projectsafetyjournal.com

project safety journal

health, safety and wellbeing in the built environment

Winter 2022

New year New tech

Digital developments to keep sites safe in 2023

aps association for project safety

Safety in residential HRBs • Asbestos management • Sharing information


UCEM
UNIVERSITY COLLEGE
OF ESTATE MANAGEMENT
No. 1
provider of online surveying degree apprenticeships
BUILT FOR TALENT
Improve retention
Increase diversity
Attract new employees
Utilise levy-funding
Chartered Surveyor
undergraduate and postgraduate routes available
Building Control
Construction Site Management
ucem.ac.uk/employer-apprenticeships
businessdevelopment@ucem.ac.uk

CPD: Head protection standards and guidance

page 22

In this issue

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

Tech to keep you safer
page 12

Documents in construction disputes
page 18

Member profile

page 20

“Truly competent people, often right on the coalface, have to be listened to. They’re the ones who can articulate what’s going wrong
Richard Wilks, Bell Group

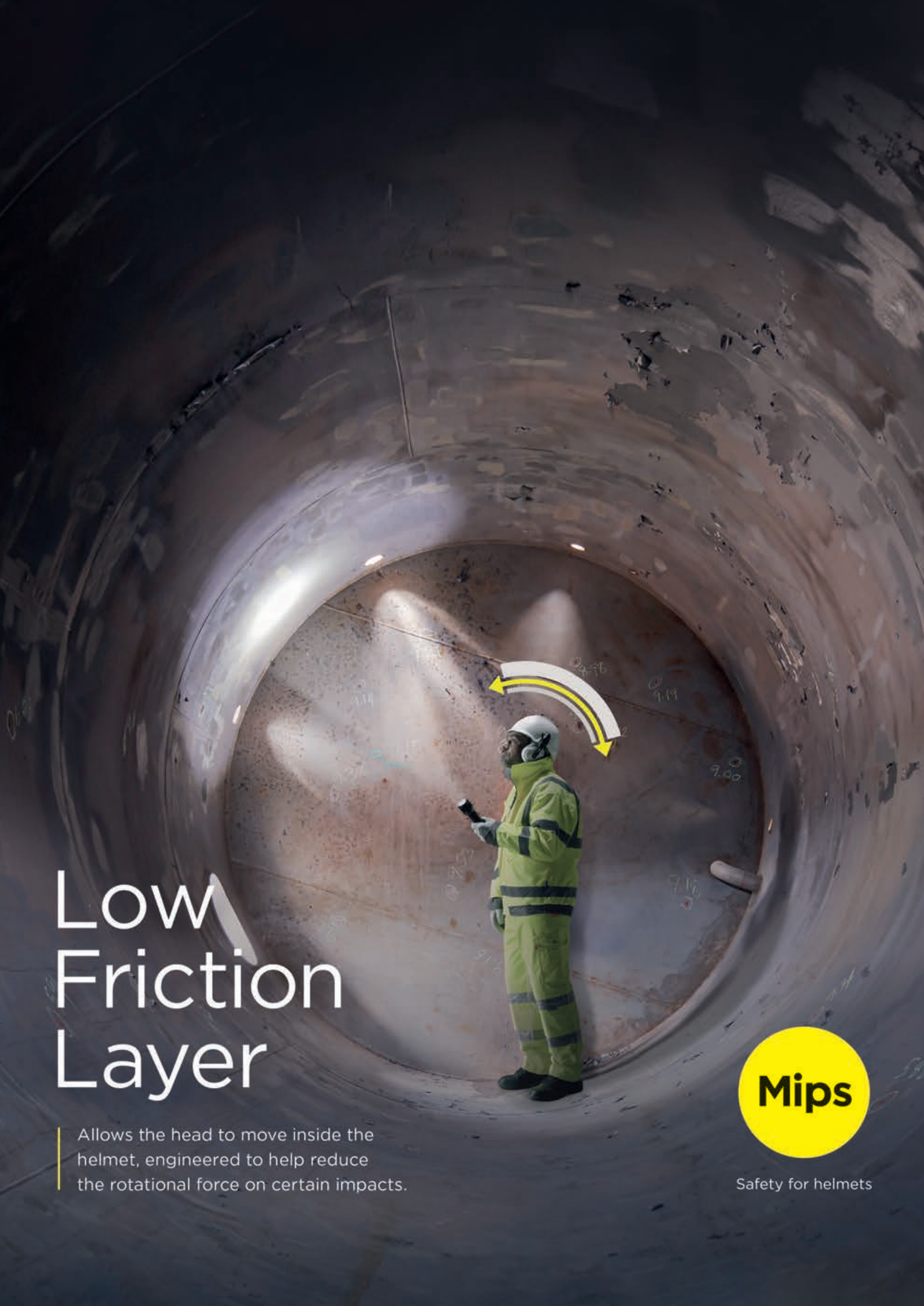
Association for Project Safety
5 New Mart Place, Edinburgh EH14 1RW
Telephone: +44 (0)131 442 6600
www.aps.org.uk | info@aps.org.uk

Atom Media Partners
Project Safety Journal is published for the Association of Project Safety by Atom Media Partners.
Atom Media Partners, 26 Bedford Square, London WC1B 3HP
Telephone: +44 (0)20 7490 5595
www.atompublishing.co.uk | eva@atompublishing.co.uk

Project Safety Journal
Editor: Denise Chevin
denise@atompublishing.co.uk
Production editor: Sarah Cutforth
Art editor: Heather Rugeley
Advertising manager: Samuel Ford
sam.f@atompublishing.co.uk

Printing
Printed by Precision Colour

ISSN 2755-7855



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

Welcome

With Christmas on its way, this issue of *PSJ* brings you more information about new technology and initiatives that will help bring us a safer new year. By **Lesley McLeod**

I am not usually lost for words. But these last few months have been such a political maelstrom that I have been finding it hard to keep up with the rapidly changing scene in Westminster. Or, indeed, to think what I can say to you all without risking it sounding ages out of date before it gets to you.

So, lets start with the things we know. As Mark Snelling explains in the news pages, work on the secondary legislation – the Regulations – that will accompany the Building Safety Act and turn the law into practical reality is still going ahead.

There have been a good number of consultation documents on the go and the Association for Project Safety (APS) has been at the forefront of getting your concerns and considerations in front of the people advising the revolving door of government ministers.

We are also looking at another piece of legislation which, on the face of it, might not seem to have very much to do with you and your daily lives. It's the Retained EU Law (Revocation and Reform) Bill – and a key part of the UK's withdrawal from the European Union. I understand it is being characterised as a Brexit benefit.

Lesley McLeod
Association for Project Safety

Now and into the new year, APS will be running fast to keep up with all the changes

But there are genuine concerns, from both sides of the argument, that the legislation – being taken though at a breakneck pace – may mean hard-won health and safety provisions may be written out of the British statute book, making our built environment – and other places of work – less safe for workers and end-users alike.

But, no matter how this plays out, I think we are all on the same page when it comes to sharing safety-critical information. In this edition of the *Project Safety Journal*, we have a thought-provoking piece on no-fault safety reporting – akin to what happens in the civil aviation industry. We take a look at how APS members can get involved with CROSS – an initiative to help professionals share concerns about fire and structural safety. We pick up this theme elsewhere in our legal coverage of Balfour Beatty's attempts to get Broadway Malyan to share design information.

Our cover story takes a look at the high-tech kit that might be making its way on to Santa's safety wish list. And we also have more from Anthony Taylor on how the fire safety duties of the building safety manager will be divided out now the role has been dropped, a look at the latest national safety statistics and an in-depth CPD piece on head protection.

However, whatever happens, you can be sure – now and into the new year – APS will be running fast to keep up with all the changes. We will also carry on providing information on your favourite topics. As for the association, we have plans to make 2023 your best year yet: watch out for energy week coming in January. And take a look at what else is coming up – there's a rundown on p30 – and remember you can always see the latest events at www.aps.org.uk/events.

But we have the holiday season to survive first. So, whatever you wish for and wherever you will be, may I – and the team at APS – wish you all the very best. We look forward to seeing you the other side of the Bells. ●

Lesley McLeod is CEO of the Association for Project Safety.

APS responds to Building Safety Act consultations

The chair of APS's Policy and Regulation Committee has expressed concern about the capability of principal designer organisations to confirm compliance with building regulations and the liabilities that may follow

The chair of APS's Policy and Regulation Committee has expressed concern about government proposals regarding the liability of individual principal designers under the Building Safety Act.

Mark Snelling made his comments in response to a slew of consultation documents issued by the Department of Levelling Up, Housing and Communities (DLUHC) setting out how the Act would be implemented. The consultation process closed in the middle of October.

As well as issues around the personal liability of principal designers, the committee also expressed concerns that the broad proposals for the 'golden thread' would end up making it harder and more costly to implement.

Snelling's view was that on a complex higher-risk building (HRB) project, a principal designer would not be able to sign a compliance statement for the entire project. Restrictions to personal indemnity insurance (PII) would make it very difficult for the principal designer to assure technical design carried out by specialist designers.

The response went on to urge government to adopt as a solution a mechanism used in Ireland to sign off compliance. The Royal Institute of Architects of Ireland (RIAI) Form 1 is an architect's Opinion on Compliance with Building Regulations for use where a professional architectural service has been provided at the design and construction stage of the relevant building works.

Snelling explained: "This form envisages the architect giving an overall certification of compliance, but relying very much on having got confirmations from other professionals such as structural engineers, fire engineers, mechanical and electrical engineers etc in relation to the elements of the relevant building or works which those persons designed. The opinion relies solely on these confirmations in respect of such elements."

In further comments, APS also picked up on proposals

> **The whole process will be cheaper and easier to implement with an agreed coding system or indexing structure**
> **Mark Snelling, APS**

for the golden thread, where DLUHC has not set out a prescriptive approach.

Having a golden thread is intended to enable those people responsible to have easily accessible, reliable, up-to-date and accurate information, both during design and construction and once the building has been handed over. APS believes that simply providing a broad definition of how this could be achieved is the wrong approach.

Said Snelling: "The whole process will be cheaper and easier to implement if there is an agreed data coding system or systems or at least an agreed index structure. It is perhaps correct to say that the industry could agree what this looks like, however a clear steer from the government will allow for the prompt implementation that the government's legislative programme demands.

"If you don't set a standard, residents will end up paying for resolving any issues that result from different systems with different indexes and items named in differing ways."

APS also called for regulations setting out specific competence requirements for those responsible for safety in occupation, as the draft Bill had proposed (see p9).

● Meanwhile, a freeholder is one of the first to face action by the DLUHC's new Recovery Strategy Unit, set up to identify and pursue firms that repeatedly refuse to fix buildings, working closely with other enforcement authorities.

Grey GR Limited Partnership, the freeholder of Vista Tower, a 15-storey tower block in Stevenage, was given 21 days to commit to remediating the tower's fire safety defects or an application will be made to the courts. Grey GR is ultimately owned by RailPen.

The DLUHC said the action "reaffirms the government's commitment to making sure building owners, landlords and developers meet their legal obligations." ●

Brick manufacturer trials exoskeleton suits

Workers at sustainable brick manufacturer Kenoteq will test the two types of suit

Brick manufacturer Kenoteq, which produces bricks made from recycled construction waste, is to trial exoskeleton suits in its factory.

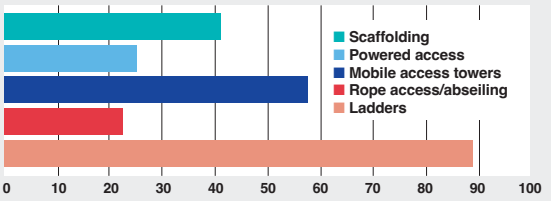
The company, a spin-out from Heriot-Watt University, is trialling the Herowear Apex and Auxivo Liftsuit to support general manufacturing and loading activities.

Both suits have been designed to protect the upper body and back from the strain associated with manual labour.

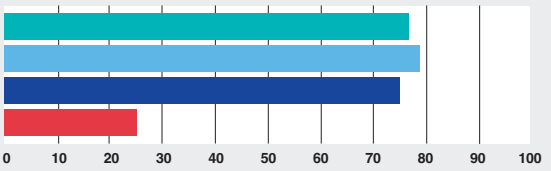
Musculoskeletal disorders in 2020/21 for the construction sector were higher than any other industry at 1,830 cases per 100,000 workers, according to the HSE (see p28).

Working at height: risks still not understood

What types of equipment do you feel present the most risks when working at height (%)



What can help reduce risks and accidents when working at height? (%)



- Better work planning to reduce work at height, e.g. use of modular building
- Proper use of fall arrest, edge protection and other safety systems
- Specifying access equipment that is appropriate to the task and in good working order
- Use of digital technology to help understand risks

Nearly 60% of construction professionals think the industry's workforce does not fully understand the risks involved with working at height. The results came from a survey by *Construction Management* magazine in November.

The survey found 98.6% of the 200 construction professionals surveyed agreed that working at height is still a significant safety risk in the sector.

When it comes to the types of equipment that they feel present the most risks, ladders were highlighted (88.8% of respondents) as posing one of the biggest dangers. That was followed by mobile access towers (56.6%) and scaffolding (41.3%).

Meanwhile, respondents identified three main ways to reduce risks and accidents while working at height. Specifying access equipment that is appropriate to the task and in good working order was the most popular route (selected by 79%).

That was followed closely by better work planning to reduce work at height, such as the use of modular building (76.2%), and proper use of fall arrest, edge protection and other safety systems (74.1%).

Respondents commented: "Not enough planning by suppliers and subcontractors takes place. Supervisors do not have time and are ill equipped to make a judgement on the type of equipment required. This results in equipment not suited for the task."

"Avoidance of work at height is often not considered at the design stage because the use of readily available access equipment is often the cheaper option, so preferred by client," commented another.

Meanwhile falls from an elevated platform are almost always fatal, according to new analysis of accident data by the International Powered Access Federation (IPAF).

IPAF examined data from its Accident Reporting project. It found that of the latest 117 incidents reported, falls from the platform of powered access equipment resulted in 120 people injured and 93 killed.

New generation of guaranteed fire-safe façade systems

Tata Steel's new Trisobuild® rainscreen systems are designed to provide fire safety assurance to owners and users of buildings at the quality end of the medium to high rise market.

Designers of buildings like modular schools, residential premises and hotels will welcome the combination of a guaranteed, non or low combustible product combined with an enhanced aesthetic that allows architects more freedom to express their vision.

Trisobuild® gives architects more freedom to mix and match a wider range of colours and profile shapes than ever before.

Tata Steel backs its Trisobuild® products, all of which have been independently tested, with its Platinum® Plus 25 year system guarantee and an extensive technical support that is available at every step from specification writing and detailed design to project completion.

For further information:
T: +44 (0) 1244 892199
E: technical.envelopeproducts@tatasteeleurope.com

Together we make the difference

www.tatasteeleurope.com

Safety responsibilities in residential HRBs

The requirement to appoint a building safety manager was removed from the final Building Safety Act. But the functions very much remain, says **Anthony Taylor**

Anthony Taylor
Chair of Working Group 8 of the Competency Steering Group and chair of the Building Safety Alliance

The Building Safety Act was finally given Royal Assent earlier this year and the first consequence for those "responsible for the management of residential higher-risk buildings" will be building registration, beginning in April 2023 through to October 2023.

Registration will require basic details of the building and "the name and title of a nominated individual who will act as a single point of contact for the principal accountable person (PAP) within the organisation".

While it is anticipated that it is likely that the statutory role of PAP will be taken by the organisation owning or having control of the "in scope" higher-risk building (HRB), registration will need the organisation taking the role as the dutyholding accountable person (AP) – or, if more than one at the building, the PAP organisation – to identify an individual.

The dutyholding organisation PAP has several specific statutory duties and the individual "contact" will need to understand what these are.

Initially the Building Safety Bill had proposed a role called the building safety manager (BSM), which was expected to assist the PAP with ensuring its duties are fulfilled. This was removed from the final Act, so there is no such legal role as a BSM, albeit some organisations continue to employ competent individuals with this or a similar title to undertake a role similar to the one proposed.

By removing this role, it is intended to offer the PAP greater flexibility as to how it will ensure its Building Safety Act Part 4 duties are met. Unless the PAP organisation has the competence and resources to deliver management of building safety in-house, it will need to outsource, by contractual arrangement, some or all of the resources necessary to fulfil its duties.

The Building Safety Act only deals with "spread of fire and structural safety" in the residential parts of any building. There remain the other existing health and safety responsibilities that have been in place for years.

There are also the implications of the recent Fire Safety Act of 2021 to contend with. The Fire Safety Act and the Building Safety Act are designed to work together to ensure residents' safety in their own homes.

The need to be competent

There is the expectation that the individual nominated as the primary contact within the PAP organisation will have appropriate competence, ie, the right combination of skills, knowledge, experience and behaviour – not being an expert in everything but having appropriate competence, and the authority to ensure adequate resources can be made available. It is also a specific requirement that they only appoint appropriately competent persons to undertake work for them.

In July 2022 the BSI published three PAS (Publicly Available Specification) documents related to competence for the new roles under the Building Safety Act 2022:

- PAS 8671 (relating to the new role of principal designer);
- PAS 8672 (relating to the new role of principal contractor); and
- PAS 8673 (relating to management of safety in residential buildings).

The roles of principal designer and principal contractor relate to building regulations compliance. They are separate from and additional to the roles under the CDM 2015.

All of these set out the competence frameworks expected of organisations that undertake these roles and all require that a senior person in the organisation has appropriate competence to ensure the delivery of competent work activities.●

Anthony Taylor is chair of Working Group 8 of the Competency Steering Group and chair of the Building Safety Alliance.
He can be contacted at anthony.taylor@resolvegroup.co.uk.

Specific duties of the PAP include:

- **Register the HRB with the regulator**
- **Apply for, and display, a building assessment certificate**
- **Assess building safety risks**
- **Manage building safety risks**
- **Deliver a safety case report**
- **Report to the regulator and provide a complaints procedure**
- **Deliver a residents' engagement strategy**
- **Keep, maintain and make available information about higher-risk buildings, the golden thread and the safety case**

The killer in your workplace

More than two decades after it was banned, asbestos remains an active threat to those working in construction, explains **Colette Willoughby**

It is not uncommon to find that when you mention the word "asbestos" many think it is an issue of the past. After all, we don't use asbestos anymore: the worst forms were banned almost 40 years ago, with a final total ban 23 years ago.

A large number of those currently working in construction will not have been involved when asbestos was widely used in the same way that they may now use products such as plasterboard, glass fibre insulation, jointing and packing materials, vinyl flooring, decorative finishes and fillers, sprayed and blown fire protection and insulation – to name but a few. In the UK we used over 3,000 different asbestos products in the construction and maintenance sectors.

Although asbestos use may now be seen as a thing of history, the same cannot be said of the devastation it has left. Each year more than 5,000 people die in the UK from asbestos-related diseases – a figure that has continued to rise year on year for decades.

A large percentage of this death toll comes from individuals who have worked or continue to work in the construction sector, where asbestos exposures continue to occur on a regular and often daily basis.

The risk of exposure to asbestos is high for anyone working on buildings being refurbished, maintained or demolished. This risk is highest for buildings built before 2000 as the final ban on asbestos use did not occur until 1999.

Latency period

For decades we have introduced various health and safety regulations to try and combat the issues around asbestos. However, these have not been as effective as everyone might have hoped – evidenced by the upward trend in the annual death toll.

This in part may be due to the latency period associated with asbestos. This is the lag period between being exposed and then developing one of the associated fatal diseases.

Unlike many other fatal hazards there are no instant signs to show when someone has been exposed. You cannot see the deadly fibres when they are airborne and you won't know that you have breathed them in. The fibres are then lodged within your lungs forever. Signs of a disease won't appear for 10-20 years – often longer.

The UK's current regulation of asbestos revolves primarily around responsibilities to manage risks from asbestos containing materials (ACMs). Details are found in the *Control of Asbestos Regulations (CAR) 2012* and associated guidance documents.

Top: Buildings being refurbished or demolished may contain asbestos

Colette Willoughby
Director, Asbestos Compliance Limited

> **You cannot see the deadly fibres and you won't know that you have breathed them in. The fibres are then lodged in your lungs forever**

In recent years there have been growing concerns that the UK government wasn't doing enough to deal with this deadly material. As a result, in the latter quarter of 2021, the Department of Work and Pensions (DWP) launched a public inquiry into how the UK government regulates and manages asbestos.

Inquiry findings

The public inquiry produced a report on its findings in late April 2022 with 10 key recommendations. The most contentious of these was the removal of all high-risk ACMs within a 40-year period, along with a national database to highlight where all ACMs are located within public buildings.

The government issued a response that focuses predominantly on our existing arrangements and a need for everyone to better understand and implement their responsibilities for managing asbestos risks. However, as our increasing death toll demonstrates, existing arrangements are not effective and something needs to change.

In the short term this may result in more enforcement action. Those with responsibilities for identifying and managing asbestos risks must increase their knowledge and understanding. These were both recommendations in the public inquiry report but did not make the same headlines as the removal of all ACMs.

Some ACMs will need to be removed, however until such time as everyone fully understands how to assess the risks and properly identify what they must do, then we will most likely continue with our upward death trend.

A new asbestos management qualification is due to be launched soon, aimed at those with responsibilities for managing construction and maintenance works. It is hoped it will go part way in helping to resolve this. ●

Colette Willoughby is an asbestos compliance consultant and director with Asbestos Compliance Limited.

Viega cold-press technology

Makes piping smarter.

Don't WORK HARD

WORK SMART

viega.co.uk/presstechnology

Work smart – discover the Viega advantage
No need for heavy machinery or hot-works measures: connect pipes much safer and faster. With 100 % efficiency, 0 % fire risk and just a Viega Pressgun in your hands. **Viega. Connected in quality.**

viega

New tech for a safer new year

Contractors are looking to new technology to provide simple, cost-effective solutions that are already making construction sites safer places to work. Here **Denise Chevin** introduces a selection of innovations we're likely to be seeing more of

From remote flying drones to Spot-the-dog robots to exoskeleton suits to immersive virtual reality headsets, construction is awash with new technologies with high aspirations to make the industry more efficient and safer.

There is no question that if workers can be removed from harm's way then the risks are reduced. But while some of these technologies will be able to take workers out the equation in time, for the most part they are either in the developmental stages – a little clunky or gimmicky, or cost- and skills-wise still outside the realm of many construction projects. We may have to wait some time before robots lay bricks and self-driving excavators are the norm on site.

But those looking to make construction a safer place today are also looking to digital methodology to provide simple and cost-effective solutions that can be easily embedded into construction workflows. Here we speak to contractors and health and specialists to find out more about some of the innovations we could be hearing more of in 2023.

> **"It might be about turning your method statement into a short video that people can grasp very easily. Or it might be using modelling software that you can get off the internet, or it might just be some sort of animation**
> **Andrew Hughes, ISG**

Seeing is understanding

ISG introduces a visual approach to site safety

"Many different technologies are emerging that are potentially seen as being able to improve safety. There are those like robot dogs or laser-guided diggers – technologies like that, which reduce the need of someone to do the work. But that's not always possible or practical and they don't necessarily add anything different to what we've had before, says Andrew Hughes, director of health and safety at ISG.

"And there's the big-data approach where you collect more data and then use that in a way to predict where situations might be riskier. But to a certain extent it is still guesswork.

"ISG wanted to take a different route – one of getting close to the actual work and looking at how we can reduce risk," he says.

RAMS visualisations

One of the ways ISG is doing this is in the production of visual standards for sites to enhance engagement and compliance. A particular element is around visualising risk and method statements (RAMS).

ISG is working with several supply chain partners to use these RAMS visualisations (either static images or videos) in daily site meetings to show key activities.

Hughes explains that it means personnel can now see rather than just hear about activities – and also understand the correct procedures through the visual medium.

He says: "It might be about turning your method statement into a short video that people can grasp and see and understand very easily. Or it might be using modelling software that you can get off the internet, or it might just be some sort of animation.

"We felt there was opportunity there, using those visualisations, to say this gets us to a better understanding of what are sometimes very technical types of work – and where those risks are and how those things will be mitigated."

ISG has worked with suppliers to produce the visualisations – some suppliers have included voiceovers in several different languages – to set out procedures for tricky activities such as working at height using mobile elevated platforms or installation of ventilation systems.

"We're augmenting this content with short video captures from our site team to chart day-to-day logistical changes, so we're showing rather than telling delivery teams about important updates. It's about bringing people closer, stimulating conversations and working through challenges together and bringing RAMS documentation to life, so everyone understands what the correct methods look like."

ISG says that feedback from suppliers on the visual RAMS is that they see this can be quickly implemented across the industry – it's also helping them unlock the talent they already have in their teams around digitalisation and challenging traditional methodologies. The idea he says would be that it would be inexpensive and easy to put together.

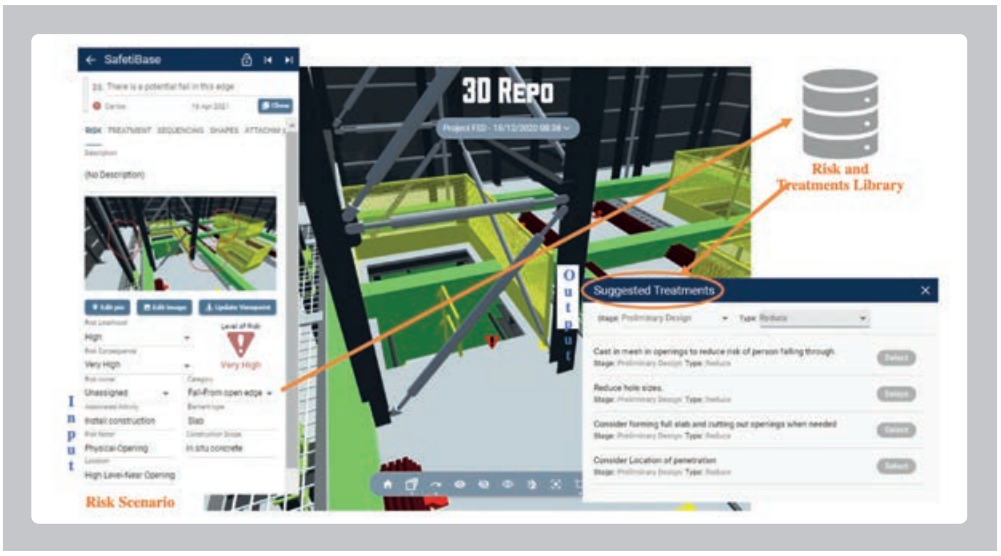
Hughes says the visualised method statements have rolled out across the business in Wales and they are working out which technologies work best, with the plan to use them more widely in the future. "We have other systems that this can potentially interact with. There is a move towards OpenSpace – this is a system that uses a standard 360-degree camera attached to a hard hat that passively records images as a builder walks the site carrying out their duties," he says.

"The image data is uploaded to the cloud, where algorithms automatically map the photos to project plans and 'stitch' them together to create an accurate visual representation of the site without any human intervention." ▶

> **"We're augmenting visualisations with short video captures from our site team to chart day-to-day logistical changes, so we're showing rather than telling**
> **Andrew Hughes, ISG**

Top: A visualisation demonstrates the correct positioning of items on site

Below: An easily understood visual spells out the order of events



The library is embedded into SafetiBase, created by 3D Repo

Risk library alerts of design dangers

Software allows risk to be designed out before site work begins

A key emphasis on improving health and safety across construction is designing out risk in the first place. This is very much the theme of a programme of work funded through the Lloyd's Register Foundation's Discovering Safety Programme and delivered by the HSE, industry partners and academics at the University of Manchester.

The Construction Risk Library project is a highly important piece of work – an award-winning programme that started in 2019. The HSE's Gordon Crick is technical lead on the project, which is about to start its third phase. The HSE team has been working closely with Dr William Collinge, lead investigator in the Thomas Ashton Institute, University of Manchester.

The library builds on the developing trend of using 3D and 4D models that allow planners to represent visually how a construction plan is sequenced before it starts on site. It brings an additional dimension, says Crick: "What we're trying to do is to make the models more valuable for health and safety by adding extra information about the risk and the context of the risks."

Crick says the team has gathered information on risks, including analysing hundreds of HSE press releases of incidents. Common risks are then tagged in a software tool that can be linked to the models. The software can be searched, with risks flagged up on screen when a scenario involving the risk is depicted. The software contains data about the risk and potential solutions for mitigating it.

There are about 300 risk scenarios in the library. The team is looking to grow this with help from those in the industry who can supply data and risk scenarios which are then anonymised.

The library is embedded into a tool called SafetiBase, created by software firm 3D Repo with industry partners including Atkins, Mott MacDonald, Laing O'Rourke, Costain, Bentley, HS2 and Tideway. The development of SafetiBase was funded by i3p and Innovate UK.

Safetibase is open source software which, as well as allowing users to mark up risks within a model, enables them to complete various information fields and apply the risk rating, which can be updated if changes are made.

Safetibase is compliant with PAS1192-6. Although it can be used in conjunction with 3D Repo's BIM model viewer, it uses a common schema which means that it can be used with any BIM model. To date, the library has been piloted on a number of projects with organisations such as AstraZeneca, Atkins and Multiplex.

Says Crick: "It also works well as a collaboration tool. A contractor could identify a problem on site, take a photograph and send to an architect or an engineer, enabling them to share the problem instantly and discuss a solution."

Manchester University's Collinge says of the work: "It's exciting and groundbreaking. It's much more a visual, immersive, digital way of mitigating health and safety risks that can be shared collaboratively from architects or contractor to whoever is involved.

"The other exciting thing is the data. The library is in effect a vast collection of data. So the idea is this library grows and grows over time, with data from various projects. And so it matures and evolves and becomes a generalised repository of data that is useful for any kind of project to interrogate.

He adds: "The tool also supports the new ISO standards for health and safety. So it really ticks all the boxes."

While the Construction Risk Library concentrates on the design phase, another strand of the Discovering Safety work by the HSE and the University of Manchester is moving into the construction phase and trying to come up with leading indicators that can pinpoint health and safety risks using cutting-edge data analytics and AI.

Steve Naylor, senior scientist in HSE's Science and Research Centre and a technical lead, explains: "One of the things we are interested in doing is assigning risk scores to projects and as part of that looking at how such risk indicators can be predicted."

> **"It's much more a visual, immersive, digital way of mitigating health and safety risks that can be shared**
> **Dr William Collinge, University of Manchester**

Low-cost apps help shore up safely

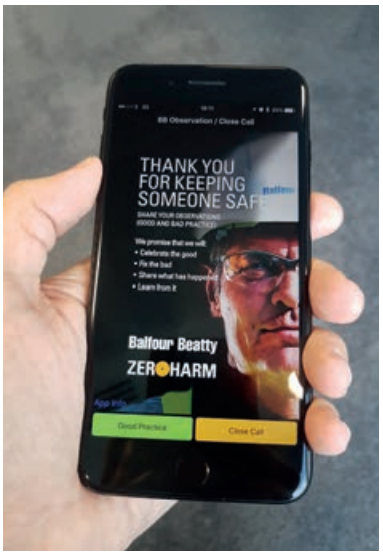
Tilbury Douglas trials mobile apps on tank refurbishment

Photogrammetry – the process of taking many photographs of an object from a variety of angles and stitching them together using algorithms to create a 3D model – has been making waves in construction. But the kit typically needed to capture such imagery – such as specialist cameras, or drones with LIDAR for example – can be expensive and needs experts to set up and operate. (LIDAR is an acronym of laser imaging, detection and ranging. It is sometimes called 3D laser scanning.)

Ben Bennett, principal engineer and head of temporary works at Tilbury Douglas, is trialling inexpensive mobile apps used in the animation industry to do a similar job, while producing centimetre-level accuracy as opposed to millimetre accuracy you might get with more expensive equipment, which is often adequate for communicating scenarios on site.

Tilbury Douglas is trialling two apps – Polycam and Metascan – on the refurbishment of a water tank for Thames Water (pictured). Both are available on Android and Apple devices.

"If you need to react to something quickly on site, it is about speeding up



Balfour Beatty's smartphone observation app

Employees can report observations of close calls

Sharing and learning is a mantra that's well established in site safety – but how can you make this easy for all?

Balfour Beatty has come up with the Balfour Beatty Observations app to allow employees and contractors to report their observations of close calls and share best practice.

"The app provides an easy, anonymous method of reporting near misses in real time. It records the exact location of the reporter and captures photographic evidence of the incident. It can be used to simplify near-miss reporting and enable a greater understanding of the incident through the provision of photographic evidence," says Balfour Beatty.

Safe distancing post Covid

Zonr smart safety system alerts workers to hazards

In the days of Covid-19, firms turned to wearable alarms that alerted those on site if they were working too close to a colleague. Now one of the leaders in supplying this technology has widened its application to help prevent accidents in potentially hazardous situations.

Pathfindr, an asset tracking and industrial IoT tech specialist, has developed a smart safety system called Zonr. This is a proximity alarm that alerts workers when a vehicle or other hazard comes close, or if they step into a high-risk area, helping them to avoid potential incidents. It is a development of Pathfindr's Safe Distancing Assistant, a wearable device to support social distancing launched amid the outbreak of the covid-19 pandemic in 2020.

Zonr relies on a combination of GPS tracking and ultra-wideband technology to locate workers and hazards and create a dynamic virtual barrier – or exclusion zone – around those hazards.

The exclusion zone is created through signals sent between sensors – which can be placed anywhere within a site – and a control unit. The control unit alerts the plant operator to any incursion and also lets workers themselves know when they have entered an unsafe zone through a sounded alarm on a wearable device.

All set-up is completed through a mobile app and incursion data is viewed in real time via a web-based portal – with data transmitted to the cloud via a 5G connection.

Left: The app allows anonymous reporting on site

Above: The Zonr system enables an exclusion zone to be created

> **"It's certainly not a replacement for common sense. In effect it's a nudge to say: look, you're getting too close**
>
> **Andrew Scheer, Pathfindr**

The system gives site operators real-time data over incursions, enabling interventions to be made in the moment, as well as providing holistic data to enable overall health and safety processes to be improved.

It has been adopted by the rail contractor QTS Group, following successful trials. The company is now talking to a number of tier 1 contractors, says Andrew Scheer, Pathfindr's marketing director.

He says that a major benefit of the system is that it also allows the management team – whether at site level, regional or national – the information really to investigate if there are any issues.

"It's certainly not a replacement for common sense. This is an extra tool. In effect it's a nudge to say: look, you're getting too close to something that could be dangerous. And you're letting the operator know that there is someone getting too close." ●

that transfer of information to make sure we've got a suitable and safe design in place quickly," says Bennett.

"So for example, where there is a need for temporary propping, it can sometimes be difficult to communicate the geometry with photographs alone. These apps allow anyone with a smartphone to produce 3D visualisations that can be shared with a designer remotely in a matter of minutes to help communicate the requirements. It may also make it easier to spot structural elements that might have been missed in a photograph and should help to establish a safer solution faster."

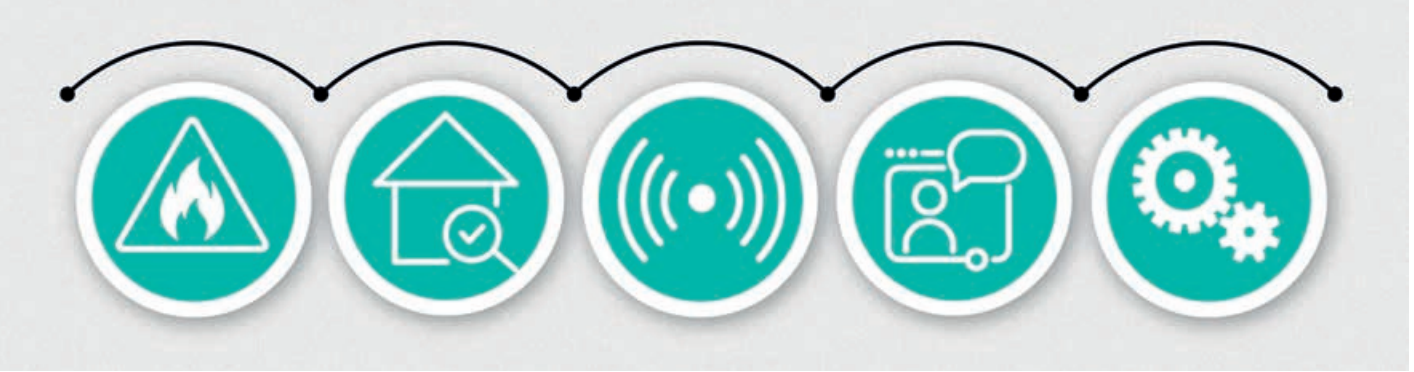
The team is currently trialling the apps to help in planning the safe demolition of a large primary settlement tank for Thames Water. The virtual model, which users can 'walk around', was produced with the Polycam app using an iPhone.

"There is whole plethora of new technology and we are currently investigating many areas, such as virtual reality and augmented reality for instance, to improve safety on site," adds Bennett.

"The industry is pushing for an adoption of new technology and digitisation, to catch up with other industries that have already embraced it for the better. We've got to continue to innovate and explore new technologies like this to keep up with the pace of change and improve efficiencies and the levels of safety we can achieve on our sites."

Sharing information makes structures safer

Structural safety reporting organisation CROSS has relaunched with a new emphasis on fire safety. **Neil Gibbins** and **Peter Wilkinson** explain its role



CROSS has been in operation for over 15 years but until recently was focused on structural safety issues. It was recently relaunched with a new website and scope, while its full name – Collaborative Reporting for Safer Structures – reflects a wider remit that now includes fire safety.

CROSS was originally created by a group known as SCOSS (the Standing Committee on Structural Safety), when the leading thinkers from the Institution of Structural Engineers recognised that great benefits could be achieved by organising a route for people in their profession to share learning in a safe, independent, non-judgemental process.

Significant investment by the UK government's Building Safety Programme team has now facilitated a complete refresh of the website and engagement with the fire sector – the driver for this being the Grenfell Tower fire and the subsequent analyses of our building safety system.

The expansion of CROSS will support fire sector learning, providing a route for professionals to safely share lessons that need to be learned and to provide some oversight of the health of the fire safety system, helping protect the public and firefighters.

Thankfully, very few people in their lifetime will suffer a loss of a friend or relative from fire. However, Grenfell demonstrated that we must not become complacent. The hundreds of tall buildings clad in a similar manner could have led to similar disasters, with potentially more unidentified failings yet to be revealed.

Neil Gibbins
Lead fire consultant, CROSS-UK

Peter Wilkinson
Fire engineering consultant, CROSS-UK

Dame Judith Hackitt pointed out many areas that could be improved – one of them being that there is a need for a knowledge hub.

The broad role of CROSS

CROSS has a number of functions. It provides a route for a conscientious professional to tell others about something they are concerned about, or to share something they have learned. The information given can be analysed by an expert panel that holds knowledge sufficient to identify the importance of the information and what lessons need to be taken from that.

The same expert panel sits back and looks at the system and interprets how it is working and what needs to be done to keep it being effective. Safety alerts are disseminated to give a heads-up, hopefully averting repeats that might lead to tragedies.

The fire safety sector has nothing similar to CROSS. Over the last 40 years the UK approach to fire safety has changed quite dramatically. It has gone from being almost totally owned and managed in a prescriptive manner by the fire brigades to a much more diverse, goal-based, self-compliant and complex process.

In that period the bodies responsible for providing fire-safe buildings, the people in the system and the materials used have changed dramatically. There has been little in place to bring them all together to look at the efficacy of the whole system.

How does CROSS work?

CROSS applies a process devised by NASA for the US aviation sector. Reports are received by 'designated persons' – the only people who know the identity of the reporter and/or the building involved. The report is deidentified and shared with the expert panel.

A CROSS report is then developed that sets out the issue reported and the lessons to be learned, signposting associated references as appropriate. This is then published. Subscribers to the website can choose to receive alerts when new reports are posted.

Over 1,000 reports have been received and reviewed, with learning points published in a quarterly update. Among those reports are nuggets of information that have been read by structural engineers and have added to the knowledge pool for the sector.

Structural engineers are now expected to become familiar with CROSS reports. Hundreds of them have shared their learning. The expert panel also meets to review the overarching lessons identified from the reports that have been received, feeding the knowledge back into the safety system.

Fire safety as a natural partner to structural safety

In the past CROSS has received reports relating to fire safety matters. These were generally in the space where fire safety and structural safety come together.

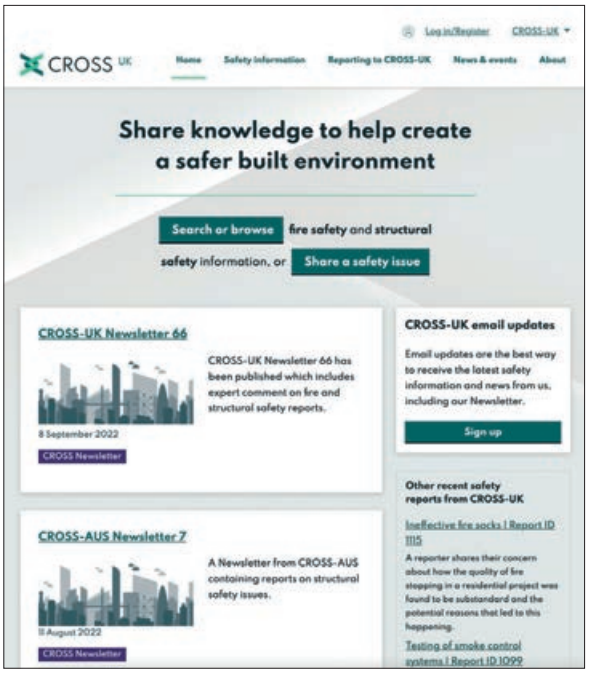
Current issues around the use of mass timber for structural elements bring engineering challenges to both professions. However, there has been no formal interface to bring the two together in a safe space where concerns and ideas can be explored.

The formation of a CROSS-UK Fire Safety Expert Panel and regular planned events that bring it together with the CROSS-UK Structural Safety Expert Panel has provided the opportunity to feed informed opinion into the building safety system.

The expansion of CROSS is a key step that will support fire sector learning, while providing a route for professionals to safely share lessons that need to be learned and to provide some oversight of the health of the fire safety system. ●

Neil Gibbins is lead fire safety consultant for CROSS-UK. Peter Wilkinson is a CROSS designated person and a fire engineering consultant.

> **The formation of a CROSS-UK Fire Safety Expert Panel provides the opportunity to feed informed opinion into the building safety system**



Newsletters and email updates share information from reports

Learning from others' experience

Neil Gibbins and **Peter Wilkinson** describe the process

CROSS is receiving and publishing fire-related reports covering some of the key interest areas here in the UK – product markings and marketing, competence, oversight during construction, the use of modern or novel systems or approaches and the impact of climate change considerations on building and firefighter safety.

For example, in one instance a reporter (the person filing the report) is concerned about the monitoring of photovoltaic (PV) panels and whether all the possible lessons are learned from current experience. One of the triggers for this report was a fire in a building under construction.

The reporter raises the fact that building integrated photovoltaic (BIPV) panels were present in the building, rather than building attached photovoltaics (BAPV). BAPVs are fitted on existing surfaces that comprise the structure (like flat or tiled roofs), while BIPVs essentially replace construction elements and the panel becomes part of the building (potentially facade or roof element).

The issue of photovoltaic panel installations is one of the ongoing issues relating to new developments in construction and building technology potentially presenting different fire risks to more conventional methods.

The CROSS expert panel acknowledges and supports the need for sustainable growth and greener energy solutions, and this report is another good example of how their introduction to the built environment can require additional considerations by designers. However, pursuing the green agenda cannot be at the expense of safety for all, and the potential for creating a future legacy issue must be acknowledged at an early stage and throughout the project.

In another example, a reporter is concerned about the possibility of fire spread between buildings when the external plastic composite fencing is involved in a fire. Composite fencing usually comprises a synthetic product that uses wood and plastic as its primary materials. It has also been referred to as plastic wood.

Photovoltaics are an example where new technology poses different risks

These products are made in factory conditions where the wood fibres and plastic are mixed with an adhesive and undergo heat treatment. This process results in a durable, lightweight composite product. Because wood fibre and plastic are often recycled materials, these composite products are attractive as an eco-friendly solution. Due to their usual field of application, they are not considered construction products and their desired properties are not explicitly covered in technical guidance.

The CROSS expert panel considers that the reporter raised a very interesting point. Composite decking products have been the focus of previous reports in two cases: in one they are used to form the common access balcony and in the other information on their expected performance or its certification would not be provided.

Even if it may not be a legal requirement, it can be considered good practice and common sense on the side of those who are responsible for safety (in the event of fire) to consider any possible risk (flames/heat/smoke) posed by these products where they are placed externally. The production of smoke during a fire, and its toxicity, can pose serious risks to the safety of the building occupants, area residents and emergency responders, along with any potential environmental concerns.

Hand it over

At the beginning of a construction dispute, parties often have difficulties getting hold of the documents needed to formulate or defend the claim. The recent UK decision in *Balfour Beatty v Broadway Malyan* demonstrates the problems with using court procedures to try and obtain such documents. By **Theresa Mohammed** and **Emma Thompson**

Construction disputes often commence with a request for disclosure of a raft of project documents by the prospective claimant, sometimes even before details of the claim have been provided. More often than not, the claimants invoke the contractual provisions with threats to resort to provisions of the Civil Procedure Rules (CPR) relating to pre-action disclosure if the contract is not complied with.

The nature of construction projects and claims is no doubt one of the key reasons why construction parties in particular seem to lack the documents which would support their position. Projects last for years and defects often do not manifest themselves until some years after the works have finished.

“Consolidation of construction firms and novation or assignment of contracts can lead to less than ideal documentation retention and storage

Documents may not be centrally stored or organised to allow prompt retrieval. Even fundamental documents can be lost and despite parties having obligations to prepare and provide documents, sometimes they are reluctant to provide these, particularly when a dispute is on the horizon.

When a dispute arises and parties seek legal advice, the first questions are always requests for contemporaneous documents which may be in the possession of other parties or consultants. Consolidation of firms and novation or assignment of contracts can also lead to less than ideal documentation retention and storage.

If asking the other parties and invoking the contract is unsuccessful, the claimant may then approach the court requesting pre-action disclosure. Such applications have a number of significant hurdles to overcome and many fail. The reasons include:

- the request was too wide and more akin to a ‘fishing expedition’;
- the request was made too early – before the pre-action protocol procedure had been followed;
- the request may impede or frustrate a contractually agreed expert determination mechanism;
- the court had no jurisdiction because the claim was governed by an arbitration agreement; and
- the request was unlikely to assist resolution of the dispute or save costs.

All of the above reflect the court’s desire to avoid disproportionate disclosure requests and to uphold the parties’ contractual bargains. They also reflect the problems that particularly befall construction disputes, namely a significant lack of the basic documentation needed to formulate a complex claim.

Obtaining documentation

The *Balfour Beatty v Broadway Malyan* case (see box) is another in a long line of construction disputes seeking to get hold of documents to help with preparing the claim. The reported cases

Disclosure of documents: Balfour Beatty v Broadway Malyan

This recent case threw a spotlight on the complications of documentation disclosure in construction disputes as well as the new disclosure regime

The recent decision in *Balfour Beatty Regional Construction Limited (formerly Mansell Construction Services Limited) v Broadway Malyan Limited* [2022] EWHC 2022 (TCC) has highlighted all these issues, as well as further complications presented by the new disclosure regime which has been introduced for the Business and Property Courts, which include the Technology and Construction Court (TCC).

The dispute arose out of the construction of a complex known as the Hive, which was owned by Hive Bethnal Green Limited (HGBL). The developer was JG Colts, which entered into a JCT Design and Build Contract (2005 edition) with Mansell Construction Services. Broadway Malayan (BM) was appointed architect. BM's appointment was novated to Mansell, which was then acquired by Balfour Beatty (BB). HGBL issued but did not serve a claim form against BB. Those proceedings are currently stayed pending the pre-action protocol steps being taken.

BB wrote to BM, passing on some of the allegations from HBGL and asking for a significant amount of documentation in respect of BB including all work products such as drawings, designs, specifications, the original appointment, site inspection records, fire strategy report and final inspection letter to the developer/ employer. BM did not provide the documentation and so BB applied to the court.

BB's application was based on almost everything that could be relied on:
- **Civil Procedure Rules (CPR) Part 31;**
- **CPR PD 51U paragraph 31.12;**
- **contractual obligations or proprietary rights to the documents;**
- **relationship of principal and agent;**
- **RIBA Professional Code of Conduct, Principle 2, paragraph 5.3; and**
- **statutory remedy of delivery up in section 3 of the Torts (Interference with Goods) Act 1977.**

The decision

The court declined to consider the contractual disclosure obligations on the basis that it would involve making a final determination as to the interpretation of the contract. That would be inappropriate where there was not even a pleaded case and at a time when summary judgement was not available.

It also rejected CPR Part 31 as a basis because the claim fell under the new disclosure regime in PD 51U. The application failed under the provisions in PD 51U because it disapplied the provision in CPR 31.12 for specific disclosure and the sole basis of the court's power to grant early specific disclosure was the general case management powers in CPR 3.1(2)(m).

The court refused to exercise its discretion to order early specific disclosure. Almost every party could make a case for early disclosure that something significant and important would be achieved to promote settlement. That would run contrary to the intentions of the disclosure regime and so there must be something outside the usual run for early disclosure to be ordered. Further, the Pre-Action Protocol is designed to help the parties understand the issues between them before proceedings are commenced, so it would rarely make sense for pre-action disclosure to be ordered before that pre-action process had been embarked upon.

The requests were said to be focused but, in reality, they potentially encompassed a wide range of documents. BB had overstated the difficulties of identifying the issues without disclosure and those difficulties were not unusual in cases where claims are brought years after completion of the works. BB was seeking to shift the burden of finding relevant documentation onto BM, the prospective defendant, with only the most general idea of what to search for. That also ran contrary to the PD 51U disclosure scheme.

have illustrated on many occasions that the pre-action disclosure and early specific disclosure provisions are not appropriate for this scenario.

The reasons why such documentation is not available may relate to the length of the project and the time that has passed since completion, but there may also be questions to be asked about how the contractual obligations to prepare and provide documents are working in practice. Is the problem caused by parties not complying with these obligations or the other party not enforcing its obligations to receive documents because it is busy with other issues on the project?

The issue may be more fundamental. Are the contractual provisions fit for purpose? Do they need to be redrafted to ensure that parties get what they need? Not only will it benefit a developer or owner trying to put together a claim for defective workmanship, but likewise a contractor on the receiving end of such a claim. If the documents are available, it is likely to result in a significant saving in litigation costs, not to mention time.

Theresa Mohammed
Partner,
Watson Farley & Williams

Emma Thompson
Associate,
Watson Farley & Williams

Key disclosure considerations to bear in mind with PD 57AD

Since the introduction of the Technology and Construction Court's (TCC's) pilot scheme for disclosure, PD 51U, there has been a rollout of a later practice direction on disclosure, namely PD 57AD. There are several key considerations to bear in mind when contemplating the disclosure process as detailed in PD 57AD.

From the outset of a dispute, parties have an obligation to preserve documents in their control which may be relevant to any issues within the proceedings. Parties ought to bear in mind that their duty of disclosure is ongoing and will continue until a settlement is reached or a final judgement is entered by the courts. Should a party be unable to produce a document, because it no longer exists or cannot be found, the disclosing party has a duty to ensure that the document and its whereabouts are particularised in sufficient detail.

While the full obligations and procedural requirements of PD 57AD have not been explored in this article, parties to disputes should ensure they get up to speed with the new rules. Failure to comply with the disclosure duties could result in an order for extended disclosure, adverse costs or, in extreme cases, a finding of contempt of court. Familiarity with the rules will ultimately put parties in a good position to bring or defend a claim – as, after all, being prepared is better than cure. ● **Theresa Mohammed is a partner and Emma Thompson an associate at Watson Farley & Williams.**

‘I believe workers are the solution’

Former APS president Richard Wilks has been focused on health and safety since helping with his family’s demolition business as a teenager. He tells **Denise Chevin** how the answers to H&S issues are often found at the coalface rather than in the office

> **“I think if people understand why things are needed, they generally comply**
> **Richard Wilks, Bell Group**

What is your current role?
I am overall lead on the health and safety arrangements for the Bell Group. There is a team of 12 delivering the group-wide health, safety and sustainability compliance required by a £180m-turnover organisation.

The company started as a painting and decorating contractor and now has the largest portfolio of painting and decorating work in the country. And we’ve diversified into fire safety, refurbishment, reactive/planned maintenance, retrofit and roof and vertical cladding in both private and social housing sectors. We’ve been developing fast and have got 32 offices and a workforce of 2,000.

My role has developed since I joined in 2016. As part of my overall group responsibilities, I am the lead director on Bell’s safety consultancy work, which specialises in CDM and design risk management, supporting national contractors and clients through Abco Safety, a sub-company of the group. I also direct strategy on our sustainability targets, contractor approvals and claims management.

So, as you can see, there’s plenty of support required from both me and our compliance team over a very wide range of activities.

How did you get into the safety industry?
It goes way back to when I was a teenager and started to get interested in our family’s demolition and steel business in Yorkshire. I used to hang around and often worked there in the holidays, helping with the recycling of timber and steel. My dad tells me that when I was 16 I was so worried about people not looking after themselves that I put up signs telling them to wear helmets. Then, when I was 19, someone got killed on a job we were working on (not our workforce) and it made a very deep impression on me.

After going to Manchester University – twice, actually, as I was kicked out the first time when

> **I believe that safety should not be a bolt-on. It should be embedded into everyone's job**
> **Richard Wilks, Bell Group**

I started a degree in civil engineering because my maths wasn't good enough. I then studied for a construction management BSc and property finance MPhil. I travelled for a bit before finding a job with Kier in 1993. I became very involved with the CDM regulations, which I found really interesting – that was my professional entry route into the world of safety.

Do you have a personal health and safety philosophy?
Well, I certainly believe that safety should not be a bolt-on. It should be embedded into everyone's job – fearlessly. And I believe people should be allowed to have more responsibility and work things out for themselves with high levels of psychological safety.

It shouldn't all be about H&S 'experts' running around writing risk assessments and method statements and stating the obvious. You should be upskilling managers so it is within their power to take responsibility for organising H&S planning and implementation. I believe workers are the solution and not the problem.

I feel passionately that we have to allow people to help develop the H&S culture through failure and improvement. And I think if people understand why things are needed, they generally comply. It's not all about ticking boxes! Successful safety should not be measured by the absence of bad things only. It's about emulating and celebrating the good things.

The health and safety fraternity can far too often be obsessed with using process to show things can be done perfectly safely because of their paperwork. But what they miss is that truly competent people, often right on the coalface, have to be listened to. They're the ones who can articulate what's going wrong.

One glaring example of something we get wrong is when we talk about whether somebody's got a face-fit test certificate. What we should be talking about is respiratory risk avoidance – and why people can wear masks and yet still be ruining their health when they're sanding down hardware which is carcinogenic or breathing in general site dust and silica from cutting blocks. This is just ignoring the bigger issue: why are these nasty materials still present on sites? The HSE data speaks for itself here.

CV: Richard Wilks

- **Since 2021: Health, safety and sustainability director, Bell Group**
- **2016-2021: Director of health, safety and environment, Bell Group**
- **1997-2016: Principal, Abco Safety Management**
- **1995-1997: Contracts manager, Jays Construction, Yorkshire**
- **1993-1995: Design leader, Kier Group**
- **1992: BSc Construction Management, Manchester University**
- **1987-1993: Site manager and site engineer roles**
- **Interests: Walking, swimming in open/ice cold water, scuba diving, karate, yoga, ancient architectural engineering and travelling**

I've been on quite a journey since I joined this industry. When I started out, I was very mercenary and my sole idea was that injured people don't work well. But I realise now the industry needs to see that health and safety is very much a moral issue. Safety is personal!

I understand you're very interested in mental health issues
So much more needs to be done to help prevent mental health problems developing. It should all be about prevention – and kindness.

I've had my own experiences with mental health. Like many senior male executives, I did have a burnout. It was serious. But the guys at Bell didn't give up on me and I'm very lucky.

The APS – how have you been involved?
I've been involved for many years, and still am. I first got involved when I served as a director of the Association for Project Safety from 2003-2007 and 2009-2014.

When I became APS president from 2014-2017 I led on the issue during the public debate around CDM 2015. I spent a lot of time working with the HSE on the development of CDM Regulations 2015, particularly the new principal designer role and our own APS CDM guide.

At the same time, I represented APS on the Construction Industry Council (CIC) H&S Committee and CEO committees with other built environment organisations.

I also assumed the interim role of APS CEO on two separate periods during 2015-2016 until APS secured a new CEO. And currently, I chair the APS Membership and Standards Committee which means I also attend the Board.

What career tips would you offer anyone just starting their career?
Don't ever work just for the money – it's always the wrong thing to do. No matter how much money they're offering or paying you, if you're not happy there, it will only take you down a toxic path.

Instead, look to work with people who have a beginner's mindset – that is, want to constantly learn new things – and who like ideas, not money. Also, see health and safety as just another management issue. Be helpful – it's not a dark art.

What may surprise us?
I have climbed at altitude above 13,500ft and summitted Toubkal, the highest mountain in north Africa, with a military and civilian team. I am also a qualified scuba rescue diver and have undertaken the role of dive master on scuba training courses. ●

APS Energy Week: 23-27 January 2023

The APS Energy Week takes place from 23-27 January 2023. The event is intended to shine the spotlight on this most pressing subject for CPD members. It is APS's answer to all the questions surrounding energy, its impact and what we can do to prepare ourselves.

It will feature webinars and CPD on decarbonisation, energy poverty, futureproofing and budgeting. Plus efficient working practices and a look from a legal angle on how to move forward in this area.

These events are free for members and included as part of annual subscriptions. Industry colleagues can attend for a modest fee. APS will be providing more detail of the webinar series in the coming weeks.

ZEKLER SAFETY

It is important to ensure hard hat compatibility with eye and ear protection

Head protection in construction

What do hard hats offer in terms of protection, what materials are they made from, to which standards they are tested and how are those standards changing? This CPD, in partnership with Mips, explains

Safety helmets and hard hats have been protecting people in one form or another for thousands of years. From their humble beginnings as battle armour in 2500BC to today where their use is much more widespread, they have stood the test of time. These common safety items offer far more than you realise in terms of protection and Mips would like to provide you with guidance on what that means in terms of the modern safety helmet and why our mission is leading the world to safer helmets.

Let's talk plastic

HDPE or ABS or PP – which is best?

- HDPE (High Density Polyethylene): This is the most common plastic used to make hard hats/safety helmets, versatile with good chemical and impact resistance.

● PP (Polypropylene): This is the second most commonly used plastic in the world and has good chemical and impact resistance as well as a high melting point.
● ABS (Acrylonitrile Butadiene Styrene): This is a thermoplastic with good impact resistance and compression qualities. It also has good chemical resistance.

So, what type of plastic is best?
Most plastics are tested using different methods but here are two examples.
● An Izod impact strength test:
A pivoting arm is raised to a specific height and then released. The arm swings down hitting a notched sample, breaking the specimen. The energy absorbed by the sample is calculated from the height the arm swings to after hitting the sample. A notched sample is generally used to determine impact energy and notch sensitivity.
● Compressive strength (MPa) test:
Compressive strength gives a good indication of the short-term loading capabilities of different plastic materials. It is measured by applying an increasing force on cylindrical or cubical specimens held between two plates, while measuring both pressure and elongation.

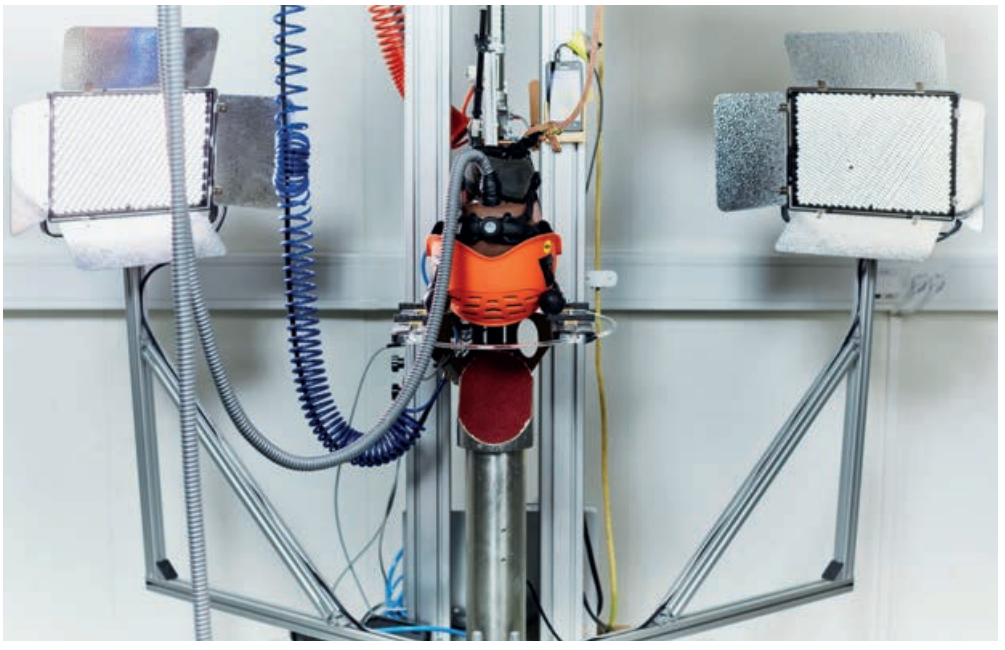
Chris Tidy
Owner/director, STCC

All the plastics listed above have good impact resistance characteristics and therefore make great safety helmets or hard hats.

Mips would like to discuss compatibility, in that is the PPE you are wearing compatible and how do we view the question of compatibility as a global leader in helmet safety technology?

Let's talk compatibility
What is compatibility and what does that mean to you as a wearer?

According to most national laws, employers must provide adequate protection for workers and that protection must be suitable. Compatibility is relevant because the UK Personal Protective Equipment at Work Regulations states that when employees wear more than one item of PPE that the equipment should be compatible and when used together, will adequately control the risks against which they are provided to protect. It is therefore worth considering that even if a hard hat or safety helmet is tested to the standard, say EN 397 for example, does adding ear protection change dynamically the way it would react in an incident?



Helmets undergo testing at the Mips test centre in Sweden

> **When purchasing PPE, it is not only worth thinking about whether items work together but also if they are tested together**
> **Chris Tidy, STCC**

Compatibility can cause major issues for the user where comfort and safety are concerned. When purchasing PPE, it is not only worth thinking about how they work together but also if the items have been tested together and are meeting the requirements of the standard.

Good helmet manufacturers aim to design products that work together in harmony, thus providing increased comfort and optimal performance for the wearer. Mips believes that products should be tested together for performance evaluation. For example, when Mips introduces its low friction layer into a manufacturer's safety helmet or hard hat it is also tested to make sure it still meets the requirements of the standard it is certified to.

This gives the wearer peace of mind that the products are tested to not only work together, but also to perform together. In the varying jungle that is the PPE market, it is worth asking yourself two important questions when selecting your products:
● Do they work together from a comfort perspective?
● Do they perform together according to the applicable standard?

Mips would like to discuss what you could wear and why.

What to wear and why?
All good safety helmets or hard hats are qualified to a recognised standard. The standard describes how they are tested and what areas of the helmet have been tested, for instance, the crown or sides of the helmet. Testing can also include chinstrap retention strength and breakage strain if a chinstrap is fitted.

Mips recognises that there may be confusion over which standard someone should be wearing under different circumstances. For instance, should wearers working at height just add a chinstrap to an EN 397 rated helmet? Mips would like to give you some insight into this issue.

If you work solely on the ground, then an EN 397 helmet could be your primary choice, remembering though that this helmet is only tested ▶

More head injuries occur from slips, trips and falls from the same level or one level above than being struck by an object, but until recently the focus has been on protecting against being struck by an object

for linear impacts on the crown area only. It does not have any extra impact protection unlike helmets that are used for working at height. This standard also has an optional chinstrap, so we recommend that you take advantage of this to ensure your head protection always stays on.

So, what helmet should I choose if I'm working at height? Firstly, when working at height you should always use a safety harness. Using a harness can reduce the risk of falls from height. If that is the case then an EN 12492 helmet can be used. The main difference between an EN 12492 helmet and an EN 397 is that the EN 12492 helmet is also tested on the side, rear and front using a 5kg mass which is dropped from 0.5m.

This test is designed for mountaineering accidents when you are attached to a rope and may swing into the side of a rock or mountain wall. It is not a test that would mimic a typical fall accident. According to accident statistics a fall accident is the most common cause of severe head injuries. A fall accident can occur at the same level by slipping or stumbling on the ground or by falling off a ladder two or three steps up.

Studies have shown that if you fall from a 1.5m height the force can be above the level for skull fracture to occur and can result in high rotational forces that could result in brain injuries. It is therefore possible to argue that the EN 12492 test method is not designed for a potential fall accident. It could also be argued that the shock absorption test methods used to test adult cycling helmets (EN 1080 1.5m drop test of helmet and head form) better evaluate the helmet's ability to absorb the impact from a fall accident. All helmets on the market that are equipped with Mips technology are tested using a falling head form.

So, what if you want to work on the ground and at height? Then you could opt for an EN 12492 helmet which is designed for giving protection on the ground and at height. Should you take into account the strangulation risks from the chinstrap that is attached to an EN 12492 helmet or hard hat?

The strangulation risk was based on compression of the airway at 15kg, so have this risk in mind when choosing a helmet. However, this risk could be quite low depending on your work situation, so it is a risk but should be a relatively small one compared to what could happen if your safety helmet or hard hat fell off during an incident! ►

Mips helmet technology is now available in construction hard hats

CENTURION SAFETY PRODUCTS

The changing face of standards

Why do we need standards and how have they evolved?

Why have standards? And what are they there for? The answer to those questions is quite simple. Firstly, for safety and reliability: adherence to standards helps ensure safety and reliability. Secondly, for the support of government policies and legislation: standards are frequently referenced by regulators and legislators for protecting user and business interests. Lastly for consumer choice: standards can provide the foundation for new features and options.

As far as safety helmets and hard hats are concerned, the standards started when TE Lawrence (Lawrence of Arabia) was fatally injured in a motorcycle accident in May 1935. His doctor, the young Australian neurosurgeon Sir Hugh Cairns realised his life might have been saved if he had been wearing a helmet. Cairns went on to research and campaign for the use of motorcycle helmets in the UK.

Cairns researched head trauma in 1940 which was subsequently published in 1941 in the *British Medical Journal* ("Head injuries in motorcyclists. The importance of the crash helmet.") This all led to the first motorcycle standard in 1952 which was followed two years later by the first hard hat standard (The Light Duty Safety Helmet Standard) in 1954 – both of which were British Standards. This standard was updated once before the International Standards Organisation tried to unify safety helmet standards in 1977 with ISO 3873.

So today we are left with the most common EU safety helmet/hard hat standard EN 397, which was actually for the most part comprised of the ISO 3873 standard from 1977 plus a few additional tweaks in 1995 to bring it up to date.

There are other global safety helmet/hard hat standards which are very similar to EN 397 that may be updated once the new version of EN 397 is released as most of them like EN 397 were bench marked from ISO 3873.

Mips believes that wearers need to be educated about head injuries and their risk but also to understand how important the wearer's role is in the wear and care for their safety helmet or hard hat.

Education is key in the fight against traumatic brain injury but also participation in an event like Hard Hat Awareness Week will enhance wearers understanding of wear and care for their safety helmet or hard hat.

BBRS.™

Business Banking
Resolution Service

Unresolved business banking complaint?

We can help settle disputes dating back to December 2001.

The BBRS is a free, independent service helping SMEs settle unresolved banking complaints.

See if our dispute resolution specialists can help you.

thebbrs.org/property

749

The number of incidents in the UK in 2018/19 where a loss of consciousness was caused by a head injury or asphyxia

Remember if it is a risk, it is up to you to provide an adequate risk assessment based on the evidence.

There are currently changes being made in EN 397 and hopefully when the new standard is released it will fit the requirements of specifiers and wearers globally.

Accidents and statistics

There are a lot of accident records and statistics available online. However, the interpretation of these is key to understanding and evaluating the risk.

One way that displays how we view accidents from a health and safety perspective is when we put up a board at our building site or factory saying: "It's been 238 days since our last reported accident." What's wrong with that? Potentially accidents may not be reported, as individuals may not want to ruin the company's accident record or statistic.

Perhaps it should read instead: "238 accidents reported in the last three years, thank you. Please continue to report all accidents or incidents." This would then promote a good reporting culture and in turn help us to understand how these accidents and incidents occur.

For all of us, accident reporting and statistics provide insights to help us elevate the issue of better head protection for the world's safety helmet/hard hat wearers. It allows us to constantly challenge the status quo and push technical boundaries to achieve better protection, sending us home safely to our loved ones every day.

Our most valuable asset to protect is our head because that is the bit that works everything else. If something happens to that, then there may be serious implications including anything from brain injury to death. Through accident reporting and statistics, we can gain further understanding on how injuries are caused and therefore how we can prevent them.

However, statistics are only one part of the equation. As an industry, we must continue to analyse and question statistics so that we can address the issues that have the biggest impact on wearer safety.

For instance, we know that in 2018/19 in the UK there were 16 fatal injuries involving being struck by a moving or flying/falling object, but we do not know which ones involved a head injury. We know there were 749 incidents in the UK 2018/19 where a loss of consciousness was caused by a head injury or asphyxia, but how many were caused specifically by a head injury? We know that more head injuries occur from slips, trips and falls from the same level or one level above than being struck by an object, but the focus until recently has been on protecting against being struck by an object.

We must continue to push for better, more detailed accident reporting and statistics so that we can take the right steps to protect people and ensure we focus on the areas that can have the biggest impact on wearer safety, such as traumatic brain injury (TBI) and rotational injury.

These injuries are far more common than you think. For example 50% of TBI go undiagnosed or detected, while 90% of diagnosed TBI do not involve a loss of consciousness. Accident data and statistical analysis are likely to help us to achieve a higher level of protection for the wearer, but only if we push for better data quality and use it to inform future product development.

- Remember that not all head protection is equal when it comes to types of impacts.
- Remember that head protection may be required to play a vital role in saving your life. ●

"Mips believes that wearers need to be educated about head injuries and their risk but also to understand how important the wearer's role is in the wear and care for their safety helmet or hard hat

The yellow Mips Safety System is designed to allow the head to slide 10-15mm in any direction during certain angled impacts

CPD Questions

1) The Personal Protective Equipment at Work Regulations states that when employees wear more than one item of PPE that the equipment should be compatible and when used together?
a) Will adequately control the risks against which they are provided to protect
b) Will inadequately control the risks against which they are provided to protect
c) Will totally control the risks against which they are provided to protect
d) May never control the risks against which they are provided to protect

2) What original standard from 1977 is EN 397 for the most part comprised of?
a) EN 12492 b) ISO 8733
c) ISO 3873 d) ISO 3378

3) The strangulation risk for EN 397 was based on compression of the airway at how many kg?
a) 17 b) 20 c) 15 d) 14

4) What type of impact is an EN 397 safety helmet or hard hat tested for?
a) Linear b) Oblique
c) Angled d) 60°

5) What type of incident do more head injuries occur from?
a) Being struck by an object
b) Acts of violence
c) Handling, lifting or carrying
d) Slips, trips and falls from the same level or one above

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

Wireless connectivity that just works.

As the leading provider to the construction industry, and experts in wireless connectivity, we are confident we can improve your site operations to help you build and sell homes quicker. **Get in touch today.**

Call **0333 900 1026** or visit **ukconnect.com**

UK CONNECT
BECAUSE COMMUNICATION MATTERS

CEL-FI CERTIFIED RESELLER

CHAS

cradlepoint ELITE PARTNER 2021

RUCKUS READY PARTNER PROGRAM ELITE

cradlepoint EMEA Partner of the Year

smas WORKSAFE

Musculoskeletal disorders top ill health issues in construction

Stress and depression also account for a high proportion of health problems in the sector, as illness rates unaffected by the pandemic

As illness across the nation drives record numbers of people out of work, the construction sector continues to struggle with work-related health problems. Some 74,000 construction workers were reported to be suffering from work-related ill health, as averaged out over the three-year period 2018/19 to 2020/21, according to figures from the Health and Safety Executive (HSE).

Of these illnesses, an estimated 40,000 workers (1.8% of all workers in the sector) suffered from work-related cases of musculoskeletal disorder (new or long-standing), compared to 1.1% of workers across all industries.

Expressed another way, 54% of all ill health in the construction sector is caused by pains and disabilities affecting muscles, joints and tendons in all parts of the body.

During October HSE inspectors focused on moving and handling construction materials to make sure sites were using sensible control measures to protect workers from injuries and musculoskeletal disorders (MSDs).

Overall, in the year 2020/21, the construction sector had an ill health prevalence rate of 3,360 per 100,000 workers (3.4%), compared to an all-industries rate of 3,680 per 100,000 (3.7%). The numbers for both ill health and MSDs were unchanged throughout the coronavirus epidemic.

There were also an estimated 20,000 work-related cases in construction of stress, depression or anxiety (new or long-standing), representing 27% of all ill health in this sector.

In percentage terms, around 0.9% of workers in the construction sector reported suffering from stress, depression or anxiety that they believed was work-related (new or long-standing cases). This rate is statistically significantly lower than that for workers across all industries (1.8%).

54%

of all ill health in the construction sector is caused by pains and disabilities affecting muscles, joints and tendons

Coronavirus pandemic

Prior to the coronavirus pandemic, the rate of work-related stress, depression or anxiety for all industries had been broadly flat over the previous three years. The rate for the latest period, which includes years affected by the coronavirus pandemic, is not statistically significantly different from the previous period.

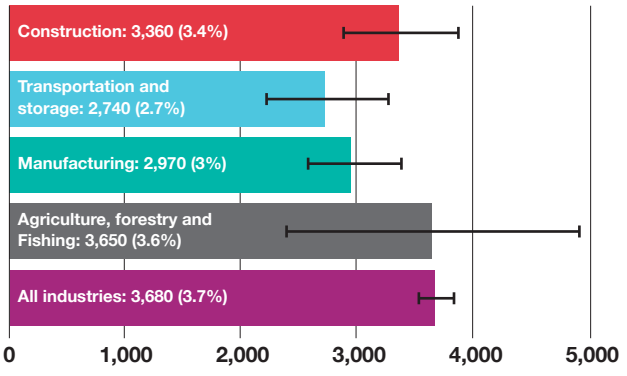
According to the reporting scheme for occupational respiratory disease, the rate of occupational asthma is 0.5 per 100,000 construction workers. There are various causative factors linked to this including occupational exposure to fumes, chemicals and dusts and environmental pollution but smoking is the single most important factor. Roofers were significantly more likely to suffer than other construction occupations.

Dermatitis is also a problem across parts of the construction sector, with plasterers suffering at a rate of 10.2 per 100,000 workers, compared to the overall rate for construction of 1.6 per 100,000 and the all-occupations rate of 2.14 per 100,000 workers.

Research into occupational cancer commissioned by the HSE indicates that across all industries, past occupational exposure to known and probable carcinogens is estimated to account for about 5% of cancer

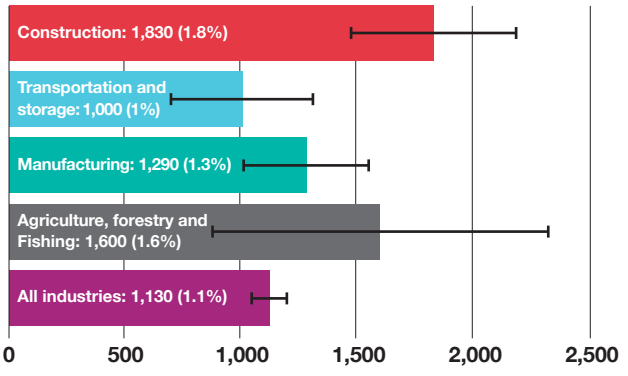
All illness

Construction compared to industries with similar work activities (rate per 100,000 workers)



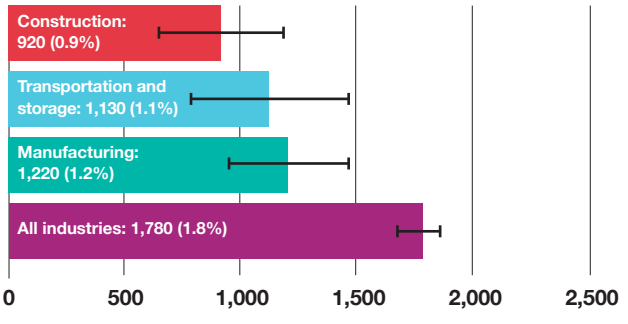
Musculoskeletal disorders

Construction compared to industries with similar work activities (rate per 100,000 workers)



Stress, depression or anxiety

Construction compared to industries with similar work activities (rate per 100,000 workers)



74,000 workers suffering from work-related ill health (new or long-standing) averaged over the three-year period 2018/19 to 2020/21

deaths and 4% of cancer registrations currently occurring each year in Great Britain. This equates to about 8,000 cancer deaths and 13,500 new cancer registrations each year. Of these 8,000 deaths, it is estimated that around 3,500 would be in the construction sector.

An epidemiological study of mesothelioma, a form of cancer that follows the inhalation of asbestos fibres, in Great Britain suggests that about 46% of currently occurring mesotheliomas among men born in the 1940s are associated with the construction industry including carpenters, plumbers and electricians. Some 17% can be attributed to asbestos exposures through carpentry work alone. A key factor in causing the higher risks now seen in these former workers appears to be the extensive use of insulation board containing brown asbestos (amosite) within buildings for fire protection purposes, says the HSE.

Across the country, the number of people not looking for work because they are suffering from a long-term illness has hit a record high of nearly 2.5 million, according to the latest official figures from the Office of National Statistics. ●

“There were an estimated 20,000 work-related cases in construction of stress, depression or anxiety (new or long-standing), representing 27% of all ill health in this sector

46%

of currently occurring mesotheliomas among men born in the 1940s are associated with the construction industry

In the dock

Recent prosecutions for health and safety breaches

£1,500 fine for denying HSE entry on site

A man who barred two HSE inspectors in Scotland from entering a construction site has received a fine.

The inspectors were responding to multiple concerns about unsafe work at the construction site in Irvine. On 16 March 2021, they attended the construction site and observed unsafe work at height taking place on a steel structure. The inspectors tried to gain entry to the site, but the gates were locked. They spoke to the person in control of the site, Baldev Singh Basra, who refused to unlock the gates and let them in, before they eventually gained entry and halted the unsafe work.

At Kilmarnock Sheriff Court, Singh Basra, of Loach Avenue, Irvine, pleaded guilty to an offence under Section 33(1) of the Health and Safety at Work etc. Act 1974 for contravening a requirement of an inspector – namely refusing entry to a premises where unsafe work was taking place. He was fined £1,500.

Two fined for misuse of vibrating kit

Two partners in a construction firm received fines for failing to control the risks of vibration while using tools.

Employees of Roywood Contractors worked at various construction sites using vibrating tools without adequate control. As a result, an employee who had been working at the company for 12 years suffered significant ill health from hand-arm vibration syndrome (HAVS).

An investigation by the HSE found that on or before 15 January 2020 the company failed to adequately assess the risk to employees from exposure to vibration. There were no appropriate measures to control exposure or to place employees under suitable health surveillance to monitor their condition.

Andrew Hatto and Paul Kiff, trading as Roywood Contractors, of Tilford Road, Tilford, Farnham, Surrey, pleaded guilty to breaching Regulation 6 (1) and 7 (1) of the Control of Vibration Regulations 2005. They were each fined £1,150 and ordered to pay costs of £3,500 each at Basingstoke Magistrates' Court on 20 September 2022.

Suspended sentences and fines follow site death

Two construction company employees have received suspended prison sentences, and two companies were fined, after Josh Disdel, an 18-year-old construction worker, was crushed to death on a site by a vehicle.

D Brown (Building Contractors) of Seas End Road, Spalding, was found guilty of contravening Section 3(1) of the Health and Safety at Work etc Act 1974. It was fined £300,000 and ordered to pay costs of £15,765.92.

P & R Plant Hire (Lincolnshire), of Station Road, Cambridgeshire, pleaded guilty to contravening Section 2(1) of the Health and Safety at Work etc Act 1974. The company was fined £24,000 and ordered to pay costs of £2,264.87.

Brent Woods of North Parade, Holbeach, Spalding, was found guilty of contravening Section 7(a) of the Health and Safety at Work etc Act 1974. He was sentenced to 18 weeks' imprisonment suspended for two years. He was also ordered to complete 200 hours of community service and pay costs of £1,200.

Darrell Tripp of Broadgate Lane, Deeping St James, Peterborough, was found guilty of contravening Section 7(a) of the Health and Safety at Work etc Act. He was sentenced to eight weeks imprisonment suspended for two years and ordered to pay costs of £1,200.

£80,000 fine for worker's fall

A Devon-based company has been fined £80,000 after an employee fell through a stairwell while working on a barn conversion.

Timber company Lamisell employed the 49-year-old driver and warehouse operative. He was working on the barn at the company's address near Okehampton on 14 May 2018.

Trying to access the first floor of the barn from exterior scaffolding he jumped onto a piece of insulation covering a stairwell. It gave way and he fractured two vertebrae in the fall.

Lamisell, of Meeth, Okehampton, Devon pleaded guilty to breaching Section 4 (1) of the Work at Height Regs 2005. It was fined £80,000 and ordered to pay costs of £7,331 at Poole Magistrates' Court on 31 August 2022. The company must also pay a £170 victim surcharge.

Looking back over 2022

Over the year APS has delivered a wide range of webinars and CPD sessions, which will continue to expand in 2023

The Association for Project Safety was founded on the guiding principle that the association would help members – and colleagues across the construction sector – shape and share best practice. APS's CPD has always been one of its strong points. Recently – and certainly since the advent of the Covid pandemic – we have been working hard to put on an increasing number of engaging webinars and online events.

Over the course of 2022, APS has delivered a wide range of webinars and CPD sessions, covering topics such as diversity, equality and inclusion, as well as how the construction sector is all the better for bringing in skills, experiences and insights gained from people from differing backgrounds. There were webinars on skin cancer awareness, unexploded ordnance, rail projects, confined spaces and the Building Safety Act.

More recently the APS's Hidden Hazards, Human Risks series brought various risks out of the shadows – such as stress, modern slavery, budgeting and menopause. It also lifted the lid on technical topics including dust, decarbonisation, temporary works, asbestos and retrofitting.

The national CPD sessions covered General Health and, later in the year, Retrofitting. We listened to what you wanted to hear and we hope that you enjoyed what we offered. Feedback from events showed a 98% member satisfaction rate, which we are delighted to hear!

Delegate feedback

Below are some kind words from delegates who attended APS events this year:

"A very good presentation, extremely useful and well presented. Full of useful information and advice."

"When added to the previous Network Rail webinar, offerings from the APS this week have really hit the spot. Today's was insightful, well presented and picked up on a number of CDM and safety issues associated with smart motorways. Well done, APS – and to the presenters this week, good effort."

"Following on from this webinar I shall be booking an appointment to see my GP. Good webinar."

"Fascinating information and statistics, all very well presented."

"An excellent presentation which included items and details of which I was previously unaware!"

Looking ahead to 2023

Plans for 2023 are well underway with the final details being put in place. There have been many discussions at APS HQ on the way the association will deliver events next year. The decision has been taken to keep all national CPD, conferences and, of course, webinars in a virtual setting. The main reason for this is accessibility. Many members have told us they prefer to attend events online due to time-saving and, more recently, the rising costs of fuel to travel to venues.

We know that networking is important to you. With that in mind we plan to run a networking event regionally to allow you to do just that. More details on dates and locations for these events will follow shortly.

Building Safety Act updates

APS has launched a unique, groundbreaking webinar series explaining the Building Safety Act and all the changes it will bring. Leading experts Andrew Leslie (APS head of membership) and Mark Snelling (APS fellow and founder of the Building Safety Alliance) will take delegates through what the new legislation means, what has been affected and how delegates can prepare.

The first two sessions have already taken place. You can watch these here: **www.aps.org.uk/category/webinars.** The next two sessions are available to book now.

- Session 3: Wednesday 18 January 2023
- Session 4: Wednesday 1 March 2023

These sessions are free for APS members to attend and a nominal fee for non members. You can book your place here: **www.aps.org.uk/events.**

Dates for the diary

The 2023 events calendar is packed

Here are some key dates for your diary:

- **Monthly economic updates starting in January**
- **The APS Energy week: Monday 23 January-Friday 27 January 2023**
- **Spring webinar series: 13 February-20 March 2023**
- **National CPD, spring series: 3, 11 and 19 April 2023**
- **Spring Conference: Wednesday 10 May 2023**
- **Personal Development Week: Monday 5 June-Friday 9 June 2023**
- **Annual Conference: Wednesday 6 September 2023**
- **Autumn webinar series: 25 September-30 October 2023**
- **National CPD, autumn series: 6-30 November 2023**

The majority of these are free for APS members to attend, with the exception of both conferences. If you are unable to attend live, you can always watch what you missed back at a later date.

BUILT FOR THIS MOMENT

On the ground and in the sky, the building goes on. The air is buzzing. The team's all here – still digging, lifting; still sawing and shouting. But this time, it's different. Now the teamwork – and the fist bumps – mean a little bit more. Now you're working together like never before. On beams and girders, in hoists and trailers, you're building our future – right now. And we're here to help you do it.

We're Bluebeam. Built for today. Building for tomorrow.

bluebeam.com/uk/now

synergietraining

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 now also provide the **APS CDM Awareness, APS Accredited CDM Client** and **APS Accredited CDM Principal Contractor** courses along with CDM Overview, Domestic Client, Construction Safety through Design and customised CDM training.

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:

6 Dec	*VIRTUAL* – APS Accredited – CDM 2015 for Principal Contractors	Online - Remote	£250
6 Dec - 7 Dec	APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Glasgow	£595
8 Dec	*VIRTUAL* – APS Accredited – CDM Client	Online - Remote	£295
13 Dec - 14 Dec	APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	London	£595
13 Dec - 14 Dec	*VIRTUAL* – APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Online - Remote	£595
16 Jan	*VIRTUAL* – CDM 2015 Overview	Online - Remote	£195
17 Jan	*VIRTUAL* – APS Accredited – CDM 2015 for Principal Contractors	Online - Remote	£250
23 Jan - 24 Jan	*VIRTUAL* – APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Online - Remote	£595
24 Jan - 25 Jan	APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	London	£595
30 Jan - 31 Jan	*VIRTUAL* – APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Online - Remote	£595
7 Feb	*VIRTUAL* – APS Accredited – CDM Awareness	Online - Remote	£250
15 Feb - 16 Feb	*VIRTUAL* – APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Online - Remote	£595
15 Feb - 16 Feb	APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Manchester	£595
16 Feb	*VIRTUAL* – APS Accredited – CDM Client	Online - Remote	£295
22 Feb - 23 Feb	APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	London	£595
27 Feb - 28 Feb	*VIRTUAL* – APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Online - Remote	£595
New Courses			
23 Mar	*VIRTUAL* – Building & Fire Safety Act Overview – 1 Day	Online - Remote	£295

Please quote APS-DEC-10 or a 10% discount on any of the above public courses.

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

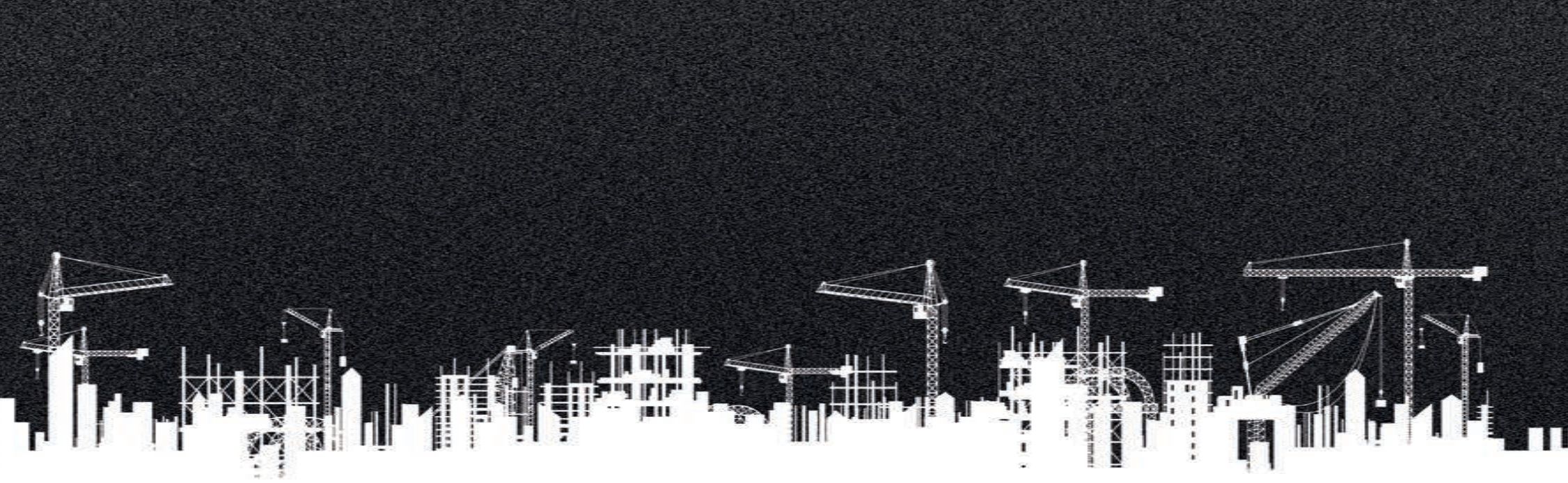
Synergie Training is an approved APS, CITB & IEMA Accredited Training Centre and holds ISO: 9001, ISO: 14001 and ISO: 45001 quality standard accreditations.

Website: www.synergietraining.co.uk
E-Mail: enquiries@synergietraining.co.uk
Tel: 01463 227580

association for project safety Accredited Training Provider

citb

IEMA



2023

aps

Events Calendar • Conferences • Webinars • CPDs

2023

▶ See the latest events that are open for booking at www.aps.org.uk/events

JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
SU	1	WE	1	WE	1	SA	1	MO	1	TH	1
MO	2	TH	2	TH	2	SU	2	TU	2	FR	2 Economic webinar*
TU	3	FR	3 Economic webinar*	FR	3 Economic webinar*	MO	3 Spring CPD series	WE	3	SA	3
WE	4	SA	4	SA	4	TU	4	TH	4	SU	4
TH	5	SU	5	SU	5	WE	5	FR	5 Economic webinar*	MO	5 Personal Development Week
FR	6 Economic webinar*	MO	6	MO	6	TH	6	SA	6	TU	6
SA	7	TU	7	TU	7	FR	7 Economic webinar*	SU	7	WE	7
SU	8	WE	8	WE	8	SA	8	MO	8	TH	8
MO	9	TH	9	TH	9	SU	9	TU	9	FR	9
TU	10	FR	10	FR	10	MO	10	WE	10 Spring Conference	SA	10
WE	11	SA	11	SA	11	TU	11 Spring CPD series	TH	11	SU	11
TH	12	SU	12	SU	12	WE	12	FR	12	MO	12
FR	13	MO	13 Spring Webinar starts (11 dates)	MO	13	TH	13	SA	13	TU	13
SA	14	TU	14	TU	14	FR	14	SU	14	WE	14
SU	15	WE	15	WE	15	SA	15	MO	15	TH	15
MO	16	TH	16	TH	16	SU	16	TU	16	FR	16
TU	17	FR	17	FR	17	MO	17	WE	17	SA	17
WE	18	SA	18	SA	18	TU	18	TH	18	SU	18
TH	19	SU	19	SU	19	WE	19 Spring CPD series	FR	19	MO	19
FR	20	MO	20	MO	20	TH	20	SA	20	TU	20
SA	21	TU	21	TU	21	FR	21	SU	21	WE	21
SU	22	WE	22	WE	22	SA	22	MO	22	TH	22
MO	23 Energy Week	TH	23	TH	23	SU	23	TU	23	FR	23
TU	24	FR	24	FR	24	MO	24	WE	24	SA	24
WE	25	SA	25	SA	25	TU	25	TH	25	SU	25
TH	26	SU	26	SU	26	WE	26	FR	26	MO	26
FR	27	MO	27	MO	27	TH	27	SA	27	TU	27
SA	28	TU	28	TU	28	FR	28	SU	28	WE	28
SU	29			WE	29	SA	29	MO	29	TH	29
MO	30			TH	30	SU	30	TU	30	FR	30
TU	31			FR	31			WE	31		

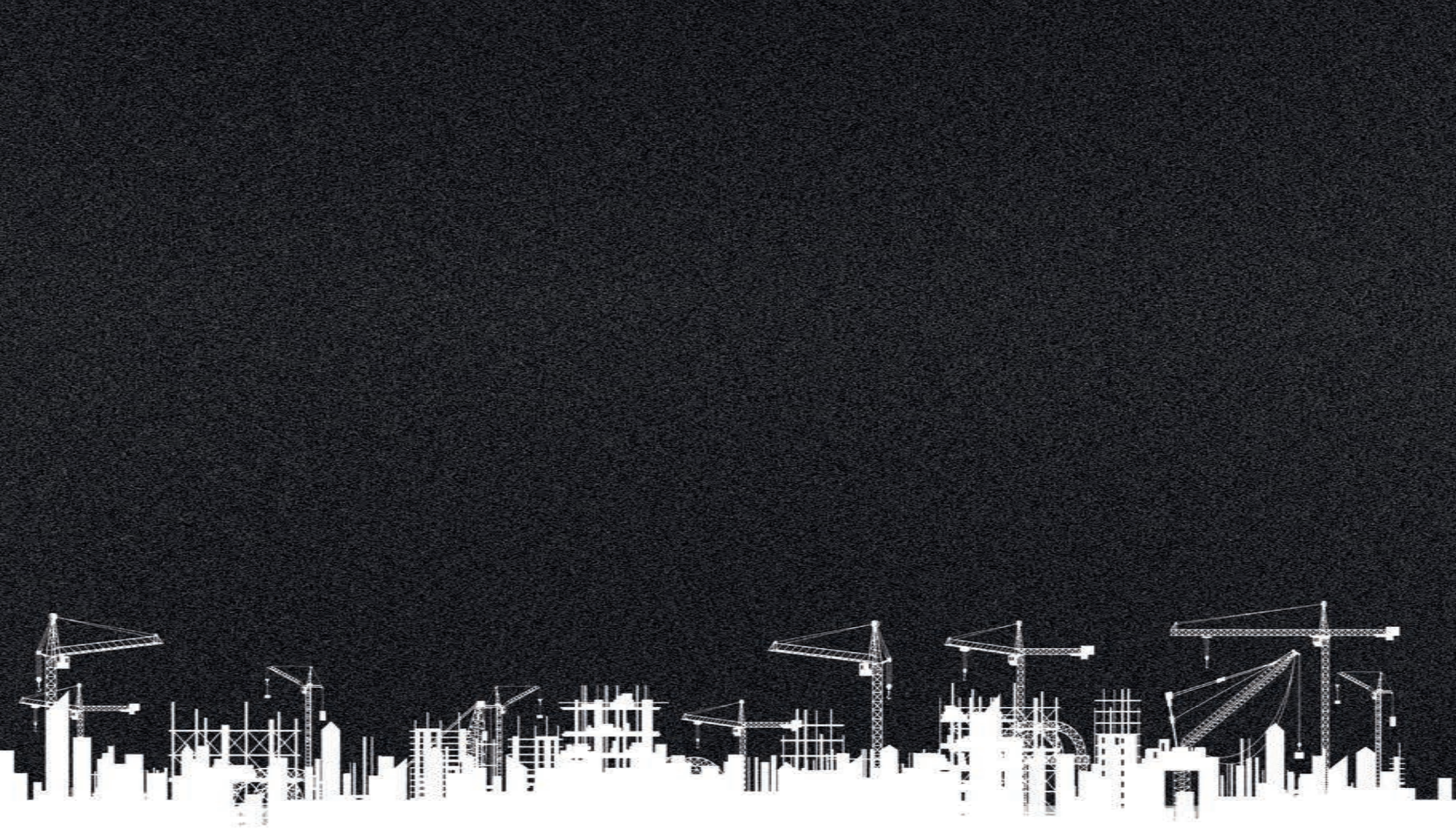
* Economic webinar dates to be confirmed

▶ See the latest events that are open for booking at www.aps.org.uk/events

2023

JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
SA	1	TU	1	FR	1 Economic webinar*	SU	1	WE	1	FR	1 Economic webinar*
SU	2	WE	2	SA	2	MO	2	TH	2	SA	2
MO	3	TH	3	SU	3	TU	3	FR	3 Economic webinar*	SU	3
TU	4	FR	4 Economic webinar*	MO	4	WE	4	SA	4	MO	4
WE	5	SA	5	TU	5	TH	5	SU	5	TU	5
TH	6	SU	6	WE	6 Autumn Conference	FR	6 Economic webinar*	MO	6 Autumn CPD starts (3 dates)	WE	6
FR	7 Economic webinar*	MO	7	TH	7	SA	7	TU	7	TH	7 APS Christmas Event
SA	8	TU	8	FR	8	SU	8	WE	8	FR	8
SU	9	WE	9	SA	9	MO	9	TH	9	SA	9
MO	10	TH	10	SU	10	TU	10	FR	10	SU	10
TU	11	FR	11	MO	11	WE	11	SA	11	MO	11
WE	12	SA	12	TU	12	TH	12	SU	12	TU	12
TH	13	SU	13	WE	13	FR	13	MO	13	WE	13
FR	14	MO	14	TH	14	SA	14	TU	14	TH	14
SA	15	TU	15	FR	15	SU	15	WE	15	FR	15
SU	16	WE	16	SA	16	MO	16	TH	16	SA	16
MO	17	TH	17	SU	17	TU	17	FR	17	SU	17
TU	18	FR	18	MO	18	WE	18	SA	18	MO	18
WE	19	SA	19	TU	19	TH	19	SU	19	TU	19
TH	20	SU	20	WE	20	FR	20	MO	20	WE	20
FR	21	MO	21	TH	21	SA	21	TU	21	TH	21
SA	22	TU	22	FR	22	SU	22	WE	22	FR	22
SU	23	WE	23	SA	23	MO	23	TH	23	SA	23
MO	24	TH	24	SU	24	TU	24	FR	24	SU	24
TU	25	FR	25	MO	25 Autumn webinar starts (11 dates)	WE	25	SA	25	MO	25
WE	26	SA	26	TU	26	TH	26	SU	26	TU	26
TH	27	SU	27	WE	27	FR	27	MO	27	WE	27
FR	28	MO	28	TH	28	SA	28	TU	28	TH	28
SA	29	TU	29	FR	29	SU	29	WE	29	FR	29
SU	30	WE	30	SA	30	MO	30	TH	30	SA	30
MO	31	TH	31			TU	31			SU	31

* Economic webinar dates to be confirmed



The Association For Project Safety
5 New Mart Place, Edinburgh, EH14 1RW

aps association for project safety