

Battery Recycling

Current Recycling Practices

Currently, rates of recycling of all battery types in the UK, except automotive batteries, are very low: less than 3% of portable batteries recycled. New regulations which came into force on the 5th May 2009 require recycling levels to rise to 25% of portable batteries by 2012, and 45% of batteries placed on the market by 2016. This equates to over 500 million batteries.

Batteries account for less than 0.0001% of domestic waste. Despite extensive trials there has never been any evidence that batteries have a negative impact on the environment. However, batteries contain heavy metals which are hazardous, and there are concerns about the damage these metals can do to the environment if the batteries are disposed of incorrectly.

G & P Batteries is the UK's leading waste battery collection and battery recycling specialist having opened the UK's first battery recycling centre. They can recycle practically all battery types, and employ two different processes for extracting the different constituents. These processes are Pyrometallurgical – where the batteries are put in a furnace to extract some of the metals, and



Hydrometallurgical – where the contents of the batteries are dissolved in acid and the metals recovered chemically.

Only a few local authorities currently operate battery collection schemes. You may be able to recycle batteries at your local recycling centre. Previously, local authorities were discouraged because batteries had to be sent to Europe to be recycled; the financial and environmental costs of the transport far outweighed the value as well as the environmental benefits of recovering materials from the spent cells.

Interesting Facts

- In 2007, 260 million batteries were bought in the UK.
- 30,000 tonnes of waste batteries are produced in the UK every year, but on average only 1,000 tonnes are recycled.

There are numerous battery types used in consumer, commercial and industrial applications. The common battery technologies and applications are presented in the following table.

| Battery Type | Technology | Typical Use |
|-----------------------------|--|--|
| Consumer (non-rechargeable) | General purpose (alkaline manganese & zinc carbon) | Clocks, portable audio devices, torches, toys, cameras. |
| | Button cells (zinc air, silver oxide) | Watches, hearing aids, calculators. |
| Consumer (rechargeable) | Nickel Cadmium (NiCd), Nickel Metal Hydride (NiMH) & Lithium Ion | Cellular phones, power tools, cordless telephones, laptops, emergency lighting. |
| | Lead Acid | Torches, laptops, telephones. |
| Automotive | Lead Acid | Automotive/Motorcycle Starter, Lighting and Ignition (SLI). |
| Industrial | Lead Acid Standby | Alarm systems, emergency back-up systems, e.g. rail and telecommunications applications. |
| | Lead Acid Traction | Motive power sources, e.g. forklift trucks, milk floats. |
| | Nickel Cadmium (NiCd) | Motive and standby applications, e.g. satellite and rail applications. |

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Links

REBAT

<http://www.rebat.com/collectionwebpage.htm>

REBAT is an initiative managed by the British Battery Manufacturers Association to encourage collection of nickel cadmium batteries in the UK, as required under European legislation.

Waste Online

www.wasteonline.org.uk/resources/InformationSheets/Batteries.htm

Information on recycling and legislation for batteries.

RABBITT

www.rabbittrecycling.co.uk

Collects batteries for recycling from the commercial sector