Submission from **Insulation Manufacturers Association**

Following previous information that IMA supplied to your committee and in advance of the session this week of the Local Government and Communities Committee session on Building Regulations and Fire Safety in Scotland, I would like to submit a publicly available research paper [available via this link](#) recently published by Efectis, ‘Reconstruction of Grenfell Tower fire. Part 3—Numerical simulation of the Grenfell Tower disaster: Contribution to the understanding of the fire propagation and behaviour during the vertical fire spread’. I believe the paper will be of interest to your committee.

The paper describes computational fluid dynamics (CFD) modelling of the complete Grenfell tower façade, and investigates vertical fire spread behaviour over the full height of the façade from the initial apartment fire. Specifically, I would like to highlight the following statement from the report:

“The influence of the insulation and cladding on fire development over the east face was investigated by substituting these materials in the model for a non-combustible insulation and cladding in turn. The influence of the cavity barriers and of fire resistant windows was also modelled numerically. Similar fire propagation is observed when the MW insulation is substituted for PIR. On the contrary, significantly reduced fire propagation is observed when ACM-A2 cladding is used. In this case, the fire stays localized in the initial apartment. Thus, the numerical modelling suggests that the ACM-PE cladding was the main significant factor in the rapid upward spread of the fire.”

Overall PE core ACM had a major contribution to fast flame propagation and the results highlight the need to evaluate facades properly as a whole system in appropriate scale tests.

Although the Efectis report is specific to Grenfell Tower, its findings are highly relevant to many other buildings and add important information to this complex area of building fire safety. We fully support all the recommendations of Dame Judith Hackitt’s Independent Review of Building Regulations and it is clear to us that BS 8414 provides the best way of testing cladding systems to ensure they achieve the outcome of controlling fire spread as this is a much more effective way of testing fire performance than merely relying on individual product classifications.

For your information, IMA is the trade body for all the PIR and PUR insulation industry in the UK and Ireland. Membership comprises all the major companies in the industry, including manufacturers of finished PIR and PUR insulation products, suppliers of the various raw materials and associated services.

Thank you for taking the time to consider this submission and please contact me if I can be of any further assistance or you need clarification on any aspects of this submission.