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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 0 +44 (0)20 7666 8555 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 0 sales@proquest.co.uk or SWETS Print Institutional Access 0 info@uk.swets.com 0 +44 (0)1235 857500 for print subscriptions

To take out a personal subscription, members and non-members should contact licensing manager Louise Weale 0 lweale@rics.org

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Design by: Redactive Media Group
Printed by: Page Bros

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Martin Conlon illustrates the value of correctly conducted building control by looking at what happens in its absence

Under control

Have you considered what the UK would be like without building control? The recent report into the collapse of parts of school buildings in Edinburgh shows how vital we are (http://bit.ly/2lGRWn4).

The report found there were insufficient or incorrect wall ties while cavities were not uniform, causing the wall at Oxgangs Primary School to collapse. Similar faults were apparent at 16 other schools that were declared unsafe.

The report makes clear that a lack of scrutiny and supervision allowed those mistakes to be made, and explains that the assurances the council thought it was getting were not the checks actually taking place.

Reduction of costs and inadequate supervision of building work are repeated themes in the report. It recommends that any similar buildings are checked not just visually but by physical inspection inside the walls.

Look at Latvia

Without building control, things can get far worse, however – as one historical precedent proves.

When the Soviet Union collapsed in 1991, Latvia regained its independence as a nation. With an area twice the size of Belgium and forests covering 45% of its land, building control was not high on the national agenda, though, and construction went on unchecked.

That was until the collapse of a roof at the Maxima shopping centre in the capital city, Riga, on 21 November 2013, which killed 54 people. This was investigated by an especially convened parliamentary commission, which concluded that the government had to amend construction law and develop a state-controlled system to inspect and approve construction works.

The Latvian government moved very quickly and a law introducing building control came into force on 1 October 2014, less than a year after the disaster. Latvia's State Construction Control Bureau, under the Ministry of Economics, began operating on 1 October 2014 with the aim of ensuring quality and safety in the construction industry, complying with both local and EU regulations. It controls the operation, maintenance, construction, reconstruction and commissioning of public buildings and facilities.

One of the bureau's main tasks is to inspect existing buildings for compliance and safety issues. By using a traffic-light system, it has been able to assess the state of the existing stock: a green light signifies a safe condition with no issues; amber a safe building or one in critical condition that needs to be shut down until improvements are made; and red an unsafe building or one in critical condition that needs to be shut down until improvements are made.

The bureau inspected more than 2,800 existing buildings in 2015 and 2016. It found that 56% are in excellent or good condition but the remaining 44% are not safe, and 6% are actually dangerous. Of those buildings that were identified as dangerous, the largest group was offices, with particular concerns being expressed about fire safety; chiefly, the absence of any means of early detection and warning as well as poor provision of escape routes.

New building works are also part of the bureau’s remit. In 2016, it carried out 700 inspections of construction works in progress; compliance issues were found on 48% of sites, and in 25 cases these proved so severe that the main works had to be halted until all the remedial measures required were taken.

In the UK, questions are often asked about the value of building control, with some quarters advocating less or even no control, meaning that construction would have to be self-regulating.

What the experience of Latvia shows is that, left to its own devices, the industry will slip into complacency, resulting in buildings that become unsafe. This creates a risk that any civilised country simply cannot ignore.

So when anyone queries with me the need for building control, I tell them about the Latvian experience, and ask whether any society would accept 54 deaths as a result of poor construction.

Martin Conlon is Chairman of the Building Control Professional Group
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Looking BRACward

Having stepped down from the Building Regulations Advisory Committee, Dave Mitchell reflects on its essential role

Last year was one of change for many, and people are still trying to get to grips with the UK’s decision to leave the EU. At a more personal level, I have experienced my own “BRACxit”: after some years as a member of the Building Regulations Advisory Committee or “BRAC” (http://bit.ly/2jJ92kA), my term of office ended last year.

I found the time I served informative in many ways. For instance, I never realised when I first joined the committee how much work goes into formulating new Building Regulations; neither was I aware of the depth of knowledge that government officials have and the many procedures and protocols they have to follow.

BRAC begins

BRAC was established in 1962 under section 9 of the Public Health Act 1961, which has since been superseded by section 14 of the Building Act 1984. The committee advises the Secretary of State on the exercise of their powers to make Building Regulations as well as related matters.

Under the act, the Secretary of State has a statutory obligation to consult BRAC before introducing any Building Regulations containing substantive requirements, such as a Part L change, as opposed to simplified wording.

BRAC also serves as an important sounding board for many policy, technical and legal matters that directly affect the building and construction industry.

When I first joined the committee, it covered both England and Wales, but in December 2011 Welsh Assembly ministers gained the power to make Building Regulations in the principality, and they now oversee their own version of BRAC.

BRAC still advises the Secretary of State in Westminster on making, reviewing and, where necessary, revising the Building Regulations, as well as on setting standards for the design and construction of buildings in England. It is an advisory, non-departmental public body, also designated as a Scientific Advisory Committee.

The regulations and standards govern the health, safety, welfare and convenience of people in and around buildings, as well as energy conservation and sustainability, prioritising issues on which the Department for Communities and Local Government (DCLG) will be concentrating in the coming years.

With building practices, technology and construction techniques constantly evolving, there is a need to ensure that Building Regulations are fair, efficient, up to date and effective, fulfilling their stated objectives without having any unintended consequences. By and large, BRAC manages to achieve this successfully.

After a candidate is interviewed by the DCLG, a recommendation is given to the Secretary of State who then appoints members to BRAC to ensure it has sufficient expertise and experience in the required areas. Members serve a two- or three-year term, and can be re-appointed to serve up to a maximum of 10 years.

Members’ depth of knowledge of their relevant areas ensures a unique breadth and quality of scrutiny for proposed changes or regulations. In my case, I provided a housebuilding perspective, offering practical and economic solutions where appropriate and sitting on many working groups that have helped formulate recommendations for regulations and changes.

I’m sure BRAC won’t mind me saying that it consists of a strange bunch of people, and we have not always seen eye to eye. However, we all have a great deal of respect for each other’s expertise; there is also general recognition that the advice BRAC gives to the Secretary of State on regulatory changes is absolutely essential to ensuring that these are sensible and practical for the wider industry.

So I will miss BRAC, but take with me a great deal of satisfaction from what was achieved during my time in office, as well as a lot of happy memories.

“I don’t want to out them.”

Dave Mitchell is Technical Director at the Home Builders Federation

www.hbf.co.uk
Unpicking a quarrel

The best way of avoiding disputes is to think about resolution procedures at the outset of the contract, argues Laurence Cobb

As parties put together a contract, they may wish to include provisions for formal dispute resolution processes such as litigation, arbitration and adjudication. Adjudication is perhaps the best known of these methods for resolving construction disputes in the UK since its statutory introduction by the Housing Grants, Construction and Regeneration Act 1996, though like litigation and arbitration it involves the determination of a dispute by a third party who makes a binding, albeit temporary, decision on the parties.

Other forms of dispute resolution include mediation, conciliation and dispute review boards – where non-binding decisions are recommended to the parties – although these are also less commonly used forms such as expert determination or the court settlement process.

Commercial contracts, and construction contracts in particular, can often include escalation provisions requiring that the parties first negotiate in good faith before going to adjudication or arbitration. Other contracts, for example the New Engineering Contract, adopt early warning procedures to try to resolve conflicts before they develop into significant disputes.

Know your contract

For contract administrators, the first practical step to take towards avoiding disputes is to know your contract. This not only involves checking the dispute resolution provisions, but ensuring the following as well:
- that records are maintained clearly
- that risk registers are updated where appropriate
- that good project management and communication practices are adopted.

In addition, all elements of the contract should be kept together so that they can be readily retrieved in their entirety.

For contract negotiators, letters of intent should be used carefully and drafted appropriately, being superseded by the requisite signed contract as soon as possible. Disputes over whether certain terms form part of the contract are best avoided if possible.

Parties should also make sure that the dispute resolution provisions are considered early so those chosen are appropriate for the particular contract. Relations between the parties may always sour, even when they have worked together successfully on projects in the past or have already established a good working relationship.

For example, the contractor’s representative on a hydroelectric power plant in Scotland described the employer as “the best with whom he had worked” and had established a good working relationship from the outset, providing weekly and monthly reports on technical issues. However, this still did not prevent the parties becoming involved in a £130m dispute (SSE Generation v Hochtief [2016] CSOH 177).

Another practical tip is to ensure that dispute resolution provisions in any subcontracts contain similar provisions for resolving disputes as the main contract, since it is far easier and cheaper for disputes to be dealt with in the same forum rather than run the risk of having conflicting provisions in related contracts.

Avoiding conflicts

As already indicated, there are a number of methods for resolving disputes, and further detail can be found in the RICS Conflict avoidance and dispute resolution in construction 1st edition guidance note (www.rics.org/conflictavoidanceguidance).

In recent years, though, there has been much more emphasis on collaboration between the parties and on attempts to deal with disputes early as efficiently and economically as possible, rather than embark on an adversarial dispute once the contract is complete.

For large projects, bespoke dispute resolution provisions could be adopted, such as those adopted by Transport for London (TfL) in the Crossrail project contracts. The Conflict Avoidance Panel (CAP)’s provisions in TfL’s contracts are intended to be less adversarial than adjudication: the CAP consists of between one and three people who can be appointed at short notice when issues arise, and whose role is to produce a non-binding recommendation within 21 days of the appointment.

The parties are not obliged to accept that recommendation, but if it is followed then it should provide impartial guidance, which should then help the parties avoid
the need for formal resolution of the issue. By not being a standing panel, the CaP differs from the dispute adjudication boards under International Federation of Consulting Engineers (FIDIC) contracts, or indeed dispute review boards, which are usually convened at a project’s start.

**Dispute boards**

Where a dispute review board can make a non-binding recommendation, a dispute adjudication board can issue a formally binding decision. Both boards operate in a similar way: the members visit the site periodically to acquaint themselves with the project, and meet regularly to hear about its progress and any disputes that have arisen.

The board sits on all disputes that might arise on the same project, and as the parties become familiar with the way the board members view particular issues, that knowledge will help them when they are seeking to prevent disputes that might be brewing. Nevertheless, maintaining such a board throughout the project is an expense that can only be justified on major projects.

Dispute resolution advisor (DRA). They are appointed by the parties at the outset of the project and use mediation techniques to help resolve disputes. The DRA makes no recommendation or binding decision, but they can get involved before a dispute has crystallised, with the aim of helping the parties agree how to resolve differences between them.

Of course, negotiation between the parties is always available as an option to settle a dispute, should they be able to agree, regardless of what the contract provides; a mediator can also be appointed to help the parties with any such negotiations.

**Pre-action Protocol**

That parties often need help in resolving disputes can also be seen in the recently revised Technology and Construction Court Pre-action Protocol for construction and engineering disputes.

Although following the revised protocol is optional, one of its aims is that the parties take appropriate steps to resolve their dispute without resorting to litigation by considering alternative approaches. The revised version of the protocol also introduces the concept of a referee procedure, which is designed to assist the parties in compliance.

**A range of alternatives**

This article has outlined some approaches to dispute resolution and looked at the opportunity to consider, at the outset of a project, mechanisms that can be used to resolve matters by dealing with disputes as amicably and economically as possible.

Experience shows that such provisions are among the least commonly read in a contract, and looking at them only after a dispute arises at best means disappointment and at worst a very painful and expensive adventure.

In recent years, there has been much more emphasis on collaboration between the parties.
A recent review of the code of conduct for the Construction Industry Council Approved Inspectors Register puts principles rather than prescription at its heart, writes Robin Somerville

**Code of confidence**

The Construction Industry Council Approved Inspectors Register is operated by CICAIR Limited, the body designated to regulate private-sector providers – that is, approved inspectors – of building control work in England and Wales. CICAIR has recently concluded a review of the Code of Conduct for Approved Inspectors; the code sets out the fundamental principles of behaviour to which approved inspectors are expected to adhere. The review working group initially undertook an open consultation with the industry on the important features that professional standards should have.

One important piece of feedback from this consultation was that the code should be a set of guiding principles rather than a rigid and prescriptive list. The code does not attempt to cover every situation where an approved inspector may face professional or ethical issues, neither does it oblige them to respond in a particular way. Instead, it adopts a value system based on the principles of appropriate professional behaviour.

The proposals were taken back to the industry for a second consultation. The feedback was overwhelmingly supportive, carefully considered and widely adopted. The final draft was approved by the CICAIR Board of Directors in October 2016 and came into force on 1 January this year, with a two-month transitional period.

**Three themes**

The new code has three central themes: honesty and integrity; competency; and accountability.

Honesty and integrity mean not only telling the truth, but doing the right thing regardless of the consequences and adhering to moral and ethical principles. The code places a duty on approved inspectors to act with honesty and integrity in every situation; to comply with all relevant laws and regulations; to act impartially and not allow bias, incentives, professional or financial conflicts of interest or the undue influence of others to override professional judgements; and to act in the best interest of the profession when dealing with all other building control bodies.

The code also places a duty on approved inspectors to act in a competent manner. It does this by mandating that they provide an appropriate standard of service; act with professional skill, care and diligence; recognise and work within the limits of available competence or resources; keep their professional knowledge and skills up to date; and pay due regard to industry best practice, technical and professional standards and to the CICAIR Code of Conduct guidance notes. These notes support the code and have been drafted in order to help approved inspectors comply with its requirements.

Lastly, the code requires approved inspectors to be accountable not only for their own decisions but also for duties and tasks that they delegate to others. Approved inspectors may only delegate work in accordance with the requirements of the code.

These requirements also provide a framework for the manner in which approved inspectors procure work and deal with complaints. Lastly and most importantly, the accountability provisions place a duty on approved inspectors to uphold the reputation of the profession and of CICAIR as its regulator.

**Protective purpose**

The fundamental purpose of regulation is to maintain the reputation of the profession as one that can be trusted. A profession’s most valuable assets are this trust, its collective reputation and the confidence which that inspires. The code of conduct is built on the tenet that the profession’s reputation is more important than the fortunes of any individual inspector. Approval to act as an inspector brings many benefits, but with these comes the responsibility to act in an appropriate manner.

Some approved inspectors are also members of RICS, and it has agreed with CICAIR that, where a regulatory matter concerning the building control function arises and the approved inspector is also an RICS-regulated firm, CICAIR is to be the default point of contact. Although the CICAIR and RICS codes differ in some of their requirements for professional and ethical conduct, approved inspectors are required to follow the more stringent provisions where these are a CICAIR requirement, insofar as the building control function is concerned. CICAIR is confident that its new code of conduct will build on the work it has been undertaking over the past few years to drive up standards. Through robust professional regulation, CICAIR believes that public confidence in the profession will be protected and enhanced.

This will provide approved inspectors with an environment in which they can develop successful businesses with a knowledge of what is required of them, and the confidence that these requirements are being fairly, but firmly, enforced.

Robin Somerville is Chairman of the CICAIR Code of Conduct review working group.

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Related competencies include Building control inspections.
Simpler submission

Scotland’s eBuildingStandards service is streamlining the process of seeking permission for building works, says Bill Dodds

Launched in August 2016, the eBuildingStandards service is already proving very successful. The launch follows the revamp of ePlanning, which went live in January last year.

The eBuildingStandards service makes it quicker and easier to apply for building work, whether it is an individual home improvement project or a larger commercial development, and enables related payments to be made online.

The eBuildingStandards.scot and ePlanning.scot services are both hosted by the eDevelopment.scot site. The site not only offers access to both portals via a single login system, it also includes facilities such as new mapping tools, and offers potential for further expansion into other online services in the future.

More than 8,000 applications have been submitted and 6,000 users have registered since the site went live in December 2015 (http://bit.ly/2jN8qul).

At the official launch event for eBuildingStandards.scot in Edinburgh last September (see image, above right), Kevin Stewart, Scottish Minister for Local Government & Housing, said: “The success of ePlanning drove demand for a similar service for eBuilding Standards. Over the last seven years, ePlanning has developed a strong reputation and excellent customer base. Three-quarters of all planning applications are now submitted online. To date, customers and authorities have saved around £40m since 2009.

“In today’s world, we know that customers want to engage digitally with local and central government. The drive to expand to eBuildingStandards came from customer feedback. We listened and responded to this and will continue to do so.”

Stewart added: “Together, the two portals offer applicants and local authorities an opportunity to save in cost and time with every application made online. This could see savings of more than £73m over the next five years for customers and local authorities.”

The minister was keen to recognise the vital partnership role played by Scotland’s 32 local authorities in helping Holyrood provide this service. “This shared commitment and strong sense of joint ownership has enabled challenges to be overcome as a collective. Over the coming months, we will continue to work with our partners to drive forward with further opportunities for digital transformation,” he said.

Also speaking at the launch event, Robin Presswood, Head of Economy, Planning and Employability Services at Fife Council, said: “Online applications have significant customer benefits. They are simple, save applicants time and money and are delivered to us swiftly, so enable us to start considering applications sooner.

“The new eBuildingStandards.scot portal provides an easy way for submitting applications for building warrants, completion certificates and other related forms.

“The ePlanning service launched in January 2016 has already helped us to drive business efficiency, improve performance and increase community engagement. The eBuilding initiative is another step forward in ensuring that Fife Council is best placed to meet the needs of businesses and increase sustainable economic growth.”

Eugene Mullan, Architect and Director of Smith Scott Mullan Associates, added: “As architects, we operate in an almost entirely digital information world. It is important that we are able to interact efficiently and effectively with our clients and local authorities in submitting documents such as building warrant applications. We welcome the eBuildingStandards initiative and see it as an opportunity to improve the efficiency of this process.”

The eDevelopment Programme recently received the Digital Services Award at the 2016 Scottish Public Services Awards.

Bill Dodds is Head of the Building Standards Division at the Scottish Government bill.dodds@scotland.gsi.gov.uk

Related competencies include Legal/regulatory compliance
Surface value

An increasing emphasis on energy efficiency is leading the construction industry to seek innovative ways to meet U-value and PSI-value targets, according to Behnaz Abedi

Big claims are made in advertising about the thermal efficiency and performance of many products in the construction industry – in fact, it’s a bit of a jungle out there. So how do you pick your way through it all?

Although it is not as frantic as the London Stock Exchange, the manufacturers and thermal team here at the British Board of Agreement (BBA) do get excited by a tiny change in the numbers.

We all know that we have a finite store of fossil fuel resources, while there is an ever-present focus on energy prices and our awareness of sustainability issues has never been higher on the agenda. In this context, the UK’s 2050 carbon targets are looking more and more challenging.

Increasing attention is thus being directed towards performance measures such as U-values and PSI values while regulatory requirements are progressively lowered. This has meant that the industry has had to take a step back and reconsider the design of buildings, the materials being used and how we are using them.

U-values & PSI values

A U-value is a measure of the heat loss through 1 sq. m of a building element – a roof, wall, floor or so on – and the calculation also takes into consideration any thermal bridges that occur throughout a building element, such as timber studs.

You can calculate the U-value of a specific building element from the inverse of the sum of the inside and outside surface thermal resistances, together with the thermal resistances of each layer that make up that specific construction.

This can be relatively straightforward calculation when dealing with simple structures such as homogenous layers; however, it may be more complicated when there are one or more “bridged” layers, such as timber studs or battens for services cavities, or ventilated air layers and fixings.

Most U-value calculation software can determine interstitial condensation risk – that is, within or between layers – and industry strives to use building designs that avoid moisture-related problems such as mould growth, fabric deterioration and even failure of the assembly.

PSI or Ψ (pronounced “si”) values on the other hand are a measure of heat loss along 1m of a junction between two different building elements – such as a ground floor and external wall – and account for non-repeating thermal bridges. There are three ways to declare PSI values:

- calculation by a person who has suitable expertise and experience
- using Approved Values from the Accredited Construction Details for part L of the Building Regulations
- using default values, which by their nature tend to be conservative.

While the Building Regulations use U-values to assess the thermal performance of an element of the building fabric, the overall thermal performance of constructions – that is, both the element and junction performance of a house – is assessed using more complex computer modelling procedures, such...
as the government’s Standard Assessment Procedure.

Incorrect data input
There are several software packages that are commonly used in the industry to carry out the thermal calculations and the associated condensation risk analysis – which means that there tends to be a perception that to know how to operate the software is to know how to perform the calculations.

The truth of the matter is that the software still generates a result even when the data input is inaccurate; such input is rarely deliberate, but instead tends to be the result of a lack of experience and understanding.

With this in mind, the BBA operates a competency scheme for assessing and monitoring U-value and condensation risk analysis calculations. This seeks to promote and assist accurate, objective and consistent calculations in the industry.

Members of the scheme have to satisfy the BBA of their competence via successful completion of four separate stages:
- initial screening
- office inspection
- validation and certification
- ongoing monitoring.

By the book

The calculation of U-values is not about manipulating variables to offer the thinnest possible insulation; it is about establishing realistic expectations for a product’s or component’s performance to help people achieve regulatory compliance, or better, and provide a corresponding improvement in a building’s energy use and environmental impact, and in the comfort of its occupants.

As an insulation manufacturer, there is nothing more frustrating than being told that a calculation is “wrong” because it shows a slightly thicker insulation product than someone else claims can be used. This is especially annoying when the other calculation has been worked out inaccurately or does not follow industry-accepted conventions and simply assumes the best-case values for other variables.

By meeting the scheme’s requirements and ensuring that technical staff understand how calculations are performed, we aim to assure our customers that they are being advised correctly and that the proposed product will perform to the required standard.

Paul Forrester is Technical Services Manager at Recticel Insulation

Based on the application form we receive, we send a selection of standard BBA calculations to the participant, which they have to complete and return.

On successful completion of this stage, we then carry out a technical interview to ensure that there is a sound understanding of the principles behind the calculations rather than just familiarity with software.

Next, there the applicant’s quality management system is assessed, which is done on an initial audit visit to its offices. A rigorous quality management system gives us the confidence that each calculation conducted is fully traceable, and also assures us that each possible complaint is recorded and the action plan to resolve it meets the BBA’s technical and customer service standards.

As part of the initial audit, a number of calculations will also be selected randomly from the participant’s database and validated in the BBA offices.

Once the applicant’s competency certificate has been issued by the BBA, we ensure that the quality is being maintained by a regular visit from our staff.

Registration under the BBA/Thermal Insulation Manufacturers and Suppliers Association U-value and condensation risk calculation competency scheme reassures any specifier or user that the data being provided has been subject to a rigorous, independent assessment process. They can therefore be assured that the output is representative and reliable.

Behnaz Abedi is U-Value Competency Scheme and Project Manager at the BBA
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Related competencies include Analysis of client requirements
Alex Frame stresses the important role of the often overlooked third surveyor in party walls disputes

The third way

The Party Wall etc. Act 1996 (the act) mentions three types of party wall surveyor. First is the “agreed surveyor”, who as their title suggests has been appointed as the single surveyor to resolve a dispute between the two parties. Next are the surveyors who are appointed individually by each of the parties to resolve a dispute. Finally, there is the “third surveyor”, who, in a case where there are already two appointed surveyors, is selected by them as a quasi-arbitrator, and they together form a tribunal.

When an agreed surveyor is appointed then there is of course no third, and as such the parties can be disadvantaged in the event of a disagreement with that surveyor because they have nowhere to take their complaint. The only advantage of appointing an agreed surveyor is one of costs as clearly only one fee is payable, usually by the building owner, rather than two.

“Selected”

Notice that I have said the third surveyor is selected instead of appointed, and this is as directed by the act. In fact, the nuanced term “select” is mentioned 10 times in the act when referring to third surveyors, who are never referred to as being “appointed”.

Once the two surveyors have been appointed by the respective building owners, their first duty is to select a third surveyor, as under section 10(1)(b) of the act. The legislation goes on to state: “All appointments and selections made under this section shall be in writing and shall not be rescinded by either party”. In other words, surveyors cannot then be sacked.

Having made the selection of the third surveyor, the first two tend to leave the matter there – and thereby actually fail in their statutory duty, because section 10(11) of the act says: “Either of the parties or either of the surveyors appointed by the parties may call upon the third surveyor selected in pursuance of this section to determine the disputed matters and [they] shall make the necessary award.”

We therefore find that, although the parties, or owners, have a right to call on the third surveyor to determine any matter as well as calling on the two appointed surveyors, they will not know they can do so or how to go about it unless their surveyors tell them who has been selected.

Advice line

The Faculty of Party Wall Surveyors (FPWS) runs an advice line for both the general public and surveyors, and having fielded many calls myself I am astonished at the problems that can arise.

It is very common to have someone on the telephone weeping as they inform me that, although a notice was served in January and surveyors duly appointed, it is now October and the two surveyors are still arguing, so no award has been made. This means that work has been unable to start, which clearly causes great consternation.

My answer has very often been: “You can of course call on the third surveyor to sort the matter out for you.” However, the reply to this tends to be: “Who is that?” I then explain the procedure to the weeping caller, who – surprised – returns to the appointed surveyor, only to receive one of the following answers.

- “Only the first two surveyors can call on the third.”
- “You don’t need to bother with the third surveyor as we’re dealing with it.”
- “We haven’t got one yet.”

These and other answers fill me with horror, and simply tell me that there are a lot of party wall surveyors who clearly understand neither the act nor the reason for their own appointment.

Then of course there is the situation whereby the two surveyors cannot even agree on the selection of a third. The act does not prescribe how this should be done, but it is customary for three names to be offered by the building owner’s surveyor, and if the other surveyor does not choose to select from this list then they usually offer a list of three of their own. This procedure may go backwards and forwards as the lists get ever longer, but usually after 12 names are offered, both appointed surveyors give up and move on to the next stage, which is covered by section 10(8) of the act.

This says: “If either surveyor appointed under subsection (1)(b) by a party to the dispute refuses to select a third surveyor under subsection (1) or (9), or neglects to do so for a period of ten days beginning with the day on which the other surveyor serves a request on [them] –

- “(a) in cases where the relevant appointing officer or [their] employer is a party to the dispute, the Secretary of State,
“may on the application of either surveyor select a third surveyor who shall have the same power and authority as if [they] had been selected under subsection (1) or subsection (9).”

The appointing officer

Unfortunately this very often causes more confusion, because it prompts the question: “Who is the appointing officer?”

Some local authorities do understand the role, though, and if they have one in place it will be someone from the legal department or, more often than not, from building control.

Most such authorities are the inner London boroughs, which have been dealing with party wall matters under part VI of the London Building Acts (Amendment) Act 1939.

However, this leaves many other local authorities throughout England and Wales in the dark, and they know very little of what to do when approached by party wall surveyors to select a third. I have received many calls from local authorities asking me to advise them; it is not their fault that they lack this knowledge, but a reflection on central government for not advising them of such a duty.

In order to help, the FPWS lists on its website competent third surveyors who have received training in how to act as such (www.fpws.org.uk). The Department for Communities and Local Government holds the same list, in the event that a local authority is unable to help and these surveyors need to be approached.

The local authority appointing officer – and it is our recommendation that this be the chief building control officer – may select from this list, and of course they do not have to dismiss any of the surveyors previously discounted by the first two, should one of these be considered suitable.

Heat loss tests

Building Research Establishment (BRE) has carried out first-stage tests on a prototype for rapid, accurate measurement of heat losses (U-values) from solid-wall homes. Created by Finnish university Arcada with input from the UK’s University of Salford, the device was entered into a BRE competition aimed at developing tools to help improve the thermal performance of homes of this kind.

The UK has more than 7m solid-wall homes and insulating them is a major challenge. Understanding heat losses from solid walls is vital to determining the likely energy, cost and carbon savings associated with solid-wall insulation, though to date policies have been based on modelled estimates of these.

BRE said the Arcada–Salford device moves the process forward considerably by focusing on robust, up-to-date and accurate data collected in situ by energy assessors. Supported by Department for Business, Energy and Industrial Strategy funding, the tool underwent a laboratory and field-based testing focusing on measurement accuracy and speed, ease of use and financial viability. With refinements identified for incorporation into the second-phase model, the tests will prompt further innovation, ultimately making significant improvements to the measurements that are critical for effective retrofit programmes.

Matthew Custard, Principal Consultant at BRE, said: “The tests were very encouraging and we are keen to see next stage development. These devices have the potential to differentiate wall performance and with investment could enable a more informed and effective approach to the development of thermal improvement strategies.”

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Alex Frame’s The Third Surveyor: A Guide is published by FPWS.
http://bit.ly/2eKdEaM

Related competencies include Building control inspections, Legal/regulatory compliance

www.bre.co.uk

Image © iStock

[Image 431x529 to 504x600]
[Image 49x541 to 376x843]
Although housing space standards are nationally described, there is little incentive and plenty of barriers to their application, argues Andrew Whitaker.

The Department for Communities and Local Government (DCLG)’s Technical housing standards – nationally described space standard, published in March 2015, sets out optional requirements for access and water that exceed the minimum standards in the Building Regulations. The same changes also introduced an optional, nationally described space standard for new dwellings (http://bit.ly/2aIQ6DW).

This means that it is up to the planning system to impose and police space requirements: but this can cause problems for planners and building inspectors.

Expansion and contraction
State intervention in the control of dwelling size began in the early 1960s. The recommendations published in the Ministry of Housing’s Design Bulletin 6 – Space in the Home in 1963 were modified to become mandatory standards for the government’s new towns programme in 1967 and, by 1969, applied to all public sector housing. But the requirements were withdrawn in 1980, primarily due to the public cost of meeting them.

Some of the requirements, such as central heating systems and flushing toilets, were subsequently adapted into Building Regulations, though not the space standards. The Housing Corporation dabbled with such standards in the 2000s, but these were not mandatory or applied to private-sector dwellings.

Adoption and application
Because the DCLG’s 2015 standards are not part of the Building Regulations, they are applied through the planning system. However, because they are optional, local planning authorities cannot merely apply the standards but must persuade an independent examiner that they are necessary in their area.

In making such a justification, authorities must also consider:
- how the provision of potentially larger dwellings affects development viability
- need for a transition period before applying the requirement.

To date, few councils have successfully adopted local plan policies requiring space standards, mainly due to their inability to justify such a policy, though the London Plan is one notable exception. The difficulty for most councils is that not only must they show that developers in their area are building dwellings below the minimum standards, they also have to show that applying the standards would not affect the affordability of dwellings. Since smaller dwellings are generally less expensive than larger ones, this is a very high hurdle to clear.

However, adopting a policy is only the start of a local authority’s problems. Even if it has an adopted policy requiring the nationally described space standard – and it cannot specify or require any standard other than the government’s – it must subsequently apply and enforce it when making decisions on planning applications.

Local plan policies do not apply to all development. Section 38(6) of the Planning and Compulsory Purchase Act 2004 states that decisions on planning applications should be made in accordance with the policies of the plan “unless material considerations indicate otherwise”; such conditions could include, for example, site-specific problems caused by topography or viability. Thus an application that does not conform to the minimum space standards can still be approved.

Enforcement and inspection
Enforcement and inspection of properties “as built” is not as simple, then, as ensuring that all properties meet the space standards, because a dwelling that does not comply with the standards may still not be in breach of its planning consent.

This view is seemingly supported by government guidance on the standards’ application, which states that local authorities should accept such submissions.

Similarly, bespoke designs should be tested against the policy requirements at the planning stage: dwellings that do not meet the standard should either be refused or approved on the basis of “material considerations”. There should be no necessity, as some have suggested, for local authorities to impose a planning condition requiring dwellings to fulfil the standards.

Checking that dwellings have been built as approved is not a core planning function for most local authorities, though, who tend to see compliance as a building control issue. While building control bodies may choose to check space standards as an additional service, they are not obliged to do so and there is no provision to levy additional fees on developers for this.

In a competitive service environment, there is little incentive for building control bodies to offer the service if it is going to cost applicants more, and with local authority resources already stretched there is very little chance that they themselves will cover these costs. This suggests that such checks will not happen, and that assessing the application of and compliance with policy can only be dealt with at the stage of making planning decisions rather than as part of building inspection.

All of this means that compliance and enforcement will be lax at best, if not non-existent, bringing into question the efficacy of adopting a local space standards policy.

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Related competencies include
- Legal/regulatory compliance
As the UK gears up to leave the EU, Stephen Barnshaw maintains that we could still learn a great deal from the way homes are built in Germany

"Even if the number of people coming to live in this country falls, we’ll have to build at least 220,000 homes a year for the next decade just to keep up with population growth," declared Sajid Javid, the UK Secretary of State for Communities and Local Government, last autumn (http://bit.ly/2kL8TPJ).

With government schemes such as Right to Buy and Help to Buy putting more people on the property ladder, 220,000 is still a conservative figure. We now have the Home Building Fund as well, the government’s £3bn incentive introduced in October to increase the number of homes being built in England. Applications are currently being accepted from the private sector to build new housing or prepare sites for development.

Since 1 April 2016, local authorities have also had to keep a register of those who want to build their own homes when planning for future housing and land use; while those authorities are also required under the Housing and Planning Act 2016 to ensure they have sufficient plots that are shovel-ready to match such demand.

Self-build
Contrast this with the situation in Germany: where land has been identified as suitable for residential development, the council then subdivides the site into a number of serviced plots. Once the infrastructure is in place then individual plots can be offered for sale, with those who live in the locality getting priority in that sale.

Within the constraints set by councils, plot owners can then ask custom homebuilding companies to design the building for them, and these businesses often offer a turnkey service.

Unlike the UK, where around 10–15% of new homes are self-built, the figure is more than 60% of new homes in Germany. As a result, the niche tag of “self-build” does not exist there.

Javid went on to claim, in an interview with Sky News earlier this year, that this information before visiting the factory to see the house in production. At the time of writing, the UK is still a member of the EU, it is party to the free trade arrangements that exist between member states, BS and EU standards are harmonised, and approval and certification mechanisms for products and systems ought to be freely transferable across the member states.

Despite this infrastructure, there can be interesting and subtle differences between the standards in each country. For instance, in Germany the minimum permissible height of guarding to balconies is 1,000mm, whereas in the UK this figure is 1,100mm.

We have not yet completed our approval of the Meisterstueck Haus system, but it has made us think about the way in which we procure and build homes here in the UK, what we can learn from our European partners and the role that off-site building will play in meeting the demand.

The next few years will be a challenge for the industry and the government to provide the homes we need. But given that we have promised them, shouldn’t we be keeping that promise?"

As the UK gears up to leave the EU, Stephen Barnshaw maintains that we could still learn a great deal from the way homes are built in Germany

A tale of two nations

Meisterstueck Haus's Hamelin factory in full production
Parts of the external wall in production
Completed Meisterstueck house in Kent

“Britain will get thousands of new homes through a quick-build modular method.” We are told that the forthcoming housing white paper will include measures to support “ready-to-go” homes, from factory-built to custom-made.

“If Germany and other countries can build made-to-measure, ready-made, ready-to-go modern, stylish homes, I think they can be an important part of what we can deliver in the UK,” Javid added.

Borders and barriers
I recently received a call from a client looking for us at jhai to secure approval under UK Building Regulations for a German factory-built dwellinghouse system based in Hamelin.

Meisterstueck Haus has been in the wood industry for more than 100 years, and the company currently specialises in construction of insulated, closed-timber panels as well as posts and beams for new dwellings.

Applying the Building Regulation requirements to a factory-built specification from another European country is not without hurdles. We were provided with technical specifications and structural engineering documents in German, and – with some assistance from the company’s UK representative – we were able to navigate our way through
Proper design, specification and installation is essential for drainage in tall buildings, writes Daniel Oliver

From design to construction, tall buildings are some of the most complex projects faced by construction professionals. Although the effects of getting things wrong may not be immediate, without the proper expertise in place throughout then drainage in tall buildings may eventually fail.

Using the end-to-end expertise of a drainage manufacturer and installer is the best way to prevent any future complications. From design to product training, bespoke fabrication and installation, an holistic approach is needed, considering all potential issues, from complicated systems and high numbers of toilets to dealing with rainfall.

Proper installation

If drainage systems are to function properly, it is vital to assemble and install products correctly. Training on the benefits and specifications of a company’s entire portfolio allows the right products and systems to be installed on any given project. A “one size fits all” mentality does not work for drainage, particularly when systems are complicated.

Many construction professionals underestimate the complexities of designing and installing drainage in a building, with tall buildings presenting additional challenges. Working with a single manufacturer from the design to the installation of products can often obviate these issues.

Successful drainage systems require pressure to work successfully. For every 70.1cm of building elevation, 6.9kPa of air pressure is sacrificed, and a drainage system can be compromised as a building’s height increases. The pressure must be maintained throughout the entire system from roof to sublevel, and this presents a major challenge.

When water travels through a drainage system, the space left behind in the pipe must be replaced with air; otherwise negative pressure will build up. This in turn will lead to poor performance, with the potential for blown trap seals, siphoning and consequent drainage failure.

The hydraulic jump associated with this change in pressure puts considerable strain on pipe joints and can lead to coupling failure, which must be counteracted at design stage by specifying restraining joints.

Air pressure valves

Tradition dictates that to prevent these rapid changes in pressure, a secondary ventilation stack must be installed. However, this can take up valuable commercial space and requires double the materials and staff to install.

More modern methods, including the installation of air pressure attenuation valves, are a proven alternative. The valves absorb the effect of positive back pressure, which can blast water out of traps, by slowing the speed of the airflow from a potential 320m/s to 12m/s.

The way water travels throughout drainage systems also needs to be considered, particularly in tall buildings. When water moves through a vertical pipe, it travels down the sides, creating a vortex with an empty space through the middle. While this presents no major issues when a pipe is vertical, any horizontal branch pipes – which are inevitable in a drainage system – will be compromised.

Water can travel at speeds of almost 5m/s down a vertical pipe, but this should be reduced to around 2m/s when it reaches an offset pipe. Failure to do so can result in air compression in the system and its eventual failure.

This complication is worsened by the installation of a large number of toilets in a building, as in high-rise apartment blocks and hotels for instance. Again, the intelligent use of attenuation valves in the system can rectify this before it becomes an issue.

As mentioned, if the movement of air in the...
Failed drainage can cause the release of unpleasant odours, the backflow of foul water and even the spread of disease or potential building damage.

Severe rainfall and consequent flooding may compromise the integrity of a building’s above- and below-ground drainage, damaging the property, roads, cars and the surrounding area. However, by working with specialist manufacturers these issues can be avoided, for example with the installation of green and living roofs, which are now being incorporated into local authorities’ strategic flood risk assessment plans.

The most effective way to counteract any potential complications is to factor all possibilities in at the design stage of the project. Working with experts in air and water movement in tall buildings will ensure that the selected systems are appropriate for the project, as well as reducing the time and staff required for installation.

Each project will have its own complications and consequent solutions. When fitting complicated drainage in a building, incorporating a manufacturing partner from the consultation stage to design, manufacture and installation ensures that experts are on hand through to project completion.

With each additional storey of a building come additional complexities and challenges, and the correct product needs to be specified accordingly. If a building will be used primarily at night and the comfort of residents is the key consideration, as in residential towers, student accommodation and hotels, then acoustic – that is, more extensively soundproofed – soil and waste drainage may be deemed necessary.

With triple-layer pipes developed from co-polymer polypropylene and acoustically engineered fittings, the transmission of airborne noise through the building structure is limited. Office blocks, however, may be more suited to a system made from high-density polyethylene with strong resistance to abrasion, chemicals and temperature.

**Manufacture**

Once the system design has been finalised, working with a manufacturer that offers a fabrication service means that drainage stacks and products can be made specifically to the particular standards required on each project.

Simplifying on-site connections, air-testing drainage stacks in advance and reducing on-site waste means installation time is reduced, drainage systems are more reliable and the product meets the project’s exact requirements.

With the construction industry shedding 343,000 jobs since the financial crisis in 2007 and an estimated 400,000 staff to be lost to retirement in the next decade, architects and surveyors are continually looking at ways to reduce labour time and demand for human resources (http://bit.ly/2ji3kY1). Using off-site construction is one of the easiest ways to do this, and is particularly effective in the manufacture and installation of drainage.

Even expertly designed and manufactured systems will fail if they are incorrectly installed, though. Training installers on the technical requirements for each product’s use, as well as in best practice for installation, will prevent such failure. Training can be conducted in dedicated seminars or on site, and will help ensure the integrity of the installation.

**Welded jointing**

As technology advances, manufacturers are continually improving the methods by which their products are installed. Welded jointing can ensure that the weld area is as strong as the host material, reducing the risk of leaks, but if installers are not trained in this method then complications will occur, so proper training is needed.

The incorrect installation and maintenance of drainage can damage the infrastructure of the building, with dire logistical and financial consequences. While specifying and installing drainage in a building can be complicated, working with experts from design to completion will ensure that the system is not only functional but saves resources, reduces demand for staff, limits costs and meets all deadlines, making it a sound investment.

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You may have seen recent media stories about apprenticeships in various industries and the levy to be introduced in April. Firms that hire apprentices can access at least 90% of the costs of training and final assessment either from their own levy payments or from the government, and two surveying routes that lead directly to RICS-accredited qualifications are now open.

If your organisation has not been looking into apprenticeships, then it is time you did.

Future leaders
Apprenticeships combine working and studying for a qualification. The new trailblazer routes are a fantastic way of developing future high-quality professionals.

RICS has been working with both businesses and the government to create professional trailblazer apprenticeships in surveying, which enable studying for a diploma or an RICS-accredited degree, or taking an APC or Associate assessment alongside paid employment.

We see apprenticeships as an important way to widen pathways into our profession. Those who learn better through part-time study with direct application of knowledge are supported from enrolment through to qualification without incurring study or tuition fees.

Apprenticeship levy
From 6 April this year, all UK employers with an annual wage bill of more than £3m – which represents less than 2% of businesses – will be required to pay 0.5% of that bill as an apprenticeship levy, to fund new apprenticeships. In England, control of such funding will be put in the hands of employers by the Digital Apprenticeship Service.

Each employer will receive an allowance of £15,000 to offset against this payment, payable to HM Revenue and Customs via PAYE. For construction firms already paying the Construction Industry Training Board levy, they are working with these employers on a temporary transition package.

What is available?
Currently, a Surveying Technician Level 3 apprenticeship and a Chartered Surveyor Level 6 degree apprenticeship have been approved by the Department for Education and are ready for employers to recruit new starters or upskill existing staff.

The Associate assessment is the final examination for the Surveying Technician apprenticeship, while the APC is the end point for the Chartered Surveyor degree apprenticeship. These programmes cover the following areas of practice:

RICS has been working with employers and the government to create professional trailblazer apprenticeships in surveying, which enable studying alongside paid employment

- building surveying
- commercial property
- residential property
- land (Level 3 only)
- minerals and waste management (Level 6 only)
- planning and development
- project management
- rural (Level 6 only)
- valuation
- quantity surveying.

We are working with other employers and universities to develop other apprenticeships and areas of practice.

Funding and eligibility
All businesses will get 90% funding for an apprentice’s training, assessment and certification, whether from their own levy payments or from the government, though some small businesses recruiting young people may be eligible to receive 100% of the costs.

Only apprentices whose workplace is based in England will be funded under this system. To be eligible, the individual must spend 50% or more of their time at work, be training to a higher level of qualification, or be retraining to an equivalent or lower level provided that the apprenticeship is in a different area and giving them substantive new skills.

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For full details about which employers pay the levy and which do not, please visit www.rics.org/employanapprentice
Infrastructure and innovation

Surveyors need to join the data revolution to support infrastructure development and foster the skills that will ensure the profession’s future, insists RICS President Amanda Clack.

During last year’s US election campaign, President Donald Trump promised an additional $1tr investment for national infrastructure over the next 10 years. His pledge reflects an issue with which many developed countries are contending: ageing infrastructure is holding back economic growth, while investing in infrastructure can enable it.

Innovation is essential, and the rapidly evolving role of data and technology gives us an opportunity both to streamline and to disrupt traditional ways of providing the infrastructure that our world requires.

**Why infrastructure matters**
Resilient and effective infrastructure is central to supporting the rapid urbanisation that is occurring around the world. It has the power to encourage social change, create jobs, support businesses, improve the environment and create a better world in which to live. All markets must see further investment in infrastructure if they are to support their regional and national economies.

Infrastructure investment requires long-range planning. Trump’s election sent major shockwaves through global markets, and, with other votes, including the UK’s decision to leave the EU, helped to create geopolitical uncertainty. This year, there are further elections across Europe, including in Germany and France, the outcome of which is just as uncertain.

One way of enabling certainty for infrastructure projects is through the use of data and technology. From the time of the Romans, we have seen how infrastructure encourages innovation – their straight roads and invention of concrete allowed them, as the technological disruptors of their time, to develop an empire.

Today, data and technology are reaching a new tipping point. Technology enables more effective transfer of knowledge, while data acquisition and manipulation combine to enable predictive decision-making.

To realise the potential of data, property businesses need to be alert to the value of having a chief data officer, sometimes referred to as a chief information officer. Such staff are required to manage data effectively and make transformative business decisions; they can champion the use of data in large organisations as well as taking responsibility for its security. Someone in this role should also be in a position to advise on trends, strategy, productivity and growth.

**Changing skills**
There is a significant ethical dimension to using data. This information is increasingly used by organisations to manipulate your thinking by creating needs that you did not even know you had. You may not even be aware this is happening as technology becomes ever more sophisticated.

The professions are perfectly placed to help organisations to navigate these ethical challenges, because the primary duty of bodies such as RICS is to act in the public interest. But in order to do so, surveyors have to adapt. Competence is at the heart of what makes a professional, and we must adapt our skills to our changing environment. It is clear that many traditional surveying tasks are already being automated, but the same is true for the work of all professionals. Data and technology will not make surveyors redundant, but we do need to move further along the value chain. This means offering a wider range of more strategic, value-adding and advisory services.

To meet future challenges, skills training is necessary to help surveyors thrive in an increasingly digital world.

Data analytics are already embedded in all our routes to RICS membership, and our infrastructure pathway to becoming a chartered professional is now futureproofed. By looking at the components of infrastructure, alongside project finance, building information modelling and asset management, students gain competencies that are valuable in the present and future.

Data and technology are inherently complex, and the professions can help to interpret change as well as train industry for the future workplace. They can also continue to pursue their remit for working in the public interest by ensuring that data is not exploited by the strong to the detriment of the weak. This is where regulation and control by organisations such as ours come into their own.

**Market confidence**
In a time of seemingly continual geopolitical shocks, it is more important than ever to create confidence in the market by making authoritative and innovative use of the opportunities presented by data and technology. Many concepts for data use may seem way off being workable, but this is not the case: companies such as Pauley and Oculus are taking virtual reality by storm by accurately replicating an entire environment in virtual reality. This has wide-ranging applications for the surveying sector.

Our profession needs to be seen to be innovative and acting as a digital disruptor to maintain its continuing relevance.
First among equals

Alexander Aronsohn explains why international standards are so important

Many are confused by the term “international standards”, often seeing it as relating to anywhere other than where they are. But it means professionalism: standards are the unique selling point of RICS, compared with other service providers. It is why clients choose RICS members rather than other professionals doing a similar job. Alternative service providers may not adhere to the same standards of professionalism that are expected of every RICS member.

Professionalism and RICS

The importance of professionalism is seen in the following two key questions that RICS is exploring.

● What are the expectations of a professional today, and how do these differ from those of the past?
● What constitutes a high standard of service, and how do we manage and meet clients’ expectations in a world where so much information is freely available?

These and other questions need answering to ensure that RICS and its members remain relevant. People have a more global outlook today, and even when they are working nationally or regionally they can be affected by international factors.

Avoidable scandals

The Financial Times reports that VW has had to set aside €6.5bn to deal with its recent emissions scandal (http://on.ft.com/2gXNu50) – a figure that does not cover share or brand damage. If VW had been a member of the International Ethical Standards (IES) Coalition (https://ies-coalition.org), though, the scandal may not have happened, as all its suppliers and contractors would have to have been members and abide by its 10 ethical principles too, including accountability, financial responsibility, integrity, standard of service and transparency.

However, ethical standards alone are not the answer. Enron, for instance, had a code of ethics, but it was not implemented or enforced, which is what led to the company’s eventual collapse.

Good business sense

Chartered surveyors are highly qualified service providers, but service providers nonetheless. There are a number of other providers operating in our markets, such as brokers – who may have significant experience but limited qualifications – as well as architects and engineers providing property valuations, but who often incorrectly equate price with value.

International standards are what distinguish RICS professionals from the competition.

We are involved in the following international standards:

● International Land Measurement Standards (ILMS)
● International Construction Measurement Standards (ICMS; see https://icms-coalition.org)
● International Property Measurement Standards (IPMS; https://ipmsc.org)
● International Valuation Standards (IVS; www.ivsc.org)

International measurement standards

ILMS

The ILMS are intended to serve as minimum requirements for securing legal rights to land and enabling efficient, secure transfer and transaction of land and property rights.

ICMS

Construction costs can vary enormously between countries and firms, each of which may use their own basis for calculation. The ICMS provide an internationally agreed system for comparison giving firms and non-governmental organisations greater confidence in developments’ overall costs.

IPMS

New premises must be measured for transactions such as lettings or sales. Many transactions are made according to national measurement standards and many occupiers and investors operate on a local basis so external developers may not be aware of the national standard. Office measurements can vary by up to 24%, residential apartments by up to 15% and houses by up to 58% across world regions. In local markets, there can be a 27% variance in the measurement of residential apartments and 10% for houses (www.rics.org/loggiaslodgings).

The IPMS coalition comprises more than 80 organisations and 300 partners. The global adoption of IPMS will make transactions much easier for international investors and tenants.

IVS

RICS is a member of the IVS Council, which includes academic, corporate and institutional members. IVS offer agreed terms, and in some cases a methodology, for the valuation of businesses, intangible assets such as intellectual property, tangible assets such as personal property, plant and machinery, and real estate.

International financial reporting standards, which are adopted by more than 120 countries, work with the council encouraging business and stimulating trade, and giving investors and lenders the confidence that reported valuation figures are accurate.

IES

As an IES Coalition member, RICS incorporates the standards into its own five ethical principles and regulates its members under them. RICS’ code of conduct will also be incorporated.

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www.rics.org/intstandards

Related competencies include Conduct rules, ethics and professional practice, Measurement of land and property
Internal stairs can be a common source of problems. Continuing his series from Australia, Mark Anderson explains how these can be resolved.

Common errors with internal stairways occur during the design phase, but these are often overlooked and carried through into construction. This article looks at those common errors and how to address them.

Wrong size
The first common error is drawing the wrong width or rise, so stairs are too narrow or too steep.

How to avoid
The required width varies by building type and may also be determined by a fire engineering report. If you have not allowed enough width for a 30mm stringer or 10mm plasterboard on both sides, your only option once on site is to encroach on other spaces, reducing your net lettable area. Allowances are determined by the expected usage and average width of person; the wider the stair, the better the provision for passing or egress.

Internal stairs that are accessible to those on foot, that is, “ambulant-accessible” should be designed to at least 1200mm wide to allow people to pass. In commercial buildings, occupancy calculations can make these wider, to enable escape in the event of fire. Stairs that are not designated as ambulant-accessible could potentially be narrowed in line with occupancy calculations or where the area is in use, for example in plant rooms.

When the floor heights on plan do not match the actual heights on site, it can mean that risers are either too high at the bottom of the stairs or too low at the top. This situation cannot be remedied unless there is considerable negotiation with stakeholders and building control.

Landings with a small slip step can be more of a hazard than stairs themselves, and are common in dwellings where a stair must be removed and replace with one of the correct dimensions.

Short tread length
The second common mistake occurs when tread length is 280mm instead of 300mm.

How to avoid
Use a width of 300mm for the going of all stairs, which will then assist with designing ambulant-accessible stairs. It is easier to shorten from the maximum than increase from a smaller dimension. When the ambulant-accessible stairs are chosen, you can reduce the size of the others.

Too many stairs
Too many steps in a flight is the third common error.

How to avoid
Internal stairs in Australia should have a maximum of 18 steps in each flight and a minimum of three; the maximum for publicly accessible buildings in the UK is 12. For buildings with high floor-to-ceiling heights, you should consider an allowance space for landings and rest areas at an early stage.

When the stairs are not designated as accessible, other rules apply; for example, in an assembly and recreation building, there are other limits on the numbers of steps to allow for less steep access.

Door encroachment
The landing should be clear of the door swing, though this is not always the case.

How to avoid
Ensure that the door swing does not encroach on to the landing and that the access door is set back if it has to swing in the direction of travel. In commercial or public buildings, you normally have to allow for a disabled refuge space as well.

Poor coordination
Another common error is poor coordination of services and structural elements.

“Landings with small slip steps can be more of a hazard than stairs”

Handrail too short
Addition of a 300mm extension to the handrail at its end is commonly forgotten.

How to avoid
Always draw the handrails on your floorplans and show the 300mm extension on the stairs. The ordinary encroachment of handrails on to the stair width is acceptable up to a point as the handrail is located at waist-height, and waists have tended to require smaller allowances than shoulders. This dimension and encroachment should be reviewed, though, given the increased waists of many.

Tread carefully
Stair issues are avoidable given due care and attention, both at design stage and during construction. If you do encounter any, the best course of action is to discuss with building control.

Mark Anderson is senior building certifier at KPMG AU
manderson@kpmg.com.au
Chris Lindsay discusses progress on implementing the outcomes of RICS’ pathways and competencies review

Keeping competencies current

The RICS pathways and competencies framework defines the knowledge, skills, experience and level of competence that are required to become a chartered surveyor. The framework was launched in 2006, and we currently offer 20 pathways, including Building Control.

Each of these pathways combines core and optional competencies across three defined levels:
- **Level 1**: Knowledge and understanding
- **Level 2**: Application of knowledge and understanding
- **Level 3**: Reasoned advice and depth of technical knowledge.

These are in addition to mandatory competencies — the personal, interpersonal, professional practice and business skills common to all pathways that every candidate must demonstrate (see Table 1).

Candidates for the Building Control pathway must demonstrate how they have provided guidance and advice on how to achieve building standards, such as creating an inclusive work environment and addressing climate change through energy conservation.

### Review

RICS conducted a long-term review of the framework, to ensure that it is globally relevant and represents contemporary practice, and proposed the following outcomes based on its findings:
- In recognition of the broad nature of the profession and the robust nature of the framework, the existing 20 pathways will be retained, subject to a review of the content of each.
- New competencies for emerging areas are being created, and duplication and overlap in existing competencies will be removed.
- Pathways should offer greater choice for candidates. This can be achieved by expanding an existing principle in the Building Control pathway that allows candidates to select a limited number of competencies from the full technical list.
- Although there is no standard model, the number and the level of competencies between pathways should be broadly consistent.
- Each competency statement will be further refined.
- Three new pathways will be considered for the broader areas of the Built Environment, Land and Resources, and Real Estate.

### Consultation

We consulted widely on these proposals for 10 weeks from August to October last year through RICS’ online iConsult platform. Respondents were asked to review a range of documents, including the exposure draft of the new requirements and competencies guide.

This draft included a descriptor for each competency. These were intended to be fairly broad; more detailed information about the context and level 1, 2 and 3 examples for each area of practice will be included in the individual pathway guides, which are to be developed separately.

We received a total of 172 responses through the iConsult questionnaire, the second highest number of responses to an RICS consultation in 2016. Some of these responses were collective, for example coming from employers rather than individuals.

All views have been taken into account, although only the iConsult responses appear in the quantitative analysis contained in the final feedback report.

### Core competencies

While consultation feedback on the Building Control pathway was limited, two proposed changes to core competencies did not receive support: specifically, removing the Building control inspections competency and including its content and scope in the Inspection competency; and removing Fire safety and including its content and scope in Health and safety.

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### Table 1

The current competencies in the Building Control pathway

<table>
<thead>
<tr>
<th>Mandatory competencies</th>
<th>Technical core competencies</th>
<th>Technical optional competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 3</strong></td>
<td><strong>Level 3</strong></td>
<td><strong>One competency to Level 3 and one competency to Level 2 from the following</strong></td>
</tr>
<tr>
<td>Conduct rules, ethics and professional practice</td>
<td>Building control inspections</td>
<td>Analysis of client requirements</td>
</tr>
<tr>
<td>Client care</td>
<td>Environmental audit (and monitoring)</td>
<td>Building information modelling (BIM) management</td>
</tr>
<tr>
<td>Communication and negotiation</td>
<td>Fire safety</td>
<td>Building pathology</td>
</tr>
<tr>
<td>Health and safety</td>
<td>Inspection</td>
<td>Conservation and restoration</td>
</tr>
<tr>
<td><strong>Level 2</strong></td>
<td><strong>Level 1</strong></td>
<td>Construction technology and environmental services</td>
</tr>
<tr>
<td>Accounts</td>
<td>Building pathology</td>
<td>Contaminated land</td>
</tr>
<tr>
<td>Mapping</td>
<td>Legal/technical (and inspection)</td>
<td>Measurement of land and property</td>
</tr>
<tr>
<td>Accounting principles and procedures</td>
<td>Risk management</td>
<td>Planning</td>
</tr>
<tr>
<td>Business planning</td>
<td>Sustainability</td>
<td>Property records/information systems</td>
</tr>
<tr>
<td>Conflict avoidance, management and dispute resolution procedures</td>
<td>Team working</td>
<td>Planning</td>
</tr>
<tr>
<td>Data management</td>
<td></td>
<td>Property records/information systems</td>
</tr>
<tr>
<td>Sustainability</td>
<td></td>
<td>Planning</td>
</tr>
<tr>
<td><strong>Level 1</strong></td>
<td></td>
<td>Risk management</td>
</tr>
<tr>
<td>Accounts</td>
<td></td>
<td>Works progress and quality management</td>
</tr>
<tr>
<td>Mapping</td>
<td></td>
<td>Sustainability</td>
</tr>
<tr>
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<td></td>
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<tr>
<td>Team working</td>
<td></td>
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</tr>
</tbody>
</table>

Candidates must also demonstrate one competency to Level 2 from the full list of technical competencies, including any not already chosen from the optional list above.
Neither proposal will be taken forward, and Building control inspections and Fire safety will both be retained as separate core competencies.

Feedback also suggested that the Environmental audit (and monitoring) competency, as currently written, is no longer as relevant to the role of building control surveyor and some candidates find it difficult to achieve Level 3. This will be addressed as part of the next phase of the project, described below.

Optional competencies
Changes were also proposed to optional Building Control pathway competencies.

● The Planning competency should be split into two competencies: Planning and development management, and Planning policy and infrastructure development.

● The Analysis of client requirements competency should be included in an updated Client care competency, which will be mandatory to Level 2. Building Control candidates could also select it as an optional competency to Level 3.

● Measurement of land of property should be renamed simply Measurement.

● The Property records/information systems competency should be included in an updated Data management competency, and be mandatory to Level 1. Building Control candidates would have the choice of selecting it as an optional competency to Level 2 or 3.

Proposed changes to the mandatory competencies, as outlined in the feedback report, were also well supported, and will be taken forward to the next stage of the review.

Summary of actions
Based on the feedback we have received across all pathways, we will move forward with the project’s next phase, which is to look at the development of the individual pathway guides. There will then be a second-stage consultation on that basis.

The exposure draft of the requirements and competencies guide and the proposed competency matrix will be updated to reflect the feedback received through the consultation period. Both documents will be reissued for further consultation alongside the updated pathway guides later this year.

Pathway guides will be developed for the new pathways of Land and Resources, and Real Estate; the latter will focus on corporate real estate. Further consideration and research is required for the Built Environment pathway.

Timeline
Any changes relating to our qualifications are made in January and July each year.

The initial date for implementing the outcomes of the review was July 2017; some minor changes may be included as part of the membership release update this July, but most of the changes will now take place in 2018.

Transitional arrangements will be made for all candidates who are already enrolled on the APC.

Chris Lindsay is RICS Global Education and Qualification Standards Manager
globaleqs@RICS.org

To offer any comments on the review, or to receive a copy of the feedback report, please contact RICS Global Education and Qualification Standards globaleqs@RICS.org

www.zedpods.com

Car park life

A prefabricated, energy-efficient micro-home has been launched that is designed to sit on an elevated platform above car parks at big retail outlets, hospitals or municipal offices. Housing two people, a ZEDpod is an entry-level home that costs £65,000, and can be bought outright or installed and rented for £650 a month.

ZEDPods Ltd has been funded by the UK government’s Enterprise Investment Scheme with the objective of manufacturing and setting up the pods across the UK as a way of providing housing for key workers and students as well as meeting general needs.

The pods have been devised by RIBA-award-winning zero-carbon design and development company ZEDfactory. Of durable, permanent construction, they can be installed as singles or doubles, or clustered together as pop-up villages.

With energy-performance standards in excess of those required in the Building Regulations, the ZEDpods’ external envelope is designed for a 20-year-life before it first requires maintenance. The company says the pods can be relocated easily at low cost, with minimal wastage. Each home has integral, roof-mounted solar panels charging a battery store, heat recovery ventilation and large, triple-glazed windows.

Built off site in the UK, ZEDpods are designed to be put up in a matter of days with a forklift, and their raft foundation should exert no more pressure on existing tarmac than a conventional vehicle does.

ZEDPods Ltd already has a funding partner to build, maintain and let pods back to local authorities and healthcare organisations for use as worker housing, in exchange for long-term leases for “air rights” above their car parks. A ZEDpod is now on display at BRE Innovation Park.
All about Matrics

RICS Matrics has in its different forms been the platform for the next generation of surveyors for 125 years. All students, trainees and members with less than 10 years’ experience after qualification automatically become Matrics members when they enrol with RICS.

There are 40 Matrics groups across the UK, meaning that members are able to attend events near them and get to know their peers and other professional groups in the area. If you attend a local group, you can enjoy interprofessional networking, social events, APC support, charity balls, sports and much more. I have made many contacts through such activities, a number of whom are now good friends.

The nature of RICS Matrics means that a number of members have just become chartered, or are APC doctors or assessors, and this allows members to support each other when working towards their APC. I had a huge amount of support from RICS Matrics members both locally and nationally while preparing for my assessment, and I am certain I would not be chartered without this.

While the people I have met through RICS Matrics have come from all walks of life, we all have one thing in common: we are proud to be chartered or be working through our APCs. Matrics members are among the best people to engage and inspire the next generation, which is one of the groups’ key objectives: since I have been involved, I have carried out numerous presentations and careers fairs at schools and universities, and I have seen individuals come through this route who are now working towards becoming chartered members, which is an extremely rewarding feeling.

RICS Matrics also lets members develop in ways that they would not necessarily be able to do at work, fostering essential skills that can help young surveyors move into more senior roles. It provides a platform for new professionals to have a voice on RICS’ future strategies as well. Matrics enables any aspiring RICS member to stand out from crowd. By being an active member, you have the opportunity to inspire the next generation and ensure that RICS continues to signify excellence for any professional in land, property and construction.

Amy Leader is the current RICS Matrics UK Chair

Technology research

New research indicates that surveyors have a growing appetite for technology. GoReport undertook an in-depth study with surveyors in both large and small practices over 18 months to gain a detailed understanding of working practices, habits and frustrations. The findings have led to the launch of new mobile surveying software from the firm.

CE marking deadline approaches

Firms risk losing out on trading opportunities with Europe if they do not have appropriate CE marking for their cable products, according to BRE Global.

The warning comes ahead of CE marking becoming mandatory for power, control and communication cables on the European market as of 1 July.

Concrete standard

The British Standards Institution has revised BS EN 206 Concrete – Specification, performance, production and conformity. This European standard applies to concrete for structures cast in situ, pre-cast structures, and structural pre-cast products for buildings and civil engineering structures.
In consultation
RICS Valuation: Global Standards 2017 (Red Book)
Until 3 April.

Recently published
Conflicts of interest professional statement
UK commercial property market investment agency professional statement
Surveying assets in the built environment guidance note
● www.rics.org/standards

Domestic energy efficiency
The Bonfield review into domestic energy efficiency, Each Home Counts, has called for a government-backed quality mark for green home improvements, in order to protect homeowners.

The BRE chief executive’s report says there have been “too many instances of poor-quality [energy efficiency] installations being made by companies who do not have the skills, quality levels or core values required to operate responsibly in this market.”

He proposes a single quality mark for all energy efficiency and renewable energy measures, to be backed by a consumer charter, code of conduct and code of practice, similar to the Gas Safe Register, TrustMark or Kitemark.

Bonfield also recommends that clients, including government, social landlords and private finance organisations, require firms to have the quality mark if they are to secure work. His review advocates an overarching standards framework for retrofitting energy efficiency and renewable energy measures, building on existing standards and freely available under licence to installers.

He proposes that a strategic governance board be created from industry and government representatives to ensure the framework is implemented, and calls for smart meters to be installed in as many properties as possible, regardless of type.
● http://bit.ly/2hCshxw

False fire alarms
Following its campaign to reduce the number of false fire alarms on site, Gatwick Airport (above) has contacted BRE to review its data and identify ways of reducing the risk of such incidents.

The airport had already been investigating and addressing its false alarms and has cut passenger evacuations by 70% over the past five years. BRE’s review proposes a new operational process that could help it further limit the number of such events.

Findings from two general BRE studies on false alarms are available free of charge to download at:
● www.bre.co.uk/firedetectionresearch

Home heating study
A home built to the latest Building Regulation requirements can cost half as much to heat as a Victorian house of the same size, according to a report by the NHBC Foundation.

The advantages of new homes was based on a survey of 2,000 people who had recently moved into a new home and were asked what they considered the advantages of such properties to be.
● http://bit.ly/2gbaLiA

Nuclear control
The building control approval process for the Hinkley Point C nuclear site, ancillary workers’ campuses and enabling work is being carried out by private approved inspector firm Regional Building Control Ltd.

It has been appointed by EDF Energy to assess all buildings that are not directly regulated by the Office of Nuclear Regulation or are exempt.

Regional Building Control has previously worked with EDF on the construction of its nuclear training facility at Cannington Court near Bridgwater in Somerset.

The ancillary campuses and park-and-ride facilities at Hinckley Point will provide accommodation and transport links for the construction workers for the main power station.
● www.rbcltd.co.uk
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