HSE

Consultation on HSE Draft Building Inspector Competence Framework

Submission from the Chartered Institution of Building Services Engineers (CIBSE)

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Name:	Dr Hywel Davies
Position:	Technical Director
Name of organisation:	Chartered Institution of Building Services Engineers
Address:	222 Balham High Road, London, SW12 9BS
Email address:	hdavies@cibse.org

About the Chartered Institution of Building Services Engineers (CIBSE)

The Chartered Institution of Building Services Engineers, CIBSE, is the professional engineering institution that exists to 'support the Science, Art and Practice of building services engineering, by providing our members and the public with first class information'. With its main office in London, CIBSE has over 20,000 members, with around 75% operating in the UK and many of the remainder in the Gulf, Hong Kong and Australasia. CIBSE accredits building services engineering courses in the UK and overseas.

CIBSE is the sixth largest professional engineering Institution, and along with the Institution of Structural Engineers is the largest dedicated to engineering in the built environment. Our members have international experience and knowledge of life safety requirements in many other jurisdictions and work extensively on the systems that control the various engineering systems that keep buildings safe, comfortable and healthy.

CIBSE members design, install, operate, maintain and refurbish life safety and energy using systems installed in buildings. They include specialists in digital engineering, the Society of Digital Engineering, a Division of CIBSE, who specialise in digital information management. We also have a Special Interest Group in IT and Building Controls, which works closely with the Building Controls Industry Alliance (BCIA) to provide events and activities on this topic.

CIBSE publishes Guidance and Codes providing best practice advice and internationally recognised as authoritative. These include the Digital Engineering Series of guidance and templates has been produced to assist the full built environment supply chain in tackling the practical challenges, specifically of the BIM processes, of digital engineering more widely.

The CIBSE Knowledge Portal makes our Guidance available online, where CIBSE members can access the guidance as a benefit of membership. The knowledge portal is the leading systematic engineering resource for the building services sector, used regularly by members to access the latest guidance material for the profession. Currently we have users in over 170 countries, demonstrating the world leading position of UK engineering expertise in this field.

CIBSE operates a number of Special Interest Groups covering a range of technical topics and themes. The CIBSE Electrical Services Group has contributed significantly to the preparation of this response.

CONSULTATION RESPONSE

Executive summary

This is the Institution's formal response to the consultation issued by the HSE on the Draft Building Inspector Competence Framework. This has been developed with contributions from our wider membership, including those who have a special professional interest in refurbishment of heritage buildings.

The institution welcomes the intention to create a single framework of competences for building control professionals and a single register of building control professionals. In formulating the competency framework there is an opportunity to address those aspects of building control activity which the industry does not consider to have been well served under the existing arrangements and to reinforce the competence of the building control profession in these areas.

In the section outlining the different classes there is an indication that the building control profession should comprise those at level 6 qualification level or above. We consider that this may be problematic for several reasons.

Firstly, there are a number in the building control profession who do not have that level of academic qualification. Are we effectively telling them that although they have come up through the older system of professional assessment such as the old Institute of Building Control exams, that their expertise is no longer valued? That may have significant implications for capacity and morale in the profession.

Secondly, we understand that CABE has been surveying its membership and has advised us that over a third of those surveyed are planning to leave the profession in the next three years. This is a cause of serious concern. And a requirment for level 6 academic qualification for level 2 and above may make their replacement challenging.

Thirdly, we believe that there is a clear need to set out what the future pathway will look like for building control professionals so as to enable recruitment into the profession on a significant scale. The reality is that the reforms being undertaken will require a greater level of competence and greater capactiy in the profession, and that losses of inspectors on the scale indicated will pose challenges to the who industry for some years to come.

A clear transistion plan, both from the current arrangements to the new regime over the next two years and also the longer term transition to a degree level profession, if that is indeed to the ambition, is needed.

Another aspect of the framework that we consider needs greater consideration and may also have an impact on capacity in the longer term is the treatment of existing and heritage buildings (defined as pre 1919 buildings, which account for about a fifth of the current stock.

In particular, we strongly recommend that works to existing buildings should be stressed far more within the framework. There are a number of reasons for this:

- with the legal commitment to net zero carbon by 2050 there are some 28 million buildings in need of significant retrofit works to achieve this. Retrofit is often more complext than new building and in older buildings in particular there will be a need to balance various considerations. Building control will be faced with more challenging scenraios that require a greater degree of competence in relation to works in existing buildings;
- in particular, interventions to improve thermal performance create significant technical risks with the dew point and potential to cause moisture build up within existing fabric causing at least damage and, as recent events have demonstrated in the housing sector, condensation and mould with all the significant health implications they have;
- the move to zero carbon buildings will require significant interventions to building fabric and to services, cretaing potentially competing demands around energy, airtightness, thermal comfort, ventilation, indoor air quality and acoustics, which will further extend the competence requirements of the building control profession.
- consideration of 'embodied carbon' will lead to more refurbishment or 'retrofit' of existing buildings rather than (demolition and) building new, which will also require a greater degree of building control competence;

there is no mention in the framework of buildings that require special consideration - these would include those that are nationally or locally listed or are located in Conservation Areas, National Parks, Sites of Special Scientific Interest, Areas of Outstanding Natural Beauty and UNESCO World Heritage Sites. These are often subject to additional requirements that may at times conflict with typical building regulations approaches. This in turn may demand alternative approaches which require enhanced knowledge and expertise on the part of the building control professional and may also require significant behavioural competence to successfully negotiate a successful outcome with the other regulatory bodies involved.

Detailed comments

We have the following more detailed comments on the Framework

General comment

The Framework does not obviously map to the BS Flex 8670 Framework for competence schemes. It would be very helpful if the links were more explicit and the competences more directly aligned to the Skills, Knowledge, Expertise and Behaviours approach in the BS Flex.

The Framework identifies various competencies, but gives no indication of how a candidate is to demonstrate compliance. The UK SPEC, the competence framework for engineers, is set out in two columns – on the left the competence requirements and on the right an indication of what sort of knowledge, skills, experience or behaviour a candidate would be asked to put forward as evidence of meeting the requirement. It would be very helpful to see a similar approach here.

This would also allow some greater differentiation between the extent of competence required at the different levels. For example, at level 2 knowing what an HRB is may suffice. But not at level 3 or 4. Examples of the evidence required to satisfy each level would be helpful.

Level 2 Accountabilities
In the Level 2 accuntabilites there are two statements about requirements of inspectors at level 2 and above.

Identify, determine and take action to secure compliance
provide competent advice to building control bodies and dutyholders

It is our understanding that under the Building Regulations Operating Standards, recently published for consultation, Building Control professionals are prohibited from providing advice. We therefore do not think it is appropriate for building control professionals to be expected to do more than assess compliance.

We are unclear about both of these points. We have been led to understand that the responsibility for compliance will rest with the client and the appointed designer(s) and contractor(s). They will be expected to understand how the building they are responsible for complies with the building regulations. We understand that the building control inspector will have a duty to determine whether the evidence they see convinces them that the building is indeed compliant.

However, if it is not compliant, it is not the role of the inspector to “secure compliance” in the broad sense of the term. The only action they should be taking is to refuse to approve, certify or in any other indicate that a non compliant building is compliant. They should also be required to provide clear evidence to support their determination that the building is not compliant and be very clear about the aspects of non compliance that they have identified. But if the building is not compliant then it must fall to those who will, under the proposed dutyholder and competence regulations, be responsible for design and construction, to “take action to secure compliance”.

And this then leads into the second aspect of the accountablity – providing advice. If this means providing clear statements about what is non compliant and what would be expected of a compliant building then we have no problem. But given the responsibilites proposed for designers and contractors we see a real risk of building control professionals giving “advice” that could constitute or be taken as “design advice” and would create a risk of confusion over roles – which the whole reform package is intended to remove.

We think that the accountability needs to be framed in such a way as to remove advice, perhaps in the following terms:

Identify and determine compliance of building designs and work
Provide a clear statement of reasons for determining that design or work is non compliant

Communicate effectively with building control bodies and dutyholders on compliance throughout the design and construction process

We suggest that this avoids giving any suggestion that building control professionals are "advisors" or that their role overlaps with that of the dutyholders.

In the Indicative Examples of knowledge for Level 2 there is a reference to "Approved Documents, best practice and guidance. This risks muddling best practice with the bare acceptable minimum set out by the ADs. Knowledge of the Statutory guidance for common building types set out in the Apoproved Documents is one indicator.
Knowledge of sources of industry guidance and best practice published by professional bodies and reputable industry assoications is another different indicator. It is also essential for building control professionals to have a knowledge of testing and product standards – they must understand those or they cannot assess compliance effectively.

Page 18 – Law
This statement says nothing explicit about upholding the law. Suggest it might usefully be reframed as "Demonstrate and maintain high professional standards in the application and upholding of all relevant law, associated acts and regulations in the delivery of all building control functions and activities."

Comment: Upholding and enforcing the legislation is essential if it is not to become an expensive burden on those who are responsible and seek to comply and a means to allow the unscrupulous to undercut and compete unfarily with those who do not comply.

In level three of four there must surely be a statement such as

> How a private sector building control inspector is required to act in the event of persistent non compliance by a client or a refusal to bring work into compliance.

Comment: we simply cannot afford to have a scenario in which a private sector inspector is faced with non-compliant work and no realistic means of getting compliance without having some credible recourse to the local authority or the BSR. And knowing how this is to be tackled has to be a core competence of all private sector inspectors from day 1. It has to be known how a private sector inspector can act to protect them from bullying and commercial coercion by the less scrupulous. This will be the reality in the worst cases – and those are the ones where effective enforcement will be most necessary.

Where will knowledge of the dutyholder and competence regime be addressed? It will be really important for building control professionals to understand this.

Page 19 – competence criteria
There is nothing about HRBs until you get to level 4. Even at the most basic level there needs to be awareness of the concept of HRBs and that they are regulated not just in design and construction but also in operation. Getting the concept of HRBs in at level 1 is essential.

Planning Gateway One is enabled by amendments to the Town and Country Planning Act – this should be included in the list of primary and allied legislation under the Level 1 list.

Page 20 – Technology
In the introductory text include an explicit reference to the technology of refurbishment. In light of the Grenfell Tower evidence this is a very specific and significant aspect of technological awareness and understanding. See general comments at the beginning on refurbishment.

In the level 1 awareness list there is reference to testing and certification, but no mention of product standards. Inspectors must understand what product standards are, what they tell us, what they do not tell us and how they should be used. If they don't know that they simply cannot do their jobs and are not competent.
At level 2 they need to be able to demonstrate how they assess compliance. Full Stop. Whether that is using handbooks linked to warranty schemes, or using the guidance for common building types set out in Approved documents (and understanding that the ADs are guidance for use in common building types is an essential competence in its own right – it is the functional requirements that are the legal essential, not following the ADs). And they need to understand how they assess a scheme that either chooses the legally valid option of not following the AD or is a building type that is not covered by the AD. A competent inspector must understand the status and purpose of the ADs and that following the ADs is not a statutory requirement, but meeting the functional requirements is.

It is good to see the references to a sustainable built environment here – they will need further reinforcement later.

Page 21 competences. At Level 1 its essential to insert a further bullet:
Ventilation design and installation to provide healthy and habitable spaces. In the light of the findings of the Manchester Senior Coroner in the case of Awaab Ishak's death it is essential that building inspectors are fully conversant with ventilation requirements and their interaction with thermal performance. It is well recognised that mould growth mainly occurs in areas that have poor local air circulation, often coupled with cold bridging or cold internal surfaces. As the recent tragic case shows, these issues are just as life safety related as fire and structural understanding, and with a national programme to deliver net zero building control will have a key role in protecting the public from poorly conceived and executed refurbishment.

At level 2 and above there needs to be some understanding of innovation in the sector as well as test methods and product standards.

At level 2 and 3 there needs to be a full understanding of Approved Documents, which should not be considered in relation to insurance as they are quite unrelated to insurance schemes.

At level 2 and 3 there needs to be an explicit mention of refurbishment in relation to technology and innovation.

At levels 2 and 3 building control professionals need to understand the role and operation of Competent Persons Schemes.

At level 4 there is a one line entry, very high level. There will need to be miuch more detail and it has to address refurbishment in HRBs, the oversight regime, the role of CP schemes and works to higher risk buildings as part of routine maintenance.

Building Services – page 22 & 23
At level 1 up there needs to be an understanding of the impact and influence of building services on overall compliance with the regulations. This needs to include refurbishment.

The competence overviews on page 22 are extremely high level and vague. Much more detail is needed on services and on provision of information about services – regulations 38-40 and aspects of 41-44.

Level 4 is also very thin and there is a need for considerable detail in relation to work on services in HRBs.

There is no mention of accessibility, provision for disabled persons or of lift provision in buildings, either in the accountabiities or the competence criteria on page 23. In particular, there is limited or no coverage of accesibility, of fire suppression, or broadband (which is regulated and with increasing reliance on online medicine is increasingly important to the elderly and infirm or indeed anyone requiring access to online medical provision, which relies increasingly on broadand provision. And broadband requires cables penetrating fire compartments too. And then there is electric vehicle charging.

At level 2 and above it is essential that building control professionals understand commissioning of building services, the requirements of Regulation 44 and the implications of not commissioning on compliance of a building.

At level three there is a reference to “what makes a building service compliant”. It is not at all clear what this actually means. The functional requirements do not generally apply to a specific building service – the services contribute to meeting the requirements. We suggest that this needs further development.

There is one line on competence for complex buildings. It simply does not enable any assessment of competence and needs to be developed – the UK SPEC for HRBs may offer useful material to support this and other parts of the framework.

In addition, we suggest that the awareness section regarding building services on page 23 needs some further adjustment and reinforcement:
- electricity systems should read electrical systems
- the fire detection, alarms, emergency lighting and signage paragraph should also refer to works in existing buildings;

- there is no mention of gas (not just used for heating, but used for cooking, processes and also still used in some places for lighting) which would need to include not just natural gas and blends (and will possibly eventually need to consider pure hydrogen).
- In hospitals and helathcare buildings medical gases and compressed air (used for controls as well as processes) would need to be considered as well;
- lighting isn't specifically mentioned, but is essential for a safe and functional building;
- security systems (access control, alarms, CCTV and intruder detection etc.) should be split out separately from 'communications systems';
- there is no mention of other specialist building services such as transport systems - the 'Lamson' tube pneumatic system is probably best known). there is no mention of oils of various types (28-second kerosene and 35-second 'diesel') which are used as a heating fuel and for powering generators in some older buildings that may undergo controlled building work;
- there will probably be other systems not mentioned in the framework and in the listing above and some general catch-all phrasing to cover all eventualities will be required.

In the section on building control functions it would be good to see explicit critera and coverage around responsibilities, duties and powers of building control professionals,

END

Please do not hesitate to contact us for more information on this response. CIBSE would be willing to assist in the development of any of the issues raised in this response.