have any particular professional goals at the moment?

Currently, it’s very much to support the RLB team to grow. Perhaps, in the future, I’d love to get involved with projects that directly give back to the environment – such as green energy infrastructure schemes.

I’d also like to work on some process safety projects – such as COMAH (control of major accident hazards) sites, working with industry to prevent and mitigate major accidents involving dangerous substances that can harm people and/or the environment, which can have devastating consequences on communities.

What do you get up to away from work?

As I mentioned, we’ve got four children, so there’s plenty of running around, taxiing and swimming lessons and other activities like that, which I love doing.

But if there’s time after that, I play five- or seven-a-side football. And I love hiking with family, on the coast, up mountains or along rivers. I just simply love being out in nature. ■

“I saw how my dad was made unwell through work pressures. I just felt that was morally wrong
Dan Cooke, Rider Levett Bucknall

Dan Cooke CV

● Nov 2022 to present: Associate, Rider Levett Bucknall

● Nov 2019 to Nov 2022: Senior H&S consultant, Rider Levett Bucknall

● May 2017 to Nov 2022: Senior CDM/principal designer, Safety for Design

● Dec 2012 to May 2017: Senior CDM adviser/HSE adviser, Atkins

● Aug 2008 to Dec 2012: H&S consultant, Peninsula Business Services

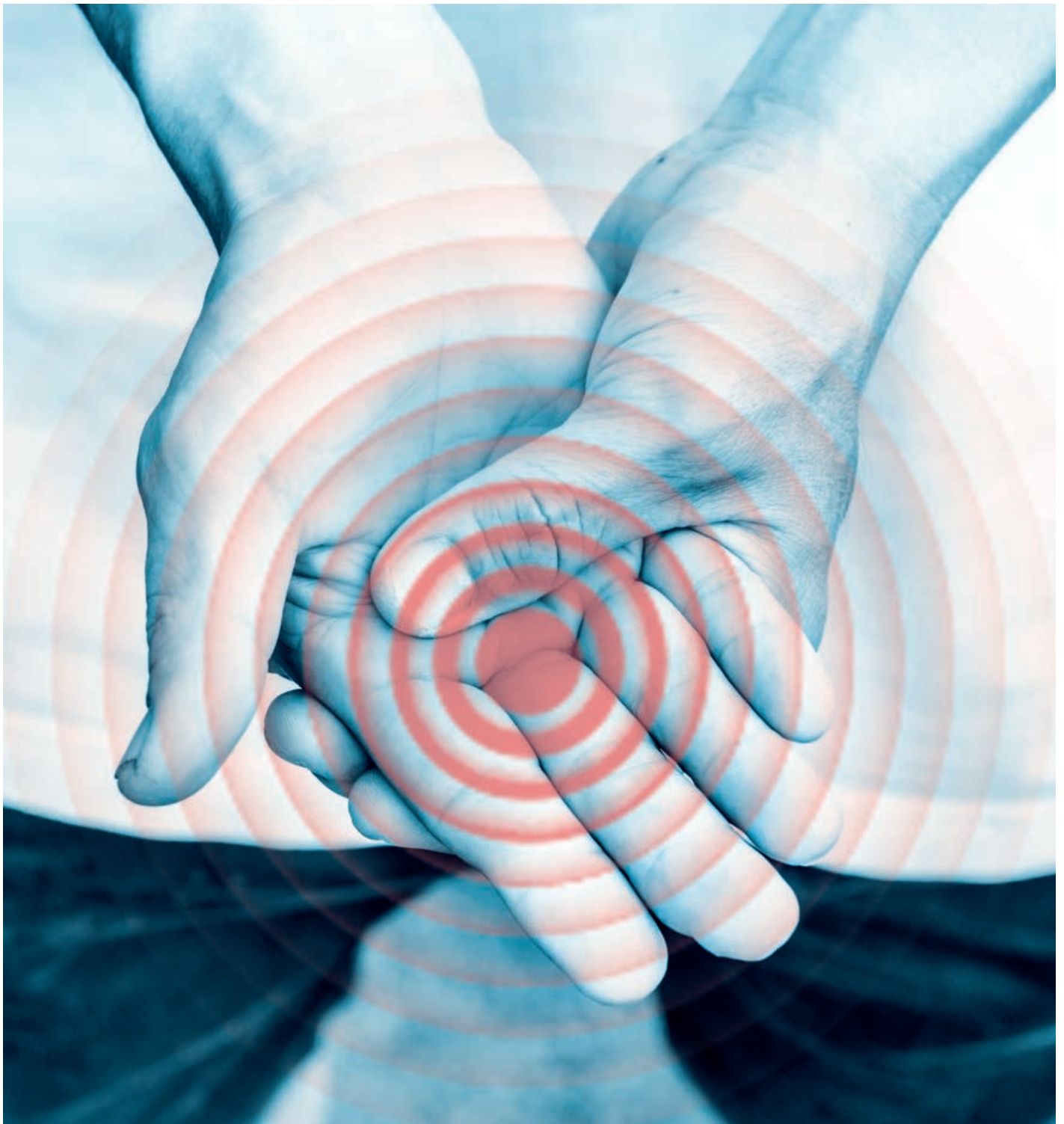
● Apr 2005 to Aug 2008: Planning supervisor/CDM coordinator, Hyder Consulting

● 2002-2003: MSc in Ergonomics, Loughborough University

● 1999-2002: BSc (Hons) in Physical Activity, Exercise & Health, Leeds Metropolitan University

CPD: Managing HAVS risks

The HSE estimates that over two million workers are at risk of hand-arm vibration syndrome. This CPD explains how to manage the risks, with reference to a recent HS2 project



Hand-arm vibration syndrome (HAVS) is a health condition caused by the vibration from any handheld or guided power tools and machinery on site, such as drills, torque wrenches and plate compactors.

HAVS causes damage to muscles, nerves, joints and blood vessels, leading to permanent long-term health conditions. HAVS can cause vibration white finger – a permanent and painful numbness and tingling in the hands and arms – as well as painful joints and muscle weakening. There is also evidence that it may cause carpal tunnel syndrome.

HAVS can be prevented, but once the damage is done it is permanent. Regular or frequent exposure to hand-arm vibration is likely to occur when the use of vibrating tools is a regular part of someone's job.

Over two million people in the utility and construction sectors in the UK are at risk of developing a HAVS-related condition, according to the Health & Safety Executive (HSE).

Each year, over 80 instances of HAVS are reported to the HSE as a RIDDOR (Reportable Injuries, Diseases and Dangerous Occurrences Regulations) reportable disease, under regulation of the RIDDOR Regulations 2013.

The Control of Vibration at Work Regulations 2005 aim to protect workers from risks to health from vibration. The regulations introduce action and limit values for hand-arm and whole-body vibration.

These are:

- Exposure action value of 2.5m/s^2 A(8): at this level employers should introduce technical and organisational measures to reduce exposure.

“On HS2, HAVS was identified as one of the top occupational health concerns in its health and safety strategy



Vibration from handheld power tools can cause damage to nerves, muscles and joints

- Exposure limit value of 5.0m/s^2 A(8): this should not be exceeded.

HSE provides a list of alternative processes to avoid or reduce the use of vibrating equipment in construction.

These include:

- mechanised tunnelling methods, to eliminate hand digging;
- use of machine-mounted equipment such as breakers and crushers instead of hand-operated tools for groundworks and demolition; and
- designing and planning to avoid the use of masonry drilling.

HSE describes as “not acceptable” the use of hand-operated tools for pile-capping and scabbling. Instead, it recommends alternative methods where technically appropriate, such as suspended hydraulic pile croppers, grit blasting (wet or dry) or the Elliott method, among others.

HSE also provides guidance on management of HAV risks where use of vibrating equipment is unavoidable, which includes better selection of work equipment, limiting daily exposure time, improving information, instruction and training, and health surveillance.

HSE states that “where a risk cannot be eliminated an employer

needs to reduce the exposure to as low a level as is reasonably practicable through organisational and technical measures”.

HS2 HAVS risk

On HS2, HAVS was identified as one of the top occupational health concerns in its health and safety strategy.

The condition came into focus during the EKFB (Eiffage, Kier, Ferrovia and BAM) JV's construction of the A41 onsite batching plant near Aylesbury in Buckinghamshire.

“Often on site a power tool will be used in conjunction with another static metal tool such as a spanner, for example when tightening bolts to erect a scaffolding tower or metal structure,” explains Timothy Callow, safety, health and wellbeing adviser with EKFB. “In these situations, the vibration source is coming from the power tool but is transferred through to the static metal tool and to the operator's hand.

“On the batching plant, there was a need for thousands of bolts to be manually inserted. These bolts had to be tightened with a metal spanner ►

Data from HS2 HAVS tests on Aylesbury batching plant

EKFB carried out tests on workers using spanners with and without the rubberised insulated sleeve.

The results were as follows:

Spanner without protection: $X = 3.80$, $Y = 6.35$, $Z = 6.74$. Overall = 10m/s^2 (double the upper exposure value limit).

Spanner with protection:

$X = 0.37$, $Y = 0.19$, $Z = 0.23$.

Overall = 0.48m/s^2 (reducing exposure to 5% of that without the added protection).

(X axis = forward/back, Y axis = up/down, Z axis = side to side.)



2m

Over two million people in the utility and construction sectors in the UK are at risk of developing a HAVS-related condition

and a battery-operated torque wrench which produced vibration. More than 2,500 bolts were needed, potentially exposing workers to regular and excessive vibration. Tests showed that the vibration levels were double the upper value exposure level."

Concerned that its contractor's operatives were potentially being exposed to HAVS, EKFB asked for further support from its occupational health provider People Asset Management (PAM) to measure the HAVS exposure level and suggest ways of removing or reducing the exposure.

PAM provided an occupational hygienist and tests were carried out on the operatives to find out the exposure levels.

Occupational health assessment

The occupational hygienist used a professional HAVS meter manufactured by Pulsar connected to the spanner.

"The tests showed that the vibration levels in the hand holding the spanner (left hand) had an increased vibration

PAM carrying out tests on the A41 batching plant

exposure compared to the hand holding the vibrating torque wrench," says Callow.

The exposure levels measured were double the HSE's accepted HAVS upper exposure value level of 5m/s^2 when tightening the support frame bolts (10m/s^2), so there was an immediate need to remove or reduce the risk to workers.

A simple and cost-effective solution in the form of a rubberised/insulated sleeve was added to the spanner handle, costing approximately £1.50 per spanner, to see if this would reduce vibration exposure since there was no design solution available.

"This idea was derived from the collected experience of the people involved on site and the knowledge that some tools, such as hammers, often come supplied with a ready-made rubberised sleeve," says Callow. "The added sleeve did not restrict work from carrying on normally."

After adding the rubberised and insulated sleeve to the spanner handle, the results of the tests with the additional protection showed that the vibrations then being received were only one-twentieth, or 5%, of those without the additional protection – 10m/s^2 unprotected down to 0.48m/s^2 protected.

Learnings and recommendations

"HAVS is a major health risk on most construction sites. However, because its effects are initially hidden and longer-term, it can be easily

“After adding the sleeve to the spanner handle, the tests showed that the vibrations then being received were only 5% of those without the additional protection

“After adding the sleeve to the spanner handle, the tests showed that the vibrations then being received were only 5% of those without the additional protection

overlooked or ignored,” says Callow. “The potential HAVS risks on the A41 batching plant were more obvious because of the volume and intensity of the task over a period of 38 days.

“The project manager of the batching plant contractor agreed to use the new method on the erection of the remainder of the A41 batching plant and to adopt it on erection of a further batching plant on another EKFB site. They also confirmed that this method would be used on its future projects worldwide.”

He adds: “The adding of a rubberised sleeve to a static metal tool has many more applications on site – for example, when erecting scaffolding or metal structures and in the erection of large plant, such as cranes, or in the repair of plant and machinery on site.

“These activities typically involve a large number of people on site

– labourers, fitters, pipelayers, erectors – who represent 24% of the total HS2 workforce, some 7,200 people.

“This initial learning event has raised awareness of HAVS across EKFB’s Aylesbury area. EKFB has also produced HAVS support materials to use at inductions and HAVS medical assessments have been introduced for operatives.”

Additionally, Reactec’s HAVS monitoring system has been introduced on EKFB sites. The Reactec system allows the monitoring of daily HAVS exposure levels for all vibration tools being used on site for activities such as drilling, concrete trimming and scabbling, ensuring that the minimum exposure value level for each tool is not exceeded. ■
HS2 case study supplied by PAM and EKFB for the HS2 Learning Legacy library.

HAVS can cause vibration white finger – a permanent and painful numbness and tingling in the hands and arms



Use of a protective sleeve significantly reduced vibration exposure

CPD Questions

- 1) Which of these processes is not an alternative to avoid or reduce the use of vibrating equipment in construction?
 - a) Mechanised tunnelling methods, to eliminate hand digging
 - b) Designing and planning to avoid the use of masonry drilling
 - c) Use of hand-operated tools for groundworks and demolition
- 2) According to HSE, which of the following methods is “not acceptable” for pile-capping and scabbling?
 - a) Elliott method
 - b) The use of hand-operated tools
 - c) Grit blasting
- 3) How many cases of HAVS are reported to the HSE as a RIDDOR?
 - a) Under 25
 - b) Over 80
 - c) Over 200
- 4) What legislation protects workers from health risks caused by vibration?
 - a) Manual Handling Operations Regulations 1992
 - b) Health and Safety at Work Act
 - c) Control of Vibration at Work Regulations 2005
- 5) Evidence shows that HAVS can cause...?
 - a) Carpal tunnel syndrome
 - b) Cancer
 - c) Mesothelioma

To test yourself on the questions and collect CPD points, go to: projectsafetyjournal.com

Useful resources

Hand-arm vibration at work: www.hse.gov.uk/vibration
The Control of Vibration at Work Regulations 2005: www.legislation.gov.uk
Treatment for HAVS: www.patient.info



Increase in work-at-height deaths shocks industry

Falls from height remain cause of largest number of fatalities as construction deaths continue to rise



More people are being killed at work now after suffering a fall from height than in the last 17 years, according to the latest fatality figures released by the HSE in July.

There were 138 worker deaths in 2023/24 of which 51 were construction workers – 37% of all the industries surveyed. The annual data release covers the period from April 2023 to March 2024.

A further 87 members of the public were killed following a work-related incident in 2023/24. This is an increase of 14 from last year.

Across all industries, the number of annual workplace deaths “remains broadly in line with pre-pandemic levels”, the HSE said.

But, for construction, the latest figure was 70% higher than HSE’s data for 2018/19 – the last full year before Covid hit, when there was a dip in construction deaths to 30.

“While the number of fatalities fluctuates year-on-year, the average number of worker deaths in construction in the latest two years is statistically significantly higher than the pre-pandemic period,” the HSE said.

The number of fatalities in construction in 2023/24 saw an increase of four from the previous year total (47). The five-year average for fatal injuries in this sector is 42.

The tally for construction in 2023/24 was more than double that of the

second-worst-affected industry – agriculture, forestry and fishing, with 23 fatalities. If measured as a fatality rate per 100,000 workers, agriculture, forestry and fishing is 7.51, roughly three times that of construction.

The three most common causes of fatal injuries across all sectors were falls from height (50), being struck by a moving vehicle (25) and being struck by a moving object (20).

Deaths resulting from falls from height were up 22% from 2022/23, which saw 41 deaths.

This latest HSE release does not break down cause of death by sector until the November 2024 release. But sector-specific figures for the previous year (2022/2023) released in November 2023 show that falls from height accounted for 51% of construction deaths.

The Access Industry Forum (AIF), which represents the principal work-at-height trade associations and federations, points out that the last time the total number of fatal falls from height was greater was back in 2007/08, when the figure was 58.

“Since then, the number of fall-from-height fatalities has shown no improvement, seemingly reducing for a year or two, only for the number to sadly rise again.”

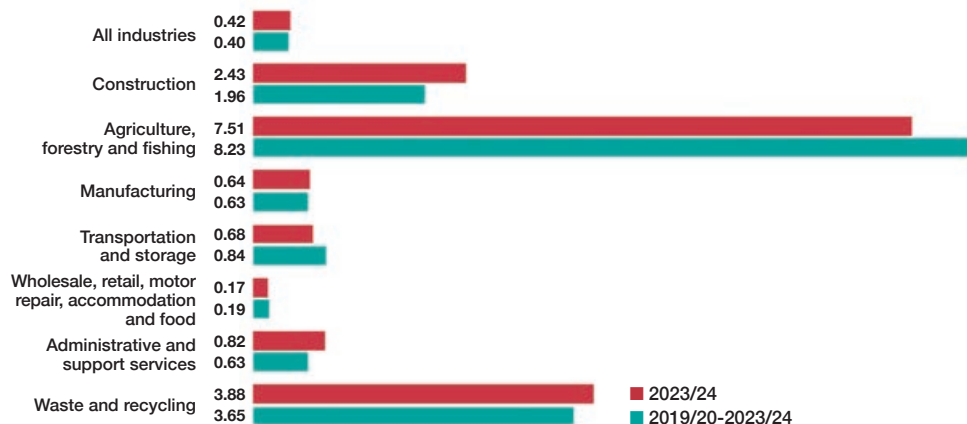
It points out that, despite advances in height safety, ongoing campaigning and increasing awareness of the risks of work at height, the proportion of falls from height has continued to increase in recent years. It was 25% in 2021/22, rising to 30% in 2022/23.

“The 2023/24 figure for fatal falls from height now sits at an unacceptable 35% above the five-year average of 37,” the AIF says in a statement.

The statistics show that work-related fatal injuries are predominantly to male workers. In 2023/24, 131 male workers suffered fatal injuries, accounting for 95% of the deaths recorded.

The highest rate of fatal injury is to workers in the 65+ age bracket. Workers aged 60-64 have a rate around twice the ‘all ages’ rate, while the rate for workers aged 65+ is three times as high as the ‘all ages’ rate. ■

Rate of fatal injuries by selected main industry group (per 100,000 workers), 2023/24 and annual average for 2019/20-2023/24

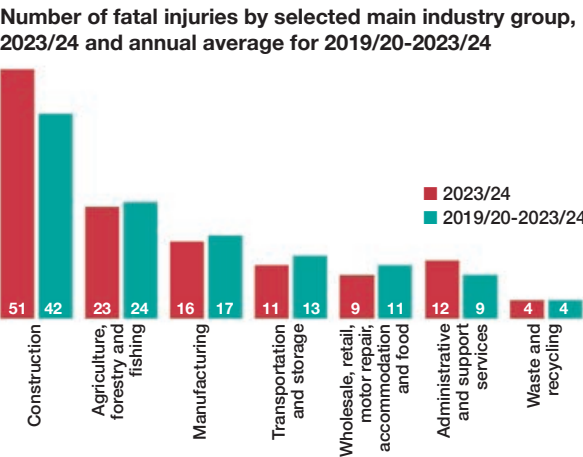
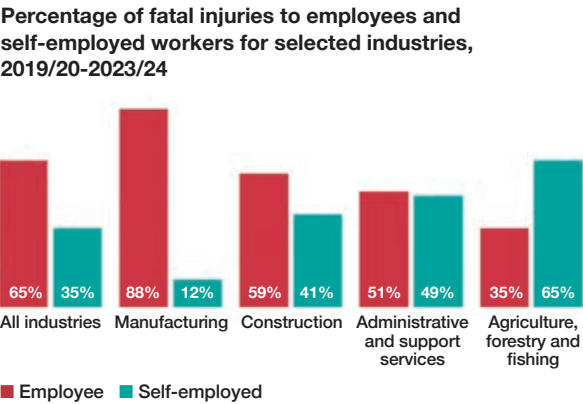
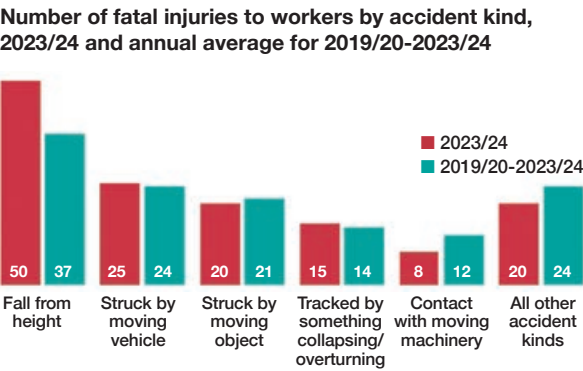


70%

22%

Construction deaths in 2023/4 saw a 70% rise from the 30 recorded in the HSE data for 2018/19

Deaths resulting from falls from height in 2023/4 were up 22% from 2022/23, which saw 41 deaths



FIGURES WITH A FIVE-YEAR RANGE ARE FIVE-YEAR AVERAGES.

In the dock

Recent prosecutions for health and safety breaches

£240,000 fine after fall

A Cheshire-based electrical transmission company has been fined £240,000 after a worker was left paralysed from the chest down after a fall at work

Gavin Pugh, from Bangor in North Wales, was 35 at the time of the incident and employed as a linesman by Wood Transmission and Distribution. He had been demolishing and replacing electricity pylons in East Staffordshire when he fell more than 9m on 6 April 2022.

On 12 April 2024, Wood Transmission and Distribution, of Booths Park, Chelford Road in Knutsford, pleaded guilty at Birmingham Magistrates Court to breaching regulation 4(1) of the Work at Height Regulation 2005.

At a hearing on 17 July 2024 it was fined £240,000 and ordered to pay costs of £14,142.

HS2 site injuries

EMC Elite Engineering Services has been fined £52,500 after an employee sustained serious injuries while working at an HS2 construction site in Hertfordshire.

The man was employed as a mechanical engineer by the company and was 57 at the time. He had been repairing a conveyor at the site on Chalfont Lane when he fell 11m on 20 November 2022.

EMC Elite Engineering Services, of Heronsgate Trading Estate, Paycocke Road, Basildon, Essex, pleaded guilty to breaching Regulation 4(1) of the Work at Height Regulations 2005.

The company was fined £52,500 and ordered to pay £6,871.12 in costs at St Albans Magistrates' Court on 15 July 2024.

Driver crushed

Avant Homes has been fined £333,000 after a driver was crushed to death by falling concrete blocks at a construction site in South Lanarkshire.

Conor Joseph Morgan, 45, had been delivering materials to Shott Farm in High Blantyre, a construction site being operated by the homebuilder, when the incident happened on 19 April 2017.

“The 62-year-old, who was helping with restoration work, was inside an excavation removing temporary propping supporting the wall when a section of the wall collapsed on him

A HSE investigation found that Avant Homes, as the principal contractor on site, should have ensured there was a safe system of work for the unloading of the delivery vehicle driven by Morgan.

It also found that his employer, Regen Waste, had not carried out a suitable and sufficient assessment of risk for the drivers delivering to remote sites not under its control.

Avant Homes (Scotland) of Edinburgh Park, Edinburgh pleaded guilty to a breach of Section 3(1) of the Health and Safety at Work etc Act 1974. It was fined £333,000 at Hamilton Sheriff Court on 19 June 2024. Regen Waste of Newry, County Down, pleaded guilty to breaching Regulation 3(1)a of the Management of Health and Safety at Work Regulations 1999. It was fined £23,000.

Canal volunteer death

A Wiltshire canal charity has been fined £30,000 after a voluntary worker was fatally crushed.

Canal charity Wilts & Berks Canal Trust was fined after a section of wall collapsed, fatally crushing Peter Konitzer.

Konitzer was helping the trust with restoration work on part of the canal at Pewsham Locks on 24 August 2016. The 62-year-old was inside an excavation removing temporary propping supporting the wall when a section of the wall collapsed on him.

On 24 June 2024, at Swindon Magistrates' Court, Wilts & Berks Canal Trust, of Dauntsey Lock, Chippenham, Wiltshire, pleaded guilty to breaching Section 3(1) of the Health and Safety at Work Act.

The trust was fined £30,000 and ordered to pay £10,822 costs.

Regional focus: Scotland

This latest regional round-up highlights activity north of the border, where three previous regions – Scotland East, Scotland North and Scotland West – have been consolidated to become the Scotland region

The requirements around building safety have yet to be confirmed north of the border. That doesn't stop the new Building Safety Act being widely discussed in Scotland, where many members of APS work on projects in both England and Scotland and are investigating what the new dutyholder roles, included in the new legislation, entail in practice.

"I think there's a couple of things that are happening here in Scotland. The first is that members of APS providing the CDM 2015 principal designer role are looking to get a better understanding of what the Building Safety Act means for us in Scotland," explains Callum Bunce.

"We are then waiting to see how that might be addressed in Scotland and whether they are going to appoint a separate dutyholder like the principal designer building regulations (PDBR), or possibly a compliance plan manager, with similar duties to that of the PDBR."

Bunce, a principal designer (architecture) at BakerHicks, the design, engineering and project delivery company, and previous chair of the Scotland West branch of APS, is now Scotland's APS representative along with Ken Hannah, an associate director and senior principal designer at Potter Raper.

"At BakerHicks we currently have live projects in both Scotland and

England where we are the principal designer and principal designer adviser. However some of the English projects are also now assessing their project requirements to appoint a PDBR.

"We aren't providing the PDBR service at the moment but we are investigating that with some of our designers within the business," says Bunce.

"From there, we will understand the implications of providing a dual role or at the very least to allow us to correspond effectively with the PDBR in a collaborative manner," he adds.

The post-election landscape and what that means for public sector spending is another area of interest – particularly for BakerHicks, which is currently working on public sector custodial projects.

These are largely dependent on continued support and funding from the government to improve the quality and increase the capacity of the current custodial premises.

More widely, the market is buoyant in Scotland, says Bunce, who moved to BakerHicks eight months ago from a similar role at Thomas & Adamson (T&A).

Following success in England, the build-to-rent market is gathering momentum in Glasgow and other cities in Scotland.

One of the higher-profile schemes is the £100m Central Quay scheme in Glasgow next to the SECC event campus. Bunce worked on this project for his previous employer.

The busy construction market is also putting pressure on staffing. For example, the architectural team at BakerHicks' Motherwell office, where Bunce is based, has tripled in number in recent times.



Callum Bunce
Scotland region,
APS

He says: "Across the industry it sometimes can be difficult to get people with the right level of experience. At BakerHicks we attract highly skilled individuals and also have developed good mentoring programmes, which helps upskill people to reach and maintain the skill sets that we require."

Bunce has been a member of APS since 2010. He qualified as an architectural technologist before developing an interest in health and safety in design and construction.

He gained a NEBOSH General Certificate in 2006, followed by membership of IOSH in 2008 and APS membership in 2010. He was elected to the APS Scotland West Committee in 2014 and became chairperson in 2019.

In his role as a regional representative, Bunce is hoping to start CPD activities for the region, which he expects to be a mixture of online teams with possibly a few in-person events as well, if there is appetite for that. ■

“Members of APS providing the CDM 2015 principal designer role are looking to get a better understanding of what the Building Safety Act means for us in Scotland
Callum Bunce, Scotland region, APS

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APS autumn event series: Learning and innovation in construction safety

As the evenings draw in, APS events continue to offer a range of opportunities to expand your professional capabilities



As the leaves begin to turn and the air grows crisp, the Association for Project Safety (APS) is thrilled to announce an exciting line-up of events for our autumn series.

This season, we're offering a range of opportunities for professional development, industry insights and the latest advancements in construction safety.

Join us for our Autumn Conference, a comprehensive webinar series titled Plan for Safety, and an autumn CPD session focusing on the transformative role of AI. Here's a closer look at what's in store:

Autumn Conference:

Wednesday 18 September 2024

The season begins with the highly anticipated Autumn Conference on Wednesday 18 September. This half-day online event provides vital updates and discussions on hot topics in the industry.

The conference will feature:

- **Building Safety Update:** Learn about new safety regulations, standards and technologies that are shaping the future of building safety.
- **Practising Competence:** Enhance your skills and knowledge to ensure you are practising with competence and confidence.
- **The Design Risk Management Debate:** Engage in a lively debate on the best

practices and challenges in design risk management, crucial for ensuring safety at every project stage.

- **Industry Legal Update:** Stay updated with the latest legal developments affecting the construction industry, ensuring you remain compliant and informed.
- **The APS PDBR Register:** Discover the benefits of the new APS Principal Designer Building Regulations Register and how it can support your professional growth.

Webinar series: September to October

The autumn series continues with a comprehensive webinar series titled Plan for Safety, running from September through October. This series, developed from member feedback and professional insights, is designed to cover both familiar topics and emerging trends in construction safety.

Highlights include:

- **Scaffolding:** Explore best practices for scaffolding safety and management.
- **PPE Inclusivity:** Learn about the importance of inclusive personal protective equipment (PPE) for all workers.
- **Working in Conservation Areas:** Understand the unique challenges and safety considerations when working in conservation areas.
- **Modular Construction:** Delve into the safety aspects and benefits of modular construction.

The series will also feature member-led projects, such as the SSE Battery Energy Project and Project H&S Information Management, showcasing innovative safety solutions and practices.

Additionally, our APS Fire Safety Series is back by popular demand. Key sessions include:

- **Fire Legislation Updates with Kizzy Augustin:** Get the latest on fire safety legislation from a leading expert.
- **Fire Risk Assessments:** Understand how to conduct thorough and effective fire risk assessments.
- **Spotlight on a Fire Project with Tony Bolder:** Gain insights from a real-world fire safety project led by Tony Bolder.

Autumn CPD: November

Concluding our autumn series, APS is excited to present a special CPD session on AI in the Construction Industry, led by Gena Ibraev. It will explore the transformative potential of AI in enhancing safety, efficiency and innovation. Attendees will gain understanding of how AI applications can be leveraged to improve project outcomes. ■

Join us this autumn and be part of a vibrant learning community dedicated to advancing construction safety – there's something for everyone. Find out more and book your places at aps.org.uk/events.



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Synergie Training specialises in the **APS Accredited Principal Designer** course which we provide as both onsite closed company courses and as public courses throughout the UK. We have successfully accredited over 2,000 individual Principal Designers with a 95% pass rate. We also provide the **APS CDM Awareness, APS Accredited CDM Client, APS Accredited CDM Principal Contractor** and the new **APS Accredited Building Safety Act & PD Building Regulations 2023** training course.

VIRTUAL TRAINING

We are currently still running the majority of our CDM courses virtually via live trainers. These courses have been a great success having trained over 1000 delegates on our virtual APS CDM PD course.

Upcoming dates include:

9 Sep - 10 Sep	*VIRTUAL* – APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Online - Remote	£595
9 Sep	*VIRTUAL* – CDM 2015 Overview	Online - Remote	£225
10 Sep	*VIRTUAL* – APS Accredited – CDM 2015 for Principal Contractors	Online - Remote	£250
25 Sep - 26 Sep	*VIRTUAL* – APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Online - Remote	£595
25 Sep - 26 Sep	*VIRTUAL* – APS Accredited – Building Safety Act & PD Building Regulations 2023 – 2 Days	Online - Remote	£595
26 Sep	*VIRTUAL* – APS Accredited – CDM Awareness	Online - Remote	£250
26 Sep - 27 Sep	APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	London	£595
7 Oct - 8 Oct	APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Manchester	£595
7 Oct - 8 Oct	*VIRTUAL* – APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Online - Remote	£595
14 Oct	*VIRTUAL* – APS Accredited – CDM Awareness	Online - Remote	£250
15 Oct	*VIRTUAL* – APS Accredited – CDM 2015 for Principal Contractors	Online - Remote	£250
21 Oct - 22 Oct	APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Newcastle	£595
23 Oct - 24 Oct	*VIRTUAL* – APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Online - Remote	£595
23 Oct - 24 Oct	APS Accredited – Building Safety Act & PD Building Regulations 2023 – 2 Days	Manchester	£595

Please quote **APS-SEPT** for a 10% discount on any of the above public courses.

Please visit: www.synergietraining.co.uk/course-schedule to view additional public course dates.

Synergie Training is an approved APS, CITB & IEMA Accredited Training Centre and holds ISO: 9001, ISO: 14001 and ISO: 45001 quality standard accreditations.

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