





Materials contained in batteries are finite, for the most part highly recyclable, and essential for future energy security. From [recent research](#) conducted by the United States Geological Survey, an analysis of material security with regard to key metals contained in batteries e.g. cobalt and lithium, we can infer that demand for limited resources will increase significantly in the future – either directly or via limited access to battery powered products. By transforming the battery recycling sector, Australia will be well placed to secure our own need for these materials and secure export markets for these increasingly scarce materials.

### Option 1. TO REQUIRE SECURE BATTERY COMPARTMENTS

ABRI proposes that if Option 1 is adopted, ACCC also mandate that:

- ◆ information regarding the location of batteries, battery and/or chemistry type, and methods for removing batteries from the product at end of life with the product or via other publicly available information.
- ◆ such batteries be required to be easily removed by a recycler using commonly available tools. This approach has precedence in the IEEE Standard for Environmental Assessment of Personal Computer Devices (see Attachment 3).

Providing this information would protect workers in the waste management and recycling sector and prevent button batteries from being inadvertently shredded or damaged resulting in combustion and release of toxic gases. Such incidents have the potential to seriously impact worker health and safety and would also result in significant mitigation costs to the industry.

### Option 2: Mandate that batteries are supplied in child-resistant packaging

ABRI proposes that if Option 2 is adopted, ACCC also mandate that the child-resistant packaging be designed to enable safe storage of batteries at end-of-life so that batteries can be safely transported to an appropriate waste disposal or recycling drop off location. ABRI and ACCC has previously collaborated on a prototype that could be used as a practical example.

Prototypes c1, 3A, & 3B.



Providing this additional requirement would facilitate safe storage and recovery of batteries at end of life, and enable batteries contain toxic and flammable materials to be responsibly managed. It would also ensure that non-renewable resources are made available for recycling and value adding. It is worth noting that some materials in lithium batteries (i.e. cobalt) are sourced from the Democratic Republic of Congo which has serious child and slave labor issues and as such should not be discarded lightly.

### Option 3: 1&2, PLUS ADDITIONAL WARNINGS AND INFORMATION

ABRI proposes that if Option 3 is adopted, ACCC also mandate the inclusion of a requirement for warnings and information to include information about safe disposal of batteries.

This is important as it would reduce risks to the community arising from ingesting batteries but also from risks associated with improper storage and disposal of button batteries.



Placing a button battery directly into the rubbish bin creates a risk that the battery could be damaged or short circuited if the terminal comes into contact with another battery or a metal object. Such damage and short circuits have been associated with combustion.

This risk can be greatly reduced if the terminals (located on the flat sides of the battery) of the batteries are taped prior to disposal or recycling.

Providing information to consumers about the risks associated with storage and management at the end of life would greatly reduce this risk to consumers of fires in the home.

Providing this information would also reduce fires in:

- ◆ waste collection trucks
- ◆ landfills which have been shown to create extremely hazardous emissions that impact the health of surrounding communities in both the short and medium term.

### PROPOSED EXEMPTION FOR HEARING AID DEVICES AND ZINC AIR BATTERIES

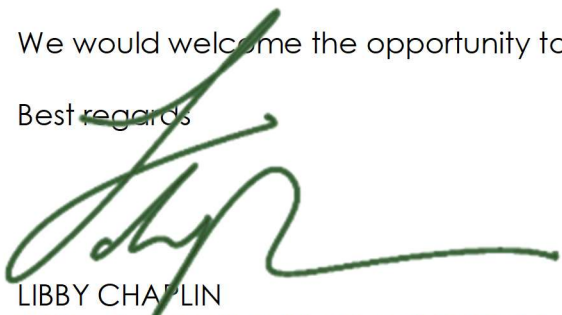
ABRI does not support this proposal. All batteries are subject to ingestion (ears, nose and throat) and medical advice indicates that the results are very serious. In addition, ABRI is over the view that simpler messaging, including a clear message that all button batteries, is preferred.

### BATTERY STEWARDSHIP

ABRI would also like to see the inclusion of requirement that if a battery stewardship scheme is established, that the battery manufacturer/importer either join the scheme, create their own supply chain stewardship scheme or pay a penalty. This would enhance the development of a local battery recycling industry that can support safe recovery and recycling of button batteries.

We would welcome the opportunity to talk with you further on these subjects.

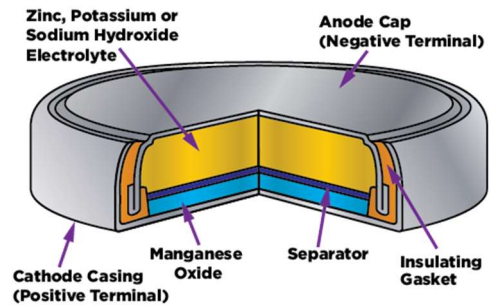
Best regards



LIBBY CHAPLIN  
CEO, AUSTRALIAN BATTERY RECYCLING INITIATIVE

### SUPPORTING ATTACHMENTS

- Attachment 1. ABRI Button Cell Battery Guidelines
- Attachment 2. Example of a Button Battery Safety Data Sheet
- Attachment 3. Extract from IEEE 1680.1 Standard for Environmental Assessment of Personal Computer Products.





## Attachment 1. ABRI Button Cell Battery Guidelines



**WHAT ARE BUTTON BATTERIES?**



Button, disc and coin batteries are widely used in electronic devices such as hearing aids, thermometers, greeting cards, calculators, remote controls, children’s toys, kitchen scales, watches, tea-light candles, and flashing jewellery.

Button batteries contain valuable natural resources that can be recycled into new products, reducing the need for mining raw materials from the natural environment.



**SAFETY WARNING**

**Button batteries are extremely hazardous to children & vulnerable people**

Examples of vulnerable people include older people and people who have special needs or visual impairment.

**BE AWARE OF THE HAZARDS**

**☠ If swallowed or inserted into the body, button batteries can lodge in the oesophagus, ears or noses resulting in internal burns**

The electric current in button batteries (not leaking battery acid) turns saliva into a caustic solution that can burn in as little as two hours. In Australia two children have died from button battery injuries.

**☠ Delayed symptoms**

Button batteries can be swallowed without choking or coughing. Children and vulnerable people may not be able to communicate about their experience. Unless someone sees them swallow a battery, parents or carers may be none the wiser.

**☠ Button batteries may be mistaken for pills**

Hearing aid users or those with poor eyesight may accidentally swallow button batteries.

**☠ Even low voltage can be dangerous**

Lithium batteries are dangerous even when they stop working as they still retain some voltage.

**☠ Risk of fire**

Some batteries present a low but real risk of catching fire if they are damaged or if their terminals short-circuit (see next page for details).

**IMPORTANT SAFETY INFORMATION**

If you suspect a child or adult has swallowed or otherwise ingested a button battery:

- ☉ don’t wait for symptoms to develop - immediately call the Poisons Information Centre: 13 11 26
- ☉ go straight to the hospital, not to a doctor
- ☉ prevent victims who may have swallowed a button battery eating or drinking. Do not induce vomiting
- ☉ if possible, take the device and the battery packaging to help you identify the battery type

**BUTTON BATTERY SAFETY TIPS**

**When buying new batteries or equipment**

- ☉ Choose products with a sealed battery compartment.
- ☉ Choose products that prevent easy access to battery compartments.
- ☉ Only buy button batteries in childproof packaging.
- ☉ Give priority to products using rechargeable button batteries and those made with recycled content.
- ☉ Always read the directions before use.

**Keep button battery products away from children or vulnerable people**

- ☉ Ensure open packs of batteries are kept out of reach of children.
- ☉ Store batteries in a container that requires use of a tool, key or two or more independent AND simultaneous actions to open.
- ☉ Regularly check devices using button batteries to make sure battery compartments are secure.
- ☉ Duct tape over button battery compartments in devices. Batteries may come out if the product is dropped and the compartment breaks open.

**Avoid mistaking button batteries for medicine**

- ☉ Always look at medicine you intend to swallow.
- ☉ Turn on the lights, put on your glasses, read the label and look at the medicine itself.

**Ensure used batteries are safely managed**

**SEE NEXT PAGE FOR INFORMATION  
ON HOW TO SAFELY MANAGE USED  
BUTTON BATTERIES**

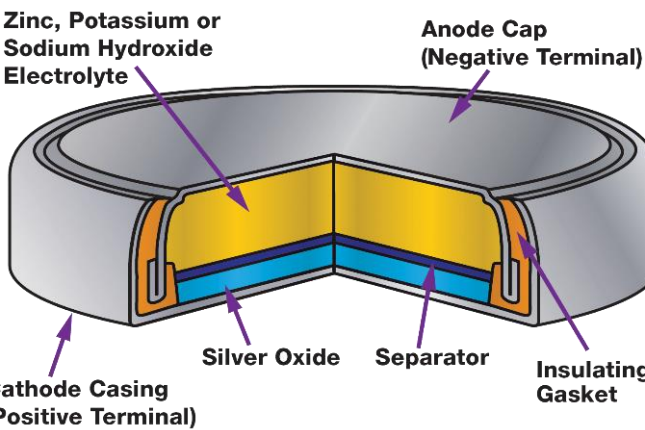


**FIRE SAFETY WARNING**

**Button batteries have a low but real risk of igniting if they are damaged, not fully discharged, or if they short-circuit**

Batteries can cause fires in rubbish bins, in recycling and waste collection trucks, and in landfills.

Short-circuiting may occur if terminals touch other terminals or if they touch metal objects such as keys. Terminals are on the top and bottom of the battery.



**TIPS FOR SAFE DISPOSAL OF BUTTON BATTERIES AT THE END OF THEIR LIFE**

- As soon as you have finished using a button battery put sticky tape around them to:
  - make them less attractive to children
  - prevent short-circuiting and avoid the low risk of having them catch fire.
- Once taped, store batteries in a child-proof container.
- Take batteries to a designated battery recycling drop-off location.

**WHAT TO AVOID**

- Always keep used button batteries out of reach of children i.e. not in unsecure bins or draws.
- Avoid storing button batteries for long periods of time or near running water or in damp cupboards.
- Avoid disposing of button batteries in kerbside bins to prevent fires in collection trucks and landfills.

**HOW TO PROTECT BUTTON BATTERY TERMINALS**

The best way to avoid a fire is to protect the terminals by preventing contact with other batteries or metal objects. This can be done by covering both sides of the battery with sticky tape as shown below.



This can be done for one or more batteries.

**WHY RECYCLE?**

By delivering taped used button batteries to designated battery recycling drop-off centre you can:

- help to ensure toxic or valuable metals such as lithium, mercury, cobalt, or lithium are recovered
- prevent toxins from contaminating landfills
- reduce the risk of landfill fires. Such fires release toxic gas that can cause long-term health problems
- prevent fires from occurring in general rubbish and recycling collection trucks

**FIND A BATTERY RECYCLING  
DROP-OFF POINT NEAR YOU BY  
VISITING THE ABRI WEBSITE**

[www.batteryrecycling.org.au](http://www.batteryrecycling.org.au)

or go to

[www.recyclingnearyou.com.au](http://www.recyclingnearyou.com.au)

**FOR MORE INFORMATION**

Visit the ABRI website for more information about batteries, battery hazards, or industry best practice.

**DID YOU FIND THIS GUIDANCE  
USEFUL?**

If so, please consider joining ABRI to support the work we do to improve battery stewardship and recycling in Australia and internationally.







### Attachment 3. Extract from IEEE 1680.1 Standard for Environmental Assessment of Personal Computer Products

Section 4.3.1.1 below is provided as an example, but it should be noted that additional sections of 4.3 are also relevant including:

4.3.1.2 Required—Elimination of paints or coatings that are not compatible with recycling or reuse

4.3.1.3 Required—Easy disassembly of external enclosure

4.3.1.5 Required—Identification and removal of components containing hazardous materials

4.3.2 Design for recovery through disassembly

#### 4.3 Design for end of life

##### 4.3.1 Design for recovery through recycling systems that utilize shredding

###### 4.3.1.1 Required—Identification of materials with special handling needs

**Product criterion:** Manufacturer shall provide treatment information to reuse and recycling facilities that identifies the presence and location of materials that require special handling, especially nonstandard or new substances or new technologies, and including components such as batteries.

**Applies to:** All covered products.

**Verification requirements:**

- Declaration by manufacturer as to how information is provided to reuse and recycling facilities or Web link to where information is available

**References and details:** “Nonstandard or new” substances or technologies shall refer to substances or technologies that are rarely encountered in the end-of-life stream of products such that recycling and reuse enterprises would not develop methods to deal with them. If a new substance or technology is introduced and in time becomes commonplace such that recycling and reuse enterprises develop methods of dealing with them, then they shall no longer meet this definition.

Endnote

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<sup>i</sup> O'Farrell, K., et al (2019)