



Northern Ireland  
Assembly

Committee for Finance

# OFFICIAL REPORT (Hansard)

Building Regulations (Northern Ireland) 2012:  
United Kingdom Accreditation Service;  
Fire Safety Engineering Research and  
Technology Centre (FireSERT)

13 January 2021

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**Members present for all or part of the proceedings:**

Dr Steve Aiken (Chairperson)  
Mr Paul Frew (Deputy Chairperson)  
Mr Jim Allister  
Mr Pat Catney  
Ms Jemma Dolan  
Mr Philip McGuigan  
Mr Matthew O'Toole  
Mr Jim Wells

**Witnesses:**

Professor Ali Nadjai	Ulster University
Mr Hugh Taylor	United Kingdom Accreditation Service

**The Chairperson (Dr Aiken):** The next briefing session is with Hugh Taylor, director of external affairs at the United Kingdom Accreditation Service (UKAS); and Professor Ali Nadjai, director of the Fire Safety Engineering Research and Technology Centre (FireSERT) at Ulster University. I thank Hugh and Ali for taking the time to talk to us. As a bit of background, even though we are the Department of Finance's Committee, we were asked to look at fire safety regulations, particularly those pertaining to cladding. The interest in Grenfell, as well lobbying by members of the Committee, has gained the Committee's attention. One of the things that we have become aware of as our investigations continued is that there is much more to this than we originally considered. We would like to be fully briefed and understand the issues of something as vital as this. That is why I am glad that you can present to us today. Please feel free to make your opening statements, after which I will open it up to questions from members. Thank you very much indeed.

Can you hear us?

**The Committee Clerk:** Mr Taylor, can you hear us? Professor Ali, can you hear us as well?

**Mr Hugh Taylor (United Kingdom Accreditation Service):** I can, but it is a little bit broken up.

**The Committee Clerk:** The Chairperson has asked whether you would like to make an opening statement if the technology allows.

**Mr Taylor:** I am happy to go first. First, thank you for you inviting us this afternoon. I am from the United Kingdom Accreditation Service. We are the national accreditation body, and therefore we oversee organisations that issue certificates for construction products and services of various kinds. Our remit is not just across construction; it is across the whole of industry, engineering and business. That is my brief introduction.

**The Chairperson (Dr Aiken):** OK. Professor?

**The Committee Clerk:** We need to get in contact with Broadcasting to see if they can help us out. Sorry, members.

**The Chairperson (Dr Aiken):** Hugh, since you are still on, would you care to go ahead with your presentation? Hopefully, the technology will hold up.

**Mr Taylor:** Yes, certainly, Chair.

My understanding — please correct me if this is wrong — is that UKAS has cropped up on a number of occasions in your discussions and that you wanted a better understanding of who we are and what we do.

**The Chairperson (Dr Aiken):** Yes, indeed, particularly in relation to fire safety standards.

**Mr Taylor:** OK. I believe that you have some papers in the pack, but I will try, if I can, to share my screen, though I am not massively comfortable with your system, which I have never used before.

**The Chairperson (Dr Aiken):** Neither are we.

**Mr Taylor:** I am struggling here. I will not share my screen. That is probably a bit better. I point you to the very simple presentation that I believe you have received. There is one diagram in particular that I would like to use to explain our role, which is the pyramid diagram. I will talk you through that.

Very simply, the bottom layer of the pyramid represents product and services providers, for instance, manufacturers of fire doors, food production companies, and engineering organisations of various kinds. Those organisations need a certificate. For instance, a fire door manufacturer may need a certificate to prove the quality or performance of the fire door, and a food manufacturer may need a food safety certificate. Those organisations have to approach third-party organisations, which is the middle layer of that pyramid, and we tend to call them conformity-assessment bodies, including testing laboratories, certification bodies and inspection bodies. They are third-party experts who can issue certificates in certain areas.

The role of UKAS, at the very top of that pyramid, is to provide oversight of the conformity-assessment bodies. In very simple terms, we check the checkers, and we are the sole nationally appointed government organisation to provide oversight to organisations of various kinds. I hope that the diagram helps to explain what we mean by UKAS's role, the term "accreditation", what UKAS applies for conformity-assessment bodies, and certification, which is what the conformity-assessment bodies provide manufacturers and service providers.

**The Chairperson (Dr Aiken):** Thank you.

Professor, can you hear us?

**Professor Ali Nadjai (Ulster University):** Yes, I can. Can you hear me?

**The Chairperson (Dr Aiken):** Yes. Thank you. Professor, I invite you to go ahead with your presentation while we still have the technology to allow us to continue.

**Professor Nadjai:** Thank you, Chairman. Let me first give you a brief outline of what FireSERT can do. The Fire Safety Engineering Research and Technology Centre at the University of Ulster is nationally and internationally recognised for its excellence and its contribution to fire safety engineering and science, as manifested with the prestigious £6 million grant from the Engineering and Physical Sciences Research Council (EPSRC) and the UK Government.

That grant created the UK and Europe's premier university research facility for fire safety science and engineering. In general, *[Inaudible]* the public safety and the competitiveness of UK industry through performance prediction methods, measurement technology and new fire safety material that has shown improvement in life-cycle quality, sustainability and the economy of the built environment.

**The Chairperson (Dr Aiken):** Thank you very much indeed.

**Professor Nadjai:** I lost the sound.

**The Chairperson (Dr Aiken):** If you do not mind, we will push ahead with questions while we can still keep the various links up. *[Pause]* We are struggling to communicate with you, but I would like to ask you both a couple of questions. First, we have had evidence to suggest that Northern Ireland should be taking a separate route towards the fire safety certification of certain materials from that of England. We understand that Scotland has taken a separate route. What is your view? Why would Northern Ireland, which is a relatively small market, take a different approach from England and Wales?

**Professor Nadjai:** Thank you for the question, Chairman. It is a very articulate question relating to the regulations in Northern Ireland. I looked at the regulations for England, Wales and others in the United Kingdom and, mainly, Northern Ireland. I looked at regulation B and compared it with approval document E of the Northern Ireland regulations and saw no particular difference in the regulations, except that the names are given *[Inaudible]* rather than requirements, and some words have been misplaced in the title of the section compared to the requirements from B1 to B5. I accept that a few adjustments have been made to fit with construction and building regulations in Northern Ireland.

I do not agree with you, Chairman, that we *[Inaudible]* compare what is going on in the United Kingdom. We are lucky in a way that so many things are happening on the mainland compared to Northern Ireland. We are fully participating in the regulations in the United Kingdom and England and Wales, and we should *[Inaudible]* share the information and *[Inaudible]* it separately in our document B. We can extend the amendment provided by the recent change in the building regulations.

I know that Scotland is taking steps to change the regulations related to the sprinkler system to drop it from 30 metres to 11 metres. It is not *[Inaudible.]* Let us put it this way: if anything were to happen in England, it is the UK that participates in the built environment regulations, so we would not make any contribution in England. In that case, if there are amendments to the regulations in England, the same should be done for Northern Ireland, Scotland and Wales. We know that Wales and England worked together on the document.

**Mr Taylor:** I see no particular reason why different parts of the United Kingdom should greatly differ in this respect. Fire behaves in the same way no matter what part of the United Kingdom it happens to strike.

Ultimately, as the professor said, perhaps decisions can be made locally regarding, for instance, the number of storeys in, or the height of, the building that is affected. Those may be decisions that devolved Governments wish to make themselves. However, in general terms, there should be no great difference with the building regulations.

**Professor Nadjai:** May I add something, Chairman?

**The Chairperson (Dr Aiken):** Yes, certainly.

**Professor Nadjai:** We are not small. Let us think about it this way. We implemented our knowledge in the *[Inaudible]* part 1 section 2 in relation to localised fire and *[Inaudible]* compartmentation, including the new long-span beams *[Inaudible]* with openings and so on. Our knowledge is all over the world.

I can add other things. We participated with the Government of Australia's Commonwealth Scientific and Industrial Research Organisation in relation to facades and provided them with knowledge, and they are using it. We also worked with Japan and China on facades. We have participated in all sorts of knowledge and science. There is nothing that should eliminate us from implementing and adding what can be added to document B in Northern Ireland. If we are participating all over the world, that means that we are big. We exist. We even participated in the document *[Inaudible]* and also in the document B amendment. In that case, we are part of it. We have the right to add to our regulation B here.

**Mr Allister:** Obviously, public safety is everyone's primary concern, so my question is relatively simple. In respect of building cladding, is it necessary to have an absolute ban on combustibles, or is it possible to have an adequate testing system that makes some cladding suitable? If the choice is between an absolute ban or an approved testing system, which do you prefer?

**Professor Nadjai:** I have to make sure that all the materials used in the facade are non-combustible or have limited combustibility. Having said that, there should be a system to test all the assembly elements to see whether the structure responds as a mechanism all together or fails some criteria provided by BS 8414, either part 1 or part 2, depending on the structure of the building.

In answer to your questions, there are two options. I have to make sure that we satisfy all the elements on non-combustibility or go to the test and check it following the regulation. In my view, we have to check the materials first. The next phase is making the assembly elements a system to be tested to be sure that we fulfil all the requirements of BS 8414, either 1 or 2.

**Mr Allister:** Can a laboratory test, whether on a large or small scale, confidently compare with the actuality of what could happen on the ground?

**Professor Nadjai:** That is a good question. In 2012, it was the comparisons between the existing facade assembling systems of different countries, between the BS standard, *[Inaudible]* and the ISO standard, which is the international one. It came about that there were similarities, but the closest to the practicality one was the British standard. I have the evidence here in front of me that the British standard becomes a strong candidate to be used even beyond the UK and Europe. Last year's assessment, in which I participated, *[Inaudible]* was the British standard.

**Mr Allister:** Does that mean that, if it is adequately met, you do not need a ban?

**Professor Nadjai:** Say that again.

**Mr Allister:** If the British standard is satisfactorily met, does that mean that you do not need to have a ban?

**Professor Nadjai:** Yes. If it is —

**Mr Allister:** Are you confident that the testing is wholly reliable?

**Professor Nadjai:** If the system is *[Inaudible]* in the right manner and with the right qualified staff working in the lab, with the right checking and, of course, with UKAS, it should not be a problem. I would feel more confident with that.

Your question is very good. People get confused between BS 841 part 1 and part 2. *[Inaudible]* for building control to check which one is compliant with the regulations: is it 1 or 2? I have seen 2 in 1 and 1 in 2. They have to be very careful. As long as there is 1 and 2, it should be specific for the particular geometry of the building. They should not say that 2 is more risky or that 1 is OK. It should not happen that way. Those questions were asked previously; I heard that in relation to fraud *[Inaudible.]* That could be fraud. If you test 1 and the criterion is 2 and you pass it to building control and it is approved, that is a big mistake.

**Mr Wells:** We are two nations divided by one Zoom call. I missed some of what you have said because of the technical issues. As the amount of cladding in Northern Ireland is relatively small, what would the implications be if we simply decided that there will be no more cladding on any building in Northern Ireland above, say, eight metres, which would mean that testing would become academic?

**Professor Nadjai:** That is a good question. At the moment, we have a proposal with the Northern Ireland Housing Executive to assess all the existing hazards in the 33 buildings that were selected. We are going to make an *[Inaudible]* and an *[Inaudible]* building and within that come up with a matrix from which we can bring up a point of concern in order, possibly, to add it to our appendix E because it will be related to construction here in Northern Ireland. That will help a lot in the design concepts for multi-storey buildings in Northern Ireland in future. That will be in appendix E — or document E or booklet E, as people sometimes call it. It will give us a robust document in order to believe that we are doing things safely. It should not be a concern if we are using it beyond six floors and using the cladding panels, as you said.

**Mr Wells:** What would be the practical difficulties if we said, "We are not interested in the ambiguity or testing; we are just going to ban it"? Are there any problems? Clearly, it is not very popular in Northern Ireland. There seem to be lots of buildings in the Province without it, so why, in the interests of simplicity, do we not just say, "No new buildings will have cladding"?

**Professor Nadjai:** That is a question to be *[Inaudible]* answered. We *[Inaudible]* provides combustible, non-combustible and limited-combustible materials. All that has to work in construction but with some limitation.

We cannot *[Inaudible]* in the regulation says beyond 18 metres, non-combustible material. There is no comment on that. The regulation is very stiff. Below that, however, you have sprinkler systems, so you have the added technology. The technology can help a lot with evacuation and to reduce the risk of fire from travelling from the compartmentation through the opening to the external facade.

There is a way to reduce the high risk, but we should not rely on one thing but not the other. We should work *[Inaudible.]*

**Mr Wells:** I do not think I got that.

**The Chairperson (Dr Aiken):** I did not hear the last bit.

**Mr Wells:** Could you just repeat the last sentence, please? The Zoom went again.

**Professor Nadjai:** The regulation is clear that the combustible material should not be used above 18 metres.

**The Chairperson (Dr Aiken):** Non-combustible above 18 metres.

**Professor Nadjai:** That is correct: non-combustible material beyond 18 metres. The technology exists to reduce the risk in Northern Ireland and in other places. The sprinkler system was dropped from 30 to 11 metres, which is good. Eleven metres is less than 18 metres, which means that the flame spread would be eliminated before it achieved that level.

Technology can help a lot to stop fire spreading from the compartmentation to the façade and in the evacuation, so that people are not trapped by smoke and heat inside the building.

**Mr Wells:** I got that.

**The Chairperson (Dr Aiken):** Hugh and Ali, thank you very much indeed. I apologise for the communication links. If we have further questions, can we write to you for written answers rather than relying on a rather poor communication link?

**Professor Nadjai:** Yes.

**The Chairperson (Dr Aiken):** Thank you both very much indeed for your time.

**Professor Nadjai:** Thank you, Chair.

**Mr Taylor:** Thank you.