

**TAKE-BACK TO THE FUTURE:
PROGRESSING WASTE PAINT AND HANDHELD BATTERY STEWARDSHIP SCHEMES IN
AUSTRALIA**

Authors: Jade Barnaby jade.barnaby@sustainability.vic.gov.au +61 3 8656 6706
& John Polhill

Summary

This paper outlines the legislative framework and actions contributing to national product stewardship schemes in Australia for architectural and decorative waste paint and handheld batteries. The paper describes how work by jurisdictions has contributed data and information on various trialled take-back models that are currently informing national stewardship scheme developments. It highlights the challenges of developing national product stewardship schemes and concludes by describing upcoming activities required to implement national stewardship schemes for these two products.

Introduction

Annually in Australia approximately 264 million handheld batteries, equating to approximately 12,000 tonnes, reach end-of-life (Warnken ISE, 2010). Similarly, it is estimated that 18,000 tonnes of architectural and decorative (A&D) paint is stockpiled and/or require disposal (Nolan-ITU, 2003). Unfortunately, at this time less than 5% of Australian handheld batteries are recycled (Warnken ISE, 2010). Current levels of national data make it difficult to determine A&D waste paint presently recovered in Australia, as recovery rates differ greatly between each state. However it is estimated that Victoria collects and treats approximately 20% of the state's estimated stockpiled/waste paint, which is one of the highest A&D waste paint recovery rates in Australia (GlobalPSC, 2013). At this time collections and processing of these two products are most commonly delivered through a patchwork of local and state government take-back programs (Lewis, 2013, GlobalPSC, 2013). While these programs deliver an important service to both the health of Australians and the Australian natural environment, they are costly to run and are at constant threat of being discontinued as government priorities shift and public funding continues to shrink.

The Issues

Both A&D waste paint and end-of-life handheld batteries pose a certain level of risk to public health and to the natural environments if disposed of incorrectly. In addition, these products contain resources that would be more valuable to business and community if they were recovered at the products' end-of-life rather than landfilled. Batteries contain heavy

metals that are becoming increasingly rare as raw materials; this includes nickel, lead, zinc, silver and particularly lithium, therefore increasing the value of recovering them from end-of-life batteries. Batteries also break down in landfills, causing concerns over leachate into surface and groundwater that is especially a concern for unlined landfills (DEWHA, 2010). Although paint has significantly decreased in hazardousness over the past decade, paint can still contain heavy metals, dyes, acids, alkalis and other contaminants (GlobalPSC, 2013). Inappropriately disposing of residual paint cans in current recycling systems contaminates other recycling streams. More significantly, A&D waste paint disposed of into waterways and sewage systems contaminates water treatment plants creating significant concern for waste water management authorities (GlobalPSC, 2013). Further, A&D waste paint disposed of in natural waterways inhibits sunlight penetration and therefore photosynthesis, threatening viability of aquatic environments and biological systems (Greiner et al., 2004). Solvent A&D waste paint in particular can be recovered for fuel by increasing the calorific value to a level suitable for use in cement kilns as a fossil fuel replacement (GlobalPSC, 2013, SV, 2011).

Sustainability Victoria on behalf of the Victorian Government currently delivers a range of take-back programs for a number of problematic and/or 'priority products' for Victorian households. Instead of continuing to run these programs under the current and expensive take-back models, the Victorian Government is, however, taking a more strategic approach. Using recent national legislation and following objectives of *Getting Full Value: the Victorian Waste and Resource Recovery Policy*, the Victorian Government is seeking to engage industry and federal and local governments to adopt a shared approach to the management of products at end-of-life and moving away from government take-back to implementing industry product stewardship schemes.

Legislation

In August 2011 the Australian Commonwealth Government's *Product Stewardship Act 2011* (the Act) came into effect. This was the result of the *National Waste Policy* having been endorsed by all Australian governments through both the Environment Protection and Heritage Council (November 2009) and Council of Australian Governments (COAG) in August 2010. The passing of this legislation realised an objective of the *National Waste Policy* that was to develop nationally consistent product stewardship schemes with an emphasis on national frameworks to support voluntary, co-regulatory and regulatory product stewardship and extended producer responsibility (EPR) schemes. Both the *National Waste Policy*, and the objects and criteria of the Act provided an appropriate framework for considering the public policy and business case of stewardship intervention for both A&D waste paint and handheld batteries.

The relevant Sections of the Act (Australian Government, 2013) that would apply to A&D waste paint and handheld batteries being considered products for voluntary, co-regulatory or regulatory stewardship scheme are below.

Section 4 of the Act states that,

“(1) It is an object of this Act to reduce the impact:

(a) that products have on the environment, throughout their lives; and

(b) that substances contained in products have on the environment, and on the health and safety of human beings, throughout the lives of those products.

(2) It is Parliament’s intention that this object be achieved by encouraging or requiring manufacturers, importers, distributors and other persons to take responsibility for those products, including by taking action that relates to the following:

(a) avoiding generating waste from products;

(b) reducing or eliminating the amount of waste from products to be disposed of;

(c) reducing or eliminating hazardous substances in products and in waste from products;

(d) managing waste from products as a resource;

(e) ensuring that products and waste from products are reused, recycled, recovered, treated and disposed of in a safe, scientific and environmentally sound way.

Other objects

(3) The following are also objects of this Act:

(a) to contribute to Australia meeting its international obligations concerning the impacts referred to in subsection (1);

(b) to contribute to reducing the amount of greenhouse gases emitted, energy used and water consumed in connection with products and waste from products.”

Section 5 of the Act contains product stewardship criteria that are satisfied in relation to a class of products if:

- a) the products are in a national market*
- b) at least one of the following applies in relation to the products in the class:*
 - i. the products contain hazardous substances;*
 - ii. there is the potential to significantly increase the conservation of materials used in the products, or the recovery of resources (including materials and energy) from waste from the products;*
 - iii. there is the potential to significantly reduce the impact that the products have on the environment, or that substances in the products have on the environment, or on the health or safety of human beings.*

The first product stewardship scheme to be established under the Act was the National Television and Computer Recycling Scheme (NTCRS). The NTCRS currently has five approved co-regulatory arrangements to deliver collection and recycling services for end-of-life TVs and computers across Australia.

The Victorian Contribution

Prior to the establishment of the Act, the Victorian Government primarily through Sustainability Victoria has been running numerous government take-back schemes with the objectives of minimising risks of problem waste products and materials that are either being stored at home and/or are being disposed of incorrectly; and encouraging the recovery of valuable materials from these products.

Detox Your Home would probably be considered the Victorian Government's flagship take-back program. Having commenced in 1994, the program has almost a 20 year history of collecting and responsibly recovering hazardous household chemicals and other toxic household items. From a volumes perspective, Detox Your Home has experienced significant success with mobile collections increasing from 13,818.7 kg collected in 1994/5 to 2,907,753.9 kg collected in 2007/8 (Doctor, 2013). During this time the scope of the program has also expanded to include in addition to household chemicals- batteries, paint, CFLs and at some locations gas cylinders. Although primarily targeting hazardous household chemicals, roughly 80% by weight of Detox Your Home collections is A&D waste paint, accounting for approximately 65% of costs (Doctor, 2013). Detox Your Home is an expensive taxpayer's funded program with \$2.7 million (AUS\$) allocated for the program's 2013-14 budget (Doctor, 2013). Although costly, Detox Your Home has enabled the Victorian Government to collect significant amounts of data on A&D waste paint and other hazardous waste products generated in Victoria that has fed into the recent publication of *The Case for Voluntary Paint Stewardship* paper published this year, as well as informing other industry reports.

Another Victorian take-back program that commenced in 2008 as a trial is Batteryback. This program sought to engage retailers as more suitable drop-off locations for householders wishing to responsibly dispose of handheld batteries. Similar to Detox Your Home, the program has since expanded the number of sites and also increased the number of retailers participating in the program, with volumes of household batteries collected increasing significantly with the recent expansion.

Other take-back trials and programs the Victorian Government has delivered includes FlashBack (light bulb collections), PaintBack (trial of returning waste paint to retailers), PaintCare (trade waste paint collection trial) and ByteBack a precursor program to the NTCRS that collected end-of-life electronic products in Victoria. A significant amount of data and input into the NTCRS was predicated on work completed by Sustainability Victoria's ByteBack program that collected computer waste prior to the NTCRS and also served as an intermediary service as the NTCRS progressively roll-out across the Australia.

As expected and demonstrated through Detox Your Home, the costs associated with delivering such public programs are considerably high. As a result general taxpayers' money is being used to fund programs associated with products and services that not every person of the public may utilise. There is also the underlining assumption that government red tape and administrative burdens artificially push the costs of delivery higher than necessary if delivered by an industry group or association. Another threat to these services is that if government priorities shift or the public purse decreases, as is the case in recent economic times, these valuable but less prominent public programs may be discontinued.

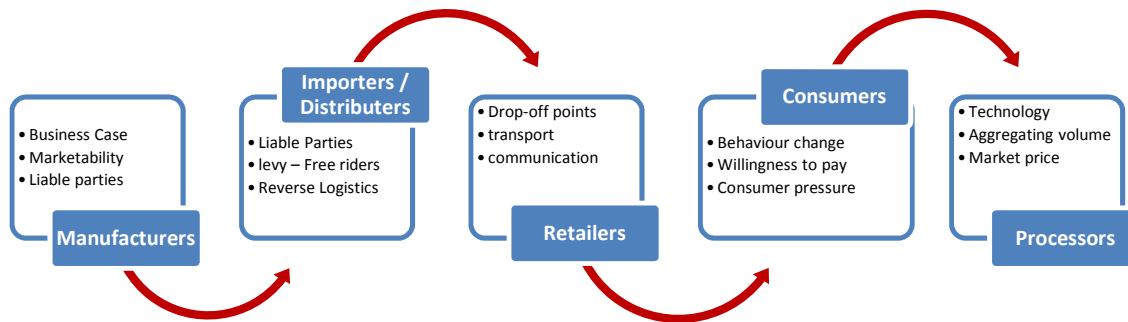
Therefore, there is a rational incentive from government (and the taxpayers) perspective's that the burden of managing the end-of-life of these problematic or priority products be shared along the products' supply chain. Ultimately the costs of proper disposal and/or recover of materials should be passed on more directly to the actual consumer and industry, not spread across the general taxpaying public.

Moving from Government Take-Back to Industry Product Stewardship

Although there are differences among the definitions or specifics of product stewardship and EPR, significant objectives of these terms include: shifting the financial burden from the general public to the specific users; sharing the responsibility of an end-of-life product along the supply chain; and promoting the increase of resource recovery from products. Aside from delivering state government take-back programs for A&D waste paint and end-of-life handheld batteries Sustainability Victoria on behalf of the Victorian government, in partnership with the Queensland government, have been progressing national stewardship schemes of these products through a range of activities.

In the past year, the Victorian government has for both A&D waste paint and handheld batteries economically evaluated the Victorian government take-back programs currently delivered; identified and collaborated with willing stakeholders including the Australian Paint Manufacturers' Federation (APMF) and the Australian Battery Recycling Initiative (ABRI); examined the life cycle or value chain of these products and identified areas of access or intervention for stewardship schemes; and commissioned the following two documents: the *Business and Public Policy Case for Battery Stewardship in Australia*, and *The Case for Voluntary Paint Stewardship*. Research work has also been undertaken by Swinburne University investigating the commercial viability of paint in other end markets for example as a polymer modifier in concrete production. Work to support or grow end markets is a critical step in the development of national schemes to aid market pull of reprocessed material. A visual representation of the type of product supply chain and identification of intervention points for A&D waste paint and handheld battery stewardship are on the following page.

Possible intervention points along a product's supply chain.



With the completion of these activities and continuing to run Victorian government take-back programs as usual, the Victorian and Queensland governments submitted a joint submission to the COAG's Standing Council on Environment and Water (SCEW) to consider placing both A&D waste paint and handheld batteries on the Product List for 2013-14, a legislative action required by the Act.

As previously discussed, the Commonwealth's *Product Stewardship Act 2011* established a legislative framework for managing the environmental, health and safety impacts of products and to promote the recovery of their resources. A significant requirement of the Act is to publish a Product List annually that serves to 1) provide uncertainty to community and business on what is being considered for coverage under the Act, and 2) requires that any future mandatory or co-regulatory approach to be proceeded by 12 months' notice before a particular product can have such a regulatory approach applied. The product list is released by the Parliamentary Secretary for Sustainability and Urban Water, with input from a range of sources including the Product Stewardship Advisory Group, the COAG SCEW, jurisdictional priorities and other industry stakeholders and international obligations.

In April 2013, the COAG meeting in New Zealand, reviewed and approved the Victorian and Queensland joint recommendation that both A&D waste paint and handheld batteries be placed on the Product List for 2013-14. This was confirmed with the 30 June 2013 release of the 2013-14 Product List that included A&D waste paint and handheld batteries as well as packaging, end-of-life air conditioners with small gas charges, and end-of-life refrigerators with small gas charges.

Next steps

With both A&D waste paint and handheld batteries now on the 2013-14 Priority Product List, work is currently under way by both Victoria (leading A&D waste paint) and Queensland (leading handheld batteries), to develop the appropriate national stewardship schemes for their respective products. Over the next 18 months these two state jurisdictions will be

working closely with industry to develop draft stewardship schemes. These schemes are due to be completed, including public consultation, by December 2014 and presented for SCEW consideration in early 2015. Both A&D waste paint and handheld batteries have established Implementation Working Groups made up of industry experts that will meet regularly over the next 18 months to draft up the proposed model schemes. Already, there have been initial workshops bringing together industry and government to discuss the first steps, explore what attributes a successful scheme would have, whilst highlighting potential challenges and areas requiring further investigation.

There will be ongoing consultation with wider stakeholders through Reference Groups that will have opportunities to review works, consult and provide feedback into the process and potential models. While the appropriate models will not be on the ground delivering in 18 months there will be a clear vision of what national stewardship schemes for these products will look like, and what will be required to deliver these schemes within these next 18 months.

Conclusion

With the *National Product Stewardship Act 2011* establishing an essential national legislative framework and the NTCRS, the Act's first scheme on the ground, the timing is fitting and appetite substantial for development and implementation of appropriate stewardship schemes across Australia. Product stewardship and EPR can provide many benefits to Australia, including reducing the risk of these products at end-of-life on human health and the environment; increasing recovery of valuable materials; and reducing the costs of running government take-back schemes by shifting cost toward the products' users. Despite the current work underway with industry to develop stewardship schemes over the next 18 months, particularly those for A&D waste paint and handheld batteries, local and state governments' experience of delivering take-back schemes has and will continue to contribute to the establishment of appropriate industry stewardship schemes. The Victorian government in particular has been very active in this space over the past 20 years, collecting data and trialling various models that will be taken into consideration by the Implementation Working Groups for both A&D waste paint and handheld batteries.

Although there is no guarantee that there will be appropriate and industry-supported stewardship schemes for these products by December 2014 both government and industry are certainly providing a concentrated effort on getting there. Ultimately, it is hoped that with current national legislation, state and local government take-back delivery experience, and industry support and leadership, Australian product stewardship schemes will continue to be developed with a net positive outcome for business, community and the environment.

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