

# Damaged, Returned or Recycled Rechargeable Batteries

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Damaged, returned, or recycled rechargeable batteries can present an increased risk of fire and require careful management to reduce the potential for property damage and the associated trading impacts.

This document is one of a series, providing guidance to help identify, and mitigate the risks related to battery use, handling, and storage.



# Damaged, Returned or Recycled Rechargeable Batteries



## Introduction

Rechargeable batteries are prevalent in the workplace, found in a number of industrial and commercial applications including lift trucks and other mechanical handling equipment; workshop and manufacturing tools, buggies, carts; communications equipment etc.

With this increased usage comes the potential for damage, wear and tear, faults, and end of life battery care, all of which require close management to minimise the risks of fire damage, impacts to trading profitability, and injury to personnel and customers.

For example, Firefighters in Scotland tackled a [fire at a battery recycling facility](#) in June 2024 resulting in catastrophe level damage. A [fire at a battery recycling plant in Wolverhampton](#) in July 2023 led to significant damage, and a further fire/explosion incident was reported at the site in January 2024. Data provided by the National Fire Chiefs Council suggests battery fires in bin lorries and at waste sites in the UK reached an all-time high with over [1,200 battery fires in bin lorries and waste sites across the UK in 2023](#), an increase of 71% from 700 in 2022.

This document is one of a series of battery related Loss Prevention Standards. Other documents in the series provide guidance for specific battery applications or settings.

Note: This standard is not intended to address Liability exposures. It focusses on Property loss prevention and related risk management guidance.

## Understanding the Risks

Batteries can become damaged in a number of ways, such as accidentally dropping or impact incidents whilst in use and even accidental connection between the battery terminals. Lithium-ion batteries can overheat, suffer compression damage or puncturing which can lead to internal short circuiting. In addition, all batteries may simply develop faults due to a latent manufacturing issue. Signs of damage can include overheating, device malfunctioning, unusual odours, leaking and bulging but often the damage or issue is undetectable until combustion commences.

Lithium-ion batteries, when damaged, can become unstable and enter 'thermal runaway', a condition which can result in rapid overheating, release of flammable gases, ignition, flaming and in some cases explosion incidents. Combustion can be intense with wide dispersal of flaming, toxic smoke, and hazardous chemical release. Once alight battery fires can spread to other combustible goods in proximity and quickly overcome fire protections such as sprinklers. These effects can be amplified with multi-celled battery arrangements, with cascading ignition of individual cells, leading to prolonged flaming and increased potential for ignition of other combustible goods in proximity.

Lithium-Ion battery fires can also be difficult to extinguish, and the amount of firefighting water needed for even small fire events can be significant. The post event contamination and pollution including acid gases, smoke and any fire water run off can also create liabilities for the business, damaged reputation, and challenges in resuming trading post loss.

It is important to note that thermal runaway can occur hours and even days after the battery is first damaged or develops a fault, even though it might appear to operate 'normally' in the meantime. The heat growth within the



battery cells is often unseen and can develop over time at different rates. Fires in batteries or cells that have been extinguished can also reignite several days after the initial fire event.

## Risk Assessment and Management of Change

As a priority the premises Fire Risk Assessment should be reviewed to assess the battery related exposures and ensure fire safety arrangements remain adequate. Any actions generated should be addressed promptly. Any obligations under explosive atmospheres regulations, in the UK addressed via The Dangerous Substances and Explosive Atmospheres Regulations 2002, should be investigated and any actions generated should be addressed promptly.

**Producers, and some distributors of batteries, may be required to ‘take back’ damaged and waste batteries from customers and other persons under UK and EU Regulations/Directives.** In the UK this is currently addressed via The Waste Batteries and Accumulators Regulations 2009, which also places responsibility to ensure waste batteries are safely processed, and the credentials of suppliers are checked. Any obligations under these Regulations, or other corresponding International Regulations/Directives, should also be investigated and any requirements complied with.

Whilst there are no defined requirements to notify the local Fire and Rescue Service of the presence of damaged, returned, or recycled Batteries, particularly lithium-ion batteries, at your premises, this may be prudent if battery numbers are significant and a regular occurrence. Such disclosure can aid the Fire and Rescue Service with deployment of firefighting resources and allow for any pre-emptive planning in respect of run off containment to be undertaken. As a minimum you should update any emergency fire information left at the premises for the emergency services to confirm the possible presence of damaged lithium-ion batteries, and their location.

Any proposed changes to business activities should also be managed through a formal Management of Change process to help ensure all stages of the change are progressed with the minimal exposure to the existing arrangements e.g., changes to layout to accommodate charging stations and risk management controls. These proposed changes should also be discussed with your Insurer and Broker.

## Management Policy

A management policy should be introduced detailing the site arrangements in relation to the use, handling, storage, transit and charging of damaged, returned, or recycled batteries, or goods featuring such batteries. This policy should be clearly communicated to all employees, and other applicable stakeholders e.g., visitors etc., along with corresponding Standard Operating Procedures outlining rules and protocols including emergency procedures.

A maximum number of batteries should be permitted to be stored within dedicated areas, and authorisation procedures should be in place to ensure the permitted thresholds are not exceeded. This number must be fully risk assessed based on the weight and size of the batteries and the extent of perceived damage.

Adequate information and training should be provided to **employee’s, contractors,** visitors, and other stakeholders, ensuring they understand the hazards relating to the storage of damaged, returned, or recycled batteries; the importance of inspections; site rules; emergency procedures etc.

**Employee’s** and other relevant persons should be actively encouraged to report any incidents or issues involving damaged, returned, or recycled batteries, or goods featuring such batteries, such as unusual odours, swelling, vibration, heat, inappropriate storage etc. to a responsible person within the business for review.

The Management Policy framework should be supported by at least once daily recorded inspections of storage areas to help avoid deliberate or unintentional breaches of site rules, signs of battery distress, combustible goods being stored in proximity etc. In most cases, daily inspections are recommended.

## Standard Operating Procedures

Standard Operating Procedures (SOPs) in relation to the handling of damaged, returned, or recycled batteries, or goods featuring such batteries, detailing key responsibilities; acceptance, handling and storage requirements and rules; training and retraining frequency; emergency arrangements etc., should be produced, shared with relevant staff, and reviewed regularly.

The formalisation of clear rules and procedures helps to ensure consistent and safe processes and procedures are followed by relevant personnel, reducing the risks of unplanned and unexpected fire events, and mitigating the losses associated with poor or unclear emergency planning.

## Transportation

When arranging transportation of damaged, returned, or recycled batteries, or goods featuring such batteries, whether on behalf of a customer, returning goods to a manufacturer/agent or other premises within your business, only hauliers or couriers suitably experienced in carrying potentially hazardous goods should be utilised.

Damaged batteries should be transported in alignment with any regulations or legislative requirements pertaining to the movement of goods by road, sea, and air and advice should be obtained from legal representatives and/or a competent and reputable transport and shipping company in this regard.

The containers used to transport damaged batteries or goods with battery issues should be suitable e.g., shock/impact and leak proof, and designated for the purpose, in some cases the battery will need to be packed in vermiculite and marked with the necessary warning signage. Relevant Safety Data information should accompany the batteries or goods with battery issues being transported.

Vehicles used to transport batteries may be required to display signage dependent upon the quantity of batteries transported. Courier or Haulier partners should be able to explain the regulatory requirements and detail how they comply with them.

Transportation of damaged, returned, or recycled batteries, or goods featuring such batteries to the manufacturer/agent or designated hub store within the business, should be arranged as promptly as possible and not held on site any longer than necessary.

## Acceptance Arrangements

Where damaged or faulty batteries, or goods featuring such batteries are returned by customers, couriers, hauliers etc., the Standard Operating Procedures should clarify strict acceptance procedures, and be shared with relevant personnel. Considerations should include:

- Provision of an appropriate handover area - This should preferably be an area out of direct sunlight, where personnel or customers are not at risk of injury if the battery enters thermal runaway, provides clear, designated escape routes and fire exits, and which is clear of combustible goods.
- An immediate inspection of the damaged item(s) to assess the extent of damage. This should be completed by suitably trained personnel, fully conversant with the issues relating to such batteries and the possible risks.
- Production and adherence to damage classification definitions - These definitions should be simple, clear and reflect the extent of the damage and suitable signage clearly displayed on or adjacent to the battery/item. For example:
  - Damage level 1 - No signs of physical damage and appearing stable, fault rather than physical damage reported.

- Damage level 2 - Light cosmetic damage only e.g., scratched, lightly marked.
- Damage level 3 – Critical or significant damage e.g., bulging, unusual odours, heavy cracking, or damage to casing.

Note: Colour coding and symbols are recommended to reinforce the prescribed damage levels.

- Immediate handling and storage procedure for goods based on the damage level (Further information is provided below in the section Storage Arrangements).
- Where bought to the premises by a customer, details of the damage or fault, related incidents or effects, collation and storage of customer information including name, address, email address, telephone numbers, date, and time of handover etc.
- Haulier or courier information.

## Battery Charging

Batteries that are physically damaged e.g., damage level 3, should not be charged under any circumstances.

Lightly damaged or faulty batteries, or goods featuring such batteries e.g., damage level 1 and 2, should ideally not be charged within buildings to test the charging capability. Instead, the batteries should be assumed to be damaged or faulty as stated and handled in line with the guidance provided in this Loss Prevention Standard.

Where test charging is unavoidable, charging should ideally be undertaken in a safe, sheltered area in the open and preferably at least ten metres from buildings or other valuable assets and combustible goods.

Where an external charging area is not available, charging should be undertaken within a proprietary charging cabinet or container, which should be:

- Specifically designed for the charging of a small number of batteries,
- Independently tested and approved by a third-party accredited testing organisation and rated to provide a defined fire resistance period of at least 90 minutes.
- **Located in a defined 'safe' area of the premises, preferably a separate fire compartment** but otherwise remote from combustible building linings; at least three metres clear of combustible goods, traffic movements and hazardous trading activities. Demarcation using floor hatching to specify clearance distances is recommended where possible. Additional impact protection may be necessary in areas with significant vehicular movements.
- Fitted with overcharge isolation devices.
- Adequately ventilated.
- Subject to appropriate electrical appliance testing of charging equipment.

Numbers of batteries under test should be minimised to reduce the size of any resultant fire, and limited to the very minimal testing period necessary to assess charging capability and not carried out whilst the area is unmanned or the premises unoccupied.

Note: It is important that where any consideration is being given to the storage and/or charging of batteries that any additional risks posed must be fully assessed, with consideration given to the use of the building and its layout and be subjected to review within the premises Fire Risk Assessment.

The use of non-fire rated cabinets for the charging of damaged, returned, or recycled batteries, or goods featuring such batteries is not recommended.

## Charging and Electrical Hazards

Charging places stress on batteries and is one of the main fire related concerns. The increased load on the electrical supply, which if not well maintained or capable of supplying the demand safely, is also a potential source of ignition.

The following guidance can help reduce the risk of electric faults during charging operations.

- **In all cases all manufacturers' recommendations and local regulatory requirements should be followed.**
- All fixed charger **points should be installed and maintained in accordance with manufacturer's instructions** and by a competent trained electrician (In the UK - such as those with current NICEIC, ECA, NAPIT accreditation).
- The circuit(s) supplying the charging points should be checked to ensure it has capacity for the proposed additional electrical load.
- All chargers should be suitably rated for the devices they are due to charge.
- Surge protection safety devices should be installed and regularly tested.
- Where possible as much of the wiring should be hard wired.
- Routing of cabling should be carefully considered, particularly if multiple cables are running through cable trays, as current draw may cause excessive heating within trays or conduits.
- All chargers should be clearly labelled and if different chargers or chargers with different ratings are proposed to be in use in the same area, the chargers should be grouped to help avoid confusion. Users should ensure the right charger with the correct rating is being used to charge the corresponding battery/device in question.
- The design and layout of the area should ensure charging cables do not become overstretched, tangled, or can be damaged.
- All chargers should be arranged with a clearly labelled and readily accessible master isolation switch that is not in the same fire area as the charger itself.
- Depending on the nature of the arrangements and chargers used, these should be considered within all required electrical fixed wiring or portable appliance testing.
- If any charging equipment is damaged or is faulty it should immediately be removed from use, repaired, or discarded and the charging equipment isolated safely as necessary.
- The use of extension leads and/or multi plug adaptors should be prohibited.
- Thermographic cameras should be routinely used on the batteries and the charging equipment to check for hot spots and overheating components.
- An annual formal infra-red thermographic inspection of the charging infrastructure is also recommended.

## Storage Arrangements

Damaged, returned, or recycled batteries, or goods featuring such batteries should not be stored at the premises longer than is necessary, and a strict rule to this effect should be established within your Standard Operating Procedures, detailing arrangements, and responsibilities for prompt collection/removal.

Wherever possible an external, non-combustible storage facility should be used, located as far from buildings, valuable assets, and combustible goods as possible. In most cases at least 10 metres separation is recommended.

If this clearance is unachievable, consideration should be given to safe off-site storage; upgrading the fire resistance of the external storage facility or the installation of a [fire barrier](#) providing a fire resistance rating of at least 60 minutes between the storage facility/area and the buildings, valuable assets or combustible goods.

Internal storage of any damaged or faulty batteries, or goods featuring such batteries is not recommended and should be avoided if possible. Where this is unavoidable, storage should be within either a proprietary storage cabinet for smaller numbers of batteries, or a designated storage room for larger numbers of batteries. 90 minutes fire resistance rating is recommended.

Recommended specifications for the proprietary storage cabinet are provided above – see Battery Charging.

Where a storage room is preferred, this should be:

- Of non-combustible construction providing a fire resistance rating, including the ceiling of at least 90 minutes and,
- Fitted with an appropriately tested and accredited fire door, providing at least 90 minutes fire resistance, and kept closed when not in use.
- Fitted with lighting and any necessary electrical fittings with an appropriate explosivity rating, to reflect the potential presence of explosive vapours.

Note: An increased fire resistance rating of 120 to 240 minutes should be considered for significant numbers of physically damaged batteries e.g., damage level 3; where larger batteries/battery packs or larger numbers of smaller batteries are stored, or as stipulated within the premises Fire Risk Assessment.

Additionally, the store should not feature any other openings, such as windows and deposit slots unless fitted with fire shutters certificated to LPCB Loss Prevention Standard - LPS 1056: Issue 6.2 Requirements for the LPCB Approval and Listing of Fire Door sets, Lift Landing Doors, and Shutters, providing at least 90 minutes fire resistance.

Any openings for cabling and pipework etc. should be adequately fire stopped and/or fitted with intumescent collars to ensure the 90 minutes integrity of the store is maintained in the event of ignition. Intumescent collars should be used to protect pipework which could collapse or melt in the event of fire filling any voids created and providing a fire barrier.

The installation of fire shutters and fire doors should be completed by a company certificated to LPCB Loss Prevention Standard Installation of Installation of LPS 1271: Issue 2.3 Requirements for the LPCB Approval and Listing of Companies Installing Fire or Security Doors, Door-sets, Shutters and Active Smoke/Fire Barriers.

Installation of other passive fire protection products such as fire stopping should be completed by a company certificated to LPCB Loss Prevention Standard - LPS 1531: Issue 1.2 Requirements for the LPCB approval and listing of companies installing or applying passive fire protection products.

Maintenance of such protections should be completed by a company certificated to LPCB Loss Prevention Standard - LPS 1197: Issue 4.2 Requirements for the LPCB approval and listing of companies inspecting, repairing, and maintaining fire and security doors, door-sets, shutters, and active smoke/fire barriers.



The storeroom should not be used for any other purpose and a clear distance maintained between the storeroom and its openings of preferably at least three metres. Marking the flooring to specify clearance distances is recommended.

The maximum storeroom temperatures should be assessed, and cooling/heating systems configured to automatically operate prior to recommended battery temperature thresholds being met. Automatic heating/cooling systems should be suitable for use in potentially explosive environments and be subject to routine testing to ensure safe operation when required.

Depending on the number of batteries in store, explosion relief systems may be necessary. This should be assessed by a suitably competent person or consultant within an explosion/DSEAR assessment, and any recommended actions implemented.

Note: Under no circumstances should damaged or faulty lithium-ion batteries be deposited with other general waste, or within recycled battery bins, as seen in many retail outlets, with other battery types.

## Ventilation

In addition to preventing the spread of fire, the safe management of smoke and gas emissions resulting from lithium-ion battery combustion, off gassing or thermal runaway should be considered.

To minimise the potential for fire, explosion and/or undue smoke contamination you should arrange for appropriate, mechanical means of ventilating storage or charging rooms to be installed. The potential explosivity of emitted gases should be assessed, and ventilation systems rated as suitable for use in explosive atmospheres as appropriate. This is of additional concern given the production of hydrogen gas that can be generated when firefighting water is applied to lithium-ion battery fires.

The exhaust point of the ventilation system should be to a safe area in the open, and not located in an area where any exhausted smoke could compromise the air intake of the building or that of neighbouring properties.

The ventilation system should be continuous and not actuated or stopped by performance of any fire protections and be subject to a formal inspection and maintenance programme by appropriately qualified and competent personnel.

## Inspection of Damaged, Returned or Recycled Batteries and Storage Facilities

Facilities used for the storage of damaged, returned, or recycled batteries, or goods featuring such batteries should be inspected at least once daily to check for signs of instability, decay, etc. Where safe to do so any batteries stored internally and exhibiting signs of distress should be removed from the premises to a cordoned area in the open, and as far from buildings, other assets, and combustible goods as possible. In most cases at least 10 metres separation is recommended. The emergency services should be contacted if the battery emits smoke, gas etc., or enters thermal runaway.

Regular self-inspections and visual checks should be undertaken of battery storage facilities for signs of damage or fault to the structure, fittings, fire protections or ventilation equipment. Ideally this should be undertaken at least weekly. The use of photographic evidence with such inspections can prove invaluable.

Thermographic camera inspections can also prove invaluable for such inspections. These are relatively inexpensive and can be used to check on the batteries in store or whilst the batteries are being test charged.



## Emergency Response

Given the risks associated with lithium-ion battery fires, an emergency response plan should be produced specifically developed to outline key responsibilities and actions in an emergency event involving damaged, returned, or recycled batteries.

The explosive potential of lithium-ion batteries is increased when enclosed within compartments, particularly when oxygen levels increase suddenly, such as when compartment doors are opened. Access into such compartments during a fire event should ideally be limited to firefighters or other approved persons.

The emergency response rules should be formally documented, and appropriate training provided.

## Fire Protections

### Automatic Fire Detection

Charging and storage of damaged, returned, or recycled batteries, or goods featuring such batteries undertaken internally should be within an area of the premises covered by the sites automatic fire detection system. Detection should also be extended to any external charging areas where canopies or protective enclosures have been installed.

Where not installed, automatic fire detection should be provided in all areas/rooms of the buildings to include the storage/charging areas. In the UK this should ideally be compliant with Category L1 or P1 of BS 5839-1:2017 - Fire detection and fire alarm systems for buildings - Code of practice for design, installation, commissioning, and maintenance of systems in non-domestic premises. This is vital for life safety and early notification to the Fire and Rescue Service.

Given the potentially damaged nature of the batteries stored and their vulnerability to fire, the use of thermal and aspirating detection technology, which can provide very early warning of issues such as overheating batteries or initial gas releases are recommended, and guidance should be obtained from an accredited fire alarm installer.

A means of manually raising the fire alarm should also be provided, especially in the storage/charging area if it exposes any other assets.

Any plans to change the existing fire detection system or install a new fire detection system should be discussed with your Insurer and Broker.

### Automatic Sprinkler Protection

Where an existing automatic sprinkler system is installed, the design should be adequate for any changes in risk profile. A suitably accredited sprinkler maintenance company, such as one approved to LPCB Loss Prevention Standard LPS 1048: Requirements for the approval of sprinkler system contractors in the UK and Ireland, should be asked to confirm the sprinkler density, water supply demand and water supply duration are likely to be adequate and provide recommendations for enhancing the protection where necessary. Storage methods and **packing materials used should support 'wetting' of stored stock in proximity to the seat of the fire, to help hinder fire growth and spread.**

Note: International sprinkler standards have not yet developed clear and specific guidance on protecting against the risk of lithium-ion battery fires in all scenarios, and any recommended solutions are likely to be based on the judgment and experience of the sprinkler company. Any recommendations in relation to automatic fire protections should be discussed with your Insurer and Broker as early as possible for advice and guidance.

## Alarms

Alarms associated from the above should raise a site fire alarm to ensure there is an appropriate emergency response and escalation if needed. If not already in place you may wish to consider connecting the alarm to a constantly attended location or an approved Alarm Receiving Centre. An accredited fire alarm installer can provide further guidance and assistance.

### Off-Gassing Detection

These systems provide sensor and gas detection for stationary lithium-ion battery systems such as Battery Energy Storage Systems, data centres and electric vehicles whilst under load, and work by detecting gases released in the early stages of battery failure, **commonly known as 'off gassing'**. The system can be interlocked to the power supply to isolate upon the detection of gases and prior to thermal runaway. Whilst beneficial such systems are unlikely to be suitable for the applications discussed in this document. An accredited fire alarm installer can provide further guidance and assistance if required.

### Interlocks

The use of interlocks may help reduce the potential for an overheating lithium-ion battery or cell to enter thermal runaway. As such, the actuation of any of fire protections and alarms should be interlocked to de-energise the power supplies and isolate charging equipment. The interlocks should be tested at least annually and restored following any impairment to the fire protection and alarm systems.

### Fire and Rescue Service

Whilst there are no defined requirements to notify the local Fire and Rescue Service of the presence of lithium-ion batteries at your premises, this may be prudent if battery numbers in use or storage are significant. Such disclosure can aid the Fire and Rescue Service with deployment of firefighting resources and allow for any pre-emptive planning in respect of run off containment to be undertaken. Local Fire and Rescue Services are often amenable to inspecting premises to evaluate fire risk exposures and offer guidance upon request, however as a minimum you should update any emergency fire information left at the premises for the emergency services to confirm the presence and location of damaged, returned, or recycled battery charging rooms or containers (firefighters may opt to leave these environments sealed to prevent oxygen ingress).

It is important to maintain suitable access for the Fire and Rescue Services and consider the distances and location to the nearest source of fire water or hydrant that they may need use. The location and number of fire hydrants in the proximity of the premises should be documented in an emergency response plan or shown on appropriate drawings.

It is also good risk management practice to know what water supplies are available for the Fire and Rescue Service to use. Therefore, site management should always establish:

- What fire water is available.
- With static pressure, flows and residual pressure test results.
- Whether additional resources, such as a private hydrant system or water storage tanks are necessary.

Fire and Rescue Service access to the storage and charging areas including smoke ventilation and emergency signage should be carefully considered, as should the risks to neighbouring properties including storage in yard areas, and any local environmental features e.g., ponds, lakes etc. from fire, smoke and firefighting water runoff should be assessed and any necessary damage mitigation measures agreed.

## Fire Extinguishers

Fire extinguishers specified for use in tackling lithium-ion battery fires are available, however whilst potentially providing some benefit require very early application and, may not fully extinguish a developing fire involving larger lithium-ion battery arrangements or prevent the batteries reigniting. The volatility of lithium-ion battery fires and their explosive characteristics also presents significant injury risks to persons tackling such a fire in proximity, and as such their use should be carefully considered within the premises Fire Risk Assessment.

## Impairments

Ensure any impairments relating to fire detection and protection systems are reported to your Insurer and Broker. Temporary changes may be necessary to some arrangements whilst impairments are ongoing.

## Business Continuity

Every business should have a formal Business Continuity Plan in place. This should be reviewed to ensure disaster recovery and continuity arrangements remain adequate. Any actions generated should be addressed promptly.

## Key Action Steps

- Ensure relevant Risk Assessments have been reviewed to include the presence of damaged, returned, or recycled batteries.
- Produce and share a management policy with clear rules within Standard Operating Procedures.
- Adopt strong acceptance controls, keeping batteries in a safe area until assessed for damage levels.
- Ensure safe storage and charging measures are in place to minimise the risk of fire damage or fire spread in the event of ignition. Contain any internal storage and charging within fire resistance rated cabinets and/or compartments.
- Arrange for prompt removal of damaged, returned, or recycled batteries, and use only reputable approved hauliers/couriers only for transporting damaged, returned, or recycled batteries.
- Complete at least daily self-inspections to ensure batteries, equipment and storage facilities are in good order. Use thermographic cameras.
- Introduce emergency procedures and provide appropriate training to staff and contractors.
- Ensure fire detection systems and other fire protections are appropriate.
- Review Disaster Recovery and Business Continuity plans.

## Checklist

A generic [Battery Checklist](#) is available, which can be tailored to organisation's needs.

## Specialist Partner Solutions

Aviva Risk Management Solutions can offer access to a wide range of risk management products and services at preferential rates via our network of Specialist Partners, including:

- Fire risk assessment: [Cardinus Risk Management](#).
- Explosion/DSEAR Risk Assessments: [Bureau Veritas](#).
- Fire stopping, fire resistant enclosures and passive protection: [Checkmate Fire](#)
- Charging cabinets: [Denios](#)
- Thermographic imaging and PAT testing: [PASS](#)
- Automatic fire detection and portable extinguishers: [SECOM](#)
- Business continuity: [Horizonscan](#)

For more information please visit: [Aviva Risk Management Solutions – Specialist Partners](#)

## Sources and Useful Links

- [The Dangerous Substances and Explosive Atmospheres Regulations 2002.](#)
- [The Regulatory Reform \(Fire Safety\) Order 2005.](#)
- [The Fire Safety \(Scotland\) Regulations 2006.](#)
- [The Fire \(Scotland\) Act 2005.](#)
- [The Fire and Rescue Services \(Northern Ireland\) Order 2006.](#)
- [The Waste Batteries and Accumulators Regulations 2009](#)
- [The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009](#)
- [BS 5839-1:2017 - Fire detection and fire alarm systems for buildings - Code of practice for design, installation, commissioning, and maintenance of systems in non-domestic premises.](#)
- [LPS 1056: Issue 6.2 Requirements for the LPCB Approval and Listing of Fire Doorsets, Lift Landing Doors and Shutters.](#)
- [LPS 1271: Issue 2.3 Requirements for the LPCB Approval and Listing of Companies Installing Fire or Security Doors, Door-sets, Shutters and Active Smoke/Fire Barriers.](#)
- [LPS 1531: Issue 1.2 Requirements for the LPCB approval and listing of companies installing or applying passive fire protection products.](#)
- [LPS 1197: Issue 4.2 Requirements for the LPCB approval and listing of companies inspecting, repairing, and maintaining fire and security doors, door-sets, shutters, and active smoke/fire barriers.](#)
- [LPS 1048 approved sprinkler contractors - UK and Ireland.](#)
- [LPS 1048: Issue 5.0 Requirements for the approval of sprinkler system contractors in the UK and Ireland.](#)

Note: Whilst UK standards and legislation are referenced in this document, other international standards and legislation should be referenced where applicable.

## Additional Information

Relevant Loss Prevention Standards include:

- [Lithium-ion Batteries - Storage and Transit](#)
- [Business Continuity](#)
- [Contamination Following a Fire](#)
- [External Building Areas - Usage and Safety](#)
- [Fire Compartmentation](#)
- [Fire Doors, Fire Shutters and Fire Dampers](#)
- [Fire Safety Inspections](#)
- [Fire Safety Legislation](#)
- [Heat and Smoke Venting Systems](#)
- [Managing Change - Property](#)
- [Smoke Contamination](#)
- [Thermographic Surveys](#)

To find out more, please visit [Aviva Risk Management Solutions](#) or speak to one of our advisors.

Email us at [riskadvice@aviva.com](mailto:riskadvice@aviva.com) or call 0345 366 6666.\*

\*The cost of calls to 03 prefixed numbers are charged at national call rates (charges may vary dependent on your network provider) and are usually included in inclusive minute plans from landlines and mobiles. For our joint protection telephone calls may be recorded and/or monitored.

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