Business Sector Risk Review Reports are created for each and every occupancy category held within the FPA/ RISCAuthority Large Loss Fire database where sufficient records exist for meaningful analysis and are updated annually. They are designed to highlight the loss history in each business sector to help inform insurance and risk control choices, and provide brief bespoke best-practice guidance. 

This data is best appreciated in association with local information on F&RS response, AFA policy, and firefighting water availability data which is available to RISCAuthority members via the website (www.RISCAuthority.co.uk). The data presented here spans the two years January 2012 to December 2013; the complete database and analytical tools may be accessed by members via the RISCAuthority website.

### Shopping Centres

Retail fires account for **10.5%** of all large loss fires.

Fires involving Shopping Centres account for **0.2%** of all large loss fires and **1.7%** of all Retail fires.

<table>
<thead>
<tr>
<th>Causation</th>
<th>Accidental</th>
<th>Deliberate</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td>45%</td>
<td>31%</td>
<td>24%</td>
</tr>
<tr>
<td>Shopping Centres</td>
<td>20%</td>
<td>80%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time of fire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midnight - 6am</td>
</tr>
<tr>
<td>Retail</td>
</tr>
<tr>
<td>Shopping Centres</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Impedances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
</tr>
<tr>
<td>Retail</td>
</tr>
<tr>
<td>Shopping Centres</td>
</tr>
</tbody>
</table>

**45 Retail** fires of **295** had impedances, **7** of these had more than one impedance. **0 Shopping Centres** fires of **5** had impedances, **0** of these had more than one impedance.

**Cost of fire**

Retail fires account for **12%** of all large loss financial loss, with a mean average cost of **£835,403** per fire.

Shopping Centres fires account for **1%** of all Retail loss, with a mean average cost of **£540,000** per fire.

<table>
<thead>
<tr>
<th>Insurance component</th>
<th>Material damage</th>
<th>Business interruption</th>
<th>Contents</th>
<th>Resources</th>
<th>Machine and plant</th>
<th>Stock</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td>44%</td>
<td>34%</td>
<td>7%</td>
<td>4%</td>
<td>2%</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>Shopping Centres</td>
<td>76%</td>
<td>5%</td>
<td>1%</td>
<td>18%</td>
<td></td>
<td>7%</td>
<td>1%</td>
</tr>
</tbody>
</table>

These statistics are based upon information supplied by loss adjusters to the FPA on a voluntary basis and not all insurers conducting business in the UK contribute to this dataset. They represent only sums paid out where the total loss is in excess of £100K and are deficient of losses under £100K, deductibles, under-insurance, uninsured, self-insured and captively insured components, which may be significant. In a year, total losses captured typically account for 50% of the ABI declared annual fire loss figure - which is similarly deficient of the same components (except the £100K threshold).
FPA BUSINESS SECTOR RISK REVIEW REPORT FOR RETAIL – SHOPPING CENTRES

Fire safety legislation

In common with virtually all businesses, fire risk assessments should be undertaken for shopping centres in compliance with the Regulatory Reform (Fire Safety) Order 2005 (or equivalent legislation in Scotland and Northern Ireland).

Fire hazards

In addition to the potential fire hazards present in most businesses, there are others associated with shopping centres. These include:

- Large numbers of members of the public, most of whom will be unfamiliar with the layout of the centre and some of whom may have a disability.
- General lighting and display lighting.
- Heating installations.
- Electrical installations from poorly maintained equipment and installations.
- Temporary or fire resistant storage in the centre.
-Smaller spaces and tight circulation patterns.
- The need for liaison between the responsible persons from the retail outlets and representatives of the management company.
- Large quantities of combustible materials in retail and storage areas.
- Accumulations of combustible waste and packaging materials outside the centre.
- Obstructed or inadequate access for firefighting vehicles and firefighters.

Risk control recommendations

The following risk mitigation measures should be considered to eliminate or reduce the risk of fire in shopping centres:

- At the time of the fire risk assessment give careful consideration to the likelihood of deliberate fire setting and the implementation of suitable security measures to reduce the likelihood of such an event. Consideration should be given in accordance with RISCAuthority Recommendations RC48 to the potential threat from staff and out of hours intruders as well as from shoppers.
- In enclosed shopping malls, the responsible persons (as defined by the Regulatory Reform (Fire Safety) Regulations 2005) from the individual retail outlets should liaise with each other and with the responsible person from the store so that everyone is aware of all fire hazards in the centre.
- Review the fire risk assessments for the individual retail units or the shopping mall whenever there is significant change to the types of goods on display, processes being undertaken or layout of the area concerned.
- Train staff so as to be able to evacuate the centre rapidly and effectively in the event of fire, providing assistance to any shoppers with a disability where necessary. Train selected staff in the use of the portable firefighting equipment.

- Apply the Essential principles set out in RISCAuthority document BDM1 when designing new shopping centres.
- Eliminate hot work wherever possible. When hot work cannot be avoided, eliminate the use of acetylene by using other forms of welding and cutting if practicable. Control all hot work by a registered competent person as set out in RISCAuthority Recommendations RC7.
- Minimise the spread of fire by effective fire compartmentation. The retail area, any stock areas and other staff areas should be effectively separated from each other so as to provide at least 60-minutes’ fire resistance.
- Following any work that requires breaching the fire compartmentation ensure that suitable fire stopping is undertaken in accordance with the FPA Design guide for Fire stopping system and fire resisting rating of the structural elements concerned.
- Minimise the storage of combustible waste materials outside the premises. Store combustible waste in metal skips or bins sited, where practicable, at least 10m clear of all buildings and 2m away from the boundary walls or fences. Consider the use of a compactor where large quantities of packaging materials may accumulate.
- Ensure that electrical installations are designed, installed and periodically tested in accordance with the current edition of BS 7671 (the IET Wiring Regulations). Inspections should be carried out on a risk assessed basis as recommended in the Periodic Inspection Report.
- Arrange for portable electrical equipment to be inspected and tested at least in accordance with HSG 107 and/or the IET Code of practice for in-service inspection and testing of electrical equipment. The period between each inspection/test should be determined by the responsible person.
- Ensure that combustible materials are not stored or displayed within 0.5m of lighting luminaires.
- Protect the building by automatic fire detection and alarm (AFD) systems. The design, installation and commissioning of such systems should be carried out by an independent UKAS accredited third party certification body. The installation should be to a recognised category in accordance with BS 5839-1 as determined by a risk assessment and in consultation with the installation company. The installation should be maintained in accordance with BS 5839-1 by a competent engineer.
- Arrange monitoring of the AFD systems on site personnel or an off-site alarm receiving centre. Off-site alarm receiving centres should be certificated by an independent UKAS accredited third party certification body, and operate in accordance with a Category II facility as defined in BS 5979.
- Give serious consideration to the installation of water sprinkler systems where the new centre is at the design stage. Sprinkler systems should be designed, installed, commissioned and maintained in accordance with the LPC Sprinkler Rules incorporating BS EN 12845 to standards certified by an independent UKAS accredited third party certification body.
- In addition to an automatic sprinkler installation, a suitable number of appropriate portable fire extinguishers should be available in each retail outlet and in the common areas and be immediately accessible and clearly visible. Each place of business should have extinguishers approved and certificated by an independent, third party certification body. They should be installed in accordance with BS 5306-8 and inspected and maintained in compliance with BS 5306-4.
- Give consideration to the installation of smoke venting systems and/or the installation of smoke curtains to prevent the spread of smoke and hot gases, for both life safety and property protection purposes. This may be achieved by complying with BS 6767-2: 2011: Code of practice for smoke ventilation systems and/or the installation of smoke curtains to prevent the spread of smoke and hot gases, for both life safety and property protection purposes. This may be achieved by complying with BS 5839-8: 2009: Code of practice for smoke ventilation systems.
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Further information

2. The Fire (Scotland) Act 2005, asp 5, TSO.
3. Fire Safety (Scotland) Regulations 2006, Scottish SI 2006 No 456, TSO.
4. Fire and Rescue Services (Northern Ireland) Order 2006, SI 2006 No 1254 (N19), TSO.
5. Fire Safety Regulations (Northern Ireland) 2010, SI 2010 No 325 (NI10), TSO.
6. Furniture and Furnishings (Fire) (Safety) Regulations 2011, SI 2011 No 917, TSO.
7. BS 5839-1: 2013: Fire detection and fire alarm systems for buildings. Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises, BSI.
12. ROBUST Recommendations for high risk, 2012, FPA.
13. RC18 Recommendations for fire safety in warehouses, 2013, FPA.

Case histories

1. Five teenagers were being sought by police after a shop fire. Officers said they wished to talk to the 14-16-year-olds after a shelf with pet food caught fire in a store at about 16:20 on Saturday. A female member of staff had noticed the blaze in the city centre with an extinguisher and no-one was injured. Officers said the incident could have been serious.
2. A shopping centre was evacuated and a cordon placed around the building following a fire. Fire crews were called to the blaze in the city centre at about 08:30 on Tuesday. The fire and rescue service said an acetylene cylinder in a storage area where work was being carried out caught alight. The centre was closed until midday while firefighters cooled the cylinder with water and smoke and the fire was now out. Crews are cooling the acetylene cylinder using one hose reel jet. The cooling process is expected to take some time,” Four fire engines attended the scene.
3. Fire investigation officers sifted through the wreckage of balloons and cards in a bid to find out how a blaze started at a shopping centre store. Crews were called to a greeting card shop on Monday at 11:30. All stores in the indoor precinct were evacuated although the store itself was contained to just part of one shop.
4. Flames were prevented from spreading by a sprinkler system but water damaged other parts of the indoor section of the centre. Fire crews and shop workers are believed to have saved the fire from spreading. No one was injured in the incident, which involved a quantity of balloons and cards. Firefighting crews used four sets of breathing apparatus and two hose reels to tackle the flames.

16. ROBUST software (Resilient Business Software Toolkit): https://robust.riscauthority.co.uk
18. BDM1 FPA Design guide for the fire protection of buildings: Essential principles, 2007 FPA.
19. FPA Design guide: The protection of buildings: Core principles, 2005, FPA.
20. HSG 107: Maintaining portable and transportable electrical equipment, 2013, HSE.