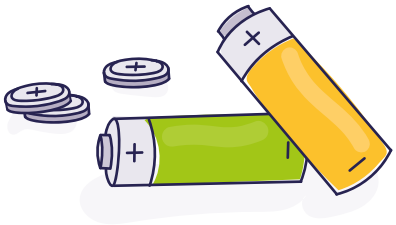
# The business guide to battery recycling

Batteries are used in our everyday life at home and work, providing us with a portable, convenient power source for many of our devices.

However, with awareness growing of the dangers that improper battery disposal can pose, businesses across the UK must play their part in ensuring this type of waste is recycled responsibly.



## How to recycle batteries responsibly

### Never put batteries in your general waste or recycling bin.

During normal waste processing, batteries may get punctured or damaged which can cause them to ignite. Most batteries are classed as hazardous waste and all businesses have a responsibility to dispose of waste responsibly.

In recent years, vapes (e-cigarettes) have become a very popular alternative to cigarettes. The incorrect disposal of used vapes has become an environmental and safety issue for many organisations and local authorities.

Discarded vapes are classified as hazardous waste, containing heavy metals, nicotine and a lithium battery, which also makes them WEEE waste.

It is therefore a legal requirement to separate these from general waste and dispose of them at an approved and permitted hazardous WEEE waste facility.

You may need to arrange for a commercial waste management company to collect this type of waste.

SUEZ recycling and recovery UK provides waste collection services for hazardous waste such as batteries and vapes, to ensure they are disposed of in a safe and compliant manner.

**If you would like any support with battery collections for your business, please contact us.**

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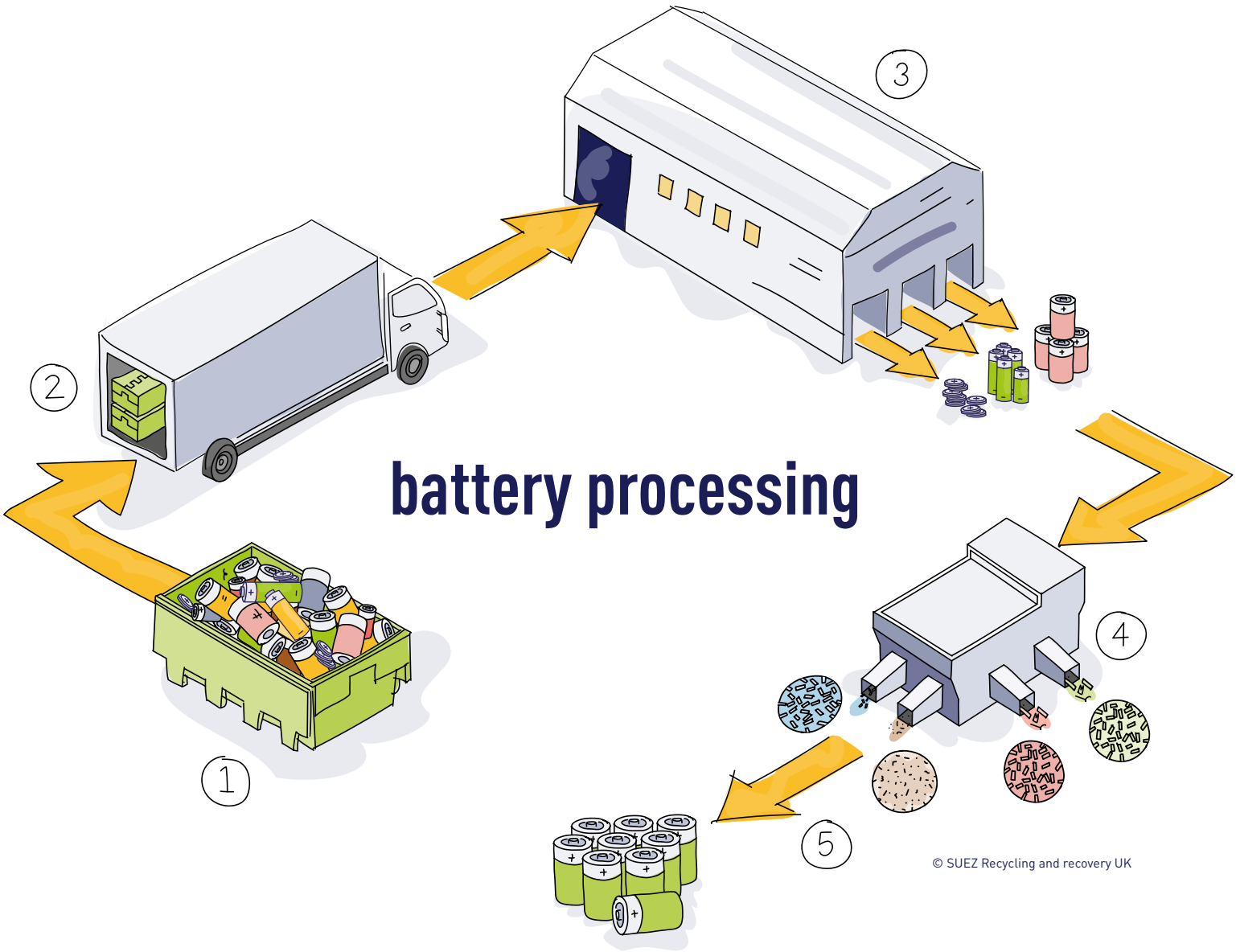
## What happens to batteries?




1. **Batteries are collected in designated containers, ready for collection from business premises.**
2. **They are transported by a licensed carrier to a centralised processing facility.**
3. **The batteries are then processed and sorted by type of battery and by material compounds.**
4. **The materials are separated using a range of different techniques, dependent on the compounds present.**
5. **The raw materials are sent for reproduction.**

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# Frequently asked questions

## Why are batteries likely to be damaged during disposal and collection?

When batteries are placed in your general waste bin, they are likely to be crushed, punctured, shredded and exposed to liquids. When batteries become damaged, even to a small extent, not only can their hazardous contents leak out and cause environmental harm, but some batteries can become very hot and set fire to other waste material around them, causing large fires and putting recycling and waste workers at risk.

## Why can't I recycle my batteries in mixed recycling bin?

When your mixed recycling is collected, it goes through various hand and mechanical sorting processes to make it ready to be turned into new things. These processes are not designed to accept batteries, so batteries can end up contaminating your recycling or can be easily damaged during sorting – leading to serious fires.

## Can all types of batteries cause fire?

All types of batteries can pose a risk of fire when damaged, but some can be particularly dangerous if they're not recycled responsibly.

Certain rechargeable battery types most often found in portable electronic devices like laptops, tablets, mobile phones, cameras, power-tools, remote controls and toys and even e-cigarettes, are particularly prone to causing fires because they can release lots of energy quickly, and in an uncontrolled way, if they are damaged or exposed to liquids.

The use of lithium-ion batteries is rapidly increasing across a wide range of products. Although safe to use normally, if damaged, these batteries can be particularly dangerous, so please recycle them responsibly.

## How does responsible battery recycling work?

When batteries are recycled responsibly, they are stored together, only alongside other batteries, in safe containers.

They are then carefully collected and taken to facilities which specialise in safe battery sorting and recycling.

## What shall I do with batteries that are concealed in the product?

If you can safely remove the battery from the product, please do so. Batteries and waste electrical items should be recycled separately.

However, some electronic devices contain rechargeable batteries which cannot be easily removed from the product. If you no longer want one of these products or if the product is broken and you wish to recycle it, please recycle it with the battery inside, alongside other small waste electrical items (WEEE), or as part of your business hazardous waste collections.

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# Benefits of recycling batteries

## Keep everyone safe

When batteries are incorrectly disposed of, such as thrown into a recycling or general waste bin, they can get punctured during the waste disposal process causing them to ignite. Incorrectly disposed of batteries can cause fire in your business premises or waste facilities.

It's estimated that almost half of fires in waste facilities are started by batteries. This not only puts workers' safety at risk but can also cost millions in damage to facilities. We **captured shocking footage**[1] at the recycling centre in Aberdeen, which shows just how quickly a fire can take hold, and it's believed the likely cause of the fire was a battery that a resident had accidentally put into their bin.

## Remain compliant

Your business is legally required to send batteries for recycling if you sell or manufacture batteries, or supply products that contain batteries. Adhering to the waste legislation and **regulations**[2] is key for safety and minimising costs and reputational damage. What's more, all businesses have a duty of care to ensure the hazardous waste they generate, such as batteries, are disposed of responsibly.

## Conserve natural resources

Batteries can **contain rare and valuable metals**[3] such as lithium, nickel, cobalt and copper, many of which are not found in the UK and could be non-renewable. When batteries are recycled, these materials are extracted and reused, which reduces our need to mine raw materials.

## Produce new products

When the raw materials are recovered from batteries, they can be recycled into new batteries or other products and used across industries including in manufacturing and construction.

## Keep harmful materials out of the environment

Many of the substances that can be reused to create new products can also become hazardous if they end up in landfill. When batteries become eroded or damaged, they can release toxic chemicals, polluting soil and waterways, having a detrimental impact on our environment and the wildlife which inhabits it.


1 https://www.youtube.com/watch?v=6l94tWf3XZE
2 https://www.legislation.gov.uk/uksi/2009/890/contents/made
3 https://www.faraday.ac.uk/wp-content/uploads/2024/07/Faraday_Insights_20_FINAL.pdf

# Guidance on lead acid batteries containing persistent organic pollutants (POPs)

The Environment Agency has issued guidance on the waste management of lead acid batteries which contain or may contain persistent organic pollutants (POPs) in England. This applies to automotive, industrial, and portable lead acid batteries.

## What are POPs?

**POPs**[1] are organic chemical substances that do not break down and are a danger to human health and the environment.

## How to identify lead acid batteries which contain POPs

You can identify whether a waste lead acid battery may contain POPs by checking:

- **The type of plastic the case is made from:**

  If the battery case is made of polypropylene plastic only, it is unlikely to contain POPs.

  However, if the waste lead acid battery case contains other plastics – for example acrylonitrile butadiene styrene (ABS) – it may contain POPs.

- **The presence of bromine in the polymer:**

  Under certain circumstances, x-ray fluorescence (XRF) can be used to scan the plastic case for bromine, an indicator of the presence of brominated flame retardants including POPs.

  If you cannot confirm the plastic type or bromine content, you must assume the battery contains POPs.

## Waste classification and documentation

If batteries may contain POPs, you should:

- Clearly describe them as "containing POPs" on the waste consignment note.
- List the following chemicals in the composition:
  - Decabromodiphenyl ether
  - Hexabromodiphenyl ether
  - Antimony trioxide

Ensure the waste is correctly classified. Refer to the UK government guidance for further details.

## Disposing of waste lead acid batteries containing POPs

To comply with POPs guidance, lead acid batteries, or the material containing POPs, must be destroyed using one of the following methods:

- an incinerator (D10 or R1 hazardous waste, municipal waste, or cement kiln)
- a metal smelter (R4) to destroy the POPs

The facilities must be authorised to accept POPs waste.

## Export restrictions

Anyone exporting lead acid batteries from England to destinations outside the UK must notify the Environment Agency and obtain its consent before proceeding.

## Further information

For further information on this guidance including pre-treatment and exporting POPs containing lead acid batteries, please visit **the government website**[2].

1 https://www.suez.co.uk/en-gb/news/blog-230130-changes-to-guidance-on-the-management-and-disposal-of-items-containing-persistent-organic-pollutants-pops
2 https://www.gov.uk/guidance/manage-waste-lead-acid-batteries-containing-pops

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