1.1 - Maintaining good standards of fire safety

General argument

There are three good reasons for preventing fires in the workplace and maintaining good standards of fire safety.

1. Moral

Fires result in a great deal of suffering for those affected. We must all do what we can to avoid this.

2. Legal argument

It is a legal requirement to prevent fire, protect employees and other relevant persons from the effects of fire and to mitigate the effects of fire from anyone in the vicinity of a premises on fire.

3. Financial argument

The costs to society as a result of fire are substantial, especially when we add on the consequential losses such as interruption to business and the loss of trade. The environmental damage caused by fires can also be enormous. It should be noted that most companies that have a major fire never resume business again.

The size of the fire safety 'problem'

NUMBERS OF FIRE FATALITIES AND INJURIES

The following figures are based on the information in the 2004 UK fire statistics which were published by the Office of the Deputy Prime Minister (ODPM).

The fire and rescue services attended almost 900,000 fires and false alarms. This represents an 18% decrease on the 2003 figures. Within this figure, fires decreased by 29% to 442,700, while false alarms fell by 5% to 448,800.

Total number of fires attended - 442,700.

Fires attended in dwellings - 59,700 (6% reduction on 2003).

The number of building fires - 97,000.

Total number of ***accidental*** primary fires 97,700.

- 47,800 fires (49%) were in dwellings.
- 21,500 (22%) in other buildings.
- 17,800 (18%) in road vehicles.
- 10,600 (11%) in outdoor structures / secondary fires with casualties or 5 or more appliances.

The key changes in the 2004 statistics compared to those for 2003 were:

Accidental primary fires	2003	2004	Difference
Dwellings	50,000.	47,800	- 4%
Other buildings	23,100.	21,400	- 7%
Road vehicles	19,900	13,300	- 33%

Figure 1-1: Accidental primary fires. *Source: ODPM 2004.*

The number of ***deliberate*** primary fires fell for the third consecutive year, by 21% from 115,100 in 2003 to 91,200. The main reason for the fall in 2004 was a 25% reduction in deliberate fires in road vehicles.

Casualties from fires were:

- Fire related deaths - 508 or down by 14% on 2003.
- Non-fatal casualties (including fire fighters) - 14,600 or down by 6% on 2003.

Primary fires include all fires in buildings, vehicles and outdoor structures or any fire involving casualties, rescues, or fires attended by five or more appliances.

Secondary fires are the majority of outdoor fires including grassland and refuse fires unless they involve casualties or rescues, property loss or five or more appliances attend. They include fires in single derelict buildings.

Chimney fires are any fire in an occupied building where the fire was confined within the chimney structure (and did not involve casualties or rescues or attendance by five or more appliances).

A ***false alarm*** is defined as an event in which the fire and rescue service believes they are called to a reportable fire and then find there is no such incident.

Commercial fire losses remain substantial - £672m in 2003. Fires in commercial buildings remain a serious cost to the UK economy, with insured losses (£672m in 2003) over 50% higher than for domestic fires. In practice, despite the large insured losses arising from commercial fires, actual loss of life is relatively rare - of 540 deaths in fires in 2002, 29 occurred in commercial buildings. Even non-fatal casualties, more common than fatalities, are comparatively rare in commercial fires (45 per 1,000 fires), reflecting the success of the current arrangements. It is this success in reducing fatalities and injuries in workplace fires that is leading to a shift in resources towards domestic fire prevention work,

where the majority of casualties occur. Whilst Association of British Insurers (ABI) fully supports a risk-based approach to deploying fire service resources, a wider view of the risks facing society must be taken. The economic and social consequences of fire also include business failures, job losses and the loss of local services and facilities. The insured losses from commercial fires can be split between the direct financial losses caused by fire damage (£672m in 2003) and the indirect cost through lost business (£81m in 2003). These costs vary significantly year on year since fires in substantial commercial enterprises can represent a large proportion of the total losses. Business interruption losses consequent on the fire damage can be several multiples of the physical damage to assets in such cases. Overall Government estimates are that fire costs the UK economy around £6.6bn per year (including both domestic and commercial fires). Economic losses are over six times higher than insured losses.

(Quoted from Association of British Insurers (ABI).

COSTS OF INADEQUATE FIRE RISK MANAGEMENT

- In 2003, the total cost of fire is estimated at £7.7bn, equivalent to approximately 0.9% of the gross value added of the economy.
- The costs as a consequence of fire, including property losses, human casualties and business disruption, are estimated at £3.3bn in 2003.
- The cost to the Fire and Rescue Service (FRS) of providing fire cover is estimated at £1.7bn in 2003. The cost of FRS attendance at both false alarms and non-building fires is estimated at almost £700m respectively, due to the large proportion of all incidents that these account for.
- The total cost of arson in 2003 is estimated at £2.8bn, which includes an allocation of the total costs incurred in anticipation of fire. The cost of FRS response to malicious false alarms is estimated at £83m.
- The average cost of a domestic fire is estimated at £25,000, of which approximately £15,000 is accounted for by the economic cost of injuries and fatalities.
- The average cost of fire in a commercial building is estimated at £58,000, of which the cost of fire damage to property represents £45,000. The average cost of a vehicle fire is estimated at £4,700.

Whilst caution should be exercised in analysing trends over a short period of time, particularly since it is difficult to observe costs directly, the cost of fire remained stable as a proportion of the economy over the last 5 years, at approximately 0.9%.

As can be seen, the true costs of a fire are extremely high. This can be highlighted by looking at two recent examples.

Primark warehouse fire, Leicestershire

Dozens of fire-fighters tackled the massive blaze at the 440,000 sq ft Primark warehouse at Magna Park, near Lutterworth. The warehouse building itself cost £8million to build, with up to an estimated £50million worth of garments being destroyed. The building was owned and operated by TNT on behalf of Primark.

The building was fully insured both for stock loss and business interruption. The impact on the companies has been survivable, but the cost will of course go to the insurers.

Figure 1-2: Primark warehouse fire. *Source: BBC News.*

Figure 1-3: Buncefield Oil Terminal. *Source: Royal Chiltern Air.*

Buncefield Oil Terminal fire, Hertfordshire

The Buncefield fuel depot fire in December 2005 was the biggest in the UK's peacetime history. Explosions and heat from the fire caused severe damage to more than 80 buildings on the industrial estates surrounding the terminal, and some were demolished by the blasts. Initial estimates from Hertfordshire Chamber of Commerce put the cost of the damage at between £500 million and £1 billion. Information technology (IT) software and services firm Northgate Information Solutions was the closest business to the fire, when a blast ripped through the oil depot in the early hours of Sunday, 11 December. The explosion rolled across Northgate's car park and into its 150,000 square-foot building, starting a fire which left the firm's UK headquarters an empty shell. This fire was an extreme example with many buildings being destroyed or damaged by its effects.