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What are the latest government proposals on regulations & standards I need to follow?

Geoff Wilkinson
MEng MIFireE MRICS FRSA

Key points:

- Understanding the implications of the Hackitt report on current standards and guidelines
- Fire safety and prevention
- Future health and safety practices
- Materials, fire rating and best practice

Building a Safer Future

Independent Review of Building
Regulations and Fire Safety:

Final Report

May 2018

Dame Judith Hackitt DBE FREng

Cm 9607



As the review has progressed, it has become clear that the whole system of regulation, covering what is written down and the way in which it is enacted in practice, is not fit for purpose, leaving room for those who want to take shortcuts to do so.



I have set out to look at the whole system, including the people working within it, and how the various parts interact to deliver outcomes on the ground. This includes the roles and responsibilities of people designing, planning and constructing buildings; the roles and responsibilities of different enforcing bodies and those who set standards; and the roles and responsibilities of all those who interact with the system during the use of a building, which often involves highly complex ownership models. The regulatory system comprises all of these elements, not just what is written in statute.

Change control and quality assurance are poor throughout the process. What is initially designed is not what is being built, and quality assurance of materials and people is seriously lacking.

Changes to the regulatory regime will help, but on their own will not be sufficient unless we can change the culture away from one of doing the minimum required for compliance, to one of taking ownership and responsibility for delivering a safe system throughout the life cycle of a building.

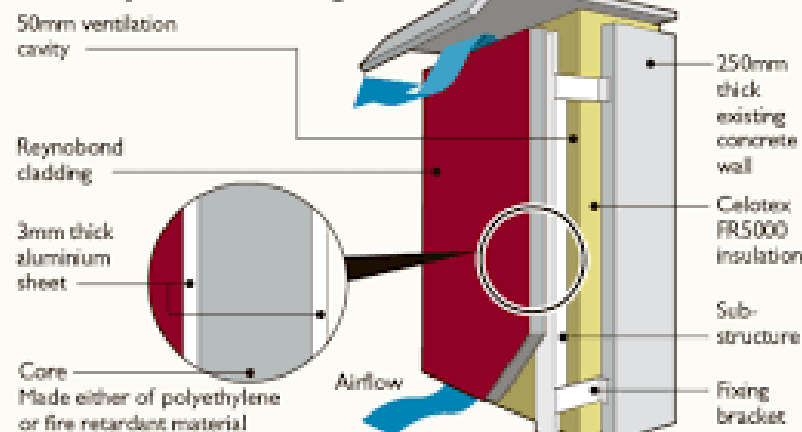
The above issues have helped to create a cultural issue across the sector, which can be described as a 'race to the bottom' caused either through ignorance, indifference, or because the system does not facilitate good practice. There is insufficient focus on delivering the best quality building possible, in order to ensure that residents are safe, and feel safe.



A systemic review of the regulations by a non-expert in construction was never going to recommend detailed changes to the technical requirements – this is beyond my area of competence. Any attempt to modify details of the regulation without addressing the clear systemic failings would be akin to adding a paint job and decorations to a fundamentally non-roadworthy vehicle. My goal is to ensure that we create, within a much more robust overall system, a process that ensures there is effective oversight of materials, people and installation.



Anatomy of the cladding





CIC calls for an industry-imposed moratorium

29 May 2018

CIC calls for an industry-imposed moratorium on the use of combustible materials in high rise cladding systems

At the CIC Members' Conference, held on 17/18 May, members present welcomed the announcement by The Rt Hon James Brokenshire MP, Secretary of State for Housing, Communities and Local Government, on 17 May, that the government will consult on banning the use of combustible materials in cladding systems on high-rise residential buildings.

The CIC Members present at the Conference, stressed that it was essential to begin the formal consultation as soon as possible. They also agreed that it would be appropriate for the industry itself to impose a moratorium on the use of combustible materials in cladding systems on buildings over 18 metres, until there is a clear decision by the government on the definition, classification, testing and use of combustible cladding & insulation materials for high-rise residential and other higher risk buildings. The use of combustible materials in cladding systems on buildings less than 18m high should be subject to careful review on a case-by-case basis.

The industry-imposed moratorium should be in conjunction with the work on fire and structural safety recommended in the Independent Review of Building Regulations and Fire Safety

Professor John Nolan, chairman of CIC said, following the members conference: *"I would be very surprised if anyone in the UK was specifying combustible ACM and insulation combinations on high-rise buildings since the Grenfell disaster. The combustibility of facades and their various components is an extremely complicated issue which needs detailed further investigation and guidance. I therefore welcome the Secretary of State's initiative to clarify the situation regarding the combustibility of all materials in high-rise cladding systems".*

Graham Watts, CEO of CIC said *"It is essential that the government makes a decision based on the widest range of expertise across all dutyholders engaged in the design, construction and management of high-rise buildings. This will take time and so the unanimous view of members at our Conference was to allay public fears and show leadership by urging the professions – as a whole – not to specify combustible cladding systems on high-rise residential and other higher risk buildings while the consultation is ongoing".*

So what does it contain ?

53 Recommendations

42 aimed at Govt for new regulation

Affects Govt, Duty Holders, Manufacturers, Professional Bodies, Fire Service, Environmental Health, Principal Contactors, Clients, BCB

EG the entire construction sector

Chapter 1 Parameters and principles of a new regulatory framework

Chapter 2 Design, construction and refurbishment

Chapter 3 Occupation and maintenance

Chapter 4 Residents' voice

Chapter 5 Competence

Chapter 6 Guidance and monitoring to support building safety

Chapter 7 Products

Chapter 8 Golden thread of building information

Chapter 9 Procurement and supply

Chapter 10 International examples

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Recommendation 1.1

The new regulatory framework should apply to residential properties which are 10 or more storeys high in the first instance. New HRRBs should be identified by the Local Planning Authority and notified to the regulator. Existing buildings in scope should be identified through other means, learning from the MHCLG Building Safety Programme experience.



Recommendation 1.2

The government should set up a 'Joint Competent Authority'. This should comprise Local Authority Building Standards, fire and rescue authorities and the Health and Safety Executive, working together to maximise the focus on building safety within HRRBs across their entire life cycle. The optimum model for ensuring effective joint working should be discussed with all relevant parties, but should draw on the model set out above. The JCA should design and operate a full cost recovery model.



Recommendation 1.3

The regulatory framework should treat the building as a single entity (a system encompassing sub-systems) and a new over-arching Approved Document should be published describing the system and the holistic analyses that must be completed when undertaking building work. This should define the requirement to understand the interactions of the system and its comprising subsystems in both normal operation and outside normal conditions.

Recommendation 1.4

- a. A system of mandatory occurrence reporting to the JCA similar to that employed by the Civil Aviation Authority should be set up for HRRBs. The requirement to report should be for key identified dutyholders on a no-blame basis. The outputs of these reports (and statistical analysis of this data) should be publicly available. Non-reporting should be regarded as non-compliance and sanctions applied appropriately.
- b. It would be appropriate for the JCA to be a prescribed person under PIDA.
- c. For all other buildings the current CROSS scheme should be extended and strengthened to cover all engineering safety concerns and should be subject to formal review and reporting at least annually.

Key roles and responsibilities

2.15 It is necessary to identify the key roles that are most important in initiating, overseeing or influencing activity throughout the procurement, design and construction phase. The key roles¹⁹ for prioritising building safety are the same as those identified in the CDM Regulations. These are the roles best able to understand and manage risks to construction site safety. This approach has the added advantage of consistency and clarity across all regulatory requirements.

Table 1 – Key roles under the CDM Regulations

Key roles under CDM Regulations	Is this role critical in ensuring a focus on building safety?	Why is this role critical?
Clients	✓	Develops and maintains a sense of ownership and responsibility for building safety and regulatory compliance. Identifying the client's responsibilities at the outset will ensure a greater degree of ongoing engagement.
Principal Designers	✓	Maintains the ownership concept on behalf of the client to ensure that Gateway Points are observed and key players are engaged appropriately.
Designers	✓	Ensures accountability and helps create an audit trail in respect of any design changes that can be followed back through the Principal Designer and ultimately to the client.
Principal Contractors	✓	Assumes primary ownership throughout the construction phase, and especially at handover to the occupation and maintenance phase.
Contractors	✓	Ensures accountability and helps to create an audit trail to ensure that any on-site changes can be followed back through the Principal Contractor and ultimately to the client.

Recommendation 2.3

Government should make the creation, maintenance and handover of relevant information an integral part of the legal responsibilities on Clients, Principal Designers and Principal Contractors undertaking building work on HRRBs. The four information products (the digital record, the Fire and Emergency File, Full Plans and Construction Control Plan) represent a minimum requirement.

Recommendation 2.5

The LPA should be required in law to undertake a consultation with the JCA where it identifies that a building is a HRRB. This process should also apply where planning permission for another building in the near vicinity is sought (where such a building might impact on fire service access to a HRRB).

This is the first Gateway Point.



Recommendation 2.6

Government should ensure that there is thorough assessment by the JCA of detailed design plans for HRRBs and sufficient assurance that dutyholders are in place and relevant responsibilities are being met in order to give permission for building work to legally commence. This should be in line with paragraphs 2.29-2.32.

This 'Full Plans Approval' is the second Gateway Point.

2.30 Informal engagement between dutyholders and the JCA should begin before this Gateway Point begins. However, this should be the point at which the Principal Designer is formally required to present the JCA with Full Plans. This should include dutyholders providing detailed specifications of building works in respect of fire and structural safety as a minimum (alongside the necessary specification in all other aspects of the Building Regulations). This will need to be in an appropriate and accessible format in order for formal consideration to start. This will require a more rigorous and investigatory skill set than is currently required from those responsible for building control. Such plans will need to satisfy the JCA that the layers of protection for that building ensure that risks are reduced so far as is reasonably practicable in the key safety areas. More generally, the plans will also need to show compliance with all aspects of the Building Regulations²⁸. The JCA needs to minimise unnecessary delays in this process to ensure safe building work can be signed off as promptly as possible.

2.31 Only once those plans are fully considered and approved by the JCA (with building control leading) will dutyholders have authority to start building work. There would be appropriate sanctions for dutyholders' starting building work without clearance – see Part 5 of this chapter. This strengthening will better embed building safety at an early stage by²⁹:



Recommendation 2.7

Government should ensure that:

- a. the JCA undertakes a thorough test of the dutyholders' as-built construction of HRRBs, supported by clear documentary evidence from the Principal Contractor that the design intent has been delivered as proposed (and any changes are documented and justifiable) and that handover of key golden thread information has occurred. This should be as set out in paragraphs 2.33-2.35 above; and
- b. the building owner must have completed a pre-occupation Fire Risk Assessment and resident engagement strategy. All of this must be signed off by the JCA (and a safety case review cycle established) to enable occupation to commence.

This 'Completion Certificate' process is the third Gateway Point.

Recommendation 2.9

- a. there should be a clearer, statutory change control process that places requirements on the relevant dutyholder to notify the regulators of significant changes post-Full Plans sign-off. Within that context, two types of changes should be defined – ‘major’ and ‘minor’.
 - ‘Major’ changes would be a limited list of significant changes for example (a) changes in use, changes in number of storeys, changes in number of units or (b) changes which could impact on previously signed-off building safety plans. Major changes would require an update from the dutyholder to the JCA (for reconsideration) before such work is commenced.
 - ‘Minor’ changes (i.e. all other changes) would need to be recorded and identifiable at the completion of the work for dutyholders to demonstrate that Building Regulations are still satisfied.
- b. Government should consider also applying this change control process to other multi-occupancy residential buildings and to institutional residential buildings.



Recommendation 2.10

In HRRBs, building work that is carried out by ‘persons in a competent person’s scheme’ should be subject to full oversight by the JCA to enable it to fully discharge its duties in line with paragraph 2.38-2.39 above.

Recommendation 2.13

The sanctions and enforcement regime should be reinforced so that penalties are an effective deterrent against non-compliance. These stronger enforcement tools should generally look to replicate and align with the approach in the Health and Safety at Work Act. More specifically:

- a. the JCA/Local Authority Building Standards should have additional powers to issue formal Improvement and Prohibition (or 'Stop') Notices to dutyholders where there is a sufficient concern about, for example, the degree of oversight of the work; accurate record-keeping; or the likelihood of meeting Building Regulations requirements;
- b. the JCA/Local Authority Building Standards should have the clear power to require changes to work that fail to meet the Building Regulations requirements alongside any broader penalties sought;
- c. time limits for bringing prosecutions against dutyholders should be increased to five or six years for 'major' deficiencies in building requirements identified at a later date;
- d. the JCA cost recovery model should be weighed appropriately to create a fund for enforcement action to be taken where needed; and
- e. the new powers should be available, wherever appropriate, to support either the JCA or Local Authority Building Standards in respect of all non-compliant building work.



Recommendation 4.1

- a. The dutyholder for a HRRB should have a statutory duty to proactively provide residents with a set of information that supports residents to understand the layers of protection in place to keep their building safe.
- b. The government should consider applying this requirement to other multi-occupancy residential buildings.

Recommendation 4.2

- a. Residents of HRRBs should have the right to access fire risk assessments, safety case documentation and information on maintenance and asset management that relates to the safety of their homes.
- b. The government should consider applying this requirement to other multi-occupancy residential buildings.

Recommendation 6.1

- a. Government should work towards a long term aim that guidance on how to meet the building regulations is to be owned by industry, while government sets out regulatory requirements and provides oversight of the regulatory system.
- b. Government should reserve the right to create guidance if industry has not proven that it is able or is deemed unable to produce suitable guidance.

Recommendation 6.2

- a. The government should create a new structure to validate and assure guidance, oversee the performance of the built environment sector and provide expert advice.
- b. There should be a periodic review (at least every five years) of the effectiveness of the overall system of building regulation including accountabilities, responsibilities, guidance, and the effectiveness of the regulator.



Where the building exceeds 10m in height, the BCA recommends three options for showing compliance with paragraph 12.7 of AD B2 -

Option 1

The use of materials of limited combustibility for all elements of the cladding system both above and below 10m. This includes the insulation, internal lining board and the external facing material. Smaller gasket parts and similar low-risk items can be excluded from this requirement. The definition of a MCLC is stated in Table A7 of AD B2.

Option 2

An acceptable alternative approach (see AD B2 paragraph 12.5) is for the client to submit evidence to the Building Control Body that the proposed external cladding system has been assessed according to the acceptance criteria in BR135 - *Fire Performance of External Thermal Insulation for Walls of Multistorey Buildings*. The preferred method of demonstrating compliance is via a fire test carried out in accordance with BS5414-1: *Fire performance of external cladding systems - Part 1: Test method for non-loadbearing external cladding systems applied to the face of the building* or BS5414-2: *Fire performance of external cladding systems - Part 2: Test method for non-loadbearing external cladding systems fixed to and supported by a structural steel frame*. The test should be carried out by an independent UKAS accredited testing body. The BS5414 tests do not give a PASS / FAIL answer because the data obtained is used by different bodies with different minimum requirements. Hence, for Building Regulation purposes, any test using this method needs to be supported by proof that the acceptance criteria of BR135 have been met. These acceptance criteria are listed in Annex A or Annex B of BR135 and include the following:

- External fire spread—determined by a 600°C rise in temperature on the external face of the building (measured at a point approximately one storey above the fire floor) for thirty seconds or more during the initial fifteen minutes of the test.
- Internal fire spread—determined by a 600°C rise in temperature on the internal face of the building (measured at a point approximately one storey above the fire floor) for thirty seconds or more during the initial fifteen minutes of the test.
- Mechanical performance—determined by an assessment of system collapse, spalling, delamination, flaming debris or pool fires.

Option 3

If no actual fire test data exists for a particular system, the client may instead submit a desktop study report from a suitable independent UKAS accredited testing body (BRE, Chiltern Fire or Warrington Fire) stating whether, in their opinion, BR135 criteria would be met with the proposed system. The report should be supported by test data which the test-house already has in its possession and so this option may not be of benefit if the products have not already been tested in multiple situations / arrangements. The report should also specifically reference the tests which they have carried out on the product.

Key Notes

- Surface Spread of Flame Classification does not infer any resistance to combustibility, it is solely a measure of the spread of a flame across the surface.
- Thermosetting insulants (rigid polyurethane foam boards) do not meet the limited combustibility requirements of AD B2 Table A7 and so should not be accepted as meeting AD B2 paragraph 12.7. However, if they are included as part of a cladding system being tested to BR135 & BS5414, the complete assembly may ultimately prove to be acceptable.
- The BR135 / BS5414 tests deal solely with the spread of fire once it has entered the cavity. Hence, the requirements for cavity barriers in accordance with Section 9 of AD B2 are required in all cases including around openings in the façade.
- Issues of the fire-resistance performance of external cladding systems, eg in relation to boundary conditions and space separation still need to be addressed. The recommendations in Section 13 of Approved Document B2 and BRE guide BR 187 - *External fire spread: building separation and boundary distances* should be followed.

Recommendation 7.1

- a. A clearer, more transparent and more effective specification and testing regime of construction products must be developed. This should include products as they are put together as part of a system.
- b. Clear statements on what systems products can and cannot be used for should be developed and their use made essential. This should ensure significantly reduced scope for substitution of any products used in a system without further full testing. Until such time, manufacturers should ensure that they adhere to the current limitations set out in classification reports in the current regime.
- c. The scope of testing, the application of products in systems, and the resulting implications must be more clearly communicated in plain, consistent, non-technical language.

Recommendation 7.2

- a. Manufacturers must retest products that are critical to the safety of HRRBs at least every three years. Manufacturers should consider the need to test more frequently, focusing especially on the testing of products as they operate in systems rather than individual elements.
- b. The testing of products that are critical to the safety of HRRBs should be subject to independent third party certification.
- c. The introduction of the JCA should drive the introduction of reactive testing when particular issues of concern arise regarding products installed that are critical to the safety of HRRBs.
- d. Additional test houses should be established and certified.
- e. All test houses should produce an annual report providing summary details of tests carried out and the number of passes and failures reported.

Recommendation 7.5

- a. The construction products industry should work together to develop and agree a consistent labelling and traceability system, making use of the digital technologies that are already available and learning from other sectors.
- b. The dutyholder for any given HRRB should ensure that the documentation that supports the performance claims for products and systems incorporated within the HRRB should be maintained throughout the life cycle of a building through the golden thread of building information (see Chapter 8).

Recommendation 7.6

- a. Government should ensure that there is a more effective enforcement, complaint investigation and market surveillance regime with national oversight to cover construction product safety.
- b. Government should consider whether this could be achieved by extending the remit of the Office for Product Safety and Standards.
- c. The introduction of national level market surveillance should drive the introduction of risk-based testing of products that are critical to the safety of HRRBs.



Recommendation 8.1

- a. Government should mandate a digital (by default) standard of record-keeping for the design, construction and during the occupation of new HRRBs. This is to include any subsequent refurbishments within those buildings.
- b. Digital records are to be in a format which is appropriately open and non-proprietary with proportionate security controls.



8.28 A non-exhaustive list of the types of information that should be recorded, available and maintained for existing buildings are:

- size and height of the building;
- structure;
- fabric;
- escape and fire compartmentation information;
- systems in operation; and
- permanent fixtures and fittings.

8.29 To avoid placing unreasonable requirements on existing building owners where information has not been handed over from the construction phase or from a previous owner, the JCA may require less information than is required for new buildings. Intrusive surveys may be required for some buildings in order to build an accurate record as evidence to support the safety case. This work would be part of the phased introduction of a new regulatory framework for existing HRRBs.

Recommendation 8.3

- a. Government should work with industry to agree the type of information to be collected and maintained digitally (by default) to enable the safe building management of existing HRRBs.
- b. Dutyholders must identify and record where gaps in the above information exist and the strategy for updating that relevant information.

- a. For higher risk residential buildings (HRRBs), principal contractors and clients should devise contracts that specifically state that safety requirements must not be compromised for cost reduction.
- b. The government should consider applying this requirement to other multi-occupancy residential buildings and to institutional residential buildings.

- a. For HRRBs, tenders should set out how the solution that is proposed will produce safe building outcomes, approaching the building as a system. Those procuring should use the tender review process to test whether this is the case.
- b. The government should consider applying this requirement to other multi-occupancy residential buildings and to institutional residential buildings.



For more information:

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Questions?

Email: geoff@thebuildinginspector.org

Telephone: 01732523466

Website: www.thebuildinginspector.org

Twitter: @geoffwilkinson