

SCOSS ALERT

July 2018

Building a Safer Future Independent Review of Building Regulations and Fire Safety: Final Report

WHO SHOULD READ THIS ALERT?

This Alert is aimed at those who own, commission, design, construct, or maintain multi-occupancy higher risk residential buildings (HRRBs) that are 10 storeys or more in height.

EXECUTIVE SUMMARY

This Alert is a summary of selected parts of the [Independent Review of Building Regulations and Fire Safety: Final Report](#) that are relevant to structural and civil engineers. The final report should be read in full to appreciate all of the facts and the implications, and to absorb the wealth of information and the recommendations made by Dame Judith Hackitt.

The report proposes a fundamental shift in the approach to regulation, that being one from prescription (and rote compliance) to one of the professions looking at buildings as a whole and demonstrating them to be safe. Although there has been much public focus on the Grenfell Tower fire and the role of cladding in that incident, the Hackitt report takes a much broader view tackling the basic challenge of making HRRBs safe overall. The government will have to enact legislation, but there is no doubt that, if adopted, the Hackitt recommendations will have wide ranging implications for the construction industry. Significant effort will be required by government and industry to assess and comment on the many implications.

Dame Judith Hackitt found that:

- Roles and responsibilities for building safety are unclear;
- Regulations and guidance are "ambiguous and inconsistent" and are "misunderstood and misinterpreted";
- The process that drives compliance with the regulations are "weak and complex with poor record keeping and change control in too many cases";
- Competence (of people in the system) is "patchy";
- Product testing, labelling and marketing is "opaque and insufficient";
- Residents' voices go unheard, even when safety issues are identified.

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

Dame Judith Hackitt has set out a new regulatory framework to address all of these weaknesses with a stronger focus on creating and maintaining safe buildings. Condensing the key recommendations of a new regulatory framework into a few points, these are:

- There should be a stronger and tougher regulatory framework for higher risk residential buildings (HRRBs) that are 10 storeys or more in height;
- There should be a new Joint Competent Authority (JCA) comprising fire and rescue authorities, Local Authority Building Standards and the Health and Safety Executive (HSE) to oversee better management of safety risks in these buildings (through safety cases) across their entire life cycle;
- Introduction of a safety case approach and permissioning regime which will only allow buildings which are demonstrated to be safe to be constructed and occupied;
- Clear responsibilities to actively manage on-going safety during occupation;

- Mandatory incident reporting is proposed for HRRBs with CROSS reporting to be used for all other buildings to cover all engineering safety concerns;
- Key roles and responsibilities must be clearly established, including tackling poor procurement practices;
- A fundamental overhaul of guidance - simpler, clearer and easier to use to support a systems approach to building safety with more rigorous requirements where needed;
- Digital records for new HRRBs from initial design intent through to construction and including any changes that occur throughout occupation must be kept;
- A stronger enforcement and sanctioning package - criminal sanctions and large fines;
- More effective leadership and competence for ensuring building safety amongst key roles;
- Stronger testing, labelling and traceability of products used in construction which are critical to building safety;
- Empowering residents - giving residents a voice in the system.

“At the heart of this report are the principles for a new regulatory framework which will drive real culture change and the right behaviours” says the report.

It recommends a model of risk ownership, for the Client, Designer, Contractor and Owner who will be held to account by a new JCA. Furthermore, the new regulatory framework must be simpler, more effective, and outcomes-based. This is instead of prescriptive rules and complex guidance, and the JCA must have real teeth. There should be a risk-based approach to the level of regulation that will be most effective in delivering safe building outcomes in the future. Those who procure, design, construct and maintain buildings must be responsible for ensuring that those buildings are safe for those who live and work in them.

Additionally, government will set clear outcome-based requirements for the building safety standards which must be achieved. Residents will actively participate in the ongoing safety of their buildings and must be recognised by others as having a voice.

Whilst each of the recommendations are crucial, in isolation they will fail to achieve the systemic change sought, says the report. The framework operates as a mutually reinforcing package and requires the implementation of its interdependent components in order for this to be achieved. Whilst some of the recommendations can be delivered in the short term, says the report, some will require primary legislation and, in the meantime, industry must start the cultural shift that is required - the most important element of achieving that will be leadership from within industry.

BACKGROUND

The unfolding of a series of events, including the Grenfell Tower fire, materials falling from a building in Glasgow, the temporary evacuation in London of the Chalcots Estate and the discovery of structural safety issues with four buildings at the Ledbury Estate, Southwark, prompted the Secretary of State for the Department for Communities and Local Government (DCLG, now MHCLG) and the Home Secretary to instruct Dame Judith Hackitt to conduct an Independent Review of Building Regulations and Fire Safety with a particular focus on their application to high-rise residential buildings.

Dame Judith Hackitt was asked to present timely recommendations to provide assurance to everyone, and in particular to residents of high-rise buildings, that urgent steps are being taken to improve the safety of buildings and to address what could be seen as evidence of systemic failings in the regulatory system and deeper problems in the industry. Dame Judith Hackitt published her interim report in December 2017 and her final report in May 2018.

WHAT WILL BE NEW

Regulatory framework

The behaviour and attitude of some in the chain of those engaged in the construction of buildings has been found to be faulty so new systems are required. The new regulatory framework will focus, in the first instance, on multi-occupancy HRRBs that are 10 storeys or more in height. Engineers however will recognise that there are other categories of building that could also be considered ‘higher risk’ and in due course these will have to be covered too.

The new JCA will comprise of fire and rescue authorities, Local Authority Building Standards and the HSE to oversee better management of safety risks in these buildings across their entire life cycle. This will be done by making use of safety cases, a proven system used in some other industries such as nuclear, military, railways, aviation, oil and gas operation, offshore and chemical manufacture.

The regulator, JCA, will have a more important role and there will be three 'Gateway Points' at key stages in the building life cycle, where dutyholders will have to show to the JCA that their plans are robust, that their understanding and management of building safety is appropriate, and that they can properly account for the safety of the completed building. The three Gateway Points are:

- Gateway Point 1 – Planning Permission
- Gateway Point 2 – Full Plans sign-off
- Gateway Point 3 – Completion stage

Creating a system whereby dutyholders will not be able to gain permission for land use, start building work or begin occupation until they meet the necessary requirements at the relevant stage, will also drive the right behaviours, the report says. Associated with this will be a stronger change control process because one of the current problems is that designers are not always consulted about changes made on site, so standards may be compromised. During the occupation and maintenance phase, the dutyholder must nominate a 'building safety manager' with the relevant skills, knowledge and expertise to assist in discharging their duties and to be available to residents concerned about safety in their building.

A common concern is that there are no clear levels of responsibility for safety so in future there will be an identifiable dutyholder with this responsibility for the whole building.

The regulatory process will be independent from clients, designers and contractors and there will be more rigorous enforcement powers. The JCA will be especially concerned with fire and structural safety not only during design and construction but also during the life of a building.

The new 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.

Building standards that HRRBs need to meet will remain outcome-based, meaning that regulations define the outcomes that the building work needs to achieve. This will rely on robust competence regimes with appropriate levels of assurance. Those appraising it will need to have sufficient levels of skills, knowledge and expertise to make appropriate judgement calls.

Reporting

It is recommended that a system of mandatory occurrence reporting to the JCA 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. There could be protection in law for the JCA in the same way as there is for whistleblowers.

CROSS (Confidential Reporting on Structural Safety) is recognised in the report as an established system for incident reporting from structural engineers. It relies on a skilled professional to recognise concerns and failure events and report on them. This is not however whistleblowing but the collection, processing, and dissemination of safety information on a voluntary basis for the benefit of all concerned, especially the public. For all buildings, other than HRRBs, says the report, CROSS should be extended and strengthened to cover all engineering safety concerns, and should be subject to formal review and reporting at least annually.

The information collected via these routes would provide rich data to inform future policy decisions, for example whether the definition of HRRBs should be amended, or where additional guidance may be required.

Key responsibilities

Government should specify the key roles and responsibilities that will ensure the procurement, design and construction process results in HRRBs that are safe, using definitions that reflect those in the CDM Regulations.

Key information products

The report has identified four key information products that are integral to greater dutyholder oversight on building safety (and other Building Regulations requirements) throughout procurement, design and construction:

1. The digital record:
Digital record of the building as planned, then as built including, for example, products used. Intended to underpin an effective understanding of the constructed building across the life cycle.
2. The Fire and Emergency File:
Product setting out the key building safety information. The file will be initiated and then updated and ultimately passed across to the building owner.
3. Full Plans:
Detailed plans/specification of building works in respect of fire and structural safety as a minimum.
4. Construction Control Plan:
Describes how building safety and Building Regulations compliance will be maintained during the construction phase and how change will be controlled and recorded.

As soon as detailed work commences on a building, the client needs to ensure that a digital record of the building work is established and a Fire and Emergency File is initiated. Both of these will need to be maintained throughout design and construction and be part of the regulatory oversight process.

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.

Safety case and information management

It is proposed that the dutyholder for a HRRB presents to the JCA, a safety case, at regular intervals (as determined by level of risk), which shows that across the whole building the risks are being managed effectively. The safety case is an evidence-based approach in which the dutyholder identifies the hazards and risks, describes how risks are controlled, and describes the safety management system in place, including emergency procedures in the event of an incident. This approach is tailored to each building and is proportionate because the level of detail and amount of information required is determined by the level of risk, says the report.

The safety case file should include:

- information on the building management system in relation to fire and structural safety, records of maintenance, inspection and testing undertaken on the structure and services and evidence that the competence of those undertaking work on the building was sufficient;
- a resident engagement strategy;
- the maintained and updated Fire and Emergency File and digital record;
- a copy of any fire safety inspections undertaken by the dutyholder and/or regulator; and
- a copy of the latest fire risk assessment and evidence of actions taken and the appropriate competence of the person who performed it.

The government should consider applying this requirement to other buildings with high levels of occupancy.

Competency

Increased levels of competence are an integral part of the proposed new regulatory framework. The package of responsibilities placed on dutyholders will drive a requirement for high quality work from all those involved in the end-to-end process for HRRBs. As well as addressing technical competence, there is a pressing need to see the leadership that is required within the construction industry and fire safety sector to drive the shift in culture. Professional bodies need to demonstrate and deliver this leadership.

It is imperative that the lessons that have been learned in other sectors from tragic events on the scale of the Piper Alpha oil production platform disaster in 1988, and the RAF Nimrod air crash in 2006, are quickly absorbed and translated in a way that is relevant to this sector. Every encouragement should be given to cross-disciplinary and cross-sector learning. Business leaders in construction, and in the service sectors which support it, must reach out to other sectors and to learn from the experience of how they have managed issues such as asset integrity.

There must be competence of building designers, including architects; of site supervision and project management; and of building safety managers. In addition, there must be competence amongst the specialist bodies and trades operating within the construction industry and fire safety sector. The review considers that this must be overseen by a single body to ensure delivery and consistency.

In summary the construction sector and fire safety sector should:

- demonstrate more effective leadership in relation to developing a responsible approach to delivering building safety and integrity;
- work with other sectors to learn and translate good practice and implement it within the sector; and
- develop continuous improvement approaches to competence levels.

Products and procurement

A clearer, more transparent and more effective specification and testing regime of construction products must be developed. This must include products in the assemblies and systems in which they are intended to be used. Once an assembly or system of products is approved as a specific assembly or system, it must be made very clear as what product substitutions can (or cannot) be made without invalidating the assembly or system approval. Once a given assembly or system is invalidated, the entire new assembly or system should be validated in its own right.

For HRRBs, principal contractors and clients should devise contracts that specifically state that safety requirements must not be compromised for cost reduction. The government should consider applying this requirement to other multi-occupancy residential buildings and to institutional residential buildings. The invitation to tender and the bid process must prioritise building safety and balance the upfront capital cost against quality and effectiveness. The safety requirements, and how they will be assured, must be scrutinised during both the tendering process and the bid review.

Golden thread of building information

Government should mandate a digital (by default) standard of record-keeping for the design, construction and during the occupation of new HRRBs. Very importantly this is to include any subsequent refurbishments.

CONCLUSIONS

The findings from the report were damning for parts of the industry. The recommendations are for major changes to address the failings and to improve safety for many years to come. All parties will have to co-operate, forget dividing lines, and work together for the benefit of those who construct and maintain buildings as well as those who live in them.

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