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BUILDING CONTROL JOURNAL

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Building Control Journal is the journal of the Building Control Professional Group

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Published by: Royal Institution of Chartered Surveyors,
Parliament Square, London SW1P 3AD
+44 (0)20 7666 8885 www.rics.org
ISSN: ISSN 0265-6493 (Print) ISSN 1759-3360 (Online)

Building Control Journal is available on annual subscription. All enquiries from non-RICS members for institutional or company subscriptions should be directed to:

Proquest – Online Institutional Access sales@proquest.co.uk
Proquest – Online Institutional Access info@uk.swets.com

To take out a personal subscription, members and non-members should contact licensing manager Louise Weale lweale@RICS.org

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Design by: Redactive Media Group
Printed by: Page Bros

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Community and climate

I have recently been involved in the refurbishment of our village’s clubhouse, which has had its ups and downs. But working on a project such as this does draw the community together and forges close ties and friendships – as well as the odd argument.

In building control, though, we do not seem to be the community that we once were. Feelings of friendship and camaraderie seem to have been replaced by competitive rivalry between local authority building control bodies and private-sector approved inspectors as well as an insular attitude. It is a shame that we have gone from being a band of brothers to a more cut-throat sector. There are many competing interests in this day and age, but in the end we are all doing the same job and want safe and secure buildings. With this in mind, the Building Control Alliance was set up to enable the various elements of the profession to meet and discuss common issues to find an agreed path forward. The alliance has been very successful and deserves everybody’s support.

International matters

Traditionally, the alliance’s role has been limited to the UK, and with the advent of more devolved government the regulations and technical means of compliance have become more regionalised. So while considering the more international aspects of building regulation and control may seem a little strange, the profession needs to be outward-looking as the emerging economies of the world develop their infrastructure. There is more demand for transferring skills internationally, so we need to be mindful of these developments (see pp.6–7 for more on comparing regulations from different global locations).

Diversity

Recruitment into our profession has always been a problem. In the past, entrants were predominantly former tradespeople and intake was male-dominated. As we became a graduate profession, the role changed, and so did the skill set required. Recruitment has had to become more diverse, and I am pleased to say that we have embraced this, with some excellent recruits coming from a variety of backgrounds. However, there is still so much to do (as articles on pp.18–21 explain).

You will also have noticed that we did not have a conference in 2016. I am pleased to say that there will be a conference in some shape or form in 2017, emphasising the theme of training and education. We will be looking at the APC and the roles of all those involved in the process, including candidates, counsellors and supervisors. It will give us all the opportunity to examine the issues surrounding the route to chartered status and help those who want to be involved in the process.

Climate change is affecting us all and will have to play a part in the development of regulations and guidance for building.
A little bit of medicine

The industry needs to plan ahead when dealing with health and safety issues, Dave Mitchell maintains.

Clear evidence is now emerging that the construction industry is making progress towards managing health as well as it does safety and giving both areas appropriate attention. And with the Construction (Design and Management) or CDM Regulations 2015 bedding in, there is an opportunity to plan ahead in a more coordinated fashion.

Ill health results in 100 times as many construction deaths than safety problems, so progress is well overdue. Thanks to the Health in Construction Leadership Group (HCLG), it is now more clearly on the agenda of many construction CEOs. The current emphasis is on mitigating dust exposure and understanding the burden of mental health problems on those in our industry.

Reducing dust

Treating health like safety means that we act to eliminate or at least reduce the dust that is generated by our activities, such that there is less opportunity for exposure. As a result, personal protective equipment should be provided for work on site, or health surveillance used to check that people have not been adversely affected.

The Home Builders Federation’s Health and Safety Committee is working to reduce the dust hazard on new-build housing sites. It has also worked proactively with the Health and Safety Executive (HSE) to evaluate exposure levels, and with equipment manufacturers to help address tool dust suppression and extraction. It continues to raise awareness along supply chains, and with those who work on site to reduce dust exposure.

Mental health issues

Mental health problems present a huge challenge throughout UK industry, not just construction. Studies show that men in particular struggle to talk about their problems, and in our male-dominated industry there has historically been a perception that these represent a weakness – often pushing those in need of support, or just asking to be heard, into deeper despair.

Risks to mental health can affect staff in the entire construction sector, including senior executives and commercial and design staff as well as those on site. To address this, Mates in Mind is a new HCLG initiative with the British Safety Council to provide much-needed simple and pragmatic advice and support.

The industry’s focus on addressing health and safety issues also needs to be seen in the context of the CDM Regulations 2015. While these are now nearly two years old, there continues to be significant dialogue around their appropriate interpretation, in particular with the role of principal designer. With the principal designer now having duties parallel to those of the principal contractor – namely to plan, manage and monitor their respective phase of the construction process – there should be the opportunity for a consistent approach.

In the housebuilding sector, many developers take on the role of both principal designer and principal contractor, with the technical and build teams typically addressing the specific safety responsibilities in the pre-construction and construction phases, as appropriate. It is not uncommon for the technical and build directors to act as focal points and be supported by the company’s health and safety director in discharging the corporate duties in each phase efficiently.

Industry and the HSE are currently looking to take on board the lessons of a series of case studies related to the implementation of the CDM Regulations 2015. Their aim is to help organisations understand what a pragmatic interpretation of the regulations looks like, while addressing some sector-specific differences.

The two themes of health and the CDM Regulations are increasingly coming together under the umbrella of designing for health. Many leading organisations are seeking to encourage and subsequently challenge those in the design process to consider how their design can reduce exposure to health risks for people either constructing or maintaining the works.

While health and the CDM Regulations are receiving significant attention, however, we should not lose sight of the traditional safety risks. Working at heights and workplace transport continue to require careful planning and preparation to mitigate risks. The core requirements of collective protection and fall prevention for working at height, and the need to keep people and plant effectively separated, can still be frequently seen in the health and safety press to have been poorly executed. With the new Sentencing Council health and safety guidelines now being used in courts, multimillion-pound fines are becoming increasingly common, even for non-fatal injury.

The solution as always is to plan and prepare the work, taking account in advance of how the workforce is likely to perform the task and seek to identify potentially difficult tasks. Worker engagement needs to be used in the planning of works, and not just as an after-the-event discussion.

Dave Mitchell is Technical Director at the Home Builders Federation

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Related competencies include

Health and safety
Building control regulations typically seek to manage the safety and sustainability of buildings from the planning stage through design, construction and operation to occupation and beyond.

These regulations have a huge impact on the safety of the buildings in which we live and work, the materials with which we come into contact and the energy we consume.

In making our built environments safe, it is critical to ensure that regulations are fit for purpose, up to date and progressive enough both to enable and to encourage innovation. Doing so can promote greater investment from key stakeholders such as private-sector developers, resulting in a more sustainable and innovative construction industry.

This article sets out to further the understanding of what defines a progressive regulatory framework for building control, and of the hallmarks of a successful system, by reviewing an Arup project. Commissioned by the Building and Construction Authority in Singapore and identifying key learning and action points, this study is possibly the first aimed at improving understanding of progressive building regulation.

Benchmarking exercise
To gain a deeper understanding of building regulation frameworks around the world, Arup undertook a benchmarking exercise to identify best practice at five locations around the world: Frankfurt in Germany, Hong Kong, New York city in the USA, Singapore, and Sydney in Australia.

Arup’s specialists in these locations shared their knowledge, experience and opinions on the strengths and weaknesses of their respective cities’ regulatory frameworks. Along with the authors and reviewers, these specialists have extensive experience as practising engineers in these locations.

The study used a framework with a total of 88 criteria: four primary, 12 secondary and 72 tertiary. The first two levels of these are shown in Table 1; the 72 tertiary criteria were case-specific for the cities reviewed and for simplicity’s sake are not listed here.

When assessing the effectiveness of each action, the study considered the impact that the regulations have on the following outcomes:

- saving time for industry
- improving safety
- encouraging innovation
- saving resources
- reducing cost for industry.

Through this exercise, 72 best-practice actions were identified across the five locations. These were specific to each of the tertiary criteria identified, so to distil particular learning points they were categorised into three hallmarks of successful progressive building regulation frameworks: local industry knowledge, regulatory knowledge and market facilitation.

**Local industry knowledge**
This component of a regulator’s role is essential to ensure that regulation is progressive, which is achieved by focusing on knowing the local industry’s needs and regulating accordingly. Examples of essential local knowledge include industry capability along with market economies and drivers.

The capability of the industry must be clearly understood and managed through regulation to ensure that the aims of the regulators are met. In Singapore and Frankfurt, emphasis is placed on the designer’s responsibility for safety through design sign-off by a suitably qualified and registered person. Additionally, detailed scrutiny of the

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**Table 1**

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<tr>
<th>Criteria breakdown</th>
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<tr>
<td><strong>Primary criteria</strong></td>
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<td>Safety</td>
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<td>Effectiveness</td>
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<td>Sustainability</td>
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<td>Capability development</td>
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<td>Secondary criteria</td>
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<td>Regulation to achieve quality assurance and control</td>
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<td>Relevance</td>
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<td>Adaptability</td>
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<td>Clarity and transparency</td>
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<td>Consultative</td>
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<td>Submissions process</td>
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<td>Futureproofed</td>
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<td>Materials</td>
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<td>Productive</td>
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<td>Enabling procurement systems</td>
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<td>Enabling technologies</td>
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<td>Personnel capacity</td>
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Regulators must understand the drivers and appetites of their local market

design is undertaken by accredited checker companies or individuals.
In Sydney, on the other hand, much greater responsibility is placed on contractors than on the designer; it is the former’s job to ensure the safe construction of developments. The differing approaches reflect the relative strengths of the respective industries in these locations.
Similarly, regulators must understand the drivers and appetites of their market. This is particularly the case when promoting the innovation or adoption of new systems. For instance, sustainability and green development is a focus for each of the cities studied, but how this agenda is encouraged differs from location to location between being market-driven and mandated by regulation.
In the former case, the market decides to adopt a specific measure despite its potentially higher cost. This typically occurs where there is a financial benefit to the change.
For example, as sustainability has become a focus for many corporations, a market has been created for sustainable buildings and developments. Where the added value of undertaking a sustainable development outweighs its added cost, industry will then opt for this approach. In this situation, regulators can also help industry and influence existing commercial drivers with incentives such as the introduction of green building rating systems. However, not all locations will develop such a market naturally, so regulators may need to resort to a mandatory approach.

Regulatory knowledge
To create a progressive framework, regulators must have a detailed understanding of the wider governance system. They should also conduct scheduled reviews to avoid possible conflict between regulatory requirements.
Building regulation does not operate in isolation. Many associated regulations can also affect the construction industry, including those relating to environmental protection, fire and life safety, and health and safety. Regulatory impact assessments should be performed alongside routine reviews involving key stakeholders such as statutory boards and industry practitioners.
Some of the benchmarked locations were seen to be very proactive in this area and that should be promoted. These reviews should also aim to keep regulation relevant and up to date.
New York city has, for instance, recently completed an extensive review of its building regulation framework and begun to make dramatic changes to improve it. Singapore adopts a more structured approach, with reviews of regulation every three years. In Singapore, there are also dedicated panels and committees such as the Inter-agency Coordinating Committee to deal with conflicting regulatory requirements, and the International Panel of Experts to provide advice on technical advances affecting regulation.
Equally important to understanding the market is an appreciation of the regulator’s internal capabilities, such as staff competencies and resourcing. These need to be in line with the regulatory framework to ensure procedures run safely and smoothly. As a result, regulations may need to be revised to make good any gaps. For instance, where the building regulator reviews and approves designs, materials or construction methods, there must be an appropriate number of skilled staff to support this, as is the case in Hong Kong and New York city.
Alternatively, industry can perform these reviews and approvals, as happens in Frankfurt and Singapore, or self-certify, as in Sydney; these require different skill sets and levels of resourcing for the regulatory body. Key to success, however, is understanding the implication of regulation on resources and maintaining these resources to fulfil those responsibilities adequately.

Industry facilitation
Most progressive approaches to building regulation place emphasis on supporting the construction industry. This can be done by helping it to work efficiently and removing unnecessary obstacles. Regulators could also aim to improve the way in which they collaborate with and disseminate data to industry.

Such industry collaboration and efficiency can be promoted by implementing detailed procedural guidelines, by making individuals available for face-to-face or digital consultation and, potentially, by training, seminars and online videos. The regulator can also proactively make information available to industry to streamline the design and construction process.
Indeed, Hong Kong has decided to collate geological information and building records into consolidated data sets. These are easily available to the industry either online or via print libraries. Regulators can also directly influence industry efficiency by streamlining submission proposals, as is the case in Singapore, where submissions can be made around the clock and review periods are as short as two weeks. This proactive approach can be summarised as a time-efficient one-stop shop for regulatory approvals.

Summary
The findings suggest that there is significant variation between regulatory practices around the world but there are some broad commonalities that can form the foundation of progressive building regulation, as follows.

- **Know your market**: a skilled regulator has a detailed understanding of the local construction industry and applies tailored regulation in their own jurisdiction.
- **Know your regulatory field**: a regulator has an holistic view of their own and of wider governance practices, aims to undertake periodic regulatory reviews and impact assessments, and has a broader understanding of how building control regulation interacts with other governance approaches.
- **Support your industry**: a regulator adopts a collaborative approach to the industry and its key stakeholders, with the common goal of achieving efficiencies of time and cost, adopting new practices and making best use of technology.

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Understanding security risks and crime prevention should be essential for surveyors, says Spencer Carroll

On the safe side

Like many concerns for surveyors, security cuts across building types, sectors and services, and is more far-reaching than one might expect. But for major or new-build projects, there is a wealth of design guidance.

Approved Document Q (ADQ) of the Building Regulations – Security in Dwellings came into effect on 1 October 2015. ADQ applies to all new dwellings and sets out security standards in relation to doors, windows and accessible rooflights, in order to safeguard against intruders. The product must be shown to have been manufactured to a design tested to an acceptable security standard. ADQ does not apply to extensions or replacement doors and windows in existing dwellings.

Police initiative

Set up in 1989, Secured by Design (SBD) is a UK police initiative focusing on the design and security of new and refurbished homes, commercial premises and car parks. It is intended to provide research to inform guidance for “designing out crime” through physical security measures and processes.

For example solid shutters to shopfronts create dead frontages, attract graffiti and prevent the shop’s interior being seen. SBD offers a more holistic approach to crime prevention, and there is a wealth of guidance ranging from garden design for deterring intruders to information on the use of alarms and external lighting.

Homeowners and business proprietors are advised to take this guidance on board and, where possible during cyclical maintenance or capital repair projects, to improve security in accordance with the best practice it outlines.

Building fabric theft

Thefts from the external fabric of a building are on the up, and the continued increase in the value of metal, especially lead and copper, means that it will remain a common problem. This so-called heritage crime – with lead being stolen from ecclesiastical buildings for example – has long been acknowledged as a risk. However, continuing economic hardships have seen criminals diversify and become more organised.

Primary schools and nurseries are now at particular risk, because their typically single-storey construction often means that access to roofs to remove lead is relatively straightforward under the cover of darkness.

The lengths to which criminals will go to steal metal shows no limit. There are often reports of thieves scaling tall buildings or removing live copper cables, with ensuing disruption to public or private services.

In cases where lead flashings are stolen, for example, it can be many months before there is any noticeable ingress of rainwater, by which time often costly damage will already have occurred to the roof deck and building structure itself. This is a particular problem on flat concrete roofs where large volumes of rainwater can be trapped between the concrete deck and the roof system.

Figures from a Freedom of Information request to the London Borough of Croydon show that there were 27 lead thefts to schools in 2015, costing the taxpayer a total of £143,000. For an education sector already challenged financially, these costs have a direct impact on the bottom line of budgets.

The use of lead-free products that perform in a similar way is now more routinely specified for low-rise buildings. Unfortunately, none of these materials offers the same heritage value or durability that lead does, neither do they weather with such an attractive patina.

Damaged brickwork

The latest reported escalation in building fabric theft concerns deliberate damage to boundary walls made from high-value Georgian and Victorian London stock brickwork. This brick is predominantly formed with shallow deposits of brickearth, a clay-based material overlying the natural geology of much of London clay. The unique yellow-clay brickearth was then mixed with what was essentially the rubbish of London, but which also contained a large quantity of ash and cinders.

The result was an economic
sometimes be tempted to business proprietors may property, homeowners and in an effort to protect their DIY protection at a property can serve as an light. Active display of its use only be seen under ultraviolet marking, containing a unique permanent forensic liquid such thefts in the form of a proves uncommon.

brickwork for subsequent sale then removing the disturbed reports of criminals who were in the theft of such stock, and there was a particular spike with matching materials. planning requirement to build where there is often a strict those in conservation areas to period houses, especially brick is particularly prized for its suitability in extensions commonly (see images, left and above). The legality of such approaches may be questionable, however.

The company SmartWater provides one solution to such thefts in the form of a permanent forensic liquid marking, containing a unique code that is registered to a particular property and can only be seen under ultraviolet light. Active display of its use at a property can serve as an important deterrent for would-be thieves.

DIY protection In an effort to protect their property, homeowners and business proprietors may sometimes be tempted to consider the introduction of DIY or budget measures to deter intruders.

The proliferation in the use of spikes, broken glass and barbed wire to boundary walls or fences is now quite common (see images, left and above). The legality of such approaches may be questionable, however.

Anyone who owns or controls a property has a duty of care to protect people and animals on the premises from foreseeable harm, and this extends to uninvited persons – whether they be a burglar or simply a child trying to retrieve a ball. Similarly, spikes or razor wire on boundaries next to the public highway could potentially result in the injury of innocent humans or animals. A local authority also has a duty of care to protect such persons using the highway, and therefore may insist that barbed wire on a garden fence, for example, is removed.

Any injury or harm to persons or animals could result in a prosecution. The fortification of property is also likely be challenged by the local authority if it contravenes the permitted height of boundary walls, and by neighbours whose visual amenity may be spoilt.

It may under certain circumstances be possible to discharge a duty of care from the risk of harm by razor or barbed wire by positioning it at such a height that accidental injury is unlikely, as well as by the use of warning signs. Nevertheless, clarification should also be sought from your building insurer as to whether you are indemnified against the risk of injury to others.

Building fabric theft is not only a threat to existing buildings but also to those under construction or nearing completion. Very often, the presence of scaffolding surrounding a building will provide the perfect opportunity for safe access to carry out a theft. Not only are the building fabric and components at risk but, on a construction site, tools, plant and equipment also present rich pickings for resale on the black market.

Industry response The construction sector has responded well to this challenge with the provision of remotely monitored wire-free scaffold alarms, lighting, CCTV and site hoardings with biometric or access-controlled entry points. As ever, balancing cost with risk requires careful consideration because all of the above security measures can have quite a significant effect on the bottom line of a project budget.

The surveyor’s relationship with the security specialist is critical, too, as these measures are not necessarily a panacea. There needs to be early collaboration between those who are working on the overall project, scaffold and security design to ensure that all aspects are optimised.

Every client wants to avoid paying for state-of-the-art equipment, while at the same time preventing false alarm activations or alarm downtime. They will also want the on-site workforce to be able to operate the technology on a day-to-day basis.

Bear in mind that construction sites are dynamic work environments: scaffolding is modified, subcontractors work at different times and sensors can be blocked, and all of these could inadvertently undermine the function or adequacy of site security.

It is strongly advised that the project’s security arrangements are understood and accepted by the building or contents insurers, particularly if the building is either fully or partially occupied. It is likely that building or contents insurers will request that scaffold security complies with an industry quality benchmark, such as that provided by the National Security Inspectorate. Each of these issues can be considered in much greater detail in their own right, but as ever the role of the surveyor can be essential in connecting them in a logical manner, when carrying out a due diligence survey for a purchaser or when providing contract administration or project management services.

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Secured by Design’s National Building Approval process aims to create well-designed, secure buildings and minimise fear of crime, explains Michael Brooke

National security

Secured by Design (SBD) is a crime prevention initiative run by the police that aims to improve the design and layout of new developments and create spaces that are attractive, well used and safe.

Supplemented with effective, appropriate levels of physical security for buildings, SBD will cause difficulty and delays for any potential offender. Independent academic research has consistently found that this approach reduces reported crime by up to 75%.

Meeting with approval
SBD’s National Building Approval scheme has in recent months received considerable praise from many quarters, including housing associations, construction companies, local authorities and building control professionals.

At first seen simply as a means by which developers could gain evidence of compliance with Approved Document Q, Requirement Q1: Unauthorised access, of the Building Regulations (England) (http://bit.ly/2dYBq01), or with Building Standard 413 (Scotland) (http://bit.ly/2doBYI), it now has the potential to answer many other prayers.

The traditional route to gaining SBD approval can be very time-consuming, with much form-filling, many meetings and a lot of paper-chasing to ensure that the development receives the award once it is complete.

Under the current arrangements, the award is only available at the end of the build programme – a situation that has been to the detriment of the applicant, community and police alike for the following reasons:

- the applicant remains uncertain that an award will actually be made, and worries that some unexpected costs may result from an inconsistent or alternative local approach
- the development’s occupants and the surrounding community would benefit from knowing what efforts are being taken by all parties to prevent crime
- the efforts of the police, who work tirelessly to prevent both crime and the fear of crime, go almost unrecognised by others at present.

The new process is designed to alleviate all these concerns.

Technical schedule
SBD National Building Approval deals not only with these concerns but many more. At its heart is a bespoke document, the technical schedule, which is prepared for each member. This describes how they intend to provide physical security measures and also lists their approved suppliers of doors and windows.

SBD conducts due diligence on all these suppliers to ensure that they comply both with the Building Regulations and SBD’s own need for third-party certification. Once the document is complete, agreed and signed off, it becomes the template for security provision, and is acceptable to all UK police forces.

The document can be used time and time again, and on each occasion an SBD silver certificate will automatically be generated. Silver denotes that the physical security of the buildings fulfils the requirements of both the Building Regulations and SBD.

There are many benefits in issuing the certificate early, but chief among these is that it can be used as evidence to discharge third-party obligations or client requirements, and also demonstrates that security has been taken seriously by the member, thereby alleviating local fear of crime and future concerns on the part of the building users. The local police are on hand to assist members and will happily work with those who wish to obtain SBD’s full gold award.

A technical schedule can be used in many different scenarios – not just new-build housing but developments of any kind, including commercial and mixed uses. Housing associations can employ this as a template for the refurbishment of existing properties or as an output specification to inform the tender process. They may choose to pass this on to their construction company as a requirement to be met, or indeed the construction company may wish to join the initiative under its own name for the sake of commercial advantage or to reap its own benefits.

Finally, there is a contract to be signed, which attracts a fee of £10 for three years’ SBD membership.

As a not-for-profit organisation, SBD’s National Building Approval initiative is all about creating safe, secure buildings and environments, preventing crime and disorder and allowing the law-abiding to go about their daily business without fear.

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Related competencies include
Building control inspection, Legal/regulatory compliance
Up to standard

Anthony Burd rounds up recent work done by the British Standards Institution

The built environment sector has perhaps the longest history of any when it comes to the use of standards. The British Standards Institution (BSI) was the world’s first national standards body as well as being a founding member of the International Organization for Standardization, and today it works in partnership with experts across the sector to provide guidance on best practice and to help ensure compliance with relevant regulations such as the Building Regulations. This article looks at some of its more recent activities in the sector.

BIM

Following the 2011 Government Construction Strategy, which mandated the use of Level 2 building information modelling (BIM) as a condition of contract on all public-sector projects from 2016, the UK BIM Task Group was established, comprising experts from industry and government. BSI has worked closely with the UK BIM Task Group to develop supporting standards and guidance, and now maintains a dedicated website (http://bim-level2.org/en) on which all relevant documents are freely available. The Level 2 BIM mandate came into effect in April 2016.

In 2012, the Cabinet Office identified the use of BIM standards as a significant contributor to possible savings of around £800m a year for the UK construction sector and its clients.

Fire safety

BS 9999: Code of practice for fire safety in the design, management and use of buildings is intended to safeguard the lives of building occupants and firefighters. It gives recommendations and guidance on the design, management and use of buildings to help ensure reasonable standards of fire safety are observed throughout their lifecycle.

Following public consultation, BS 9999 has been revised by our panel of experts. The revised standard (shop.bsigroup.com/BS9999), which was published in January, incorporates the following changes:

- a flowchart showing the steps of the design process, to help users when applying the standard
- revised clauses on fire safety management
- coverage of watermist fire suppression systems

- expansion of guidance on fire alarms that play back recorded voices
- revised recommendations for smoke and heat control
- recommendations for fire curtain barrier assemblies
- revised recommendations for mechanical ventilation
- revised recommendations for shopping complexes
- revised recommendations for building exits
- revised recommendations for ducting
- expansion of the table on fire growth rates to provide more information.

European role

While the UK’s vote to leave the EU is a significant issue for standardisation in the built environment, the UK remains a full member of both the European Committee for Standardization (CEN) and the European Committee for Electrotechnical Standardization (CENELEC) through the BSI.

European standards have to be adopted by the respective national standards bodies in 33 countries. Any conflicting national standards have to be withdrawn, leaving a single, Europe-wide standard known as the single standard model.

British experts have considerable influence over European standards because of the UK’s membership of CEN and CENELEC. As well as being entitled to participate fully in the creation of all European Standards, the UK currently holds the secretariat for 51 technical committees, and there are no fewer than 566 British technical committee chairs or working group convenors across the two organisations.

As both CEN and CENELEC are private organisations and membership is not contingent on remaining in the EU, there should be no obstacle to the UK maintaining the single standards model following Brexit, and in this respect it will retain a European role.

Helping engagement

As the UK’s national standards body, BSI works hard to support and encourage engagement with standards. We are soon going to launch a new web portal that will bring together the existing standards development site, new proposals and the draft review in one place. The portal will make it easier for stakeholders to submit feedback and keep up to date with standards. Via the portal, you will be able to:

- propose ideas for future BSI work
- comment on proposals for new standards
- comment on drafts for public consultation
- discover and track standards in development
- browse standards that have already been published
- find out which stakeholders are represented on BSI committees and discover the standards for which they are responsible.

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www.bsigroup.com/standards-development

Related competencies include Legal/regulatory compliance

UK experts have a big influence over European standards
The National House Building Council (NHBC)’s Facades to Tall Buildings seminar last year included key speakers from the Department for Communities and Local Government (DCLG), the Building Research Establishment (BRE), Exova and the Building Control Alliance (BCA). Between them, they discussed the use of combustible materials in the external walls of high-rise buildings in addition to the consequences of poor specification and implementation.

Legislative background
Brian Martin, Principal Construction Professional in DCLG’s Sustainable Buildings Division, kicked things off by providing context, outlining the legislative background and the origins of the Building Regulation requirements for the use of limited combustibility materials in the facades of tall buildings.

The issue of facade fires is not a new one, he explained. Several fires in cladding systems have occurred around the globe, particularly in cities where a sizeable number of new high rises have been built using modern materials and methods of construction.

Even with sprinkler protection, Martin pointed out. Several fires in cladding systems have occurred around the globe, particularly in cities where a sizeable number of new high rises have been built using modern materials and methods of construction.

Between the two when subjected to a flame source in the presence of unrestricted air flow, he observed.

Stephen Howard, BRE’s Director of Fire Testing and Certification, then explained the methods of demonstrating compliance with the recommendation documents that support the UK Building Regulations. He noted that guidance in place for a number of years has two requirements for the major components of external wall build-ups to buildings with a floor more than 18m from ground level.

Specifically, these should either be built from materials of limited combustibility, as defined in Table A7 of Approved Document B2; or, a full-size sample of the proposed facade construction should be classified under the parameters of BR 135: Fire performance of external thermal insulation for walls of multi-storey buildings, when tested to the appropriate part of BS 8414: Fire performance of external cladding systems.

Compliance options 1 and 2
Steve Evans, Senior Area Technical Manager at NHBC and Chair of BCA’s Technical Committee, then went on to detail industry best practice guidance. As architectural designs have incorporated more and more cladding types and thermal regulations have demanded greater levels of insulation, he explained, it became clear to building control bodies assessing these various designs that the routes to compliance described in regulations were insufficient to deal with the vast number of different combinations of supporting structure, insulation and cladding finish that were being specified, and for the arrangements for closing internal cavities.

In June 2014, BCA therefore published Technical Guidance Note 18, entitled Use of combustible cladding materials on residential buildings, which provided builders and designers with three methods of demonstrating compliance. The note was subsequently re-issued in July 2015 as Use of combustible cladding materials on buildings exceeding 18m in height, emphasising that the requirements in the regulations apply to all tall buildings and not just housing, as well as offering an expanded range of four methods to demonstrate compliance.

Among these, Evans continued, options 1 and 2 describe the two routes to demonstrating compliance detailed above – that is, using materials of limited combustibility or providing evidence of a system’s classification to BR 135. However, these methods cover few of the facade systems currently being used on buildings in England and Wales.

To enable designers and builders to demonstrate compliance on a wider range of facades, BCAs revised guidance note sets out two further options, both of which are based on reasoned fire engineering judgement and require the specialist skills of experts with knowledge in this particular field, advised Evans.
Even with sprinkler protection the unpredictable nature of occupancies can potentially lead to an outbreak of fire that can spread rapidly to affect occupancies on higher floors.

**Compliance options 3 and 4**

Dr Janet Murrell, Testing Manager at Exova Warrington Fire Ltd, then talked attendees through the two more common methods used to demonstrate compliance with the requirements of the guidance note.

Option 3 assessments are probably the most frequently used to determine the fire safety of a facade system comprising materials that are not of limited combustibility or have not been tested and assessed against BR 135. This option requires builders to provide a desktop assessment based entirely on BS 8414 evidence, together with evidence of material behaviour from tests such as EN 13823, the single burning item test.

**Insulation testing**

Under option 3, Murrell elaborated, the insulation must have been tested against the requirements of BS 8414 and the facings used must bear some material similarity to that which has been tested with the insulation specified. This means that if the insulation does not have a BS 8414 test then the desktop assessment route cannot be taken. To date, only a limited number of insulation types have undertaken a BS 8414 test.

The assessment takes each individual part of the system and compares its fire performance with that of any potential similar replacement. It is essential that the desktop assessment be made by a fire engineer who is also a materials specialist, said Murrell. The interaction of the various materials to be used in the construction must be understood and form the basis of the assessment.

In general, she outlined, simple facades on framework consist of:
- a layer or two of gypsum plasterboard
- a vapour barrier
- framework that may or may not be filled with an insulation product
- a sheathing board fixed to the frame
- insulation fixed to board
- a cavity containing cavity barriers
- a facing.

In addition, as part of the assessment, considerable emphasis is placed on the nature of the fire stopping around every penetration in the facade, which includes windows, vents and ducts. The fixing methods are addressed as part of the desktop study, with the aim of ensuring that they are robust enough to keep any protective materials in the facade assembly in place should it be exposed to fire.

Attention must be paid to ensure that gaps in facings are closed to prevent flames penetrating the cavity, Murrell added; however, based on the fire behaviour of facings that can melt, crack or shatter, cavity barriers are used to close off the cavity at each floor and also, in effect, to segment the cavity in the vertical direction.

Architects generally use a variety of facings to give character to the construction. For instance, it has been known for a building to have up to 30 different facade materials; however, between three and six different facings is the norm.

This large variety of facings includes, among others, the following different types, as Murrell outlined:
- metal: steel; aluminium panels and cassettes; zinc
- metal composites: aluminium honeycomb; aluminium composite panels; steel-faced sandwich constructions; copper over wood
- non-combustible boards: fibre cement; marble; stone; concrete; ceramic tile; terracotta tile
- glass: spandrel panels
It is very important to consider the nature of the materials used in facade construction

Fire-resistant elements
Murrell added that fire-resistant elements must be used throughout a building to ensure that any fire is compartmentalised for as long as possible. These elements include:
- structural frame intumescent coatings
- other structural frame spray coatings
- structural frame boards
- fire/smoke control ductwork
- fire stopping with penetration seals
- fire/smoke control dampers
- fire doors and shutters
- fire-resistant partitions
- fire-resistant roof glazing
- fire-resistant screen glazing
- fire-resistant building hardware
- smoke control doors
- fire-resistant glazed doors
- fire-resistant glass doors.

High-rise buildings also need safe refuges that require containment and insulation from the temperatures of any fire in the vicinity.

Passive and active fire protection both help ensure extended time to escape the building and to allow the fire brigade to attend. These should be factored in to any fire safety assessment, Murrell said, so option 4 should be considered in the building’s fire safety strategy.

NHBC guidance
Finally, NHBC Specialist Surveyors John Lewis and Maulik Katkoria introduced delegates to a new NHBC technical guidance document. Acceptability of common wall constructions containing combustible materials in high rise buildings advises builders on some of the most common types of wall and facade on tall buildings, for which NHBC will no longer require a desktop assessment in accordance with BCA option 3 for as long as possible.

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The new NHBC guidance note and BCA Technical guidance Note 3 are available on Building Regulations Plus www.nhbc.co.uk/techzone

NHBC has also recently published its latest annual technical standards document, which includes a new chapter on render http://bit.ly/2fFr73d

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The fire performance of the facade materials should form a major part of the assessment, in particular compared with the performance of such materials tested to BS 8414. The location of various types of facade on a building, surrounding structures such as decking and high-risk use areas in the building including bin stores should all be considered.

Fire safety engineering
Murrell went on to outline the final method described in BCA Technical Guidance Note 18, namely option 4, which allows for the use of fire safety engineering strategies. With this approach, she explained, the entire building should be considered, and the work is very much building-specific.

This approach is often taken where there is a lot of glass in the facade or curtain wall system, and it takes into account the nature of the active and passive precautions plus their effect on the size of any fire that may not be contained by the structure.

This is then used to determine the potential for the fire to enter the cavity or penetrate the facing, and also addresses fire spread into the building at another level. All elements of the building design are factored in to models to predict fire development and smoke movement and inform the evacuation of people, said Murrell. It is then possible to look at the active and passive protection proposed to optimise its effectiveness by altering positioning or adding into it.

Murrell stressed that, with this approach, it is also very important to consider the nature of the materials used in facade construction and that both passive and active measures are implemented in tandem and not in isolation; each should be addressed as part of the assessment of the building.

She also reminded the audience that sprinklers only discharge for a limited period, which may not be sufficient to extinguish a fire. They may even fail to activate at all, for example, if the fire grows in an unsprinklered void in the building. In operation, however, sprinklers have a cooling effect, reducing the size of the fire and its growth rate, and can be used to protect glazing by delaying the heat’s effect on it.
Asbestos practice

Laurence Cobb highlights the implications of a recent asbestosis claim for employers and insurers

Exposure to asbestos can lead to chronic respiratory problems and develop into dangerous forms of lung cancer such as mesothelioma; these and other diseases associated with asbestos remain one of the greatest causes of work-related death in the UK. But as our knowledge of the dangers of asbestos has grown, so has the regulation controlling the substance and the health and safety of individuals exposed to it at work. Notable among these measures are the Control of Asbestos Regulations, as amended in 2012 at the request of the European Commission.

Duty to manage asbestos

Many buildings constructed or refurbished before the use of asbestos was prohibited may contain the substance. Under the Control of Asbestos Regulations 2012, duty holders including the owner of a premises or the person with the main responsibility for its repair and maintenance have a duty to manage asbestos to prevent exposure to any that may be present and to implement a plan to manage the risk. This duty applies in relation to all non-domestic buildings, including factories, warehouses, offices and shops.

Although surveyors may not themselves be the duty holder, those with information about the construction or maintenance of the building would be expected to help them; equally, a competent surveyor could be appointed to carry out a survey on behalf of the duty holder to determine whether any asbestos is present.

Employers can also face claims from their employees in relation to asbestos exposure. In the recent Court of Appeal case Carder v the University of Exeter [2016] EWCA Civ 790, a retired electrician brought a claim against the university for asbestos exposure while working in the boiler rooms and other areas between 1980 and 1994. In fact, most of his exposure to asbestos had occurred in previous employment as an apprentice electrician in the 1950s.

The university argued that, while working there, Carder’s limited exposure to asbestos had made no discernible difference to his condition. The question before the Court of Appeal was whether it agreed with the High Court that Carder had suffered damage from further exposure at the university and was worse off to a degree that was sufficiently serious to claim damages.

Decision

It was calculated that the university had contributed to 2.3% of Carder’s exposure to asbestos, with some 97% being attributable to his employment in the 1950s. This 2.3% did not cause Carder to suffer additional symptoms, the court decided; however, the severity of the disease had been increased to a “small, albeit not measurable” extent.

Although the 2.3% figure was small, the university conceded that it was material. Asbestosis was a divisible disease, meaning that damages awarded for the condition could be divided in proportion to the different exposures. Each exposure to asbestos contributed to the development of asbestosis, so the exposure at the university had exacerbated Carder’s physical condition. Consequently, he could recover proportional compensation from the university for this 2.3%.

The sum awarded in damages was small when compared to the costs of the litigation, but it probably reflects the fact that insurers stand to lose a considerable amount if this case offers a precedent for similar cases of asbestos-related illness. From the claimant’s point of view, the decision will potentially allow Carder to seek further damages should his condition deteriorate. This is not the end of the road for the case either, because we understand that the university is seeking to appeal to the Supreme Court.

However, the case emphasises the need to be diligent regarding the consideration of risks of the presence of asbestos, because exposure to it is dangerous from a medical – and hence a legal – perspective.

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Related competencies include Legal/regulatory compliance
Robbie Craig reports on the work of a team behind a new plan to protect properties from flooding

Brilliance in resilience


The plan was the culmination of a year's work by a roundtable team of professionals from the insurance, surveying, charity and construction sectors, led by Dr Peter Bonfield of the Building Research Establishment. DEFRA and Environment Agency officials supported the work but left the development of the action plan to members of the round-table team.

Common hazard

Flooding is the most common and widespread natural hazard in the UK, with almost one in six homes at risk. Although the government is investing £2.3bn to protect a further 300,000 homes by 2021 using defences at the community level, there will still be properties at risk in places where it is difficult or uneconomic to build defences, or in locations where the particular risk means that these approaches will not work.

Property-level resilience can play a valuable role in managing the impacts and disruption that flooding causes and offer people more control and confidence in managing their own risk. It includes a wide range of measures, and although traditionally it has meant physical installations such as flood barriers or airbrick covers to block apertures, it is increasingly about adapting the building through use of flood-resilient materials or design to minimise the damage if water does get inside.

According to DEFRA, property-level resilience has a cost–benefit ratio in excess of £5 for every £1 invested in terms of reduced damages (http://bit.ly/2rChW9R). However, despite several government and local authority schemes installing these measures, there is still relatively low uptake in England – people at high risk of flood are not routinely installing resilience measures in their homes and businesses. This is the challenge to which ministers asked the roundtable team to respond.

There are two immediate outputs from the team's work. First, a website has been set up by the Centre for Resilience (www.centre4resilience.org) to make it easier for public and professionals alike to access information about flood resilience. Second, the Business Emergency Resilience Group has piloted an end-to-end advice service to help people affected by the winter floods of 2015–16 in the north of England.

Long-term project

However, the property-level resilience action plan is a long-term project and the team would like to see the following developments at key stages:

- after a year: a better understanding of what property-level resilience is among individuals, communities and businesses
- after two years: significant progress towards systems and practices in the insurance, building and finance sectors that normalise property-level resilience as part of existing activity
- after three to five years: a situation where those at high risk of flood have the knowledge, capability and means to adapt their properties in ways that limit the physical damage to homes and businesses from flooding, speeding up their recovery
- after five years: a situation in which it is standard practice for properties at high risk of flood to have been made resilient.

Bonfield has now stepped down as chairman of the roundtable team and his place taken by Graham Brogden, a member of its Business Emergency Resilience Group. Brogden will lead work to improve both standards for products and services, and the way that business helps customers with flood resilience. The immediate ambition is that membership of the team will expand from the core group and actions rolled out across the sector.

Recent DEFRA-funded research looked into the specialist requirements for providing technical advice on flood resilience (http://bit.ly/2ekse8Q), and one effective route identified was to find a way to add flooding competencies to built environment professionals' skill set rather than create a niche profession. How this might be achieved and what skills and training would be needed were not mapped out in great detail. However, the roundtable team's continuing work on standards for services and products may offer a chance to explore and initiate this.

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Stormy weather

Continuing his series from Australia, Mark Anderson looks at the repercussions of extreme weather.

Each year, buildings are lost to extreme weather conditions and natural disasters in most parts of Australia, but in particular the Northern Territory and Queensland.

Losing homes and possessions can involve long-term financial and emotional hardship, especially for households that are either underinsured or not insured.

Damage can include:
- failure of corroded connector fasteners to plates, to roof battens and to other components
- failure of rotten timbers
- garage doors being blown in or out
- roofs blown away in whole or in part
- collapse of unreinforced masonry walls
- collapse of poorly built housing that is located on exposed sites such as hills and sea frontages

Cyclones and winds

Houses built before the mid-1980s in Queensland and Western Australia or before 1975 in the Northern Territory may not be constructed to cyclonic building standards and therefore may not be able to withstand such winds.

Cyclone Tracy hit a vastly unprepared Darwin, the Northern Territory capital, in late 1974, demolishing around 80% of homes and necessitating evacuation of 47,000 residents; 71 lives were lost.

Given that some areas in Australia are more prone to such catastrophic natural events, as well as bushfires and earthquakes, the Australian Building Codes Board introduced advice for these localities, the goal of which has been to keep properties and their inhabitants safe over the past 30 years.

Scientists worked with government to ensure that these would help mitigate the effects of such natural catastrophes. This means that today we have codes for wind compliance for all coastal areas in Australia.

When a cyclone hits, it causes damage to the building and may lead to its collapse if it gets inside, with pressure building up beneath the roof and ceiling that results in them being lifted up and pushes the walls out.

One way to combat this is to prevent wind entering the house, and if this not possible then to have provided extra strong fasteners to secure the roof. Walls and ceilings should also be braced with additional plywood boarding to reduce the effect of wind.

Wind load

A coastal location can influence how you mitigate the effects of strong winds. When calculating the wind load of a site, you should consider the following factors:
- mature trees
- site elevation
- other buildings that may offer protection or pose a risk if fixtures become detached.

Cyclone-resistant fabric panels that are polymer-based add trampoline-like coverings to windows and doors to repel flying debris without sacrificing visibility in a storm. These are secured to the edges of windows and doorways with grommets and wing nuts or clips and pins, making them easy to install and remove.

Residents of areas that are prone to cyclones and strong winds should have a safe place to shelter on their property. This should be a small room with reinforced concrete walls and a concrete ceiling if possible. If the walls are not concrete, you should consider additional strengthening measures in that room. In other parts of the world you would provide a basement, but these are not common features of buildings in these areas of Australia. Nevertheless, providing this room is a cost-effective way to ensure that you can survive such catastrophic events.

It should be stressed that no building can be made entirely cyclone-proof. However, you can reduce the effects of such weather events by adding the structural measures that are appropriate for your location and maintaining your building to a good standard.

No building can be made entirely cyclone-proof but you can take appropriate structural measures.
Best foot forward

Sophie Smith encourages efforts to attract more women into the profession

Rigger boots and hard hats are not just for men. As we move forward with the diversity and inclusion agenda, it is an exciting time for anyone to be working in the built environment, and I hope to see similar numbers of both men and women entering our profession.

At the end of 2015, I wrote an article outlining my part in the campaign to attract more women into surveying (see Building Control Journal November/December 2015, p.8). Looking back on my personal experiences and the wider profession since then, it is clear that there has been definite progress in the construction industry.

RICS has played a key role in attracting more women as well as influencing diversity and inclusion more broadly. This article looks at some of the key changes, innovation and initiatives that are encouraging diversity, as well as my own work in helping move these forward. Remember that we can all contribute to change in the surveying profession; it is everyone's responsibility.

Conference speech

Following my last article, I have continued to work hard for change and to encourage others to join me. For instance, in January 2016 I was invited to speak at Gloucestershire College's Diversity and Inclusion Conference in front of 400 staff members.

The college offers technical education that can provide a basis for a career in surveying. Its range of construction, building services and engineering courses reflects the wide range of surveying careers available and equips students for RICS-accredited degree courses.

As much as the experience was nerve-wracking, it was also an excellent opportunity to educate and to broaden debate about the challenges faced by women in construction. Lecturing staff who were in attendance at the presentation will all now know about RICS’ provision of advice to students making career choices.

We can make a significant impact when we speak directly to those who influence young people's decisions, and I encouraged
the audience to consider their approach to teaching and to encourage the next generation to think widely in terms of career choices, as well as to promote diversity in their own workplaces.

Role models
As professionals, we are well equipped to make presentations and exercise our influence. I have always made myself available to attend careers conferences and give presentations in schools whenever my workload allows.

The role model approach is an effective way to engage young people in thinking about their choice of career, as well as older people looking to retrain. Current RICS President Amanda Clack is another keen advocate for role models to play a part in surveying for the future (see update item on p.23).

In terms of outreach, it is crucial to be out and about building strong networks with influential professionals. For example, I have developed a good relationship with organisations such as Women in Property (WIP), being invited to be a guest speaker at WIP South West’s Christmas Lunch in 2015 and participate in its International Women’s Day celebrations.

On both occasions, it was empowering for me to be among such talented and inspiring women while telling them my story. I spoke to many individuals, sharing ideas and examples of how we are together fostering the next generation.

We also spent time encouraging each other to work on our own professional development, in the hope that this will eventually lead to more women in the boardroom. WIP’s principles and frameworks should be applauded because they show that by working together we are able to make a difference.

Awards
In the last year, I have been a finalist in three different award schemes, largely as a result of my contribution to attracting more women into our industry. The awards include:

- Construction Youth Trust: the Duke of Gloucester’s Young Achievers Scheme, Surveying category
- Inspiration Awards for women
- Gloucestershire Women of the Year Awards: Diversity Champion, and Woman to Watch (Under 30).

Being shortlisted for these put my career in the spotlight as an inspiration to others.

It had been finding someone who inspired me that had helped me to aim high in the first place. Early in my career when I was taking an apprenticeship in building control, I was the only woman in a class of 30 on the Higher National Certificate in Construction course.

But my lecturer put me in touch with a chartered surveyor called Debbie Copeland, who was instrumental in encouraging me in my career. Debbie is now the chair of the Gloucestershire RICS Matrics group, and I sit on the committee with her.

My current employer, Atkins, also has a refreshingly supportive way of working. It focuses on having a diverse workforce and actively promotes the benefits of this in terms of innovation, profit and being better able to meet its clients’ needs. For example, it has an internal Women’s Professional Network and a buddy and support system, as well as diversity and inclusion committees across the world.

The RICS Inclusive Employer Quality Mark (IEQM) has had a positive impact on employers too, and is a great way for them to lead the way, as well as enabling employees to choose companies that they know support diversity (see p.20 of this issue).

An ever-expanding list of employers is signing up to the IEQM; if you are interested in reading more, please visit http://bit.ly/2bd9WE.

Protective gear
However, it is not just personal support and professional initiatives that influence who enters and stays in our profession. Have you ever considered the importance of innovation in personal protective equipment (PPE) in relation to changing the future of our workforce, and how this has led to a lack of diversity in the past?

I have had considerable involvement in PPE innovation for women since my last article, having designed the ‘Sophie Shoe’ with women in mind. Because women tend to have smaller, narrower feet, we have been poorly served by the safety shoes that are available for use on most construction sites and for surveying work in the past; so it has been great to devise comfortable and stylish footwear (see image, left), which is manufactured by Amblers Safety and is available across Europe, that also provides the required safety features.

As a result of designing the shoe, I was chosen to be on the judging panel of the national Professional Clothing Awards. I considered the entries along with designers, manufacturers and industry experts. I learnt so much from the experience, which should contribute to the overall objectives of attracting more women into the profession and highlighting the challenges we face.

President precedent
It was a moment to celebrate in 2014 when Louise Brooke-Smith became the first female president of the RICS in its 144-year history. Neither has she been a one-off, as Amanda Clack began her term as President in 2016.

Amanda is a fantastic role model, and her enthusiasm and hard work in diversity and inclusion in the profession is infectious. She has been inspiring to many and has continued to bring RICS’ drive for change to the fore.

I have discussed the ways in which you can help support change, from giving talks to designing PPE, and even becoming RICS President.

But there are also simple and effective initiatives to which every member can contribute.

Social media is a powerful tool helping us to get our message across. The hashtag #SurveyingtheFuture has been instrumental, for instance, and since it was launched in 2014 there have been more than 3,000 tweets with it, totalling 12.6m potential impressions; that is, the total number of times it could have appeared in users’ Twitter feeds in this time.

More recently, RICS has launched the #LoveSurveying campaign. This is designed to encourage professionals to post about why they love surveying on social media such as Twitter and Instagram, using the hashtag to spread the word about what we do and in turn influence career choices.

It is clear that we have achieved a lot over the past year, but looking at the bigger picture – being aware that only 13% of RICS members are women – there is clearly much further we need to go. We all have a part to play, and we must continue to help women fulfil their potential.

Let us work together to make this happen. The bottom line is that greater diversity makes good business sense.

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Lucile Kamar sets out the case for a more diverse workforce, and looks at how RICS is helping members to make it a reality

Diverse and dynamic

It is estimated that, by 2028, women will control close to 75% of worldwide discretionary spending (http://bit.ly/2gZyYpG). Women are already becoming increasingly influential as clients and the surveying profession is facing a skills shortage with an ageing demographic, according to the recent RICS Surveying the Future research. RICS report Our Changing World: Let’s be ready highlighted that one of the key areas employers wanted RICS to address in conjunction with them was the “war for talent”.

The sector currently suffers from a perception that it is not diverse enough: just nine property businesses made it on to a 2015 list of the UK’s 100 most gay-friendly workplaces compiled by the charity Stonewall. Moreover, recent gender dynamics suggest it will likely be at least another 40 years before the number of female chartered surveyors comes close to equalling the number of males.

RICS-qualified membership statistics tell us:
- that only 13% of surveyors are female, with 19% of commercial surveyors and 17% of residential surveyors being women
- that 1.2% of surveyors come from Black, Asian or minority ethnic backgrounds
- that those with disabilities make up fewer than 1% of the profession
- we have no data for lesbian, gay, bisexual and transgender (LGBT) surveyors.

Inclusive Employer Quality Mark

RICS has a duty and an ambition to act as a catalyst for change across the profession. One way RICS is contributing is through the RICS Inclusive Employer Quality Mark (IEQM). Launched in 2015, the IEQM has recently reached its 120th signatory, and now covers more than 150,000 people in total.

The IEQM is the benchmark for inclusion and diversity in land, property and construction, and is based on six principles: leadership and vision; recruitment; staff retention; staff development; staff engagement; and continuous improvement. The mark is designed to change behaviour by encouraging all firms, large and small, to look carefully at their employment practices and put inclusivity at the heart of what they do.


Companies in the top quartile for gender diversity are 15% more likely to have financial returns above their respective national industry medians. Creating a diverse and inclusive environment therefore makes business sense, and is also in line with the Equality Act 2010.

Companies in the built environment are at different stages of progress towards being diverse and inclusive. A common request from our members and members’ firms however, was to create a place where they could share best practice. It was felt that learning from business leaders and external organisations would embed diversity and inclusion principles in their workplace.

Online hub

We have therefore revamped our diversity website by creating the first professional hub of best practice and case studies. This has been described by our members as the “missing piece of the puzzle”, proving that putting diversity and inclusion measures and policies in place does not have to be a time-consuming or resource-intensive process.

This is very much in line with RICS’ ambition to support our members and their firms in diversity and inclusion. We continue to lead the way by promoting this agenda, and welcome contributions from all practices, so do please get in touch if you would like to take part.

We are also inviting professionals to join us for a series of UK-wide networking lunches in the regions, concentrating on improving diversity and inclusion practices in land, property and construction. Each lunch will feature a panel of industry representatives discussing topics related to one of the principles of the IEQM. Visit rics.org/diversity to find an event near you.

Finally, we are committed to ensuring that our profession is as open and inclusive as possible, and we believe that this comes about by empowering members and organising events. For example, in October we celebrated Coming Out Day at RICS HQ in Westminster for the LGBT community and its allies.

RICS is ready to offer advice, guidance and support to firms, and we continue to lead the way by driving the diversity and inclusion agenda in the profession. To advance responsible business practices, we have embarked on a number of initiatives to improve diversity and inclusion throughout the property, land and built environment sectors.

Do get involved now, and if you have any questions or comments, please contact me at the email address below.

Lucile Kamar is RICS Equalities Manager
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Inspiring the next generation

James Baker explains what RICS is doing to encourage future generations of surveyors

As a chartered surveyor, and having been RICS Matrics UK Chairman 2015–16, I am pleased to see that the profile of surveying is a priority for RICS with the appointment of a Future Talent Director.

We need to be loud and proud about what we do and encourage future generations into careers in surveying. Recruitment is key, but the profile of our job first needs to be elevated to sit alongside other careers of choice, such as solicitors and accountants. Recruitment will then be improved as larger talent pools will be available.

**Diversity**

Diversity is clearly an issue, with surveying lagging behind other professions. However, it is not all doom and gloom, and things are definitely changing. For instance, the RICS now has an Inclusive Employer Quality Mark, with large employers recognising the benefit of having a diverse workforce. In 2015–16, the RICS Matrics board had an almost 50/50 split of male and female members as well.

Diversity is obviously not just a matter of gender, and attitudes are changing for the better to ensure that surveying is a more inclusive profession. Teams with which I have worked have definitely become more diverse, and it is important that we continue to make forward strides on this.

**Profile**

In terms of profile, the board and its network of 40 local groups across the UK are working with the RICS Future Talent team to implement a newly established RICS careers strategy. Both the board and local members will inspire the next generation of surveyors by running workshops and presentations for a range of schools and technical colleges.

We have already consulted with the target audience, and it is clear that students want to experience prospective careers through interaction and case studies.

I look forward to being one of the team that helps raise the profile of the profession by attending careers fairs and engaging with students.

Surveying needs to be portrayed as a diverse, forward-thinking profession with vast opportunities; the RICS is working hard to achieve this, and RICS Matrics intends to be integral to the process. We need the support of employers to promote the profession, to signpost placements, and to provide inspiring case studies.

**Schools**

I have visited local schools to talk about surveying as a profession, attending careers fairs as well as giving presentations with which students have engaged with interest. I particularly remember one large fair where virtual reality technology was used to demonstrate the vast range of opportunities that careers in surveying can offer.

RICS has invested in and now launched a “World” on the careers website Plotr (www.plotr.co.uk), which is used at schools and colleges by young people to find out about potential careers. This is a great use of technology to reach out to a wider audience and present surveying as a possible career.

With the appointment of a Future Talent Director and team at RICS, I have no doubt that things are moving in the right direction. It is vital that RICS members and firms work together to raise the profile of surveying. With this joined-up approach we can make big advances; if we do not work together, then there is a chance that the message could be diluted or disjointed, having little or no effect.

I am extremely passionate about surveying, and am looking forward to contributing to giving the profession a higher profile. When I became RICS Matrics UK Chairman in June 2015, I wanted to inspire the next generation through careers and education, and this is something I fully intend to continue pursuing. I encourage anyone with a passion for what they do to contact the RICS and get involved as well.

The profile of our job needs to be elevated to sit alongside other careers of choice.

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James Baker is an associate at Artelia UK and former RICS UK Matrics Chairman. james.baker@uk.arteliagroup.com

If you have any thoughts about RICS’ Future Talent strategy, please contact Barry Cullen at bcullen@RICS.org
Balconies are an increasingly common feature of urban development as designers strive to harness precious outdoor space, especially in high-rise buildings. But careful consideration must be given to materials and structural design to mitigate the risk of a balcony fire spreading to other parts of the building.

This is the finding of a BRE Global report for the Department for Communities and Local Government carried out under the Investigation of Real Fires contract. Written by Ciara Holland, Martin Shipp and Dr David Crowder, *Fire safety issues with balconies* cautions that design choices made to prevent thermal bridging or improve insulation in balcony structures and meet Part L of the Building Regulations may be compromising fire safety under Part B (http://bit.ly/2dk7nOm).

At the same time, the report says, Part B provides no specific fire design guidance for balconies, except when they act as a means of escape. This effectively means that there are no statutory requirements accounting for external fire spread from the incorporation of balconies into a structure, leaving the resolution of any issues subject to interpretation of the Building Regulations.

Citing several case studies of fires in high-rise residential developments, the report reveals that blazes starting on a balcony can be quite severe and may spread to the balcony or flat above via windows. The presence of inappropriate cladding material can also encourage fire to spread up the entire facade of the building. These conditions could endanger the lives of residents on higher floors and may cause burning material to fall to the ground, with potential spread downwards or into adjacent buildings.

Some of the investigations that are highlighted show that, in meeting the requirements of Part L, there had been an adverse effect on compliance with Part B.

One such case involved a fire on a concrete balcony fitted with timber decking and battens, underlaid with polyethylene spacer rings and foam insulation covered by a woven plastic sheet. The fire spread to insulation behind cladding systems on external walls, and to the balcony ceiling, which had expanded polystyrene insulation behind a render. It also spread under the decking to the balcony of the neighbouring flat on the same level.

Current high demand for housing and the premium put on private outdoor space is likely to see a proliferation in balconies in new developments, inevitably increasing the risk of balcony fires; BRE Global reported on six fire incidents in 2015 compared with just one in 2005. If a balcony’s design has not adequately considered all parts of the Building Regulations, the potential remains for a fire to pose a significant threat to life.

### Survey of the profession

More than 5,796 members of the profession responded to RICS’ latest survey. Our areas of focus continue to be as follows:

- ensuring demand for RICS standards and qualifications
- establishing regulation worldwide that provides the profession with a competitive advantage
- attracting the brightest and best talent to the profession
- agreeing international standards, in collaboration with partners across the markets in which we work
- explaining clearly what the value of RICS’ plans is
- putting the profession ahead of the competition with cutting-edge training, knowledge and information.

For more information on the results of the survey, see www.rics.org/professionsurvey2016
Role modelling a diverse profession

Role models are very powerful. They can motivate us, teach us, unlock our potential and overcome barriers. And we are all potential role models – with skills and experiences that would be hugely valuable to share with others. We have a responsibility to share our knowledge and experiences to inspire the next generation.

A key part of the RICS diversity and inclusion campaign Surveying the Future is to promote role models. We need to take multiple different approaches to create a profession that better reflects the varied societies and individuals whom we serve. Everyone needs the opportunity to choose their path and, for some groups in society, it remains the case there are fewer opportunities than there should be.

Young people from black, Asian and minority ethnic backgrounds, for example, often have a more limited number of role models, and so choose their life path from a narrow range of options. Employers too have a limited number of role models. With boards being stereotypically full of white, middle-class men who went to university, these are often qualities they seek in new members.

There is no quick fix for ensuring diversity in our profession when our professionals are far from representative of society as a whole. It will take a combined effort from government and individuals. However, role models actively demonstrate that barriers can be overcome. The more we celebrate individual success, the easier it becomes to surmount barriers.

This role modelling can also be formalised through mentoring. To kick-start the process, we are delighted to be launching an international mentoring initiative between the UK and South Africa. This is part of our commitment to support colleagues around the world in developing a more diverse profession.

We believe that international collaboration enables us to share the opportunities and challenges of fostering diversity. The hope is that this idea will spread globally.

Ultimately, we can all be role models if we are proud of what we do, remember what others have done for us and pay it forward. The idea should be to climb the ladder and bring someone with you as you do so.

Amanda Clack is RICS President

CORRECTION

The opening sentence of “A voice for Europe and beyond” (Building Control Journal November/December 2016 p.7) should have read: “The Consortium of European Building Control (CEBC) was formed in 1989 at a meeting in Brussels between members of the Institute of Building Control and the then Commission of European Communities, with the aim of creating a body to represent the profession across the continent.”
Taking up the cause

Richard Scott marked the beginning of his presidency of the organisation Local Authority Building Control (LABC) with a pledge to improve consistency and standards in the way its members work in England and Wales. He wants to see targeted performance standards, comparative measurement and better definitions of best practice.

Scott, the Building Control and Land Charges Team Manager at Ashfield District Council, took up the role at the annual president’s reception in London in October, succeeding 2015–16 incumbent Jayne Hall.

LABC represents departments across England and Wales. The office of president is a voluntary position that allows holders to take a lead on local authority building control issues. The president is drawn from members at council teams and volunteers who have a strong networking background in their regions or who have led development through an LABC working group.

“I believe in improvement, and LABC is investing in that through standardised reporting, consistent records, a new learning platform and changes to the way that its working groups and committees relate to each other. Local authorities with similar profiles need to be more consistent in how they deliver building control and customers’ experiences need to be more comparable,” he explains.

Scott believes this will contribute to other discussions in the industry, at departmental level in local authorities and in the Welsh government. Various all-party parliamentary groups and committees are looking at the quality of the building industry and the role of building control, he says.

Compliance

Discussions tend to focus on site inspections, however, and, as Scott explains, one of the most important routes to compliance is through pre-application discussions, plan-checking and design team advice. All these activities can be carried out by local authority building control before construction starts.

“One of the best, most efficient and effective forms of compliance intervention happens when we are giving feedback on design concepts or detailed plans. So many issues are resolved at this stage and it enables the specification, supply chain management and site supervision to work more effectively. This was borne out by all the work of the Zero Carbon Hub, which showed that good design and specification sets projects on the right path.”

Scott says he will spend his presidential year meeting industry leaders, policymakers and local government to raise awareness of best practice and pre-contravention intervention and explain their economic value. He will be commissioning research to demonstrate how plan-checking saves money for developers and contractors, improves compliance and enhances the technical quality of construction.

Charity of the year

As is tradition with LABC presidents, Scott named his charity of the year, which is Pancreatic Cancer UK.

He explains: “Most of us will have lost someone special in our lives and I am no different. I lost both my parents when I was 11 years old and was very fortunate to gain a new dad in the form of my father-in-law when I married my wife Jo-Ann back in 1989. John Radford seemed to know everything and could turn his hand to anything, too.

“We sadly lost John to pancreatic cancer in May 2012 and that is why I am supporting Pancreatic Cancer UK in my presidential year. All cancers are awful, but pancreatic cancer has seen no tangible improvements in survival rates in the past 40 years. I appreciate there are many worthy causes, but I hope as many as possible find time to donate.”

To make a donation to Pancreatic Cancer UK, visit www.justgiving.com/LABC-President3
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Paul Yandall, Project Manager and Quantity Surveyor, Torbay Development Agency

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