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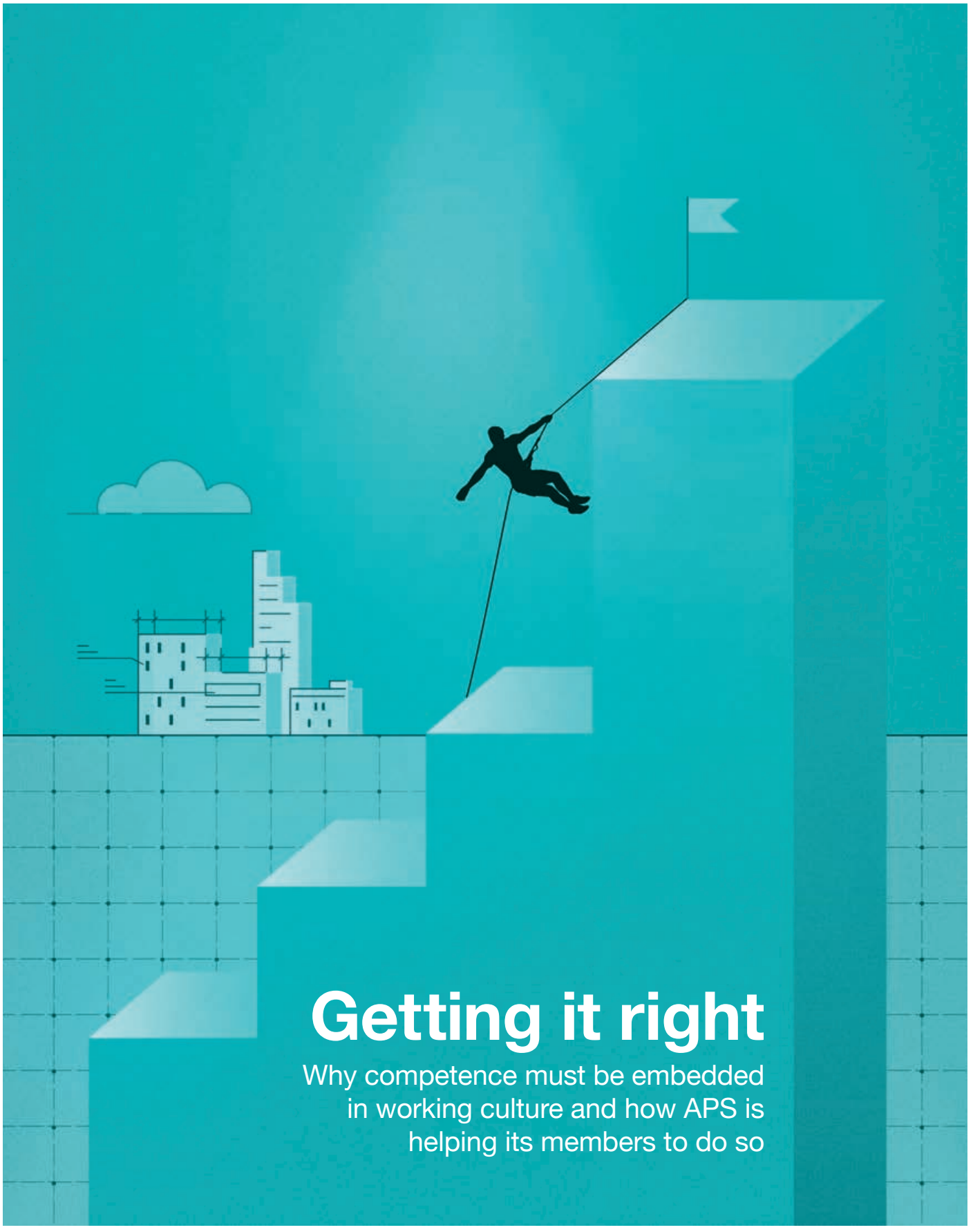

Getting it right

Why competence must be embedded in working culture and how APS is helping its members to do so

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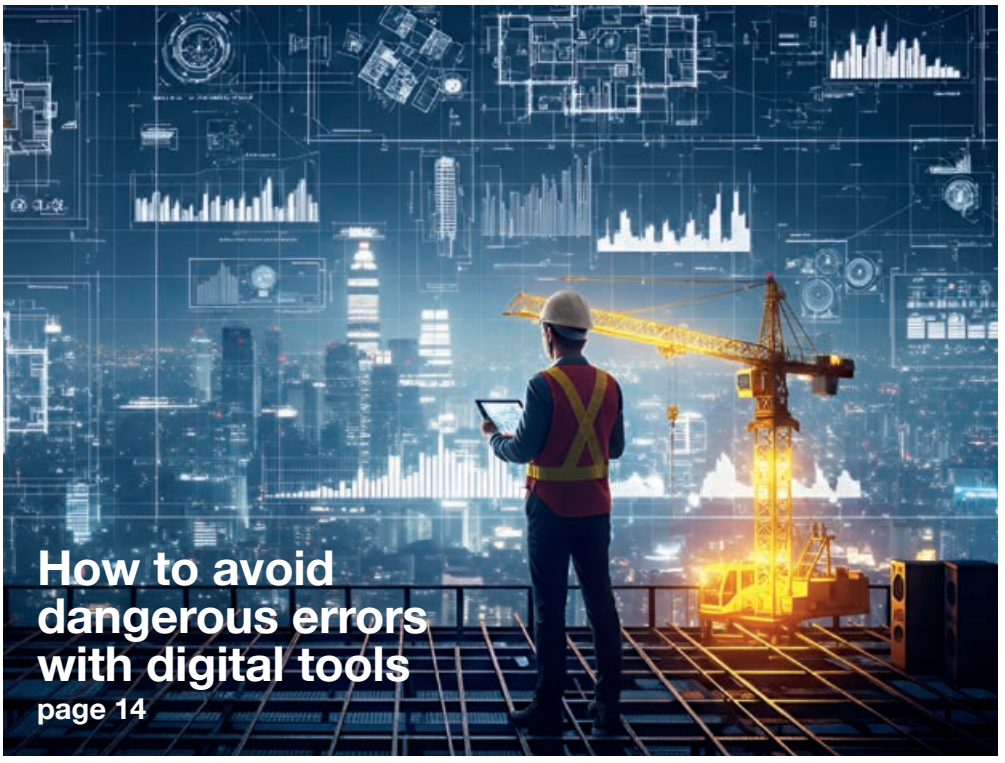

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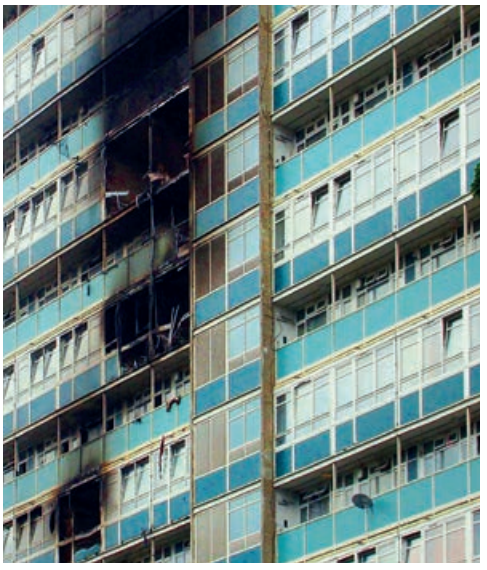

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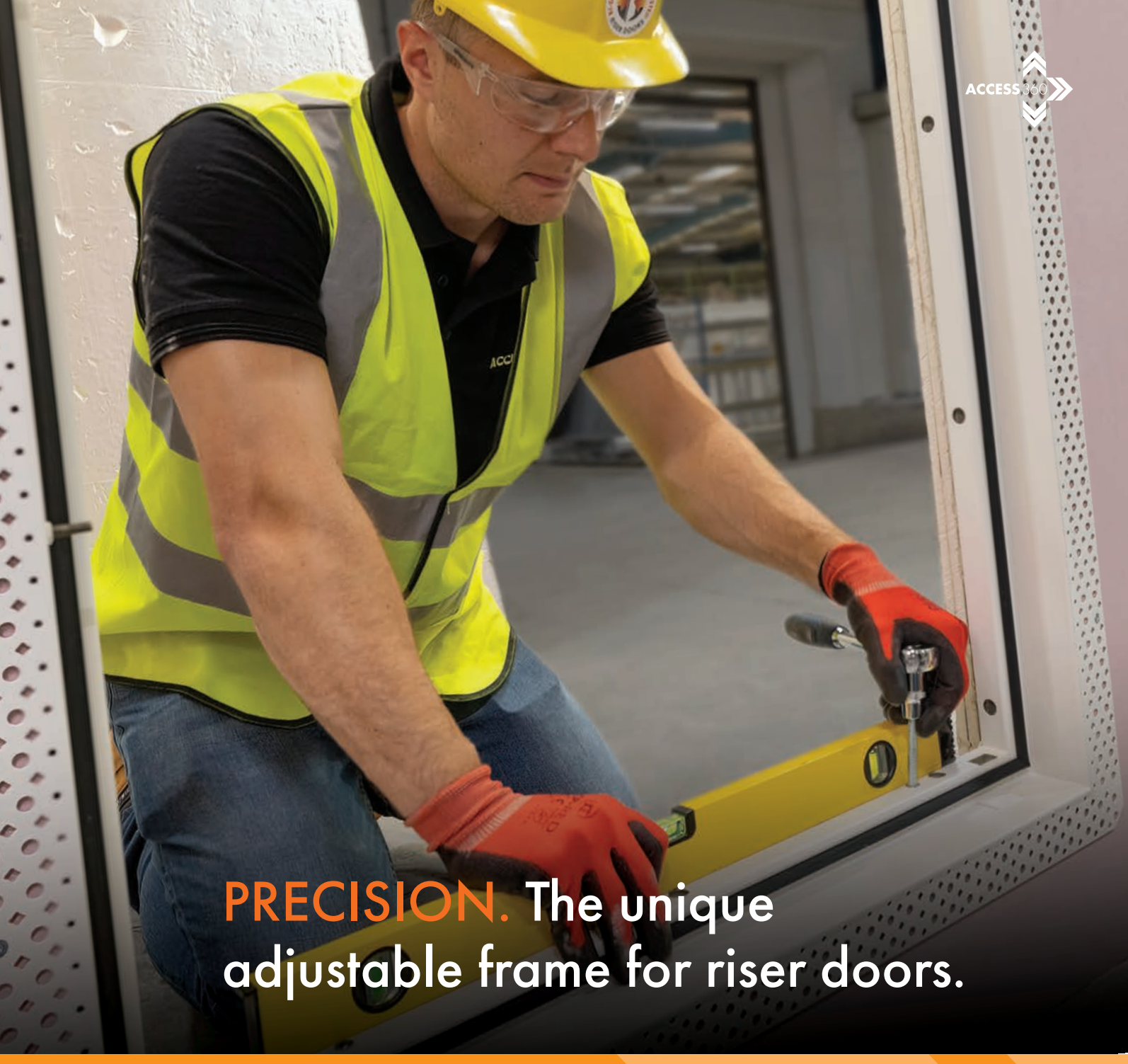

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Welcome

Over the winter, APS will continue its work strengthening construction's competence culture, says **Andrew Leslie**

Will this be a winter of discontent or do we have reasons to be optimistic that the built environment sector will finally address the 'new' C word?

Competence is on everybody's lips these days, as if this word was signalling something new. As professionals we should always be competent at what we do and know our limits. It should not come as a surprise that the concept of being competent comes in all shapes and sizes, depending on one's viewpoint, background, education, training, CPD and, dare I say, membership of a professional body.

In this edition of Project Safety Journal, we share our thoughts on competence (A Mission for Change, p10), describing the state of play as we find it and how we seek to support the required change. We also explain the different post-Grenfell response in Scotland in an article on the proposed compliance plan approach (CPA) (Regional Focus, p28) – an alternative take on how to assure that design and construction activities are compliant and buildings can be safely occupied.

While APS is focused on what is happening in all four nations, the pace of activity has been fundamentally different in each, with England paving the way by implementing its legislation, including significant 'new' regulations on competence added to the building regulations.

APS is engaged in much of the activity, leading from the front or participating in leadership groups. In England, APS is actively involved with CONIAC, the Industry Competence Committee, the Industry Competence Steering Group, CIC, the Building Safety Alliance – and our engagement with government has stepped up significantly. We have initiated, and are chairing, the Industry Task and Finish Group on Organisational Management of Competence.

In Wales, APS is keeping track of legislation as it hopefully draws to a conclusion in the near future, and in Scotland we are liaising with the Building Standards Division and the Working Groups around the CPA. We are beginning to pick up on progress on Northern Ireland.

"To what end?" might be the question on APS members' lips. Our objective is twofold – firstly, to influence and represent our members; secondly, to track progress such that we can support our members and registrants (on APS competence registers) in the best possible manner for when the competence piece for individuals, and its management by organisations, finally reaches maturity across the UK.

One way of supporting our members is through the launch of the Principal Designer Building Regulations Register and competence scheme based around PAS 8671. Principal designers (building regulations England) must be competent for the function, and that competence should be assured. Our scheme helps our registrants do just that – assure their competence on an ongoing basis.

Andrew Leslie
Association for Project Safety

> **APS is engaged in much of the activity, leading from the front or participating in leadership groups**

Another way that APS is supporting members to maintain their competence is through the launch of the APS Academy. The academy is designed to arm CDM practitioner members (and others) with knowledge of subjects that may have been off their radar, and will eventually provide an opportunity for members to submit evidence of putting this newfound knowledge into practice.

All in all, APS sincerely hopes that significant progress can be achieved before the 10th anniversary of Grenfell. After all, we still have to see the result of the CDM 2015 Post Implementation Review by HSE, the outcome of the move of the Building Safety Regulator to the Ministry of Housing, Communities and Local Government (MHCLG) in England – and that's before a Building Safety Act review in 2027.

In Scotland, guidance on the CPA will be issued this year and it will ask for industry to embrace the compliance plan manager (CPM) role two years or so before legislation confirms the CPM as a statutory dutyholder. A mechanism for delivering a CPM competence scheme has not yet been devised. We hope Wales will be more straightforward, and Ireland, we understand, may follow a hybrid model. Watch this space.

Andrew Leslie is CEO of the Association for Project Safety.

UK PARLIAMENT

Minister signals a new era of cooperation between BSR and industry

BSR is getting through backlog – as new chair calls for wider registration

The government minister in charge of building safety gave her full confidence in the new leadership of the Building Safety Regulator (BSR) to work more closely with the industry and clear the backlog of Gateway 2 applications by the end of the year.

Speaking at a debate in Westminster Hall in October, Samantha Dixon, the parliamentary under-secretary of state in the Ministry of Housing, Communities and Local Government, said that the new leadership "is already implementing significant operational changes based on their extensive industry experience".

Dixon pointed out that new chair Andy Roe, a former commissioner of the London Fire Brigade, and chief executive Charlie Pugsley, deputy commissioner of the London Fire Brigade, who were both appointed in June, had established a new 'innovation unit' which was now managing 27 new build applications consisting of 6,192 units.

She said that the majority of these applications were currently meeting or exceeding the 12-week service level agreement for processing applications. All told, there were 152 national new build applications being progressed.

Above: Minister Samantha Dixon welcomed 'significant operational changes'

> **"The BSR has been meeting weekly with industry bodies to address gateway challenges, and has increased two-way engagement with applicants**
> **Samantha Dixon MP**

She said that the BSR expects nearly all new build applications to conclude by December, with the final three closing in January 2026.

"The BSR has also recently announced a new batching process for Category A projects, this consolidates the teams used to review applications into one organisation, significantly reducing delays."

Delays at Gateway 2 had meant that applications were taking over a year in some cases, and there has been widespread criticism of inconsistencies in the way applications had been checked, with a lack of coordination between members of interdisciplinary teams.

"The BSR has been meeting weekly with industry bodies to address gateway challenges, and has increased two-way engagement with applicants," she said. "We are clear that conversation must deepen."

The BSR also plans to introduce an account manager model where applications from larger developers will be grouped and assigned a dedicated point of contact to ensure issues are identified at the earliest opportunity.

In addition, Dixon said: "The BSR is actively supporting the Construction Leadership Council to publish a further suite of industry guidance expected around mid-November on the statutory documents accompanying building control approval of applications." This will sit alongside earlier guidance.

In terms of concerns expressed about delays at Gateway 3, the minister said that, as of early September, the BSR had received 616 Gateway 3 applications for new-build higher-risk buildings.

"Nine have already been approved and issued with completion certificates, while seven remain under review. Some applications have moved through quickly, demonstrating what a well-prepared submission can achieve," she said. "Others have required additional information before assessment could progress."

She acknowledged shortages of skilled people in building control and that the BSR's progress had been constrained by capacity issues, but – in response to Mike Reader, one of the MPs who had organised the debate – ruled out the possibility of offering higher salaries to attract the 100 more people the BSR is looking to recruit.

"As the construction sector and partner regulators rely on the same limited pool, this continues to constrain the BSR's capacity. While offering higher pay might attract talent, it risks destabilising partner organisations by shifting, not solving the shortage," she said.

Dixon added that a long-term workforce strategy like that underway in the fire service was needed to build systemwide capacity: "We're working on it with local authorities, BSR and registered building control approvers to help shape it."

Single regulator

The minister went on to give more details on the creation of a single regulator for construction. "We intend to legislate when parliamentary time allows, and will publish a prospectus later this year."

Her remarks were made as Andy Roe gave evidence to the House of Lords industry and regulators committee.

Roe said that professional regulation in the sector should extend beyond the building control profession. The Building Safety Act 2022 introduced a requirement for building control inspectors to pass competency assessments and to register with the Building Safety Regulator (BSR).

Roe, who was incident commander during the Grenfell Tower fire in 2017, said that construction chief executives would be "the first to admit that the system of subcontracting in this country in the construction industry still holds great danger".

"I would argue that there's a real need to regulate not just the building control profession, but the other engineering professions, [and] other critical roles inside construction," he added.

See Opinion, p8

GOOGLE STREET VIEW

News in brief

Fines for ignoring improvement notice

Birmingham City Council has successfully prosecuted a company for failing to comply with an improvement notice relating to fire safety measures in a residential high-rise.

Freehold Managers (Nominees), the company responsible for Centenary Plaza on Holliday Street (pictured), pleaded guilty to failing to comply with an improvement notice during sentencing at Birmingham Magistrates' Court on 16 October.

Modular passes

A 23-storey student accommodation tower in west London has become the first volumetric scheme to receive Gateway 2 approval under the new building safety regime.

Volumetric developer Tide's 424-bed scheme in Southall, called The Green, was granted approval to begin construction from the Building Safety Regulator in October after putting in its application in mid-March.

Partial collapse

Developer Bruntwood has insisted agreed safety protocols were followed prior to an incident at its 1960s high-rise office scheme in Manchester in October. The incident saw part of a building on the site which was being demolished suffer an unplanned collapse.

New interim chief construction adviser appointed

Architect Thouria Istephan, a former partner at Foster's, has been appointed as the interim chief construction adviser. She will provide independent expert advice to ministers on building safety and regulatory reform.

Istephan's industry experience spans decades at leading international design and architectural practices, where she held senior roles including construction design management manager, partner and technical design deputy across major projects and sectors. She also served as a panel member during Phase 2 of the Grenfell Tower Inquiry.

Samantha Dixon, minister for building safety, said: "Her work will drive the transformation needed to restore trust and improve safety, accountability and confidence across the sector."

Istephan said: "This role enables me to apply my extensive architectural experience, together with insights gained through my work on the Grenfell Tower Inquiry. It represents a unique opportunity to provide independent advice that promotes progressive and proportionate standards."

MARCO BERNARDINI

Timetable set for schools to become RAAC free

The government has promised to remove all reinforced autoclaved aerated concrete (RAAC) from schools within the next four years.

Education secretary Bridget Phillipson said the government was setting out plans to ensure all schools and colleges are free of the dangerous concrete by the next general election, which is expected in 2029.

Of the 237 schools and colleges where RAAC has been found, 123 will be rebuilt through the School Rebuilding Programme.

The remaining 108 are getting government grants for RAAC removal, with works delivered through their responsible body – usually the local authority or a trust.

The government also confirmed today that RAAC has already been removed from 62 schools and colleges.

The lightweight material was widely used across the UK and in many types of buildings, including hospitals, from the 1950s to the 1990s but has now passed its 30-year design life.

A new approach could break the logjam of Gateway 2 delays

Are the building safety regime and the housing minister's mantra of 'build, baby, build' at odds? They don't have to be, argues **Allan Binns**

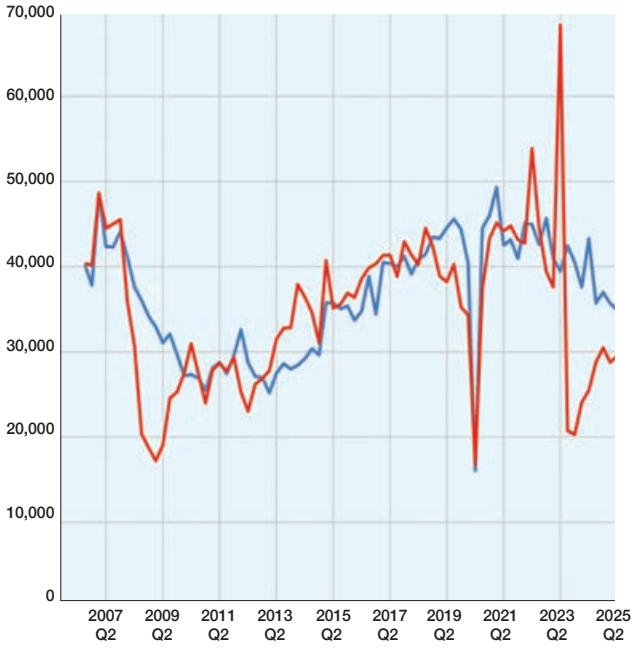
On 2 September 2025, Sky News ran a striking headline: "Hundreds of empty flats that developers say sum up UK's housing crisis." It revealed that over 1,200 completed homes remain unoccupied due to approval delays from the Building Safety Regulator (BSR).

That same day, I appeared before the Ministry of Housing, Communities and Local Government (MHCLG) Select Committee alongside Dame Judith Hackitt (chair of the Building Control Independent Panel) and Melanie Leech (chief executive of the British Property Federation) to provide evidence on the work of the BSR to date. The inquiry aimed to probe whether the new regulatory framework effectively balances safety and housing delivery.

For the last year, I have been obtaining and sharing statistics on the Building Safety Act with a view to cutting through the noise and providing clients with the best possible information on what to expect from the new regime. A recent freedom of information request showed that as of 16 July 2025 there were circa 40,000 new homes caught in the Gateway 2 decision process.

Allan Binns
Project Four

Below: Seasonally adjusted trends in quarterly building control reported new-build dwelling starts and completions, England, 2006 Q2 to 2025 Q2



But, according to the same dataset, only 216 applications for new-build HRBs have been made since October 2023. Would this have been more if there weren't so many bad news stories? While anecdotes shared on social media suggest this, it would be great to also see some empirical evidence to confirm it.

What we do know is that UK construction activity in July fell at its steepest rate since Covid-19. Delays in getting Gateway 2 approval ultimately mean that building works cannot commence on site. So ostensibly, the ideology of the Building Safety Act and the government's 'build, baby, build' mantra are at odds.

However, as I argued to the select committee, I do not believe that there is an inherent conflict between housing supply and the demand for safety. Rather, the issues experienced to date are purely operational.

These could be divided into three categories: proportionality, resource and consistency:

1. Proportionality: Over 90% of Gateway 2 applications concern work to existing HRBs. Despite this, they endure the same procedural rigour as new builds. A 76-storey tower is required to go through the same approval process as a fire door installation.

While both works rightly must demonstrate compliance before the works are done, a dedicated team for smaller works could enable swifter handling without compromising safety. The recent arrival of the BSR's Innovation Unit has been a welcome change, providing a dedicated resource for new-build projects.

2. Resource: In parallel, I questioned the professional development route for Class 2 accredited building control professionals. Class 3s are a finite resource – with only 500, spread thin across building control and professional services.

Could Class 2s be allowed to regulate Category B works with supervision, as part of a transparent route to Class 3? This could bolster system capacity while preserving oversight and quality.

3. Consistency: Inconsistency has been the only constant since the regime formed. Across circa 50 applications to Gateway 2, it feels as if no two experiences have been the same. This has only perpetuated uncertainty and compounded delays.

Greater standardised decision-making via professional guidance and industry-aligned exemplar submissions could help practitioners align quickly with expectations. The recent Construction Leadership Council guidance is much welcomed, but there could be more.

Performance appraisal

After we gave our evidence to the select committee, Andy Roe (the BSR's non-executive chair) provided a candid appraisal of the new regime's performance to date, accepting all criticism and confirming that the changes addressing proportionality, resource and consistency would be forthcoming. He also lamented the current IT systems, regarding them as not fit for purpose, and promised improvements.

Roe's openness was refreshing against the backdrop of the poor dialogue experienced during the first year of the new regime. Ultimately, he committed to significantly reducing the wait times on Gateway 2 applications before the end of the calendar year.

Since September, I have supported many several Gateway 2 applications for new HRBs – none have been without a hitch but all are progressing at pace. Invariably our recent submissions have received validation within one week, seen a regulatory lead and multi-disciplinary team appointed shortly after, and received initial comments within three weeks.

Whether this is a new dawn or a false one remains to be seen, but there are positive signs that show – with calibration – that we can deliver safe, scalable housing. ■

Allan Binns is the national director of Project Four Building Safety Experts.

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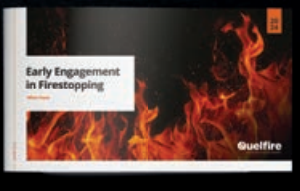

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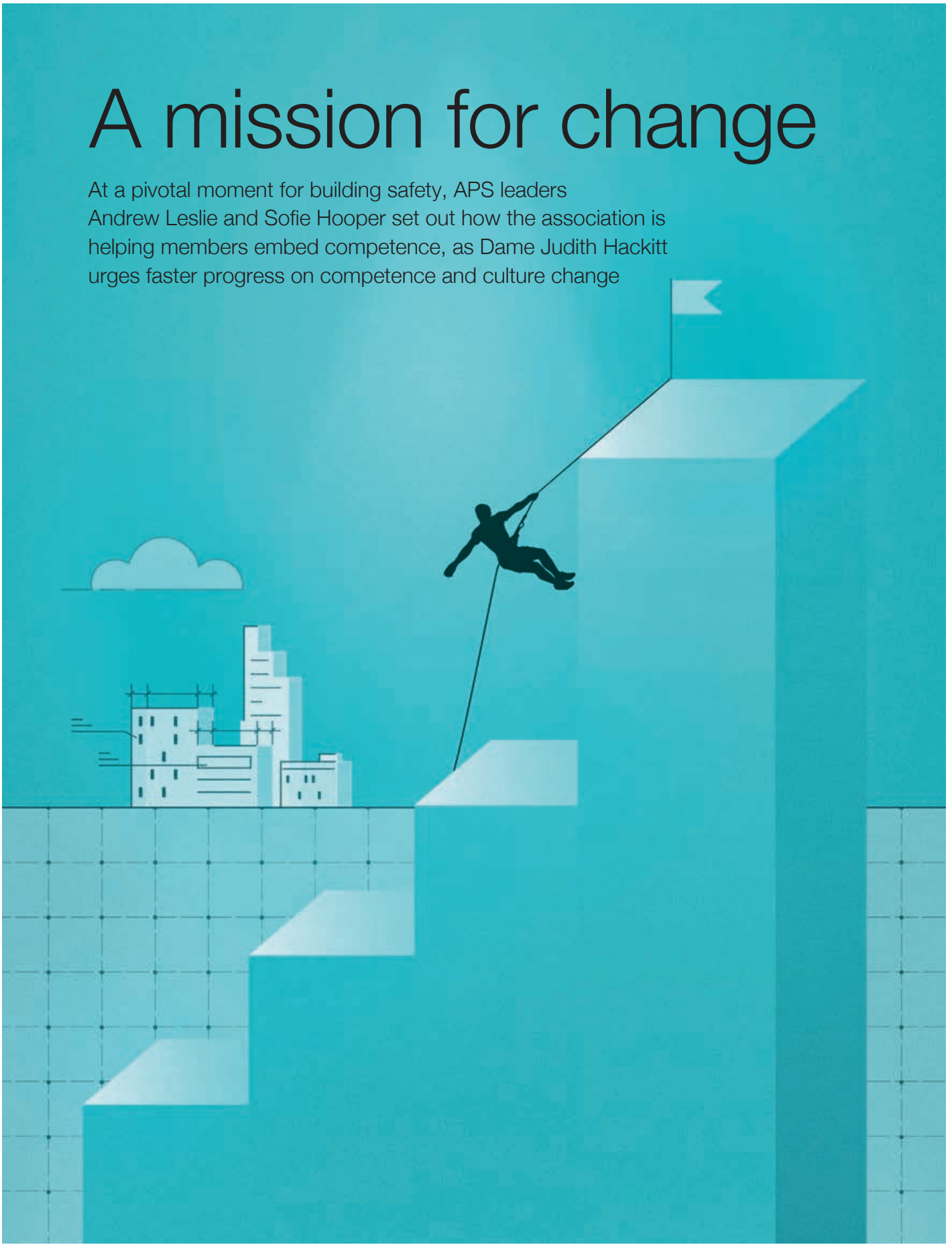
A mission for change

At a pivotal moment for building safety, APS leaders Andrew Leslie and Sofie Hooper set out how the association is helping members embed competence, as Dame Judith Hackitt urges faster progress on competence and culture change



> **It's easy for people to do training and tick the box that they've done it. But changing the way people behave is much harder**
> **Sofie Hooper, APS**

Competence has become identified as the defining challenge for the construction sector in the post-Grenfell era — and one that the Association for Project Safety (APS) is determined to help the industry meet. Its efforts in setting up a register for principal designers and in leading on guidance on the management of competence for companies have been acknowledged by Dame Judith Hackitt, no less, who in September received an APS honorary fellowship (see p12).

For APS, the goal is not only to raise standards but to clarify what competence truly means. As Sofie Hooper, deputy chief executive at APS, explains: "People now know that competence means skills, knowledge, experience and behaviours — and the way this needs to be assessed is through a broader process than CPD."

APS chief executive officer Andrew Leslie adds that confusion persists. "There's a misconception about how competence is supported, and the constant referencing to CPD I think is a major mistake," he says."Competence maintenance is a dynamic process anticipating that the learning will be put into practice and revalidation will be required to maintain competence, but CPD is currently mostly about providing knowledge."

Andrew Leslie
Chief executive officer, APS

Sofie Hooper
Deputy chief executive officer, APS

Beyond CPD: A broader understanding

Hooper acknowledges that the industry has yet to agree the minimum thresholds for assessing competence consistently. APS has therefore been helping to shape that conversation — aligning its register frameworks to national standards (PAS 8671 – principal designer building regulations) and encouraging others to follow suit.

"BS 8670 provides a framework," says Leslie. "Each professional body will adapt that framework to marry in with the competences required for their members."

A register to evidence competence

That drive has taken practical form through the APS Principal Designer Building Regulations (England) Register — a scheme launched in June 2024 to allow individuals to demonstrate competence.

"Applicants provide evidence of the work they've done — their understanding of what's required of them under PAS 8671. If assessors believe the application is acceptable, the applicant will be interviewed to test what they've said against what's been provided," says Leslie.

Although take-up has been gradual: 28 have registered so far, with more in the pipeline, APS is using early feedback to refine the process. "We're currently undertaking a review of the process to align with our experience over the last year," says Leslie. "We'll be relaunching the scheme with slightly amended application processes and guidance."

He adds that APS has been working closely with the Chartered Institute of Architectural Technologists (CIAT), which has its own framework and register, to align procedures — a step that could pave the way towards a common register across multiple professional bodies.

"The objective," says Leslie, "is to create the possibility of having a common register of competence-assessed individuals, leading to other professional bodies collaborating towards standardised assessment arrangements."

Competence across all buildings

Hooper stresses that one persistent misunderstanding is that the Building Safety Act applies only to higher-risk buildings (HRBs). "It's really important to stress that competence requirements apply across all buildings," she says.

Leslie explains that the APS framework recognises two levels of assessment — for HRBs and for all other projects. "The HRB applications require additional evidence," he says. "But competence to practise is based around a framework also delivering against the requirements of the building typology."

Applicants must demonstrate experience in particular building types and show evidence of how they work within those contexts. "If a designer wants to move from residential to industrial buildings," says Leslie, "they have to demonstrate they're competent to do so."

Building organisational competence

Alongside the individual practitioner register, APS is helping developing guidance to help organisations manage competence effectively.

"It's not about registration of companies as such," says Hooper. "What we're working on is a guidance piece that complements the work of the Industry Competence Committee around what the expectations are for organisations when they manage competence of the people under their control." The consultation for the document Managing Competence in the Built Environment: A Guide came to a close in mid-November.

APS has brought together representatives from across the industry to produce practical guidance.

"We've come together with the industry to work on a guidance piece that will provide practical tools for people to implement those expectations," says Hooper. "If there is guidance in place, it's not difficult to imagine that a standard will follow — and that there will be an opportunity in future for organisations to demonstrate that they manage competence."

Changing culture, not just systems

Both recognise that competence reform is as much about behaviour as it is about systems "It's easy for people to do training and tick the box that they've done it. But the culture piece — changing the way people behave — is much harder," says Hooper.

Progress is happening, but not fast enough, Leslie suggests. Many practices, he notes, still treat regulatory compliance as a paperwork exercise rather than a professional responsibility. He points out that under the new regime, where HRB projects have to be signed off at Gateway 2 as designed in accordance with the building regulations before they can move to begin on site, designers must provide far more evidence of compliance than before. ►

"The law requires more detail," he explains. "Previously designers might have seen a note to their specification saying 'intumescent strips to comply'. Now they have to say what is complying and how. It's mandatory — designers don't have any choice."

That shift also means new expectations for clients, who must pay for the work needed to produce compliant information earlier in the process. "It's going to have a kickback from clients saying, 'Wait a minute, you're wanting more fees earlier in the project," Leslie says. "But that's the reality — the regulator needs the detail up front."

Clients – or shall we say informed clients – are looking for practices where individuals are registered with a scheme
Andrew Leslie, APS

Learning for all

APS has launched the APS Academy – a new learning and development hub designed to strengthen competence in health and safety and building safety risk management.

"We want to make sure we service the broader APS community with upskilling opportunities. This hub focuses on boosting competence across key areas of health and safety and is targeted at all APS members," says APS deputy CEO Sofie Hooper.

The academy's first three CPD-certified courses cover essential skills for CDM practitioners:
- **Fire Safety in the CDM Pre-Construction Phase (England).**
- **Temporary Works for CDM Practitioners.**
- **Building Regulations (England).**

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Driving consistency and confidence

Both Hooper and Leslie believe that APS can help the sector navigate this new landscape by promoting consistent standards of competence and clearer routes to demonstrate them.

"Clients – or shall we say informed clients – are looking for practices where individuals are registered with a scheme," says Leslie.

Hooper agrees that the goal must be to give the industry the tools to meet its responsibilities. "We need to ensure that anyone doing any building work or any design work is competent to do so," she says. "That's the foundation of building safety — and it's what APS is here to support." ■

'We cannot wait for the slowest ship in the convoy'

Dame Judith Hackitt urges faster progress on competence

Accepting her honorary fellowship at the APS annual conference in September, Dame Judith Hackitt warned that while construction has made real progress since Grenfell, it must now move faster to embed competence and culture change — echoing the call from APS leaders Andrew Leslie and Sofie Hooper for the industry to raise standards across every project.

Hackitt reflected on the long road since her 2017 independent review of building regulations and fire safety. She had expected the shock of the Grenfell tragedy to drive rapid, lasting reform, but said the journey had proved "longer and more complex" than she anticipated.

Dame Judith Hackitt: Competence 'is about conduct and behaviours'

"Competence was at the heart of my report, and that was also true for the public inquiry," she said. Both identified the same failings: poor standards, a race to the bottom, and a lack of ownership and accountability. "The similarities in our findings reinforce the need not only for change, but for change at pace — change that goes beyond simply implementing a new regulatory system."

Hackitt said the culture she exposed eight years ago — of cutting corners, conflicts of interest and casual record-keeping — had caused lasting damage. "People should be driven by an overriding purpose of delivering buildings which are fit for use and safe," she said.

Despite that legacy, she stressed that progress since 2017 had been "huge" and should be recognised. "We can all point to how much more there is to do, but we must also give huge credit to those who have stepped up and increased levels of competence."

Her message to professionals was clear: understand how change affects your role and act proactively. "Be in the right place with the right skills, the knowledge and the information now required," she urged. And while much of the focus has been on high-rise buildings, she emphasised that "the same approach, in a proportionate way, should apply across the sector".

> **I believe that APS has an opportunity to be one of the leaders in this — and I would encourage you to take that opportunity**
> **Dame Judith Hackitt**

Hackitt said professional bodies such as APS have a vital role in accelerating progress, but cautioned that true competence "is about more than technical knowledge — it is about conduct and behaviours". That means not walking past problems, refusing to cut corners, and upholding professional pride. Individuals also need "strong support from professional bodies" to help them demonstrate and maintain standards.

Hackitt warned that, while the creation of new standards was an important milestone, "it is the end of the beginning, not job done". Professional bodies must now raise awareness among members, promote accreditation and ensure qualifications are earned, not "grandfathered or simply handed out".

She illustrated the cost of poor practice with a case from the Building Safety Regulator, where a new high-rise building was refused permission for occupation after inspectors found a sprinkler pump unable to deliver water above the 12th floor.

"The installer admitted to knowing the pump was not the right specification but installed it anyway," she said. "This is a real live example of why competence has to be about behaviours as well as knowledge."

Hackitt closed with a warning that some professional bodies risk losing control of standards if they do not act swiftly. "Having change imposed upon you by others, or having responsibilities handed over, is surely not where these professional bodies want to be," she said.

"We cannot wait for the slowest ship in the convoy to hold others back," she concluded. "I believe that APS has an opportunity to be one of the leaders in this — and I would encourage you to take that opportunity."

Andrew Leslie, APS CEO, said: "APS is delighted that Dame Judith sees the association as one of those leaders, helping to shape competence and culture across the built environment." ■

Proving competence: how it's working in practice

Across the industry, APS members are seeing change take hold unevenly — but, with clearer frameworks, rising expectations and growing client awareness, they say the competence agenda is finally gaining traction

Chris Bracewell, senior consultant, Orsa

I'm on both the APS and RIBA principal designer registers, as I'm an architect by profession.

Being on a register is a good starting point for evidencing competence, but as a company we go further — maintaining a competence document with individual CVs, skills and experience.

The new requirements are positive but complex. When CDM first came in, it took about five years to bed in — and I think it will be the same with this legislation.

The Building Safety Regulator is also still finding its feet, often subcontracting building inspectors and struggling to assemble competent teams. Even so, the bar for competence is definitely being raised.

Bobby Chakravarthy, partner, Arcus

We're involved in a significant number of projects, mostly as principal designer, and handling about 100 Gateway 2 applications. Yet in only about half of the cases have clients asked us to demonstrate competence before appointment. We send our own competency documents, but not everyone does the same.

Any project that must comply with building regulations (England) requires clients to appoint competent dutyholders – not just for HRBs. But many are still coming to grips with the rules.

Once appointed, we carry out detailed competency checks on designers, contractors and subcontractors – anyone with design responsibility. Technically, it's the client's duty too, but often they appoint the principal contractor without proper checks. Gathering evidence can be tricky, as many struggle to provide it.

There's no single way to prove competence. Certification under BS 8670 is one option, but we also look at project experience, professional accreditations, and quality assurance processes for risk, design management and compliance.

The new regime is reducing risk, though progress is slow. The ethos is sound; we just need to get on with delivering it properly.

Peter Waxman, director of health and safety, Gleeds

Although competency for appointments has long been a client duty, the reforms after Grenfell have put a much stronger spotlight on this area.

The Building Safety Act and BS 8670 suite have provided structure for assessing competence of principal designers and principal contractors (building regulations), yet the approach to evidencing competence still varies widely.

While the gateway process has brought real rigour for HRBs, the same momentum isn't always seen on non-HRB projects. Many clients still find it difficult to assess competence effectively, as the process is often qualitative and there's uncertainty about what 'good' looks like.

At Gleeds, we're embedding competence through in-house training, refreshed role profiles, and assessment processes aligned to PAS and BSA guidance. Externally, we help clients develop clearer verification processes and expectations for their project teams. I'm also an external examiner for the RIBA Principal Designer Register.

Sam Mepham, partner, national head of health and safety services, Rider Levett Bucknall (UK)

Within the last 12 months, we're being asked more consistently for evidence of competence, mostly via the client or their representatives. And we often ask others on the client's behalf.

Upskilling started early: all our technical teams underwent Building Safety Act training. To be serious about competence, the industry needs to understand what it is. A two-week training course doesn't equate to competence — it's about skills, knowledge, behaviours and, above all, experience.

Competency requirements for roles such as the building regulations principal designer are still high-level in places, but as interpretations are tested, expectations are becoming clearer.

Double check your digital designs

Without proper professional oversight, independent checking and sound design principles, computational tools including AI have the potential to lead to unsafe structures and costly mistakes, says **CROSS**

Digital engineering can be considered from four perspectives: software, people, process and hardware. These are linked, and a weakness in any can result in a safety issue.

Confidential Reporting for Safer Structures (CROSS) has received a significant number of reports relating to computational design that suggest there is a gap between the use of software and the understanding of it.

This widening gap has the potential to lead to unsafe outcomes. The rapid expansion of artificial intelligence (AI) and other digital tools may mean that this trend will accelerate unless steps are taken to address it.

To help professionals engage with these risks, CROSS has collected these safety reports on digital engineering in a dedicated theme page on its website (www.cross-safety.org/uk/digital-engineering). This page aims to help engineers understand common errors, learn how to mitigate them and share their experiences for the benefit of others.

The circumstances in which the misuse of computational models may lead to unsafe structures include:

- People without adequate structural engineering knowledge or training developing structural analysis tools.
- Limitations of computational models not being sufficiently apparent to users.
- Software being applied by inexperienced engineers beyond its limitations.
- Inadequate checking processes that fail to catch errors.
- Even experienced engineers struggling to spot weaknesses in programs when applied to unusual structures.
- Automated design software creating a false sense of security, where errors can easily be hidden.

Professionals with awareness of a safety issue connected to digital engineering are encouraged to contribute to this growing knowledge base by submitting their own confidential reports to CROSS.

CROSS safety report: Modelling of concrete frame building

One report featured on the CROSS page, Concern over Modelling of Concrete Frame Building for Construction Stage (March 2022), highlights serious risks caused by over-reliance on computational tools without proper validation.

In this case, the designers used a global 3D model that assumed the building was complete and fully cured and hence had not achieved its design strength.

This overlooked the temporary conditions during construction and drastically underestimated loads on a critical transfer slab. The result was that the slab was under-reinforced and at real risk of failure or even disproportionate collapse.

What the report describes illustrates a broader challenge: computational models can generate unrealistic load paths and omit consideration of temporary conditions during construction, especially where self-weight is significant.

The risks were compounded by a lack of hand-checks, weak internal review and inexperience among the engineers involved. Together, these factors demonstrate the dangers of treating software outputs as definitive, rather than as tools requiring judgment in the interpretation of their outputs.

The key lesson identified by the CROSS expert panel is that digital engineering must always be paired with rigorous validation and independent checks. Designers should sanity check outputs against conventional methods, consider buildable construction sequences and explicitly communicate the assumed methodology.

If contractors propose sequencing changes, designs must be reassessed. Robustness and redundancy should be built into every stage of construction, not only the final condition.

Ultimately, this safety report shows that computational tools are only as reliable as the engineering judgment and processes that underpin their use.

> **Digital engineering must always be paired with rigorous validation and independent checks**

CROSS safety report: Unqualified engineer's unsafe design

Another report, Unqualified Engineer's Unsafe Computer-aided Design of a Retaining Wall, shows the dangers of unqualified individuals relying on computer-aided design without the expertise to validate results.

The reporter describes how retaining walls designed by a non-engineer were found to be unsafe, with inadequate resistance against overturning despite extensive computer calculations.

The fundamental issue was a misapplication of Eurocode 7 principles and a lack of understanding of structural equilibrium.

Computer outputs were produced in large volumes, but they concealed the fact that the design was fundamentally unsafe. The result was that the retaining walls would likely need to be demolished and rebuilt, with both safety and financial consequences.

This CROSS safety report shows how computational tools are only ►

effective when used by competent, qualified engineers who can interpret, check and challenge results.

Over-reliance on software without adequate knowledge of the underlying engineering principle creates the risk of unsafe designs passing into construction. Where building control bodies lack capacity for detailed technical checking, this risk is heightened.

CROSS safety report: Errors in steelwork connection design

This recent CROSS report from June 2025, Errors in Steelwork Connection Design Risk Unsafe Beam Sagging Moments, highlights the risks of misusing structural software, particularly when programs are used outside their intended scope.

In the case described by the reporter, software that did not support a required beam-to-column web moment connection led designers to substitute a beam-to-beam connection type. This substitution was not identified by the designer and hence not challenged.

The difference is critical: the web of a column behaves very differently from the end plate of a beam. Using the wrong assumptions led to errors in bolt forces, yield line patterns and force distribution. The potential consequences included web deformation, unintended rotation of connections and higher sagging moments in beams than allowed for in the structural model.

This case demonstrates how software can mislead designers if its limitations are not understood. Outputs may appear precise and detailed but can still be fundamentally flawed. Structural analysis models often idealise member connections, ignoring local stress effects that can critically influence safety.

The broader lesson is that engineering judgment and awareness of software boundaries are essential. Designers must not manipulate software to fit unsupported conditions, nor treat simplified models as complete reflections of real behaviour. To mitigate risks, lead designers should prescribe connection assumptions, review fabrication details and ensure all designs remain within codified and tested guidance.

Once again, the overarching lesson is that computational design is only reliable when validated against engineering knowledge.

Outputs may appear precise and detailed but can still be fundamentally flawed. Structural analysis models may ignore local stress effects that can critically influence safety

Overall themes and guidance

Taken together, these reports demonstrate a growing industrywide concern: computational design tools are being widely used, but sometimes without sufficient understanding or validation.

For those seeking advice, the Institution of Structural Engineers (IStructE) has published useful guidance on the use of software for engineering calculations, which is free to download at www.istructe.org.

The guidance focuses on the management and control of calculation processes, including:

- Establishing clear workflows for analysis models.
- Interpreting results effectively.
- Carrying out assessment checks.
- Sizing and detailing components appropriately.
- Reporting conclusions clearly and transparently.

This guidance reinforces the same lessons that emerge from the CROSS reports: software must be treated as a tool, not as a substitute for engineering knowledge.

Conclusion

Digital engineering is an essential part of modern structural design, but its safety depends on the balance of software, people, process and hardware. A weakness in any of these areas can lead to failure. The CROSS safety reports show that the misuse or misunderstanding of computational tools has the potential to lead to unsafe structures and costly mistakes.

Digital tools can support engineers but cannot replace the need for competence, judgment and rigorous validation. As the use of AI and other digital engineering technologies grows, the need for professional oversight, independent checking and sound design principles becomes ever more important.

By learning from these case studies, sharing experiences and applying published guidance, the industry can ensure that digital engineering enhances safety rather than undermines it. ■

Beware the AI hype

The challenge using AI is to cut through inflated expectations and focus on practical, safe applications, writes Peter Debney

Risks and limitations

- Bias and prejudice: AI systems trained on historical data can perpetuate existing biases.
- Lack of understanding: AI encapsulates knowledge without true understanding. This means outputs can be plausible but wrong, creating risks if not carefully validated.
- Data security and privacy: Using AI tools embedded within company systems may be safe, but putting sensitive information into public AI platforms carries risks. Data may be reused for training or published.
- Hallucinations: AI can generate convincing but false information (hallucinations). Neural networks also lack transparency, making it difficult to trace exactly how decisions are reached.
- Environmental impact: Training and running large models is energy intensive, with significant carbon costs.

Benefits and practical uses

Despite these risks, AI has potential in engineering when applied with care for a number of tasks:

- Optimisation: AI can generate and test multiple design options quickly, including complex topology and shape optimisation. This can reduce carbon impacts and improve performance.
- Document search and productivity: AI tools help scan large volumes of material such as codes, standards and client specifications, supporting engineers with routine tasks.
- Inspiration and writing support: AI can produce outlines or generating ideas for refinement, provided outputs are carefully checked.

There are also deeper questions for the profession. If AI takes on basic calculations and routine design work, junior engineers may lose opportunities to build the skills needed to become senior decision-makers. Experience 'through the mill' is essential for developing judgment.

Ultimately, AI is best viewed as a tool. Used wisely, it can extend human capability, but it cannot currently replace the engineering knowledge, responsibility and critical checking that ensure safety.

Peter Debney is a CROSS expert panel member, a fellow of the Institution of Structural Engineers and the author of Computational Engineering.

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A clearer view of the fire regulations

Changes to fire regulations and building safety have created a complex web of overlapping rules. Mishcon de Reya partner **Kizzy Augustin** explains how they all fit together

The Grenfell Tower fire of June 2017 fundamentally transformed fire safety regulation in the UK. What emerged was not merely a series of incremental shifts in attitudes towards safety but a recalibration of the regulatory framework governing fire safety, particularly in residential buildings. For the fire safety industry and dutyholders, the last few years have brought unprecedented legislative activity, creating a complex web of overlapping regulations that continues to challenge the sector.

Legislative developments: building on existing foundations

The regulatory fire safety frameworks have developed since Grenfell, and they rely heavily on concepts introduced by the Regulatory Reform (Fire Safety) Order 2005 (FSO), which has served as the cornerstone of fire safety enforcement in England and Wales for nearly two decades.

The FSO established the risk-based approach familiar to most practitioners, placing duties on 'responsible persons' to conduct fire risk assessments and implement appropriate fire safety measures.

However, the Grenfell fire exposed critical ambiguities in the FSO's scope, particularly regarding the application of fire safety duties to the external envelope of buildings and to individual flat entrance doors within multi-occupied residential buildings. These uncertainties had created enforcement gaps that proved potentially catastrophic and difficult to overcome.

The Fire Safety Act 2021

This act received Royal Assent in April 2021 and commenced in May 2022, directly addressing the legal ambiguities surrounding who was responsible for assessing fire safety risks within the common parts of a relevant building.

The act clarified that the FSO explicitly covers the structure and external walls (including windows, balconies and cladding) of buildings containing two or more domestic premises, as well as individual flat entrance doors opening onto common parts.

This seemingly straightforward clarification carried profound implications for responsible persons, who now faced unambiguous duties to assess and manage fire risks associated with building facades and internal compartmentation interfaces.

Perhaps more significantly, the act extended enforcement powers to fire and rescue authorities in relation to these previously ambiguous areas. Fire authorities can now take action against non-compliance concerning external walls and flat entrance doors, eliminating the regulatory blind spots that had existed under the previous interpretation of the FSO.

The Fire Safety (England) Regulations 2022

While the Fire Safety Act 2021 clarified scope, the Fire Safety (England) Regulations 2022, which came into force in January 2023, provided the operational detail necessary to implement the Phase 1 recommendations of the Grenfell Tower Inquiry.

These introduced specific, prescriptive requirements for buildings containing two or more domestic premises, with enhanced provisions for high-rise residential buildings of at least 18 metres or seven storeys (higher-risk buildings, or HRBs).

All buildings with at least two dwellings must provide clear and relevant fire safety instructions to residents and provide residents with fire door information. Those buildings that are more than five storeys or 11 metres in height must carry out annual checks of flat entrance doors and quarterly checks of all fire doors in the common parts.

The regulations imposed several new duties on responsible persons dealing with HRBs. They must provide local fire and rescue services with up-to-date electronic building plans and detailed information about external wall construction and materials.

For HRBs, responsible persons must conduct regular checks of fire doors to common areas, lift evacuation equipment and signage. They must also share critical fire safety information with residents, ensuring that evacuation strategies are clearly communicated and understood.

Kizzy Augustin
Mishcon de Reya

Additionally, the regulations mandate the installation of secure information boxes containing vital building information accessible to fire and rescue services during emergencies. These requirements reflect lessons learned from the operational challenges faced by firefighters at Grenfell, where incomplete building information hampered response efforts.

The Building Safety Act 2022: a parallel regime

Running parallel to these fire safety reforms, the Building Safety Act 2022 (BSA) established a comprehensive new regulatory regime for HRBs.

The BSA introduced a gateway-based approval process for HRBs throughout their life cycle, from design and construction through occupation. It imposes duties on multiple dutyholders, including the accountable person and principal accountable person for occupied buildings, who must demonstrate ongoing compliance with building safety requirements.

For fire safety professionals, the critical challenge lies in understanding the interaction between the BSA and existing legal duties under legislation such as the FSO and other health and safety regulations. Both regimes apply to all relevant buildings (albeit there are enhanced building safety duties for HRBs), creating potential for confusion about respective scopes, overlapping duties and the appropriate enforcement authority for particular issues.

Below: Fire doors now require more stringent checks

> **For professionals, the critical challenge lies in understanding the interaction between the Building Safety Act and existing legal duties**

The Building Safety Regulator enforces building safety risk requirements under the BSA while considering the impact of fire safety non-compliances, while fire and rescue authorities continue to enforce the FSO. This division of regulatory oversight requires careful navigation, particularly where building safety risks and fire safety risks intersect. We still do not have enough collaboration between the various regulators that govern fire safety compliance.

The overlap between the FSO, the Fire Safety Act, the Fire Safety (England) Regulations and the BSA creates complexity, particularly regarding which regulatory framework applies to specific circumstances and which enforcement authority has primacy.

The concept of the 'responsible person' under the FSO may not align perfectly with 'dutyholders' under the BSA or the Health & Safety at Work Act 1974, particularly where multiple parties have overlapping responsibilities for different aspects of safety. Determining which party bears which responsibility, and ensuring coordination between different dutyholders, requires careful legal analysis and practical arrangements which are still up for debate.

The Phase 2 Inquiry: unfinished business

The Grenfell Tower Inquiry's Phase 2 Report, published in September 2024, delivered 58 recommendations that promised to reshape the regulatory landscape further.

Among the most significant proposals was the establishment of a single construction regulator, which would consolidate oversight of construction activities on HRBs. This recommendation explicitly acknowledges concerns about regulatory fragmentation under the current system. ►

The inquiry also recommended that fire safety strategies for HRBs should be prepared by registered fire engineers and submitted at key gateway points in the building control process. This professionalisation of fire safety design represents a fundamental shift toward specialist expertise and accountability in fire engineering practice.

Other recommendations addressed the adequacy of product testing and certification regimes, improvements to information sharing between dutyholders and emergency services, and crucially, the competence of those working in fire safety roles. The government's response, published in February 2025, accepted many of these recommendations in principle, though implementation timelines remain uncertain.

The Competence question: extending the BSA model

Perhaps no single issue has emerged more prominently from the post-Grenfell reforms than the question of competence.

The Phase 2 Inquiry Report was unequivocal in its assessment that the Grenfell Tower fire resulted in part from serious deficiencies in the skill, knowledge and experience of those engaged in the construction industry. This has catalysed a fundamental reconsideration of how competence should be defined, demonstrated and enforced across the fire safety sector.

The BSA established a statutory definition of competence to all dutyholders involved in the design, construction, refurbishment and maintenance that is now likely to serve as the template for fire safety regulation more broadly.

Under the BSA, competence is defined as possessing the appropriate skills, knowledge, experience and behaviours to perform one's functions safely and effectively.

This four-part definition represents a significant evolution from previous approaches, which often focused narrowly on qualifications or experience without adequately considering behavioural aspects such as professional ethics, communication and the ability to recognise the limits of one's own competence.

These requirements are not satisfied merely by holding particular qualifications or memberships, but rather demand ongoing demonstration that individuals and organisations possess the necessary capabilities for the specific work they undertake, and that those appointing consultants are assured of their competence.

This approach emphasises a 'rebalance of responsibilities' – with continual professional development and honest self-assessment about the boundaries of one's expertise.

Fire safety practitioners should expect similar competence frameworks to emerge for those working specifically in fire safety roles. The Phase 2 Inquiry recommendations called for clearer definitions of fire safety competence and more robust mechanisms to ensure that only appropriately qualified individuals undertake fire risk assessments, design fire safety strategies or advise on fire safety matters.

11 Buildings that are more than five storeys or 11 metres in height must carry out annual checks of flat entrance doors

The inevitable direction of travel is towards a system where fire safety professionals, like their counterparts in building safety, must demonstrate competence through reference to established frameworks that encompass not only technical knowledge but also professional behaviours and ethical standards.

A concrete manifestation of this competence agenda appears in the proposed Article 9A(2) of the Regulatory Reform (Fire Safety) Order, introduced by Section 156 of the Building Safety Act 2022. Although not yet commenced, this provision will require responsible persons to ensure that anyone appointed to undertake or review a fire risk assessment is competent, defined as having "sufficient training and experience or knowledge and other qualities" to perform that function.

The deliberate delay in commencing Article 9A(2) reflects ongoing work to establish appropriate competence frameworks and assessment mechanisms before imposing this duty on responsible persons.

This development raises important questions for the fire safety sector. Should fire risk assessors be required to hold specific certifications or demonstrate competence through third-party assessment schemes? Should fire safety consultants be required to maintain registers demonstrating their competence, and, if so, who should administer and maintain such registers? How should competence be assured for those working in specialist areas such as complex evacuations, fire engineering or the assessment of external wall systems?

The likely adoption of a BSA-style competence model also has implications for organisational capability. Just as organisations acting as dutyholders under the BSA must demonstrate adequate systems, resources and culture to discharge their functions competently, responsible

Below: The Fire Safety Act 2021 clarified responsibilities for external walls of relevant buildings

How should competence be assured for those working in specialist areas such as complex evacuations or fire engineering?

persons under fire safety legislation may face similar expectations.

This would represent a shift from viewing competence purely as an attribute of individuals to recognising that organisational structures, quality assurance processes and corporate culture all contribute to competent performance of fire safety duties.

Looking forward

The regulatory environment for fire safety in the UK has undergone transformational change since Grenfell. The amendments to the FSO, the introduction of new fire safety legislation and the establishment of the building safety regime represent the most significant reforms to fire safety regulation in decades.

Yet implementation remains ongoing, and the full implications of Phase 2 recommendations continue to unfold. We hope that further guidance and assistance is on its way to help dutyholders perform their roles in a proactive and preventive manner.

For fire safety professionals, however, the challenge extends beyond mere compliance to encompass strategic understanding of how these various regulatory regimes interact. As further guidance emerges and case law develops, practitioners must remain vigilant, ensuring that the spirit of these reforms – preventing another Grenfell – is realised in practice through competent, coordinated, and comprehensive fire safety management across the built environment. ■

Kizzy Augustin is a partner (H&S, fire and environment), with Mishcon de Reya.

Above: Responsible persons must conduct regular safety checks and share information

In the dock

Recent prosecutions for health and safety breaches

Road project tragedy

A construction company has been fined £1m after a road resurfacing project ended in tragedy in May 2022.

Robert Morris, who was working on the project in Haringey, north London, was struck and killed by a reversing roadsweeper.

Marlborough Highways, Morris's employer, was handed the fine in October following a joint investigation between the Health and Safety Executive (HSE) and the Metropolitan Police, which identified a number of failings at the site.

Marlborough Highways pleaded guilty to Sections 2(1) and 3(1) of the Health and Safety at Work etc Act 1974.

The company was handed the £1m fine at City of London Magistrates' Court, with associated costs amounting to £6,028.

Rooflight fall

The Health and Safety Executive (HSE) has successfully prosecuted two companies after a construction worker fell through a rooflight at a factory, impaling his leg on machinery below.

AT Lee Properties and LJH Property were fined a combined total of more than £95,000 following the incident in Keighley, Yorkshire.

Directors for each firm were given conditional discharges and ordered to pay prosecution costs.

The man suffered leg injuries after falling at the Cirteq factory in July 2022.

Domestic CDM fail

A builder has been given a suspended prison sentence after a roof collapse destroyed an occupied home and injured three workers in Windsor.

Jack Savva, 70, was given a 13-month custodial sentence, suspended for two years, following the incident on 6 August 2020.

Savva, of Friary Road, Wraysbury, Surrey, pleaded guilty to breaching Regulation 19(1) of the Construction (Design and Management) Regulations 2015.

In addition to the custodial sentence, he was ordered to pay £2,000 compensation to the homeowner at a hearing before Reading Crown Court on 17 September 2025.

The homeowner was left to foot a £200,000 bill to rebuild their home because Savva's public liability insurance was invalid.

Worker crushed to death

A building company has been fined £56,775 after an employee was crushed to death when a 1.8 metre-high retaining wall collapsed on him.

Gary Anstey, 57, from Bristol, was working for H Mealing & Sons at a school construction site in Bath when the incident happened on 19 March 2019.

Mealing & Sons, of Northend, Batheaston, Bath pleaded guilty to breaching Section 2(1) of the Health and Safety at Work etc Act 1974.

The company was fined £56,775 and ordered to pay £44,000 in costs at Taunton Magistrates' Court on 11 September 2025.

Child injured by falling pipe

A construction company and its director have been fined after a five-year-old child was injured by a falling cast-iron pipe.

The incident happened on 20 July 2021, when Sage Homes was carrying out work on an extension to a house in Totton, Hampshire, near a local primary school. A cast-iron pipe fell onto a passing child, striking him on the head and fracturing his skull.

Sage Homes and Jason Scorey were sentenced for breaches of Section 3(1) and Section 37 of the Health and Safety at Work etc Act 1974, respectively, at Southampton Crown Court on 4 August 2025.

Scorey received a fine of £1,685, with 45 days' imprisonment in default, and was ordered to pay costs of £10,436.

Sage Homes, which according to Companies House records has now been dissolved, was fined £15,000. Both Scorey and Sage Homes were also ordered to pay a victim surcharge.

CPD: Passive fire protection for service penetrations

In this CPD, **Craig Wells** explains the role passive fire protection plays in buildings, with a specific focus on service penetrations

Passive fire protection is a key element of a building's fire strategy, covering areas like intumescent fireproofing, linear gaps and cavity barriers, compartmentation, fire doors and service penetration sealing.

These work alongside active measures, such as fire alarms, extinguishers and sprinklers, to protect people and property from the threat of fire. However, while active systems are visible and ready to use, passive fire elements are often hidden within the walls and floors of a building – but are just as important.

We all walk through fire doors and past fire-rated walls without noticing, yet these are what keep a fire contained to its area of origin.

Breaches in compartmentation are typically caused by mechanical, electrical or plumbing (MEP) services, and can pose a significant risk when not sealed properly with the correct products.

Intumescent basics

Most service penetration sealing products contain an intumescent material. This is a graphite-based material that expands when exposed to heat and seals the opening left behind by the melting service.

This reaction forms a carbonaceous char that prevents the spread of fire and smoke to other areas, commonly known as fire compartmentation.

What does the legislation say?

Firestopping is a legal requirement enforced by building regulations and other industry documents and legislation, such as Approved Document B and the Building Safety Act 2022. Building regulation requirements can be found in Approved Document B, which provides guidance on how to meet the regulations.

Requirement B3 focuses on internal fire spread (structure) and states: “The building shall be designed and constructed so that, in the event of a fire, its stability will be maintained for a reasonable period.”

Furthermore, it adds that: “Every joint, imperfect fit and opening for services through a fire-separating element should be sealed with firestopping to ensure the fire resistance of the element is not impaired. Firestopping delays the spread of fire and, generally, the spread of smoke as well.”

The Building Safety Act, as a result of the Grenfell Tower tragedy, reinforces that everyone, not just decision-makers, must follow fire safety regulations and work compliantly.

BS EN 1366-3 fire testing standards

Fires do happen, and that’s why fire testing is crucial to ensure products and systems work as intended.

Service penetrations are tested to BS EN 1366-3, where the system is installed into a replica wall or floor, and then craned onto a furnace, ready to be exposed to fire conditions.

BS EN 1366-3 fire testing is designed to replicate a flashover fire. With actual furnace temperatures capable of exceeding 500°C within five minutes, this method is extremely onerous and aggressive.

Once the test is complete, the UKAS-accredited laboratory will issue a test report. This report presents straightforward observations and includes technical details.

At the second stage, the classification report and European Technical Assessment (ETA) will be created, again, by a third-party UKAS-accredited laboratory. This will define multiple test reports to outline the scope, upper and lower limits, and specifications.

The classification report and ETA are the most useful documents because they show the overall tested scope of application instead of focusing on individual specimens.

Finally, the third stage is achieving CE marking, which after Brexit was replaced by UKCA in Great Britain, although the former is still accepted. This requires conducting regular factory audits to verify product quality and confirm that the product performs consistently with the original test specimen.

Common design and installation challenges

Historically, the construction industry has lacked coordination and communication between various trades and elements of the design team.

When projects focus heavily on the installation phase, the crucial role of thorough design, backed by coordination and communication, is often overlooked.

And when these elements are missing, onsite problems such as oversized holes or incompatible substrates can occur, resulting in delays and additional costs.

> **Passive fire elements are often hidden within the walls and floors of a building**

Product example: fire collar

- **Stops the spread of fire where plastic pipes pass through fire compartment walls and floors.**
- **Consists of a metal shell, generally stainless steel.**
- **Contains a high-performance intumescent material.**

For example, using a standard drill bit to create a 132mm hole for a 110mm pipe seems straightforward: install a wrap around the pipe, push it flush with the concrete, backfill and finish.

But oversized holes can complicate the process, requiring additional coordination and tested solutions, such as adding a temporary shutter to wrap and compound. If the oversized hole isn’t properly shuttered and backfilled, the intumescent wrap could fall out or expand into any ►

BS EN 1366-3 performance criteria:
- Integrity (E): No flames or large holes
- Insulation (I): Limits temperature transfer

gaps in the backfill, instead of sealing the gap in the compartment line created as the pipe melts.

'Pink foam' misuse

There are widespread misconceptions in the industry about fire-rated PU foam, due to a poor understanding of its use and suitability.

While it can sometimes be used to effectively seal small linear gaps, for instance, pink foam has a limited tested scope of application.

Its material makeup means that it can shrink away from the substrate as it burns, creating unsealed gaps through which fire and smoke can spread. Therefore, at Quelfire, we strongly advise against using it to firestop service penetrations.

An 'up to' fire rating refers to the maximum time the product has ever achieved in a fire test, and it may have only achieved that specific fire rating in one application.

That may mean that in another application it needs to be used in a system with other firestopping products to achieve the 'up to' rating.

That's why it's imperative to understand, choose and install the correct products following the tested scope of application, as these products are the only barrier between the fire and non-fire side. They save lives.

Complexities of services and substrates

When it comes to firestopping, not all services and substrates behave in the same way. This can consequently affect product selection and installation.

Different materials react differently in fire: For example, uPVC and HDPE melt and burn in different ways, which impacts the type of firestop product needed and the fire rating that the product/system achieves.

Substrate matters: A flexible plasterboard wall behaves very differently from a rigid concrete floor. The firestop solution must be compatible with the specific wall or floor type it's being installed into.

Spacing guidelines: The tested scope of application defines the minimum distance that is permitted between each service seal. In reality, there is often a tendency to pack as many services as possible into a small opening.

The importance of early engagement

There will always be challenges that arise on site – that's just the nature of construction. But the complexity of the challenge will be reduced when an early engagement approach is implemented in the project.

Early engagement ensures that a suitably tested firestop solution is chosen to match the service type, substrate, fire rating and installation environment. It also ensures the correct sizing of holes, product selection and adherence to building regulations.

It brings all relevant stakeholders together to discuss key objectives and coordinate the project based on the available test evidence.

The guide Firestopping of Service Penetrations: Best Practices in Design and Installation, published by the ASFP, BESA, BSRIA, FIS and GPDA, has nine golden rules.

Seven of these relate to the building's design, clearly highlighting where the emphasis needs to be. Ultimately, an accurate design

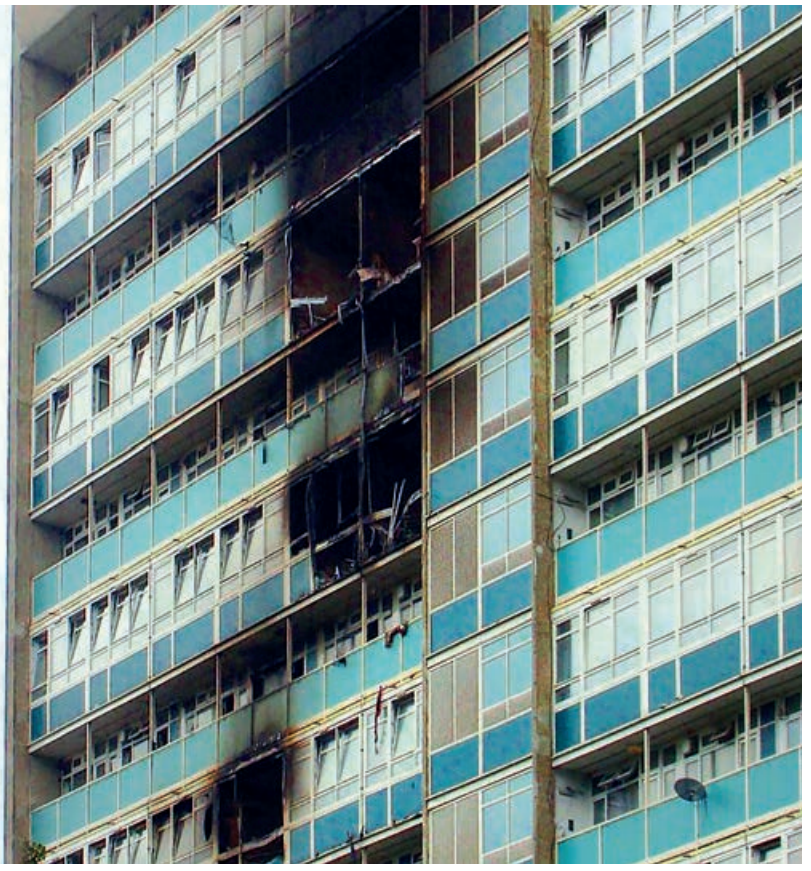
Lakanal House fire

In 2009, a fire broke out at Lakanal House, a 14-storey residential block in south London. Six people lost their lives, including three children.

The cause of the fire was an electrical fault in a television, which quickly spread through the building.

An investigation into the fire revealed a failure in the building's compartmentalisation, which allowed the fire and smoke to spread between flats and floors.

Lakanal House is one of many tragedies that raised fire safety concerns in high-rise buildings. It showed why firestopping needs to be taken seriously and emphasised that every detail matters when it comes to fire safety.



PETER GASSTON

Below: Fire and smoke spread between flats and floors in the Lakanal House fire in south London

500

BS EN 1366-3 fire testing is designed to replicate a flashover fire, with actual furnace temperatures capable of exceeding 500°C within five minutes

Above: Service penetration seals are fire tested to the BS EN 1366-3 test standard

makes a compliant installation much easier to achieve.

The beauty of the 'design then build' model is that fully tested solutions are integrated early, allowing for the correct products to be installed in a compliant manner.

As a result, fire will be contained to its compartment of origin for the specified period of time it has been fire tested.

This removes the pressure of retrofitting firestopping solutions post-installation, reducing rework and compromise later in the project. Most importantly, it protects the end user and gives you peace of mind.

Responsibilities in firestopping

Construction is a collaborative effort, yet we often see responsibility passed around, with no party wanting to accept it wholly. However, the truth is that we all share responsibility for the roles we play in projects, no matter how big or small.

Designers are responsible for including compliant solutions from the early stages of design, while firestop contractors must make sure the solutions are installed as tested.

Each trade must understand its impact on the next, and how its work may affect the installation of the firestopping.

Then you have the manufacturers, which have the responsibility to provide accurate test evidence, training and support.

Service penetration sealing is far too important to be an afterthought. Everyone has a part to play in ensuring compliance.

However, with an early engagement approach, tested products and collaboration, the protection of people and property is achievable. ■

Craig Wells is sales director at Quelfire.

Useful resources

- **Approved Document B: www.gov.uk**
- **Building Safety Act 2022: www.legislation.gov.uk**
- **Fire Safety (England) Regulations 2022: www.gov.uk**
- **BS EN 1366-3: https://knowledge.bsigroup.com**

CPD Questions

1) What is the main function of intumescent material used in firestopping products?
a) It conducts heat away from the service penetration to slow combustion
b) It expands when exposed to heat, sealing gaps left by melting services
c) It reinforces the structure of fire-rated walls and floors

2) Which document provides legal guidance on firestopping requirements for service penetrations in buildings in England?
a) Approved Document B
b) Fire Safety (Scotland) Regulations
c) BS EN 1366-3

3) What is the primary purpose of BS EN 1366-3 testing?
a) To evaluate the ease of installation of firestopping products
b) To classify the aesthetic finish of fireproofing systems
c) To assess the fire resistance performance of service penetration seals

4) Who is responsible for firestopping?
a) Designers and contractors
b) Manufacturers
c) All of the above

5) Why is early engagement important when planning passive fire protection?
a) It ensures fire doors are always installed before internal partitions
b) It allows for integration of tested firestopping solutions and reduces costly rework
c) It removes the need for final fire safety inspections

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

‘I like looking at process, and forward planning’

New APS board member Chris Ottaway is a chartered and European engineer who has been running his own consultancy for over 30 years. Despite a full-on working life, he’s still trying to be in the gym at 6.30 every morning. ‘It’s where I do some of my best thinking,’ he tells **Denise Chevin**

How did you get to be running your own consultancy?
I set up Ottaway & Associates in 1992, and during the 10 years before that I had two main career paths. First, I worked in the NHS for six years as assistant chief engineer at the London Hospital, Whitechapel, and then as district design engineer for Islington Health Authority.

Following that, after I’d qualified as a chartered engineer, I worked at Hackney Council for three years as a mechanical group engineer, before joining Kent County Council as head of maintenance for the mid-Kent area.

It really wasn’t what I wanted to do. I became very frustrated working in the public sector. I realised I needed to set up my own business because I could no longer take instructions from people who were, in my opinion, basically just playing the system. I used to say that to survive in a local authority meant making sure the last memo on file is yours and it ends in a question!

I decided I would set up my own business. With BS 5750 taking off, I saw it as a great area to focus on initially, along with other construction-related areas. In 1992 Ottaway & Associates was born.

> **“I was very pleased when I discovered APS. So when the opportunity arose to apply to be a director, I thought: that’s right up my street**
> **Chris Ottaway, Ottaway & Associates**

What services do you offer?
We are a management consultancy for companies in the construction industry. We provide quality, environmental and safety services, as well as general management and consultancy advice.

We’ve also got a CDM division where we advise principal contractors, act as principal designers and provide general CDM consultancy.

As I said, I set up my consultancy to help with quality assurance (QA) issues. But after a few years, QA became rather supplanted by health and safety, which became embedded in management systems across the UK – with QA becoming the poor relation.

It made sense to keep up with the climate and switch our primary focus, and it actually suited me well because I found I liked pre-construction work. I like looking at process, and forward planning, which were services we’d been offering through our quality assurance work.

We’re just a small consultancy these days, so only four employees. We were up to 10 employees at one stage a few years ago. Nowadays, if I need some extra help, I bring in associates.

You deliver training courses on asbestos awareness. What’s your approach to dealing with it?
I do asbestos awareness training – I’m registered with UKATA (the UK Asbestos Training Association) – but we don’t get involved with asbestos removal.

There’s some debate in the sector at the moment about the best way to deal with asbestos – whether to remove it or work round it and make it safe.

My view is that the UK is a forward-thinker and policy leader regarding the management of asbestos-containing material. However, I do have some concerns about the people dealing with asbestos in the domestic market. I think many are a bit behind the curve, and I’m not convinced the HSE has enough inspectors to deal with the problem.

That means no one’s really checking on the builders taking asbestos out of houses. Unlike with non-domestic property, homeowners don’t have to produce an asbestos register. And because so many homeowners don’t want to pay for an asbestos survey, there’s a real weakness in the whole system.

CV: Chris Ottaway

- **1992 to present: Managing director, Ottaway & Associates**
- **1990-92: Head of maintenance, Kent County Council, Mid Kent Building Maintenance Department**
- **1987-90: Central mechanical group engineer, London Borough of Hackney, Directorate of Technical and Contract Services**
- **1984-87: District design engineer, Islington Health Authority**
- **1980-84: Engineering officer, The London Hospital**

What’s a typical day for you?
Probably one where I’m out visiting a client looking after their quality, safety and environmental systems, maybe their third-party certification too. It’s pretty well the role of a specialist non-exec director.

If I can, I’ll get to the gym at 6.30am and work out for an hour. I find I do a lot of my best thinking when I’m there. If I’m not visiting a client, I’m at my desk by 8am for what’s usually a busy round of online meetings throughout the day.

Any projects jobs you look back on particularly proudly?
There’s one that still gives me a buzz when I look back on it. In the early 1990s, I was invited to go on a trade mission, with Michael Heseltine MP [then secretary of state for trade and industry] to Australia.

Above: Chris Ottaway: 'Take up golf as early as possible!'

While I was out there I met a guy from Tasmania who was working as a marketing agent for the Australian government agent and we got on really well. Ten months later, completely out of the blue, he called and asked if I'd be interested in tendering for a role that involved overseeing a massive aquacultural design, install and maintain contract in Hong Kong.

Of course I said yes, and Ottaway got it. It was all very exciting. I was working for an Australian company and I flew out to Tasmania every six weeks to oversee designs and the manufacturing process. And then I had to go to Hong Kong regularly to oversee the installation.

I persuaded the Australian company to also get Ottaway carrying out the role of certifying the quality and environmental aspects of the project.

It became a real flagship project for us, and gave us a great marketing boost. And it was all down to striking up a conversation with someone I'd never met before in a country on the other side of the world.

> **"APS really showed its worth during Covid, where everyone was looking for an excuse not to do anything – and it was putting on webinars every week**
> **Chris Ottaway, Ottaway & Associates**

You're a new member of the APS board – what are you hoping to achieve and contribute?
As well as helping members get to grips with the Building Safety Act, I'm keen to look at potential new income streams. We'll be discussing some thoughts I've put together in a paper at the next board meeting.

I was very pleased when I discovered APS some years ago, and I've taken lots of their courses over the years. So when the opportunity arose last year to apply to be a director, I thought: that's right up my street. I applied and was delighted when I got it.

APS has grown considerably in recent times and, for me, where it really showed its worth was during Covid, where everyone was looking for an excuse not to do anything – and APS was putting on webinars every week. I thought they put a few other institutes to shame.

What advice would you give your younger self?
Don't get conned into thinking you've got to go to university. So many people come out of university with qualifications that they're never going to use in an industry they're never going to visit. What a waste of time.

Consider an apprenticeship. That way, you do your education part-time and you're far better off in the long run because you have so much more practical experience than a standard university graduate – plus, you improve your personal skills by being in the workplace.

Oh, and take up golf as early as possible – don't leave it until you're 40! ■

The rise of the compliance plan manager

Scotland is carving out its own pathway to improving the post-Grenfell building safety space, with a new approach and new role, explains APS chief executive **Andrew Leslie**

Andrew Leslie
Association for Project Safety

The compliance plan manager (CPM) role in Scotland is a newly proposed position designed to strengthen building standards for high-risk buildings (HRBs) initially, with voluntary adoption of the approach starting from March 2026.

In response to critical safety failures such as the Grenfell Tower fire and structural issues in Edinburgh schools, the Scottish government initiated a new approach to compliance – one that can be scaled up or down and is appropriate for all types of work that need a building warrant.

This led to the creation of the compliance plan approach (CPA), a quality assurance system aimed at improving transparency and accountability in projects and delivering compliant buildings – initially focused on HRBs. (In Scotland these are residential buildings with any storey over 11 metres, and include public, community, health and residential care buildings, regardless of storey height.) Over time, this approach is expected to be applied to all building warrants.

Central to this is the new role of compliance plan manager (CPM), alongside two existing roles – the relevant person and local authority building control (BC) verifier.

The CPM, which is yet to be enshrined in primary legislation, will be responsible for developing and managing compliance plans (CPs) for HRBs, ensuring the work delivered aligns with approved building warrant plans and complies with the Scottish building standards established under the Building (Scotland) Act 2003.

The CPM will record the planned measures taken to assure compliance then record whether these have been carried out, oversee the collection of evidence, ensure inspections are properly conducted and recorded, and liaise with relevant professionals to maintain compliance. They will be responsible for making sure the CP is completed. The role is not limited to a single profession but intended to coordinate across disciplines, promoting safety through good design and rigorous documentation.

Questions remain

Some questions about the role remain. Who does the CPM report to? What are the criteria to become a CPM? Will it be a role protected by statute as an independent function?

APS anticipates the role to translate in practice as a combination of PD and PC as known in England and Wales (and possibly a bit of clerk of works) – focusing on compliance and continuity between the design and construction phase, orientating around coordination, oversight, verification and information management.

In terms of competence, despite it being a managerial role, this would start to translate towards requiring a demonstration of breadth and depth of knowledge in potentially quite specialist areas of design and construction, including knowledge and application of the building regulations, contractual and technical competences, as well as an extensive suite of pre-requisite requirements spanning essential and desirable experience. Membership of a relevant professional body is currently seen as an important pre-requisite.

APS believes the CPM role should be focused across key elements of building safety and health and not necessarily across all elements of compliance with the building standards, with the wider role being the responsibility of the BC verifiers. Close liaison between the CPM and BC verifiers will be required as far as signing off key elements is concerned.

What is certain is that anyone doing the CPM role will want to make sure they feel confident about signing the compliance declaration on the completion certificate submission, confirming that the building complies with the building regulations.

> **Membership of a relevant professional body is currently seen as an important pre-requisite**
> **Andrew Leslie, APS**

Supporting tools

The CPM role is supported by tools such as the Construction Compliance and Notification Plan (CCNP – issued by the local authority with a building warrant) and the proposed Compliance Handbook, which will provide guidance for implementation of the role.

By the end of December 2025, CPA guidance will be published for industry to voluntarily adopt – including the steps expected of a CPM – before it becomes a statutory requirement to work with all parties to propose, then monitor, the CP. Verifiers' guidance will also be published to support the implementation of phase 1 of the CPA.

The publication of revised national guidance in advance of a legislative change, anticipated in the next legislative term, is part of the Scottish government's response to the Grenfell Inquiry Phase 2 recommendations. The Scottish government hopes this allows it to follow a recognised change curve and move from early adopters to an early majority before legislative change requires it. ■

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Events update: competence, culture and the path ahead

As 2025 draws to a close, APS has delivered a wide-ranging programme of events aimed at strengthening competence, compliance and safety culture across the construction and built environment sectors

This autumn's line-up of events from the Association for Project Safety (APS) has brought together industry professionals, academics and regulators to explore the latest developments in building safety, offering practical insight and continuing professional development (CPD) opportunities for anyone involved in project design, management or health and safety.

Highlights from autumn 2025

The season opened in September with the APS National Conference, which focused on the three pillars of building safety — competence, compliance and culture. Experts shared updates on the post-Grenfell regulatory landscape, higher-risk building management and good-practice case studies.

A busy series of webinars and CPD sessions followed, covering topics such as slips, trips and falls prevention, inclusive design, quality management systems, and competence in organisations.

The APS Academy also delivered specialist training on essential fire regulations for CDM dutyholders and temporary works for CDM practitioners, while the When Safety Fails sessions explored the legal and practical lessons learned from construction incidents.

One of the standout moments this autumn was Safer Air Week (3-7 November), a week-long series of expert-led webinars on managing airborne hazards such as silica dust, asbestos and mould. The event reinforced the importance of practical, preventative approaches to worker health and site safety.

The Building Safety Regulations Webinar Series concluded its 2025 run in November with updates on the next phase of the Building Safety Act and discussions on fostering a proactive safety culture across the sector.

Looking ahead: December and early 2026

The APS events programme continues into winter, offering further opportunities for learning and collaboration across the industry.

Upcoming sessions include:

- Dr Peter Wilkinson (CROSS) – Confidential Reporting for Structural and Fire Safety (3 December 2025).
- APS Academy: Temporary Works for CDM Practitioners (2 December 2025 and 13 January 2026).
- APS Academy: Fire Safety in the CDM Pre-Construction Phase (England) (10 December 2025).

These sessions continue APS's mission to provide practical guidance and professional insight to help individuals and organisations navigate the evolving building safety landscape.

Catch up and continue learning

If you missed any of this autumn's events, many sessions are available to watch on demand via the APS website, offering an easy way to revisit key insights and maintain your professional development at a time that suits you.

To explore upcoming opportunities and access recordings of past sessions, visit aps.org.uk/events.

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Course Title	Location	Dates	Cost
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APS Accredited – CDM Client	Online	8 Dec 2025 24 Feb 2026	£295 + VAT
APS Accredited – CDM 2015 for Principal Contractors	Online	9 Dec 2025 20 Jan 2026 19 Feb 2026	£250 + VAT
APS Accredited – The Role of the Principal Designer under CDM 2015 (2 Day)	Online	10–11 Dec 2025 21–22 Jan 2026 11–12 Feb 2026	£595 + VAT
APS Accredited – BSA & Building Regulations (England) Dutyholder Introduction	Online	12 Dec 2025 10 Dec 2026	£325 + VAT
APS Accredited – CDM Awareness	Online	19 Jan 2026	£250 + VAT
APS Accredited – The Role of the Principal Designer under CDM 2015 (2 Day)	Nottingham	26–27 Jan 2026	£695 + VAT
APS Accredited – Building Safety Act & PD Building Regulations 2023 (2 Day)	Manchester	27–28 Jan 2026	£695 + VAT
APS Accredited – The Role of the Principal Designer under CDM 2015 (2 Day)	Birmingham	18–19 Feb 2026	£695 + VAT

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