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Prescription in English fire regulation: treatment, cure or placebo?

Angus Law PhD, MEng, CEng, MIFireE

BRE Lecturer in Fire Safety Engineering, School of Engineering, University of Edinburgh, Edinburgh, UK (corresponding author: angus.law@ed.ac.uk)
(Orcid:0000-0002-7829-434X)

Neal Butterworth MPhil, CEng, MIFireE

Director, Design Fire Consultants, Leeds, UK

This paper presents a discussion of the recent ‘ban’ on combustible cladding that has been implemented in England following the Grenfell Tower fire. The ban is discussed in terms of its context within the existing regulatory system in England and is analysed in terms of the intended and unintended consequences. Key intended consequences are identified as the prohibition of ‘Grenfell-type’ cladding, the banning of desktop studies for relevant buildings and the banning of some forms of engineered timber construction. Unintended consequences include the devaluation of private leaseholder’s homes, the potential for the problems with the construction industry to be perceived as ‘fixed’ and a raft of somewhat absurd administrative effects. The authors conclude that the ban has likely been effective in its overall aim but that its success is, ironically, inherently bound up with the efficacy of the very regulations that it was intended to fix. The authors also identify that the new ban is potentially susceptible to ‘gaming’ by unscrupulous parties within the construction industry.

1. Introduction

On 17 May 2018, Dame Judith Hackitt released her final report on the state of the UK’s construction industry. Hackitt took to the airwaves and attempted to present the findings of her report to Martha Kearney on the UK’s flagship news programme, *Today* (BBC, 2018a). Things started well. Dame Hackitt managed to make her points about how the existing regulatory system was broken, that there were no clear assignments of responsibility and that a wholesale culture change was required. However, things soon started to get trickier. Kearney continued to press Hackitt on why her report did not call for an outright ban on combustible materials. Dame Hackitt stumbled – ‘that gets us into very technical ground’ – and continued to emphasise her point that ‘you have to go beyond simply specifying what can and can’t be used’ (BBC, 2018a).

Dame Hackitt stuck to her principles. She steadfastly repeated her considered opinion – and a conclusion that represented many months of research by tens, if not hundreds, of civil servants. She reiterated her position that ‘it is more than about simply issuing a ban’ (BBC, 2018a) and that there were fundamental systemic changes that she said were needed in the construction industry.

However, the headlines were already written. Dame Hackitt’s failure to ‘ban combustible cladding’ was the lead item for the rest of the morning. Member of Parliament David Lammy branded her review as a ‘betrayal and a whitewash’ (Lammy, 2018). By lunchtime, under mounting pressure, the government caved (Apps, 2018). James Brokenshire, Secretary of State for the Ministry of Housing, Communities and Local Government (MHCLG) announced in Parliament that the government would ‘consult on banning the use of combustible materials in cladding systems on high-rise residential buildings’ (Hansard, 2018a).

As the day wore on, Dame Hackitt again presented her report. This time to Parliament’s Select Committee on Housing, Communities and Local Government. She made the case for an outcome-based system – whereby designers are held accountable for their solutions – but the members of the committee wanted to talk about the ban (Hackitt, 2018a).

Hackitt (2018a) noted that ‘in spite of reams and reams of prescription, people are still doing things which the guidance says [they] should not be doing’. She also observed that ‘simply banning something from happening is no guarantee of compliance’ and that this was ‘fundamental to what I have found in [the] review’ (Hackitt, 2018a). Hackitt stated that ‘if people attach too much reliance upon banning activities and particular materials as being a solution to this problem, it will create a false sense of security’ (Hackitt, 2018a).

By this time, it was mid-afternoon. Seven hours previously, Dame Hackitt had refused to call for a ban on combustible cladding. At around 15:45, hesitating before she spoke, Hackitt (2018a) said that she was ‘pleased to see that the Secretary of State has announced today that he is going to consult on whether or not combustible materials will be banned’. As outsiders, the authors can only imagine the machinations that must have played out behind the scenes on 17 May 2018.

That evening, on BBC One’s programme *Question Time* (BBC, 2018b), Dominic Raab, the Minister of State for Housing and Planning, came under pressure from Diane Abbot MP not to consult, but simply to issue a directive to ban combustible cladding immediately. He responded by highlighting the complexity of the issue – asking Diane Abbot, ‘can you define

combustible cladding for me right here and now in a way that is clear?' (BBC, 2018b). Then, he made the following statement.

My commitment is that we understand the concern; we've listened to the expert review and report, but we will be looking to ban it. The question is the most effective way to do it so that we have effective regulations – not defective regulations that were the cause of this in the first place. (BBC, 2018b)

Over the course of a single day, Her Majesty's Government progressed from no ban to a consultation on whether or not a ban was required to a consultation on the most effective way to implement a ban.

The challenge of this latter question was addressed by Brian Martin of MHCLG during a keynote presentation that he gave in Edinburgh on 31 October (Martin, 2018). With respect to creating rules for a prescriptive ban, Martin (2018) noted that 'every time you think you've written [a rule] somebody says "what about one of those?" and you're back to square one again. It's considerably harder than it looks'.

On 29 November, 5 months after Hackitt had initially refused to 'ban combustible cladding', the government 'banned combustible cladding'. As this paper is being written, the ban is still new – but, as Brian Martin noted, writing rules is hard. This paper examines the immediate consequences of the ban and also identifies how unintended consequences may manifest – and how these may be mitigated.

2. The functional requirement

England's building regulations have been based, since 1985, on the concept of functional requirements (HMG, 1985). These functional requirements are qualitative statements about the performance that a building should achieve. In the case of fire safety, they require things such as appropriate escape routes, structures maintaining stability for a reasonable period and (of course) that fire spread over the building envelope is adequately resisted.

Until early 2019, the functional requirements were the only fire safety necessity that any building designer needed to achieve. However, deciding what constitutes appropriate or reasonable is difficult, so the government also published a series of *Approved Documents* that give a set of prescriptive rules to assist designers in compliance with the functional requirements (HMG, 2013a, 2019).

Following these rules may be relied on as tending to negative liability (with respect to compliance with the functional requirements), but it is not a guarantee of compliance (Building Act 1984).

As a consequence, a competent designer must make a judgement about whether the rules are appropriate to every aspect of the

building under consideration. Also, by necessity, the rules are generic and cannot prescribe every aspect of a building design, and designers are required to interpret whether their design complies with the rules or at least the intent of the rules.

Therefore, if a designer applies the rules unthinkingly or without adequate skill and care, there is always a chance that they will create a building that is unsafe (because of some circumstances that the writers of the rulebook did not foresee or because they misinterpreted the requirement or intent of a rule) and/or create a situation within a building that is inappropriate in some other way.

A key feature of the system of functional requirements is that it allows (and even requires) the application of prescriptive rules to be moderated by common sense and engineering understanding. Thus, new hazards that are inadequately controlled by the existing regulatory framework can be identified and addressed without the need for new regulations or new published prescriptive guidance. Furthermore, when the application of rules leads to a scenario that is clearly absurd, this can be corrected by following the intent of the rules – rather than the exact wording of the rules.

A feature of this functionally based system is that prescriptive measures are coupled to statements of intent. For example, the prescriptive requirements for external walls in *Approved Document B* (ADB; prior to the 2019 update) were linked to three statements of intent.

- If a designer was uncertain about how to interpret paragraph 12.7 of ADB, they could refer to paragraph 12.5, which identifies that '[t]he external envelope of a building should not provide a medium for fire spread if it is likely to be a risk to health or safety' (HMG, 2013a: p. 93).
- If there remained any uncertainty about the meaning of this paragraph, then a further statement of intent is provided within the Secretary of State's view in that the requirements will be met if 'the external walls are constructed so that the risk of ignition from an external source and the spread of fire over their surfaces, is restricted, by making provision for them to have low rates of heat release' (HMG, 2013a: p. 92).
- Finally, if the designer remains uncertain about whether their proposals are appropriate, they can evaluate them directly against the functional requirement which states that '[t]he external walls of the building shall adequately resist the spread of fire over the walls and from one building to another, having regard to the height, use and position of the building' (HMG, 2013a: p. 91).

These statements of intent provided additional context that collectively allow a designer to judge whether they have interpreted the guidance correctly. If there is any ambiguity in the specific guidance clauses, this can be clarified by referring to the statements of intent. If the prescriptive guidance delivers a solution that is absurd, the solution can be revised in the context of the overall intent.

3. The ban

The ban that James Brokenshire announced on 29 November 2018 (Hansard, 2018b) was not a functional requirement. Instead, for the first time since the introduction of the Building Act 1984, a prescriptive ‘fire safety’ measure for building work was written into statute – Regulations 7(2), 7(3) and 7(4) of The Building (Amendment) Regulations 2018 (HMG, 2018b). In his keynote presentation to the British Standards Fire Safety Conference on 21 May 2019, Chandru Dissanayake of MHCLG, giving context for the ‘ban’, noted that ‘it is the responsibility of industry to ensure that fire doesn’t spread on the outside of a building; industry hasn’t been taking this seriously so we’ve had to take action’ (Dissanayake, 2019). He emphasised that the ban was necessary because ‘government doesn’t trust industry’ (Dissanayake, 2019).

The primary implication of writing a prescriptive rule in legislation is that Regulation 7(2) must be obeyed; not obeying Regulation 7(2) is to be in breach of the The Building (Amendment) Regulations 2018 (HMG, 2018b). The second implication is that expressing the new prescriptive rule in legislation removes any need to clarify the intent of the rule. The absence of this clarifying intent, and the rigid manner in which it must be followed, leads to consequences – some of these may have been intended by the lawmakers, and some are likely to be unintended.

It is the consequences of this legislative change that are the focus of this paper. The ban is still new and any legislative change can drive innovative practice, as well as further ‘gaming’ of the system. The authors have chosen to explore these issues through cases of which the authors have first-hand experience, have been featured in the media or which logically follow from the context of the construction industry. The authors have deliberately avoided analysing potentially significant consequences for the materials and systems used to deliver building energy performance – as this is beyond their competence as fire safety engineers.

4. Intended consequences

4.1 Omission of combustible elements of construction

Given the political context presented in Section 1, the most obvious intended consequence is to ban ‘Grenfell-type’ cladding (e.g. aluminium composite panels with polyethylene filler and combustible insulation) from use in relevant buildings. In this regard, Regulation 7(2) seems to have already been very successful and is likely to continue to be so. The only reason that the authors say ‘seems’ is because they cannot be sure whether the industry shift away from using combustible construction is directly because of Regulation 7(2) or whether it would have happened anyway: from the authors’ experience, many funders, developers and contractors had taken the decision to avoid Grenfell-type cladding before the changes were announced.

Although Regulation 7(2) does not provide its own context, the government’s impact study (MHCLG, 2018a) makes it clear that government intends to ban all combustible materials, not just

Grenfell-type cladding. Whether it is successful in this regard remains to be seen. As with any prescriptive requirement, much will depend on the robustness of the wording and degree to which practitioners find themselves able to game the system – a practice that Judith Hackitt has identified as being widespread within the construction sector.

For example, the new Regulation 7(2) bans combustible materials that become part of external walls. At first glance, this is pretty clear. However, closer examination leads to a number of questions of which the authors have first-hand experience.

- What is a material as opposed to a product? Does government really mean to ban all combustible materials? Would this extend to the combustible binders within mineral wool insulation and paper on plasterboard? Neither of these materials, if tested on their own, can achieve European Class A2-s1, d0. Possible answers to this question may be found within the *Approved Documents* (HMG, 2013b) and on a new ‘Frequently Asked Questions’ website set up by MHCLG (MHCLG, 2019). However, this immediately leaves Regulations 7(2), 7(3) and 7(4) open to interpretation.
- The definition of ‘external wall’ is also open to interpretation. For example, when an internal wall meets an external wall – does the cross-section of the external wall now extend into the building until it reaches an occupied space? Based on experience of other prescriptive approaches, it is likely in time that this definition will be gamed, and it will be argued that certain components are not actually part of an external wall.

The ban is also accompanied by a series of exemptions which are, no doubt, provided because the writers of Regulation 7(2) have judged that the current practice in the construction industry would be impacted too significantly unless exemptions are made.

This list of exemptions introduces its own series of questions and possibilities for gaming. For example, membranes are exempt. What is a membrane? Any practitioner in the construction industry might currently believe that a membrane is a thin vapour-control layer or watertight layer (such as the ethylene-propylene-diene monomer membrane that was present at Grenfell Tower (Bisby, 2018)). However, this definition is open to interpretation. How long before a manufacturer decides to market their new combustible insulation product or cladding as a ‘membrane’?

4.2 The Part B backstop

The answer to many of the questions raised earlier may be that it does not, in fact, matter. Although Regulation 7(2) now provides a prescriptive rule, it does not supersede or replace the requirements of Part B of the Building Regulations. Building designers must still consider their solutions in the context of the functional requirements of Part B.

At the same time that the new Regulation 7 was introduced, the guidance of ADB was also updated to refer to the new regulation

(HMG, 2018a). The *Approved Documents* were subsequently updated again in July 2019 with the intent of providing greater clarity across the full extent of the documents (HMG, 2019).

Consequently, while Regulation 7(2) may be potentially gamed, the functional requirements represent a ‘backstop’ that requires thought be given to whether the proposed solution does, in fact, adequately prevent fire spread. For example, an unscrupulous practitioner could attempt to classify a 3 mm thick sheet of polyethylene as a membrane under Regulation 7(3) and therefore allow this material to be permitted on the building. However, when evaluated against the functional requirements of Part B, it is expected that this product would be identified as inappropriate and therefore prevented from being used.

Regulation 7(2), can therefore deliver adequate safety only when considered together with Part B – and when culture and the system are fixed to eradicate gaming. Therefore, while the government has introduced the ban because they do not trust industry to ensure that fire does not spread on the outside of a building, the long-term success of the prescriptive ban relies on the functional requirements of Part B to ensure adequate safety. The success of the ban therefore relies on the successful implementation of Hackitt’s broader recommendations – and the capacity of the industry to regain credibly the trust of the government. It is also somewhat ironic that the success of the ban is reliant on the success of the ‘defective regulation’ (BBC, 2018b) that the government was trying to fix.

4.3 Prohibition of high-rise timber construction

One immediate consequence of Regulation 7(2) is that engineered timber construction is included within the ban, as, in practice, most current large-scale engineered timber buildings are constructed with cross-laminated timber as an element of structure within the external wall. The government’s impact study (MHCLG, 2018a: p. 10) notes the following.

The policy prohibits the use of timber materials in the external wall of buildings within the scope. Currently the number of projects above 18 m in height where load bearing structural timber elements are used remains relatively small. The effect of the ban on the use of engineered timber remains limited in the short term. There is however a growing number of buildings above 18 m in height using engineered timber as part of their structure. Engineered timber offers an alternative to traditional methods of construction in buildings within the scope of the policy. It is therefore likely to slow down the use of engineered timber in future development in the medium to long term.

From this statement, the authors conclude that engineered timber being ‘scuppered’ (Cousins, 2019) by the ban appears to have been a conscious choice by government. The purposeful nature of this decision is further emphasised by the long list of exemptions under Regulation 7(3). It would have been possible, no doubt, to draft an exemption targeted at engineered timber; the absence of such an exemption suggests that the government has used

Grenfell Tower as political cover for prohibiting a form of construction that has proliferated in recent years. It is ironic that, although Dianne Abbot was quick to press the government for the ban, the Labour Hackney Council in her constituency has been ‘keen to promote the benefits of building with wood’ (Hackney Council, 2012) – actively promoting (Stops, 2016) buildings that would now be banned under Regulation 7(2).

Since the immediate aftermath of the Grenfell Tower fire, the Royal Institute of British Architects has also been consistent in its recommendation for a ban on combustibile external wall construction (Dobson, 2018; Waite, 2017). With respect to the use of engineered timber, some of its leading members now find their activities swept up in the ban. With calls for a ‘common-sense approach’ as the manner of the prohibition emerged in autumn 2018 (Dunton, 2018), some appear to have realised too late that this form of construction was vulnerable to the inflexible adherence to prescriptive rules – and that common sense is not relevant in the face of a statutory prescription. Leading practitioners in this area are already indicating that they are considering how they can change how external walls for timber structures are designed – to get around Regulation 7(2) (Jessel, 2018). Time will tell whether this change will be to omit timber from the external wall or whether designers will seek to redefine administratively the external wall such that, according to this new definition, ‘internal’ elements of the external wall can be timber.

The evidence suggests that engineered timber was not an unfortunate victim of the ban on combustibile materials, but an active target of the new Regulation 7. If practitioners invest time and resources to re-engineer their schemes to remove timber from the external walls, the authors would suggest that there is the real possibility that government may introduce new rules to target this form of construction specifically. A key motivation for the engineered timber industry should therefore be to provide evidence to the government that this form of construction should be one of the exempted products – by spending time to address safety concerns rather than gaming Regulation 7 (Deeny *et al.*, 2018; Law and Hadden, 2017; Law *et al.*, 2019).

4.4 Banning desktop studies

The rigidity of Regulation 7(2) now means that it is not possible to use a ‘desktop study’ to demonstrate compliance with the requirement. Dame Hackitt identified that ‘assessments in lieu of tests (also known as ‘desktop studies’) should only be used in a very limited number of cases’ (Hackitt, 2018b: p. 92). Furthermore, much of the media coverage following the Grenfell Tower fire focused on desktop studies. From this, it seems likely that the banning of desktop studies (in order to demonstrate adherence to Regulation 7) is an intended consequence of the legislation.

Although the use of desktop studies is restricted in relation to the scope of Regulation 7(2), there is still the possibility to use large-scale testing to demonstrate compliance with the recommendations of ADB. In this context, the use of desktop studies appears likely

to be standardised in the form of the proposed BS 9414 (BSI, 2019). Given the number of system variables that the draft BS 9414 identifies as ‘not possible to change’, it seems likely (and indeed the authors have already encountered cases) that BS 9414 not only limits the extent to which desktop studies can be used, but also effectively limits the degree to which BS 8414 (BSI, 2015a, 2015b) can be applied to any project.

5. Unintended consequences?

5.1 Devaluation of property

Since June 2017, a large number of buildings have been identified that have combustible cladding. The government maintains a list of buildings that have been identified as having ‘unsafe’ cladding that were identified as part of the screening process that was set up in the days after the Grenfell Tower fire. Where buildings have been deemed unsafe, the government has indicated that owners should undertake remedial works. To assist with this, the central government has made £400 million of funding (MHCLG, 2018b) available to local authorities to ensure that there is sufficient financial resource available to undertake the work.

In the case of privately owned blocks, the government has called on owners to ‘do the right thing’ and undertake the remedial work. However, the degree to which this request has been met with action appears to be limited (MHCLG, 2018b). It is the authors’ observation that private companies may have a limited appetite for undertaking multimillion-pound remedial works in the absence of a legal mechanism that compels them to do so. In fact, the authors’ experience is that, in many cases, there is no private company doing the right thing because the companies have either ‘gone bust’ or been deliberately dissolved after construction. Apparently, in recognition that ‘too many building owners have failed to take responsibility’ and that ‘many leaseholders face unfair, and often substantial costs’, on 9 May 2019, a further £200 million was announced in an attempt to enable leaseholders in private blocks to undertake remedial work (Hansard, 2019).

It is notable that Regulation 7(2) has, in effect, raised the bar with respect to the level of safety delivered by England’s building regulations. Prior to this regulation, it would have been possible to use some combination of combustible cladding materials – for example, by testing a system in accordance with BS 8414 and classifying it in accordance with BR 135 (Colwell and Baker, 2013); Regulation 7(2) now requires these materials to be European Class A2 or better.

A key question in relation to many existing buildings is, ‘Was Regulation 7(2) introduced because the government believed that the level of safety in ADB was too low, or was Regulation 7(2) introduced because the government had lost faith in the industry’s ability to follow the guidance in ADB?’.

This is a question of paramount importance for the owners of flats in many affected buildings, as the authors have experience of building

control authorities, fire services, insurers and mortgage providers who have expressed the view that the new Regulation 7(2) (in addition to guidance in relation to Category 2 aluminium composite material (ACM) in MHCLG *Advice Note 11* (MHCLG, 2018c)) is an indication that buildings that previously complied with ADB are no longer considered by government to be adequately safe.

This means that there are a number of buildings that fall into a compliance gap – that is, buildings where the cladding systems that complied with building regulations when they were built, but do not comply with The Building (Amendment) Regulations 2018 (HMG, 2018b). In theory, this does not matter – existing buildings are not required to comply with new regulations. However, in practice, the authors are aware of instances where mortgage providers have refused to lend money on, and regulatory enforcers have insisted on remediation of, flats in buildings that include any cladding materials that are not European Class A2 or better – regardless of whether the building complied with ADB when it was built. This has led to situations where private residents have concluded that the only way to maintain (or recoup) the value of their property is to replace the cladding. However, these residents have also found that they have no recourse to developers or building warranty providers – as all parties agree that the building complied with the original regulations.

The compliance gap, whether intended or unintended, is a consequence of the ban that has forced residents to pay (either directly or through the government’s private funding scheme) for cladding to be replaced in situations where it had previously been deemed adequately safe. The number of properties affected by this compliance gap may increase as the government extends its research and recommendations beyond the immediate concern of ACM cladding, or it could decrease if the government takes heed of results which suggest that some combustible cladding materials may be adequately safe.

While the support for leaseholders is to be welcomed, it is worth noting that, taken as a whole, the construction sector responsible for designing and installing ‘unsafe’ cladding is now being subsidised by the government to remediate its own ‘defective’ work.

5.2 Elimination of consequence

In her evidence to the select committee, Dame Hackitt stated that ‘if people attach too much reliance upon banning activities and particular materials as being a solution to this problem, it will create a false sense of security’ (Hackitt, 2018a). It is the authors’ view that this has the potential to be one of the most significant unintended consequences of Regulation 7(2).

Practitioners may believe that if they comply with Regulation 7(2), then they do not need to worry about meeting Part B. If this view prevails, then it follows that practitioners may feel that they have no responsibility for their solutions – as they are defined by the government. Where the building designer does not hold responsibility for their solutions, competence to evaluate proposed

solutions against Part B becomes irrelevant. A perceived lack of design responsibility therefore reduces the need for designers and contractors to be competent in relation to understanding the risk presented by a given external wall construction. This may lead (over time) to a situation where any residual competence present in the industry is lost – the opposite of the objectives of the Hackitt review.

A further consequence of the ban is the concern that the problems with the construction industry will be perceived as being ‘fixed’ – and that political will to implement wider recommendations of Hackitt’s final report may ebb away.

5.3 Minor unintended consequences

There is also a raft of other more minor consequences that appear to be unintended.

Regulation 7(2) states that all materials should be tested in accordance with ‘BS EN 13501-1:2007+A1:2009 (ISBN 978 0 580 59861 6) published by the British Standards Institution on 30th March 2007 and amended in November 2009’. As discussed earlier, a high level of specificity is necessary for any prescriptive regulation in order to minimise the extent to which a rule can be gamed. However, the level of specificity with the exact document that should be used is curious, as it appears to preclude any product that is classified against, for example, the German standard DIN EN 13501 (DIN, 2019). This means that any product for sale in the English market place must be classified in accordance with the British version of the standard. In the context of Brexit, perhaps this is intentional – but it does appear curious, as it can leave otherwise saleable products ‘non-compliant’ when they enter the English market.

It is worth noting that, in the *Approved Document* series, the standards are also referred to as British Standards – but this is simply guidance, so any engineer can recognise that a product classified in accordance with DIN EN 13501 has the same status as a product classified in accordance with BS EN 13501. In the case of the new Regulation 7(2), there is not the same flexibility.

In a similar manner, the latest version of BS EN 13501 is BS EN 13501-1:2018 (BSI, 2018). As a consequence, some testing laboratories have already updated their classification documentation to accord with the new test. Any certificate issued in accordance with the 2018 version of the standard does not comply with the regulation. To be compliant with Regulation 7(2), it must be reclassified in accordance with the old standard.

This level of administrative absurdity is perhaps a price that the government has deemed worth paying in order to achieve the intended consequences of the ban. However, the authors cannot let it pass unremarked.

In addition to the somewhat absurd administrative consequences, there are also somewhat absurd practical consequences.

For example, while the new regulation applies to external walls, it does not apply to flat roofs. In many modern buildings, it is common to provide rigid polyisocyanurate (PIR)/phenolic foam/rigid polyurethane (PU)/polystyrene insulation over the top of the structural slab that forms the roof of the building. In apartments, it is also common to provide a top ‘penthouse’ level that is stepped back from the edge of the building. This leads to an immediate question of ‘Where does the wall stop and the roof start?’. The authors have already seen projects where contractors have removed an arbitrary perimeter of PU/PIR from a roof in order to ensure that this does not accidentally become classified as the external wall. As with the previous examples, this is perhaps a small price to pay for the success of the ban; but it demonstrates that the introduction of a prescriptive rule can lead to absurd design situations that cannot be resolved by application of engineering or common sense – they can be resolved only in legal terms.

6. Conclusion

The ban on combustible cladding was introduced because the British government did not trust the industry to ensure that fire does not spread on the outside of a building. The ban appears to have been broadly effective in prohibiting many of the materials about which the government was (rightly) concerned. However, the authors have concluded the long-term effectiveness of the ban can be sustained only if the existing regulatory regime functions adequately, and if competent application of Part B serves as a backstop to any inappropriate gaming of Regulation 7.

As such, the authors conclude that the measures in Regulation 7 represent a patch (or, in the language of Brian Martin (2018), ‘the biggest regulatory hammer I can find’) to induce an immediate change in the practice of the construction industry. This risks being a classic case of knee-jerk regulation – or design by disaster (Spinardi *et al.*, 2017). Unless the wider issues identified by Dame Hackitt are also addressed, other building safety issues will periodically emerge. Therefore, adopting the language of Brian Martin, MHCLG will need to use their metaphorical hammer in a never-ending game of whack-a-mole.

The authors have observed that the effectiveness of the ban has also come at a cost. Some of these apparent costs (e.g. the immediate impact on engineered timber) appear to have been intentional. Some of these costs are obviously absurd in that they simply generate an administrative loop that must be obeyed – but these costs are potentially acceptable to the government (and perhaps society) given the overall effectiveness of the ban.

There are, however, potential unintended consequences that are of more concern. Any prescriptive rule is vulnerable to gaming, and the new Regulation 7 – with its list of exemptions – certainly has this potential to be gamed. The ban appears to force, on the grounds of safety, leaseholders to pay for the replacement cladding that was previously deemed safe – simply to retain the value of their asset. The ban also presents an opportunity for designers to avoid potentially taking design responsibility for their

proposals – the exact opposite of the outcome that Dame Hackitt is seeking as part of her reforms. With respect to this, the authors can only reinforce the point that designers must still comply with Part B of the Building Regulations and that the government follows the advice of Hackitt to prioritise cultural change and outcome-focused regulation.

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