

# 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](http://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.

## Intensive Farming Sheds

*Sub category*



**Permanent Agricultural** fires account for **3.2%** of all large loss fires.

Fires involving **Intensive Farming Sheds** account for **0.2%** of all large loss fires and **6.7%** of all **Permanent Agricultural** fires.

Causation	Accidental	Deliberate	Unknown
Permanent Agricultural	51%	9%	40%
Intensive Farming Sheds	67%		33%

Time of fire	Midnight - 6am	6am - midday	Midday - 6pm	6pm - midnight
Permanent Agricultural	26%	19%	31%	24%
Intensive Farming Sheds	17%		83%	

Impedances	Access	Acetylene	Inadequate water supply	Resources
Permanent Agricultural	28%	11%	56%	6%
Intensive Farming Sheds				

**17 Permanent Agricultural** fires of **89** had impedances, **1** of these had more than one impedance.

**0 Intensive Farming Sheds** fires of **6** 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.

**Intensive Farming Sheds** fires account for **6%** of all **Permanent Agricultural** loss, with a mean average cost of **£249,333** per fire.

Insurance component	Material damage	Business interruption	Contents	Resources	Machine and plant	Stock	Other
Permanent Agricultural	63%	13%	3%	0%	6%	5%	11%
Intensive Farming Sheds	49%	29%	4%		14%	2%	3%

*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 – INTENSIVE FARMING SHEDS

## Fire safety legislation

Fire risk assessments should be undertaken for intensive farming sheds and similar buildings which form a workplace in compliance with the Regulatory Reform (Fire Safety) Regulations 2005 (or equivalent legislation in Scotland and Northern Ireland).

## Fire hazards

There are a number of fire hazards associated with intensive farming sheds; these include:

- Deliberate fire setting.
- Sparks produced as a result of welding and cutting and also from grinding discs and other hot work processes.
- Electrical fire hazards from poorly maintained generators, equipment and installations.
- Overheating of materials by heaters and lamps.
- Stored hay, straw and animal feed.
- The use of sandwich panels in the construction that incorporate combustible cores.
- Accumulations of combustible and flammable waste materials.
- Inadequate water supplies for firefighting.

## Risk control recommendations

The following risk mitigation measures should be considered to eliminate or reduce the risk of fires involving intensive farming buildings:

- Give careful consideration to the likelihood of deliberate fire raising at the time of the fire risk assessment especially if there are public paths nearby. Suitable security measures should be implemented 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 environment, the numbers of animals being reared, or the nature of the combustible materials being stored in the facility.
- Plan a strategy for the evacuation of animals in case of fire.
- 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 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.
- Store all gas cylinders in suitably signed facilities designed for this purpose in accordance with RISC Authority Recommendations RC8.
- Store hazardous materials and combustible waste at least 10m from the shed and from outdoor plant or equipment.
- Where farm chemicals and animal feed are stored observe the advice set out in RISC Authority Recommendations RC10.
- Cut down undergrowth around the building regularly; do not treat it with proprietary chlorate based weedkillers.
- Establish a means for giving warning of fire and summoning assistance to evacuate animals where necessary. Certain buildings, 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. On other sites the fire risk assessment may indicate that whistles, klaxons or air horns may be suitable provided they are clearly audible above background noises 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.
- Liaise with the local police service if the premises may be identified as a target by animal rights groups.
- Ensure that water supplies in the area are adequate for firefighting purposes; liaise with the local fire and rescue service where appropriate.
- Ensure that access to the buildings 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. RC7 *Recommendations for hot work*, 2012, FPA.
7. RC8 *Recommendations for the storage, use and handling of common industrial gases in cylinders including LPG*, 2012, FPA.
8. RC10 *Fire safety in agricultural and horticultural premises*, 2011, FPA.
9. RC49 *Recommendations for reducing business interruption, Part 1: Acetylene cylinders involved in fires*, 2007, FPA.
10. *Business resilience: A guide to protecting your business and its people*, 2005, FPA.
11. The ROBUST software (Resilient Business Software Toolkit) may be found at <https://robust.riscauthority.co.uk>
12. 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.
13. *LPC Rules for automatic sprinkler installations incorporating BS EN 12845: (Fixed firefighting systems. Automatic sprinkler systems. Design, installation and maintenance, BSI)*, 2009, FPA.
14. *Fire safety risk assessment: Animal premises and stables*, 2006, Department for Communities and Local Government.

## Case histories

1. About 26,000 chickens were evacuated at the height of a barn fire; firefighters were tackling the blaze for over 12 hours. A 200m cordon was placed around the single-storey 100m by 30m building as it contained several gas cylinders. The farmer moved his brood from an adjacent barn to a safe place in case they were caught in an explosion. Fire crews from eight fire stations took part in the operation, during which the main road past the farm was closed as firefighters fought the blaze.
2. About 350 guinea pigs are believed to have been killed in a fire at a pet breeding centre. Police and firefighters were called to the site at about 00:30; four sheds in a 20m by 20m area used to house small mammals were completely destroyed. An investigation by the police and fire service indicated the fire had been caused by an electrical fault. It was initially thought about 1,000 small animals had died at the farm which breeds guinea pigs, rabbits and rats but members of the family which owns the facility managed to save some before being beaten back by the heat and smoke. The fire is believed to have started in a small shed which housed several domestic freezers. It spread from there to another shed, which had no livestock, but burnt so strongly that it spread to the shed next door where there were about 350 guinea pigs.
3. A fire at a pig farm, which led to 700 animals being moved, may have been started deliberately, police believe. Fire broke out in the 50m by 20m building on Saturday night. A fire and rescue service spokeswoman said about 400 tonnes of straw and some farm machinery were on fire and the pigs were removed by lorry from the site. Crews brought the fire under control and remained at the site damping down the fire.