



**Cynulliad Cenedlaethol Cymru  
The National Assembly for Wales**

**Pwyllgor Deddfwriaeth Rhif 1  
Legislation Committee No. 1**

**Dydd Iau, 30 Medi 2010  
Thursday, 30 September 2010**

**Cynnwys**  
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The Proposed Domestic Fire Safety (Wales) Measure: Stage 1—Evidence Session 1

Cofnodir y trafodion hyn yn yr iaith y llefarwyd hwy ynndi yn y pwyllgor. Yn ogystal, cynhwysir cyfieithiad Saesneg o gyfraniadau yn y Gymraeg.

These proceedings are reported in the language in which they were spoken in the committee. In addition, an English translation of Welsh speeches is included.

**Aelodau'r pwyllgor yn bresennol**  
**Committee members in attendance**

Rosemary Butler	Llafur (Cadeirydd y Pwyllgor) Labour (Committee Chair)
Val Lloyd	Llafur Labour
Rhodri Morgan	Llafur (yn dirprwyo ar ran Ann Jones) Labour (substitute for Ann Jones)
Nick Ramsay	Ceidwadwyr Cymreig Welsh Conservatives

**Eraill yn bresennol**  
**Others in attendance**

Paul Bates	Prif Swyddog Tân Cynorthwyol, Gwasanaeth Tân ac Achub Canolbarth a Gorllewin Cymru Assistant Chief Fire Officer, Mid and West Wales Fire and Rescue Service
Colin Hanks	Prif Swyddog Tân Cynorthwyol, Gwasanaeth Tân ac Achub Gogledd Cymru Assistant Chief Fire Officer, North Wales Fire and Rescue Service
Andy Marles	Prif Swyddog Tân, Gwasanaeth Tân ac Achub De Cymru Chief Fire Officer, South Wales Fire and Rescue Service
Richard Price	Swyddog Polisi a Chynllunio Cymru, Ffederasiwn Adeiladwyr Cartrefi Planning and Policy Officer, Wales, Home Builders Federation

**Swyddogion Cynulliad Cenedlaethol Cymru yn bresennol**  
**National Assembly for Wales officials in attendance**

Stephen Davies	Cynghorydd Cyfreithiol Legal Adviser
Claire Griffiths	Dirprwy Glerc Deputy Clerk
Ben Stokes	Gwasanaeth Ymchwil yr Aelodau Members' Research Service
Liz Wilkinson	Clerc Clerk

*Dechreuodd y cyfarfod am 9.30 a.m.*

*The meeting began at 9.30 a.m.*

**Cyflwyniad, Ymddiheuriadau a Dirprwyon**  
**Introduction, Apologies and Substitutions**

[1] **Rosemary Butler:** Good morning, everyone, and welcome to today's meeting. Apologies have been received from Ann Jones, for whom Rhodri Morgan will be substituting. As you know, Ann is responsible for presenting the Proposed Domestic Fire Safety (Wales) Measure. We have also received apologies from Eleanor Burnham and Chris Franks.

[2] I remind Members that the committee operates bilingually and that you can use your headsets to listen to a translation of Welsh contributions, or as an induction loop to hear the

whole proceedings more clearly. Channel 0 on the headsets will provide the verbatim broadcast and channel 1 provides translation. Please turn off any mobile phones, pagers or other electronic devices, as they interfere with the broadcast and translation systems. If the fire alarm sounds, the ushers will escort us from the room—if that happens, we have the right guys here with us this morning. *[Laughter.]* Please do not touch the microphones, as they will come on automatically.

9.30 a.m.

**Mesur Arfaethedig Diogelwch Tân Domestig (Cymru): Cyfnod 1—Sesiwn  
Dystiolaeth 1  
The Proposed Domestic Fire Safety (Wales) Measure: Stage 1—Evidence Session  
1**

[3] **Rosemary Butler:** The purpose of today's meeting is to take oral evidence from the fire and rescue services in Wales and the Home Builders Federation in connection with the Proposed Domestic Fire Safety (Wales) Measure. For the first session, we will take evidence from the Fire and Rescue Services in Wales and I welcome to this morning's meeting Colin Hanks, who is the assistant chief fire officer for north Wales, Paul Bates, assistant chief fire officer for mid and west Wales and Andy Marles, who is the chief fire officer for south Wales and is a familiar face in this building. We have a number of questions for you this morning. If you would like to ask us any questions or make any points towards the end of the meeting, please do so.

[4] I will start the questioning. Could you confirm for the record whether you support the general principles of the proposed Measure?

[5] **Mr Hanks:** Good morning. The Chief Fire Officers Association (Wales) fully endorses the proposed Measure. We are confident that this groundbreaking and lifesaving legislation will make a significant contribution to both public and firefighter safety.

[6] **Rosemary Butler:** In view of existing legislation on fire safety, why do you think that automatic fire suppression systems are needed in new residential premises? What do they provide over and above existing fire safety measures in newly built homes, in particular the hardwired smoke detectors?

[7] **Mr Hanks:** While smoke alarms are essential in providing early warning of fire, they alone cannot ensure safe egress from a building. A sprinkler will not only detect the fire, but will, nine times out of 10, extinguish it or contain it within the room of origin until the arrival of the fire and rescue service. The fire and rescue service and our colleagues across Wales have been working tirelessly to deliver community education and to fit free smoke alarms. We have carried out over 70,000 home fire safety checks throughout Wales and fitted several hundred thousand smoke detectors. Those will clearly save many lives, but cannot save those who are particularly vulnerable such as the very young, the very elderly, the infirm and those who use drugs and alcohol unwisely. Only by influencing the design of the building and installing sprinklers can you actually prevent those fire deaths and injuries.

[8] **Mr Marles:** Based on knowledge from past experience, colleagues may well remember a particular piece of legislation that was introduced following a particularly difficult fire in the Rose and Crown hotel in Saffron Walden in 1969 where 11 people died. The UK Government at the time—this, of course, was way before devolution—thought, 'It cannot be right to pay for a hotel room and die in a fire'. That fire also followed a few other particularly tragic fires, but that one was of most note and gave rise to the Fire Precautions Act 1971, which is probably one of the most spectacular pieces of legislation when it comes

to saving lives: following that Act, no-one died in a hotel fire until the unfortunate incident in a hotel in Newquay, Cornwall where one person died.

[9] That is an example of how a piece of legislation was introduced because of a series of events in the UK and, from that point on, the fire service was given the power to go into buildings to inspect them to ensure that they were safe. People stopped dying in commercial premises such as hotels. Unfortunately, school buildings were not designated under the Act. Eventually, places of work were designated, but the only part of the legislation that applied to schools was the part where someone was employed to work at the school, so it did not cover children in schools. We have had some tragic and unfortunate situations in schools over the years, particularly in Wales and throughout the UK, where as much as £80 million has been lost in schools, and that is just in rebuild costs, not the cost of children not getting an education, the effect on the school curriculum and so on. So, that was probably the most spectacularly important piece of UK legislation, because it changed things very quickly. Things changed again in 2005 with a new piece of legislation. So, to use that analogy, there has never been a piece of legislation, other than the building regulations requiring smoke detectors in 1992, that has addressed life safety in the other place we all spend time: the home. The attitude that an English person's home or a Welsh person's home is their castle has never been legislated for. This is a really important piece of legislation to tackle the other place where we live, work, eat, sleep and breathe, namely the home.

[10] As Mr Hanks just said, this is the only piece of legislation that seeks to tackle the fire. Smoke detectors give you early warning and save some lives, but you still end up having to rebuild a house or with some other major issue. It also affects sustainability. If you can put the fire out, keep it contained in a room or keep it small, there is an economic advantage for society.

[11] **Mr Hanks:** May I just add something, Chair?

[12] **Rosemary Butler:** We have a pile of other questions, which we need to move on to. If we do that and you feel that we have missed something out, we will come back to you.

[13] **Rhodri Morgan:** To avoid your pre-answering all the questions that we are going to ask you, we had better get on with the questions. Given that 80 per cent of fire-related deaths and injuries occur in the home and the fact that this legislation is not about retrofitting older homes but about new homes being constructed, of that 80 per cent of fire-related deaths and injuries that occur in the home, do you know what proportion occur in newly built homes and how many occur in what we loosely refer to as older housing stock?

[14] **Mr Marles:** I looked for statistics on this because I noticed in some of the written evidence to you that there were questions on building new homes and so on. Our problem is that we do not keep data on that, and what the term 'new home' means is debatable. I guess that colleagues will have different definitions. I do not know when my home was built, because I have not looked at the deeds. That is the problem for firefighters. They go to put out a fire in someone's home, but they do not necessarily have a clue when it was built, although they might have a rough idea. So, we have no statistics on new home builds. We know, as my colleague just said, that 82 per cent of fire-related deaths and injuries in Wales occur in the home rather than elsewhere, and the figure is similar in England. However, we do not know what percentage of those occur in new and old homes.

[15] **Rhodri Morgan:** Okay. In the absence of data on the age and type of property in which these deaths and injuries occur, can you be certain that the targeting of this legislation is as good as it could be, given that it is not about retrofitting but new build only?

[16] **Mr Hanks:** We agree with the message in the proposed Measure that it is eminently

not sensible or practical to attempt to retrofit the entire Welsh housing stock. The fire and rescue service currently targets certain socioeconomic groups and older housing stock. We think that this twin-track approach of legislating for new properties and targeting our community fire safety activities at vulnerable groups, as I mentioned earlier, means that the whole spectrum of fire safety in the home will be covered.

[17] **Mr Bates:** I suppose that the fact remains that we must start somewhere.

[18] **Rhodri Morgan:** Yes, one does not exclude the other; I think that we are clear on that. We are just trying to explore your response to the evidence from Community Housing Cymru and others, which is that we should take a risk-related approach. That would require legislation-plus, if you like.

[19] **Mr Hanks:** We already take a risk-related approach. I have provided one example in my evidence of an individual who was particularly vulnerable. The ultimate protection for that individual was to retrofit a sprinkler system, which saved her life in an incident in January this year.

9.40 a.m.

[20] **Rhodri Morgan:** Okay, but the evidence that we received from CHC and others was that further work needs to be undertaken to determine the extent of the problem of deaths and injuries from fire in newly created residences, because that is what the legislation is specifically about. However, they are saying that that should be done before the proposed Measure progresses further. What is your response to that?

[21] **Mr Hanks:** That is focusing on the wrong issue. Clearly, older properties provide particular challenges, but it is the people who occupy the building and their lifestyles who cause the fires. That is why we agree with installing sprinklers in new properties but we will continue to target those other groups through our existing community fire safety activities.

[22] **Rhodri Morgan:** So, a more effective approach to reducing the incidence of deaths and injuries would not necessarily be to seek ways to improve fire safety in older stock, but would be more about addressing the particular risky lifestyles of people, for example, people who smoke in bed when they are drunk or under the influence of drugs. You have to target the socioeconomic groups and that is another aspect that sits side by side with the legislation. Is that what you are saying?

[23] **Mr Hanks:** There is evidence of that from abroad. In Vancouver, for example, a local bye-law 30 years ago changed this, so that sprinklers were installed in any major rebuild or refurbishment. So, half the building stock in Vancouver is now protected by domestic sprinklers.

[24] **Mr Marles:** There is evidence to suggest that it could take 10 years to ensure that 10 per cent of the housing stock in Wales is covered by sprinklers. We think that that is a good thing. If we have covered 10 per cent of the housing stock in 10 years, we will have made a significant contribution to improving fire safety.

[25] **Rhodri Morgan:** It is clear from your answers to my questions that we agree on the fact that the big variation may be more in the socioeconomic groups, namely those who smoke in bed while under the influence of alcohol, than in whether you live in an old or new house or flat. Do you collect data, or is it that you just have a fire officer's knowledge at your fingertips? Do you get feedback from your officers that these socioeconomic groups are the big variable between high fire risk and medium and low fire risk rather than the age of the property, or do you have data on that?

[26] **Mr Hanks:** It is important to remember that, in Wales in particular, registered social landlords provide in a good year around 8,000 new homes—and I think that last year, the figure was between 6,500 and 7,000—and that housing stock will house some of those vulnerable groups. If the proposed Measure had already been passed, they would all be fitted with sprinklers.

[27] **Rhodri Morgan:** That is true, but on the 80 per cent of all fire-related deaths and injuries being in the home and not on other premises, you said that you did not collect data on whether those fires occurred in old or new housing stock. You said that you did not collect data, but you and I both agree that the big variation is probably as a result of socioeconomic groups occupying a property, not the age of the property. However, do you collect data on that?

[28] **Mr Marles:** We do. Every fatality results in a major investigation by the coroner, and we investigate all our major serious injuries, so that we know the kind of people who are dying or being injured in house fires.

[29] **Rhodri Morgan:** That is true, but do you collect statistical data to show that a socioeconomic group, such as heavy smokers under the influence of drink or drugs, can be used to explain 10, 20 or 30 per cent of fires, or is it just a fire officer's instinct that tells you that?

[30] **Mr Bates:** We would use that sociodemographic data to target our community safety activities. Some people say that fire does not discriminate, but it does; it discriminates against those who are old, and those who are living in certain—

[31] **Rhodri Morgan:** So, if we asked you to produce data to show that, in a typical year, roughly speaking x per cent of home-related deaths and injuries were sustained by those in high-risk socioeconomic groups, you could give us a percentage, could you?

[32] **Mr Marles:** Yes. The software that we are now using takes into account those socioeconomic groups.

[33] **Rhodri Morgan:** I would find that very useful.

[34] **Val Lloyd:** You may already have answered my next question in a roundabout way, but for the record it would be useful to have a direct answer. In your evidence, you state that

[35] 'it is sensible and eminently practical to limit the proposed Measure to new residences and...that it is not sensible to require the retrospective fitting of AFSS to existing properties.'

[36] Can you explain why you believe that to be the case?

[37] **Mr Hanks:** We think that it is sensible, proportional and, given the nation's wealth, economically viable to target new properties. We are not suggesting that the proposed Measure seek to retrofit existing housing stock. I mentioned earlier that it will take 10 years to cover 10 to 15 per cent of the housing stock, but we have to start somewhere. If, in 10 years' time, 15 per cent of the Welsh housing stock is fitted with sprinklers, that will be a significant achievement.

[38] **Rosemary Butler:** You said 10 per cent earlier, but now you are saying 15 per cent.

[39] **Mr Hanks:** If, in 10 years, between 10 and 15 per cent of the housing stock is

covered, that would be a significant achievement.

[40] **Rosemary Butler:** It was just that you said 10 per cent in 10 years earlier, and now it is between 10 and 15 per cent.

[41] **Mr Marles:** Chair, may I add one little thing about sprinklers in another field? The Welsh Assembly Government has been very supportive of retrofitting sprinklers in schools, and installing them in new-build schools. We have some experience of doing that and know that it is particularly difficult in existing buildings. So, being proportionate is actually about being reasonable. It would be unreasonable to expect some buildings to be fitted with sprinklers, because that would affect the fabric of the building to such an extent that it would cost a lot of money. That is our experience in schools.

[42] **Val Lloyd:** I now turn to a slightly different aspect. Section 1 of the proposed Measure establishes a duty to provide automatic fire suppression systems in all new residential properties in Wales. Given that research undertaken in the United Kingdom has failed to support the case for automatic fire suppression systems other than in specific cases such as residential care homes, blocks of flats over 11 storeys high and some new social housing, do you think that it would be reasonable to limit the application of the duty to those types of residences?

[43] **Mr Hanks:** That evidence is based on a Building Research Establishment report in 2004. I invite committee members to turn to page 35 of the explanatory memorandum, if it is available to you. There are some figures in table 5 on that page, on the left-hand side column, related to deaths, injuries and property damage. As a fire officer with some 33 years' experience, I do not relate to those figures, but I do accord with the figures on the extreme right-hand side column, which were supplied by the FSA in 2004. That is why the BRE has been commissioned to revisit its research.

[44] Yesterday, I had a conversation with Chris Enness, who will be able to write to the legislation committee with the emerging findings of that new research that has been commissioned. The full report will probably not be available until after this committee stops receiving evidence, but Chris Enness is prepared to write formally to the committee to share with you the emerging findings. On the three headings—deaths, injuries and property damage—the emerging findings are that sprinklers would reduce deaths by some 80 to 85 per cent, and injuries by between 30 and 40 per cent, although we think that there is some evidence skewing the figures slightly. The reason those figures are much lower than the 85 per cent in the FSA column is because they relate to elderly people who have set fire to themselves in residential care premises. Sprinkler systems have operated in those residential care premises and extinguished the fire, but, sadly, the short interval between the fire starting and getting to the 69 degrees required to operate the sprinkler has meant that, regrettably, they sustained severe burns and died from their injuries 10 to 12 days later. So, that has had an effect and skewed the injury figures. On the third, property damage, the emerging findings are that sprinklers would reduce property damage on between 80 and 90 per cent of occasions. So, hopefully, Chris Enness will provide you with some indication of the emerging findings of the revised BRE report.

[45] **Val Lloyd:** Do you think that we should wait until the outcome of that research?

[46] **Mr Hanks:** No, I do not think so, because the case is proven. Countless fire and rescue services in other countries have already learned these lessons, and it is clear that they are benefiting from the far-sighted legislation that they passed many years ago.

9.50 a.m.

[47] **Val Lloyd:** In evidence to the committee, the Minister has made it clear that, in the event that the proposed Measure is passed, a further consideration of the costs, benefits and wider implications will need to be undertaken before the decision is made to bring forward regulations to give effect to the intent of the proposed Measure. Do you think that that is a reasonable approach?

[48] **Mr Hanks:** Plenty of research has been done. The research is complete and I would be happy for us to legislate currently. As I mentioned earlier, why do we have to reinvent the wheel in Wales when several other countries have already experienced the benefit of passing such legislation?

[49] **Val Lloyd:** Those regulations will prescribe the requirements with which the automatic fire suppression systems must comply. Do you think that that is the right approach, or would you prefer to see more detailed requirements on the face of the proposed Measure?

[50] **Mr Hanks:** I am happy with the proposed Measure, and any other details could be contained in the regulations.

[51] **Nick Ramsay:** Moving on to the maintenance of the sprinkler systems, the committee has received conflicting evidence about the ongoing maintenance requirements of fire suppression systems. Some witnesses have said that maintaining the systems would be straightforward, while others are concerned that it would have significant practical and financial implications. How important is it for the systems to be properly maintained, and what does the ongoing maintenance of the systems involve in practical terms?

[52] **Mr Hanks:** Clearly, they need to be maintained, because they play an important part in the fabric of the building. To use the motor industry as an analogy, 10 years ago most vehicles did not have airbags and 15 years ago they did not have seat belts. It is an important safety system, and it needs to be maintained.

[53] **Rhodri Morgan:** They had windscreen washers. [*Laughter.*]

[54] **Mr Hanks:** It is like maintaining a gas fire or gas boiler, which do need to be maintained. The issue has been overstated, and I do not see what the problem is. It plays an important part and needs to be looked after.

[55] **Mr Bates:** The systems are extremely simple. They are made up of a few pipes and a few valves on the end. They are really simple systems, so the maintenance requirements appear to be overstated.

[56] **Mr Hanks:** I have some evidence from the British Automatic Fire Sprinkler Association about an interesting fire in Oldham, in north-west England. In January 2005, a paint factory caught fire, which was extinguished by a sprinkler system that had been installed in 1929.

[57] **Nick Ramsay:** That is amazing. Given that you think that there are no real issues here, could the absence of ongoing maintenance undermine the effectiveness of the proposed Measure? Do you think that it would therefore be better if the proposed Measure contained an explicit provision for the maintenance of systems over time, or do you think that that is not relevant?

[58] **Mr Hanks:** That can be in the regulations. It is not crucial to have that in the proposed Measure.

[59] I have a sprinkler with me, if the Chair would allow me to recover it from my

briefcase, to give you a demonstration.

[60] **Mr Marles:** The interesting thing about domestic sprinklers, assuming that the system is a simple system that is based purely on a mains water supply, is that they are ‘fail safe’. If the system fails, water will come out of it, but the odds of the system failing is one in 16 million.

[61] **Mr Hanks:** This white disc here is what you would see in the ceiling of a building, and the rest is concealed within the ceiling. This part pops out and this part here is the little sprinkler head.

[62] **Rhodri Morgan:** How far apart do those have to be?

[63] **Mr Hanks:** In most houses there would probably be only one sprinkler per room. It would have to be a large room for there to be two sprinkler heads.

[64] **Nick Ramsay:** They are a lot less intrusive—*[Inaudible.]*

[65] **Mr Hanks:** Yes.

[66] **Rosemary Butler:** Someone suggested in the last evidence session that people were painting over them. If they paint over them, would the paint adhere to that, or—

[67] **Mr Hanks:** You can paint over the disc.

[68] **Mr Marles:** Certain types are designed to be painted to blend in with the decor of the house.

[69] **Rhodri Morgan:** So, this part of the sprinkler would function as a rose in a shower, as it were, but it sprays the water sideways on to reach the far corners of a room.

[70] **Mr Hanks:** Yes. In the evidence that I submitted I said that there were some trade-offs. I am sure that we will discuss this further, but the provision of sprinklers means that you can have larger rooms in the property, with fewer internal walls and so on.

[71] **Val Lloyd:** Is that larger than in most houses?

[72] **Mr Marles:** It depends on the standard, and on all sorts of things. If any colleagues really want to understand sprinkler systems, you are more than welcome to visit my headquarters, which is fully sprinklered. It is the kind of design that you would not notice if you walked in—just some white discs up on the ceiling. That is a full working system, just up the road at Llantrisant, and you are welcome to visit.

[73] **Rosemary Butler:** How much do they cost?

[74] **Mr Marles:** I do not know off the top of my head. It is not an incredible amount of money—£10 or £20, I would guess, per sprinkler head. Then you have the pipe system that feeds it, which just consists of copper pipes—I think that there is even a plastic system.

[75] **Rosemary Butler:** Nick, have you finished?

[76] **Nick Ramsay:** I just have a few more questions. You said that you do not think that the risk of malfunction is that high, but the Association of British Insurers has raised concerns that the proposed Measure could lead to an increase in claims for leakages from systems. What is the likelihood of water leakage from an automatic fire suppression system? Could

water leakage be a disincentive to people buying those homes?

[77] **Mr Hanks:** A pipe in a sprinkler system is no different to a pipe in your bathroom, or anywhere else—how often do you experience a burst pipe in your own home? Not often. I know that it has been suggested by the insurance industry that there could be malicious damage, with people trying to make improper claims, but I sought advice from the sprinkler industry, and malicious damage occurs in 10 or 15 cases a year throughout the UK and Europe. How often will someone maliciously damage a sprinkler system in their own home to make a claim for a new carpet? It is difficult to legislate for that.

[78] **Nick Ramsay:** You could make that argument for a lot of insurance claims, could you not?

[79] **Mr Marles:** You could achieve the same effect by turning the bath tap on and blocking the overflow.

[80] **Nick Ramsay:** I have a specific question for Paul Bates, which relates to your evidence on behalf of Mid and West Wales Fire and Rescue Service, where you raise a concern that the term ‘new residential premises’ does not comply with the British standard for domestic sprinklers, BS 9251:2005, which uses the term ‘domestic occupancy’. Could you expand on that?

[81] **Mr Bates:** As an organisation responsible for the enforcement of the fire safety Order at the behest of local authority brigades, I wanted to make the point that there will be a clear need to ensure that the terminology in the proposed Measure and the associated British standard is consistent—dare I say it?—to prevent any opportunity for those who do not want to comply with the proposed Measure any degree of wriggle room on interpretation.

[82] **Nick Ramsay:** Moving on to regulations and Orders, section 6(1)(d) provides that regulations to give effect to the intent of the proposed Measure may only be made by Welsh Ministers after they have undertaken ‘such consultation as they consider appropriate’. Is the consultation provision adequate?

[83] **Mr Hanks:** Yes. I have nothing to add on that—I am happy to leave that to the politicians and their legal advisers.

[84] **Nick Ramsay:** My next issue has come up because of timing. We have recently had an outbreak of legionnaire’s disease in Wales, and concerns were raised in evidence about the possible risk of legionella bacteria spreading via the sprinkler systems in instances where water is left unused in storage tanks. Have you come across that, and do you think that there are valid concerns here?

[85] **Mr Hanks:** I am able to share with the committee evidence that I have received from BAFSA and the European fire sprinkler network on the issue.

[86] **Rhodri Morgan:** What was the first body, sorry? Did you say BAFSA?

[87] **Mr Hanks:** Yes, the British Automatic Fire Sprinkler Association. The other was the European fire sprinkler network. There has been extensive research by both the fire sprinkler association and the loss prevention council on this issue, and the conclusion is that there is no realistic chance of a member of the public contracting legionella from a sprinkler system. There is a miniscule risk for engineering staff if they do not follow the correct procedures, but there are no published records of any instances of outbreaks of legionella or any other waterborne disease attributed to sprinklers among engineering staff or the public. I have written evidence with me, which I can share with you.

10.00 a.m.

[88] **Rosemary Butler:** That would be helpful. Thank you.

[89] **Nick Ramsay:** On the issue of trade-offs, I think that you said in your evidence that you are comfortable with the use of trade-offs in building design and other passive fire protection measures to help address the possible cost of the proposed Measure. Can you confirm that this is the case and, if so, is there a danger that the use of trade-offs could compromise the safety of residences?

[90] **Mr Hanks:** I also have evidence from BAFSA on that that I can share. However, the sorts of benefits that trade-offs give you are that you can revisit compartment sizes, have fewer internal walls, allow greater travel distances to means of escape, have fewer fire doors, have means of escape in attic and loft conversions, and allow open-plan kitchens and living rooms with various sprinkler systems. To give you an example, I have a double garage—I think my house was built in 2003—and my daughter's bedroom is above one of the garages, but the ceiling has an hour's fire resistance because the garage is beneath it and there is a huge fire door between the garage and the kitchen. If that area had sprinklers installed you could look at relaxing some of those measures.

[91] **Mr Marles:** I can give the example of a school that I visited recently that has sprinklers installed. The headteacher is over the moon with the school because it is so open plan. The young children had trouble opening the fire doors in the old school. They banged shut on them all the time, but they have to be kept shut to work. She is over the moon because there is a great long corridor in the school without a door in it, which was made possible by the sprinklers. She said that it made the circulation round the school a lot better. The architects had a lot more freedom to design the school in the way that the teaching staff wanted it as opposed to our saying that they had to do this, that and the other because the children needed to be able to get out in the case of a fire. That is a classic example of the architectural freedoms that sprinklers allow.

[92] **Nick Ramsay:** I just wish to ask a question about water pressure issues and whether you have experienced any difficulties with sprinkler systems not operating because of a lack of pressure. We have received evidence about the practical difficulties associated with the provision of water supply and sufficient pressure to ensure the effective operation of the systems. Is this something that you have come across in any areas?

[93] **Mr Marles:** I have been in south Wales for 33 years, and I have never been aware of a fire that we have attended where the sprinklers have not operated because there was not enough water in them. In fact, I cannot even think of a situation in which sprinklers have failed for any other reason. I am not aware of that happening. In fact, I know of a guy who lived because of a sprinkler system in a domestic setting in George Street in Newport. That was a simple domestic system that someone had put in many years ago. Unfortunately, the guy set the house on fire and was not able to get out. The firefighters got him out and he was still alive because the sprinklers put the fire out.

[94] **Mr Hanks:** Of course, this is proposed for new build, so there will be a new water mains infrastructure. I said in my evidence that I understand that if you are altering an existing building—if you are converting an older building for residential use, for example—there are other challenges. However, under the current British standard, there are five different ways that you can overcome that with a pump and tank system, so I do not see what the problem is.

[95] **Rhodri Morgan:** You have finished with Nick the plumber; it is production engineer

Morgan now. In your evidence, you suggest that economies of scale and advances in technology could lead to a reduction in the cost of installing automatic fire suppression systems. What is your evidence for that claim?

[96] **Mr Hanks:** It is probably down to experience. I remember when the first smoke detectors were made available; they were between £15 and £20 per unit. Now they cost less than a fiver. As technology progresses, market forces bring the price down. I am trying to think of the economic term. It comes down to units of volume—

[97] **Rhodri Morgan:** It is called ‘China’, usually, I think. [*Laughter.*] Made in China.

[98] **Mr Hanks:** I am confident that, as the industry gears up to meet the demand for domestic sprinkler systems, the design will move on and the cost will come down. If you are going to fit a new housing development of 25 or 50 houses, companies tendering for the work will have to be competitive, which should generally drive the price down.

[99] **Mr Marles:** There are examples in the plumbing world. For example, copper pipes became more expensive as copper is not replaceable and it is not very sustainable as a resource—you have to keep digging ore out of the ground to make them. These days, plastic pipes are used instead of copper pipes. As demand builds, you can find cheaper alternatives. Some electronic equipment, such as mobile phones, cost £3,000 a few years ago, but they are now giving them away as long as you sign a contract. The more that things are used, the more companies will have to make them cheaper and find alternatives to make them cheaper and more sustainable.

[100] **Rhodri Morgan:** Going back to statistics, the Member in charge of the proposed Measure, Ann Jones, outlines in the explanatory memorandum the potential savings to you as a set of fire and rescue services in Wales that she hopes will occur as a result of the proposed Measure becoming law. Based on the evidence that your overall UK body, the Chief Fire Officers Association, has supplied, she estimates that the total annual cost of house fires to the fire and rescue services of Wales is over £8 million. Can you break that £8 million down? Given that this only applies to newly built properties, are we talking about £1 million, £2 million or £0.5 million or a larger proportion of the £8 million? Do you have any ideas?

[101] **Mr Marles:** I cannot recall the exact piece of evidence, but it is probably based on the figure from Westminster’s Communities and Local Government, which is based on its calculation of the economic cost of fire, and those figures are probably based on the cost per fire. If you say that that would save the fire service £8 million, or whatever the number that has been quoted to you may be, it would mean that we could take a resource of £8 million out of the system, but you cannot do that because the fire service deals with one thing in one day, and the demand is still the same whatever happens. Although we may have reduced the number of fires a bit, we would fill our time by doing the other thing that we are very good at, which is precautionary work. So, the demand would still be the same. I would guess that the £8 million is based on the figure that CLG uses, and I guess that it is also based on the economic cost of domestic fires—although it does not sound high enough—which is about £37,000 on average, which is the cost to replace the home and rebuild it.

[102] **Mr Hanks:** These are fire and rescue service costs that Chris Enness provided.

[103] **Mr Marles:** That is the CLG figure, which is £287 per hour, per appliance.

[104] **Rhodri Morgan:** That does not get us close to the answer that I am looking for, but I may be asking for the impossible. You may not be able to supply an answer to this question this morning, but, if it is possible, we would be grateful if you could respond in writing within a reasonable space of time. Of the £8 million estimated savings to the fire and rescue services

of Wales from bringing this in, what is the reduction needed in serious fires in newly built residences that you would have to attend? Would the figure of £8 million come down by £1 million or more? Do not answer if you cannot answer it today, or do tell us if that is a completely impossible figure to calculate.

[105] **Mr Marles:** It is a completely impossible figure to calculate, as we do not keep the data on the age of properties because they are difficult to correlate. In practical terms, the fire engine pulls up outside someone's house, which is on fire, we get the occupier out, we put them in an ambulance but we do not say 'Hang on a minute—can you tell us when your house was built?'

[106] **Rhodri Morgan:** I understand that; you do not want to collect data on that at the time because you want to put the fire out. If calculating the figure is out of the question, fine. We are not going to worry about it too much.

[107] **Mr Marles:** I think that I would struggle to answer your question.

[108] **Mr Bates:** I do not think that we would have those data.

[109] **Mr Marles:** I will have a look at it by all means, but I think that I will struggle to answer your question.

[110] **Val Lloyd:** The question that I was going to ask has been answered. After hearing about the plumber, the engineer and the statistician, I was looking forward to being the accountant, but Rhodri has pre-empted my question and has taken that role as well. That is fine, as long as the question has been asked.

[111] I will move on to my next question. The Member in charge of the proposed Measure has told us that there is potential for a gradual planned relocation of resources in line with the increased installation of sprinklers that would enable all fire and rescue services to save more lives through other activities. Do you consider this to be a fair assessment? If so, why? If not, why not?

10.10 a.m.

[112] **Mr Hanks:** Clearly, we can plough any time saved by not having to attend operational incidents into our community fire safety activities to ensure that we do not have any further incidents. Any efficiencies that we can realise will be ploughed back into that work stream.

[113] **Val Lloyd:** Evidence from Dŵr Cymru says:

[114] 'It should be noted that the cost of providing and maintaining fire hydrants is borne by the Fire and Rescue Service.'

[115] Can you confirm that you are responsible for meeting the cost of providing and maintaining them?

[116] **Mr Bates:** We are. The fire and rescue service takes up the cost of installing the fire hydrants provided for firefighting and their ongoing maintenance.

[117] **Val Lloyd:** Thank you, that is clear.

[118] **Rosemary Butler:** Just to pursue that a little further, the Member in charge has suggested that savings could be made as the number of fire hydrants that would need to be

provided and maintained could be reduced over time. Do you consider this to be a fair suggestion?

[119] **Mr Bates:** Absolutely; we already carry out the installation of fire hydrants on the basis of risk assessment. If the risk in a particular area is high, we may pay for the installation of a fire hydrant there. If a new-build estate is fitted with sprinklers, then that would clearly be a low-risk area, and the chances of our having to install fire hydrants, based on a risk assessment, would be that much lower, and we would not do so, thereby saving the fire and rescue service money.

[120] **Rosemary Butler:** Fine. We have asked you quite a number of questions this morning—24 in fact. Would you like to put any other points to us? If you cannot think of anything offhand, you can write to us with any you think of later. Would you like to add anything that you think we may have missed?

[121] **Mr Hanks:** If I may, I will answer first and then invite Andy to add something. There is one statistic that I was not able to share with colleagues, which is that, when we discussed the efficiencies of sprinklers and water damage and so on, it is important to realise that when a sprinkler operates, it uses something like 50 litres per minute, and it operates as soon as the temperature of 69 degrees Celsius has been reached at ceiling height. Compare that with allowing a fire to burn for between eight and 10 minutes, at best, although sometimes longer in rural areas, at which point we turn up and use something like 1,800 to 2,250 litres per minute to put the fire out. That is a good example of the extent of water damage and fire damage that can be saved.

[122] **Mr Marles:** Chair, I thank you for giving us the opportunity to present evidence to you. It is nice to be asked, and it is nice to think that the committee believes that the evidence that we are giving is of some value. We greatly appreciate being given this opportunity, given that you asked a question about consultation.

[123] **Rosemary Butler:** Fine. Perhaps you should all thank Ann Jones for putting the proposed Measure forward. Thank you very much indeed. You will have a draft copy of the transcript of this morning's proceedings. If you have any amendments to make, please let the clerks know. Thank you very much for attending; we found your evidence very interesting.

Our next witness—that is a strong word—has not yet arrived. He was not due until 10.20 a.m.. Perhaps Members would like a short break until then.

*Gohiriwyd y cyfarfod rhwng 10.13 a.m. a 10.23 a.m.  
The meeting adjourned between 10.13 a.m. and 10.23 a.m.*

[124] **Rosemary Butler:** We will now move on to the second part of the meeting, in which we will be taking evidence from Richard Price from the Home Builders Federation. I remind you to turn off any mobile phone that you may have, or any other electronic device—as long as it will not affect your way of life. You may leave the computer on; it is your pacemaker that I am worried about. We have a number of questions to ask you, and at the end you will have a chance to put anything to us that you think we may have missed.

[125] It would seem from your evidence that you do not believe that the proposed Measure is needed. Could you clarify for the record whether you support the general principles of the proposed Measure?

[126] **Mr Price:** We have a number of issues with the proposed Measure which are clearly set out in our written evidence. One of our main concerns is that it does not identify the root of the problem of where fires are occurring in Wales—that is, whether they are occurring in

new-build homes or the existing stock. That would have implications for the aims and objectives of the proposed Measure, and whether they can be achieved. That is a significant issue for us. There are a number of others that we have highlighted, such as of the lack of evidence on development viability and things like cost-benefit analyses. Until that work is done, it is difficult for us to say that we can support the proposed Measure and identify whether or not it could achieve what it sets out to achieve.

[127] **Rosemary Butler:** We have touched on this slightly, but I will ask you this question, because we need your response for the record. Your evidence suggests that further work needs to be undertaken to determine the extent of the problem of deaths and injuries in newly created residences before the proposed Measure progresses. Can you expand on why you think that that is so important?

[128] **Mr Price:** The remit of the proposed Measure concentrates solely on newly built dwellings. It is clear from my evidence that newly built dwellings have far more effective means of protection from fire, particularly with the introduction of hard-wired smoke detectors, which we and our members think have been very successful. So, I do not think that it is fair to put new dwellings and their safety or otherwise with regard to the risk of fire in with existing stock. There are statistics given in the proposed Measure's explanatory memorandum that specifically state that there are X amount of deaths and X amount of property damage and injuries in every 10,000 dwellings. I think that the figures were 0.13 deaths and 3.7 injuries per 10,000 dwellings in Wales. The explanatory memorandum then goes on to make the assumption that that is true of new-build stock. That first set of statistics relates to all housing stock in Wales. If there is no problem with new-build stock, if we implement the proposed Measure those statistics on how safe or otherwise you are from fire in Wales will remain the same. We will have the same amount of deaths, injuries and property damage and a similar level of risk to fire safety officers. So, it is essential that we identify the root cause of the problem.

[129] **Rosemary Butler:** You suggest that existing requirements under part B of the building regulations provide sufficient protection against fire in newly built homes. Why do you believe that that is the case and what evidence do you have to support that?

[130] **Mr Price:** It is based on discussions with our technical director and the technical managers of our member companies. Our members think that part B of the building regulations is a robust mechanism to deal with the effects of fire. The new measures that have been introduced in new-build homes, particularly the introduction of hard-wired smoke detectors, has given us the knowledge and assurance that part B of the building regulations is robust enough to deal with fires in new-build homes at the moment. We have no evidence to suggest that there is a particular problem with fires in new-build homes. I provided some evidence in my written submission on the deaths and injuries that occurred in south-east Wales between 2000 and 2009. I could not distinguish whether they were new-build homes or existing stock, but I used homes that had hard-wired smoke detectors as a benchmark. Off the top of my head, one piece of evidence was that there were 72 deaths from house fires in south-east Wales between 2000 and 2009. One of those deaths was in a house with a hard-wired smoke detector. That is good evidence to suggest that hard-wired smoke detectors are efficient at alleviating the risks of fire.

[131] **Nick Ramsay:** It has been suggested that the ultimate solution to reducing deaths and injuries from fire in the home may be a combination of measures, with initiatives aimed at improving safety in older housing stock, and additional regulation, in the form of the proposed Measure, in new housing. Would you support that approach?

[132] **Mr Price:** As I have said, I want to establish where the problem lies and what types of dwellings have the majority of problems with house fires. I stated in my evidence that a

requirement for hard-wired smoke detectors in existing dwellings or even the promotion of what fire services do, such as installing battery-operated smoke alarms, might be useful in educating people of the risks of fire in existing stock.

10.30 a.m.

[133] I know that some of our members have submitted evidence to you about some of the improvements that could be made, such as fitting hard-wired smoke detectors or fire alert systems in each habitable room of the building, or increasing the use of fire-retardant material such as plasterboards and so on. So, we would definitely support a Measure that looked at the existing stock and tried to improve the safety of it. We would certainly work with you to identify any new measures to improve current standards.

[134] **Nick Ramsay:** To be clear, I was asking you whether there should be a combination of improving the safety of existing stock, exactly as you said, and a Measure for sprinklers in new-build stock.

[135] **Mr Price:** As I stated in my evidence, I would not support a Measure for installing sprinklers in new-build homes. That implies that there is a particular problem with fires in new-build homes that requires the use of sprinklers. Part B of the building regulations is robust enough to deal with fires in new buildings, and if part B does need to be reviewed I would like that to be based on evidence that we have a particular problem with house fires in new-build homes.

[136] **Nick Ramsay:** The Member in charge of the proposed Measure suggested that the installation of automatic fire suppression systems will significantly reduce or even eradicate deaths from fires in newly-created residences, as well as reducing injuries and property damage and improving safety for firefighters. Do you think that those potential benefits could provide sufficient justification for the proposed Measure?

[137] **Mr Price:** Again, that assumes that there is a particular problem in new-build homes with fires and property damage. The proposed Measure states that, by introducing fire sprinklers in new-build homes, we can reduce the risk of death and injury in homes in Wales. However, the proposed Measure does not identify where the problem is. As I said earlier, we could implement the proposed Measure, and if we do not have a problem with new-build homes in respect of fire safety, the risks and statistics that are given in the explanatory memorandum of the proposed Measure would remain the same. We need to identify whether it is appropriate to tackle new-build homes, or whether it would be more appropriate to identify where the risks of fire are coming from and to deal with the problem in that way.

[138] **Nick Ramsay:** We have heard strong evidence to suggest that automatic fire suppression systems provide safeguards over and above those provided by smoke detectors. While smoke alarms may alert individuals to a fire, as you have identified, sprinklers will help to ensure a safe exit from a burning building and keep the fire under control until the fire and rescue services arrive. Do you accept that that is the case? If so, why do you not consider that that in itself provides sufficient justification for the proposed Measure?

[139] **Mr Price:** All the evidence on smoke alarms suggests that they are probably the most effective piece of equipment that you can put in your home to alert you to a fire and to keep you safe from fire. I accept the argument that the more equipment and safety measures that you put into your home to protect you from the risk of fire, or any other risk, the more your risk is reduced, although I do not know to what extent. The more equipment you have, the more your risk will be reduced. It is also our understanding that, because this is being promoted through building regulations, there are other matters that need to be considered as well as the important issue of fire safety, and additional work needs to be done on things such

as cost-benefit analyses and viability and feasibility studies, which I think the Minister has also accepted. A lot of other things need to be bottomed out, such as the issues surrounding water supply, maintenance and the cost of installation.

[140] **Nick Ramsay:** I think that there will be questions on that later, so we will not go into that now.

[141] **Mr Price:** The point that I am trying to make is that we have to take account of fire safety and reducing the risk of fire, but there are other measures that need to be taken account of because this is being introduced through building regulations.

[142] **Nick Ramsay:** I accept fully what you said about smoke alarms and the innovation that has been made in that regard; I do not think that anyone disagrees with that. However, the witnesses from the fire service said that, when there is a fire in a house and the fire service is called out, there is an eight-minute or 10-minute delay, and perhaps longer in rural areas, before it gets there. In that time the fire will be burning unchecked, whereas if you have a sprinkler system, bearing in mind the temperature at which the system is set to go off, you can imagine the sort of fire that the fire service might be faced with. So, what I am trying to say, in a rather convoluted way, is that there must surely be some benefit of a system that means that, when the fire service gets there, the fire has already been tackled to a certain extent by the sprinkler system. Surely you see some benefit in that.

[143] **Mr Price:** I do. I accept that there will be a benefit. Sprinklers have been around for a long time; they work. What we must take account of is whether it is appropriate to introduce a building regulation to require sprinklers in homes at the moment, bearing in mind the fact that you must balance risk and its reduction against cost-benefit analyses, viability and other issues. In order to make a building regulation work efficiently and effectively, you need to look at the issue in the round, although I accept that, if you have a sprinkler in your home as well as a smoke detector, you will probably reduce the risk.

[144] **Nick Ramsay:** Thanks, that is really helpful. I have one more question. Going back to the issue of the effectiveness of smoke detectors, we have been concerned specifically about vulnerable people—the very young, the very old, the disabled and infirm, people using drugs and people using alcohol unwisely. Do you accept that sprinklers are of particular benefit to them because, although the alarm may go off, whether they are in a fit state to respond and get out is a different question?

[145] **Mr Price:** Yes, there are obviously circumstances in which such people would benefit from a sprinkler system. I may have dealt with that issue in my written response. Whether that means that there should be a requirement for sprinklers in all new homes is a separate issue. Most of those groups, according to discussion with our members, are the least likely to buy a new home—particularly people aged 16 to 24, which is one of the groups identified, given that the average age of a first-time buyer today is 37. Yes, I agree that we need to look at that, and I said that in my evidence. More work needs to be done on identifying those groups and considering how we can properly tackle that issue.

[146] **Nick Ramsay:** We are veering into that difficult question of when a new home is a new home, so I shall stop.

[147] **Rosemary Butler:** The other point—unless I have misunderstood what you have said—is that you are talking about people buying houses, but we are talking about houses built by housing associations, so people will not be buying them. The proposal is to put sprinklers in all new homes.

[148] **Mr Price:** I am trying to say that we need to identify those risks and tackle the risks

for those people. However, I still think that more work needs to be done to establish whether concentrating solely on new build housing is the best method of identifying risks for those people or whether other measures could be taken with existing stock that would provide more protection for such people.

[149] **Rhodri Morgan:** I infer from what you say that passing this proposed Measure would imply that there is a particular problem with newly built homes. Are you sure that that is the correct reading of this proposed Measure? An alternative interpretation of the purpose of the proposed Measure is that it is much easier to pass a building regulation concerning an improvement in the standards for newly built homes than to retrofit older homes. However, that does not mean that the people behind the proposed Measure think that there is a particular problem with newly built homes; it is simply that it is so difficult to retrofit.

[150] **Mr Price:** That is a fair point. However, the explanatory memorandum provides justification using statistics on deaths, injuries and property damage in the whole of the existing stock in Wales. The implication of the explanatory memorandum is that if we put sprinklers in all new homes, we will reduce those deaths, injuries and risks from fire. I am saying that we do not know whether that is the case. We need to identify whether it is the existing stock or new build homes that are the problem, before we say that this will solve that problem. That is the point I am trying to make.

10.40 a.m.

[151] **Rhodri Morgan:** Accepting that there is a shortage of data, the Minister has made clear that further work will need to be done on the cost-benefit analysis to which you refer. In the event that the proposed Measure becomes law, the work would need to be completed before the regulations are framed. Assuming that this is passed into law and that the Minister does the cost-benefit analysis and uses it to frame the regulations, does that scenario address any of the concerns that you have expressed this morning?

[152] **Mr Price:** Certainly. It addresses one of our major concerns, which is that the cost-benefit analysis for this proposed Measure has not yet been done. Drawing on evidence provided by cost-benefit analyses conducted by the Building Research Establishment and for the Thames Gateway proposal—both of which showed that the costs would far outweigh the benefits—if we knew that a cost-benefit analysis was going to be conducted for Wales, it would definitely alleviate our concerns.

[153] **Rhodri Morgan:** Is it the HBF's position that pilot schemes involving interested parties, including the house building industry, could be set up in order to highlight the barriers to the implementation of the proposed Measure? Is that the kind of thing that you would support?

[154] **Mr Price:** We would support anything that sheds a bit more light on issues that have not been covered properly by the explanatory memorandum, such as costs, the practical implications of installing the systems, maintenance and how the systems operate.

[155] **Rhodri Morgan:** I will get back to the point that the Chair was making about social and private housing. Does the Home Builders Federation only cover the builders of private housing? I am not absolutely clear on how wide the scope of the federation is.

[156] **Mr Price:** In Wales, we cover only those who build private houses.

[157] **Rhodri Morgan:** Okay. Section 1 of the proposed Measure provides for the installation of fire-suppression systems in all newly built residences. Would you be more supportive of this proposed Measure if that duty was limited to certain types of residences,

such as social housing, private sector flats of more than 11 storeys or of some other height limit, residential care homes and so on?

[158] **Mr Price:** That is an interesting question, and one that I have not covered in my evidence. I know that some of our members are already installing fire sprinklers or fire-suppression systems in certain blocks of flats, where they feel that it is appropriate to do so.

[159] **Rhodri Morgan:** Do you know the height limit that they use?

[160] **Mr Price:** I do not. The clerk has said that I can come back to you on 14 October, and that is something that I could find out by then. It would be an opportune time because I have a meeting with our technical managers and technical director on 7 October. Perhaps I could put that question to them and come back to you on it.

[161] **Rosemary Butler:** That would be helpful.

[162] **Val Lloyd:** My first questions are on maintenance. The proposed Measure makes no provisions for the ongoing maintenance of automatic suppression systems—

[163] **Rosemary Butler:** We will have to hold on for one minute while we wait for Nick to come back, because we do not have appropriate party representation here to be quorate. At the moment, we only have three Members, all from the same party. We will have to wait, if you do not mind. I am sorry about that. We have specific rules about that here.

*Datganwyd nad oedd y cyfarfod yn gwneud cworwm am 10.43 a.m., ac ataliwyd y cyfarfod.  
The meeting was declared inquorate at 10.43 a.m. and suspended.*

*Datganwyd fod y cyfarfod yn gwneud cworwm am 10.44 a.m., ac ailymgynullodd y cyfarfod  
ffurfiol.  
The meeting was declared quorate at 10.44 a.m. and the formal meeting reconvened.*

[164] **Val Lloyd:** I will start again. I wanted to ask Mr Price a question about maintenance. The proposed Measure does not make any provision for the ongoing maintenance of automatic fire-suppression systems, once they have been installed. However, the Minister has confirmed to us in oral evidence that this issue could be covered in regulations. Does the HBF think that the proposed Measure should contain such explicit provisions for the maintenance of systems, or are you content that this could be addressed by regulations, if necessary?

[165] **Mr Price:** There has been a lot of discussion on maintenance. I watched Ms Jones and the chief fire officer give evidence on this issue. The requirement for maintenance was largely played down, and I am not sure whether that was appropriate. I would like to see more work done on how important the maintenance of these systems is to their efficient and effective operation.

[166] Ms Jones mentioned that you are more likely to win the lottery than for one of these systems to fail, but how true would that be if the system were not maintained properly throughout its lifespan? That is a key question for safety and the operation of the system. There is also the issue of insurance and what your position would be with the insurance company if the system malfunctioned and the company found out that it was not properly maintained.

[167] There has also been a lot of discussion on the augmentation of water and what that would require, such as pumps and tanks. A pump would require regular maintenance, particularly if it were sitting idle for a long time. I would like more work done on that issue. In addition, some people have mentioned that, with a lot of water being stored in tanks, there

is potential for legionella and that needs to be looked at.

[168] My last point is that one of our members was made aware when they spoke to Ms Jones a while ago that there could be a requirement for different systems in a property. That led to changing the remit of the proposed Measure from fire sprinklers to fire-suppression systems. I believe that you might need separate systems in areas in which you could have oil pan fires or electrical fires and so on. Requiring different systems has implications for the maintenance of those systems and a myriad other things, such as costs, and that might affect the proposal as it stands.

[169] **Val Lloyd:** Do you think that the absence of ongoing maintenance, as well as the extras that you spoke of, could undermine the effectiveness of the proposed Measure in achieving its aims?

[170] **Mr Price:** I believe so. Such an important system needs thorough maintenance, as we know from gas boilers and so on. It is difficult to get people to maintain their gas boilers. Fewer than 30 per cent of people who have a gas boiler have a service agreement to maintain it. So, maintenance will be a key issue to make that system operate effectively and that should be included in the proposed Measure.

[171] **Rosemary Butler:** Do you want to come in on that, Nick Ramsay?

[172] **Nick Ramsay:** Yes, on that point, Chair. Surely a gas boiler requires a different level of maintenance to a sprinkler system. What degree of maintenance will a sprinkler system need over several years that will be so major as to be prohibitive?

[173] **Mr Price:** It depends on what type of system it is. You are picking up the point that I am trying to make, that is, that we do not know. It is not clear from the proposed Measure what maintenance needs to be done or what the effect of no maintenance will be on the lifespan of the system. All that we have heard is anecdotal evidence that not that much maintenance is needed and so it is not a problem. I do not think that that is an appropriate stance to take.

[174] **Nick Ramsay:** Should maintenance be included in the proposed Measure?

[175] **Mr Price:** Something on maintenance should be included in the proposed Measure.

[176] **Val Lloyd:** To turn to cost-benefit analysis, in your evidence, you raise concern that the Member in charge has underestimated the cost of the installation of fire-suppression systems. Can you explain why you think that?

[177] **Mr Price:** A number of costs are given in the explanatory memorandum. A major issue with that is that there is an assumption that pumps and tanks are not required across Wales. When the chief fire officer gave his evidence, there was an admission that that was not necessarily true and that a pump and a tank might be needed in certain circumstances. Some of the water companies have also given evidence that, despite water pressure levels, a pump and a tank might be needed as a back-up system, because they might be liable if the water pressure dipped below the correct level. That is what I read in their evidence. That will clearly have an effect on cost and there are a number of examples in the cost-benefit analysis in which the addition of pumps and tanks will increase the cost.

[178] In my evidence, I have given information on the costs of installing a sprinkler that one of our members had: it cost between £1,800 and £2,500 for one of the smallest house types, with the addition of £1,000 per plot for a pump and a tank. They also gave evidence on flats. Those figures are far in excess of the figures given in the explanatory memorandum.

Community Housing Cymru also gave examples of the costs that it is experiencing, which is a direct example of something being used in Wales. However, that seemed to be ignored by the explanatory memorandum, which I did not quite understand because it was a specific Wales example.

10.50 a.m.

[179] There are a number of issues with the costs. A number of the costs that we have received in evidence suggest that they might be higher than stated in the proposed Measure, which I think leaves out a lot of detail that could affect the costs further down the line.

[180] **Val Lloyd:** You raised the issue of the potential need for a pump and tank back-up system. Could you perhaps speak a little on the practical and financial implications of this for developers?

[181] **Mr Price:** Clearly, there will be a financial implication if we do need pumps and tanks and the explanatory memorandum will need to reflect that. I do not think that I have touched enough upon the practical implications in my evidence. It is a good point to raise. I have discussed it briefly with our members. They have said that if a pump and a tank are needed, they will need extra space for storage. If there is a requirement for extra piping and a tank, you will have to redesign the property including the floor joists and floor beams in order to allow the property to withstand those loads. Again, that is something that I can put to our technical managers at the meeting that I will have on 7 October, and perhaps come back to you with a few more examples because it is an important point that I do not think that I have touched upon enough in my evidence.

[182] **Val Lloyd:** Thank you. We would welcome that.

[183] **Rosemary Butler:** That would be helpful. Thank you.

[184] **Val Lloyd:** According to the explanatory memorandum, which you have touched upon again, it is likely that the cost of installing automatic fire-suppression systems to private developers could, in many cases, be incorporated into the value of the house, or in slightly lower land values. What are your views on that?

[185] **Mr Price:** I will deal with land values to start. It is a very dangerous assumption to make, particularly in Wales, that any new piece of legislation, and the cost of that legislation, can be incorporated in the land values. We have a particular issue at present in Wales with the viability of development. We are currently experiencing very huge difficulties in achieving the current requirements, particularly in relation to ministerial priorities such as affordable housing and sustainable buildings. Many assessments are now emerging with negative land values, rather than just land values that are not acceptable to the landowner. Therefore, it is a very dangerous assumption to make that any piece of legislation, and the cost of that, can be taken up by land values because, as I have said, we are at a critical point in Wales. Anything that is introduced needs to take full account of its effect on land value.

[186] On sprinklers increasing the cost of housing, I do not agree with that. In my opinion, there is no evidence to suggest that installing a fire sprinkler in a property would increase the value of the property. An example that I have given within my evidence is the Barratt Homes development at Hanham Hall, which reached code for sustainable homes level 6—

[187] **Rhodri Morgan:** I am sorry; where was this?

[188] **Mr Price:** In Hanham Hall, Bristol. It reached code for sustainable homes level 6, and despite the fact that that cost a massive amount over the ordinary build costs, it was not

reflected in the sales values because it would simply be valued according to its relationship to the existing stock. There is no evidence to suggest that fire sprinklers would add any value to house prices.

[189] I have also discussed this with the Council of Mortgage Lenders, which concurs with our view that it would not add anything to house prices. The chair of the CML has also had a word with one of his chief valuers, and he is also of the opinion that valuers would not attach a value to houses with fire sprinklers. However, I would urge you to discuss that with the CML yourselves.

[190] **Val Lloyd:** This is my final question. Again, in the explanatory memorandum, the Member in charge suggests that the acceptance and willingness of the public to pay for automatic fire-suppression systems is likely to grow as they become 'an expectation rather than an exception'. Does this help to address the concerns about the financial implications of the proposed Measure for your industry?

[191] **Mr Price:** No; it relates directly to valuers attaching a value to the property and then mortgage lenders lending more money on the property. As far as I am concerned, there is no evidence that the addition of fire sprinklers will prompt anyone to pay more for a dwelling. In our experience, the usual things like kitchens and locations are the things that people look for. As I have said, even the Barratt Homes development at Hanham Hall did not attract any more money in the house price, despite the fact that that is a code level 6 development, which has clear benefits to anyone living in it by way of reduced costs for heating bills and so on.

[192] **Val Lloyd:** I think that the suggestion was that, as time goes by, it will become an expectation rather than an exception. I can understand what you are saying and have some sympathy with it currently.

[193] **Mr Price:** I suppose that that is speculation from everyone's point of view, but that would not be the case from my experience, or that of people to whom I have spoken within my industry, or even those who are directly involved with our industry, such as lenders.

[194] **Rosemary Butler:** Nick, did you want to come back on that?

[195] **Nick Ramsay:** Yes. I was just thinking about your example of what homebuyers look for in a kitchen. I do not think that Val was trying to suggest that people looking for a house will say, 'That's a really nice sprinkler system', as they might about a kitchen. In the same way, if I bought a house that had a smoke detector in it, it would not be a really positive thing, but it is certainly not a negative thing either. I would be willing to pay the cost of the house that included that smoke detector, as I would think that it was a good thing to have. However, that might not be people's mindsets on sprinkler systems.

[196] **Mr Price:** I do not know whether it would be a positive for people. I would probably be quite wary of having a sprinkler system in my house, because of the risk of malfunction. Although I might think about it differently because I have looked at the evidence and seen that malfunctions are rare, the general public is probably not aware of that evidence. That is just speculation, but I think that a lot more work needs to be done on that. I am not sure whether a sprinkler system would be an incentive for someone to buy one house over another without a sprinkler. I do not have any evidence to suggest that that would or would not be the case, but you need to consider it if you think that that could happen.

[197] **Rhodri Morgan:** You mentioned that some flat developments by HBF member companies already include fire sprinklers if they are of a certain height.

[198] **Mr Price:** Yes, some of our members have mentioned flats of a certain height having

sprinklers, particularly in escape routes and stairwells. I am not quite sure about the ins and outs, but I will find that out for you.

[199] **Rhodri Morgan:** Okay. I am just trying to think of the kinds of companies that are members of the HBF and that are private housebuilders—and I mean ‘housebuilding’ loosely to include brownfield developments at Swansea bay, Cardiff bay, Newport city centre and so on. Could you make something clear for the benefit of the committee? There are four kinds of private houses or flats built in Wales by either members or non-members of your association: first, the brownfield flats in the bay and in city centres, which are 10 or 15 storeys high; secondly, greenfield developments on the outskirts of cities, in new suburbs and so on; thirdly, the small, patchy developments of 10 to 20 houses in rural Wales, which are probably not built by the quoted builders, such as Barratt Homes, Redrow and Wimpey, and which may not be members of the HBF or the FMB; and, fourthly, the houses designed and built for individuals by their own architects and builders—and are they members of the HBF? I do not know. Are there different implications for the brownfield flats, the suburban 100-house developments by Redrow, Wimpey, Persimmon Homes and the other big well-known names, the small development of 10 to 20 houses for the retirement market in north Wales, west Wales and so on, and the houses built by individuals with an architect and a master builder?

[200] **Mr Price:** Are you referring specifically to practical or cost implications?

[201] **Rhodri Morgan:** The implications that you mentioned, which would result in negative land values. For instance, if you overburden the industry, you will not get anyone building at all. If they have to put this, that and the other in, they will get to the point at which they will say, ‘I’m just not doing it’.

[202] **Mr Price:** That is one of the key issues—

[203] **Rhodri Morgan:** Are you saying that that applies to all four markets or are you saying that it will not be a problem with brownfield housing, because they are big flats and will have sprinklers fitted anyway?

[204] **Mr Price:** You have different competing objectives, depending on which local authority you are in or what type of development it is.

[205] **Rhodri Morgan:** Where will these negative land values be? Would they be in the suburban 100-house development, in the Persimmon Homes or Redrow-type houses, or in the little developments of 20 houses?

[206] **Mr Price:** Through the work of the affordable housing viability studies across Wales, we go to each local authority and identify how much it would cost to build a 35-unit development, for example. That could be built by Barrett, Redrow or a smaller developer or possibly a HBF non-member in a rural setting.

[207] **Rhodri Morgan:** So, where were the negative land values?

[208] **Mr Price:** We have found them in most local authorities.

[209] **Rhodri Morgan:** In both greenfield and brownfield developments?

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[210] **Mr Price:** Yes, in greenfield and brownfield developments. In some of the Valleys areas, because of the level of section 106 requirements that local authorities are asking for, we have seen negative land values. If you look at the affordable housing viability studies in

detail, you will see that most of them—or at least the ones that I have seen—go up to a 10 per cent affordable housing percentage, which is when you start to see significant problems in land value.

[211] **Rhodri Morgan:** So, you are saying that it is not the fire suppression systems that have created the negative land values, but the section 106 requirements.

[212] **Mr Price:** At the moment, we do not have a requirement to fit fire suppression systems, and so what I am saying is that we are experiencing significant difficulties with the current requirements.

[213] **Rhodri Morgan:** So, because section 106 requirements are too high, they create a negative land value problem today.

[214] **Mr Price:** The cumulative burden of that regulation does, yes. You will all be aware that the Welsh Assembly Government has introduced a requirement to improve building regulations from 2013—that is a 55 per cent improvement on the current regulations. We do not know what the cost is yet, but we know that it will be significant. That, again, is a ministerial priority that we have to take account of.

[215] **Rhodri Morgan:** I do not want to hog this line of questioning, but I want to be absolutely clear about these negative land values. What was the consequence of the negative land values being found in a Valleys setting, which is where you say you found them? The section 106 requirements have been pretty burdensome. Was the local authority reaction to that, ‘We would rather not have the building at all without the section 106 requirements’ or was it to go back and look at the section 106 requirements and say, ‘Look, we have overloaded this’?

[216] **Mr Price:** That is an interesting question, because that is what we are doing with the high-level test for local development plan policy, so we do not know what will happen when someone goes to develop that site. However, in a high-level test of the LDP policy, we have seen policies of 10 and 20 per cent coming out with low and negative land values. However, there was a similar example in the Pembrokeshire Coast National Park, where 70 to 80 per cent of the viability studies on the pieces of land that it had in its LDP came out with negative land value. Despite that, the inspectors still allowed a 50 to 70 per cent affordable housing policy in the LDP. They said, ‘We recognise that we will have problems with viability and that people will stop bringing land to the market, but let us give it a go because we do not know’. So, it is a very serious situation at the moment.

[217] **Rhodri Morgan:** Okay, but that is not directly related to this proposed Measure.

[218] **Mr Price:** It is the straw that broke the camel’s back, is it not? However, the camel’s back is already broken.

[219] **Rhodri Morgan:** Have you considered the trade-offs in building design and other passive fire protection measures to help to meet the cost of installing and maintaining automatic fire suppression systems, which is referred to in the explanatory memorandum?

[220] **Mr Price:** I touched on this in my evidence. The cost-benefit analysis also looked at trade-offs, and the conclusion reached was that they were not significant enough to provide any incentive.

[221] **Rhodri Morgan:** I do not know whether you heard them, but the chief fire officers made references to the positive effects on school design of having sprinklers. If you have sprinklers, you can be much more flexible about where you put your walls and corridors,

columns and beams and doors, and you do not have to have fire doors and so on. You are much freer in your design. The implication was that architects would all say, ‘Whoopie—now we can really express ourselves, and if we want a big open-plan building, we can have it’. Now that is schools. Do you imagine that Persimmon Homes and Redrow and the smaller builders, who may be members of your association, building the small developments in rural Wales might say, ‘Whoopie’ as they can now build houses with much greater freedom of design because they have to have—on the assumption that this proposed Measure becomes law—fire suppression systems, or do you think that they will say, ‘Well, we always wanted to build a standard kitchen/diner here and so it will be exactly the same whether we have fire suppression systems or not?’

[222] **Mr Price:** No, I do not think that our members behave like that; our members respond to market and consumer demands and what consumers want when they are designing houses. That is how they design them. I do not know the ins and outs of design and architectural freedoms, or what they would mean—

[223] **Rhodri Morgan:** I will give you a specific example that was given to us this morning. Currently, if you have a garage built into a house and you want to put a bedroom above the garage, you have to have a one-hour fire-protection ceiling in the garage. However, if you have fire protection, you do not have to do that. Therefore, you have much more freedom to design a garage underneath a bedroom if you already have that fire protection.

[224] **Rosemary Butler:** If you have sprinklers.

[225] **Rhodri Morgan:** Yes, if you have a fire suppression system. In theory, you can see that that means that your builder and architects can say, ‘This makes it a damned sight easier to design’. I am talking about the garage-incorporated-type design. That might apply only to a small house built for an individual, with an architect and a master builder, who may not be members of your association.

[226] **Mr Price:** The honest answer is that I am not sure.

[227] **Rhodri Morgan:** Could you come back to us on that? You could refer to the architects or designers that are used by your members. It would be very useful to me also if you could distinguish between what you call the big builders—the Redrows and the Persimmons—and the small builders who build 10 houses at a go in the rural areas of west Wales and north Wales, and the individual architect for the individual house.

[228] **Mr Price:** Absolutely. Yes, I could do that.

[229] **Rhodri Morgan:** Fine. We have dealt with my last question over the past 20 minutes, which is on development viability. Do you want to say anything further on how this proposed Measure could impact on development viability, other than its being the straw that breaks the camel’s back?

[230] **Mr Price:** The inference from the explanatory memorandum is that it is only £1,000 or £2,000 per plot and so it will not make any difference. We cannot rely on that in Wales as a justification not to take account of development viability. For many developments, particularly in areas that require regeneration and that have low land values, it could well be the straw that breaks the camel’s back to stop that development from coming forward.

[231] **Rhodri Morgan:** Just to be clear, you are saying that there will be zonal issues in the Valleys because everyone is trying to regenerate the Valleys, but you do not think that that would happen to your classic Wimpey estate in the outer suburbs of Swansea, Newport or Cardiff.

[232] **Mr Price:** No, I am not saying that; I am just giving you an example of where we have low land values. Any over-and-above regulation causes negative land values, but that could have—

[233] **Rhodri Morgan:** Hang on a second—that is exactly what I am asking you. Are you saying that there is a specific problem in low land value areas in any case where there is a general social and political purpose to try to regenerate an area, of which the Valleys would be a classic example, but that it would not be a problem for a classic Wimpey suburban housing estate on a greenfield site on the outskirts of Newport, Swansea, Cardiff or Wrexham, and so on?

[234] **Mr Price:** No, I am not saying that. There is a problem in the Valleys. There will be different section 106 agreement requirements for a greenfield development in the outskirts of a city. The local authority will recognise that it will get more land value out of it, and it will have priorities such as affordable housing and sustainable buildings that it will concentrate on.

[235] The major issue is that many unknown regulations are coming our way, and we do not know what the costs will be. That could affect all developments in Wales, irrespective of where they are. The proposed Measure on top of that could make the situation even worse.

[236] **Rosemary Butler:** You suggest in your evidence that the term ‘dwelling’ requires further definition. Can you explain why?

[237] **Mr Price:** It goes back to my point about identifying which particular house types cause the main problems. The term ‘dwelling’ can encompass static caravans, houseboats and all manner of things. If your problem is with static caravans and holiday chalets, targeting new-build homes will not achieve what the explanatory memorandum and the proposed Measure have set out to achieve. So, we need to identify what is meant by a ‘dwelling’, whether that is existing stock, caravans, houseboats or new-build homes, and which types are most susceptible to fire.

[238] **Rosemary Butler:** Are there any more questions from Members? I see that there are not. If you have anything to add but cannot think of it now, you may submit written evidence.

[239] **Mr Price:** I will come back to you on all the questions that you have asked by 14 October. It is quite opportune, as I have a meeting with all our technical managers on 7 October, and so I am happy with that.

[240] **Rosemary Butler:** Thank you very much. It has been very interesting.

[241] **Mr Price:** Thank you, and thank you for inviting me.

[242] **Rosemary Butler:** I remind Members that we will be meeting next week. That brings today’s meeting to a close.

*Daeth y cyfarfod i ben am 11.09 a.m.  
The meeting ended at 11.09 a.m.*