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Competence, the UK Building Safety Act, and the Institution of Structural Engineers: a timely update

At the end of July, the British Standards Institution (BSI) published three new PAS documents. Publicly Available Specifications (PAS) are a fast-track approach developed by sponsoring organisations to meet an immediate market need. In this case, the sponsor was the UK government's Department for Levelling Up, Housing and Communities. The immediate need was firmly established around Dame Judith Hackitt's report for government in the aftermath of the Grenfell Tower fire tragedy of 2017 and her damning assessment of standards within the construction industry.

Within two years of issue, a PAS is reviewed to assess whether it should be revised, withdrawn, or whether it should become a formal British Standard or international standard.

- The documents in question are a comprehensive suite relating to competence:
- | PAS 8671 Built Environment – Framework for competence of individual Principal Designers
 - | PAS 8672 Built Environment – Framework for competence of individual Principal Contractors
 - | PAS 8673 Built Environment – Competence requirements for the management of safety in residential buildings.

They comprise an overarching code of practice (BSI Flex 8670) and three specification documents that relate to the three stages of formal sign-off recommended by Hackitt as in-scope (higher-risk residential) projects move from design into construction and into whole-life management of the building in use.

The documents are available at www.bsigroup.com/en-GB/industries-and-sectors/construction-and-the-built-environment/built-environment-competence-standards/.

Impact on the profession

What is the impact of these PAS documents on structural engineering and, most importantly, for structural engineers and the role of the Institution of Structural Engineers?

In the space of a short article, let us start by fast-tracking activity that takes us from 2017 to the present day. This can be summarised as a huge sector-wide effort to contribute in so many ways and in so many collaborative groupings of cross-sector interests to address the findings of Hackitt – all of which were accepted by government and each of which featured in some guise in the draft UK Building Safety Bill.

Here I pay tribute and offer the thanks of the Institution to the many who represented IStructE both formally and informally. Many remain fully active and engaged on our behalf and continue working behind the scenes even though the Bill has now received Royal Assent and has passed into law.

The appointment of the Health & Safety

“ WE HAVE REASON TO SEE MORE MERIT IN A STAND-ALONE SPECIALIST BUILDING STRUCTURES REGISTER THAN IN A GENERIC ENGINEERING REGISTER ”

Executive (HSE) to the new role of Building Safety Regulator (BSR) takes us into the current phase where the BSR is shaping the enactment of the Act and bringing forward plans for the necessary secondary legislation that makes the overarching Act operable in practice.

What we know so far is that there will be a generic requirement across the sector for improved competence and a more stringent requirement to demonstrate the assessment of that competency. It will be a requirement of the BSR for those working on high-rise and higher-risk residential buildings (HRRB) to be listed on a special register of competence. But what defines those requirements?

The broad methodology is that the BSI PAS documents establish thresholds of competence separated into subject categories that are non-discipline-specific including:

- | Behavioural competence
- | Legislative and regulatory framework for compliance
- | Management of design work compliance
- | Technical framework for compliance.

It is left to organisations developing domain-specific competence frameworks to agree the learning pathways, validation methods (including the required standards of evidence to support validation) and conditions of certification and revalidation that are suitable for their particular cohorts. PAS documents can therefore be thought of in hierarchical terms as providing the guiding principles.

The next tier of activity that is applicable in the case of engineering has been the coming together of the professional engineering disciplines under the umbrella of the Engineering Council, with a remit to develop contextualised frameworks for overarching engineering

competency. Again, this is primarily directed at competence requirements for HRRBs. The approach has been to use Chartered Engineer (CEng) designation as a starting point and to then assess the additional competencies that would need to be satisfied for admission to a register of competence.

The BSR has not stated the level of competency required and there is a widely held presumption that the sector will define the levels based on its domain expertise and then seek BSR approval. At this stage, there is no direction from the BSR as to whether they will hold and operate the register or whether they will consent to one or more bodies operating registers in specific areas of expertise.

There is, however, an expectation for a move away from self-regulation, something that, in the engineering arena, we are already familiar with through the arrangement in which professional institutions are licensed by the Engineering Council. With this in mind, the Engineering Council has been working presumptively on the basis that it will operate a cross-engineering register and, in effect, become the BSR's regulator without any apparent consideration of alternative options.

All of this has been predicated by the Engineering Council on engineers following a passage of membership into one of the professional institutions as a precursor to meeting the necessary standards for admission to a specialist register. While that may be a laudable ambition, my personal assessment is that the Building Safety Act does not make that connection a foregone conclusion and neither have I discerned from BSR output to date that this is the automatic and intended route of choice.

The whole focus to date is about achieving required competence to operate on higher-risk structures and, in a free-market economy, that would not preclude the opportunity for commercial providers to offer assessment routes for individuals to demonstrate competency in accordance with guidelines that are ultimately set by the BSR. There is no room for complacency by engineering institutions in assuming that their role is any more assured under the new regulated regime than currently under its self-regulated relationship with the Engineering Council.

Such a direction would be a manifest downgrading of the importance of professional institutions which, beyond the immediacy of their technical and engineering assessment frameworks, enshrine values of ethical behaviour and professional codes of conduct as a condition of membership, and additionally

have a vitally important role in holding their members accountable for continuing professional development. Both elements feature strongly in the ethos of Dame Judith's initial report, which recognised not only the importance of developing competence, but also most strongly in the culture of the way in which the sector operates.

The essential elements of the Engineering Council's approach are that once contextual competence requirements are established, any engineer can apply for entry to its HRRB register, irrespective of their current institution affiliation. Its starting point is that, initially at least, this route will only be open to those who are CEng registrants, meaning that any engineer currently operating, say, in the 'structural engineering space' could apply, whereas professionally qualified chartered structural engineers of this Institution who have opted not to register as CEng would be ineligible.

Quite who would assess an individual's additional competences is unclear, since while the Engineering Council has expertise in licensing institutions against their procedural and policy documentation, that does not stray into areas of technical and engineering competence. That assessment quite rightly has been within the domain expertise of individual institutions and their professional members. It seems inconceivable, however, that the structural engineering credentials required for admission to an HRRB register could be undertaken without reference to the Institution of Structural Engineers.

It is important that we do not become parochial about the standards set for membership by IStructE in comparison with other institutions. The common interests of improved public safety and confidence must prevail and the collaborative approach of the industry to date has much to commend. That said, it is imperative that in seeking a common benchmark, the engineering sector raises the overall bar, and in the case of the structural discipline goes beyond CEng as its gateway requirement.

Even with the rigour of the MStructE examined test of competence, we know that additional learning and experiential evidence will be necessary to enter a specialist register for working on the most critical high-risk structures. To set an entry level for higher-risk buildings in the structural discipline that is lower than the Chartered Structural Engineer MStructE benchmark (or its equivalent standard) is contrary to the basic premise of the Building Safety Act that competency standards need to be raised.

A specialist Building Structures Register?

With this in mind, the IStructE invited the Institution of Civil Engineers (ICE) to join it for a high-level review into the concept of a specialist Building Structures Register that would offer the rigour demanded under the Building Safety Act; provide clear points of entry; offer a methodology that might in future be capable of extension beyond the very narrow definition of in-scope structures defined in the Act and be operable in a free market such that assessments could be conducted through the two institutions; require acceptance of our professional code of practice and CPD requirements but without the prerequisite of becoming a member of either.

This work took place in parallel with the collaborative cross-sector work and was concluded in mid-2021 with a report from a distinguished panel that included past-Presidents of each institution and senior practitioners with in-depth understanding of the rigour and complexities required on HRRB structures. The findings of the report were shared with the Engineering Council and with the government-sponsored Industry Safety Steering Group chaired by Dame Judith, who commended the Institution for its proactive stance.

Since that time, we have continued to work with the Engineering Council and others, while awaiting assent of the Building Safety Bill and guidance from the BSR once appointed.

Time, however, marches on and increasingly we have reason to see more merit in a stand-alone specialist Building Structures Register than in a generic engineering register being advanced by the Engineering Council.

Summary

This briefing note is intended to draw members' attention to the new PAS specifications and the role they play within the new Building Safety Act. It highlights the distinction between the guiding principles of PAS specifications and the work conducted through the Engineering Council to establish a contextualised framework for engineers wishing to be registered as competent to work on HRRBs. Finally, it outlines a number of reasons why a generic engineering register is likely to be incompatible with the standards required within the structural engineering discipline.

The next stage is for the IStructE to further develop its concept structural register for discussion with the BSR and more widely within the Institution itself, with a view to a broader communication later this year.