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# How did Grenfell change things? APS members give their views on how the industry is responding GRENFELL FOREVER IN OUR HEARTS



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**Safety in the offshore wind sector** page 26



**Construction after Grenfell** page 10

#### Member profile

page 20

Even in my relatively short time in the industry I have seen health and safety standards improve. I would like to see this continue, along with the current emphasis on wellness and wellbeing Amy Dillon, Design ID





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

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### Welcome

The publication of the final report of the Grenfell Tower Inquiry reminds us that regulatory control is just one element of the change that is needed for a new approach to safety, says Andrew Leslie

t's that time again. A time for reflection, a matter of choices and inconvenient truths.

Seven years after the dreadful disaster of Grenfell, the final report was published on 4 September 2024. As expected, the blame fell on everyone, one way or another, with a large finger of blame pointed at the architect.

The recommendations lean heavily on more centralised government-led regulatory control. This is, of course, one way of improving how the industry works. But what of the work that has already been completed in anticipation of making fundamental changes to the behaviours of the constituent parts (partners?) that work together to create the built environment.

The investigation and recommendations of Dame Judith Hackitt, the work of BSI, the Working Groups, the three PASs published in 2022, the Building Safety Act 2022 (BSA) and the various regulations spawned by it - all have resulted in implementation programmes and the formation of organisations and schemes to meet the objectives identified in this myriad of proposals, guidance and regulation.



Andrew Leslie Association for Project Safety



inconvenient truth is that adding more red tape will not improve competence within the industry

The inconvenient truth is that adding more red tape and bureaucracy will not and cannot improve competence and behaviours within the industry.

APS, and other professional bodies, have bitten the bullet and created competence schemes relating to the regulatory process in England. These are designed to improve competency for dutyholders created by the revised building regulations and introduce mechanisms for regular revalidation.

It is another inconvenient truth that take-up so far has been disappointing. Why should this be? There can only be one answer. Lack of support from those bodies whose objective is to improve industry competence as set out in BS 8670 and PASs 8671, 2 and 3. It is surely time for these agencies to reflect.

The new Labour government has already lost the minister appointed to the building safety portfolio. A new building safety minister has been appointed, but will Angela Rayner step in as Ministry of Housing, Communities and Local Government (MHCLG) lead? How will MHCLG shape up with the Building Safety Regulator? Can we expect a political bunfight?

There are two things that ought to happen, which would help.

Firstly, MHCLG should take advice from building safety professionals. Organisations like APS, which has competence at front and centre, should be fully engaged in the conversation.

Secondly, and importantly: collaborate. The industry has seen itself in silos for far too long. And this means collaborating at all levels of involvement.

And that's only England. There are another three versions of something similar on the horizon. To paraphrase what Ollie said to Stan: Here's another nice mess you've gotten us into.

The good news... APS continues its quest to improve support for existing members in their careers, attract new members and re-engage with students and young professionals. As mentioned on p30, we will continue our excellent webinars, increase the training courses available and provide members with opportunities to maintain and demonstrate competence in their chosen field. Andrew Leslie is interim CEO of the Association for Project Safety.



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APS president calls for clearer guidance from Building Safety Regulator following the publication of the Grenfell Phase 2 Inquiry report

PS president Mark Snelling is calling on the Building Safety Regulator to give a clearer steer on competence requirements in the wake of the Grenfell Phase 2 Inquiry report.

The report, published in September, concluded that the 72 deaths were avoidable and criticised multiple entities and individuals connected with the tower's management and refurbishment. It considered progress made to enhance building and fire safety and further change required.

"The Phase 2 report was yet another call to act, and in my view that has to start with getting to grips with the low levels of competence," said Snelling. "As far as I can see there is no evidence that the culture in the industry has changed, seven years after Grenfell.

"There is a reluctance for organisations to embrace the management of competence. They are all waiting for something to happen: the regulator to tell them what they need to do to comply; clients to send them pre-qualifications, etc. The problem is nobody, including the Regulator, wants to say what good looks like and get things started."

Snelling said a case in point was the fact that three new registers for principal designers to provide recognition of their competence – including one set up by APS a year ago – had received very little interest.

The expectation is that firms looking to be appointed as principal designers would be able to point to key staff being accepted on to a competence register.

"There were fewer than 75 individuals across the three of them. If it really mattered there would be a

The Regulator needs to give clear direction on its expectations for competence and then ensure this is met Mark Snelling, APS lot more people on these registers," he said. "We cannot change as an industry until we understand what competence looks like, how you measure it and how organisations need to manage it.

"The Regulator needs to give clear direction on its expectations for competence and then ensure this is met when schemes go through the different gateways and in safety case submissions."

Under the Building Safety Act clients are required to appoint designers and contractors who are competent in all projects and building control inspectors must consider competence as part of their role. Yet Snelling says that guidance from the Ministry of Housing, Communities and Local Government – at the time still the Department for Levelling Up, Housing and Communities – in the form of a circular letter appears to be undermining this.



Mark Snelling President, APS

It said: "Other than the checks being carried out for higher-risk building work when applications are made to the Regulator, we are not expecting proactive inspections of the dutyholder and competence regime."

Instead, the guidance pointed out that "when there is a failure to comply with building regulations, the dutyholder and competence regulations will enable the building control authority to track back through the design and building processes for the project for each of the relevant dutyholders and take appropriate action for noncompliance".

Snelling said: "There is an assumption in this statement that the fear of being found wanting in a future prosecution will drive the industry to comply. I see no evidence that this currently the case." ■ See cover feature, p10-14.

#### Sprinklers would have delayed fire spread

A huge fire inside a multistorey car park at Luton Airport could have been put out faster if a suitable sprinkler system had been installed, a report has concluded.

Four firefighters were injured in the blaze which destroyed 1,352 vehicles on October 10 2023 and involved more than 100 firefighters tackling it at its height.

The report from the Bedfordshire Fire and Rescue Service (BFRS) said that while a sprinkler system in the car park was not mandatory, if one had been installed it would have made the fire easier to tackle.

"If a suitable sprinkler system had been installed, it may have changed and delayed the pattern of fire spread, increasing the chances of a successful outcome once firefighting operations had begun," the report said.

"A combination of the wind spreading the fire through the open-sided car park, the impact of running fuel fires, and the early onset of signs of structural collapse all prevented internal offensive firefighting from continuing and contributed to the significant scale of the fire and subsequent financial loss."

The car park partially collapsed during the incident, and was later fully demolished. Construction of a new car park is under way, and "includes plans for a fire suppressant system", the airport has said.





### Roof terraces are not 'storeys' – for now

A tribunal judgement on apartments in east London appears to question government guidance on higher-risk buildings

he government is asking construction and regulatory bodies to continue using its official advice to determine whether a building is higher-risk following a recent judgement flagging that the guidance "appears to contradict" statutory provisions.

The case refers to leaseholders who successfully sought remediation works from their landlord, Monier Road Ltd, after fire safety issues hindered the sale and mortgage of their flats.

A first-tier tribunal ruled in July that the roof terrace at Smoke House and Curing House in Hackney Wick, east London, qualified as a seventh storey, making it a higher-risk building under the Building Safety Act.

The judgement pointed out that government guidance says that: "A

This guidance appears to not only add to the statutory provisions but also to contradict them Tribunal judgement storey must be fully enclosed to be considered a storey. The roof of a building should not be counted as a storey. Open rooftops such as rooftop gardens are not considered storeys and should not be counted as such when determining the number of storeys or measuring the height."

The judgement added that the government guidance "appears to not only add to the statutory provisions, but also to contradict them".

"The [Building Safety] Act provided that the regulations could define 'storey', the regulations do not contain that definition but the guidance purports to provide such a definition," the decision continued. "The regulations appear to provide that a rooftop can be a storey save for the one exception where that storey has plant/machinery, however the guidance appears to say that there are other exceptions."

A note on the government website posted on 18 October said the Ministry of Housing, Communities and Local Government was considering the views expressed by the tribunal that roof gardens should be classified Flats at the Smoke House and Curing House, Hackney Wick, were the subject of the tribunal as a storey when determining whether a building meets the height and storey criteria under the Higher-Risk Buildings (Descriptions and Supplementary Provisions) Regulations 2023.

But it added: "It is important to note the Tribunal itself acknowledged it was not within its jurisdiction to formally determine whether the building being considered was a higher-risk building. Until stated otherwise, the sector and regulatory bodies should continue to refer to existing government guidance."





# CLC plans to update golden thread guide

Guidance author tells webinar that expansion of HRB height definition, as well as user feedback, will drive future change

he Construction Leadership Council's (CLC) golden thread guidance will be updated and will feature case studies. And the golden thread requirement will in time be expanded beyond the current 18m height definition.

Those were the key statements made by Aman Sharma, co-author of both the golden thread and the CLC's guidance, during a Digital Construction Summit webinar, held in association with Atvero, which was devoted to the golden thread.

The guidance, *Delivering the Golden Thread*, was published by the CLC at the end of August. It sets out the golden thread information that dutyholders and accountable persons will need to generate, keep, maintain and hand over during design, through construction, handover and completion of a higher-risk building (HRB) and into occupation.

Noting the document size (90 pages), he said: "The reason it's comprehensive is that it's not a document that we are encouraging people to pick up, put down and forget about. We want this to be a reference piece. I hope users of this guidance will be constantly referring to it.

"We plan to continue to iterate the guidance based on the feedback we get from users. There is information in the document about how you can send your feedback."

Sharma said that users should be prepared to understand the document in depth and detail. "I'm convinced that its proper application will deliver safe buildings," he said.

The next stage of the guidance will go into more depth about processes organisations can use to discharge their duties under the Building Safety Act (BSA). Sharma hopes it will include contextualised case studies.

#### Maintaining the momentum

Acknowledging that further legislation should be expected when the government responds to the Grenfell Inquiry's final report, Sharma reminded the audience: "We don't get to drop down to fourth gear [until the next raft of legislation] – we should stay on course, pushing forward."

Asked if the golden thread requirement will be extended to



Aman Sharma Co-author of the CLC's guidance on the golden thread

When the definition does expand, the guidance will be developed further to reflect that Aman Sharma, CLC guidance author

buildings beyond the current 18m height, higher-risk definition, he answered: "There are mechanisms in the BSA to upscale this regime to other parts of the built environment."

He confirmed, without specifying a timetable, that this will happen.

Sharma explained that the 18m height definition was a result of ensuring the industry could meet the new legislation at pace. The current definition has created a list of 13,500 higher-risk buildings: if the definition is lowered to 11m, that number swells to 80,000.

"When the definition does expand, the guidance will be developed further to reflect that," Sharma said.

#### Learning from doing

Neil Yeomans, head of property safety and technology at housing association Orbit, also speaking at the webinar, revealed some of his lessons from implementing the golden thread.

With 25 buildings classified as HRBs, Orbit partnered with Parametrix, the scan-to-BIM specialist, to help create the data, information and models necessary to comply.

"We decided this was an operational project that was leaning heavily on data and IT. We've taken this from a different lens than is usually applied and I think that's paid dividends for us. If you put your operational team in charge of implementing the golden thread, rather than the data or IT team, you'll end up with a better project."

Orbit "drilled, droned, scanned and sampled literally everything we could get our hands on. The scans were 10mm accuracy. We then produced 3D models to navigate the data."

The sheer volume of data was something of a shock."When we had a look at all the data we collected that we felt was necessary, our current asset management system could only hold about 12% of it."

The scans showed the buildings (some of which are pictured above) were sound and the lengths the team had gone to were worth it, Yeomans said. He noted: "The collection of the data is the easy part. The difficult part is keeping it up to date." ■

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# Learning from disaster

Seven years after Grenfell, the landscape of construction safety legislation is unrecognisable. But how well is the industry responding to the changing demands? **Denise Chevin** asked four APS members

S even years on, Grenfell still casts a long shadow over the industry. To the dismay of the families of those who died in the tragic fire in June 2017 the process of criminal prosecutions has yet to begin. But in that time the deficient practices of the sector have been laid bare in the two Grenfell inquiries and there has been a plethora of changes in the legislative landscape to improve safety and accountability and responsibility.

These include – though are by no means all – a ban on combustible materials in external walls of new high-rise residential buildings over 18m, as well as hospitals, care homes and student accommodation. And we saw the biggest swathe of changes of all ushered in with the Building Safety Act 2022 (BSA).

The BSA created the Building Safety Regulator within the HSE to oversee the safe design and management of buildings, particularly high-rise residential buildings. It introduced the role of the accountable person, and other new dutyholders – including a new principal designer (PD) and principal contractor (PC).

We've also seen a shake-up in building control and new gateway processes for higher-risk buildings (HRBs) and there has been a new emphasis placed on the 'golden thread' of information – ensuring that accurate, up-to-date information about the design, construction and ongoing management of buildings is maintained and accessible throughout the building's life cycle to ensure safety and accountability.

But there could be more changes to come. The *Grenfell Phase 2 Report*, published in September, set out 58 additional recommendations for change on top of those that have already been put in place. The government pledged to respond within six months.

The report concluded that the deaths were avoidable, and criticised multiple entities and individuals connected with the tower's management and refurbishment. The catalogue of poor decisions and errors ranged from incompetence to dishonesty and illegality.

Recommendations included: • Establishing a single construction regulator (person) to oversee all aspects of the construction industry.

• Government to appoint a chief construction adviser with good working knowledge and practical experience of the construction industry.

• Consolidating fragmented government fire safety responsibilities into one department so proper regulatory oversight can be given and efficiencies gained.

 Potential widening of the definition of higher-risk buildings.

• New statutory requirements for certain documentation or statements to be produced in support of the relevant building control applications and at Gateways 2 or 3. For example, a fire safety strategy produced by a registered fire engineer and appropriate statements from the PD and PC confirming that all reasonable steps have been taken to ensure that the building will be safe on completion.

• Licensing scheme for contractors working on HRBs and mandatory accreditation system for fire risk assessors.

• The creation and maintenance of a public record of recommendations and steps taken in response to feedback from public inquiries, coroners and select committees. The industry is struggling to get to grips with the complexity and sheer volume of legislative changes Tara Fry, Waterman But what do APS members think? Here four of them reflect on how the industry has changed, what's working for the better and what are the things that still need to be addressed.



#### 'The legislation is not supported by a code of practice'

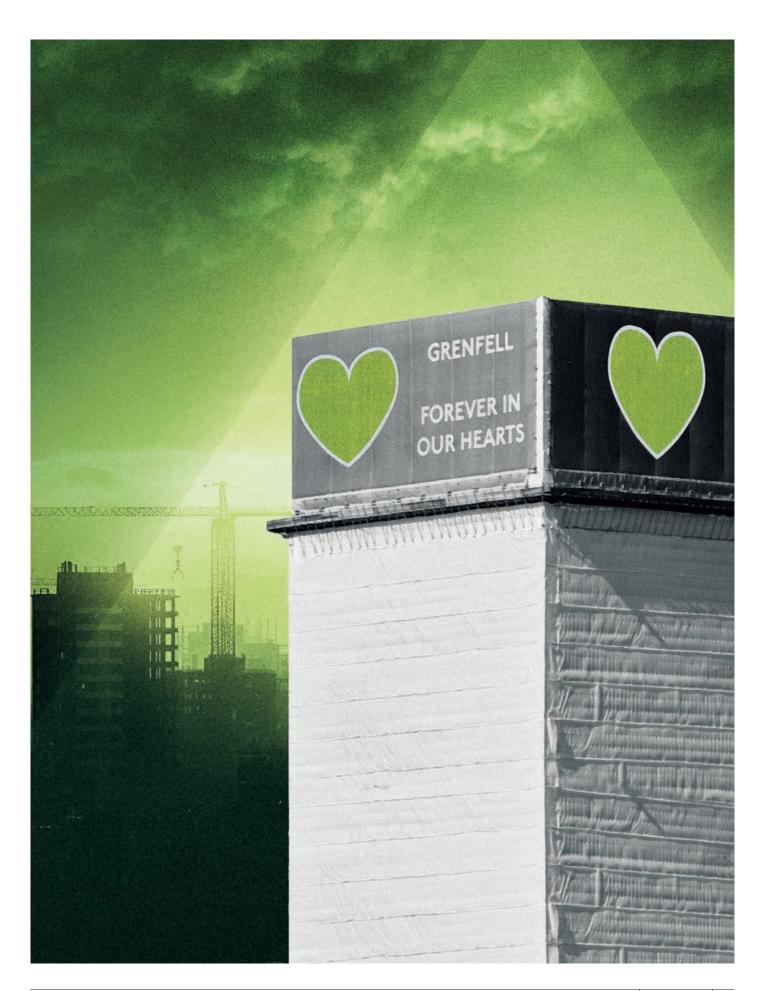
Tara Fry Technical director, Waterman

What's changed post-Grenfell? We've seen heightened awareness of design decisions related to higherrisk buildings. At Waterman, we are complying with the legislation as

designers, however the structural engineering role is evolving seeing us increasingly acting as principal designer (PD) for the building regulations.

The challenge is evidencing compliance, particularly around behaviours. Being a multidisciplinary consultancy certainly gives us an advantage when acting as PD for the building regulations since we have all the necessary skill, knowledge, experience and behaviours (SKEB) in-house to draw upon.

Putting aside the insurance issues, from my experience the industry is struggling to get to grips with the ►



complexity and sheer volume of legislative changes, related secondary legislation and amendments to existing legislation.

Where are the gaps or difficulties?

The main issue is that legislation is not supported by an Approved Code of Practice (ACoP) or, as with the Construction (Design and Management) Regulations 2015, a guidance document.

There is inevitable ambiguity and sometimes conflicting information within the legislative framework. It would help drive compliance, and ultimately building safety, had the legal guidance documents been in place to help industry across the board.

Ultimately, when the industry is left to develop its own response, we see a huge variation in what would be considered good practice. For example, we recently received a competency questionnaire which was virtually a copy of BS 8670 around individual ethical behaviours of our designers.

As professionals we sign up to ethical principles as part of our membership to professional standards bodies, so one might argue we will simply be regurgitating our existing commitments to act in a moral and safe manner. But this does not necessarily seem to prevent the type of purposeful misleading behaviour as we've seen from the *Grenfell Phase 2 report*.

I would question why the Code for Construction Product Safety is voluntary. In my opinion, the code should be mandatory but phased in to allow manufacturers and other members to work with the Office for Product Safety and Standards (OPSS).

Of the 280,000 manufacturers, approximately 60 have engaged with

the OPSS, and it's not surprising that these are larger manufacturers and tier 1 contractors.

It should be possible for architects, specifiers and principal designers to know that products specified, purchased and finally installed on buildings can be relied upon to perform in a safe manner and whether or not a product or system is suitable for its intended use.

We need products which do the job we are led to believe they do, and they must be marketed honestly and transparently. Any conformity assessment bodies must be adequately resourced, independent and impartial. Considering all this, I don't believe a voluntary code will be robust enough to drive the change we need with the impetus required.

Lowest price tendering tends to lead to poorer materials being selected on the basis of cost and can ultimately lead to the erosion of both quality and safety. Many are questioning whether value engineering (VE) is essentially poor practice, since VE can influence decisions leading to cheaper but less safe material selections outside of the specification. Ultimately, this is often reversed when a PD challenges the decisions, which has led to many heated debates around selection of materials.

Speaking to architects, specifiers and purchasers, they are still in a position where they are trusting manufacturers to be open and honest about their products, relying on product literature and testing regimes to demonstrate this.

The most important message from me is that we want to hear more from the OPSS and see a register of products that are safe to use.

A protest on the fifth anniversary of the tower blaze





### 'It is important people keep sharing their experiences'

Allan Binns Director, Project Four Safety Solutions

#### What's changed post-Grenfell?

The big thing is a change in behaviour. More and more contractors and consultants are having those difficult conversations with clients.

They are not just accepting work; they are reviewing things internally and, where necessary, raising their hands and saying, "We're not competent to do this" or "We haven't got the right resource at this time". That's a really positive change!

What and when clients pay for services is also changing. They're having more upfront conversations around programme, resources and procurement strategies.

The new change control process for HRBs forces us to question why we're changing the design or product. Those who want to make the change – for example, there might be supply chain issues – must justify it, and again that is a good thing.

We are also seeing these principles around procurement and change control being applied to non-HRB work as well.

#### Where are the gaps or difficulties?

One of the big challenges I see for PCs is change control. They now need to foster a culture that sees builders stopping work if they cannot physically build what is on the drawings in front of them and send it back to designers.

That involves a real change in culture because generally there is a lot of problem-solving that happens at site level. **6** There is a big question around what level of design detail is needed when submitting a Gateway 2 application. We need a bit more of a steer on that one Allan Binns, Project Four Safety Solutions

But it's still early days on that, because – the last bit of data showed that – there have only been 147 HRB applications that have been approved to date. It is important that people keep sharing their experiences.

There is also a big question around what level of design detail is needed when submitting a Gateway 2 application. We need a bit more of a steer on that one. It would really help if the Regulator put out an exemplar, so we know what best practice looks like.

Also, we don't have currently have any certification schemes in place for proving organisational capability for the dutyholder roles under the building regulations. The work done by the Building Safety Alliance so far is an important step.

There is also a challenge emerging for PCs with design and

# CHIER Belletitish Board of Greenent Belletitish Bo

The Grenfell Tower 'web of blame' shown to the inquiry. Arrows represent the blame attributed by organisations to others

build. Architects are struggling find insurance for the PD role under these types of contracts, which will likely see it fall to the PC to take up.

#### Reactions to Grenfell Phase 2? Other changes you would like to see?

There are clearly lots of challenges and changes to get to grips with but think the industry will develop

#### What's changed post-Grenfell? Where are the gaps?

Since Grenfell our industry has been under intense scrutiny, and building safety has become a top focus in designing and constructing our estates.

The sheer amount of legislation (new and amended) that we're required to consult does mean you have to be really determined to be able to find and interpret it all!

I'm sure the new scrutiny of the gateway process will lead to better and safer buildings and will certainly lead to a more comprehensive design being produced before the first spade hits the ground, which can only be a positive thing.

There is still a lot of uncertainty within the industry, which often is a result of the limited time to fully digest the implications of the secondary legislation. There is much confusion across a number of areas from what should be in a competent declaration to what are the practical deliverables, that should be expected from the new PD and PC roles. it its own standardised response to the legislation, which is what we have done under the CDM Regulations.

The recommendations in the inquiry all seek to build upon the improvements already written into legislation. I feel that we should see how the industry responds over the next year or so before we explore further measures.

It's probably worth pointing out that a compliant design will always fall down if the building work is not carried out correctly. Also, in my opinion, there has been lots of focus on the building regulations PD in terms of developing scopes of services but not so much on the building regulations PC.

I'm positive the mist will start to clear in time as all parties start to understand the new requirements of the BSA and in particular the amended building regulations requirements and new duty holders better. However, additional, and more accessible, guidance would be useful and templates of the prescribed documents.

#### Reactions to Grenfell Phase 2? Other changes you would like to see?

The report for me highlighted that as an industry we need to change the mindset and culture, so that within every meeting the resident's safety is at the forefront. There is still a long way to go on this. ►

### 'The industry must step up to meet these new standards'

**Steve Boulter** Associate, leading the London health and safety/principal designer/CDM team, Rider Levett Bucknall



It also recommends major reforms in fire safety regulations, accountability for building owners and managers, improvements in building design and materials, clearer evacuation strategies and stronger oversight of emergency services to prevent a repeat of the disaster.

The BSA has addressed many of the regulatory deficiencies which led to the tragedy, however many are still outstanding. For me, some of the key ones are the mandatory enhanced competency requirements for fire risk assessors, more focus on vulnerable residents and better clarity on elements of Approved Document B.

The recommendations from the report are vast but I would like to see the swift progress of the fire safety management in HRBs such as all high-rise residential building owners with any known deficiencies to evaluate their 'stay put strategy' fire strategies, fire engineers to become a protected and regulated profession and mandatory accreditation to certify the competence of fire risk assessors.

The report highlights competence, which has been addressed by the changes within the building regulations, but the industry must step up to meet these new standards. Some recommendations I would apply caution to include changing the definition of an HRB and the licensing scheme for PCs to work on HRBs, as this could make things even more difficult.



#### 'We're applying the golden thread to all our projects'

Margaret Sackey Projects health and safety management lead, UCL

I would

like to see

progress of

the fire safety

management

the swift

in HRBs

Steve Boulter,

**Rider Levett** 

Bucknall

What's changed post-Grenfell? Initially there was disbelief amongst a number of our project partners and within our organisation about the extent and breadth of the building safety legislation, assuming it would be just for higher-risk buildings.

But we have been fortunate to have members of the Building Safety Alliance via Safety Mark Services and Building Safe – facilitating our briefings and training sessions providing good CPD for internal and external project team members.

We have thereby been ramping up in our understanding of what is required for new and the refurbishment of all our UCL buildings – HRBs and non-HRBs and the on-going management for new and existing buildings in occupation and during maintenance activities.

Before the legislation came out, many in our project teams were sceptical about some of the measures like how the new PD role would work practically; some consultants had worries about getting insurance cover for that role and the shake-up of building control.

There were lots of noises predicting projects would grind to a halt. But it is settling down now and, although there are some firms who carry out the PD CDM role but do not want to take on the PD role under the building regulations, we are really encouraged by those embracing the new duties.

We are really encouraged with the way some are seeking to demonstrate the new duties. We are finding building surveyors and other lead designers who understand the building regulations taking on the role.

Where are the gaps or difficulties? What is not working is the level of assurance, getting the evidence of design assurance and construction assurance that the design meets the legislation and the building regs.

PDs who are not necessarily designers have been reluctant to do this because they say they do not have the competence to do so. But we have been saying that it's your responsibility to make sure that the person that is carrying out that design is competent, and that they sign as and provide the evidence that they are competent.

In UCL, we already have a Building Safety Portal that centrally directs all who need golden thread/key building Information. We are also progressing with a BSA tool which captures the design and construction assurance for all non-HRBs using and capturing information through the design phase and the construction phase.

We're applying the 'golden thread' process to all our projects, not just higher-rise student accommodation, because we think it is the right thing to do. The recently published guidance from the Construction Leadership Council accords with that philosophy.

#### Reactions to Grenfell Phase 2? Other changes you would like to see?

I think all of the recommendations set out in the Phase 2 Inquiry must be carefully looked at. But of all the recommendations I'd be keen to see the creation and maintenance of a public record of recommendations and steps taken in response to feedback from public inquiries, coroners and select committees.

I don't think we learn enough from the disasters of the past. This time we really have to and I think that would help. ■

6 I'd be keen to see the creation of a public record of recommendations and steps taken in response to feedback from public inquiries, coroners and select committees Margaret Sackey, UCL



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Safety for helmets

# Now digital tech is the nuclear option

Spot the robot dog, virtual reality and immersive rooms are all being deployed by AtkinsRéalis on the huge programme of work in the nuclear sector to make it safer and more cost efficient – but the application of innovative technologies doesn't end there. **Denise Chevin** reports



Meanwhile, in October, tech giants Google and Amazon both announced deals to use small nuclear reactors to generate the vast amounts of energy needed to power their artificial intelligence (AI) data centres in the US.

On top of the burgeoning new nuclear sector there is a burgeoning workload in decommissioning too, as older generators are retired from service. Hinkley Point C in Somerset is currently the largest construction site in Europe

With the sector's renaissance comes a plethora of innovative processes and technologies. This includes AtkinsRéalis's Virtual Site Access, a suite of technologies offered by the engineering giant that uses a variety of monitoring techniques to survey all types of nuclear facilities – whether operational, under construction or being decommissioned. GOVERNMENT

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This allows remote planning, analysis and management of nuclear facilities across the life cycle. Allowing the work to be undertaken remotely reduces risks, makes it more efficient and saves carbon and money.

Between March 2023 and February 2024, the use of these remote services by AtkinsRéalis saved 20,118 hours of travel, an estimated  $\pounds$ 1.2m in costs (based on agreed client metrics), and 296,585kg of CO<sub>2</sub>, while also substantially reducing personnel radiation exposure.

The suite of equipment that makes up Virtual Site Access has been developed by AtkinsRéalis as part of its Digital in Nuclear vision – a strategy of harnessing digital technology to provide a comprehensive remote service to the sector, saving people having to travel to site and work in harsh conditions. Virtual Site Access won the Best Application of Technology Award at the Digital Construction Awards in July 2024.

The digital service includes many cutting-edge technologies, such as Boston Dynamics' Spot the dog, and other quadrupedal robots, virtual reality (VR) harnessing Microsoft HoloLens 2 headset and Igloo Vision immersive spaces. Putting this package of technologies together has been masterminded by Darren Grears, director, head of digital, nuclear and power, EMEA, AtkinsRéalis.

Grears started as an apprentice in the company's nuclear business, 23 years ago. "I have a decommissioning background working at Sellafield, and decommissioning is a good sandbox because of the challenges. Sites like Sellafield are so varied and broad that there's really a strong sort of pull for innovation, technology and robotics," he says. Hinkley Point C is predicted to come on line before the end of the decade, while construction and commissioning of Sizewell C is expected in the mid-2030s – and Grears' team is working on both.

Meanwhile, eight more nuclear reactors are due to go offline by the end of the decade, joining those already being overseen by the Nuclear Decommissioning Authority. The workload in the sector is enormous and demand for AtkinsRéalis's services has grown rapidly.

"When we started the Virtual Site Access service in 2021 there were just four of us working full time on digital. Now there are close to 50," he says.

#### So what is the thinking

behind Virtual Site Access? In the nuclear industry, sites are predominantly situated away from areas of high population and therefore lack effective transport links. When combined with the necessary security restrictions (training, clearance etc), it makes accessing these sites difficult, explains Grears.

Added to site access issues are the inherent risks of the nature of the sites, both conventional and radiological. Furthermore, data security and information assurance also restrict people from being able

It is far less risky to survey the building remotely. The team used Spot to carry out a building inspection remotely while streaming the visuals live to a project team in an offsite location Darren Grears, AtkinsRéalis Above: The proposed Sizewell C power station (centre) will sit alongside the existing Sizewell B (to the right) Below: Spot, the dog-like robot produced by Boston Dynamics to visualise the site. "Being able to virtually access the site remotely through the web removes all these limitations and restrictions," he says.

AtkinsRéalis is providing services to assist and prolong the running of nuclear plants that have their lifespan extended to maintain energy security while new generation capacity is being built.

"One of the ways we're using Virtual Site Access is in deploying technology to collect site information about a plant, enabling the generation of 3D models of the current plant configuration. Drawings generated when plants were built rarely reflect the current configuration. For example, it might be there has subsequently been a change of configuration where a walkway is no longer accessible," says Grears.

One of the most advanced technologies being deployed is Boston Dynamics' quadrupedal robot, Spot, which acts as a vehicle to mount a load of sensors to collect information more autonomously to assist decommissioning activity. Spot was deployed to reduce risk in decommissioning at Calder Hall in Sellafield, which was the world's first full-scale commercial nuclear power station.

"When it was built in the 1950s materials included what we now know to be dangerous, primarily asbestos, so it is far less risky to survey the building remotely. The team used Spot to carry out a building inspection remotely while streaming the visuals live to a project team in an offsite location. The team were able to communicate with Spot operators in real-time for a bespoke inspection.



• Rather than physically having to go to site, we have the ability to bring people to the site by entering the immersive room; you can load project data and have a 360° view Darren Grears, AtkinsRéalis

Grears explains: "The building was classified as 'no person entry', so the team de-risked that whole operation by remotely controlling Spot to complete the walk around the building, doing a virtual tour of the facility.

"This inspection allowed the project to progress on what could have previously been a stalled task."

#### Immersive rooms

In what it describes as a 'leading edge' investment AtkinsRéalis has built three immersive rooms in the UK, with another three coming online globally by the end of this year.

"Immersive rooms are 360° projection rooms (like sort of BIM Caves in traditional speak). We're installing them in key locations across our UK offices. They are linked to our Virtual Site Access initiative to allow users to have group interaction with data as well as viewing it through VR," says Grears.

"Rather than physically having to go to site, we have the ability to bring people to the site by entering the immersive room; you can load project data and then have a 360° view of the information that's being collected."



AtkinsRéalis's immersive rooms allow remote interaction with data

further analysis," says Grears. "One area we could see greater demand is in rail – to reduce risks and find safer ways to conduct surveys and tasks."

#### How might the technology continue to develop?

The team still needs to be on site to deploy the technology that forms part of Virtual Site Access, though it can still operate beyond visual line of sight.

"We're working now towards that being fully autonomous and controlled from miles away. So, we would station Spot in a 'kennel' on a site permanently and then deploy it to carry out autonomous data collections regularly.

"We also want to explore how we can use machine learning to analyse the data we have collected to identify risks. We can use generative AI to start asking questions of it.

#### Should people be worried robots might start taking their jobs?

"It's not about replacing people – it's more about succeeding in a very competitive market and overcoming future skills gaps: that's where the robotics comes in," explains Grears.

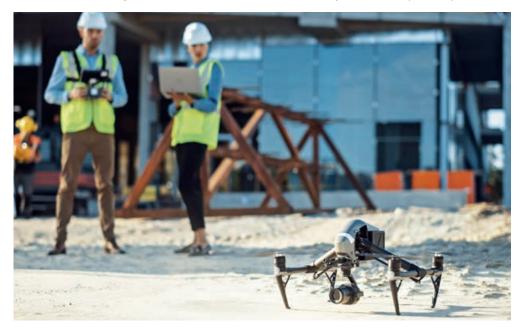
"We also need to be attracting people like gamers who do not necessarily associate construction with the cutting edge of digital technologies. We need data scientists and we need software engineers. We also need to train and pass on knowledge to a younger generation of workers, as many who have worked in nuclear for their entire careers are now retiring and that experience and understanding of site and conditions could be lost," he adds.

The company has started to recruit people from different areas to widen the skills base. "We're trying different tactics, like holding a hackathon to reach people who wouldn't have otherwise considered this as a careers field and help get our name out there as a company scaling up its technology teams. We hope it will bring in creative people with ideas that we will look to support and invest in," Grears explains. ■



used to virtually access sites for training, for inductions and to avoid having to be physically present to plan an activity. And when staff do have to go physically to site, the immersive room can be used to understand in advance what the site will be like. Are there other applications outside

Are there other applications outside nuclear? "Yes, we are using it to survey other power and network infrastructure, like plants and substations, but it can be used on any asset that requires inspection or



Drones are used

to enable remote

visualisation on a construction site Viega cold-press technology Makes piping smarter.





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# 'We all have a responsibility'

In our latest member profile, we catch up with Amy Dillon, a civil engineer with a passion for safety – and a zeal for encouraging the next generation into design and construction

ivil engineer and APS member Amy Dillon added another accolade to her already impressive list in September 2024 when she was named STEM Champion at the Inspiring Women in Construction and Engineering Awards.

Now in a role as principal engineer for the Northern Ireland-based structural and civil consultant Design ID, with a health and safety remit, Dillon started winning awards almost as soon as she began work in the sector. That was in 2012 at Sir Robert McAlpine, after graduating from Nottingham with a first-class civils degree.

She has been named as one of the Top 50 Women in Engineering by the Women's Engineering Society and *The Telegraph* in 2017, as well as being honoured by *NCE* magazine's Recognising Women in Engineering Awards for making a significant contribution to the construction industry and by the Royal Academy of Engineering as one of their Young Engineers of the Year in 2020. Here we find out more about

her career and what drives her on.

Amy Dillon: "I've always been interested in health and safety, right from the start" ••• I've developed the health and safety policies and procedures that have allowed the company to win bigger jobs and carry out those jobs safely Amy Dillon, Design ID

You're principal engineer with Design ID – what does that involve? I'm a chartered civil engineer, with a background in contracting, including the Northern Spire bridge in my hometown of Sunderland.

I joined Design ID in 2019. It's a structural and civil engineering consultancy which has been growing very rapidly, with lots of contractor clients. I manage teams and projects, and handle contractor liaison and the logistics of jobs, particularly the more challenging jobs, where my knowledge of buildability is very useful.

As well as that, I'm the company's health and safety lead. I was not recruited with that in mind but the company was taking on bigger jobs and they needed someone to look after this side of the business. I have a lot of experience and qualifications in health and safety, so it made sense for me to take on the role.

#### Tell us about the jobs you had before joining Design ID

I started my career at Sir Robert McAlpine as a graduate civil engineer, and got some really good experience. I then went to Amec Foster Wheeler for a year – that was in consultancy. And then in 2017/18 I saw that a major bridge was being built in Sunderland, so I applied to Farrans Construction, the contractor building it, saying "Hi, can I come and help you build it, please?" And they said "Yes, come on!" and gave me the job of senior site engineer on the project.

That was a great time. I was still quite a junior engineer, but was given relatively senior jobs to do on what was a £180m project. Seeing the bridge deck be pushed out across the river from land and then the pylon coming down the river and being lifted into position was really exciting – probably the highlight of my professional life.

Two other things made it very memorable. I was asked to be part of the team that named the bridge, and we came up with the Northern Spire. I was also part of the team selected to meet Prince William on a royal visit, which was a huge day for the project.

I then spent one year in Farrans' bid department, based in Belfast, gaining experience in estimating and tendering.

#### That made the next move to Design ID in 2019 quite an easy step geographically at least then? Yes, Design ID are based just outside of Belfast, in Hillsborough, although they've also got offices in London and Dublin.

When I joined the company five years ago, there were around 30 in the company: this has now doubled to over 70. I feel pleased I've been able to contribute to that growth, because I've developed the health and safety policies and procedures that have allowed the company to win bigger jobs and carry out those jobs safely.

#### What got you onto the health and safety route?

I've always been interested in health and safety, right from the start of my career. I found I had a natural aptitude for it. Working on such a busy and large site as Northern Spire, you could really see the importance of high standards with good leadership and policies and procedures. I enjoyed learning more

The Big Bridge Project takes its cable-stayed bridge kit to schools for students to build



and completing qualifications to ensure I was able to keep everyone as safe as possible.

I know you're on maternity leave, and due to return shortly, but what kind of projects were you doing before you left to have your child? I was working as CRE (contractor's responsible engineer) on Network Rail projects in London. Here I would assist contractors with liaison with Network Rail and help gain necessary approvals for the project to go ahead.

There are huge risks and specific challenges involved with working close to railways and I really enjoyed the complexity of understanding all of the specific standards and working out how to best carry out the works and mitigate risks.

This is a highly pressurised role due to the high risk with activities involved on the critical path of projects, meaning any delay can cost large sums of money or hold up the project.

#### Tell us about The Big Bridge Project

I am project lead of an exciting new educational initiative. We have a 13m long, 3m high cable-stayed bridge kit, which we take to schools in a trailer.

Students then work in teams to build the bridge – starting on both sides and meeting in the middle. Then they get to test it by walking across and it is such a joy to see how enthusiastic and excited they are and how much we are able to teach them about construction and careers in STEM.

In the first year, we've reached over 1,100 pupils in Northern Ireland, but are inundated with requests. We're now looking for new partners to help us scale that up and allow us to continue to take it to schools free of charge. Businesses can sign on as a patron, which will show clients what they're doing to boost social value.

I've also worked with the Institution of Civil Engineers to create the online game CityZen, a digital game for sixth-form students. They play as a team to construct a city and make decisions as real life civil engineers do.

It is such a joy to see how enthusiastic and excited they are and how much we are able to teach them about construction and careers in STEM Amy Dillon, Design ID

#### CV: Amy Dillon MEng CEng MICE AaPS

• NEBOSH National Certificate in Construction Health and Safety, Safety, Health and Environment for Construction Site Managers (IOSH), Site Management Safety Training Scheme (CITB)

• 2019 to current: Joined Design ID as senior engineer, now principal engineer. Currently working towards professional qualification with the Association for Project Safety (APS)

• 2018: Estimating assistant and bid manager, Farrans Construction

• 2017: Attained professional qualification with the Institution of Civil Engineers

• 2015: Senior site engineer, Farrans Construction, on the Northern Spire bridge

• 2014: Consultant, Amec Foster Wheeler, on the design of a waste transfer station

• 2012: Graduate site engineer, Sir Robert McAlpine, working on a variety of projects including a large battery plant and a city-centre shopping redevelopment

• 2012: Graduated from University of Nottingham with MEng in civil engineering (first class)

#### Is there anything about the current health and safety environment that you'd like to see change?

Even in my relatively short time in the industry I have seen health and safety standards improve, with it being part of the conversation in all activities in tender, design, construction and maintenance. I would like to see this continue, along with the current emphasis on wellness, long-term health and wellbeing.

There is a challenge with 'price only' tenders where the lowest price wins and we all have a responsibility to ensure that the highest standards of health and safety are upheld in these jobs when margins are being squeezed.

#### Are you involved with the APS at all?

Yes, I find them very impressive. A lot of the training they do is really useful and very accessible, and I take a lot of 'lunch and learn' ideas into our company.

I am currently working towards chartered status with APS and will hopefully complete this in 2025. ■ For details about becoming a patron of the Big Bridge Project contact hello@thebigbridge.co.uk or visit www.thebigbridge.co.uk.

# CPD: Compliance with new dutyholder roles

In this CPD, Burges Salmon lawyers review the duties and obligations of the principal contractor and principal designer roles under the new building safety regime



A key aspect of the building safety regime introduced by the Building Safety Act 2022 and the Building Regulations etc (Amendment) (England) Regulations 2023 (BRAE Regulations) is the new dutyholder regime and competence requirements for construction teams undertaking "building work" in England (as defined under the building regulations).

A core aim of this new dutyholder regime is to place a statutory basis for 'best practice' in ensuring compliance with the building regulations and improving competence across the construction industry. While the terminology used mirrors that of the Construction (Design and Management) Regulations 2015, the new roles introduced, namely the client, principal contractor (PC) and principal designer (PD), are separate and distinct.

Where there is more than one designer or contractor on a project, while the client under the new regime is required to appoint a PD or PC, the client and designer or contractor being appointed must be aware of their duties and confident that they hold the required competence and organisational capability for the role.

When reviewing the specific duties on the PD or PC at a high level, the roles appear similar in nature, albeit one focuses on design work and the other on building work. However, the duties on the PC are comparatively greater. This is unsurprising given the crucial importance of contractors ensuring compliant design work is then accurately incorporated into the building.

The table on page 24 provides an overview of these duties, reflecting the general duties on those undertaking design or building work, as well as additional duties placed on those appointed as PD or PC.

#### **Competency requirements**

All those involved in design and building work on construction projects in England to which the regime applies must be competent for the role they undertake.

In particular, before accepting an appointment as PD or PC, the designer or contractor must be certain that:

(i) where the person is an individual, they hold the skills, knowledge, experience and behaviours necessary,
(ii) where the person is not an individual, it holds the organisational capability (having the right policies, procedures, systems and resources in place), to:

 (iii) carry out the building or design work in accordance with all relevant requirements; and
 (iv) fulfil the PC or PD functions as summarised above.

In making this assessment, it is important to note that "competence" is not defined under the BRAE Regulations and there is no prescriptive test to measure competence. Rather, this is a subjective assessment on a case-by-case basis that will need to take into account the size, nature and complexity of a project.

Under the new dutyholder regime, the PD and PC should be prepared actively to evidence their competence and organisational capability to the client. Moreover, they should also be prepared to maintain competence throughout the duration of their work on the project.

If they do not maintain this or find the work required of them exceeds their competence level or organisational capability, they must notify the client (and may need to withdraw from the role).

#### **Delegating PD or PC functions**

While a PD or PC is permitted to delegate aspects of its role to third-party consultants and/or subcontractors, it should be noted that legal responsibility will remain ►

#### **Optimising competence**

Although there is no definitive guide, the following resources provide guidance on the competence requirements:

The Industry **Competence Steering** Group (ICSG): a cross-sector group aiming to accelerate the uptake of competency standards across the built environment, which has produced a number of materials to support the industry in understanding and evidencing competence, such as: supporting the creation of the Publicly Available Specifications (PAS) below: and

• developing frameworks of competency standards for individual specialisms across the industry within its 12 working groups.

• Three new PASs: PAS 8670 (Core Principles of Competence) as well as PAS 8671 (Competence for Principal Designers) and PAS 8672 (Competence for Principal Contractors), which provide frameworks that can be used to benchmark and assess competency.

• The Industry Competence Committee: set up by the Building Safety Regulator (BSR) to provide insights and guidance to the industry (and back to the BSR) to encourage a cohesive approach to competence, of which the ICSG will form an independent sub-group.

• Wider resources: to demonstrate and assess competence, designers or contractors should look to trade associations, professional bodies and sector training providers working in their specialism who may support in this exercise.

66 It is important to note that 'competence' is not defined under the BRAE Regulations and there is no prescriptive test to measure competence. Rather, this is a subjective assessment on a case-by-case basis

Designer or contractor

(General duties)

**66** Failure to comply with the requirements of the BRAE Regulations could constitute a crimina offence and lead to significant sanctions, including up to two years' imprisonment in respect of individuals

with the individual or organisation performing the role of PD or PC irrespective of such arrangements.

Consequences of non-complian

Any individual or organisation that carries out design or building work exceeding their competence level or organisational capability could face enforcement action.

Failure to comply with the requirements of the BRAE Regulations could constitute a criminal offence and lead to significant sanctions, including unlimited fines in respect of organisations and unlimited fines and up to two years' imprisonment in respect of individuals.

For this reason, it is essential that any potential designer or contractor only accepts a PD or PC role if they are fully competent to do so.

#### Future of the new dutyholder regime

While the duties and competency requirements under the new regime continue to challenge the industry, it is hoped that this regulatory change will drive the industry away from the "race to the bottom" culture identified by Dame Judith Hackitt, towards a culture focused on delivering quality and safety for occupants of buildings.

Key to the success of this new regime will be dutyholders embracing the challenge to ensure they are equipped to harness, maintain and evidence their competence and organisational capability, coupled with the Building Safety Regulator (BSR) and industry bodies' continued engagement with industry to truly support the transition.

Co-operation and co-ordination of construction teams and the wider industry will be crucial here to ensure there is clarity of message on what standard is required to incentivise a 'race to the top' in respect of building

	(**************************************	(**************************************	(
al	Plan, manage and monitor design work during the design phase.	Plan, manage and monitor design work during construction phase.	Must not start work unless satisfied that the client is aware of duties.
n s. nce It rk	Take all reasonable steps to ensure design work carried out by them, and anyone under their control, is planned, managed and monitored so that the design, if built, would comply with all relevant requirements.	Co-operate with the client, PD and other designers and contractors to the extent necessary to ensure that the building work complies with all relevant requirements (ie, an absolute obligation on PC as opposed to the "all reasonable steps" standard placed on PD for the equivalent duty).	Designers are to take all reasonable steps to ensure that design work carried out by them (and those under their control) is planned, managed and monitored so as to comply with all relevant requirements. For contractors, they must ensure that their building work (and that carried out by those under their control) is planned, managed and monitored so as to comply with all relevant requirements.
	N/A	N/A	Designers must take all reasonable steps to ensure that the design, if built, would be in

Principal designer

(Additional duties)

PC and PD responsibilities under the Building Safety Act 2022

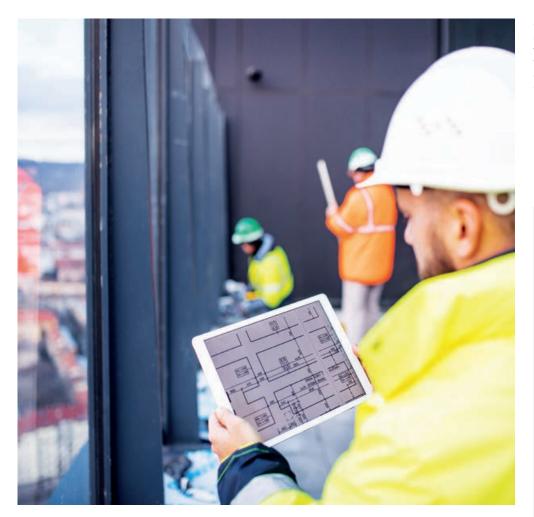
**Principal contractor** 

(Additional duties)

N/A	N/A	<ul> <li>Designers must take all reasonable steps to ensure that the design, if built, would be in compliance with all relevant requirements.</li> <li>Conversely, a contractor must: <ul> <li>ensure their building work is in compliance with all relevant requirements; and</li> <li>provide workers under their control with appropriate supervision, instructions and information to ensure the building work is in compliance with all relevant requirements.</li> </ul> </li> </ul>
Ensure that they, and others on the project, co-operate, communicate and coordinate their work with the client, PC and other designers and contractors.	Ensure that they, and others on the project, co-operate, communicate and co-ordinate their work with the client, PD and other designers and contractors.	Co-operate with the client, designers and contractors (including PD and PC) to the extent necessary to ensure compliance with all relevant requirements. Notably, when only carrying out part of the design or building works, must consider other designs or works being carried out and report any concerns as to the adequacy of that design or work to the PD or PC (as appropriate).
Liaise with the PC and share information relevant to the building work to ensure compliance with all relevant requirements (having regard to any PC comments).	Liaise with the PD and share information relevant to the building work to ensure compliance with all relevant requirements (having regard to any PD comments).	Take all reasonable steps to provide sufficient information about the design, construction and maintenance of the building to assist the client, other designers and contractors to comply with all relevant requirements.
Assist the client with provid	t with providing information to others. Notify other parties if ceases to be competent to satisfy requirements of regulations.	

Where the work is to a higher-risk building, establish and maintain a mandatory occurrence reporting system for safety occurrences, collate the relevant 'golden thread' information throughout the construction phase and provide a compliance declaration to the Building Safety Regulator (BSR) within the completion certificate application to confirm it has fulfilled its functions.

Where requested, provide advice to PD or PC (as appropriate) or client on whether any work amounts to higher-risk building work.



**66** Strict regulation does not equal immediate benefit. The right balance of 'carrot and stick' will ensure that innovation continues to thrive and that a positive culture shift occurs organically

regulation compliance across all projects in England.

As we continue to monitor the implementation of the new dutyholder regime and additional changes brought into effect by the Building Safety Act 2022, there has been some speculation within industry as to whether the direction of travel indicates an eventual intention to regulate the PD and PC role.

Strict regulation does not equal immediate benefit. The right balance of 'carrot and stick' will ensure that innovation continues to thrive and that a positive culture shift occurs organically with industry on the government's side. The new PD and PC dutyholder

roles, coupled with the enhanced liability of building professions introduced by the Building Safety Act 2022, appear at present to be achieving this balance.

In any event, given the diverse nature and scope of projects, the PD and PC roles will, by their very nature, be quite fluid and will require a degree of flexibility in their performance which would not be readily subject to further codification within a regulated industry (which is already seeking to comply with a significant regulatory shift by way of the new dutyholder regime).

We therefore do not currently envisage more stringent regulation to come into effect, but this area continues to evolve and should be monitored for developments. ■ The authors of this CPD are Tom Weld, director, Kayla Urbanski, solicitor, and Francesco Andres, senior apprentice solicitor, of Burges Salmon's construction and engineering team. Given the diverse scope of projects, the PD and PC roles will be quite fluid and require a degree of flexibility

#### **CPD** Questions

 What legislation introduced the new roles of the principal designer and principal contractor under the new dutyholder regime?
 a) Construction (Design and Management) Regulations 2015
 b) Building Safety Act 2022
 and the Building Regulations
 etc (Amendment) (England)
 Regulations 2023
 c) Housing Grants, Construction and Regeneration Act 1996

2) Which party has an absolute obligation to ensure that all building work complies with all relevant requirements? a) Client

b) Principal designer

c) Principal contractor

3) How long can an individual be imprisoned for if they fail to comply with the new dutyholder regime?
a) 2 years
b) 5 years

c) 10 years

4) If a principal contractor feels they are no longer competent to carry out the role, what should they do?
a) Notify the client and determine whether they need to withdraw
b) Appoint a new principal contractor
c) Nothing

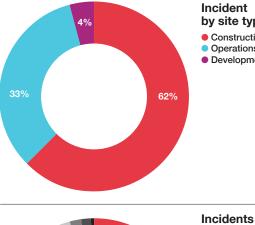
5) What happens if a principal designer or principal contractor delegates their role to a third party? a) Nothing, they are permitted to delegate aspects of the role to a competent third party b) Nothing, however, the legal responsibility for the role will remain with the dutyholder c) All of the above

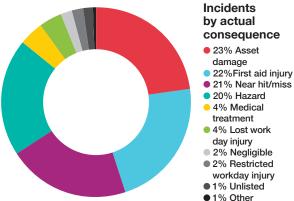
To test yourself on the questions and collect CPD points, go to: projectsafetyjournal.com

### **Growing offshore wind sector** sees incidents nearly double

The expansion of wind energy is creating more work for APS members as the spotlight falls on the hazards posed by turbine construction and maintenance







G+ GLOBAL OFFSHORE WIND HEALTH AND SAFETY ORGANISATION

Incident by site type Construction site

 Operations site Development site

overnment is committed to double onshore wind and quadruple offshore wind by 2030, as a cornerstone of its goal to fully decarbonise electricity by 2030.

That means increasing onshore wind from 15 to 30GW and offshore wind, where the UK is already number one in Europe, from 15 to 60 GW. These are hugely ambitious targets but success will not just be measured in delivering these projects in a timely fashion but also a safe one.

Safety concerns in the wind energy sector have been an ongoing issue, particularly with the rapid expansion of offshore wind farms.

Trade unions, such as GMB, have consistently called for stricter safety protocols for workers, especially given the hazardous conditions associated with offshore projects. Wind farms, particularly offshore, involve significant risks, including harsh weather, high altitudes and remote locations, making effective safety regulations critical for protecting the workforce.

New data published in the summer of 2024 by the G+ Global Offshore Wind Health and Safety Organisation, based at the Energy Institute,

outlined a mixed picture in its 2023 Incident Data Report as the industry's operations ramped up.

 Members of G+, comprising the biggest offshore wind operators and wind turbine original equipment manufacturers (OEMs) globally, reported 1,679 incidents in 2023, a 94% increase from 2022, including one fatality.

 Of the 1,679 incidents reported, 1,049 occurred on construction sites, while 560 happened at operating wind farms.

 The top three work processes recording the most incidents were lifting operations (207), vessel operations including jack-ups and barges (169) and routine maintenance (109).

The G+ partly put the increase down to the 17.3 million additional operational hours worked in 2023, as the key safety metrics of Total Recordable Injury Rate (TRIR) and Lost Time Injury Frequency (LTIF) remained broadly steady compared to previous years.

In the past year, G+ members reported a record 61.9 million hours worked, a 39% increase from 2022. The G+ said that that despite the increase in number of incidents overall, the percentage of 'high potential' incidents more than halved, falling to 11% of total incidents in 2023.

Commenting at the time of the report's publication, G+ chair David Griffiths, the head of health and safety at SSE Renewables, said: "While a headline increase in total recorded incidents is cause for concern, G+ has redoubled its efforts to engage frontline workers and mitigate hazards on site, and I'm pleased to see a genuine step change in the reporting culture across several key metrics.

"Through the G+, global operators and WTG [wind turbine generator] OEMs look to share the experiences we have had to date with the markets that are newer to offshore wind development so that together we can learn and improve health and safety.

"From governments to trade organisations to frontline workers, everybody has a part to play."

#### Key figures from the 2023 Incident Data report are:

1,679 incidents and injuries were recorded,

distributed in the following areas:

1,049 on construction sites

560 on an operation site

67 on a development site

3 incidents outside of any site

#### These incidents include:

#### 1 fatality

**65** lost work day injuries

70 medical treatment injuries

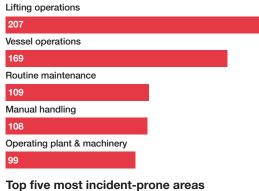
- **33** restricted work day injuries
- **31** injuries requiring emergency response and medical evacuation

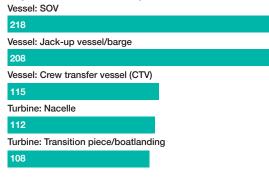
#### The top work processes are:

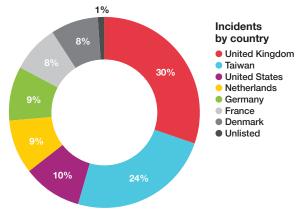
**207** incidents during lifting operations

169 incidents during vessel operations

#### Top five most incident-prone work processes







G+ GLOBAL OFFSHORE WIND HEALTH AND SAFETY ORGANISATION

#### In the dock

Recent prosecutions for health and safety breaches

#### Crane collapse endangered over 250 at Falmouth Docks

A Tyne and Wear based company has been fined £750,000 and ordered to pay £26,792.30 in costs after a crane collapsed at its site on Falmouth Docks, putting more than 250 workers at risk.

The crane had been operating above Royal Fleet Auxiliary (RFA) ship Tidespring, when its driver noticed the jib descending uncontrollably. He managed to move the crane over the dockside before it collapsed, with the jib landing on a cage of acetylene cylinders.

HSE found A&P Falmouth had failed to properly maintain the crane. A&P Falmouth, of Wagonway Road, Hebburn, Tyne and Wear, pleaded guilty to breaching Section 2(1) and Section 3(1) of the Health and Safety at Work etc Act 1974 at Truro Crown Court on 11 October 2024.

#### Balfour Beatty fined after death in cladding accident

Balfour Beatty has been fined £285,000 and ordered to pay £21,768.88 in costs after a worker died and another was seriously injured in a scissor lift accident while installing cladding during construction of an engineering hall at the University of Birmingham on 7 January 2020.

The workers fell approximately 10m when the scissor lift was pushed over by a nearby gantry crane. One died and the other sustained injuries to his spine and ribs.

HSE found the accident could have been prevented had Balfour Beatty implemented better controls.

Balfour Beatty, of Churchill Place, Canary Wharf, London, pleaded guilty to breaching Regulation 8(1) of the Lifting Operations and Lifting Equipment Regulations 1998 at Birmingham Crown Court on 16 September 2024. The university was not prosecuted by HSE.

#### Man falls to death during bathroom conversion

A man from York died after falling through a hole in his bathroom floor left by workers who were converting it into a wet room.

Construction company Cooper and Westgate removed floorboards

#### The crane driver noticed the jib descending uncontrollably. He managed to move the crane over the dockside before it collapsed

as it accessed pipework, but left an unguarded hole on 8 February 2019, which Kenneth Armitage fell through.

An HSE investigation found it failed to secure the hole as its employees were not properly trained. It had also failed to undertake a suitable and sufficient risk assessment, or prepare a method statement for the work.

Cooper and Westgate, of Navigation Court, Calder Park, Wakefield, West Yorkshire, was found guilty of breaching Section 2(1) and Section 3(1) of the Health and Safety at Work etc Act 1974. It was fined £150,000 and ordered to pay £50,000 in costs at Leeds Magistrates' Court on 17 September 2024.

#### National Grid fined £3.2m after worker's 40% burns

The National Grid has been fined more than £3m after a worker was left with life-changing injuries from working on a pylon in South Wales.

On 3 December 2020, Justin Hollins was replacing step bolts at Treforest Industrial Estate in Pontypridd when he received an electric shock of 33,000V and sustained burns to 40% of his body.

An investigation by the HSE found that 4 Power, of Unit 1b, Iddenshall Hall Farm, Cheshire, failed to properly plan and assess the risk.

National Grid Electricity Distribution (South Wales), of Avonbank, Feeder Road, Bristol, failed to ensure the electricity was off to do the work safely. It pleaded guilty to breaching Regulation 14 of the Electricity at Work Regulations 1989. It was fined £3.2m and ordered to pay costs of £20,460.

4 Power pleaded guilty to breaching Section 2(1) of the Health and Safety at Work etc Act 1974. It was fined  $\pounds$ 80,000 and ordered to pay costs of £14,123.

## Regional focus: England Central

England Central region, where regional representatives highlight pressing skills challenges, is in the spotlight this month

he representatives of the APS England Central region want to use their considerable experience to help other APS members in the region and beyond – through online CPD for example.

As director of CDM services at Bureau Veritas UK, Fran Watkins-White often provides principal designer services under the CDM Regulations, and works alongside colleagues providing service to support clients under the Building Safety Act.

Allan Binns, as a director of Project Four Safety Solutions, provides CDM services and is at the forefront of delivering services and advice for the principal designer under the building regulations.

"As a region, I'd say we are still factfinding, investigating what members want from us," says Watkins-White. It may be organising webinars, online get togethers for learning and mutual support, or in-person networking.

Now that people work more remotely, and APS organises CPD webinars centrally, both acknowledge that their role may be more as a conduit for members' views to be passed up to the APS senior team. Representatives across all six regions meet regularly to discuss pressing issues with APS president Mark Snelling.

"Come and join the LinkedIn group, in the first instance," says Watkins-White. "If people want to meet up in, say, Birmingham and have a drink and

Come and join the LinkedIn group, in the first instance. If people want to meet up in, say, Birmingham and have a drink and a chat, we're very happy to organise that Fran Watkins-White, England Central region, APS a chat, we're very happy to organise that."

There's plenty happening in the region, including the Midland Metro Extension to Birmingham Airport and the East Birmingham Extension to Solihull, both worth £735m. The £571m HS2 Phase 1 – Central Birmingham (Curzon Street) Station is another mega-scheme. Also there is the £210m Birmingham Health Innovation Campus, a collaboration between the University of Birmingham and two local NHS foundation trusts.

Watkins-White is based in Wolverhampton, with her local office in Birmingham, but she and the team work nationally. Similarly, Binns works across the country, with a lot of work in Leeds, London and Manchester. He is based in Newark, on the eastern side of the region.

Both point to a buoyant market and skills shortages. "The biggest problem now is a lack of building control professionals – or people who have those types of skills – available to satisfy the building regulations principal designer," says Binns.

"There is a lot of demand for our services. Many clients want us to start on projects immediately. Unfortunately, this isn't always possible, and we are asking for four to eight weeks' grace."

In terms of the mechanics of working under the Building Safety Act, he says: "The big challenges at the moment are on the gateway submissions, which a higher-risk scheme now must pass through – at planning, before it can start on site and then at handover.

"One of the things that we have found is on the government portal that you have to be very careful about your file names. They will only accept file names with letters, numbers and hyphens. So, if you've got any spaces or underscores or any other special characters, it won't let you upload your file.



Fran Watkins-White England Central region, APS



Allan Binns England Central region, APS

"It's important that people get their naming conventions sorted at the start of the project – otherwise you could end up going back and renaming potentially thousands of drawings and files."

Skills and competence are issues close to Watkins-White's heart. She would like to explore how members can work collaboratively to drive consistency in standards of compliance to the CDM regulations. Not just in construction of buildings, but also in the design and installation of green energy schemes' equipment, such as battery storage, solar and wind farms.

With so much infrastructure being built, alongside the increased focus on building safety, Watkins-White says that growing talent for people to work in safety in all its guises is a pressing issue that APS and all its members need to prioritise – particularly in how we attract and enable young people to pursue careers in safety. ■ For details of the LinkedIn group or to contact Fran Watkins-White and Allan Binns go to www.aps.org.uk/ regions/england-central.



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### Looking back on 2024 and forward to 2025

After a busy year of events for APS, there's yet more to come



he Association for Project Safety (APS) has been at the forefront of promoting safety and competence within the construction industry for many years, and 2024 has been another successful year.

APS continues to drive positive change through its commitment to delivering valuable resources, education and support for members, playing a critical role in shaping the future of construction safety.

One of the standout achievements in 2024 has been the success of the Annual Conference. Attendance was notably high this year – a clear sign that more and more industry professionals are recognising the importance of staying informed about safety standards and best practices.

It's these types of events that help foster a culture of learning and collaboration within the industry.

In addition, APS has been incredibly active throughout the year, hosting a total of 36 webinars and events. The

webinars cover a range of important topics, from technical regulations to evolving workplace risks, and are an essential resource for members.

The most popular webinar, Principal Designer Competence Requirements, drew over 700 registrations, making it the most attended APS event for the past three years.

This level of engagement shows just how vital APS's educational resources are to the industry. APS has seen a 30% increase in watch-back numbers – showing how members are making the most of learning opportunities even after live events have taken place.

Major highlights this year were the launch of two new CPD series. The first of these focused on the dangers of dust in construction, a topic that is often overlooked but poses significant health risks to workers.

The second series explored the impact of artificial intelligence (AI) on safety and project management, providing insights into how these

APS will showcase standout projects led by members, shining a light on excellence and safety leadership technologies are reshaping the way we approach construction projects.

Both series were well received by members and show APS staying ahead of emerging trends and challenges in the industry.

#### Fire safety webinar series

APS is not slowing down in 2025. Several exciting new initiatives are designed to keep members informed, engaged and supported in their efforts to ensure safety on every project.

A key new offering will be a series of fire safety-specific webinars. Fire safety has become an increasingly important issue across construction, and APS is committed to providing practical guidance and education.

These events will help members understand and manage fire risks more effectively, ensuring compliance with the latest regulations and safety standards.

Another new addition for 2025 is a series focused on building regulations. As the industry knows, staying up to date with the everchanging regulatory landscape can be a challenge, but it's crucial for ensuring that projects meet safety and compliance requirements.

This follows two successful series hosted by APS president Mark Snelling and CEO Andrew Leslie.

In addition, APS is launching something particularly exciting: Member Project Spotlights. These will showcase standout projects led by APS members, shining a light on innovation, excellence and safety leadership.

By sharing these success stories, APS not only celebrates the achievements of its members but also encourages others in the industry to learn from these examples and strive for even higher standards.

Looking ahead to 2025, APS will continue to lead in construction safety, offering the tools and knowledge needed. ■ Find out more about what's on at www.aps.org.uk/events.

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#### 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:

02 - 03 Dec	APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Birmingham	£595
03 Dec	APS Accredited – CDM Awareness	Virtual	£250
06 Dec	APS Accredited – CDM 2015 for Principal Contractors	Virtual	£250
11 - 12 Dec	APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Virtual	£595
16 - 17 Dec	APS Accredited – Building Safety Act & PD Building Regulations 2023 (2 Day)	Manchester	£595
20 Dec	APS Accredited – CDM Awareness	Virtual	£250
21 - 22 Jan	APS Accredited – Building Safety Act & PD Building Regulations 2023 (2 Day)	Virtual	£595
28 - 29 Jan	APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	London	£595
28 - 29 Jan	APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Virtual	£595
04 - 05 Feb	APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Virtual	£595
17 Feb	CDM 2015 Overview	Virtual	£225
19 - 20 Feb	APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Glasgow	£595
27 - 28 Feb	APS Accredited – Building Safety Act & PD Building Regulations 2023 (2 Day)	London	£595
3 Mar	APS Accredited – CDM Client	Virtual	£295
10 - 11 Mar	APS Accredited – Building Safety Act & PD Building Regulations 2023 (2 Day)	Virtual	£595
17 - 18 Mar	APS Accredited – The role of the Principal Designer under CDM 2015 (2 Day)	Virtual	£595

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

Please visit: https://training.ttc-uk.com/construction to view additional public course dates.

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