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## **Legislation Committee No.1**

### **Response to the consultation on the Proposed Domestic Fire Safety (Wales) Measure**

#### **Chief Fire Officers Association (Wales)**

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## **Response to Legislation Committee – Domestic Fire Safety (Wales)**

### **Introduction**

The Chief Fire Officers Association, CFOA (Wales) welcomes the opportunity to submit written evidence to the Legislation Committee in support of the proposed Domestic Fire Safety (Wales) Measure.

CFOA Wales has been working very closely with Ann Jones AM throughout the Legislative Competence Order process and congratulates the National Assembly for Wales and both Houses of Parliament for approving the proposed measure which has the potential to significantly reduce the number of deaths and injuries associated with fire. The work to progress the installation of sprinklers in both domestic and non domestic premises is also enshrined within the Fire and Rescue National Framework for Wales 2008-2011 document.

### **Background**

This proposed Measure provides an opportunity to prevent the needless deaths and injuries from fires which occur throughout Wales where 80% of such fire related deaths and injuries occur in the home. An individual's home should be a place of refuge, a safe and pleasant place to be, but regrettably the evidence from fire statistics prove to be the reverse. An individual is unlikely to be killed or injured by fire in their workplace, when shopping or socialising. However, if confronted with a fire situation in their own home, it is in this situation that they are most likely to be killed or injured. It would appear that other measures such as community education and the provision of smoke

alarms have not reduced this trend sufficiently and the only way to reduce the rate of fire deaths is through the wider use of automatic fire suppression systems AFSS (sprinklers).

Whilst smoke alarms are essential in providing early warning from fire, they alone cannot ensure a safe egress from the building. Sprinklers however, contain the fire within the room of origin and extinguish in most circumstances or check the fire development until the arrival of the fire and rescue service. A sprinkler does not 'false alarm' they will only operate if there is an actual fire and, because the fire is tackled at a very early stage, uses much less water than the fire and rescue service. This not only reduces the risk to fire fighters but also guarantees an escape for the occupier.

We have much to learn from the experiences of other countries, such as Canada and the USA, where mandatory measures have been introduced to install domestic sprinklers and a significant reduction in the number of deaths and injuries from fire have been witnessed.

The evidence is overwhelming that the fitting of sprinklers make a significant difference. This is why the Welsh Assembly Government has introduced a school sprinkler programme for all new build and major school refurbishments. In addition to the obvious safety benefits to the individual, there are significant consequential benefits to the state, namely in the economic cost of fire. The costs associated with deaths and injuries, re-building and re-housing, the burden on the NHS and Social Services are a significant drain on the Welsh economy.

It is sensible and eminently practical to limit the proposed measure to new residences and the alteration of existing residences, CFOA Wales agrees that it is not sensible to require the retrospective fitting of AFSS to existing properties.

With respect to the enforcement provisions, it is agreed that the use of Building Regulations is the most appropriate route in which to enforce the installation of AFSS.

### **Practical Implications**

Some of the practical implications of implementing the proposed measure may be those that affect the (a) Sprinkler Industry, (b) House Builders and (c) the Water Industry.

#### **a) Sprinkler Industry**

Initial enquiries with the British Automatic Fire Sprinkler Association (BAFSA) with regard to the competence and availability of technicians to meet the extra demand placed on the industry have been positive. BAFSA seems confident that the sprinkler industry is well placed to meet such a demand.

#### **b) Housing Industry**

The proposed measure will impact mostly on the domestic dwelling stock, which is built in the main by Private Developers and Housing Associations. There may well be reluctance in the housing industry to either bear the additional cost or pass on the cost to the owner/occupier. It is CFOA's view that further work in exploring potential trade-offs in building design may realise further building cost savings; in addition, economies of scale realised as the measure is introduced may also result in further cost reductions as experienced in the USA.

#### **c) Water Industry**

Most of the installations will be in new housing developments, where the provision of a new mains water supply for domestic use will have been provided. It is however with respect to those existing premises which are being converted and served by an existing water main that can prove challenging to the water industry. This is due to pressure reduction in the existing water infrastructure; however, there are several technical solutions to this issue that comply with the relevant British or European Standard.

## Costs

In assessing the financial burden associated with the proposed measure, one has to first consider the principal benefits and compare those against the impact of the increased costs.

The principal benefits are:

- **Saving lives** – there has never been a fire death in a fully sprinklered domestic building in the UK;
- **Protecting property** – it is estimated that property losses in buildings with sprinklers are one tenth of those in unprotected buildings;
- **Protecting fire-fighters** – conditions for fire-fighters entering a building involved in fire are much less hazardous and arduous than if the fire had developed unchecked.

Financial Implications:

- **Cost of introducing and enforcing the legislation** – the anticipated increase in workload for building inspectors is not thought to be significant;
- **Installation costs** – current predictions estimated at 1% to 2% of total construction cost; there is evidence to suggest that economies of scale and with advances in technology there will be a reduction in costs. There is also the potential for the public to see the significant safety of a sprinklered home and that demand for sprinklers may in fact increase;
- **Maintenance** – annual costs estimated to be £50– £100 per year per property with anticipated reductions in multi residence properties.

The Explanatory Memorandum makes reference to public perception where homeowners had been consulted on their preference for a sprinklered home. The emerging perceptions were of a society that sees the value of such a lifesaving initiative. An analogy could be drawn with the car industry where the inherent safety features in vehicle design safety now play a significant role in the type of vehicle chosen by the consumer. The housing market may well develop similarly where the consumer is prepared to accept the installation and maintenance costs of automatic fire suppression systems as the accepted norm.

## Conclusion

Traditionally, the role of the fire and rescue service has been firefighting; in recent years the emphasis has been to combine intervention with prevention and education to ensure that fires do not occur in the first instance. Prevention, by identifying and eliminating risk, can be achieved in a variety of ways; for example, by influencing the design of a building; by the effective deployment of resources, and by ensuring that people know what to do when fire occurs and how to escape safely.

Community education and the provision of smoke alarms have saved many lives but cannot save the most vulnerable members of our society who die – the very young, the very old, the disabled, 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 fire deaths.

There have been no multiple fire deaths in the UK as a result of a fire in a dwelling with a working sprinkler system. So sprinklers, unlike smoke detectors which can only warn of the need for evacuation, can actually save those who cannot help themselves.

CFOA Wales fully endorses this proposed measure; a prime example of the benefits of installing such domestic sprinklers is contained in Appendix A to this report. This lifesaving legislation will make a significant contribution to both public and fire-fighter safety.

For and on behalf of CFOA Wales.

**Colin Hanks QFSM, BSc Hons, MIFireE.  
Assistant Chief Fire Officer**

### **A recent example of where sprinklers have made a difference.**

An incident occurred at 0944 hrs on Monday 3<sup>rd</sup> May 2010 in Holyhead. North Wales Fire and Rescue Service (NWFRS) received the call from a neighbour stating that there was a fire in a ground floor flat. Additional information indicated – smoke was issuing from the kitchen, sprinkler system operating and the fire alarm had activated.

On arrival at the incident it was confirmed that the kitchen was smoke logged and the sprinkler system was operating. A breathing apparatus team was committed into the flat to find the fire was confined to a microwave oven and was already extinguished. The crew then ventilated the property and isolated the sprinkler system.

The post fire investigation concluded that the fire had started in the microwave oven. The timer on the microwave oven had been incorrectly set by the occupier. There had been 3 occupiers in the flat at the time of the incident all able to vacate the property without injury. They were checked over by paramedics and treated for the effects of smoke inhalation with oxygen. None of the occupiers required hospitalisation.

The occupiers were re-housed by the Local Authority on a temporary basis. The microwave oven was 100% damaged by fire, approximately 4 sq metres of the kitchen was damaged by fire and the remainder of the flat was affected by smoke.

*“The early intervention of the sprinkler system played a vital role in extinguishing and containing the fire to the room of origin. The activation of the system undoubtedly helped the occupants to survive the incident without injury; also the refurbishing costs to the Local Authority were a fraction of what they would have been if the sprinkler system had not been installed”.*

Neil Gallagher  
County Safety Manager, Ynys Môn.

### **Background**

The premises involved a one bedroom ground floor flat situated in a block of 9 other flats on 3 floors. The occupant/tenant was a female aged 62 years old and a known alcoholic and heavy smoker. The flats are owned by the local authority and are also fitted with a fully automatic fire alarm system and a secure door entry system.

### **History of Incidents**

Over a number of years, several emergency calls have been received by NWFRS to this block of flats. The range of calls varies from false alarm incidents to actual fires. There have been four fires involving the occupant, three of these fires involved cooking being left unattended and one where clothing caught fire. In two of the incidents, the female occupant was treated by paramedics for smoke inhalation but not hospitalised.

### **Multi Agency approach**

After one of the incidents in July 2009 where clothing was involved in fire, it was felt that the individual's lifestyle was likely to lead to further fires. The Local Authority and the police were contacted with a view to co-ordinating a multi agency approach to improve the situation and reduce the fire risk.

NWFRS personnel had several meetings with a number of agencies including Local Authority Housing, Mental Health team, Police and Social Services. These meetings culminated in a multi agency Protection of Vulnerable Adults (POVA) meeting where one of the following outcomes was that NWFRS would explore the possibilities of a retrospective sprinkler system being provided in the flat.

The advantages and disadvantages of installing a sprinkler system was examined and it was agreed that the installation cost could save the Local Authority significant monies as the costs of re-housing and rebuilding after a fire would be far more expensive than the clean up costs of the sprinkler system operating to extinguish a fire. However, the primary purpose would be the protection of the vulnerable individual.

A sprinkler system was installed and commissioned in December 2009 at a cost of £3000 which was shared between Isle of Anglesey Council and NWFRS.