

Building a Safer Future

Independent Review of Building Regulations and Fire Safety: **Final Report**

May 2018

Dame Judith Hackitt DBE FEng

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Building a Safer Future

Independent Review of Building Regulations and Fire Safety: Final Report

Presented to Parliament
by the Secretary of State for Housing, Communities and Local Government
by Command of Her Majesty

May 2018



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Foreword



A personal view from Dame Judith Hackitt

In my interim report published in December 2017 I described how the regulatory system covering high-rise and complex buildings was not fit for purpose. In the intervening period, we have seen further evidence confirming the deep flaws in the current system:

- lack of an audit trail as to whether essential safety work was carried out on the Ledbury Estate, and other large panel systems tower blocks;
- a door marketed as a 30-minute fire door failed prior to 30 minutes when tested, revealing concerns around quality assurance and the ability to trace other fire doors manufactured to that specification;
- another tower block fire where fire spread between floors via wooden balconies; and
- a major fire in a car park in Liverpool which came close to encroaching on a block of flats nearby.

It is not my intention to repeat here all of the shortcomings identified in the interim report. However, it is important to emphasise that subsequent events have reinforced the findings of the interim report, and strengthened my conviction that there is a need for a radical rethink of the whole system and how it works. This is most definitely not just a question of the specification of cladding systems, but of an industry that has not reflected and learned for itself, nor looked to other sectors. This does not mean that all buildings are unsafe. Interim mitigation and remediation measures have been put in place where necessary for existing high-rise residential buildings to assure residents of their safety regarding fire risk. It is essential that this industry now works to implement a truly robust and assured approach to building the increasingly complex structures in which people live.

The key issues underpinning the system failure include:

- **Ignorance** – regulations and guidance are not always read by those who need to, and when they do the guidance is misunderstood and misinterpreted.

- **Indifference** – the primary motivation is to do things as quickly and cheaply as possible rather than to deliver quality homes which are safe for people to live in. When concerns are raised, by others involved in building work or by residents, they are often ignored. Some of those undertaking building work fail to prioritise safety, using the ambiguity of regulations and guidance to game the system.
- **Lack of clarity on roles and responsibilities** – there is ambiguity over where responsibility lies, exacerbated by a level of fragmentation within the industry, and precluding robust ownership of accountability.
- **Inadequate regulatory oversight and enforcement tools** – the size or complexity of a project does not seem to inform the way in which it is overseen by the regulator. Where enforcement is necessary, it is often not pursued. Where it is pursued, the penalties are so small as to be an ineffective deterrent.

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 global concern

England is by no means alone in needing to improve building safety. Scotland has provided some excellent examples of good practice which are included in this report, in particular around supporting resident participation and collaboration. However, at the time of writing, the Scottish Government had commissioned a further review of building regulation, driven by serious structural failures which have occurred there. The Building Products Innovation Council in Australia

has also published its own report, 'Rebuilding Confidence: An Action Plan for Building Regulatory Reform'¹ since I wrote my interim report – it tells a story which could just as easily be applied to us. Extracts from that report are included in Appendix K of this report for easy reference.

A principled approach

At the heart of this report are the principles for a new regulatory framework which will drive real culture change and the right behaviours. We need to adopt a very different approach to the regulatory framework covering the design, construction and maintenance of high-rise residential buildings which recognises that they are complex systems where the actions of many different people can compromise the integrity of that system.

The principle of risk being owned and managed by those who create it was enshrined in UK health and safety law in the 1970s, following the review conducted by Lord Robens, and its effectiveness is clear and demonstrable. The principles of health and safety law do not just apply to those who are engaged in work but also to those who are placed at risk by work activities, including members of the public. It should be clear to anyone that this principle should extend to the safety of those who live in and use the 'products' of the construction industry, such as a multi-occupancy building, where the risk of fire exposes residents to danger.

A decision was taken back in 1975 to specifically exclude consumer safety and building safety from the Health and Safety Executive's (HSE) remit. However, since then, HSE's remit has increasingly extended into certain key areas – e.g. domestic gas safety. This review concludes that there is a strong case for the full effect of the key principle of risk ownership and management to be applied alongside building regulations.

This report recommends a very **clear model of risk ownership**, with clear responsibilities for the Client, Designer, Contractor and Owner to demonstrate the delivery and maintenance of safe buildings, overseen and held to account by a new Joint Competent Authority (JCA).

The new regulatory framework must be simpler and more effective. It must be truly **outcomes-based** (rather than based on prescriptive rules and complex guidance) and it must have real teeth, so that it can drive the right behaviours. This will create an environment where there are incentives

to do the right thing and serious penalties for those who choose to game the system and as a result put the users of the 'product' at risk.

This approach also acknowledges that prescriptive regulation and guidance are not helpful in designing and building complex buildings, especially in an environment where building technology and practices continue to evolve, and will prevent those undertaking building work from taking responsibility for their actions.

An outcomes-based framework requires people who are part of the system to be competent, to think for themselves rather than blindly following guidance, and to understand their responsibilities to deliver and maintain safety and integrity throughout the life cycle of a building.

We must also begin thinking about **buildings as a system** so that we can consider the different layers of protection that may be required to make that building safe on a case-by-case basis. Some of the social media chatter and correspondence I have read whilst I have been engaged in this review shows how far we need to move in this respect. The debate continues to run about whether or not aluminium cladding is used for thermal insulation, weather proofing, or as an integral part of the fabric, fire safety and integrity of the building. This illustrates the siloed thinking that is part of the problem we must address. It is clear that in this type of debate the basic intent of fire safety has been lost.

A **risk-based approach** to the level of regulatory oversight based on a clear risk matrix will be most effective in delivering safe building outcomes. Complex systems that are designed for residential multi-occupancy must be subject to a higher level of regulatory oversight that is proportionate to the number of people who are potentially put at risk.

Transparency of information and an audit trail all the way through the life cycle of a building from the planning stage to occupation and maintenance is essential to provide reassurance and evidence that a building has been built safe and continues to be safe. For example, the current process for testing and 'certifying' products for use in construction is disjointed, confusing, unhelpful, and lacks any sort of transparency. Just as the process of constructing the building itself must be subject to greater scrutiny, the classification and testing of the products need to undergo a radical overhaul to be clearer and more proactive.

1 Hills, Rodger (2018), *Rebuilding Confidence: An Action Plan for Building Regulatory Reform*, BPIC, Australia.

Where concerns are identified through testing or incident investigation, these findings must be made public and action needs to be taken if these issues are putting people at risk. This industry sector stands out from every other I have looked at in its slow adoption of traceability and quality assurance techniques. These are in widespread use elsewhere and the technology is readily available.

Progress since the interim report – implementation of recommendations and stakeholder collaboration

Since the interim report was published a good deal of progress has been made on some of the interim recommendations. We have also received a wealth of high-quality input from the working groups that were set up in February.

Above all, I have been heartened by the strong support we have had to drive a major culture change throughout the whole system. Reports dating back as far as the 1990s, such as ‘Rethinking Construction’ authored by the eminent Sir John Egan,² highlight many of the cultural issues which needed to be addressed, even then, to develop a modern, productive and safe construction sector. It is good that we start from such a strong and common agreement on the problems to be fixed, but we must also understand and overcome the issues that have stopped change from happening in the past. While conducting this review I have had personal experience of the high level of self-interested advocacy which hampers good independent decision-making in this sector, and gets in the way of much needed progress to a different set of behaviours.

It has become clear to me that the fire safety sector is not as strong or mature as other areas of engineering expertise, such as structural engineering. It is important that the sector looks to how it can implement the findings of this review and embrace closer and professionally robust working with the construction industry.

A radical overhaul to futureproof the system

While this review recommends a different approach, it is far from being a leap of faith. It is built upon confidence of what we know works here in our culture in other sectors, and more importantly in the construction sector.

The Construction (Design and Management) Regulations (CDM Regulations) under the Health and Safety at Work Act have already driven exactly this culture and behaviour change in the very same industry sector in relation to the safety of those employed in constructing and maintaining buildings. Other industry sectors have developed a mature and proportionate way to manage and regulate higher-risk and complex installations. These approaches now need to be repeated in relation to the safety and quality of complex buildings and to the safety of those who live in them. This is not just my view but one that we have heard repeatedly from the many people we have spoken to as part of this review – they have told us that they want to see a revised framework for building regulation, one that is as clear and effective as the CDM Regulations.

There are many people who stand ready and willing to help deliver this level of radical change and are ready to take on the key principles:

- What is described in this report is **an integrated systemic change not a shopping list** of changes which can be picked out on a selective basis.
- **To embed this systemic change will require legislative change and therefore take time** to fully implement. There is no reason to wait for legal change to start the process of behaviour change once it is clear what is coming and what is expected. A sense of urgency and commitment from everyone is needed.
- **We must find a way to apply these principles to the existing stock of complex high-rise residential buildings as well as new builds.** That is a moral obligation to those who are now living in buildings which they bought or rented in good faith assuming them to be safe and where there is now reason to doubt that. This will take time and there will be a cost attached to it. It is beyond the scope of this review to determine how remedial work is funded but this cannot be allowed to stand in the way of assuring public safety.
- We need to **maintain the spirit of collaboration and partnership** which has been a feature of the review process to date. In a sector that is excessively fragmented we have seen during the course of this review a will to work together to deliver consistent solutions. This will be especially important going forward to change culture.

2 Egan, John. (1998) *Rethinking Construction: Report of the Construction Task Force*, HMSO, London.

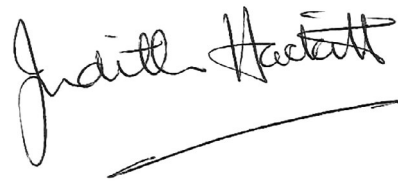
- **The ideas proposed in this report have broader application** to a wider range of buildings and to drive change more broadly.
- There will be those who will be fearful that the change will slow down the build of much needed new housing; however, there is every reason to believe that the opposite will be true. More rigour and oversight at the front end of the process **can lead to significant increases in productivity**, reduction in ongoing costs and to better outcomes for all in the latter and ongoing stages of the process. Improving the procurement process will play a large part in setting the tone for any construction project. This is where the drive for quality and good outcomes, rather than lowest cost, must start.

The criticism about thinking in silos must also be laid in part at the regulatory system that oversees the industry's activities. Viewed from one end of the lens it may matter a lot who 'owns' particular aspects of regulation, be that in terms of government departments or different national and local regulatory bodies. But for those on the receiving end this often results in disjointed and confusing guidance – what often gets described as "too much regulation". The mapping exercise which was explained extensively in the interim report has had a profound effect on thinking and has identified a real opportunity to put joined-up regulation into practice. There is no need for a new regulator to deliver this new regime but there is a need for existing regulators to come together and bring their collective expertise and knowledge to bear in a very different way to deliver a stronger and better regime that will benefit everyone.

The ultimate test of this new framework will be the rebuilding of public confidence in the system. The people who matter most in all of this are the residents of these buildings. The new framework needs to be much more transparent; potential purchasers and tenants need to have clear sight of the true condition of the space they are buying and the integrity of the building system they will be part of. The relationship between landlords and tenants, in whatever ownership model exists in a given building, needs to be one of partnership and collaboration to maintain the integrity of the system and keep people safe. There must be a clear and easy route of redress to achieve resolution in cases where there is disagreement. I have continued to meet with residents and this new framework will ensure that their perspective will not be lost in the future.

One of the greatest concerns which has been expressed to me is whether there is the political will to achieve radical and lasting change. I believe that we have a real opportunity to do this, and to create a system in which everyone will have greater confidence. At the high end of this ambition this country can lead the world in developing a robust and confidence-building approach to the built environment and improving construction productivity. I have felt privileged to work with those who share this ambition and have indicated my willingness to stay engaged in the process of implementation and delivery.

Finally, I want to thank the review team I have worked with over the last 10 months for their dedication and hard work. This has been a challenging review and we have covered a lot of ground. We have all been deeply affected by many of the personal stories we have heard from residents and want to see lasting change result from this review. That is the very least we can all do for the bereaved and the survivors of the tragedy that occurred on 14 June 2017, and for everyone who needs to know that their homes are safe for them to live in.



DAME JUDITH HACKITT

Executive summary

Executive summary

Overview

The interim report identified that the current system of building regulations and fire safety is not fit for purpose and that a culture change is required to support the delivery of buildings that are safe, both now and in the future. The system failure identified in the interim report has allowed a culture of indifference to perpetuate.

More specifically:

- the roles and responsibilities of those procuring, designing, constructing and maintaining buildings are unclear;
- the package of regulations and guidance (in the form of Approved Documents) can be ambiguous and inconsistent;
- the processes that drive compliance with building safety requirements are weak and complex with poor record keeping and change control in too many cases;
- competence across the system is patchy;
- the product testing, labelling and marketing regime is opaque and insufficient; and
- the voices of residents often goes unheard, even when safety issues are identified.

The new regulatory framework set out in this report must address all of these weaknesses if there is to be a stronger focus on creating and maintaining safe buildings. It must strengthen regulatory oversight to create both positive incentives to comply with building safety requirements and to effectively deter non-compliance. It must clarify roles and responsibilities. It must raise and assure competence levels, as well as improving the quality and performance of construction products. Residents must feel safe and be safe, and must be listened to when concerns about building safety are raised.

This new regulatory framework must be delivered as a package. The framework will be based around a series of interdependent, mutually reinforcing

changes where one new measure drives another. In doing so it reflects the reality of most high-rise buildings which operate as a complex inter-locking system. Only this genuine system transformation will ensure that people living in high rise buildings are safe and have confidence in the safety of their building, both now and in the future.

The new framework is designed to:

- **Create a more simple and effective mechanism for driving building safety** – a clear and proportionate package of responsibilities for dutyholders across the building life cycle.³ This means more time will be spent upfront on getting building design and ongoing safety right for the buildings in scope. This will create the potential for efficiency gains; scope for innovation in building practices; and value for money benefits from constructing a building that has longer-term integrity and robustness.
- **Provide stronger oversight of dutyholders with incentives for the right behaviours, and effective sanctions for poor performance** – more rigorous oversight of dutyholders will be created through a single coherent regulatory body that oversees dutyholders' management of buildings in scope across their entire life-cycle. A strengthened set of intervention points will be created with more effective change control processes and information provision.
- **Reassert the role of residents** - a no-risk route for redress will be created and greater reassurances about the safety of their home will be offered, as well as ensuring that residents understand their role and responsibilities for keeping their building safe for themselves and their neighbours.

In making these changes, the new framework will also radically enhance the current model of responsibility so that:

³ Covering procurement, design, construction, occupation, maintenance and refurbishment.

- Those **who procure, design, create and maintain** buildings are responsible for ensuring that those buildings are safe for those who live and work in them.
- **Government** will set clear outcome-based requirements for the building safety standards which must be achieved.
- The **regulator** will hold dutyholders to account, ensure that the standards are met and take action against those who fail to meet the requirements.
- **Residents** will actively participate in the ongoing safety of the building and must be recognised by others as having a voice.

Recommendations

The recommendations for this new framework are explained over the following ten chapters of this report and are summarised below.

The key parameters of a new regulatory framework (set out in Chapter 1) will establish:

- A **new regulatory framework** focused, in the first instance, on **multi-occupancy higher risk residential buildings (HRRBs) that are 10 storeys or more in height**;
- A **new Joint Competent Authority (JCA)** comprising Local Authority Building Standards, fire and rescue authorities and the Health and Safety Executive to oversee better management of safety risks in these buildings (through safety cases) across their entire life cycle;
- A **mandatory incident reporting mechanism** for dutyholders with concerns about the safety of a HRRB.

Improving the focus on building safety during the design, construction and refurbishment phases (set out in Chapter 2) through:

- A set of **rigorous and demanding dutyholder roles and responsibilities** to ensure a stronger focus on building safety. These roles and responsibilities will broadly align with those set out in the Construction (Design and Management) Regulations 2015;

- A **series of robust gateway points to strengthen regulatory oversight** that will require dutyholders to show to the JCA that their plans are detailed and robust; that their understanding and management of building safety is appropriate; and that they can properly account for the safety of the completed building in order to gain permission to move onto the next phase of work and, in due course, allow their building to be occupied;
- A **stronger change control process** that will require robust record-keeping by the dutyholder of all changes made to the detailed plans previously signed off by the JCA. More significant changes will require permission from the JCA to proceed;
- A **single, more streamlined, regulatory route to oversee building standards** as part of the JCA to ensure that regulatory oversight of these buildings is independent from clients, designers and contractors and that enforcement can and does take place where that is necessary. Oversight of HRRBs will only be provided through Local Authority Building Standards⁴ as part of the JCA, with Approved Inspectors available to expand local authority capacity/expertise or to newly provide accredited verification and consultancy services to dutyholders; and
- More **rigorous enforcement powers**. A wider and more flexible range of powers will be created to focus incentives on the creation of reliably safe buildings from the outset. This also means more serious penalties for those who choose to game the system and place residents at risk.

Improving the focus on building safety during the occupation phase (set out in Chapter 3) through:

- A **clear and identifiable dutyholder** with responsibility for building safety of the whole building. The dutyholder during occupation and maintenance should maintain the fire and structural safety of the whole building, and identify and make improvements where reasonable and practicable;

⁴ The proposed new name for Local Authority Building Control – see Chapter 2.

- A requirement on the dutyholder to present **a safety case** to the JCA at regular intervals to check that building safety risks are being managed so far as is reasonably practicable;
- **Clearer rights and obligations for residents** to maintain the fire safety of individual dwellings, working in partnership with the dutyholder. This will include a combination of transparency of information and an expectation that residents support the dutyholder to manage the risk across the whole building ; and
- A **regulator for the whole of the building (the JCA) in relation to fire and structural safety in occupation** who can take a proactive, holistic view of building safety and hold dutyholders to account with robust sanctions where necessary.

Giving residents a voice in the system (set out in Chapter 4) through:

- Providing **reassurance and recourse** for residents of all tenures by providing:
 - greater transparency of information on building safety;
 - better involvement in decision-making, through the support of residents associations and tenant panels; and
 - a no-risk route for residents to escalate concerns on fire safety where necessary, through an independent statutory body that can provide support where service providers have failed to take action, building on ongoing work across Government.

Setting out demanding expectations around improved levels of competence (set out in Chapter 5) through:

- The construction sector and fire safety sector demonstrating more effective leadership for ensuring building safety amongst key roles including **an overarching body to provide oversight of competence requirements**.

Creating a more effective balance between government ownership of building standards and industry ownership of technical guidance (set out in Chapter 6) by:

- Moving towards a system where **ownership of technical guidance rests with industry** as the intelligent lead in delivering building safety and providing it with the flexibility to ensure that guidance keeps pace with changing practices **with continuing oversight from an organisation prescribed by government**.
- A package of **regulations and guidance that is simpler to navigate but that genuinely reflects the level of complexity** of the building work. This new approach will reinforce the concept of delivering building safety as a system rather than by considering a series of competing or isolated objectives.

Creating a more robust and transparent construction products regime (set out in Chapter 7) through:

- **a more effective testing regime with clearer labelling and product traceability**, including a periodic review process of test methods and the range of standards in order to drive continuous improvement and higher performance and encourage innovative product and system design under better quality control. This regime would be underpinned by a more effective market surveillance system operating at a national level.

Creating a golden thread of information about each HRRB (set out in Chapter 8) by:

- **Obligating the creation of a digital record for new HRRBs from** initial design intent through to construction and including any changes that occur throughout occupation. This package of building information will be used by the dutyholders to demonstrate to the regulator the safety of the building throughout its life cycle.

And in addition:

- **Tackling poor procurement practices** (set out in Chapter 9) including through the roles and responsibilities set out above, to drive the right behaviours to make sure that high-safety, low-risk options are prioritised and full life cycle cost is considered when a building is procured;

- **Ensuring continuous improvement and best-practice learning through membership of an international body** (set out in Chapter 10).

The recommendations in this report relate predominantly to HRRBs which will be overseen by the JCA. However, it is made clear in the following chapters where the review believes that there would be merit in certain aspects of the new regulatory framework applying to a wider set of buildings.

Costs and savings associated with the new regulatory framework

These recommendations will require additional actions from those building and owning HRRBs. However, there are a number of potential benefits from this approach: for example, investing more in upfront design is likely to save financial resources later on in the process.

Research from the USA suggests that net savings in the region of 5% in the costs of the construction of newly built projects are possible where a digital record is utilised (see Chapter 8). In addition, a clearer set of roles and responsibilities could:

- create certainty in the market in terms of what the changes look like and in both the immediate and longer term reduce risks of poor quality

building work, increasing investor confidence and mitigating the likelihood of any slowing down in the pace of building work; and

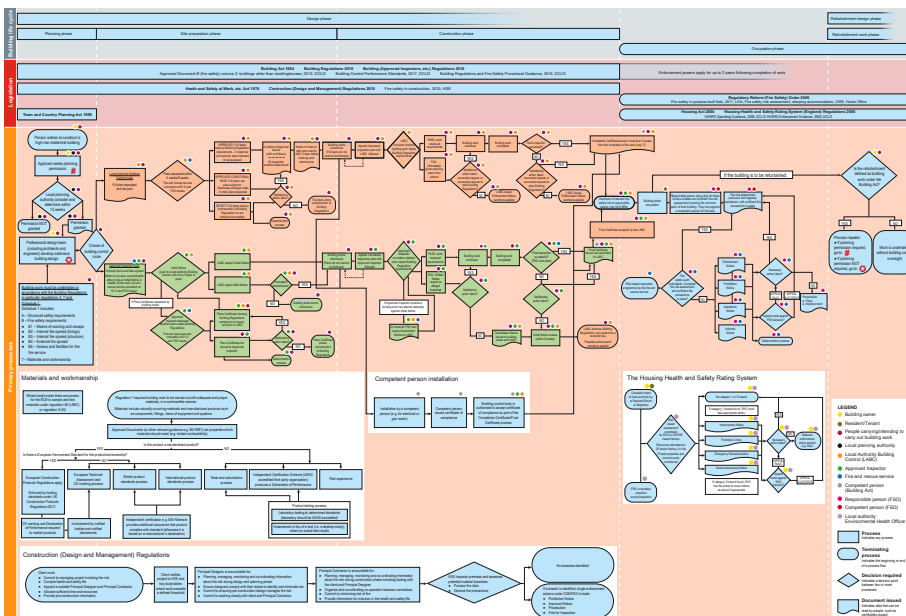
- reduce confusion between different actors over who is responsible for specific aspects of the work, and minimise the likelihood of mistakes that need to be rectified, speeding up the transaction process and potentially deliver efficiencies that manifest themselves in greater productivity.

More broadly, investing in improved competence levels could ensure that more skilled workers are able to correct errors and improve efficiency alongside ensuring compliance with the regulations. An improved product testing and marketing regime could also have additional quality benefits, for instance in ensuring sustained product performance.

Mapping the existing and future regulatory frameworks

The interim report included an outline map of the existing regulatory system insofar as it applied to the design, construction, occupation and maintenance of a high-rise residential building. Even though it did not cover all detailed scenarios, it was still **highly** complex – involving multiple routes, regulators, dutyholders and differing (and overlapping) sets of legislation.

Figure 1: Map of the current regulatory system for high-rise residential buildings



The new regulatory framework for HRRBs attempts to move in the opposite direction by making the regime significantly more straightforward and comprehensible whilst also making it more rigorous and effective. At Appendix B we have included an outline map of the new framework based on our recommendations. It is **significantly** simpler. This greater simplicity is because of the following key changes:

- the same regulatory body (the JCA) oversees building safety across the building life cycle;
- the same legislative framework applies across the building life cycle;
- the existing overlaps between different legislation and different regulators (in particular the Housing Act 2004 and the Fire Safety Order 2005) have been removed;
- there are no longer two parallel, but confusingly different, building control bodies providing oversight during design and construction;
- there are a new set of specific JCA interventions across the building life cycle (gateway points and safety case review); and
- self-certification processes (whereby aspects of building work can be signed off by the individuals doing the work without broader regulatory oversight) have been removed.

The report acknowledges there are some areas where complexity remains, especially around oversight of construction products. The review sets a clear direction towards eventual greater simplification although there remains much more to do.

Conclusion

Whilst the recommendations in each chapter are crucial, in isolation they will fail to achieve the systemic change sought. The framework operates as a mutually reinforcing package and requires the implementation of its interdependent components in order for this to be achieved.

Implementing the package proposed in this report may take some time. Whilst some of the recommendations can be delivered in the short term, some will require primary legislation and in the meantime industry must start ‘living’ the cultural shift that is required – the most important element of achieving that will be leadership from within industry.

It is therefore important that government develops a joined-up implementation plan to provide a coherent approach to delivering the recommendations in this report.

The next chapter sets out some of the key parameters that underpin the new regulatory framework. The subsequent chapters set out in detail the recommendations covering each key element of change.