

Communities and Local Government Committee

House of Commons, London SW1A 0AA

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Dame Judith Hackitt
Chair, Independent Review of Building Regulations and Fire Safety
c/o Department for Communities and Local Government
2 Marsham Street
London
SW1P 4DF

30 January 2018

Dear Dame Judith,

Re: Independent Review Building Regulations and Fire Safety

Thank you for your letter of 11 January, which responded to some of the issues I raised in correspondence with you following the evidence session in December.

I am sorry to report that the Committee were somewhat disappointed with a number of aspects of your response. We felt it was important, therefore, to re-emphasise the issues that the Committee are most concerned about and, where appropriate, ask you to reconsider the Review's approach to these.

I also enclose representations to the Committee made by various industry representatives following the evidence session. These highlight several important points relevant to your review and we would encourage you to reflect on these as your inquiry enters its final phase.

In your letter, you said that the Independent Review would not consider the current regime for testing domestic electrical appliances, as this fell outside the Terms of Reference of the Review. This is disappointing, especially in the context of your comments during the evidence session, when you told the Committee that you "could certainly give it consideration" (Question 45). You explained that one of the reasons for publishing an interim report was so that people could feedback where there might be additional relevant areas the Independent Review should be looking at. It is unfortunate, therefore, that such an important issue— particularly in the context of the Grenfell Tower fire – has been so quickly dismissed.

In your letter, you also told us that it would not be beneficial for the Independent Review to "deviate from its initial scope" to undertake a consideration of Part P. Again, it is disappointing that during the public evidence session you told us that the Interim Report would be an opportunity for stakeholders to feedback how the Review could broaden its scope, and yet our recommendation has been rejected on the basis that it would deviate from the Review's initial terms of reference (Questions 45 to 49). The public expectation is that you are conducting a review of all Building Regulations, not only Part B. It is therefore important that your review makes recommendations in relation to all aspects of the regulations and guidance, and this should include Part P.

Your response did not comment specifically on the Committee's concerns that the Independent Review might focus on a risk-based regulatory system in its final report, rather than an approach which includes some elements of prescription. Whilst we appreciate that you have not yet

published a final report, and have not yet made final recommendations on this issue, I want to emphasise again the view that it cannot be right to continue to permit the use of combustible materials on the external cladding of high-rise buildings, and that therefore some elements of prescription would seem absolutely necessary in any future regulatory system. To this end, I would also be interested to know what consideration you gave to including in your interim report recommending more immediate action on either the removal of such cladding or prevention of its use on tower blocks in the future.

The Committee looks forward to the Independent Review's final report and the opportunity to take evidence from you again when it is published later this year.

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Clive Betts MP
Chair, Communities and Local Government Committee

Clive Betts MP
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22 January 2018

Dear Clive,

Further to your meeting on 18 December with Dame Judith Hackitt and subsequent correspondence with her, I'd like to expand on some areas of concern I share with you and the Committee. (I have several roles within this industry, and have been researching the relevant Building Regulations in depth since the tragedy at Grenfell Tower. I run a cladding and building systems business and I am the Chairman of the metal cladding industry's technical committee – the MCRMA. Finally, I am a member of the CPA Technical Expert Panel that reports into the Industrial Response Group that was set up by the Independent Expert Panel chaired by Sir Ken Knight.)

I am deeply concerned that the proposed direction of travel is away from the epicentre of the issue, and unlikely to satisfy the remit of reassuring people that everything is being done to ensure that a tragedy such Grenfell does not happen again.

The prevailing message in Dame Judith's Interim Report is a systemic failure of the regulatory system but excluding Grenfell, the statistics portray a significantly *improving* fire-related fatality rate, against a convincing sample size of many incidents. This does *not* suggest a system that is completely broken and lacking in widespread competency. We should be cautious that much of the regulatory system that has delivered this welcome progress is not jeopardised by future changes.

I am grateful that Dame Judith identifies several pervasive weaknesses in the interim report such as the lack of clarity in accountability, conflicts of interest in fire risk assessments and building control that must be addressed. However, the main focus should surely be the extraordinary nature of the Grenfell fire that caused statistics to become so tragically distorted, and there seems to be little contention that the external walling system design was a fundamental factor.

Having considered the responses given to your questions of December 18 2017, I encourage the Committee to pursue that line of enquiry, particularly in relation to the following issues:

A. Cladding Regulations.

In the Interim Report opening paragraph, Dame Judith states that an industry subsequently implied to be languishing in incompetency, failed to adopt the Guidance requirement of limited

combustibility for the cladding on Grenfell Tower. However, if you read the relevant section of the guidance ourselves (section 12, Approved Document B Vol 2, pp 93-95) I would contend:

- a. The requirements are not as complex, contradictory or convoluted as suggested in the Report. Section 12 'Construction of external walls (ignition and fire spread)' is little over 2 sides of A4, and most of one page is Diagram 40.
- b. There is a clear requirement in 12.7 for '*Insulation Materials/Products*' to be limited combustibility above 18m
- c. There is NO corresponding requirement for external walls or surfaces (i.e. the cladding) to be limited combustibility. In fact, the *Diagram 40 e.* is very clear that the requirement for external cladding material above 18m is '*Class 0 (national class) or Euroclass B-s3, d2 or better (European class): i.e. combustible.*

Perhaps there is some esoteric method of interpreting this section, but I believe that it's *not* in fact difficult to understand why *all* of the buildings surveyed following the Grenfell fire had combustible cladding. Far from being widespread incompetency on behalf of the industry, it seems that this is simply in line with the Guidance requirements.

Surely, this fundamental deficiency in the statutory documents both needs investigating and addressing as a matter of urgency if we are to avoid a repeat of Grenfell? This would have the benefit of unlocking the apparent stalemate involving property owners who believe they have buildings that meet the requirements of Approved Document B, yet are clad in Class 0 polyethylene Aluminium Composite Material (PE ACM) which was proven in the DCLG tests to *not comply with the actual Building Regulations*? As suggested in the Report, there appears to be case law that if you have adhered to the Guidance you are *deemed to have complied* with the Building Regulations. Furthermore, given the alarmingly rapid failure of the DCLG BRE tests involving PE ACM (regardless of the insulation) why has there not been a clear instruction with an appropriate timescale from DCLG to property managers to strip tall buildings of this highly dangerous material?

B. Desktop Studies.

What is more difficult to understand, is why so many tall local authority buildings surveyed were clad in *combustible insulation* which is clearly proscribed by clause 12.7? Given the paucity of BR135 (the method of assessing the large scale test) passes published by the BRE at the time, presumably this situation has arisen due to 'desktop studies' which are now (according to the non-regulatory Building Control Alliance guidance) permissible by non-UKAS accredited organisations (in other words, 'self-declared competent persons')? Surely in the context of the Report remit, this is a huge concern and the validity and/or legality of a route to compliance via desktop studies should be fundamentally challenged?

This view seems further supported by looking internationally. In Dame Judith's response to Mr Hollinrake's question about EU restrictions, she responded incorrectly by saying that above 18m cladding products in the EU were required to be limited combustibility. The actual situation isn't so simple, with most member states having their own interpretations (e.g. France where the height threshold is actually 50m). Whilst several states allow large scale fire testing, many do not. However, I cannot see any state where desktop studies are allowed. Desktop studies carried out by a non-professional are not equivalent to a fire engineering route to compliance. A desktop study is an impossible guess about how a cladding system will perform in a fully developed fire, whereas a fire

engineering assessment is a balanced view of the various fire related features of a building. Surely therefore, desktop studies subvert the requirement of actual full scale test data as was originally intended by the 1999 EFRA Committee following the Garnock Court, Irvine fire?

C. Large Scale Testing

On the subject of large scale testing, I'm again concerned that the Report does not seem to fundamentally challenge this route to compliance for combustible products. As mentioned, several EU states accept large scale testing as a route to compliance however, the test standard varies significantly across Europe and the World. Furthermore, there is a draft proposal under consultation for a European *harmonised* standard for large scale testing that is *more demanding* than the BS-8414 test used in the UK. Surely this is evidence that *the current test standard is not adequate* and perhaps there should be a moratorium on such a route to compliance, at least until a consensus can be reached on an appropriate test? In the interests of public safety, it should be the industry's responsibility to *prove* their products are safe, rather than wait for another large loss of life incident to discover that they are not.

D. Combustible Materials

Bringing together several of these issues, it should be understood that *the accommodation of combustible materials* has a number of worrisome consequences:

- a. It creates a disproportionate escalation in the complexity of the regulations and an associated likelihood of misinterpretation (deliberate or otherwise). Proscribing combustible materials would collapse the current disjointed system of rules, diagrams, tests and assessments into the simple, unambiguous guidance sought in the Report. This needs to be investigated.
- b. The existence of desktop studies may be carried out by 'less than competent' individuals. Why is this?
- c. Large scale testing relies on BS-8414 which appears to be deficient, and in particular not cognisant of commonly found workmanship errors
- d. Even if a combustible system passes a large scale test, combustible materials *will burn* emitting significantly more deadly smoke and toxic fumes than a comparable system comprised of limited combustibility components (smoke and toxicity is not regulated).
- e. The allowance of combustible materials *does not reflect the strong feelings of the public* who occupy these buildings and are not in control of their specification. So far, there is a lack of engagement with the public and a *dangerous preoccupation with the opinions of industry professionals* with commercial interests. Whilst the public may not possess fire engineering expertise, their ability to weigh the pros and cons of an argument to use combustible materials should not be underestimated.

This all begs the simple question '*why shouldn't we simply ban all combustible materials from tall buildings*' (if necessary within an achievable timescale). So far there is no presentation of a convincing case not to make this proportionate step, that I feel would be broadly welcomed by the public.

It's perhaps understandable that Dame Judith ignores the historic significance of the Government's role in the Building Regulations system. Whilst there is little benefit in apportioning blame, it is nevertheless relevant when examining the fundamental factors that have dogged the development of regulations if we are to move forward effectively. Many issues go back certainly to at least 1999, but a few examples include:

- Dame Judith suggests that the Government does not have the expertise to keep abreast of product innovations within the construction sector. However, she omits reference to the ongoing and substantial contractual engagement the DCLG has with the internationally recognised consultancy BRE Global. It is hard to understand, while buildings were going up in flames around the world, how BRE experts overlooked the dangers of PE ACM, particularly when one of their senior engineers was presenting on the topic of external fire spread at a conference *in Dubai* in 2012. Given that Building Regulations were being reviewed that year, it was a key opportunity missed to manifest known concerns in renewed Guidance that may have prevented the Grenfell fire.
- Perhaps a clue to why, despite the above, cladding isn't required to be limited combustibility is found in Andrew Stunell's 2012 summary of the Building Regulations consultation. There was clearly a culture of de-regulation at the time to reduce the financial burden on business. This echoes the comments of a senior DCLG official at the 2013 Lakanal House enquiry who stated that cladding wasn't required to be non-combustible, as it would limit the choice of materials. The backdrop of this isn't that this would be an architectural compromise, but rather that businesses would have to bear the burden of more expensive solutions.
- Regarding the issue of competency throughout the industry, again Dame Judith so far hasn't acknowledged that the government played a central role here. In June 2012, the DCLG managed a consultation process on '*Competent Person Self Certification Schemes*'. The general theme of the report is that there was considerable opposition from industry to be UKAS accredited, because of the cost implications. Once again, we are in this position possibly because of successive governments' determination not to burden businesses with costs and this has been at the expense of safety. Furthermore, it's another example of the dangers of relying solely on industry feedback on what should be done.

I hope that this information is helpful and would be delighted to provide further information should you require.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Jonathan Evans', written in a cursive style.

Dr Jonathan Evans MA PhD, FIMechE



Clive Betts MP
House of Commons
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Thursday 11th January 2018

Dear Mr Betts,

Further to my letter of 15th November, I'm writing to request a meeting to discuss the Review of Building Regulations and Fire Safety.

The Review provides us with one chance to get the building regulatory system right. As a leading global insulation manufacturer, we are keen to contribute to this important debate to ensure we never again see another tragedy like Grenfell.

I read with interest your letter to Dame Judith Hackitt in your capacity as Chair of the Communities and Local Government Committee. The letter highlighted that it was the view of the Committee that it cannot be right to continue to permit the use of combustible materials on high-rise buildings – by implication supporting a prescriptive approach to regulation that only 'non-combustible' insulation be permitted.

However, as we highlighted in our five key recommendations for the Review (enclosed), there is currently a loophole in existing regulations concerning non-combustible insulation that is a cause for concern. At the moment, systems incorporating insulation materials that are labelled as 'non-combustible' do not have to undergo large-scale, full-system fire tests. Yet large-scale tests commissioned by the Department for Communities and Local Government post-Grenfell demonstrated that systems incorporating 'non-combustible' insulation materials can *fail* British Standard tests.

A number of devastating high rise building fires have occurred in façade systems worldwide, where non-combustible or limited combustibility insulation materials were involved in the constructions. These include the Torch, Dubai; Polat Tower, Istanbul; a hotel fire in Rostov on Don, Russia, and others.

Two things are therefore very clear. The first is that regulations simply prescribing that only so-called 'non-combustible' insulation can be used will not ensure that buildings are safe. Second, in order to restore public confidence, it is essential that all façade systems should be subject to building regulations that are underpinned by large-scale system testing.

The large-scale system test used by the Government was BS 8414. We are strongly of the view that testing to BS 8414, and meeting the performance criteria specified in BR 135, provides good, rigorous and robust benchmarks. BS 8414 is one of the tests that the rest of Europe is looking at as part of a new EU-wide large-scale façade test standard.

There are many other areas of regulation and enforcement that need urgent change. We regret that we have not had the opportunity to discuss these important matters with in person to date.

We would therefore like to request a meeting with you at your earliest convenience to discuss this important matter.

I hope to hear from you soon.

Yours sincerely,



Gene Murtagh
Chief Executive Officer, Kingspan Group



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One chance to get the building regulatory system right

There must never be another fire like that at Grenfell Tower.
Buildings must be constructed to protect life above all else.

When it comes to mid-rise and high-rise buildings, we need more rigorous regulations, a wider and more robust testing regime, more independent checks and balances, and more training.

Kingspan is a leading manufacturer of insulation products. We have unrivalled knowledge and technical expertise and we are ready to help develop new regulations in any way we can. With that in mind, we believe the independent Review of Building Regulations and Fire Safety should include the following five recommendations.

- ✓ 1. Large-scale testing of all types of cladding systems
- ✓ 2. Strengthen and regulate Desktop Studies
- ✓ 3. Mandatory training for installers
- ✓ 4. Enforcement of fire safety throughout design and construction
- ✓ 5. More research into smoke from buildings and contents

1. Large-scale testing of all types of cladding systems

If a product hasn't undergone suitable testing as part of a system, it shouldn't be on a high-rise building.

There is a loophole in current Building Regulations which may be putting lives at risk. This is because under current rules, systems incorporating insulation materials that are labelled as 'non-combustible' or 'limited combustibility' do not have to undergo large-scale, full-system fire tests (specifically to BS 8414). Yet BS 8414 tests, commissioned by the DCLG post-Grenfell, demonstrated that systems incorporating 'non-combustible' and 'limited combustibility' insulation materials can fail.

It is therefore clear that all façade systems should be subject to Building Regulations that are underpinned by large-scale testing, and that these tests should be extended to systems incorporating 'non-combustible' and 'limited-combustibility' insulation materials.

2. Strengthen and regulate Desktop Studies

However, the number of potential combinations of building materials and design permutations is incalculable. Performing a large-scale test of each one is impractical and there is not enough capacity within the testing system to make it possible. Desktop Studies are therefore a necessity, but appropriate checks and balances are required. We believe they should be reformed in four key ways.

1. There should be a published register of approved Desktop Studies.
2. The Government should engage with industry bodies to set mandatory qualifications and create a certification scheme for those performing Desktop Studies.
3. A register of qualified / certified Desktop Study assessors should be maintained by an appropriate body and made accessible to industry professionals.
4. The Government should establish a standard methodology for Desktop Studies and define which medium and small-scale tests can be taken into account in drawing conclusions.

3. Mandatory training for installers

The safety of buildings can be compromised by poorly-installed materials. It's imperative that fire safety considerations are incorporated into all training courses involving modern façade construction. Existing insurance industry schemes could be developed further to provide appropriate levels of installer competence and only accredited installers should be allowed to work on high-rise cladding systems.

4. Enforcement of fire safety throughout design and construction

The design and construction process is complex and includes many different parties. All stakeholders throughout the entire process must work together to ensure that designs comply with Building Regulations in regard to fire safety, and that what is built actually matches the fire safety performance of the original design. We believe that the RIBA Plan of Work, incorporating fire safety assessments at the appropriate stages of project development, provides an ideal process to follow.

5. More research into smoke from buildings and contents

In any fire, the greatest risk to human life is from smoke and toxic gases.

Therefore the minimisation of smoke and toxic gas should be a key fire safety consideration in any building design.

Research has shown that in the crucial early stages of a residential room fire, the main threat from smoke and toxic gases comes from burning building contents such as furniture, carpets and coverings, not from the building envelope.

Holistic fire strategies can be designed to minimise smoke and toxic gas emissions from both burning buildings and contents and thus minimise the risk to human life from fires.

We welcome further independent research to help inform this holistic approach as a prerequisite for any regulatory change in this regard.