Foreword

A personal view from Dame Judith Hackitt

In the early hours of 14 June 2017, a fire spread through Grenfell Tower. Seventy-one people died, many homes were destroyed and countless lives have been affected. The fire appeared to be accelerated by the building's exterior cladding system, leading to a national programme of extensive testing of the cladding on other high-rise buildings. This revealed widespread use of aluminium composite materials which did not meet the limited combustibility requirements of building regulations guidance, and raised concerns for the safety of others.

Further concerns soon came to light about the adequacy of the structural design of cladding systems when materials fell from a building in Glasgow. A subsequent series of fire and rescue service audits of tower blocks led to the temporary evacuation in London of the Chalcots Estate, Camden, and resulted in the discovery of structural safety issues with four buildings at the Ledbury Estate, Southwark.

With these events unfolding, I was asked by the Secretary of State for the Department for Communities and Local Government (DCLG) and the Home Secretary to conduct an Independent Review of Building Regulations and Fire Safety with a particular focus on their application to high-rise residential buildings.

I have been 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.

This tragic incident should not have happened in our country in the 21st century. We now all have the opportunity to respond in a way that will lead to lasting change that makes people safer in the future. I have seen the improvements in safety in the oil and gas industry that followed the Piper Alpha oil production platform disaster in 1988 and I hope this review can have a similar impact.

This review is work in progress and a final report will follow in spring 2018. The review is future-focused and has not been charged with investigating the specific circumstances at Grenfell – these are matters for the ongoing police investigation and the Grenfell Tower Inquiry. It is key that we share what we have learned to date and outline the direction of travel over the next few months. There has been an outstanding response from stakeholders through meetings, written responses to our call for evidence and subsequent roundtable discussions. From the very earliest stages of the process, the people we have spoken to have indicated that the current regulatory system falls short of what is required to be effective. While some have argued for specific short-term measures, most have recognised that the current overall system is not working effectively and needs to be overhauled.

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.

This should not be interpreted as meaning that buildings are unsafe. Major building failures, including large-scale fires, are very rare and there are many construction firms, building owners, landlords and others in the system who do the right thing and recognise their responsibilities. The unprecedented verification, interim mitigation and remediation work undertaken by fire and rescue services, local authorities and building owners since the summer have ensured that measures are in place to assure residents of high-rise buildings of their safety. My focus is to create a better system for the future which will be easier to work with, deliver better solutions everywhere and rebuild confidence.

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.

One of the major outputs at this stage of the review is a map, which shows how the current regulatory system should work in practice. Carrying out this system mapping has been fundamental to understanding where the current weaknesses are and in providing the basis for developing a simpler and more effective framework for the future. This approach could have more widespread application across other regulatory frameworks, with the potential to deliver better overall results than other regulatory reviews conducted to date.

As an engineer, much of my career has been spent working in the chemicals industry where any project undertaken has to be specified, designed to that specification and properly reviewed; any changes have to be properly managed, reviewed and recorded. At the end of the project, a full record of what has been built must be handed over to those who will operate the project. This same philosophy continues throughout the life cycle of the entity that has been built, when any further changes or improvements are made.

After some four months leading this review, it is clear that this same systematic, controlled approach to construction, refurbishment and management of occupied buildings is not by any means universal. There is plenty of good practice but it is not difficult to see how those who are inclined to take shortcuts can do so. 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.

I have been shocked by some of the practices I have heard about and I am convinced of the need for a new intelligent system of regulation and enforcement for high-rise and complex buildings which will encourage everyone to do the right thing and will hold to account those who try to cut corners.

During close to a decade as Chair of the Health and Safety Executive, I saw the construction industry respond to the challenge of improving its performance in managing the safety of its workforce on projects of all sizes. With an effective regulatory framework in place, the industry was willing and able to show leadership, to take responsibility for delivering a culture change and to move away from simply accepting that construction is a dangerous sector to work in. A cultural and behavioural change of similar magnitude is now required across the whole sector to deliver an effective system that ensures complex buildings are built and maintained so that they are safe for people to live in for many years after the original construction. The mindset of doing things as cheaply as possible and passing on responsibility for problems and shortcomings to others must stop. Everyone's focus must be on doing the right things because it is their responsibility as part of a system which provides buildings that are safe and sustainable for those who will live in and use them for many decades.

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.

At the heart of this required change is a shift of ownership. Despite being advised at the outset that the regulatory system for building was outcomes and performance-based, I have encountered masses of prescription which is complex and in some cases inconsistent. The prescription is largely owned by government, with industry – those who should be the experts in best practice – waiting to be told what to do and some looking for ways to work around it.

We know that many owners and landlords are taking responsibility and initiating remedial work where required. But even now I am aware that some building owners and landlords are waiting for direction from this review on what materials should be used to replace cladding that has been identified as inadequate. I would urge them not to wait but to consider what materials have already been identified and tested as safe. They must also take steps to ensure that those whom they commission to carry out any remedial works are competent to do the work and that the work is quality assured.

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.

I have been deeply affected by the residents of high-rise buildings I have met and I have learned so much from them. These buildings are their homes and their communities. They are proud of where they live, but their trust in the system has been badly shaken by the events of the last few months. We need to rebuild that trust.

I have also met some stakeholders during this process who think that there is one 'fix' typified by the 'if we just do this one thing, it will all be better' response. Some of this is driven by vested interest, but also by a desire to 'do something' quickly. I believe we must be very wary of this type of thinking, and the evidence tells me that this is not what residents want.

I have been impressed by the reasonableness and pragmatism of the residents I have met despite what has happened. If we are to regain their trust and create a better system for the future, we must do so by engaging them in deciding what solution is right for them in their particular situations, all of which are different given the histories of the many different buildings. There is no doubt that residents want timely resolution of issues but they are also realists and know that things must be prioritised – that means listening to them, involving them and respecting their views.

This interim report provides a summary of what has been learned so far, the proposed direction of travel for the next phase of work and the rationale for that. It also identifies some early actions which can and should be taken to support the future direction of travel; these will help to ensure delivery in an appropriately timely manner. There is a strong desire among all of those with whom I have engaged thus far to learn the lessons of the tragic event which took place at Grenfell Tower and to build a better system for the future. Our challenge now is to turn that into a reality and not to allow ourselves to move on without achieving lasting change.

Your comments and feedback on this interim report would be very welcome and we are planning to build in ways to gather those views as we move on to the next stage of the review. Most immediately, I intend to hold a summit of key stakeholders early in 2018. Many of the interim findings in this report already identify areas of work which it is appropriate to ask others to lead on in parallel with phase two of the review itself.

I would also like to thank the team of staff in DCLG and the Home Office who are providing outstanding support in this review. Despite the circumstances which led to this team being brought together, there is a strong sense that we can make a difference if we are bold enough to make the changes which are needed.

"Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius – and a lot of courage – to move in the opposite direction." E.F. Schumacher

DAME JUDITH HACKITT

Summary

Summary of the report

Aim

The Independent Review of Building Regulations and Fire Safety aims to make recommendations that will ensure there is a sufficiently robust regulatory system for the future and provide further assurance to residents that the buildings they live in are safe and will remain so.

This interim report sets out the findings to date and the direction of travel for the final report.

Interim report key findings

The work of the review to date has found that **the current regulatory system for ensuring fire safety in high-rise and complex buildings is not fit for purpose**. This applies throughout the life cycle of a building, both during construction and occupation, and is a problem connected both to the culture of the construction industry and the effectiveness of the regulators.

The key reasons for this are:

- Current regulations and guidance are too complex and unclear. This can lead to confusion and misinterpretation in their application to high-rise and complex buildings.
- Clarity of roles and responsibilities is poor. Even where there are requirements for key activities to take place across design, construction and maintenance, it is not always clear who has responsibility for making it happen.
- Despite many who demonstrate good practice, the means of assessing and ensuring the competency of key people throughout the system is inadequate. There is often no differentiation in competency requirements for those working on high-rise and complex buildings.
- Compliance, enforcement and sanctions processes are too weak. What is being designed is not what is being built and there is a lack of robust change control. The lack of meaningful sanctions does not drive the right behaviours.
- The route for residents to escalate concerns is unclear and inadequate.
- The system of product testing, marketing and quality assurance is not clear.

Direction of travel

The Independent Review will now undertake its second phase of work and publish a final report in spring 2018. This will include targeted work in partnership with the sector and other stakeholders. This interim report sets the direction for change that will underpin that report and covers six broad areas.

Regulation and guidance

- The rules for ensuring high-rise and other complex buildings are built safe and remain safe should be more risk-based and proportionate. Those responsible for high-risk and complex buildings should be held to account to a higher degree.
- There should be a shift away from government solely holding the burden for updating and maintaining guidance, towards greater responsibility for the sector to specify solutions which meet the government's functional standards.
- Regulations and guidance must be simplified and unambiguous.

Roles and responsibilities

- Primary responsibility for ensuring that buildings are fit for purpose must rest with those who commission, design and build the project. Responsibility and accountability must rest with clearly identifiable senior individuals and not be wholly dispersed through the supply chain.
- Roles and responsibilities across the whole life cycle of a building must be clearer.

Competence

- There is a need to raise levels of competence and establish formal accreditation of those engaged in the fire prevention aspects of the design, construction, inspection and maintenance of high-rise residential and complex buildings.

Process, compliance and enforcement

- There needs to be a golden thread for high-rise residential and complex buildings so that the original design intent, and any subsequent changes or refurbishment, are recorded and properly reviewed, along with regular reviews of overall building integrity.
- There is a need for stronger and more effective enforcement activity, backed up with sufficiently powerful sanctions for the few who do not follow the rules.

Residents' voice and raising concerns

- Residents need to be reassured that an effective system is in place to maintain safety in their homes.
- There must be a clear, quick and effective route for residents' concerns to be addressed.

Quality assurance and products

- Products must be properly tested and certified and there is a need to ensure oversight of the quality of installation work.
- Marketing of products must be clear and easy to interpret.

Conclusion

In summary, this is a call to action for an entire industry and those parts of government that oversee it. True and lasting change will require a universal shift in culture. The industry has shown this is possible in the way the health and safety of construction workers has seen a positive transformation in culture and practice over the last decade. This change needs to start now. A summit will be called in early 2018 with key stakeholders to discuss taking this work forward.

Chapter 1 Findings and direction of travel

Contents

Background

1.1
The government announced an independent forward-looking review of building regulations and fire safety on 28 July 2017. This review was commissioned by the Secretary of State for the Department for Communities and Local Government (DCLG) and the Home Secretary as part of the ongoing response to the Grenfell Tower disaster.

1.2
As set out in the review's terms of reference,[1] published on 30 August, this review is running in parallel with the work of the Grenfell Tower Inquiry. The review is independent and covers the system of regulation for all high-rise residential buildings. It will, however, provide useful background and input into the Inquiry.

1.3
The review team was formed in August 2017, led by Dame Judith Hackitt DBE FREng, and charged with providing an interim report in 2017 and a final report by spring 2018. The production of this interim report marks the first key milestone in the review. It is an important opportunity to share the findings so far and to indicate the proposed direction of travel for the final report.

1 Independent Review terms of reference available at: www.gov.uk/government/uploads/system/uploads/attachment_data/file/640790/Hackitt_Review_terms_of_reference.pdf

Review methodology

1.4
From the outset, the work of the review has taken a systemic view of fire safety, focused on the overall regulatory system and not on the detail of specific requirements. In order to do this, the review has used a range of techniques:

- Research into the history of the regulatory system. A short summary is included at Chapter 2.
- An in-depth mapping exercise, developed through a series of workshops, covering the regulatory system throughout the life cycle of a building. This sets out how the current system is supposed to work, and how it actually works in practice, from initial planning and design through to construction, completion, handover, ongoing use and improvement/modification. The map includes other relevant areas of legislation which overlap with building regulations and fire safety regulations, including the Housing Act 2004, the Health and Safety at Work etc. Act 1974 and Construction (Design and Management) Regulations 2015. This is included at Chapter 3.
- A call for evidence was issued in September and received more than 250 responses. These responses are well considered and offer hundreds of suggestions for improvements to the system. A summary and analysis are included at Chapter 4.
- The review has engaged with a large number of stakeholders (see Appendix C for details). In addition, the themes arising from the call for evidence have been explored at a series of roundtable events which took place during November. An overview is included at Chapter 4.
- A series of meetings and visits have taken place to gather information on other international regulatory regimes for fire safety and to gain a better understanding of regulatory systems in other sectors with comparable levels of safety risk. More detail is set out in Chapter 5.

1.5
The terms of reference of the review[2] set out that it should have a 'particular focus' on high-rise residential buildings, while recognising that it will cover the regulatory system for all buildings. It became clear, when thinking about a proportionate approach for different types of building, that it would not always make sense to separate high-rise residential buildings from other large or complex buildings where many people live or stay. This report therefore refers to either high-rise residential buildings or to 'complex and high-risk' buildings. This latter category includes other buildings for which exceptional events could lead to the risk of large-scale fatalities; for example, other purpose-built flats, student accommodation and sheltered housing. The review will provide a more precise definition of 'complex and high-risk' categories for future government use in its final report.

2 Independent Review terms of reference available at: www.gov.uk/government/uploads/system/uploads/attachment_data/file/640790/Hackitt_Review_terms_of_reference.pdf

Findings to date

1.6
The overall conclusion is that the current regulatory system is not fit for purpose in relation to high-rise and complex buildings. The following sections highlight the major concerns based on the evidence gathered to date.

1.7
It became clear quite early in the review that there is a need for significant improvement in the current system in a number of areas. These relate to matters of:

- regulation and guidance;
- roles and responsibilities;
- competence;
- process, compliance and enforcement;
- residents' voice and raising concerns; and
- quality assurance and products.

Regulation and guidance

Current regulation and guidance is both complex and unclear

1.8
The Building Regulations 2010 are clear about the outcomes to be achieved but not about where responsibilities lie.

1.9
There is widespread confusion about what constitutes the regulations and what is guidance. The guidance on ways to meet the Building Regulations, set out in the Approved Documents, are frequently referred to as 'the regulations'.

1.10
The Approved Documents are not produced in a user-friendly format. The current format of covering each requirement (fire safety, thermal insulation, noise abatement, etc.) in separate sections leads to multiple, separate specifications for overlapping or common elements of a building, with no easy means for these to be integrated into a single, compliant specification.

1.11
Key definitions are unclear; for example, 'high rise', 'persons carrying out the work', 'limited combustibility' and 'material alteration', leaving too much open to interpretation.

1.12
The Building Regulations Advisory Committee (BRAC) for England has a statutory role to advise government on the Building Regulations. Its focus over recent years has been mainly on energy efficiency and the deregulatory agenda and less on fire safety and other aspects of the regulations. While this has been in line with prevailing government policy and the trend in the evidence base of a declining number of fire deaths year on year, it is not clear whether BRAC's role is to proactively advise on initiatives and priorities or purely to take direction from government.

Roles and responsibilities

Clarity of roles and responsibilities within the system is poor

1.13
There is a general lack of clarity around, or statement of, roles and responsibilities throughout the system.

1.14
Even where there are requirements for key activities to take place it is not always clear who has responsibility for making these happen.

1.15
There is no requirement for identifiable, named dutyholders responsible for ensuring and proving compliance with the Building Regulations.

1.16
'Responsible persons' under the Regulatory Reform (Fire Safety) Order 2005 are frequently not identified when the building is due to be handed over following construction and therefore people are not aware of their responsibilities and often assume they are for someone else to do.

1.17
There is a widespread culture in relation to building and fire standards of waiting to be told what to do by regulators rather than taking responsibility for building to correct standards. The approach is very much driven by aiming for minimum compliance, not ensuring safety for the lifetime of the building.

1.18
Even where regulations or guidance call upon people to consult with others in the system as part of meeting the requirements of the legislation, there is no clear understanding of the need to do that at an appropriate time or to take account of views expressed.

Competence

The means of assessing and ensuring appropriate levels of competence throughout the system are unclear and inadequate

1.19
The competence of those involved in the design, construction, ongoing operational management and maintenance of complex and high-risk buildings has been called into question. While there are many instances of competent people planning, building and maintaining buildings in a conscientious way, there is no consistent way to assess or verify their competence. Numerous examples have been quoted, demonstrating lack of competence among designers, builders, fire engineers, fire consultants, fire risk assessors, building control inspectors and others, which compromises the fire safety of buildings.

1.20
In particular, for fire risk assessors undertaking risk assessments on complex and high-risk buildings there are no statutory registration or accreditation requirements.

1.21
Private sector Approved Inspectors are required under legislation and their code of conduct to demonstrate and maintain relevant qualifications and experience and are subject to audit by an independent body, whereas there is no such statutory competence framework for Local Authority Building Control inspectors (LABCs).

1.22
Some safety-critical tradespeople, for example gas engineers, must be registered for different types of work, but others do not have such requirements.

1.23
This is one area where England and Wales appears to be lagging behind many other parts of the world that require key personnel throughout the system to be properly trained, assessed and in many cases licensed to carry out specific roles.

Process, compliance and enforcement

Enforcement and sanction measures are poor and do not provide adequate means of compliance assurance, deterrence or redress for non-compliance

1.24
There is widespread deviation from what is originally designed to what is actually built, without clear and consistent requirements to seek authorisation or review, or to document changes made. The current trend for 'design and build' contracts (where a main contractor is appointed to design and build the project rather than the client appointing separate designers and contractors) has been identified as being particularly problematic in facilitating evolutionary design, which fails to be properly documented or reviewed.

1.25
There is no requirement in the Building Regulations for existing buildings to be brought up to the latest fire safety standards, as long as during any refurbishment the existing provisions are not made worse.

1.26
Across the life cycle of a complex and high-risk building, the different regulations that apply can overlap, and have varying approaches to responsibility and demonstrating compliance.

1.27
There is evidence of a number of key control stages of the process not being followed as intended; for example, the handover of fire safety information and the issuing of Completion Certificates.

1.28
There are wide differences of view regarding the benefits of the partial privatisation model introduced into building control which offers a choice between LABCs and private sector Approved Inspectors. The latter are perceived to be less independent of the clients and have no means of enforcement action available to them other than to refer cases to LABCs. This referral process is rarely used.

1.29
While informal enforcement activity by building control bodies generally leads to compliance, where non-compliance is identified, LABCs are deterred from taking formal enforcement actions by the cost of pursuing cases through the courts, and the historical failure of the courts to impose robust sanctions.

1.30
Some instances of non-compliance are not picked up at all because key work is encapsulated within the fabric of the building before being inspected. The review has heard repeatedly that construction often begins before the full plans have been approved by building control.

1.31
The information flow and documented evidence provided by developers to building control bodies does not provide an adequate public record to ensure building safety throughout the life of the building.

1.32
Information provided to residents of complex and high-risk buildings on the key fire safety measures, their importance and residents' responsibilities is highly variable and too often non-existent.

1.33
Fire and rescue service[3] personnel may raise concerns about compliance with the Fire Safety Order which are not acted upon because of cost, because the building work is too far advanced to make changes or because their advice is ignored.

1.34
Once a building is occupied there is a requirement for a fire risk assessment to be carried out regularly by a 'responsible person', but no requirement for this to be reported to a regulator or for this to be shared with residents.

Residents' voice and raising concerns

The route for residents' concerns to be raised and addressed is unclear and inadequate

1.35
Multiple occupancy residential buildings often have complex ownership and management models involving managing agents, varying leasehold contracts, residents' associations and so on, making it difficult to identify who to contact to raise concerns or to get responses to concerns when raised.

1.36
Roundtable discussions with residents have shown wide variation in practice by landlords from the very good to non-existent. We have heard from residents who are afraid to raise concerns for fear of eviction, and about the particular difficulties of reporting on things which involve the activities of other residents – their neighbours.

1.37
Many of the problems which are reported and fixed, for example propping open of fire doors or obstructions in access ways, very quickly revert to being a problem and there is no effective means of ensuring that residents meet their responsibilities to their fellow residents.

1.38
Regulators often face similar problems in getting concerns and defects addressed following investigation.

Quality assurance and products

Current methods for testing, certification and marketing of construction products and systems are not clear

1.39
DCLG's Building Safety Programme identified more than 200 high-rise residential buildings across England fitted with aluminium composite materials cladding systems that are likely to present a fire hazard. There does not appear to be a single, simple reason to explain why so many buildings are affected.

1.40
Products are marketed with specification data presented in ways which can easily be misinterpreted.

1.41
Individual elements are being used as part of compound systems that are not being fully tested as systems.

1.42
The widespread use of desktop studies to assess equivalence of products and systems

3 Fire and rescue services are the delivery body of fire and rescue authorities (the statutory enforcing authority for the Regulatory Reform (Fire Safety) Order 2005). In this report we use the term fire and rescue services.

is not properly managed or controlled in terms of both the circumstances in which they can be used and the qualifications and experience of those undertaking them.

1.43
Test results, desktop studies, and the details of those who produce them, are not made public.

1.44
A number of people engaged in the system have said that the test conditions used do not adequately reflect real-life conditions.

1.45
The integrity and efficacy of product and system classifications are highly dependent on correct installation by competent and knowledgeable persons.

International regulatory regimes

There are some lessons to be learned and applied from other international regulatory regimes

1.46
Fires in high-rise buildings have occurred elsewhere in the world and a number of corrective measures have been put in place or are under consideration. The review will use examples of what has worked well in other countries to support the work during phase two.

1.47
A number of other regulatory regimes have more stringent standards for fire protection and require key roles within the system to be formally licensed.

1.48
Other countries have been more proactive in requiring formal accreditation of those engaged in all aspects of high-risk buildings.

1.49
Some countries have been more proactive in calling for the retrospective upgrade of existing buildings.

Other regulatory systems

There could be greater alignment of the regulatory regime for building and fire safety with other regulatory systems

1.50
A number of respondents have cited the greater clarity and effectiveness of UK health and safety legislation in relation to construction and, in particular, the Construction (Design and Management) Regulations 2015 which is due to the clearer assignment of roles and responsibilities.

1.51
There has been a widespread call for greater consistency of use of terms to identify key responsibilities within the system.

1.52
There is also significant scope for greater collaboration, intelligence sharing and combined inspections by regulators.

Direction of travel for phase two of the review

1.53
The review's findings to date indicate that there is a clear need for a full overhaul of the regulatory system to address the wide-ranging issues outlined. This includes roles and responsibilities, competence and the lack of a joined up, effective system to deliver and sustain complex and high-risk buildings which are fit for purpose.

1.54
Phase two of this review will focus on defining a revised regulatory system which will be simpler, clearer to all involved and deliver better overall outcomes. It will be important for this revised system to continue to allow innovation in building design and construction and not introduce disproportionate delays or cost into building processes. Any additional time spent at the front end of designing and specifying a building is likely to yield significant benefits in time, cost and safety in construction and throughout the building's life cycle.

1.55
The revised system must be risk-based and proportionate and therefore not burden low-risk, small-scale or simple projects with requirements which are intended for complex and high-risk buildings where both the risk and consequences of catastrophic events are intrinsically considerably higher.

1.56
Many of the findings to date clearly identify the need for a major cultural shift across all of those who are part of the system within the construction, operation and maintenance of complex and high-risk buildings. The focus must shift from achieving lowest cost to providing buildings which are safe and fit for people to live in for years to come. Work on developing some elements which will be required within a new system can be started now and can be delivered by a range of organisations. This is not simply a task for central government through revised legislation.

1.57
The following section sets out the direction of travel in more detail. The challenge for phase two of the review will be to establish how the aspirations set out below can best be delivered and to bring forward recommendations to support this delivery. Stakeholders should prepare themselves for an early call to action to create a more effective regulatory system. The review is keen to work with residents and other stakeholders on shaping these recommendations.

Direction of travel – Regulation and guidance

1.58
The regulatory system needs to become more risk-based. Simple guidance which covers all elements of what is required to build simple residential dwellings would be much more accessible and user-friendly than the current detailed, tram-lined system of guidance. These simple types of dwellings are also handed over at the end of the process to a single owner.

1.59
In the case of complex and high-risk buildings with complex ownership and occupancy models, a more rigorous risk-based process must be put in place to ensure that building integrity is maintained throughout the life cycle. It is important that the construction and maintenance of these buildings is treated proportionately and that those responsible for such buildings are held to account to a higher degree.

1.60
To implement a risk-based system it will be necessary to define what we consider to be 'complex and high-risk buildings'. It is envisaged that this would include buildings where multiple people live or stay and for which exceptional events could lead to the risk of large-scale fatalities.

1.61
The current system of building regulation relies heavily on central government to keep all regulations and supporting documents up to date, advised by BRAC, a statutory body with wide representation. It is inappropriate for the burden of keeping up to date with technology to rest solely with government in this way. It is clearly the role of government to set the basic framework of standards which must be achieved and to make it clear who has responsibility for delivering those standards of performance throughout the life cycle. However, it should not be for government to lead on the specification of the detailed solutions as to how those standards will be met. The scope of BRAC's role in the future should be considered in this context.

1.62
Most responses to the call for evidence have indicated that there is a need for Approved Document B to be simplified and brought up to date. The usability of all of the Approved Documents could be significantly improved by more fundamental changes to their structure which would also close a number of the current gaps which are left open to interpretation and confusion.

1.63
Recommendation: The government should consider how the suite of Approved Documents could be structured and ordered to provide a more streamlined, holistic view while retaining the right level of relevant technical detail, with input from the Building Regulations Advisory Committee. Given that reframing the suite of guidance may take some time, in the meantime I would ask the government to consider any presentational changes that will improve the clarity of Approved Document B as an interim measure.

Direction of travel – Roles and responsibilities

1.64
Primary responsibility for ensuring that buildings are built to the correct standards and are fit for purpose must rest with those who commission the work and those who design and build the project. Those commissioning must ensure that those they commission to do the work have the right levels of competence and are appropriately supervised.

1.65
Responsibilities must not be dispersed through the chain as they are now. Even in an environment where there are multiple layers of sub-contracting there must be a clear, responsible dutyholder who is held to account for the performance or non-performance of all of those to whom sub-contracts are let at all stages in the life of a building.

1.66
It has also been observed that the use of 'value engineering' is almost always about cutting cost out of a project, at times without due reference to key specification requirements. Such processes must be undertaken by those with the responsibility and the competence to ensure the integrity of the building design and function, especially when considering the equivalence of substituted materials.

1.67
Given the extent of innovation which is taking place in industry there should be greater industry responsibility for demonstrating that all buildings are designed and built to be fit for purpose, including the introduction of new techniques and materials into construction.

1.68
The role of regulators should be to seek assurance that standards are being adhered to throughout all stages of construction and use. It is for industry to demonstrate to the regulators that compliance with those standards is being achieved, including through innovation. Where there is failure to comply there must be a more effective means of ensuring not only that the deficiencies are put right but that those who were responsible for compliance with the standards are held accountable for their failure.

1.69
After completion and handover of a building there must be clear responsibility assigned to a known person or persons for ensuring that the building remains fit for purpose throughout its life cycle. Where and when ownership changes, responsibilities must also be formally handed over.

1.70
The assignment of responsibilities in blocks of flats, where there are boundaries between areas which are the responsibility of residents and those which fall to landlords or owners, must be clarified. The definition of the 'common parts' of such buildings, and clarification of who is qualified and able to properly inspect both common areas and individual properties, are critical elements of maintaining overall building integrity but are currently unclear due to the confusing overlap between the Housing Health and Safety Rating System Regulations 2005 and the Fire Safety Order.

Direction of travel – Competence

1.71
Those working on complex and high-risk buildings need to have the appropriate qualifications and experience and be able to evidence that qualification and experience. The design, construction, inspection and maintenance of complex buildings would normally require a higher degree of competence and expertise than that of small-scale or simple buildings.

1.72
The task of raising levels of competence and establishing formal accreditation of those engaged at every stage of design, construction, inspection and maintenance of complex and high-risk buildings can and should be led by those professional bodies which cover the sector. The system needs to be designed to ensure that competence is measured, is made transparent to those engaging the individuals and has a means of recourse in the event that work delivered is substandard. This is a challenge to the current less rigorous and disjointed approach to registration or certification which allows many individuals to practice with questionable qualifications or without a requirement for competence to be assessed and accredited.

1.73
Recommendation: There is a need to be certain that those working on the design, construction, inspection and maintenance of complex and high-risk buildings are suitably qualified.

The professional and accreditation bodies have an opportunity to demonstrate that they are capable of establishing a robust, comprehensive and coherent system covering all disciplines for work on such buildings. If they are able to come together and develop a joined up system covering all levels of qualification in relevant disciplines, this will provide the framework for regulation to mandate the use of suitable, qualified professionals who can demonstrate that their skills are up to date. This should cover as a minimum:

- engineers;
- those installing and maintaining fire safety systems and other safety-critical systems;
- fire engineers;
- fire risk assessors;
- fire safety enforcing officers; and
- building control inspectors.

I would ask these bodies to work together now to propose such a system as soon as practicable. I will launch this work at a summit in early 2018.

Direction of travel – Process, compliance and enforcement

1.74
The current interaction of different regulatory regimes leads to a complex system with different bodies responsible for enforcement and a varied approach to assurance and demonstrating compliance. The whole process needs to be streamlined and made consistent.

1.75
There is a need to ensure that the right people are engaged and consulted at the earliest stages of complex projects and that their views are taken into account at the design stage. This is particularly important in relation to fire safety.

1.76
Recommendation: Consultation with the fire and rescue services is required on plans for buildings that are covered by the Fire Safety Order, but does not work as intended. Consultation by building control bodies and by those commissioning or designing buildings should take place early in the process and fire and rescue service advice should be fully taken into account. The aim should be to secure their input and support at the earliest stage possible so that fire safety can be fully designed in.

1.77
There needs to be a golden thread for all complex and high-risk building projects so that the original design intent is preserved and recorded, and any changes go through a formal review process involving people who are competent and who understand the key features of the design.

1.78
When a building or part of a building is completed, there is a need for the project as built to be documented. A thorough, independent review needs to take place and a handover process completed before the building, or part of the building, can be occupied. Phased occupation of buildings does occur and, where it does, this must be handled rigorously with a clear handover process. During the next phase of work the review will conduct further research into the potential for Building Information Modelling (BIM) to transfer the documentation process onto a digital platform.

1.79
Recommendation: Building developers need to ensure that there is a formal review and handover process ahead of occupation of any part of a new high-rise residential building. While there are legitimate reasons to allow

occupation in a phased way, the practice of allowing occupancy of buildings without proper review and handover presents barriers to the implementation of any remedial measures identified as part of the completion process.

1.80
Recommendation: There is a need for building control bodies to do more to assure that fire safety information for a building is provided by the person completing the building work to the responsible person for the building in occupation. Given the importance of such information for ongoing maintenance and fire risk assessment, proof should be sought that it has been transferred.

1.81
Once a complex and high-risk building is occupied and in use, there must be a clearly identified responsible person who continues to monitor the condition of the building and is responsible for all changes and maintenance work carried out within it. It must be clear to occupants and anyone who works in the building who that responsible person is, and they must be held to account. Residents must be provided with clear guidance on how to proceed if they choose to carry out work themselves or bring in contractors to their own flats.

1.82
Future modification and upgrade to complex and high-risk buildings must be subject to the same rigorous processes as during original construction and must be undertaken with reference to the original design criteria. Changes must be formally reviewed by competent professionals, documented after completion and formally handed over.

1.83
Complex and high-risk buildings must also be subject to regular and thorough reviews of their overall integrity, even if they are not subject to major change. The integrity of such buildings can be compromised by a series of minor changes which lead to a cumulative degradation of protection. It is envisaged that these reviews would be the responsibility of the building owner but must be reported to the regulator and accessible information about them made available to residents. It may also be of interest to those who underwrite the risk for such buildings.

1.84
Recommendation: It is currently the case under the Fire Safety Order that fire risk assessments for high-rise residential buildings must be carried out 'regularly'. It is recommended that the responsible person ensures these are undertaken at least annually and when any significant alterations are made to the building. These risk assessments should be shared in an accessible way with the residents who live within that building and notified to the fire and rescue service.

1.85
The lifetime of a building in use is orders of magnitude more than the time spent on its construction. Integrity must be maintained throughout the life cycle. Technology does not stand still and as new methods of improving the safety of buildings become available it is not sufficient for regulation only to make these a requirement for buildings of the future. There is a responsibility to give due consideration to what it is reasonable and practicable to do to upgrade and improve the fire safety of existing facilities throughout their lifespan, not merely to ensure that they do not deteriorate beyond how they were originally designed and built.

1.86
There needs to be a demonstration that there are sufficient layers of protection to ensure that building safety does not rely heavily on compartmentation. There is a high risk of compartmentation being breached during building use, whether as the result of residents' own actions or of maintenance work carried out in the whole building. There are a range of fire protection measures that can be retrofitted to or amended in existing buildings; for example, extra staircases and smoke ventilation or sprinkler systems. Rather than prescribe one measure over others, it should be for building owners and landlords, with the right expert advice and the involvement of residents, to demonstrate that appropriate risk mitigation measures are in place.

1.87
There is a need for stronger and more effective enforcement within the system but this requires the necessary resources to be available and demonstrably independent. Those charged with enforcing must have appropriate enforcement powers accompanied by sanctions and penalties which are suitably severe.

1.88
The cost of achieving compliance must be significantly less than the sanctions which may be imposed on those who do not follow the rules and fail to achieve the standards set, in order to create the right incentive to comply and a deterrent to seeking to circumnavigate requirements.

1.89
The current model of partial privatisation with clients being able to decide whether to choose between the use of LABCs or Approved Inspectors does not resolve the enforcement issue, raises concerns about independence and adds pressure on the resources within local authorities. While there may be scope to continue with a partial privatisation of the market, it is essential that effective enforcement is ensured and the work of Approved Inspectors is demonstrably independent.

Direction of travel – Residents' voice and raising concerns

1.90
Residents need to be reassured that an effective system is in place to maintain safety in the buildings which are their homes. Their trust in the current system has been shaken and needs to be rebuilt by a more transparent system in which residents feel included, not 'done to' by others without consultation.

1.91
Many residents have told us that they have good systems in place and good relations with their landlords. However, where this is not the case, there should be a clear, quick and effective route established for residents' concerns on fire safety to be raised and addressed with an external enforcement body. Many have expressed the wish for this to include the fire and rescue services.

1.92
The results of regular surveys of building integrity must be shared with the residents and they should be consulted about plans to modify buildings. It is also important for residents to understand the various layers of protection which are fundamental to fire safety.

Direction of travel – Quality assurance and products

1.93
It is important that products are properly tested, certified and marketed clearly, and that desktop studies are only used when appropriate, to ensure that suitable materials are used on different types of buildings, delivering the multiple different standards required. During phase two of this review, the case must be examined for a requirement for product testing data to be made transparent and publicly available and for a much clearer system of product classification and labelling.

1.94
Recommendation: The government should significantly restrict the use of desktop studies to approve changes to cladding and other systems to ensure that they are only used where appropriate and with sufficient, relevant test evidence. Those undertaking desktop studies must be able to demonstrate suitable competence. The industry should ensure that their use of desktop studies is responsible and in line with this aim.

1.95
A number of respondents have called for a reinstatement of the former role of Clerk of Works or similar to act as the primary gatekeeper of quality assurance on significant projects. There is a need to ensure oversight of the quality of installation work carried out as well as of the materials delivered to site and used.

Interim recommendations and challenges

1.96
While there is more work to be done to develop some of the ideas highlighted here and turn them into final recommendations, there are already some clear actions and initiatives which can and should be taken now, which would be entirely consistent with the likely future direction of travel. These are brought together below.

1.97
By way of underpinning all of these interim recommendations, the industry must recognise the need for significant cultural and behavioural change, where the sector demonstrates similar responsibility for the buildings they create as they have shown they can take for the safety of people working on construction projects under the Construction (Design and Management) Regulations 2015. There is no reason why this culture change cannot begin voluntarily now ahead of the final recommendations and any legislative changes. There is already evidence of good practice despite the shortcomings in the system itself.

A. **The government** should consider how the suite of Approved Documents could be structured and ordered to provide a more streamlined, holistic view while retaining the right level of relevant technical detail, with input from the Building Regulations Advisory Committee. Given that reframing the suite of guidance may take some time, in the meantime I would ask the government to consider any presentational changes that will improve the clarity of Approved Document B as an interim measure. (Paragraph 1.63)

B. There is a need to be certain that those working on the design, construction, inspection and maintenance of complex and high-risk buildings are suitably qualified. **The professional and accreditation bodies** have an opportunity to demonstrate that they are capable of establishing a robust, comprehensive and coherent system covering all disciplines for work on such buildings. If they are able to come together and develop a joined up system covering all levels of qualification in relevant disciplines, this will provide the framework for regulation to mandate the use of suitable, qualified professionals who can demonstrate that their skills are up to date. This should cover as a minimum:

- engineers;
- those installing and maintaining fire safety systems and other safety-critical systems;
- fire engineers;
- fire risk assessors;
- fire safety enforcing officers; and
- building control inspectors.

I would ask these bodies to work together now to propose such a system as soon as practicable. I will launch this work at a summit in early 2018. (Paragraph 1.73)

C. Consultation with the fire and rescue services is required on plans for buildings that are covered by the Fire Safety Order, but does not work as intended. Consultation by **building control bodies** and by **those commissioning or designing buildings** should take place early in the process and fire and rescue service advice should be fully taken into account. The aim should be to secure their input and support at the earliest stage possible so that fire safety can be fully designed in. (Paragraph 1.76)

D. **Building developers** need to ensure that there is a formal review and handover process ahead of occupation of any part of a new high-rise residential building. While there are legitimate reasons to allow occupation in a phased way, the practice of allowing occupancy of buildings without proper review and handover presents barriers to the implementation of any remedial measures identified as part of the completion process. (Paragraph 1.79)

E. There is a need for **building control bodies** to do more to assure that fire safety information for a building is provided by the person completing the building work to the responsible person for the building in occupation. Given the importance of such information for ongoing maintenance and fire risk assessment, proof should be sought that it has been transferred. (Paragraph 1.80)

F. It is currently the case under the Fire Safety Order that fire risk assessments for high-rise residential buildings must be carried out 'regularly'. It is recommended that **the responsible person** ensures these are undertaken at least annually and when any significant alterations are made to the building. These risk assessments should be shared in an accessible way with the residents who live within that building and notified to the fire and rescue service. (Paragraph 1.84)

G. **The government** should significantly restrict the use of desktop studies to approve changes to cladding and other systems to ensure that they are only used where appropriate and with sufficient, relevant test evidence. Those undertaking desktop studies must be able to demonstrate suitable competence. **The industry** should ensure that their use of desktop studies is responsible and in line with this aim. (Paragraph 1.94)

Next phase of the review

1.98
The review intends to focus on developing recommendations that will deliver the direction of travel set out above ahead of the final report.

1.99
The review has heard a range of views from the call for evidence and from our stakeholder engagement to date. As well as continuing to draw upon this evidence, the next phase will involve targeted work in partnership with the sector and other stakeholders in order to make rapid progress towards recommendations for the system in the final report.

1.100
The next milestone will be a summit in early 2018. Key stakeholders will be invited to attend this event which will set the direction and ensure co-ordination of the work we need a number of them to engage in during the spring in support of the development of the review's final recommendations.

1.101
We would welcome feedback on this report which can be sent to BuildingRegulationsandFireSafetyReview@communities.gsi.gov.uk or in writing to:

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