

The wood pallet – a tried and true transport solution for used batteries

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By Libby Chaplin

THE BATTERY industry is disappointed with the recent article by Battery Rescue in the last issue of *Inside Waste*, titled ‘Why wood pallets shouldn’t be used for transporting ULABs’, which is factually flawed and represents a misrepresentation of the used battery collection and recycling industry in Australia. This article is the industry’s response to those misrepresentations.

The Australian Battery Recycling Initiative (ABRI) encourages innovation and development of new products, however, believes the promotion of any such initiatives should be based on fact and merit, not by denigrating a highly successful and compliant industry with unsubstantiated claims.

About the wood pallet

The wood pallet is neither a “default device used for transporting used lead acid batteries (ULABs)” nor “inadequate” In fact, it is the preferred Australian Dangerous Goods compliant method of packaging for transporting ULABs throughout the country.

Wood pallets are used for the vast majority of the 140,000 tonnes

of ULABs transported to processing facilities each year. Wood pallets are readily available throughout Australia, inexpensive and designed to enable the loading, transport and unloading of heavy products, including batteries, allowing the use of common lifting devices such as forklifts and pallet trolleys.

Wood pallets facilitate the collection of ULABs for recycling from even the most isolated rural and regional areas of Australia, limiting illegal dumping, which has the potential for serious environmental contamination.

Best practice in wide use

The article suggests the use of metal strapping is the most common cause of fires yet provides no data or source for such a conclusion. ABRI Guidance for Packing ULABs is widely used by industry, and states metal strapping is unacceptable.

The inference that the ULABs industry is a safety threat to the Australian public and workers is simply untrue. The examples provided are in no way relevant to the ULABs industry.

The “evidence” provided in the piece suggesting the industry is putting

public safety at risk, is spurious.

Recovery of lead from the environment

Rather than increasing lead poisoning, the lead acid battery recycling sector plays a significant role in reducing lead in the environment.

We all know that lead is toxic and that is why lead acid battery recycling is so important. Recycling of ULABs recovers more than 85,000 tonnes of lead each year, removing it from the environment and reducing the potential of lead poisoning.

The ULAB recycling sector has a strong track record in the health and safety arena. The move to maintenance-free batteries has also reduced the likelihood of spills.

Accident rates in the sector are quite low and the two incidents cited in the article in question that suggest the industry is poisoning Australian communities and workers is unrelated to the ULABs collection and recycling industry.

The Esperance Port incident

For those unfamiliar with the incident in Esperance, a parliamentary inquiry

in 2007 found lead dust had escaped from the port undetected when lead carbonate from Magellan Metals was loaded onto ships at the port in windy conditions.

This incident is unrelated to the ULAB recycling sector and it is a long bow to draw to use this example to suggest the industry is poisoning anyone.

The station wagon incident

The tragic accident cited in the article involving the loss of two lives in a private car carrying ULABs appears to be the closest the author can come to identifying an incident in this sector. The author clearly has limited knowledge of this incident, yet it was used to defame the industry even though it involved a private vehicle.

Suggestion that industry is non-compliant has NO basis in fact

The author “estimates” that 95 per cent of the industry is non-compliant but provides no source or independent data.

ABRI is in regular dialogue with regulatory agencies and has not been made aware of any trends of non-compliance. If such a trend in non-compliance or safety incidents were seen to be on the rise, we would be aware and active in addressing the issue.

The author noted that he could only find one prosecution in the past six years. Perhaps, this is because the industry for the most part is compliant.

Plastic boxes have their own risks

While they may have their place, particularly in static storage, plastic boxes do have their own risks when used to transport used batteries.

Most plastic boxes are transported from generators’ premises, where they have been progressively filled over days, weeks or months, before transport to aggregators or scrap metal dealers.

Boxes often become a “convenient receptacle” for other scrap metal and rubbish increasing the risk of short circuit and the potential for fire.



ABRI recommends batteries are stacked only two layers high with a cardboard separator to protect the terminals.

This risk is increased if lithium batteries, which can look similar to ULABs, are placed in the containers without proper care. In that case, the risk of fire increases exponentially.

Boxes may cause additional safety risks

According to QHSE consultant Geoff Glaser, “using plastic containers to store and transport used batteries creates a number of potential safety hazards for staff. Lifting batteries in and out of plastic containers with fixed sides, with batteries weighing between 15 and 20kg, places considerable strain on the lower back. This typically results in the batteries being dropped into the container rather than being stacked”.

As lids are rarely used or closed, plastic boxes may also accumulate water and liquids. It is impossible for staff unloading these containers to determine if liquids are just water, acid or a combination of various hazardous liquids.

Glaser also notes that, “with pallets, used batteries are stacked with terminals facing upwards, insulated between layers, then wrapped and strapped to prevent movement. It is difficult to restrain batteries of different sizes and shapes in any plastic container so batteries are likely to move in transit, increasing the risk of breakage and fire from short circuit should terminals touch”.

Glaser goes on to say that “while plastic containers with front panels that can be opened may assist with the loading of batteries, once closed, the extent of movement in transit cannot be determined until the panel is released. That panel may well be supporting a number of unrestrained

batteries likely to fall out onto staff unloading them”.

Movement also increases the risk of damage, breakage, acid spills and the potential of fire from short circuit should terminals touch.

Chain of Responsibility

At ABRI’s AGM in March, a presentation by Gerard Hines, Ramcar workplace health, safety environment risk and compliance manager, highlighted the importance of Chain of Responsibility legislation, which now focuses on all parties in the supply-chain.

Businesses are becoming increasingly aware of the need to ensure goods they package and load are suitable for transport and unlikely to have any adverse impact on the health and safety of those transporting, receiving or handling those goods. As a “Dangerous Good” or “Controlled Waste,” used batteries demand such vigilance no matter the type of container used.

The call to replace the wood pallet is unnecessary and unrealistic

The call for wholesale replacement of wood pallets with plastic boxes as a mode of transport is simply unrealistic, not only because of the risks described above, but also because many plastic boxes are cost prohibitive:

- The initial cost of the plastic boxes promoted in the article is understood to exceed \$1,200, approximately 100 times the typical cost of a wood pallet.
- It is difficult to accurately calculate the number of plastic boxes that would be required to service the entire market from generators, scrap metal dealers, aggregators and recyclers, however, a conservative estimate is in the region of 30,000.
- In addition to the initial purchase

price, the promoter of the plastic box advises the use of automatic unloading and washing equipment to limit OH&S concerns surrounding manual handling and unloading.

- Automatic unloading machines are understood to cost \$25,000 each and washers \$50,000 each.

This added cost would have a devastating impact on recovery rates as we would likely see smaller operators opting out. The result would see an increase in illegal dumping and environmental contamination.

Call for increased policing

Resources in regulatory agencies are limited, and as such, increased investment in policing needs to be focused on risk, not hyperbole. If regulatory agencies are seeing a trend of non-compliance, or if there were a sudden increase in accident rates, then such an investment would definitely be warranted.

Our discussions with regulators as recently as this past month indicate this is not the case. If regulators or industry were seeing problems, then ABRI would

fully support a strategic review process.

The ABRI and the Australian Battery Industry Association are working closely with government to ensure that proposed changes to packing instructions for transport of ULABs are robust and result in real improvements to safety and environmental outcomes.

The proposal to replace wood pallets with the plastic box is promulgated in the article by a company with a vested interest and without any evidence of a real problem.

A switch to plastic boxes is not warranted at this time and has the potential to destabilise one of the most successful recycling programs in Australia.

Circular economy success story

ULABs are currently one of Australia’s real circular economy success stories. A circular economy has become an important new policy driver in Europe and increasingly in Australia. A circular economy seeks to replace the old industrial model of “extract, make, use and dispose”, with a restorative approach that ensures resources are available for future production and prosperity.

In Australia, more than 95 per cent of ULABs are collected and 96.5 per cent of those materials are recovered during the recycling process, with a high proportion used to remanufacture new batteries both in Australia and overseas.

It is important to note that the current collection rate for ULAB recycling is above 95 per cent in Australia. Not only is this a significant environmental outcome, it also demonstrates that if recycling is convenient and cost effective, it will happen.

The ULAB recycling industry is a shining example of successful circular economy and a self-sustaining recycling sectors in Australia.

Libby Chaplin is the CEO of the Australian Battery Recycling Initiative. The views expressed by ABRI represent an industry-wide perspective, not that of one company or product. iw



ULABs being prepared for transport to a processor.