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Finance Committee
FIN(3)-19-10 paper 3
Proposed Domestic Fire Safety (Wales) Measure – Additional
Information from Ann Jones AM, Member in Charge

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1st November 2010

Dear Angela,

Proposed Domestic Fire Safety Measure (Wales)

Thank you for your letter dated 21st October 2010 requesting further information following my evidence session with the Finance Committee.

With regard to your first question around cost, there is no direct comparison in the Explanatory Memorandum in terms of costs against benefits. We were looking at broad estimates of costs / benefits and these came from a variety of sources with different base costs dates.

The costs used initially were significantly out of date, as is the case with some of the benefit calculations; these were updated to more current costs.

There will be a report released soon addressing this from the Building Research Establishment (BRE), who produced the original study for the ODPM in 2004.

The range of costs of installation are based on a number of sources which agree on a range of potential costs. The CLG report of 2010 used 2007 prices which were consistent with other national estimates that I used. Evidence also shows that competition drives down costs of installation, as will the integration of fire sprinklers into the design of buildings and developments as a whole. It could also be noted that since the end of 2007 inflation has been low and at times negative, with very recent increases coming in part due to a rise in the prices of food, clothing and footwear.

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This range of costs was rounded to the nearest hundred and multiplied by a generous estimate of 10,000 properties built per year. The Welsh Government has recently published the latest figures for the number of new houses completed in 2009-10 as 6,174, with an average of 8,125 over the past 10 years. This would suggest that overall cost estimates would in fact be likely to be lower than those stated in the Explanatory Memorandum.

In terms of benefits, there is a reference in the Explanatory Memorandum (see sections 8.64 and 8.69) to an Office of the Deputy Prime Minister (ODPM) study of the economic cost of fire with estimates for 2004. Referenced cost estimates related to injuries and property damage and were updated to current prices. Both the cost of NHS treatment and the value of possessions held in properties are continually increasing and health inflation as well as the value of possessions in dwellings could be argued to be rising faster than inflation. Not all benefits have a cost attached and others do not increase in line with inflation. Fire & Rescue Service costs are not updated as these estimates are more recent and relate to a quote from 2009.

There has been no effort to financially quantify the considerable environmental benefits offered by sprinklers but again it is expected that the updated BRE report will provide more recent financial estimates of such benefits. Furthermore there is ongoing research being undertaken by the Business Sprinkler Alliance and FM Global insurers which is aimed at costing the considerable environmental benefits. This research is fairly new and it is unknown when it is likely to report.

VAT has not been included my calculations because the construction of new housing is generally zero rated for VAT purposes. The vast majority of developments that would fall under this Measure will be new builds.

There are more complex rules around conversions of domestic premises. If you carry out work to an existing building you will normally have to charge VAT at the standard rate. You may, however, be able to charge VAT at the reduced rate of 5% if premises are being converted into:

- 'single household dwelling';
- different number of 'single household dwellings';
- 'multiple occupancy dwelling', such as bed-sits; or premises intended for use solely for a 'relevant residential purpose'.

Also there are further VAT rules for housing associations in terms of full and partial VAT exemptions which arise from their status as non-profit making organisations. There are further complexities in assessing the VAT impact as it is not charged on certain services provided to disabled people, including some building work to adapt a disabled person's home.

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For the starter calculations that were made it was considered appropriate to exclude VAT as it was not relevant for the majority of construction covered by the Measure.

I have, however made generous and broad estimates on the number of properties that will fall under this Measure and of the related costs.

When considering VAT it also worth noting that this tax is subject to change and will have been set at three different levels from 31 Dec 2009 to 4 January 2011.

The point made by Community Housing Cymru in its written evidence to the LC1 committee was that the extra cost of fitting automatic fire suppression systems into affordable housing would have to be met somewhere, either through increased rents, further funding from the Welsh Government, or more flexibility in space and specification standards.

There are of course likely to be some savings due to design freedoms that arise from the inclusion of automatic fire suppression systems in new social housing. However I agree with the point made by the Minister in her evidence to the Committee when asked about the impact of the proposed Measure on the delivery of affordable housing. She said that "this is not a showstopper in any way; it will just need to be planned for in a proper and considered way. If similar targets for the delivery of a number of affordable homes are set by another Assembly Government, the amount of Government money that is allocated to deliver those targets would need to reflect any additional commitments that are made". As Members will be aware, it is the inhabitants of social housing that are more likely to experience fires and loss in the home. With the anticipated growth of new builds for this use in the near future, there will also be a related increase in void costs for the housing sector.

The figures I used when referencing the number of new builds and conversions carried out per year in Wales differ from those offered by the Minister as a different period of time is used. The source however, is the same.

Also, I consider the figure of 10,000 new homes and/or conversions in the EM to be a safe overestimate. The EM states that there have been around 83,000 new builds completed in the last 10 years which is perhaps more robust as year-on-year fluctuations can be factored into a longer timescale.

The Minister looked at the 4 years up to 2007-08, which compares 8,300 against 8,609. If you refer to Table 2 of the EM you can replicate the Minister's calculation for this period. There has been a marked fall in house building in the lead up to, and during, the recession. The estimate

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of 10,000 was a very broad and optimistic estimate which would cover for a dramatic increase in house building that could follow a recession and for any small additional costs that would be experienced in terms of conversions compared to new builds.

The Welsh Government has since released figures to state that 6,174 dwellings were built in 2009-10.

With regard to assessing the risk of fire in new homes where hard wired smoke alarms are present, it has proved very difficult to collate figures in the manner requested.

There are no statistics offering comparisons between incidents of fires in new and old homes. There is no distinction of what a new house is and as stated in my evidence to the committee, a new house will become an old house and is more likely than ever to change hands. The fact is that last year the number of fire deaths in Wales rose to 23 despite all current efforts to reduce fire deaths.

The probability of fire is not the same for everyone and the age of a house is only one of a number of factors which could influence the number of fires in a house. Different segments of society are at heightened risk for fire and those moving into new housing may be in a higher risk category. Traditionally social housing residents, elderly persons and those with mobility issues did not inhabit new homes; this is now a changing reality.

The statistics that show the complexity of drivers in relation to fire risk categories add considerable weight to the argument that it is our circumstances and lifestyles, and not buildings that create and heighten the risk of fire.

You are, for instance, more likely to be injured in a fire if you are in the age range of young adult to middle aged yet infants and older people are more likely to die in a fire. You are most likely to experience a fire if you are in a household with dependent children and least likely if you are in an all-pensioner household but again the risk of death is greater in the latter circumstance. Also, the prevalence of fires decreases with household income. The lowest proportion of houses with no smoke alarms are amongst the social housing sector followed by households with dependent children and then all pensioner households.

I hope this demonstrates that the nature of domestic fires makes it unrealistic to obtain and express the statistics in a way that would entirely satisfy the requests of the committee.

As domestic fire makes up a small part of the calculations used by insurance companies, it is unlikely that sprinklers will lead to major

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savings or price reductions. Evidence from the ten year study in Scottsdale, Arizona showed that the local industry now offer discounts with an average of 10% for approved residential sprinkler protection. As the UK industry is not yet in a position to achieve the necessary economies of scale and awareness levels, the market has not adapted to sprinkler protection in any significant way.

The selection of the negative procedure for regulations setting standards for fire suppression systems and specifying information to be provided to local authorities is based on the fact that these are routine technical matters of the kind that are commonly delegated to Ministers, subject the Assembly's power to annul the regulations. These regulations could not alter the principles set out in the Measure and could not amend any other legislation. They would also need to be revised fairly frequently in the light of changing technical standards. To require regulations of this kind, including amending regulations, to have to be considered in and approved by plenary would be disproportionate.

It is true of course that the content of these regulations would have financial implications – that is true of almost all regulations – but since regulations could only be made within the limits of the powers delegated by the Measure, and Ministers would be expected to consult properly before making regulations, this would not be a sufficient reason for making the regulations subject to affirmative procedure.

The assumptions made in the EM were based on annual maintenance costing £75 and that a third of occupiers would take it up. It is very difficult to accurately estimate how often people will maintain these systems and current evidence tells us that only between 10%-20% of private systems are maintained. However in the interests of accounting for more optimistic outcomes Table 8 in the attached Annex details the costs accrued if all the systems in the assumed 10,000 properties were maintained on an annual basis.

When considering these costs, it also worth noting that for the majority of properties, maintenance will be the responsibility of the owner/occupier so there is not a cumulative pot of cost. The process is more akin to paying for boiler service and, as an exercise; we do not ask what proportion of Welsh GVA is accounted for by boiler service or a BT line rental for instance.

As previously stated, costs are likely to be higher in converted properties, but more variable factors become apparent as there is no typical development. For the conversion of a single or small number of residences costs will be higher per unit than for a larger development. The Fire Sprinklers in Residential Premises (Scotland) Bill – Explanatory Notes

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estimated that for sheltered housing costs of converted sheltered housing would be 25 per cent higher than for newly built sheltered housing.

Dwr Cymru provided information on the costs of digging up a road which ranged from £763 to £976, depending on whether the ground being dug was unmade, had a footpath, minor or major road. All new properties would require a water supply which means the dig would be required in any case and would not be specific for a sprinkler supply. Also, pipes have to be run into the existing building and new water supply pipes may be required.

These additional costs would be added to the cost of installing into a new property and then split between the number of converted units that will be produced. If a building is undergoing the substantial refurbishment necessary for a change of use the increase in costs will be not be that great. It is unlikely that such a building will be a single house but instead it will perhaps be a future block of flats, where water supplies can be combined and a large mains connection is needed for the domestic water supply.

I have approached the Office of the Minister for Housing and Regeneration, but unfortunately I was informed that it does not hold specific information on the number of converted properties in Wales per year. However, I was assured that converted properties are included in statistics showing the number of new builds.

As stated in the EM and during the Finance Committee session on 14 November, I have factored in a generous overestimate of the number of properties to allow for extra conversion costs and any sudden growth in housing construction. The estimate of 10,000 properties that was used in the costing is 20 per cent over the average number of houses completed per year in the past 10 years.

I hope the information above sufficiently answers your questions.

Yours sincerely

Ann Jones AM

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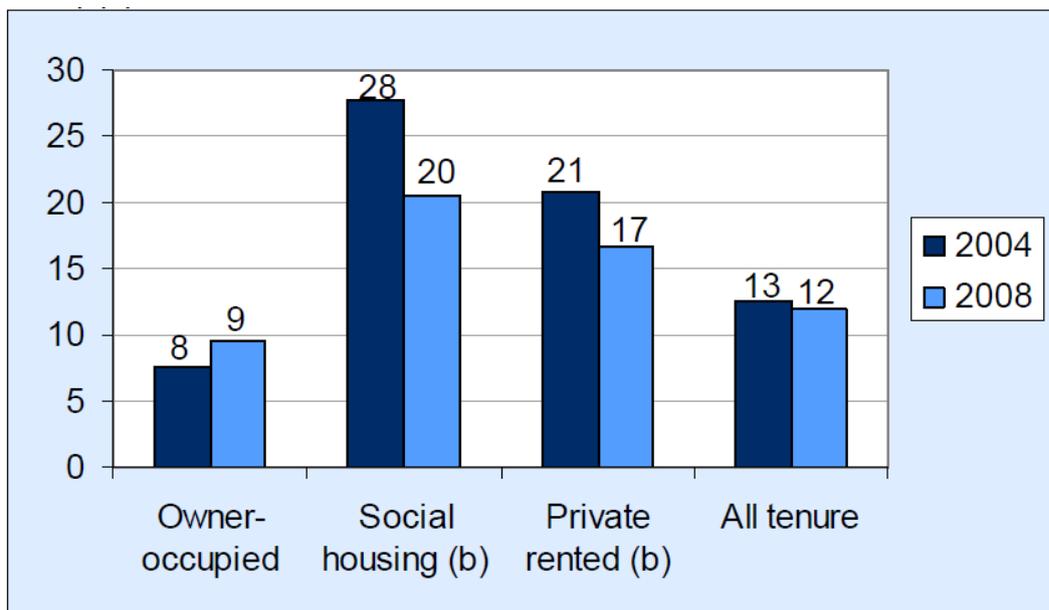
Annex: Statistical information regarding fire risk, deaths, injuries and causes and maintenance costs

Risk factors by person

The Welsh Government published a statistical bulletin [Fires in the Home, 2008](#). One of the key findings of this report was that

Higher risk factors for fires are living in social or rented accommodation and having dependent children or younger adults in the household.

Table 1 Number of households per 1,000 experiencing a fire in the last year, by tenure (2004 and 2008)



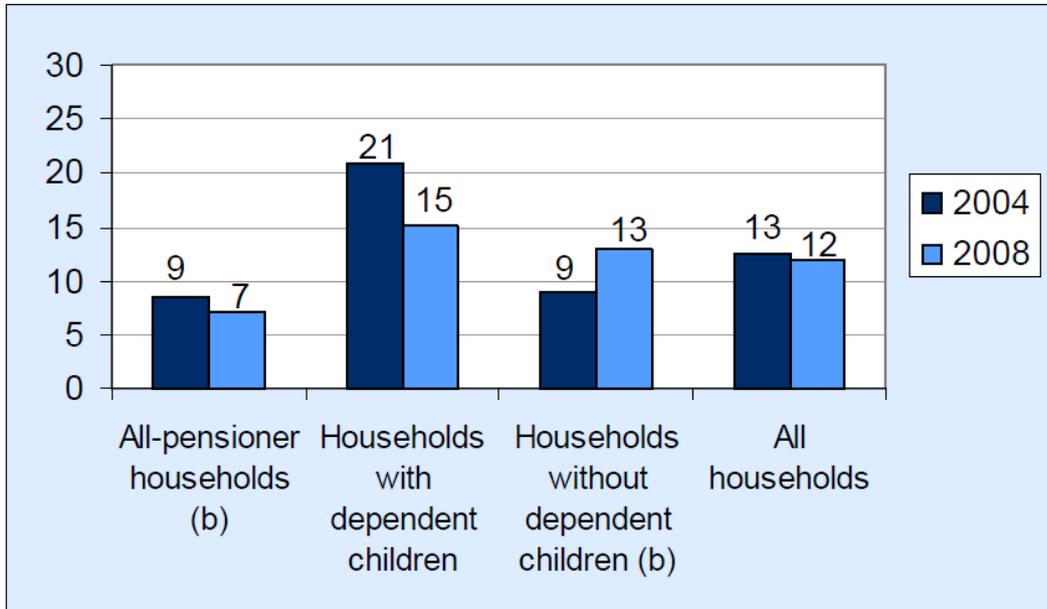
Source: Welsh Government Fires in the Home, 2008

Note sample sizes are small so there will be fluctuations between years

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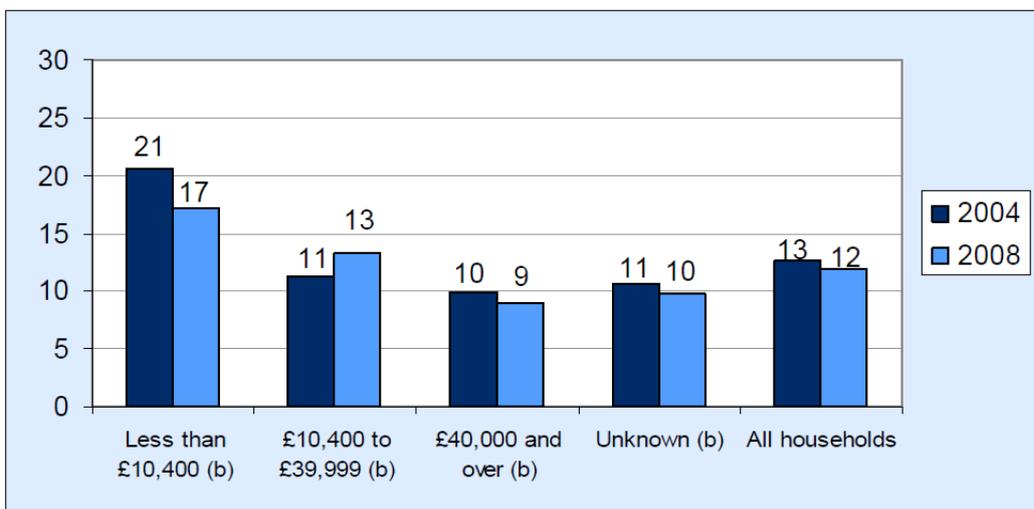
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Table 2 Number of households per 1,000 experiencing a fire in the last year, by household occupancy (2004 and 2008)



Source: Welsh Government [Fires in the Home, 2008](#)
 Note sample sizes are small so there will be fluctuations between years

Table 3 Number of households per 1,000 experiencing a fire in the last year, by income (2004 and 2008)



Source: Welsh Government [Fires in the Home, 2008](#)
 Note sample sizes are small so there will be fluctuations between years

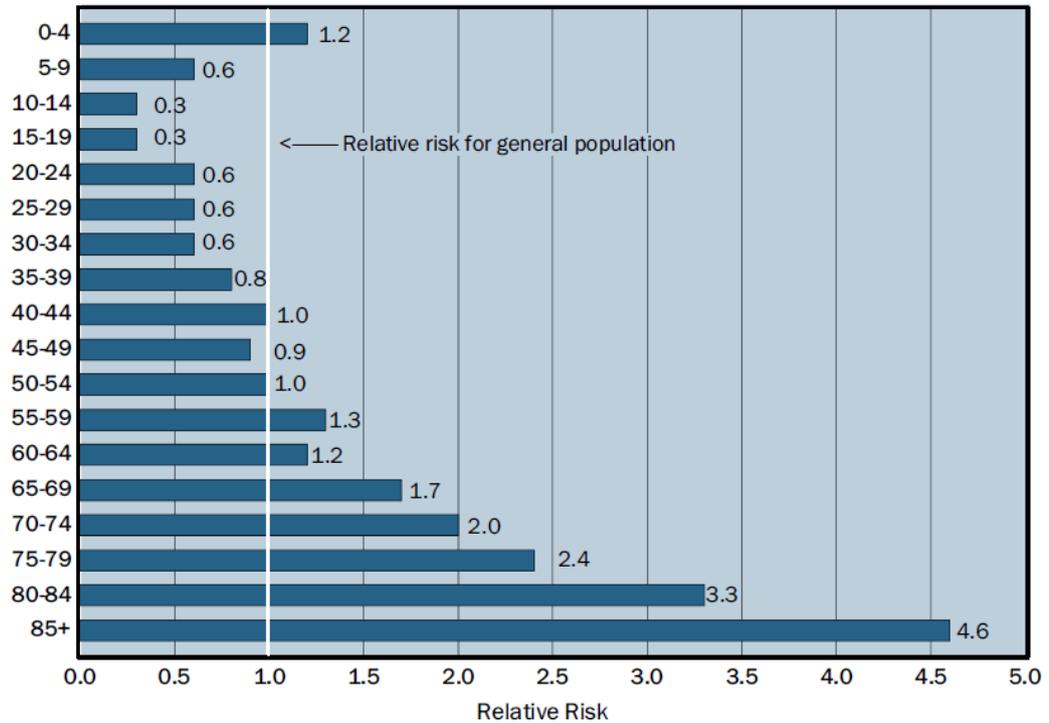
More detailed risk of fire death and injury by age

The following two tables show that when cognitive abilities are limited, as is often the case for the very young and the very old, the risk of death and injury from fire rises. Young adults and the middle aged are less likely to die in a fire, they have a high risk of injury.

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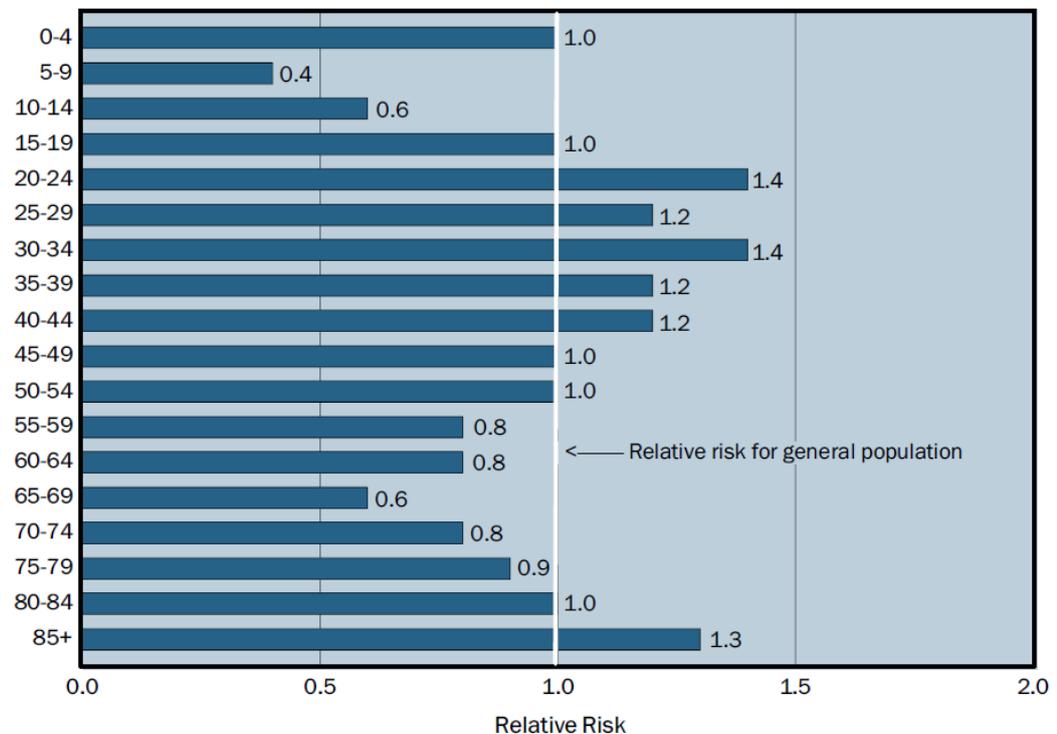
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Table 4 Relative risk of fire death by age in USA, 2001



Source: US Fire Administration / National Fire Data Center, [Fire Risk: Topical Research Service](#), Volume 4 – Issue 7, December 2004

Table 5 Relative Risk of Injury by Age in US, 2001



Source: US Fire Administration / National Fire Data Center, [Fire Risk: Topical Research Service](#), Volume 4 – Issue 7, December 2004

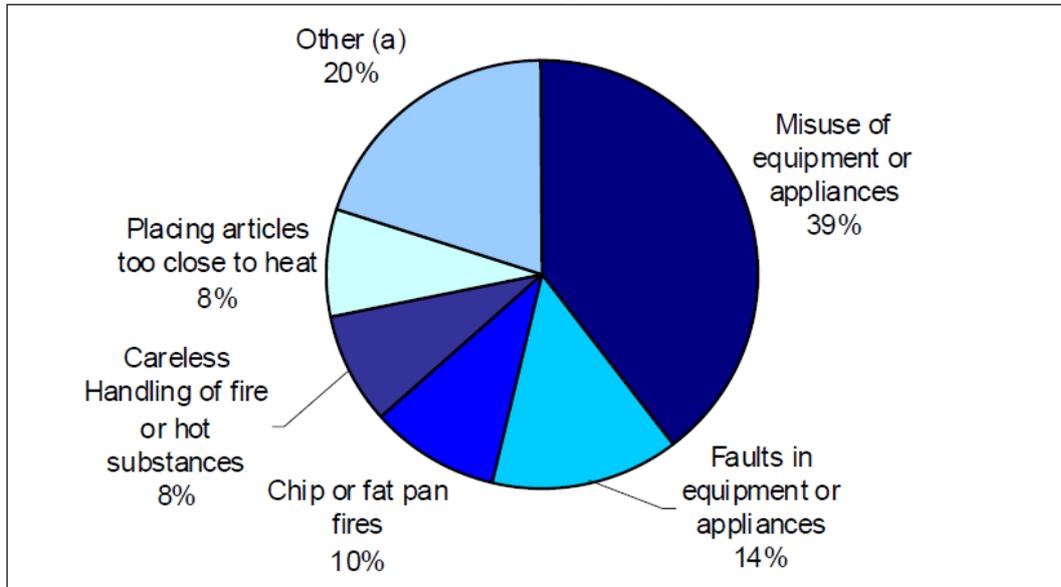
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Statistics around the causes of dwelling fires

The following information is sourced from the Welsh Government publication [Fire Statistics 2008](#).

Table 6 Causes of Accidental Dwelling Fires, 2008



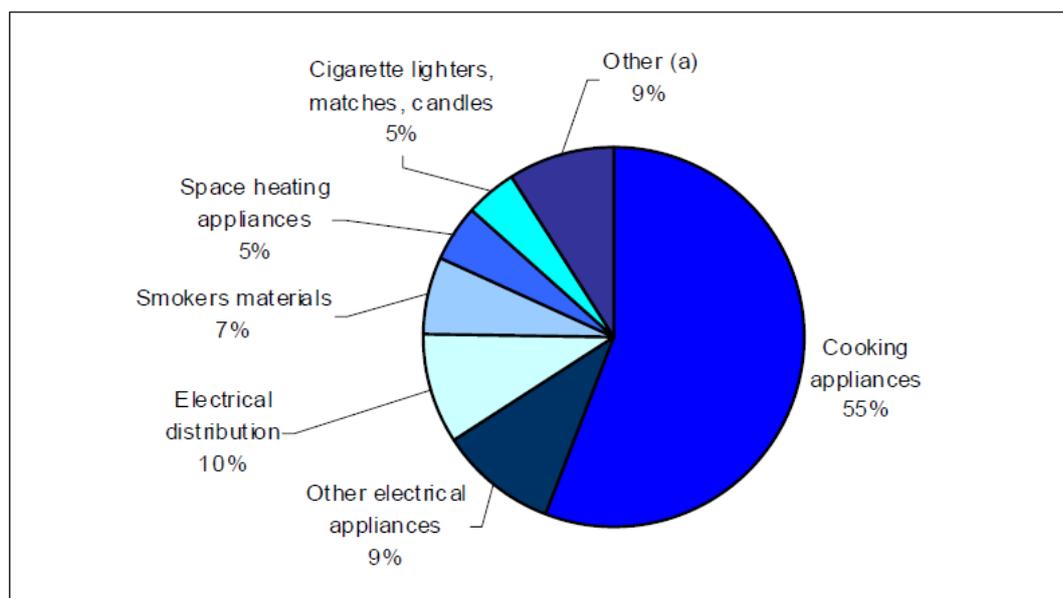
(a) Other includes faulty fuel supplies, child playing with fire, heat source in contact with article, Chimney fire, Accumulation of flammable material, Embers, Overheating, Spread from secondary source, Other known accidental, Unspecified accidental and Not known accidental

Source: Welsh Government, [Fire Statistics 2008](#)

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Table 7 Source of Ignition in Accidental Dwelling Fires, 2008



(a)Other Includes: Central and Water heating appliances, Blowlamps, welding and cutting equipment, Other and Unspecified.

Source: Welsh Government, [Fire Statistics 2008](#)

Maintenance costs

Table 8 Range of possible cumulative annual maintenance costs

	£					
	Assumed number of properties built per year					
	7,000			10,000		
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Assumed proportion of properties maintained per						
0%	0	0	0	0	0	0
33%	0	175,000	350,000	0	250,000	500,000
100%	0	525,000	1,050,000	0	750,000	1,500,000

Source: Properties built based on Welsh Government data, maintenance costs (£75 per incidence) from Explanatory Memorandum