Permanent Agricultural risk review report

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.

Other Buildings

Sub category

Permanent Agricultural fires account for **3.2%** of all large loss fires.
Fires involving **Other Buildings** account for **1.1%** of all large loss fires and **36%** of all **Permanent Agricultural** fires.

Causation	*Accidental*	*Deliberate*	*Unknown*
Permanent Agricultural	51%	9%	40%
Other Buildings	63%	3%	34%

Time of fire	*Midnight - 6am*	*6am - midday*	*Midday - 6pm*	*6pm - midnight*
Permanent Agricultural	26%	19%	31%	24%
Other Buildings	13%	35%	23%	29%

Impedances	*Access*	*Acetylene*	*Inadequate water supply*	*Resources*
Permanent Agricultural	28%	11%	56%	6%
Other Buildings	17%	17%	67%	

17 Permanent Agricultural fires of **89** had impedances, **1** of these had more than one impedance.
6 Other Buildings fires of **32** had impedances, **0** of these had more than one impedance.

Cost of fire

Permanent Agricultural fires account for **1%** of all large loss financial loss, with a mean average cost of **£325,659** per fire.
Other Buildings fires account for **49%** of all **Permanent Agricultural** loss, with a mean average cost of **£412,923** per fire.

Insurance component	*Material damage*	*Business interruption*	*Contents*	*Resources*	*Machine and plant*	*Stock*	*Other*
Permanent Agricultural	63%	13%	3%	0%	6%	5%	11%
Other Buildings	69%	9%	2%	0%	6%	4%	10%

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 PERMANENT AGRICULTURE – OTHER BUILDINGS

Fire safety legislation

Fire risk assessments should be undertaken for agricultural and horticultural buildings and structures (such as greenhouses and polytunnels) which form a workplace in compliance with the Regulatory Reform (Fire Safety) Regulations 2005 (or equivalent legislation in Scotland and Northern Ireland). In some instances an assessment may also need to be undertaken in accordance with the Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR).

Fire hazards

There are numerous fire hazards associated with agricultural and horticultural buildings; these include:

- Deliberate fire setting.
- Sparks produced from welding, cutting, grinding and other hot work processes.
- Electrical fire hazards from poorly maintained generators, equipment and installations.
- Overheating of combustible materials by heaters and lamps.
- Parked tractors and farm machinery.
- Stored crops, seeds and animal feed.
- Storage of fuel for engines and generators.
- Stocks of agricultural fertilisers and chemicals.
- Accumulations of combustible and flammable waste materials.
- Inadequate water supplies for firefighting.
- Poor access for fire fighting vehicles.

Risk control recommendations

The following risk mitigation measures should be considered to eliminate or reduce the risk of fires involving agricultural and horticultural buildings:

- Give careful consideration to the likelihood of deliberate fire raising at the time of the fire risk assessment especially if there is public access, for example to a farm shop. Implement suitable security measures to reduce the incidence of fire setting; these may include installing security lighting and introducing a high quality CCTV system to monitor the site.
- Review the fire risk assessment periodically, whenever there are significant changes to: the number of people in the workplace, the processes to be carried out, or the nature of the combustible materials to be stored there.
- Identify appropriate hazard zones in the DSEAR assessment (where undertaken) and train staff in the implications of these in the context of the materials being handled and the operations being carried out.
- Plan a strategy for the evacuation of animals where appropriate.
- Avoid hot work wherever possible. Where there is no practicable alternative to the use of acetylene, minimise the time that acetylene cylinders are held on site.
- Wherever practicable carry out hot work processes in a purpose designed area; control work undertaken outside of this by a hot work permit system.
- Engage competent engineers to maintain plant and equipment in accordance with the manufacturers' instructions. Keep suitable records of maintenance and servicing.
- Earth all electrical circuits in accordance with the requirements of BS 7671. The bonding and earthing should be subject to a programme of inspection and testing as determined by a risk assessment. The results should be recorded.
- Ensure that electrical installations are designed, installed and periodically tested by a competent electrician 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.
- Provide power tools and other items of portable electrical equipment that are suitable for outside use where necessary and arrange for them to be inspected and tested at least in accordance with HS(G) 107 and/or the IET *Code of practice for in-service inspection and testing of electrical equipment*. A risk assessment should be used to determine the actual programme of inspection and testing.
- Replace highly flammable and flammable solvents with non-flammable alternatives wherever possible. Where this is not practicable replace low flash point solvents with those having a higher flashpoint.
- Store cans and drums of flammable solvents and fuel in accordance with RISCAuthority Recommendations RC 20-2.
- Store all gas cylinders in suitably signed facilities designed for this purpose in accordance with RISCAuthority Recommendations RC8.
- Store hazardous materials and combustible waste at least 10m from the barn and from outdoor plant or equipment.
- Where herbicides, pesticides and other farm chemicals are stored observe the advice set out in RISCAuthoity Recommendations RC10.
- Cut down undergrowth around buildings regularly; do not treat it with proprietary chlorate based weedkillers.
- Establish a means of giving warning in case of fire. Certain buildings and structures, by their size and nature, may require a formal system incorporating automatic detectors and call points designed to an appropriate category as defined in BS 5839-1. In other cases the fire risk assessment may indicate that whistles, klaxons or air horns may be suitable provided they are clearly audible above any background noise in all areas and can be readily identified as being a fire alarm.
- Where appropriate, and following a risk assessment, consider installing an automatic fire suppression system designed in accordance with BS EN 12845 or other recognised standard to protect the facility.
- Ensure that water supplies in the area are adequate for fire fighting purposes; liaise with the local fire and rescue service where appropriate.
- Ensure that access to the building or structure is readily available for the fire and rescue service.
- Have an effective emergency plan in place to ensure the resilience of the business. One way of approaching this is to complete the ROBUST business continuity and incident management planning software available free from https://robust.riscauthority.co.uk/

Further information

1. Regulatory Reform (Fire Safety) Order 2005, SI 2005 No 1541, TSO.
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 (NI9), TSO.
5. Fire Safety Regulations (Northern Ireland) 2010, SI 2010 No 325 (NI), TSO.
6. Dangerous Substances and Explosive Atmospheres Regulations (DSEAR), 2002, SI 2002 No 2776, TSO.
7. RC7 *Recommendations for hot work*, 2012, FPA.
8. RC8 *Recommendations for the storage, use and handling of common industrial gases in cylinders including LPG*, 2012, FPA.
9. RC10 *Fire safety in agricultural and horticultural premises*, 2011, FPA.
10. RC20 *Recommendations for fire safety in the storage and use of highly flammable and flammable liquids: Part 1: General principles*, 2006, FPA.
11. RC20 *Recommendations for fire safety in the storage and use of highly flammable and flammable liquids: Part 2: Storage in drums, cans and containers other than external fixed tanks*, 2007, FPA.
12. RC49 *Recommendations for reducing business interruption, Part 1: Acetylene cylinders involved in fires*, 2007, FPA.
13. *Business resilience: A guide to protecting your business and its people*, 2005, FPA.
14. The ROBUST software (Resilient Business Software Toolkit) may be found at https://robust.riscauthority.co.uk
15. BS 5839-1: *Fire detection and fire alarm systems for buildings: Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises*, 2013, BSI.
16. *LPC Rules for automatic sprinkler installations incorporating BS EN 12845: (Fixed firefighting systems. Automatic sprinkler systems. Design, installation and maintenance, BSI)*, 2009, FPA.
17. *Fire safety risk assessment: Animal premises and stables*, 2006, Department for Communities and Local Government.

Case histories

1. A number of residents living near the premises had to be evacuated when fire crews tackled a blaze at three commercial greenhouses. Five crews were at the fire which is thought to have started shortly after 14:00. Traffic was diverted from the area. Nobody is thought to have been injured but thick black smoke was blanketing the scene for some time. It is not known how the fire started.
2. Around 40 firefighters were battling a blaze which ripped through a building at a farm on Thursday. At least five fire crews rushed to the scene of the blaze at around 14:20 on Thursday after receiving a 999 call. It is believed a farm outbuilding filled with tyres caught light and as a result thick black smoke was seen billowing from the farm. Workers from the power company were also in attendance in an effort to prevent the blaze from affecting overhead power cables. No one was injured in the fire; the cause is unknown.
3. Firefighters were still at the scene of a farm building fire the next day after being called at 19:54 the evening before. Four appliances were dispatched to the scene of the fire where crews were faced with a farm building which was well alight and containing a large number of bales of hay, barley, farm machinery and around 25 cattle. Firefighters in breathing apparatus used three main jets and one hose reel jet to extinguish the fire. An incident support van, welfare pod and water carrier were also sent to the scene. The team managed to rescue all the cattle from the building. Two appliances remained at the scene and continued to damp down and check for any remaining hot spots.