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31 March 2023

E-waste to Landfill Ban Consultation
Department of Water and Environmental Regulation
Locked Bag 10
JOONDALUP DC WA 6919

via: e-waste@dwer.wa.gov.au

To whom it may concern

E-waste to landfill ban in Western Australia consultation paper

On behalf of the Australian Council of Recycling (ACOR), we commend the Western Australian Government's determination to recover more value and resources from waste and protect the environment by managing waste responsibly. ACOR strongly supports the e-waste to landfill ban and believes it is a first step towards boosting e-waste recycling rates.

ACOR is the peak industry body for the resource recovery, recycling, and remanufacturing sector in Australia. Our membership is represented across the recycling value chain, and includes leading organisations in e-waste recycling, kerbside recycling, container deposit operations, recovered metal, glass, plastics and paper reprocessing and remanufacturing, road recycling, and construction and demolition recovery.

Our vision is an Australian circular economy where resource recovery, remanufacturing and recycling are central to generating economic and social value, while improving the health of our environment. Our industry operates across homes, businesses, factories and construction sites. It collects, sorts, and reprocesses material, and makes new products with recycled content, creating more jobs for Australians.

Recycling is a process of collection, recycling and end-markets, which must all be economically viable. If any one of the three elements isn't working, recycling cannot occur.

What other opportunities or benefits could a ban bring to Western Australia?

Boosting e-waste recycling—or urban mining—can secure critical minerals with lower embodied emissions.

E-waste is also a contaminant in household comingled recycling bins: materials recovery facility (MRF) operators have frequently have to fish even something as large as a home printer out of comingled recycling streams.

Are there any outcomes that need to be measured and are not reflected in the above?

ACOR strongly recommends the government oversee and measure recycling outcomes, to ensure accountability about the outcomes of the ban. There needs to be oversight on recycling outcomes, to avoid new operators shipping baled e-waste overseas, for example.

There is negligible regulation or accreditation for e-waste recyclers. To support strong and credible recycling outcomes, we encourage the Western Australian Government to advance the establishment of ACOR's Australian Recyclers Accreditation Program (ARAP), which will be tailored to Australian recyclers of all types to assess recycling operations on a site-by-site basis.

The ARAP works by establishing an objective and consistent process for assessing a recycling operator's performance and providing assurance around the legitimacy of recycling operations. Accreditation tests whether the operator is secure, sustainable, and resilient.

More information on the [ARAP can be found on the ACOR website](#).

What impacts does e-waste have on the community, environment, and economy and how big is the problem?

E-waste with loose or embedded batteries poses an alarming fire risk, in both the kerbside and commercial waste and recycling streams. ACOR has heard that at one Australian materials recovery facility (MRF) alone, thirteen fires were caused by batteries in 2022. Fires caused by batteries are widespread across MRFs, in waste and recycling trucks, and in depots—in short, at every point across collection, disposal and recovery streams. Operators in the recycling sector have witnessed fires caused by batteries in items as disparate as old toys and e-bikes.

The incidence of fires caused by batteries in recycling facilities is likely to be severely undercounted. A lack of accurate data and information on Li-ion fires can be traced to under-reporting—as colossal insurance premiums disincentivise operators to report battery fires—along with the fragmented regulatory landscape, with eight environmental protection agencies, eight fire and rescue organisations and over 550 local councils nation-wide.

A contributing factor to Li-ion battery fires in the waste and recycling sectors is confusion around recycling messaging. It is important to help the community understand not only that batteries are recyclable and should be recycled; but how and where they can be disposed of safely is equally important. Along with better messaging, easy access to correct disposal options is critical, within standards and guidelines that establish safe practices for the handling of batteries.

The [ACCC is investigating lithium-ion battery fires](#) and has found that, '39% of respondents indicated that they did not know how to correctly dispose of products containing Li-ion batteries. Improper disposal of Li-ion batteries is of particular concern as it can cause and/or exacerbate fires in waste disposal / recycling trucks and all types of waste and recycling facilities.'

Producers and governments must work together to design incentives for the community to properly and safely dispose of batteries. Given the proliferation of products containing batteries, including hidden and embedded batteries, and the degree of fire risk associated with battery disposal, ACOR believe an education campaign is needed to inform the public how to recycle batteries safely, which could align well with WA's e-waste to landfill ban.

What other actions can we take to manage e-waste, in Western Australia and nationally?

ACOR strongly encourages the Western Australian government to align policies with the forthcoming national e-waste product stewardship scheme. For example, the scope of items included in the ban should be aligned with those included in the scope of the e-stewardship scheme. The recycling sector finds duplicative and unaligned policies between the states and the federal government to be a considerable hindrance to advancing resource recovery goals.

Outlined below are our further priorities in response to the [E-waste to landfill ban in Western Australia consultation paper](#).

End-markets

Recycling can only occur when there is an end market for recycled products and materials.

The consultation paper concludes that, 'By removing landfill as an option, combined with community education and government grants to support collection and recycling infrastructure, the ban is anticipated to significantly increase the amount of e-waste being recycled by Western Australians.' However, it is end markets for recycled material that are key for viable recycling operations.

There is a role for policy makers to boost recycling rates by supporting strong end-markets for recycled materials by incentivising the use of recycled and recyclable materials and addressing the use of raw materials. Measures can include targets (including benchmarking and reporting) for the use of recycled materials and mandatory minimum thresholds for recycled materials in certain products.

Recycle Mate

[Recycle Mate](#) is Australia's first community-driven recycling app, free to download and use. Users photograph an item they're seeking to dispose of, and photo-recognition technology and geolocation provides them with instantaneous information on where it can be either recycled or safely disposed of, based on their location. While it was designed as a consumer-facing app, after three years of amassing data it is also now Australia's most comprehensive recycling directory. It provides a live, constantly evolving and quickly updated national platform that allows governments, recyclers, product stewardship schemes and the whole community to gather, share and update recycling information and avoid duplication of effort as the recycling industry evolves.

Navigating complex recycling options

The consultation paper notes that 'Western Australian residents can typically find details of e-waste drop-off or pick-up options through first point of contact with their local government or regional council,' but Recycle Mate has noticed that most councils' recycling guides typically only list up to 250 items, which isn't nearly detailed enough to answer many community questions. Recycle Mate has 5,700 items, and growing—linked to mapped directions to more than 30,000 geolocated disposal options—in the app's taxonomy and still answers around 1,000 questions from the community weekly about items not yet covered. Recycle Mate is continuously researching recycling options in response to these queries and feeding the information back into the program.

Recycling is much more than kerbside collection

Furthermore, recycling has significantly evolved in recent years from being a local government service to a wider community and industry response. Recycle Mate's data shows that only 1 in 10 away-from-home recovery options are now council run; nine in 10 options are via professional recyclers, product stewardship schemes, return-to-store programs, charities, social enterprises and more. This can often mean people don't find what they are looking for, or perhaps the highest value recovery option, on their council website. There is a lot of information to comprehend and keep up-to-date which is where Recycle Mate works to help all local councils provide the best information to their communities. Recycle Mate is working to offer the option to embed the data in councils' websites with a widget link to the Recycle Mate search function.

Understanding community recycling behaviour

Recycle Mate can also prompt people to seek recycling information. Recycle Mate conducts national focus group research to understand community recycling attitudes and behaviours and has found that most people don't actively seek new information about recycling: they either depend on what they first learnt, or make a snap decision at the bin, which can result in wish-cycling (which contaminates kerbside bins) or overcaution (which results in valuable resources going to landfill).

How Recycle Mate can help implement the WA landfill ban

Recycle Mate has found that in regional areas in states with e-waste landfill bans, some citizens have no legitimate disposal options for e-waste. While the proposed WA scheme doesn't contain penalties for households disposing of e-waste into landfill, in order to drive the intended behaviour—households keeping e-waste out of landfill—Recycle Mate can serve a valuable purpose in revealing areas underserved by e-waste recycling options.

Recycle Mate's granular search function bridges the gap between community and industry language; no one, for example, searches for how to dispose of an 'e-waste'. Recycle Mate has invested time to break categories down into specific items, so that the community is directed to correct locations: an old electric toothbrush should not be delivered to a computer shop accepting old computers through TechCollect, for example. Recycle Mate currently has 32 different categories of e-waste linked to relevant drop-off locations and is working to help councils identify gaps when there are no local options for certain categories.

Recycle Mate has also catalogued the over 500 local council kerbside systems nationally and provides information on what can and can't be disposed in the various bins, specific to each LGA. As the WA e-waste ban is rolled out, this information will be updated within hours so that people have up-to-the-minute information about what shouldn't go in the general waste bin, with directions to their local recycling alternatives. We strongly recommend that the Western Government supports the uptake of Recycle Mate, which will help to increase compliance with the scheme when it is implemented.

How Recycle Mate can support WA's recycling goals

With the government's support, Recycle Mate hopes to:

- include repair shops in Recycle Mate's data, to prolong the use of higher-value electronic products,
- include hyper-local options such as local businesses; for example, metal recyclers can accept predominantly metal electronic items like fridges and freezers,
- enhance local government data to include links for items councils pick-up via direct bookings or kerbside clean-up events,
- embed Recycle Mate data in local council and state government websites (where relevant),
- work with government agencies to expand data and keep it local and up-to-date, as the industry is dynamic and continually evolving
- visualise Recycle Mate's data through interactive state and local maps which allow users to search for recycling and safe disposal options for different items, and
- promote Recycle Mate to communities and organisations.

Product stewardship

ACOR encourages the Western Australian government to foster product stewardship schemes for e-waste, to shift the cost burden of waste from the community to producers and consumers. Product stewardship schemes should ideally facilitate collaboration between manufacturers and recyclers, to design out waste.

However, if product stewardship schemes are not supported by strong regulation, to ensure real recycling outcomes, they may in effect be only collection schemes. Producers must also be responsible and proactive about ensuring good end-of-use outcomes. If the economics worked well enough, people would voluntarily seek to return e-waste to recycling facilities, for example, in container deposit schemes, which are arguably the best-performing product stewardship schemes. As mentioned above, we encourage the Western Australian government to work with the federal government on the e-waste product stewardship scheme.

A harmonised regulatory environment

ACOR stresses that the fragmented policy landscape across Australian jurisdictions causes instability and uncertainty for industry across many sectors. We strongly encourage the Western Australian Government to coordinate and align with other jurisdictions in addressing e-waste, particularly the forthcoming federal e-waste product stewardship scheme to enable industry to support and deliver the intended outcomes of these bans.

Conclusion

ACOR strongly supports the aim of the Western Australian government to both capture the value inherent in end-of-use e-waste and reduce the harm caused by e-waste in landfill. Regular consultation with key organisations best supports the policy reform pathway towards this commitment. We are very well placed to facilitate this type of consultation with the resource recovery and recycling sector and would be very happy to do so.

Yours sincerely

[Redacted signature]

[Redacted name]

[Redacted title]

24 MARCH 2023



Submission to Western Australia Department of Water and
Environment Regulation

E-waste to landfill ban in Western Australia Consultation Paper

Western Australia Department of Water and Environment Regulation
Prime House, 8 Davidson Terrace
Joondalup WA 6027

Via email: e-waste@dwer.wa.gov.au

24 March 2023

Dear Sir/Madam

The Australian Mobile Telecommunications Association (AMTA) welcomes the opportunity to provide this submission in response to the consultation paper on the E-Waste to landfill ban in Western Australia.

If you have any queries or comments in relation to the content of our submission, please contact [REDACTED] on [REDACTED] or by email [REDACTED].

About AMTA and MobileMuster

The AMTA is the peak industry body of Australia's mobile telecommunications industry. Our purpose is to be the trusted voice of industry, promoting the adoption, monetisation and sustainability of mobile telecommunications technology for the benefit of all Australians.

AMTA members include the mobile network service providers, handset manufacturers, network equipment suppliers, retail outlets and other suppliers to the industry.

MobileMuster is a federal government accredited voluntary product stewardship program of Australia's mobile telecommunications industry. Established in 1998, the carbon neutral program is managed by AMTA and is funded by the major handset manufacturers and network carriers to provide a free mobile phone and accessories recycling program to the highest environmental standard.

Background

AMTA, as the peak industry body representing Australia's mobile telecommunications industry, has successfully managed a voluntary product stewardship program called MobileMuster on behalf of the mobile telecommunications industry since 1998. AMTA manages the program on behalf of the program's members who fund it voluntarily. MobileMuster members include handset manufacturers (Alcatel, Apple, HMD Global, HTC, Huawei, Google, Microsoft, Motorola, Oppo, Samsung, Vivo Mobile, ZTE) and mobile network operators (Optus, Telstra, Vodafone Hutchison Australia (VHA)).

MobileMuster is accredited under the Australian Government's *Recycling and Waste Reduction Act 2020* and is 100% carbon neutral. It recycles all brands and types of mobile phones, plus their batteries, chargers and accessories. The program's extensive collection network provides 3,000 public drop-off points across the country along with a free post-back option. Approximately 96% of the Australian population lives within 10 km of a MobileMuster drop-off site.

MobileMuster also works to raise awareness of mobile phone recycling through its communications and education activities, including a school program across Australia.

In July 2022 MobileMuster also expanded its recycling program to include more product categories:

- Network connectivity (modems and routers, landline phones, TV streaming devices)
- Smart home technology (smart speakers and smart digital hubs)
- Wearables and peripherals (smart watches, tracking tags, VR headsets)

Collection and recycling network: necessary infrastructure

MobileMuster has worked hard to ensure the program's collection network operates smoothly and is, importantly, as accessible to Australians as possible. The effectiveness of the collection network is reflected in the success of the program:

- 96.7% of mobile phone manufacturers and 90% of mobile phone carriers participate in the voluntary program
- Over 95% resource recovery rate through recycling
- 73% of consumers are aware of mobile phone recycling
- 109 tonnes of mobile phones and accessories were collected in FY22 (surpassing the KPI of 76 tonnes)

MobileMuster has invested heavily in its collection network over the last 24 years. This is highlighted not only by the program's performance and accessibility to the Australian public but also by high industry participation rates.

MobileMuster's collection network required some time to operate efficiently and become easily accessible to the public. As such, our primary concern in relation to the landfill ban is the availability of sufficient collection infrastructure in order to ensure items are recycled or recovered appropriately. Infrastructure includes the whole collection chain including a proper collection point network, appropriate transport and logistics, storage and processing facilities, and viable markets for all the recycled products captured by the ban.

Prior to instigating a blanket ban on e-waste products, the appropriate infrastructure needs to be in place in order for the community to have somewhere to drop off their e-waste that will have the capability to recover or recycle the product.

Create markets by fostering demand for recycled e-waste products

Developing markets for recycled e-waste products, along with creating localised opportunities for manufacturing and employment, will require a long-term approach along with investment in the local industry.

Consideration should also be given to investing in technology that will have the ability to automate sorting material types into a clean stream of material for the purposes of recycling and re-manufacturing. Other considerations in creating markets for recycled products include developing the ability to design recycled products, exploring how recycled material can be used in products, and potentially financing start-ups using recycled e-waste materials so that they become commercially viable.

Recyclers, across all product streams, should provide transparency on how products are processed, including all downstream processes. AMTA believes standards for processing and recycling should be part of a national approach and reflect international best practices.

Education, communication and community engagement

Building community awareness and understanding of the ban on e-waste to landfill will be critical to the success of the ban. In parallel to educating the community, a proper and clear network of drop-off sites must be established. The levels of knowledge of consumers of what can be recycled and where is critical.

While providing community education, attention to the diverse circumstances and needs regarding the territorial location must be given. In particular, the specific needs and circumstances of rural and regional communities must be taken into consideration when designing Western Australia's e-waste landfill ban. A one-size-fits-all approach will not work for all communities.

MobileMuster plays an active role in educating consumers on reuse options along with recycling. MobileMuster also supports its collection partner sites with resources and training for the handling, storing, packing, and transporting of products collected to both the public and collection site staff. This includes packing videos, detailed written instructions, clearly identifying what products can be accepted, and safe storage tips with additional links to resources on the MobileMuster website.

MobileMuster also conducts an annual audit of key retail partners to educate staff on how to store and pack product collections, as well as book pick-ups to reduce any stockpiling of products.

National harmonisation and consistency

E-waste management varies between states, with legislated landfill bans of e-waste in force in Victoria and South Australia. AMTA encourages the WA Government to consider how these states implemented e-waste landfill bans, including challenges and unwanted outcomes, so as to prevent repeating similar mistakes.

AMTA supports a greater national alignment of planning and regulations in relation to waste and resource recovery. Inconsistency of policies and regulations across jurisdictions has the effect of hindering the growth of, and investment in, material management, including recovery, recycling, and remanufacturing. Alignment of regulation where possible also creates efficiencies for stakeholders in the waste industry.



31 March 2023

E-waste to Landfill Bin Consultation
Department of Water and Environmental Regulation
Western Australia

via email: e-waste@dwer.wa.gov.au

ARA SUBMISSION REGARDING E-WASTE TO LANDFILL BAN CONSULTATION (WA)

The Australian Retailers Association (ARA) welcomes the opportunity to provide comments to the Department of Water and Environmental Regulation (the Department) regarding its consultation on the proposed ban on disposal of electronic waste (or e-waste) to landfill in Western Australia.

The ARA is the oldest, largest and most diverse national retail body, representing a \$400 billion sector that employs 1.3 million Australians – making retail the largest private sector employer in the country. As Australia's peak retail body, representing more than 120,000 retail shop fronts and online stores, the ARA informs, advocates, educates, protects and unifies our independent, national and international retail community.

We represent the full spectrum of Australian retail, from our largest national and international retailers to our small and medium sized members, who make up 95% of our membership. Our members operate across the country and in all categories - from food to fashion, hairdressing to hardware, and everything in between.

In Western Australia, we have several independent members, in addition to our large, national members who have extensive store networks and supply chains across the state.

The ARA is strongly committed to improving sustainability in the retail sector, particularly around recycling infrastructure, the transition to the circular economy and efficient management of product stewardship schemes.

The ARA has reviewed the Department's Discussion Paper.

As the discussion paper notes, e-waste is one of the fastest growing waste streams worldwide. It is imperative that Australia takes the opportunity to put in place a robust framework to support waste management and recycling infrastructure for hazardous materials, while establishing a circular economy.

Retailers clearly have a role to play in the management of e-waste as they can provide a point of contact for consumers and in some cases can support collection networks for portable e-waste. However we note that manufacturers and local government are also key stakeholders in this transition.

We support Western Australia in taking the initiative to address e-waste but note that it is critical that all jurisdictions work together to ensure a consistent and harmonised national framework.

We make the following specific observations and recommendations in response to the issues raised in the discussion paper.

- Option 2 is the ARA's preferred approach because it balances compliance with engagement. A similar model has been effective in Victoria and South Australia and we believe the option, as outlined in the paper, shares responsibility for e-waste recycling in an equitable manner.
- The proposed timeframe of 2024 is reasonable, provided it is supported by further consultation with stakeholders and broader community education and outreach.

- National harmonisation needs to remain an objective. Western Australia's ban on e-waste should continue to align and be informed by initiatives in other states. Retailers often operate nationally and having varying regulatory approaches in different jurisdictions can impose undue costs, create inefficiencies and potentially lead to unintended environmental impacts.
- Product stewardship schemes require an integrated approach that builds on the learnings from the most successful schemes and consolidates a policy approach for all e-waste rather than continues to deliver piecemeal solutions. We note the scope of the proposed ban is to initially include items covered by the various existing product stewardship schemes and we agree that this is a sensible approach.

We note the challenges in implementing an e-waste solution, particularly around ensuring accessibility of collection points in more rural and remote areas. However, as noted in the discussion paper, these challenges are currently faced by existing product stewardship schemes and can be informed by the learnings from these schemes to develop a more integrated policy approach.

Thank you for the opportunity to provide a submission to the Department. We look forward to further engagement as discussions progress on this important initiative.

Any queries in relation to this submission can be directed to our policy team at [REDACTED].



Department of Water and Environmental Regulation
Prime House
8 Davidson Terrace
Joondalup WA 6027
c/- e-waste@dwer.wa.gov.au

27 March 2023

Consultation: Ban on e-waste disposal to landfill in Western Australia

To whom it may concern,

The Battery Stewardship Council (BSC) thanks the Department of Water and Environmental Regulation (DWER) for this opportunity to provide input into the ban on e-waste disposal to landfill in WA and commends the action of the WA Government to consider this approach.

Generally, the BSC supports the Option 2 Regulatory approach with voluntary elements for the ban.

Please see our responses to specific consultation questions below:

Do you support the incoming ban on e-waste from disposal to landfill in Western Australia? Generally, yes.

What other opportunities or benefits could a ban bring to Western Australia?

Increased local recycling markets for batteries and remanufacturing, as well as local job creation in WA. Removing e-waste, including batteries from landfills could help reduce used battery related incidents at these sites. Although significant work needs to be completed to ensure that this risk is not loaded to another sector of society, e.g. households, transport companies, etc.

What impacts does e-waste have on the community, environment, and economy and how big is the problem?

E-waste growth and appropriate management of e-waste is a significant problem, including the recycling of batteries. It is estimated by 2050, Australians will be purchasing 800,000,000 kg per annum. Prior to B-cycle launch in early 2022 less than 10%, roughly 7% of batteries were recycled in Australia. This recovery rate doubled to over 16% in our first six (6) months of operation, however, there remains a long way to go to ensure that all waste battery materials are recovered and do not end up in landfill. A ban on waste battery products will assist this B-cycle objective.



What other actions can we take to manage e-waste, in Western Australia and nationally? Work to harmonise legislation including storing, transport, and data & reporting requirements as well as a consistent approach to managing risks such as fire and poisons. Supporting infrastructure requirements such as safe collection containers and sorting equipment.

Are the current actions adequate and working? Current recovery rates for e-waste would suggest that current actions are not adequate.

Would you change anything about the way e-waste for initial ban has been defined? Why? (e.g. more recovery, less environmental harm, stimulate recycling/re-use industry?)

The risk in introducing landfill bans is that there are antithetical outcomes such as stockpiling or illegal dumping. As you would be very aware, it is important to have a clear strategy for ensuring viable solutions are available for all waste streams associated with a ban. Product stewardship schemes offer an important element of this strategy. It is important that this strategy enables:

- + monitoring of kerbside collections to determine if the ban is diverting waste inappropriately
- + support for awareness raising (including consistent messaging with specific schemes)
- + support for industry to:
 - + scale up to accept the expanded waste streams e.g. investment in:
 - + upgrades to facilities
 - + sorting and processing infrastructure
 - + equipment such as safe storage containers.
 - + administrative systems to support:
 - + improved health and safety management
 - + tracking and traceability to end of life
 - + transparency regarding collection rates, recycling rates and materials efficiency¹ reporting.

BSC also encourages DWER to consider:

- + including audit requirements to enable verification of the effectiveness of the e-ban.
- + developing a Plan B if this ban finds a significant number of the ban in-scope products being captured unintentionally through household kerbside collections.
- + providing clearer product scope for batteries, does it refer only to loose batteries covered by B-cycle and will it consider in the future EVs, ESS and batteries from other e-waste products.

Are the principles appropriate to guide our approach to the ban?

Yes, support the principals guiding the approach and feel they are appropriate.

Are there any outcomes that need to be measured and are not reflected in the above?

Reduced risks of battery related incidents, including fire at landfills, transfer stations, etc. Although these risks may be moved elsewhere.

Could the ban affect you, your industry or business in ways that have not been outlined? The ban can support the B-cycle Scheme and help to further develop local recovery industries and businesses for used batteries.

Under Section 5.1 Stakeholders – BSC encourages DWER to communicate and align to messaging of existing stewardship schemes that can support and may be impacted by the e-waste ban, especially that impact the Collection networks.

¹ Reporting on recovery of materials to ensure that we understand which materials in a product are recovered. This enables assurance that problematic, valuable or finite materials are actually being recycled.



Do you have comments on the proposed ways the ban would apply to you as an individual, business or industry? Are there any other key stakeholder sectors, groups, or applications that we need to consider in the ban framework?

Whilst not included in Table 5 Option 2 legislative, financial and community mechanisms by stakeholder group. We would encourage Option 2 to include record keeping and performance data reporting to demonstrate benefits of the ban to the wider community, including community and environmental health and to ensure the ban will have a positive net benefit.

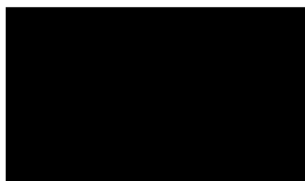
Do you think the preferred option is the one most suited to Western Australia, and why?

Yes – it is predicted to provide the most significant increase in recovered e-waste material, while minimising costs and administrative burden to both industry and government. The economic modelling assessment calculated is to have the highest net benefit.

Note on page 17 of the [*Synergies Economic Consulting*](#) report, the following statement is incomplete:

'While battery recycling infrastructure in Western Australia was not specifically discussed as part of Encycle's analysis, a Western Australian based lithium battery producer recently purchased the only B-cycle stewardship scheme accredited and EPA permitted battery recycler based in Victoria²⁴.' There are more than one B-cycle accredited recyclers in Australia that are operating with relevant permits.

Yours faithfully



Libby Chaplin
CEO

Battery Stewardship Council

REF: WA eban BSC 202303.docx

From: Bernie Masters

To: E-waste Landfill Ban

Subject: Submission on 'Cost benefit analysis of options for an e-waste landfill ban in Western Australia' and 'E-waste to landfill ban,in Western Australia, Consultation Paper'

The consultant's report states that all three options for e-waste collection and disposal are profitable, i.e., benefits exceed costs. On this basis, I submit that:

- government should legislate to make it illegal to dispose of e-waste into landfill and should establish and apply as and when necessary financial penalties for individuals or businesses that illegally dispose of e-waste into landfill
- local government should be required to accept e-waste at all transfer stations and landfill sites at no charge to the individual or business delivering e-waste
- the private sector should be encouraged to develop an e-waste processing facility to take advantage of the profits that the consultant's report claims can be made by the processing of e-waste
- because the health and environmental benefits valued at between \$1.7 and \$9.8 million will be enjoyed by the public and are not financial benefits to be gained by the private operator of an e-waste processing facility, the state government should annually provide up to this level of funding to the private operator as a subsidy to assist in making the private processing facility more financially viable.
- there is no justification for local or state governments to involve themselves in the establishment of a facility for e-waste processing
- there is no justification for local government ratepayers to financially subsidise the cost of receiving e-waste at transfer stations and landfill sites as these costs should be reimbursed by the private e-waste processing entity.

Regards

Bernie Masters

Our Ref: [REDACTED]
Enquiries: [REDACTED]

E-waste to Landfill Ban Consultation
Department of Water and Environmental Regulation
Locked Bag 10
Joondalup DC WA 6919

31 March 2023

To Whom it May Concern

Consultation Paper: E-Waste to landfill ban in Western Australia.

The City of Albany welcomes the opportunity to provide comment on the Department of Water and Environmental Regulation (DWER) *Consultation Paper: E-Waste to landfill ban in Western Australia*.

Prior to our response, I would like to draw your attention to some omissions in the interactive map referenced on page 9 of the paper under "Publicly available information on regional e-waste collection options". There are a number of items not on the list for Albany which are currently collected at our facility, including mobile phones, household batteries and light globes. There also appears to be some B-Cycle Drop Off locations not included for Albany.

Please consider the following responses to the questions posed in the *Consultation Paper*:

1. Do you support the incoming ban on e-waste from disposal to landfill in Western Australia? What other opportunities or benefits could a ban bring to Western Australia? What impacts does e-waste have on the community, environment, and economy and how big is the problem?

The impact of e-waste to the City of Albany includes the potential for leaching of harmful chemicals; risk of fires in landfill, Material Recovery Facility and storage prior to transport; costs to recycle and community expectation. Since 2013-14, e-waste collection has cost the City \$175,000, with annual totals of up to more than 31 tonnes of e-waste collected.

While the City supports the incoming ban on e-waste from disposal to landfill to reduce leaching of harmful chemicals and potential for landfill fires, and increase recovery of valuable materials, there is a need for a ban to be better aligned with the introduction of product stewardship schemes. We are concerned that the responsibility falls largely on local governments, with potential for increased costs associated with staffing, storage, transport and processing requirements.

2. What other actions can we take to manage e-waste, in Western Australia and nationally? Are the current actions adequate and working?

There is a need for better product stewardship schemes and financial contribution in conjunction with the ban. Any stewardship schemes should allow for additional transport costs from regional centres, similar to the container deposit scheme. For example, the current National Television and Computer Recycling Scheme (NTCRS) does not cover transport costs and, once the national quota is reached, recycling costs are borne by the collector.

3. Would you change anything about the way e-waste for initial ban has been defined? Why? (e.g. more recovery, less environmental harm, stimulate recycling/re-use industry)

The City seeks clarity on whether the main implication of the initial ban is for the collector who is already collecting, and what defined the responsibilities are for the manufacturer, importer, retailer, consumer and other levels of government. We seek to clearly understand the objectives of the first stage of the ban, amid concerns that it may discourage commencement of collection centres in case they are unable to find destinations for the items.

There is an urgent need to prioritise policy development for appropriate product design to ensure longevity and repairability. There are many cheap products available to consumers which are very short-lived and quickly make their way to landfill or e-waste collections.

Government and industry funds will also be required to encourage local recycling and processing options to decrease transport requirements and increase local economic and social capital.

Stimulation of the industry to ensure adequate capacity to process and recycle the items collected should happen prior to the ban.

4. Are the principles appropriate to guide our approach to the ban?

The principles are appropriate, but do not cover product design, product stewardship or funding requirements. The principles should commit to product stewardship and funding that will ensure LGAs are not left further out of pocket by the ban.

5. Are there any outcomes that need to be measured and are not reflected in the above? Could the ban affect you, your industry or business in ways that have not been outlined

It is likely that the City will have increased storage and staffing requirements to oversee e-waste management, in addition to increased transport and processing costs. Increasing collection of e-waste would mean we need more space to collect, resources to manage and funds to transport and dispose of. The risk of fires for batteries in storage while awaiting transport must also be considered, along with the cost of lithium fire extinguishers.

Any impact on local government expenses and rates rises due to implementation of the ban should be measured. Costs borne by manufacturers, retailers and consumers should also be monitored, along with any unexpected costs or impacts to processors.

We anticipate that our community will have increased expectation that the City will provide solutions for e-waste recycling, including for items not included in the initial ban.

We wish to highlight in reference to the Financial Incentive pillar, that Financial “compensation or support” may be more appropriate wording than “incentive”, as many local governments are already collecting e-waste and will be required to comply with the ban.

6. Do you have comments on the proposed ways the ban would apply to you as an individual, business or industry? Are there any other key stakeholder sectors, groups, or applications that we need to consider in the ban framework?

In addition to the potential impacts outlined above, the City would like clarification on what requirement there would be for local governments to accept e-waste from non-residential sources. At this stage the City only accepts e-waste from households. Will local governments be expected to receive e-waste from businesses, state government departments and not-for-profit organisations and, if so, will adequate compensation be provided?

7. Do you think the preferred option is the one most suited to Western Australia, and why?

The City seeks some clarification and reassurance prior to supporting the preferred Option 2. The Option does not clearly identify the responsibilities for manufactures, importers and retailers for the initial ban, and it is unclear where this group fits as stakeholders. Any ban which sees increased responsibility on local governments and processors, should also place obligation on the producer and generator.

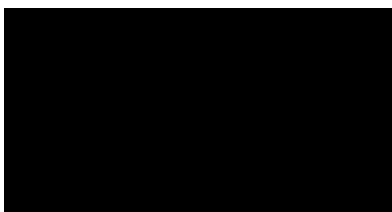
Other concerns include:

- lack of reporting requirements and impact on meaningful evaluation of the ban;
- how landfills will be expected to monitor acceptance of prohibited waste and whether funding be provided cover the additional requirements to ensure prohibited items are not inadvertently received with other waste; and
- definition of residual waste; and
- how funding will be allocated – current grant funding processes for infrastructure are very time-intensive with no guarantees of success. The City recommends equitable allocation of funding based on the State's needs, potentially through a per capita allocation which also takes into account additional costs for transport from regional centres. This could be similar to the container deposit scheme model which ensures equitable access to Refund Points; and
- lack of inclusion of reuse, repair and product design elements.

In preparation for an e-waste to landfill ban, the City urges consideration of the need for other policies to be introduced prior to and in conjunction to ensure fair and equitable distribution of responsibilities, adequate collection and processing facilities, and development of local solutions.

If you have any queries regarding the City's response, please contact [REDACTED]

Yours sincerely



Andrew Sharpe
Chief Executive Officer

Reference/ [REDACTED]
16 March 2023

E-Waste Ban to Landfill Response
Department of Water and Environmental Regulation
Prime House
8 Davidson Terrace
Whadjuk Noongar Country
JOONDALUP WA 6027
Locked Bag 10, Joondalup DC, WA 6919

Ban on E-Waste Disposal to Landfill by 2024

Response from the City of Cockburn

Q1

Do you support the incoming ban on e-waste from disposal to landfill in Western Australia?

Yes - Provided all measures are covered to ensure the proper recycling of the e-waste at no cost to the disposer and the landfill operator.

What other opportunities or benefits could a ban bring to Western Australia?

Improve the economy, create jobs and products in recycling. Promotes the circular economy.

What impacts does e-waste have on the community, environment, and economy and how big is the problem?

E-Waste, like plastics, is a significant environmental problem and has been so for many years.

Q2

What other actions can we take to manage e-waste, in Western Australia and nationally?

Provide a scheme similar to the Household Hazardous Waste Program, through the Waste Authority funded by the Landfill Levy to cover the expenses associated with the diversion and recycling of E-Waste and Bi catch. Alternatively, expand the E-Waste Product Stewardship Program potential to widen scope of products to include all product manufacturers. Developing and implementing a State-wide advertising and communications plan as well as providing funding for LGs to also run an extensive marketing plan. Funding will also be required to ensure that there are adequate staff numbers at the landfill to ensure that no E-Waste is landfilled.

Further, there could be incentives (like a tax deduction) to encourage residents to repair e-waste that no longer works. This would also work to ensure the public purchase quality equipment. This system has been adopted in some European countries.

Are the current actions adequate and working?

No. Currently LGs have found the resources to cover the processing of E-Waste and Bi catch. This therefore means that the residents shoulder this responsibility. TechCollect currently charge the City \$300/tonne and \$650/t to recycle E-Waste and Bi catch respectively. The City has not advertised to the community that some Bi catch is being recycled as this would lead to huge quantities of peripheral electrical equipment arriving at our Community Drop Off Centre and a corresponding cost that the City cannot cover.

Q3

Would you change anything about the way e-waste for initial ban has been defined? Why?

(e.g. more recovery, less environmental harm, stimulate recycling/re-use industry)

Yes.

The capacity of the E-Waste recovery industry must be increased for the national platform to work well in WA. The industry players must be supported to be capable of processing LG E-Waste at no cost to the LGs. In addition, funds must be made available to LGs to cover the increases in illegal dumping that may occur (if proven). Investment made into expanding recovery and processing facilities locally is also required

Q4 Are the principles appropriate to guide our approach to the ban?

Yes

Q5 Are there any outcomes that need to be measured and are not reflected in the above?

No

Could the ban affect you, your industry or business in ways that have not been outlined?

No All affects have been outlined

Q6 Do you have comments on the proposed ways the ban would apply to you as an individual, business or industry?

We are a landfill owner and Local Government. We will be financially disadvantaged if adequate State resources are not provided as per the response to Q1 and Q2.

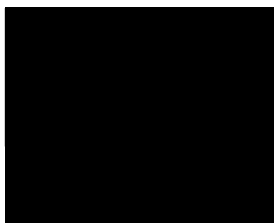
Are there any other key stakeholder sectors, groups, or applications that we need to consider in the ban framework?

Should E-waste Recyclers not be included as stakeholders. TechCollect list themselves at "not for profit" though their service to the City of Cockburn is not free. Should all Collectors or Administrators in the E-Waste Product Stewardship arrangement be included in the Stakeholder Group?

Q7 Do you think the preferred option is the one most suited to Western Australia, and why?

Yes. A compulsory option would lead to unintended disadvantages and a totally voluntary option would serve no valid purpose.

Sincerely,



Waste Manager

TO: DIRECTOR INFRASTRUCTURE SERVICES

CC: DEPARTMENT OF WATER AND ENVIRONMENTAL REGULATION (DWER)

FROM: A/MANGER WASTE SERVICES

DATE: 10 MARCH 2023

FILE REF:

OTHER REFS:

LETTER NO:

**SUBJECT: E-WASTE TO LANDFILL BAN IN WESTERN AUSTRALIA – CONSULTATION
PAPER RESPONSE**

PURPOSE

Department of Waste and Environmental Regulation (DWER) is seeking feedback on a proposed e-waste to landfill ban in Western Australia

BACKGROUND

DWER requested feedback from Local governments on the consultation paper response on the proposed E-waste to landfill ban in Western Australia. The consultation paper outlined the State Government proposal (see attachment) and provided background of the current situation in WA, international consideration, scope of the ban and how it would be implemented. Throughout the document DWER requested responses to questions related to the various sections of the consultation paper.

Outlined below are the questions and responses of the consultation paper.

Item 1.4

A. Do you support the incoming ban on e-waste from disposal to landfill in Western Australia?

Yes. Support for the incoming ban where there is adequate infrastructure locally available to recycle the e-waste.

B. What other opportunities or benefits could a ban bring to Western Australia?

- Reduction in the waste sent to landfill.
- Increased product stewardship and user pays programs.
- Increased awareness of waste streams and the use of landfills.

- Targeted education campaigns of what can be recycled concerning e-waste.
- Promotion of the Circular economy and awareness of reduce, reuse and recycle.
- Increased demand and use of recycled materials
- Opportunity of collaboration with local voluntary organisations for repairable items

C. What impacts does e-waste have on the community, environment, and economy and how big is the problem?

We have become of a throwaway mindset as e-waste becomes a cheap resource and easily replaceable instead of repairable, more WA solutions are required to be able to cope with the volumes to sustainably dispose of the items, more education is required, both by Local Governments and nationally to educate people as to how the items could be disposed off more economically.

Item 2.4

A. What other actions can we take to manage e-waste, in Western Australia and nationally?

A solution for recycling or reusing photovoltaic panels as the number of homes with such panels is only increasing and could potentially lead to large landfill tonnages.

More information about where the current locations to recycle e-waste are, so the current facilities can be utilised. Currently the WA Welshpool facility statistics indicate availability to increase e-waste tonnages.

Collaboration with consumers to recycle old unused items.

B. Are the current actions adequate and working?

Based on the statistics provided in section 2.3 Material Flows Analysis Data that 613,100 tonnes of e-waste are estimated to be sent to landfill between 2020-2030 would suggest more needs to be done to create, industry, infrastructure for the materials which are planned to be recycled from this program to ensure the end products are able to be utilised.

Currently there are several places to dispose of e-waste however more education is required for where people can dispose of the e-waste so it can be recycled.

Item 4.2

A. Would you change anything about the way e-waste for initial ban has been defined? Why? (e.g. more recovery, less environmental harm, stimulate recycling/re-use industry)

Provide more information about which products currently have a stewardship scheme to inform consumers, which in time would reduce the e-waste to landfill.

Item 4.3

A. Are the principles appropriate to guide our approach to the ban?

Yes

Item 4.4

A. Are there any outcomes that need to be measured and are not reflected in the above?

Measure the tonnages of materials collected, reused, recycled versus the amount which ended in landfill.

B. Could the ban affect you, your industry or business in ways that have not been outlined?

- Increased illegal dumping of e-waste items within the local area.
- Increase in such items being put in general waste bins.
- Increase pressure of Local Governments to cover the costs of disposing or recycling e-waste.

Item 5.5

A. Do you have comments on the proposed ways the ban would apply to you as an individual, business, or industry?

Agree with option 2 as a minimum to provide a positive affect to the e-waste to landfill issue with a potential to increase the ban in stages to reach option 3 in the future.

B. Are there any other key stakeholder sectors, groups, or applications that we need to consider in the ban framework?

N/A

Item 6.3

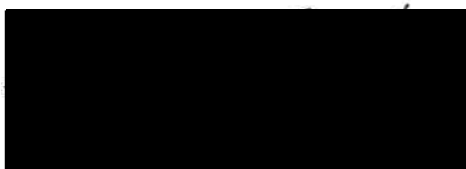
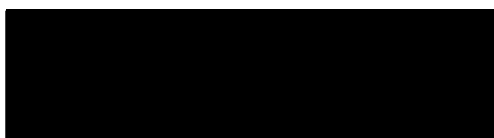
A. Do you think the preferred option is the one most suited to Western Australia, and why?

Yes. The proposal combined both household and commercial to ensure the highest volume of diversion and net benefit for the state.

WALGA's draft submission on the e-waste to landfill ban in WA consultation paper suggests that local governments would be better supported by ensuring effective product stewardship schemes are in place for all materials included in the bans, or alternative funding schemes put in place to cover additional costs so that the community and local governments don't end up paying more. Do you agree with these comments?
[20230222 WALGA E-waste to Landfill Ban submission DRAFT \(wastenet.net.au\)](#)

RECOMMENDATION

Provide comments on the proposed response to the E-waste to landfill ban in Western Australia.



Good Afternoon

Please see below the comments from the City of Swan. In addition to this, I would like to acknowledge that the City agrees with the comments in WALGA's submission as well.

As they have done very well in highlighting within their submission the requirement for a product stewardship scheme to ensure the costs are not borne by the City and the community.

1. Concerns regarding the financial impact this will have on the City without a product stewardship scheme. Without Product Stewardship arrangements in place for all items covered under the proposed e-waste ban, the burden of managing the product at end of life falls disproportionately to the City and our community.
2. The City will need a very thorough and effective education and communications plan to ensure the community is aware of the ban and where to take their e-waste.
 - a. If this ban is to be implemented by 2024, the City will need to commence education and communications as soon as possible.
3. I note that in the attached consultation paper it mentions that there are 4 commercial e-waste specialist recyclers within WA and 6 scrap metal recyclers in the state. Would it be possible to know who these are?
4. We have concerns regarding how we manage all the additional items we collect. Will there be one contractor who can recycle all the materials in Table B1 of the document? Or will we need to go through several different contractors for different items? As if so, the City does not have the resources to separate all the items collected and this will be both time and labour intensive.
5. Has the state government chosen Option 2? Or are they asking for our feedback regarding which option to go with? Because if it is Option 2, then is there no Financial incentives for councils? Both SA and Victoria provided state government funding when they went to a landfill ban. But only option 3 provides funding from WA.
6. The document mentions "Problematic e-waste items were generally those of low value and not covered under product stewardship." How would the City best manage these?
7. I note that there will be multiple phases of the plan, with these problematic items (small household goods among others) to be left for future phases. What does this mean? How will that be implemented? What if there is no economic way to recycle these products? Does this mean the ban to landfill won't all be effective at the same time?
8. This ban will have an impact on the City in terms of resourcing and costs. As we will need to recover wherever possible across the board when it comes to waste whether it is internal (other business units) or external (residents).

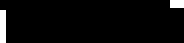
If you require any further information, please let me know.

Kind Regards,



City of Swan, 1000 Swanwick Road, Swan, WA 6150

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www.swan.wa.gov.au

The City of Swan acknowledges the traditional custodians of this region, the Whadjuk people of the Noongar nation and their continuing connection to the land, waters and community. We pay our respects to Elders past and present, and their descendants.

March 2023



E-waste to Landfill Ban in WA Consultation Response

Charitable Recycling Australia represents the interests of the charitable good retailers. There are 7 members in Western Australia including Alinea (Paraquod Industries), Anglicare, Good Sammy, Red Cross, Salvation Army, Save the Children and St Vincent De Paul. Collectively we have over 200 charitable retail stores in Western Australia.

We have collated survey responses from our members in developing this submission. It also includes learnings from the Victorian e-waste ban and the impact it had on our members.

We estimate that our members collectively sell over 500 tonnes per annum of second hand electrical items in WA. We collectively recycle over 200 tonnes of e-waste and 150 tonnes of non-saleable electrical goods as metal.

The *E-waste to landfill ban in WA: Consultation paper* recognises the importance of reuse of electronic goods as a high order in the waste hierarchy. It also recognises the priority of recycling electronic goods as e-waste, rather than metal due to the high potential to recover precious metals. The grant funding is not well structured to support re-use, and recycling of e-waste instead of recycling. Re-use, refurbishment and repair requires a significant operational cost of staff time and transport which is excluded from the grant funding. The low cost of electrical goods from retailers, and financial pressures on Charitable Retailers and staff, means that it is difficult for our retail stores to invest time in refurbishment and repair and price those items accordingly.

There are three systemic issues that need to be resolved for a ban to be effective:

- Full lifecycle product pricing – so that new electronic goods account for the whole of lifecycle cost including the material extraction impact, energy, water, transport and end of life costs. Charitable recyclers will continue to sell affordable goods, but with decreasing costs of these goods from major retailers it will continue to be difficult for us to compete on prices particularly smaller electrical household goods.

- Extended producer responsibility (EPR) for processing costs. It is currently significantly more expensive for charitable recyclers to recycle goods as e-waste rather than metal. Many electrical items have a significant plastic componentry that makes them unsuitable for metal recycling. Therefore they become a significant cost burden for charitable recyclers to recycle. On this basis we support the smaller household appliances being included in the stage 2 ban, once an EPR scheme is in place to help offset this cost.
- Circular economy and the need for these products to be designed for repair and refurbishment. The designed in obsolescence causes a high turnover of these items making it difficult for charitable recyclers to repair them. It is less desirable for the community to repair the goods when such low cost alternatives are available.

We recognise these three issues are beyond the scope of the Western Australian Government, and are being addressed nationally and internationally at some level. Charitable Recycling Australia would prefer that a ban is delayed until there is a nationally agreed approach and a comprehensive extended producer responsibility scheme in place for any banned materials.

A significant concern is that any penalty that might be incurred as part of this ban (see Table 5 page 26) would create additional financial pressure on the charitable recycling sector. It is not sustainable for us to recycle non-saleable electrical items as e-waste at the current market price. There is also a practical challenge for us having source separation of e-waste and metal at all of our 200+ stores as many already have very limited floor space, and not all of our members have access to internal logistics services to transport goods to centralised recycling locations.

A summary of the status of sales, testing and recycling of electrical goods at WA charitable recyclers stores are outlined in Table 1. This shows that most of our members sell electrical goods and undertake some form of e-waste recovery. Approximately 75% of the electrical items our stores receive as donations are not covered in the proposed Stage 1 ban.

Table 1: Current e-waste recycling management methods across our members:

Measure	No. of Members	No. of Stores
Total number of members	7	204
Number of stores selling electrical goods	6	~170 (~85%)
Number of stores selling large electrical goods	5	~ 40 (~20%)
Number of stores with Tag & Test capability	6	~70 (35%)
E-waste/ metal recycling return in stores	3	~20%

Measure	No. of Members	No. of Stores
Centralised warehouse with tag & testing	5	
Centralised warehouse with metal recycling	5	
Centralised warehouse with e-waste recycling	4	
Centralised warehouse with battery recycling	4	
Centralised warehouse with mobile phone recycling	4	

Most of our members can only accept bulky goods (white goods, large TV and computer screens) in a small number of stores. Due to tagging and testing, transport and floor space limitations most members are not in a position to expand reuse of bulky electrical items/ white goods. Tagging and testing/ transport logistics also impact the feasibility of expanding acceptance of small electrical goods in a significant number of our stores. Most of the charitable recyclers are not intending to expand their test and tag capacity beyond existing levels.

Charitable Recycling Australia would appreciate an additional financial mechanism for its members to offset the cost of e-waste recycling, and the likely impact of additional non-saleable electrical goods received as a result of the ban. There is also likely to be additional transport costs, and degassing costs resulting from the ban of large goods that will result in a financial burden on charitable recyclers. The Victorian stores saw a significant additional cost burden as a result of the e-waste ban. An unintended consequence was the need for a government exemption to landfill some electrical items due to the influx of non-saleable small goods received. It may not be practical to recycle electronic goods, especially where received in our regional stores or where the receipt of non-saleable electrical goods outstrips our ability to sell quality second hand goods. We would like more acknowledgement and mitigation methods for these cost issues in a regulatory impact statement.

The intent of the ban is to increase reuse and repair; increase recovery of precious metals through demanufacture and recycling as e-waste rather than metal; and creation of employment. We believe there is an unmet demand for high quality reused bulky goods and household appliances. Our sector is able to support the delivery of increased reuse and recovery of electrical items, but only with the right support from the electrical manufacturing industry and the government.

Thank you for the opportunity to participate in the consultation process. We would appreciate the opportunity to continue to work with you on developing a sustainable electrical reuse and repair service in WA.

How about making it law that any electronic appliance, vehicle or furniture sold in this country must last for x amount of time (minimum 20 years)?

This would stop people buying televisions, phones, computers, and other devices, and having those devices fail shortly after the warranty runs out. Some items fail before the warranty runs out.

Manufacturers actually make items to fail. They have it perfected and can make items that will last a specific amount of time. When it fails, you can't repair it so it goes in the bin. I have a 3 year old Acer laptop that died 2 months before the warranty ran out and it can't be turned on or repaired. There is a light globe in America that was made by Thomas Edison and it is still running to this very day. It was built to last. How many light globes can you buy now that will last more than a couple of years?

If items must last for a minimum period of time, there would be significantly less waste to clean up and dispose of. And there would be fewer resources needed because items would last longer and not need to be replaced every few years, which is a marketing ploy by companies.

eg: I had an Akai television made in the 80s and it lasted over 20 years before it died when there was a lightning strike on the power station that sent a current back through the house. I could have repaired that television but it was going to be cheaper to buy a new one. My old tv was not as efficient as the newer tvs either so I got a new television and it died 4 years later. I got another one that died 2 months after the warranty ran out. I have been through multiple televisions since then and none last more than a couple of years. These are brand name televisions too.

I have had numerous electronic devices over the last 20 years and none last more than a couple of years.

I have been through 6 computers, 3 monitors, 3 mobile phones, and 2 televisions in the last 6 years. All have failed whilst under warranty. This is a complete waste of resources and power. These items are made to be thrown away and it is wrong.

Enacting laws stating any electronic device (or anything like furniture, beds, cupboards, etc) must last x amount of time, would do the following:

- 1) It would reduce the amount of resources needing to be dug up, thus helping save what's left of the planet.
- 2) It would reduce the power and fuel needed to make more of these items to sell, and to ship them around the world.
- 3) There would be fewer items to dispose of, which means less power needed to recycle them, and less fuel needed to transport the unwanted items.
- 4) There would be happier customers who don't have to waste fuel or time to keep going back to Officeworks or other stores to complain about this piece of crap computer that failed 1 week after the warranty ran out, or this brand new Samsung monitor that failed 3 weeks after I bought it.

These laws should have been enacted 50 years ago but weren't.

It is the same crap that happened back in the late 70s when governments around the world wanted to make new cars more efficient than previous models. Some countries went ahead with that but not Australia. God forbid we upset the automotive industry here. You can buy a car made for the European market and it will be more efficient,

have cleaner exhaust, and have more safety features than the exact same model made for the Australian market. Why? Because the Australian government didn't want to enact laws back in the 70s, which would have given us safer, more efficient cars with cleaner exhaust emissions.

Think about this, I had a 1974 Ford Falcon panel van, a big heavy vehicle made of steel. It had a 6 cylinder engine with a 3 speed manual gearbox (no overdrive gear) and fuel was managed by carburetture. It used 13 litres of petrol for every 100kms of city driving. The last Ford Falcon made in this country had a 6 cylinder electronic fuel injected engine with a 6 speed automatic gearbox (with 2 overdrive gears), and used between 12 & 20 litres per 100kms of city driving. Over 40 years of automotive engineering and new cars sold in Australia use more fuel than cars that were built in the 1970s (last century).

The entire sales/ manufacturing industry needs a shake up and overhaul to get us back into "Made in Australia", made to last, quality control that is not dictated by multi-national companies that are based in areas that can avoid our tax system, and a consumer protection department that can actually protect consumers from crap quality products that should not be sold here because they are going to fail before or just after the warranty runs out.

If you want to help the environment by dealing with e-waste, you need to make laws that force companies that sell stuff in Australia, to manufacture quality items that don't fail after 1 year. Anything sold in this country should last x amount of time (minimum 20 years), and have a minimum 5 year manufacturer warranty (not extended warranty bought through a different company), and be fully recyclable. They must be energy efficient (minimum 6 star energy rating), and be repairable by local electricians.

It doesn't cost a company much more to use quality components to make a phone or tv, but those quality components mean the difference between having a throw away society that replaces electronic devices every couple of years, and having a society that only replaces electronic devices when they fail after a long period of use.

Thankyou for your time.

Regards
Colin Trneny

BAN ON E-WASTE DISPOSAL TO LANDFILL IN WESTERN AUSTRALIA

24/03/24

Submitted by David Karr [REDACTED]

1. For the Ban on e-waste disposal to landfill in Western Australia to be viable the following needs to be in place:-
 - Effective implementation of Legislation to regulate the management of e-waste
 - Effective education of industry and public in the management of e-waste
 - An effective and practical collection of e-waste such as public bins or collection points
 - Identification of materials making up e-waste such as plastics, glass, precious metals(gold, silver), other metals etc etc
 - The need to emphasise that the e-waste stream needs to be a pure stream
 - Creation of an effective collection, sorting process
 - Reuse of e-waste as much as possible
 - Local industry(public/private) having the ability to sort, reuse, recycle and repurpose components of e-waste



Review of Consultation Paper: E-waste to landfill ban in Western Australia

Questions asked throughout the document.

Section 1.4 Impact on community, environment and economy

1. A) Do you support the incoming ban on e-waste from disposal to landfill in Western Australia?

Yes, but more needs to be done. The policy needs to be underpinned by legislation to give it teeth (like South Australia appears to have done). Maybe that could be implemented during a later phase.

The ban should also include collaboration with manufacturers of electronic consumables to ensure products are easily recycled and contain less hazardous substances, to mitigate the processing constraints associated with e-waste and standardise commercial purchasing of sustainable electronic products. Additionally, are there any further incentives that can be provided to the general public and commercial entities 'to do the right thing' as identified in Option 3.

B) What other opportunities or benefits could a ban bring to Western Australia?

The model shown below and on page 12 of the [Waste and Resource Recovery Strategy 2030](#) provides targets for each phase of waste management. The ban provides opportunities for government to work with:

- 1) Manufacturers of electronic and electrical equipment (EEE) to design products that last longer, contain less hazardous material, easily recycled and can be serviced/re-used;
- 2) Industry to find innovative ways of enabling repair, refurbishment and re-use of electronic equipment, rather than resorting directly to the recycling process when an item has broken down or needs to be upgraded; and
- 3) Users to educate them about being less wasteful and provide information on the initiatives and services available for the different stages of e-waste management.

C) What impacts does e-waste have on the community, environment and economy and how big is the problem?

How this is managed is not only about people, profit and the planet, it's also about changing a culture, a behaviour of society. Online purchasing of hazardous electronic products and forecasted volumes will be a challenge at a consumer level without appropriate regulation of products. This will have an ongoing impact to the community, environment and economy as recycling, reuse and disposal becomes more difficult. A large majority of Electronics are purchased overseas, thus increasing the carbon footprint and decreasing economic benefit. Where manufacture occurred more at a local level this would increase the economic and environmental benefits.



Overall objectives and state targets

Avoid	Recover	Protect
Western Australians generate less waste.	Western Australians recover more value and resources from waste.	Western Australians protect the environment by managing waste responsibly.
2025 – 10% reduction in waste generation per capita 2030 – 20% reduction in waste generation per capita	2025 – Increase material recovery to 70% 2030 – Increase material recovery to 75% - From 2020 – Recover energy only from residual waste	2030 – No more than 15% of waste generated in Perth and Peel regions is landfilled 2030 – All waste is managed and/or disposed to better practice facilities

Section 2.4 Shared responsibility and product stewardship

2. A) What other actions can we take to manage e-waste, in Western Australia and nationally?

B) Are the current actions adequate and working?

The current product stewardship schemes appear to be achieving their respective targets. However, the available information on each scheme leaves some unanswered questions.

The [National Television and Computer Recycling Scheme \(NTCRS\)](#) is a federal program that has set a target that at least 90% of the weight of the material recycled in the financial year is sent for further processing into useable materials. No details are provided on the recycling process including where the products are recycled or what happens to the 10% of waste material – see also comments under Section 5.5, question 6b. Industry feedback suggests funding under NTCRS has decreased making it more expensive for WA E-waste organisations to process products, in an environment where all other costs are increasing. This is resulting in making it less economically viable to apply best practice approaches without significant increases to fees. What incentive/ funding measures could be employed to mitigate this risk?

The [Battery Stewardship Scheme and Household Hazardous Waste program](#) is a federal government scheme. There are no details on where the batteries are processed for recycling, so does this mean they transported offshore?

The [Mobile Muster scheme](#) currently transports the products for recycling to facilities in Sydney and Melbourne. Investment for a facility in WA could be considered. This would create jobs for Western Australians and be more sustainable and economical in the long term.

Section 4.2 Scope

3. A) Would you change anything about the way e-waste for initial ban has been defined?

B) Why? (e.g., more recovery, less environmental harm, stimulate recycling/re-use industry)



Provide clarity on whether the e-waste electrical appliances includes detachable cords for those appliances.

Provide a timeframe for the future phase of the ban (e.g., within 6 or 12 months of the initial focus of the ban) otherwise it could be perceived as an aspirational phase that may not eventuate within a reasonable timeframe.

Learn from the plastics ban, although a success, it has created instances where we are currently landfilling plastics that were previously processed offshore as there is no processing facilities in Australia. The initial ban should focus on funding, the capacity of the current market and provide sufficient time to ramp up to ensure that goods can be recycled/ repaired and reused. Can residual e-waste be processed by the Waste to Energy plants and how will hazardous material be processed?

Employ stronger messaging regarding recovery and reuse, the word 'waste' is perceived as an item that is 'thrown away' without any recovery value.

Section 4.3 Guiding principles for ban option design

4. Are the principles appropriate to guide our approach to the ban?

Currently the principles appear acceptable for an introduction of the ban. Another column could be added for reportable outcome measures.

Section 4.4 Outcomes of the ban

5. A) Are there any outcomes that need to be measured and are not reflected in the above?

Under "*Beneficial outcomes of a ban are anticipated and outlined below*", add:

- Increase in length of ownership of EEE due to greater awareness more socially and environmentally conscious consumers.

Under "*An e-waste ban also has risks of perverse outcomes occurring as seen in other jurisdictions and internationally from landfill bans, including the below*", add:

- E-waste that is not able to be managed is exported to another jurisdiction, making it someone else's problem.

B) Could the ban affect you, your industry or business in ways that have not been outlined?

Consider the use of State government expenditure to drive outcomes in this area of waste reduction.

If leveraging State government procurement, the Department of Finance would have a key role alongside DWER. DWER, as subject matter expert, would need to articulate a SMART outcome on that it understands Government wishes to achieve through procurement and then the Department of Finance would work



collaboratively with DWER to design a procurement measure or initiative working backwards from DWER's desired SMART outcome.

Section 5.5 Implementation option 3: Regulatory approach with extensive obligations

6. A) Do you have comments on the proposed ways the ban would apply to you as an individual, business or industry?

B) Are there any other key stakeholder sectors, groups, or applications that we need to consider in the ban framework?

It is apparent that there is a percentage of e-waste that will still need to be disposed to landfill. The option is for this to be exported interstate or overseas, but the responsible option is for WA to manage its own disposal within WA. There should be more explicit mention of this within the document.

Engagement with Aboriginal community groups (an important stakeholder) to discuss this challenge would need to occur so that a mutually agreeable solution can be reached.

[End of Questions]

General comments

- This document mostly discusses the disposal of e-waste but there is no mention of how Western Australians will follow the 'Avoid' objective in WA's Waste Avoidance and Resource Recovery Strategy 2030 (WARR), page 12 with respect to generating less e-waste. The e-waste ban to landfill strategy needs to align with the WARR and apply the same targets to e-waste. Practical measures to address the way we currently produce and consume electrical and electronic equipment (EEE) needs to be investigated and implemented. Otherwise, it is unlikely that recycling activities will keep pace with the growth of e-waste.
- There needs to be a plan to address the inevitable 'perverse outcomes' (section 4.4 Outcomes of the ban) such as increase in stockpiling, illegal dumping, contamination of recycling bins and recycling compliance issues. A proactively timed program of education and incentivising people to be responsible for their e-waste, along with the provision of e-waste collection services, is crucial.
- Section 2.1 Waste management and recycling incentives
 - "E-waste management options in Western Australia include exporting it overseas or interstate either as a product or in a reprocessed form; repairing and re-using/selling; recycling for parts; and disposal to landfill."*
 - To introduce an e-waste landfill ban, only to ship unmanageable e-waste to another place is not a very acceptable option.



- Western Australia should be responsible for its own e-waste management and disposal. Where WA does not have the capability to repair, re-use or recycle for parts, then the suggestion would be for a staged approach to be included in the document detailing the development of capabilities while this requirement is being outsourced.
 - Grants for initiatives to develop repair, reprocessing for re-use/selling facilities could be funded by the government.
 - Then the funds used to pay the states/countries receiving WA's e-waste could be redirected to support the businesses providing the replacement services. This is not just about being environmentally and socially responsible, but is also an ethical issue, as developing countries where there is no/limited regulation on conditions of labour for employees, are often the recipients of e-waste that other countries can't manage.
 - Disposal of e-waste that cannot be managed should be kept within WA and managed by government.
-
- Monitoring the quantities of e-waste is essential for evaluating developments over time, and to assess targets towards a sustainable society and circular economy. Given that this is a consultation paper from DWER, is it assumed that DWER will be designing some sort of reporting mechanism for this purpose?



PROPOSED: BAN ON E-WASTE DISPOSAL TO LANDFILL

The Department of Health (Department) provides the following comment:

In general, the Department supports the proposed ban on e-waste disposal to landfill as it aligns with the Department's strategic vision to reduce emissions and operate more sustainably.

It has been noted that there is no misalignment between the Sustainable Health Review (SHR) and the proposed ban on e-waste in landfill outlined in the consultation paper. Option 2 suggests maximising environment benefits to the State and aligning to SHR intent, while limiting perverse outcomes. The proposed ban aligns to the SHR recommendation, which recognises that the Western Australia (WA) health system has a role in promoting healthier environments and in taking a leadership role in addressing its own environmental footprint.

Within our hospital system, a key objective is to apply circular economy principles to the healthcare setting, including reducing consumption of consumables and developing sustainable healthcare waste management. It is noted that medical devices are included for the first phase; however, the appendix refers to large medical devices. The Department is also aware that there is a range of smaller electronic medical devices used in hospitals that might also fall under this category.

While the Department is in general supportive of the initiative, the document refers very briefly to human health, namely that "E-waste can also contain hazardous materials and should be collected and recycled correctly to prevent harm to the environment and human health". Also, that proposed actions to incentivise the recycling of e-waste in WA will lead to "improved environmental and public health outcomes".

While intuitively these statements are likely to be accurate, the document provides no public health evidence to support them. The document estimates the public and environmental health benefits of the proposed interventions at between \$1.7m to \$9.8m per annum but provides no further discussion on how these figures have been derived. In order to provide a fuller and more compelling argument to support their proposals, we recommend that the Department of Water and Environmental Regulation provides further details of the public health benefits associated with the various intervention options considered.

If a working group is set up at a later date, the Department recommends involving both clinicians and environmental health professionals to help provide more context about the complexities of public health and health service delivery.



Michelle Andrews
Director General
Department of Water and Environmental Regulation

e-waste@dwer.wa.gov.au

Dear Ms Andrews

Ban on e-waste disposal to landfill in Western Australia

Thank you for the opportunity to provide comment on the Department of Water and Environmental Regulation (DWER) Consultation Paper: E-Waste to landfill ban in Western Australia.

The Department of Local Government, Sport and Cultural Industries (DLGSC) supports the objectives of the ban and its alignment to global, national and local environmental and recovery targets, in particular the Waste Avoidance and Resource Recovery Strategy 2030.

Most importantly, DLGSC would like to highlight the significant financial implications to Local Government, and the communities they serve, regarding the implementation of an e-waste to landfill ban by 2024. The DLGSC welcomes the provision of grant funding to assist in increasing the capacity of recyclers in Western Australia to accept increasing amounts of e-waste and to assist with collection and reuse.

In addition, the DLGSC would welcome the opportunity to work with your team regarding further investigation into the following issues, which are still to be resolved:

- The disproportionate costs between metropolitan and regional collection points – the cost benefit analysis and discussion paper has not clearly delineated these costs, instead applying a standard cost across the state which primarily reflects a metropolitan perspective. Due to Western Australia's dispersed population, transport costs have a significant impact on the viability of collection mechanisms in regional and remote areas.
- The requirement for comprehensive and effective product stewardship schemes where the 'polluter pays' needs to be in place prior to the e-waste landfill ban taking effect. Without Product Stewardship arrangements in place for all items covered under the proposed e-waste ban, the burden of managing the product at end of life falls disproportionately to Local Governments.

If you require any further information in support of our submission, please contact
[REDACTED] or by email
[REDACTED]

Yours sincerely

[REDACTED]

Lanie Chopping
DIRECTOR GENERAL

Date 03/04/2023

BAN ON E-WASTE DISPOSAL TO LANDFILL BY 2024 CONSULTATION PAPER

Eastern Metropolitan Regional Council (EMRC) Responses

Q1. **Organisation name:** *Eastern Metropolitan Regional Council (EMRC)*

Q2. **Key contact details:** *Chief Executive Officer, Marcus Geisler* [REDACTED]
[REDACTED]

Q3 Do you support the incoming ban on e-waste from disposal to landfill in Western Australia?

Yes

Q4 What other opportunities or benefits could a ban bring to Western Australia?

The ban could generate significant volumes that can then be used as feedstock and given financial certainty to investors in processing infrastructure.

Q5 What impacts does e-waste have on the community, environment, and economy and how big is the problem?

It has similar impacts to other waste streams but e-waste becomes obsolete more quickly due to technology advances.

Q6 What other actions can we take to manage e-waste, in Western Australia and nationally?

- *New product packaging to state the correct disposal method on the label;*
- *Retailers to accept old products when purchasing new products; and*
- *Not allow products to be sold with batteries that cannot be removed (e.g. stick vacuum cleaner).*
- *To have Extended Producer Responsibilities enforced or regulated*

Q7 Are the current actions adequate and working?

No – there are too many smaller household items still being placed in kerbside bins e.g. kettles, toasters etc;

Q8 Would you change anything about the way e-waste initial ban has been defined? Why? (e.g. more recovery, less environmental harm, stimulate recycling/re-use industry)

The definition of e-waste in the consultation paper is very broad...everything that has a plug and things with batteries such as e-scooters? Can you define the difference between e-waste and household whitegoods and batteries, which are covered under the HHW and B-Cycle. A clearer definition is needed so that everyone can be on the same page.

Q9 Are the principles appropriate to guide our approach to the ban?

Yes – however, consider small household appliances in the initial focus rather than a future phase.

Q10 Are there any outcomes that need to be measured and are not reflected in the above?

The biggest outcome to be measured are the costs; who is going to pay for collection and disposal? Where are the collection drop off points going to be? Who is wearing what costs? There are also equity issues – some LGAs don't

have drop off points so residents take their items to other locations. The only solution is Extended Producer Responsibility (EPR). Perhaps it could be set up to operate like the CDS, which is proving successful.

Q11 Could the ban affect you, your industry or business in ways that have not been outlined?

Yes, potentially it could result in significant costs to LGAs. But there could also be an opportunity to invest in processing facilities and the creation of more jobs.

Q12 Do you have comments on the proposed ways the ban would apply to you as an individual, business or industry?

Yes, but its fundamental that EPR is introduced first and then consideration to a scheme like CDS.

Q13 Are there any other key stakeholder sectors, groups, or applications that we need to consider in the ban framework?

Product Stewardship Groups and Social Enterprises who provide opportunities for unskilled workers.

Q14 Do you think the preferred option is the one most suited to Western Australia, and why?

Option 2 - is the EMRC's preferred option - regulatory with voluntary elements and a scheme based on EPR principles. (Refer page 37 of the CP)

Option 1 may not work being purely voluntary

Option 3 will increase illegal dumping.

Q15 Cost benefit analysis of Options (Synergies Economic Consulting)

Some of the costs have been modelled on metropolitan Victoria which don't apply to regional WA. Modelling needs to take into account the demographics and geography of WA.

Marcus Geisler
EMRC Chief Executive Officer

How to make a submission

Consultation paper: <https://consult.dwer.wa.gov.au/waste-policy/ban-on-e-waste-disposal-to-landfill-in-western-aus/>

Submissions must be received by 31 March 2023

Submissions to be emailed to: e-waste@dwer.wa.gov.au

Think Forward • Act Now

To whom it may concern,

I am extremely supportive of the ban commencing for e-waste being dumped in bans. The reuse of critical minerals and other commodities in existing e-waste is a mechanism to reduce ongoing mining and environmental impact.... it makes complete sense to use what we have already extracted.

I have a few comments below - in response to the consultation paper attached.

- A benefit potentially to be considered for implementing the ban (not listed currently) - reduce the impact of landfill on LGA's by reduction of source of landfill. In regional Australia, landfill operation, expansion, identifying new sites etc has a huge impact on local communities directly. Reducing the amount of waste into landfill has a tangible and large benefit to local communities in regional Australia.
- Supportive of option 2 with voluntary elements and regulatory approach combined (current preferred approach) - generally limited take up if entirely regulatory. Demonstrates that state government are committed and take the change seriously. Supportive of Table 5 on regulatory framework per stakeholder.
- If Option 2 or 3 implemented - regulation is appropriately resourced / human capacity to deliver to ensure is effective.
- Consider incentives to collection centres / appropriate support to create a job market to assist in collection of e-waste.
- Ensure the benefits of the ban dont end with where the object is disposed of - ensure a market is being developed to recycle and reuse the e-waste, in tandem with it's disposal. Relating to section 4.4 on the consultation paper.
- Supportive of collection networks not entirely relying on LGA , and see the need for private entities to also have the capabilities.

As a background for my expertise - I work as an environmental scientist and consultant and have previously worked in LGA, specifically Shire of Esperance. I have a passion and many years of experience at implementing social change. I work in regional WA, Esperance.

Thanks,

--

Katie White

Caladenia Co. *The Environment and Art*
Plants | eARTh | Words | Events

Mob: [REDACTED]
Email: [REDACTED]



To Whom It May Concern,
Dear Sir/Madam,

As I cannot read large items on my laptop I had a hard copy sent to me and following my ploughing through the information whilst I may not be answering specific questions of it these are my observations.

- ❖ By not having face to face consultation/information sessions for the public to attend you will be missing out on input from some members of the community, specifically those who do not have access to a computer and/or the internet.
- ❖ As a member of the community who has no family to run me around I am going to give a comparison here with the recycling of drink containers, to recycle those and because the recycling depot is not handy for me to get to by public transport I take the drink containers periodically to my seniors club where a friend there takes them to the deposit centre when she takes her own stuff and if I did not do that then all of my recyclable containers would still go in my recycling bin.
- ❖ Therefore if there is going to be a push for households to recycle more electronic waste there has to be a better solution put in place that would enable people like me to recycle more easily any thing that might come under the classification of e-waste.
- ❖ Currently at my local library there are stands in place for people to put batteries(the ones out of torches etc) , mobile phones and the like however again unless a person can get to their local library these things would quite possibly still go into the general household rubbish bin.
- ❖ Council verge collections are now extremely limited (well in my council area anyway) where you can only have two collections a year , one for general household waste and another where you can put out fridges, microwaves, radios etc however to put out small amounts of batteries is not practical and so again people could still be putting them in their general rubbish bin.
- ❖ One way of making it easier for people to recycle e-waste would be for councils to have collections once a month at all their community centres where people would have more chance of getting there with their items and if there was a financial incentive offered it would not be too difficult for the council to have suitable sized scales to weight the small items and give a refund based on the weight and this refund being done at a situation like that could be in the form of physical gift cards to supermarkets in different values and for larger items it could be a set refund , say of twenty dollars for a microwave oven for instance.
- ❖ If at the close off date in March it was considered there did not be a reasonable amount of feedback from the community then having information sessions at local libraries, community centres could be organised, for instance my local library has sessions once a fortnight on a Friday that are called "library lovers" and these are talks on a real variety of subjects from a variety of people, some professionals, a lot non- professionals, for instance we had a talk once by a lady who had been to the base camp at Mt Everest, now I do not know how the library gets in touch with people, it would not be hard for you to contact councils and get the information you needed to do these consultation sessions.

- ❖ *Even having collection bins at all local shopping centres for the smaller sized e-waste items could be a way of encouraging the community to recycle even though there might not be a way of giving a financial reward at those places, mind you there could be again a designated day that stuff was collected and then people could be given gift cards as a reward, even a small amount such as a ten dollar gift card for the appropriate supermarket would be appreciated given the cost of living these days.*

I would possibly be able to come up with other ideas or comments at a face to face session because you would have the interaction with the panel and the community members in attendance that would more than likely create a cross pool of ideas flowing.

Thank you

Mrs Margaret Anne Ryan

18/2/2023





WHERE THERE'S SMOKE, THERE'S FIRE.

CONSIDERATION FOR INCLUSION

OF VAPING DEVICES

IN WESTERN AUSTRALIA'S

E-WASTE CONSULTATION.

February 2023

Disclaimer

The information contained in this document is the result of research conducted by No More Butts in the course of fulfilling their charitable purpose: the protection of the natural environment.

The information contained in this document should be used to consider if vaping devices should be included as part of the Western Australian government's e-Waste scope.

This document is intended to surface and provide links to existing research and information relating to the emerging trend of vaping and the e-waste impact. It brings to light the potential environmental impacts of vaping and provides some suggested activities to mitigate these risks. It is not intended to be a scientific paper.

All care has been taken to include relevant links to web sites from which content has been sourced. Where available, images have been credited to the source(s) that they were obtained from. For any incorrect photography credits, please email No More Butts.

For enquiries about this document, please email contact@nomorebutts.org.

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Image sourced from www.iquitplastics.com

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Image sourced from www.truthinitiative.org

Executive Summary

Vaping is on the rise in Australia. In 2022, the Australian Bureau of Statistics reported that 21.7% of 18-24 year olds have ever used an e-cigarette, or vaping device. This includes those that used to, or still smoke cigarettes.

Of all age groups who had tried e-cigarettes, 18% used them at least monthly compared to 10% in 2016, and 9% used them daily compared to 6% in 2016.

Along with accessibility and scale, comes a potential environmental issue. There are two categories of vaping – with and without nicotine. Whether vaping devices contain nicotine or not, they pose a hazard to our natural environment. Made from plastic and containing batteries (e-waste), when littered or dumped, they cause damage to our environment. In addition to the presence of chemicals known to cause damage, nicotine can leach into our environment.

Whilst there are some regulations around the sale of nicotine and non-nicotine Vaping devices and products in Australia, there has been limited consideration towards the batteries and how that fits into an existing or new e-waste stewardship programs.



Image sourced from www.iqitplastics.com

SECTION 1



OVERVIEW OF VAPING DEVICES

NOMOREBUTTS®

What is Vaping?

Vaping is the act of smoking e-cigarettes, or ‘vapes’.

Vaping devices, such as vapes, e-cigarettes and e-cigars, are electronic devices used to heat vaping products for inhalation. We predominantly refer to the item that people use for both categories as “Vaping devices”.

Vaping is different to smoking, which burns tobacco leaf creating smoke. Both vaping and smoking deliver nicotine, but it is the burning of tobacco that causes most of the harm. Vaping, however, is not completely harmless.

Some nicotine vaping products are supplied in vaping devices (eg. prefilled, disposable nicotine e-cigarettes and pods). Other vaping devices are supplied separately to the vaping product(s) used with those devices.

The Department of Health says [“E-cigarettes are devices that make vapour for inhalation, simulating cigarette smoking.”](#)

Vapes are **lithium battery-powered** devices that look like metallic wands, USBs or other hand-held devices.

Vapes use cartridges filled with liquids, or ‘juice’, which typically contain nicotine, artificial flavourings and various chemicals. The liquid is heated into an aerosol, or vapour, and inhaled into the user’s lungs.

The Australian Government has documented [their definition of vaping:](#)

“Nicotine vaping products contain nicotine salt or base in solution and are heated using a vaping device to make aerosol for inhalation (‘vaping’),” the Department of Health Therapeutic Goods Administration (TGA) says.

What are e-Cigarettes?

E-cigarettes are battery operated devices that heat a liquid (also known as e-liquid) to produce a vapour that users inhale. E-cigarettes are also called 'e-cigs' or 'vapes'.

E-cigarettes come in many shapes and sizes and can be made to look like everyday items including highlighters, pens or USB memory sticks. Vapour from e-cigarettes does not usually have a strong odour but they may have a sweet smell depending on the flavour.

[When using an e-cigarette, the user inhales and exhales the vapour from the heated e-liquid. E-liquid contains a range of chemicals and it may or may not contain nicotine.](#)

E-cigarettes may also be known as:

- electronic cigarettes
- e-cigs
- electronic nicotine delivery systems (ENDS)
- electronic non-nicotine delivery systems (ENNDS)
- alternative nicotine delivery systems (ANDS)
- personal vaporisers
- e-hookahs
- vape pens
- vapes

What are the differing Vaping Devices?

Vapes use two main delivery systems: [Electronic Nicotine Delivery \(ENDS\)](#) and [Electronic Non-Nicotine Delivery \(ENNDS\)](#).

Discreet pod or pen devices are mouth-to-lung devices. Pod devices have a battery and a disposable e-liquid cartridge. Pen devices have a battery, a tank that refills with liquid, and a coil that heats the vapour.

More complex tank **devices** are direct-to-lung devices and are the ones that can make big clouds.

The range of vape and e-cigarette choices have evolved rapidly in recent years, with many models and liquid flavours.

They generally come in three main categories: minis, closed pods, and refillables.

Some e-cigarettes are made to look like regular cigarettes, cigars, or pipes. Some resemble pens, USB sticks, and other everyday items.



Image sourced from CDC

What are the components?

A vape (or electronic cigarette) is a device with two distinct parts that fit together.

The first of these is a **rechargeable battery** which contains the power source for the vape as well as the controls.

The second of these is a **tank**, which is filled with **flavoured liquid**. This flavoured liquid is heated - by pressing a button on the battery - to produce the vapour cloud that is inhaled by the user.

This heating occurs due to a heating element known as a 'coil'. The coil consists of wire and cotton, and sits inside the tank. The juice in the tank is absorbed by the cotton, and when you press the button on the device the wire coil heats up, turning that juice into the vapour which you inhale.

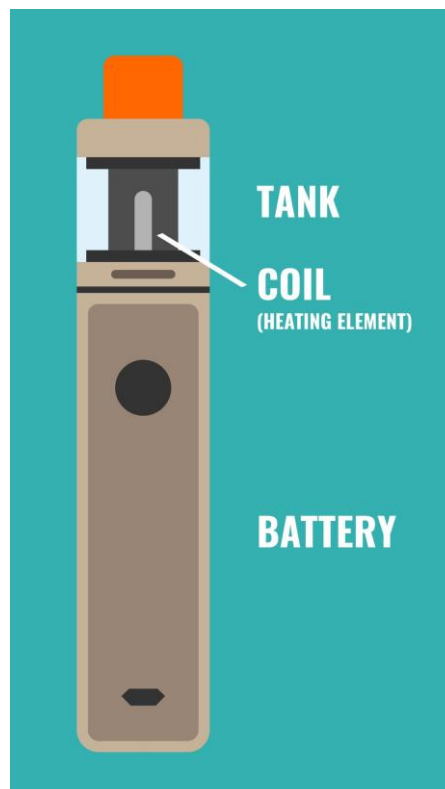


Image sourced from www.thevapestore.com.au

Types of batteries

[There are different kinds of batteries:](#)

Disposable: Early devices such as the cig-a-likes have limited lifespans and are meant to be thrown away when the device is used up. They are not rechargeable.

Integrated batteries: These batteries are built into the device and are not meant to be replaced or removed. They have a finite number of rechargers after which the device needs to be disposed.

Removable batteries: These batteries can be recharged. When they no longer recharge, they can be replaced. Removable and rechargeable batteries are typically found in more advanced devices.



Image sourced from www.fda.gov/tobacco-products

Vaping liquids

The vaping liquid (also called e-liquid) typically contains propylene glycol, vegetable glycerine, plus flavours and the option of nicotine.

Propylene glycol creates a throat sensation similar to smoking.

A higher ratio vegetable glycerine gives more vapour.

Different flavours are added for personal preference and flavours must be water-soluble.

Flavours other than tobacco extracts must meet food standards in the Australia New Zealand Food Standards Code 2002.

[Some vape liquids can contain nicotine. Nicotine is a poisonous and highly addictive chemical that some plants developed to stop animals and insects eating them. It was widely used as a natural insecticide to kill pests.](#)

There is also no way to verify what's in vape liquids purchased online from overseas. Many of them contain nicotine even if they're labelled 'nicotine-free'.

Most vape juices contain some of the following:

- propylene glycol – a common food additive
- vegetable glycerine or glycerol – also food additives
- in some cases, water
- other chemicals (including those used to create flavours).

The first three ingredients are usually harmless when eaten, but their effects when inhaled as an aerosol are currently unknown.

Vaping liquids

It's worth highlighting that non-nicotine systems can be just as harmful due to the toxins they use. Though safe to ingest, these toxins may be very unsafe to inhale. These products lack proper testing, and often still contain nicotine even if they claim to be free of it.

Some chemicals in e-cigarette aerosols can also cause DNA damage ultra-small particles that can be inhaled deep into the lungs.

Additionally, when the vape juice is heated to turn it into an aerosol, more toxic chemicals are formed.

[Vapes - especially those bought online from overseas - also can contain unspecified and uncontrolled amounts of other substances, some of which are known to be really harmful, particularly when inhaled, such as:](#)

- diacetyl – used in popcorn flavourings for its buttery taste. It can cause 'Popcorn Lung' (bronchiolitis obliterans) if inhaled in large concentrations.
- diethylene glycol – a toxic chemical used in antifreeze that is linked to lung disease
- lead, tin, nickel - heavy metals
- cadmium - a toxic metal that causes breathing problems and disease
- acetaldehyde and formaldehyde - cancer-causing chemicals
- acrolein - a weed killer that can cause irreversible lung damage and cancer
- benzene – a volatile organic compound found in car exhausts that is cancer causing and causes harm to bone marrow, reducing red blood cell numbers and leading to anemia.

Assessment of health impacts

The European Commission and its Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) [publish the final Opinion on electronic cigarettes](#).

Following a request from the European Commission, the Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) provided a Final Opinion on electronic cigarettes.

For users of e-cigarettes, the SCHEER has concluded that there is moderate weight of evidence for risks of local irritative damage to the respiratory tract and moderate, but a growing level of evidence from human data suggesting that electronic cigarettes have harmful health effects, especially but not limited to the cardiovascular system.

The SCHEER has also concluded that there is weak to moderate weight of evidence for several risks related to second-hand exposure.

Overall, there is moderate evidence that electronic cigarettes are a gateway to smoking for young people and strong evidence that flavours have a relevant contribution for attractiveness of use of electronic cigarette and initiation.

On the other hand, there is weak evidence for the support of electronic cigarettes' effectiveness in helping smokers to quit while the evidence on smoking reduction is assessed as weak to moderate.

E-cigarettes are not harm-free and may expose users and bystanders to chemicals that are harmful to health. [The Therapeutic Goods Administration has not approved e-cigarettes as an aid to help smokers to quit](#).

The Australian Chief Medical Officer and all state and territory Chief Health Officers have issued a statement outlining the emerging link between e-cigarette use and severe lung disease.

[NSW Health continues to carefully monitor the evidence to ensure the regulation of e-cigarettes is balanced and proportionate to the risks and benefits that they present](#).

Vaping categories

[There are four key defined groups of vapers:](#)

Smokers

The survey found that 54% of vapers are still smoking - "dual use" (280,000). Many vapers smoke in the early stages as they adjust to vaping and stop smoking when they are ready. Dual use causes less harm than smoking, but the greatest benefits are from quitting smoking completely.

Ex-smokers

3.2% of ex-smokers (200,000) vape, in many cases to avoid relapsing to smoking. Vaping is not risk-free but it much safer than smoking.

Never-smokers

0.7% of people who have never smoked also vape (43,000). 70% of these never-smokers vape infrequently (monthly or less) and this is of little public health importance. Only 30% vape daily.

Most never-smokers who try vaping (85.4%) do it out of curiosity and 93% of these do not continue long-term.

Vaping is not for non-smokers, but some of these never-smoking vapers would have smoked instead if vaping was not available.

Ex-smoker - ex-vaper

Many people quit smoking by vaping and then quit vaping as well, but are not captured in the Survey.

Who is Vaping?

Those using e-cigarettes are three times more likely to smoke combustible tobacco than those who have not used e-cigarettes.

According to the [Alcohol and Drug Foundation](#):

Those using e-cigarettes are three times more likely to smoke combustible tobacco than those who have not used e-cigarettes.

Former smokers who use e-cigarettes are more likely to relapse to current smokers.

Between 2016 and 2019, the proportion of people who had ever used e-cigarettes rose from 9% to 11%.

Of those who had tried e-cigarettes, 18% used them at least monthly compared to 10% in 2016, and 9% used them daily compared to 6% in 2016.

In 2019, 3% of current cigarette smokers also used e-cigarettes daily and 8% of current smokers used e-cigarettes at least monthly.

Federal Legislation on Tobacco

[From 1 October 2021, all nicotine vaping products, such as nicotine e-cigarettes, nicotine pods and liquid nicotine, are Schedule 4 \(prescription only\) medicines in the Poisons Standard.](#)

Consumers require a prescription for all purchases of nicotine vaping products. This includes purchases from Australian pharmacies and overseas. It remains illegal for other Australian retailers, such as tobacconists, 'vape' shops and convenience stores, to sell consumers nicotine vaping products.

Generally, prescription medicines must be approved by the Therapeutic Goods Administration (TGA) and registered in the Australian Register of Therapeutic Goods (ARTG) before they can be lawfully imported into, or supplied in, Australia.

There are currently no TGA approved nicotine vaping products registered in the ARTG. Medicines that are not in the ARTG are known as 'unapproved' medicines.

Nicotine vaping products contain nicotine salt or base in solution and are heated using a vaping device to make aerosol for inhalation ('vaping').

The products captured by the changes include:

- nicotine e-cigarettes
- nicotine pods
- liquid nicotine (also known as eJuice, vape juice, eLiquid).

Nicotine replacement therapies (NRTs) (including sprays, patches, lozenges, chews and gums) that do not require a prescription will continue to be available from pharmacies and some retail outlets.

Federal Legislation on Tobacco

[There are two main ways to obtain nicotine vaping products if your doctor gives you a prescription:](#)

- filling your prescription at a pharmacy (either a physical community pharmacy or an Australian online pharmacy)
- importing from overseas websites using the Personal Importation Scheme.

Apart from pharmacies dispensing nicotine vaping to patients with a prescription, it is illegal for any other Australian retailers, including vape stores, to sell nicotine vaping products. Vape stores will still be able to sell flavours and non-nicotine vaping products, or, separately, devices.

The TGA has introduced a standard for unapproved and export only nicotine vaping products, known as the Therapeutic Goods (Standard for Nicotine Vaping Products (TGO 110) Order 2021 (TGO 110), that came into effect on 1 October 2021. It includes minimum safety and quality requirements for unapproved and export only nicotine vaping products.

It includes rules about:

- product labelling (including an over sticker or in an information sheet provided with the product)
- child-resistant packaging
- maximum nicotine concentration (although people will still only be able to access the nicotine concentration in their prescription)
- requiring actual nicotine concentration/content to reflect what the product's label says
- prohibited ingredients
- records that need to be kept by the Australian sponsor for the product.

Federal Legislation on Tobacco

Recent regulatory changes allow unapproved nicotine vaping products to be imported into, or manufactured (by a GMP licensed manufacturer) in, Australia and wholesale supplied (e.g. to Australian pharmacies) through one or more intermediate suppliers.

The Australian sponsor, manufacturer or wholesale supplier undertaking the activity must have a reasonable expectation that the unapproved nicotine vaping product will ultimately be supplied to a consumer under the Authorised Prescriber (AP) scheme, the Special Access Scheme Category B (SAS B) or the Clinical Trial Approval (CTA) scheme. However, the sponsor does not need to maintain direct control over the unapproved nicotine vaping product throughout the supply chain.

[Vaping devices that are for use with unapproved nicotine vaping products can be imported into, manufactured and/or supplied \(including wholesale supplied\) in Australia without being included in the ARTG.](#) No AP or SAS approval, or clinical trial approval or notification, is required for these devices. However, if the vaping device contains or is supplied with an unapproved nicotine vaping product (e.g. prefilled nicotine e-cigarettes and nicotine pods), the import, manufacture and supply requirements for unapproved nicotine vaping products continue to apply to the nicotine vaping product (i.e. the nicotine vaping product might be supplied under an AP approval, but no separate AP, SAS or clinical trial approval is required for the vaping device).

Legislation on Tobacco

From October 1st 2021, nicotine-based vaping requires a prescription from a Doctor.

The same littering and smoking laws apply to vaping.

Doctors can prescribe nicotine vaping products for dispensing at an Australian pharmacy through the Special Access Scheme for a single patient or by becoming an Authorised Prescriber. The federal government has created new telehealth smoking cessation Medicare Benefits Schedule items, which can include provision of a script for nicotine vaping products.

Doctors can also write a script for a patient to import the products themselves for up to 3 months through the Personal Importation Scheme. However, the RACGP has strongly cautioned against this pathway as products imported from overseas are less likely to meet Australian requirements, including child-resistant packaging and restrictions against certain known toxins.

As of 12 January 2023, the TGA had approved 1635 [Authorised Prescriber](#) applications for unapproved nicotine vaping products.

This list should not be taken to be an endorsement of the particular prescribers listed, nor promotion of the supply of unapproved nicotine vaping products.

Doctors included in this list are under no obligation to provide you with a prescription for nicotine vaping products. The decision to prescribe any medicine, including nicotine vaping products, is a decision made at the discretion of the individual doctor, having considered the risks and benefits of particular circumstances.

Environmental issues

Vape waste creates three environmental issues:

- Increase in single-use plastics
- Increase in tech waste from their parts, including lithium-ion batteries
- Introduction of hazardous and toxic chemicals like nicotine into the environment when discarded

Waste from the vaping devices could be “a more serious environmental threat” than cigarettes, a global anti-tobacco organisation, (STOP) warned, as it “contains metal, circuitry, single-use plastic cartridges, batteries and toxic chemicals in e-liquids.”

Little is known so far regarding the environmental impact of e-cigarettes, and potential hazards relating to their manufacturing, use and disposal require further investigation. For example, the environmental impact of manufacturing will likely vary based on factory size and the nicotine extracting method used, [while disposal of nicotine residue-containing cartridges and battery-containing e-cigarettes represent further potential concerns for the environment.](#) There are currently no methods for proper disposal of e-cigarettes or their cartridges.



Image sourced from www.universityofcalifornia.edu

E-waste

Vapes are e-waste since they contain lithium-ion batteries & a heating element. Disposing of e-waste is a considerable challenge due to the many different types of chemicals and materials in these products. Vapes present at least two problems, as their vaporizers contain a circuit board, which can contain plastics and heavy metals. They also use lithium-ion batteries. But many vape products and accessories are being thrown away in the garbage or worse – dumped as litter, as the [UCSF survey found](#).

There is no UNU Key or HS Code for Vaping devices.

In Australia, e-waste is also the fastest-growing component of the municipal solid waste stream. [Every year, 44.7 million tonnes of e-waste is generated around the world – containing up to US\\$ 65 billion worth of raw materials like gold, silver and platinum sent to landfill.](#) The amount of global e-waste is expected to increase by almost 17% to 52.2 million tonnes in 2021, or around 8% every year.

Yogi Hale Hendlin, an environmental philosopher at University of California, said that [e-cigarettes are similar to smartphones in that they have complex computer circuitry, hard plastics, heavy metals and lithium ion batteries. Since the pen has similar technology to a smartphone it needs to be disposed at an electronic waste facility.](#)

On the company website it is stated that Juul pen must be disposed at an e-waste facility, but based on surveys and pollution data, users cannot be bothered.

Judith Enck, a regional director of the Environmental Protection Agency told Earther ['Most communities do not have easy to access electronic waste return programs. I'm extremely concerned about the millions of tiny lithium ion batteries that are littered or sent to incinerators or landfills.'](#)

Hazardous waste

Nicotine is a neurotoxin that has been used as a pesticide and has been considered acute hazardous waste by the Environmental Protection Agency (EPA) since 1980! Discarded devices may leach lead, cobalt, and other substances into the environment in toxic amounts. Toxic chemicals from commercial tobacco product waste can accumulate in animals, soil, and aquatic ecosystems, leading to contaminated drinking water and foods and posing additional downstream risks to human health and the environment.

[If pods & cartridges are discarded as litter, they may leach nicotine & other toxic chemicals into the environment or be eaten by wildlife or pets. Research has shown that even very small amounts of nicotine can be harmful or even lethal to animals.](#)

Both California state and federal laws list nicotine as hazardous waste. Nicotine, including nicotine salt, is listed by the US Environmental Protection Agency (EPA) as an acute hazardous waste. The Food & Drug Administration (FDA) banned flavors other than tobacco and menthol for pod or cartridge-based e-cigarettes.

[As batteries degrade, they can leach their chemicals into the environment. And if they are put in garbage or trash receptacles, they pose a fire risk in waste and recycling facilities if damaged or exposed to high heat, putting workers' safety at risk.](#)

E-cigarettes and their cartridges may qualify as both e-waste and biohazard waste. Neither policy nor product information currently gives consumers guidelines for disposing of e-cigarettes. E-cigarette and e-liquid waste should not be thrown in the regular trash or flushed down a sink. Instead, these items should be taken safely to a hazardous waste facility.

Importation and reporting

There are multiple vaping brands and Australian 'sponsors' who import and re-sell them. Imports of vaping devices are recorded by border control.

[Australian sponsors are required to submit a 6 monthly report to the TGA listing the brand and nicotine concentration of each kind of unapproved nicotine vaping product the sponsor supplied in Australia in the relevant period. Reporting periods are 1 January - 30 June \(inclusive\) and 1 July - 31 December \(inclusive\). Reports must be submitted within 1 month of the end of the relevant reporting period.](#)

There is no requirement for sponsors to notify the TGA prior to importing unapproved nicotine vaping products.

Sponsors will, however, need to make an import declaration to the Australian Border Force (ABF). The type of declaration required will depend on the value of the goods being imported. Information about the ABF's requirements is available on the ABF's 'Declaration for imported goods' webpage.

The pathways through which unapproved nicotine vaping products can be imported, manufactured and supplied are outlined below.

- [Authorised Prescriber \(AP\) Scheme](#)
- [Special Access Scheme \(SAS\)](#)
- [Personal Importation Scheme](#)

If the person intends to fill their prescription at an Australian (physical or online) pharmacy, the GP will need to apply to the TGA for approval to supply the nicotine vaping product through the AP Scheme (medical practitioners only) or the SAS Category B (SAS B) before they provide a prescription.

Data

Currently, there is no database, or identified taxonomy for reporting vaping related litter. Exhaustive searches do not offer data points for littering associated with e-cigarettes and other vaping items.

The EPA NSW - NSW Litter Report 2016-2020 report doesn't isolate e-cigarettes/vapes, however there is a noticeable increase in "Miscellaneous".

In the NSW EPA Butt Litter Index, vaping units aren't included in "Cigarette accessories". The AMDI doesn't allow data collection for this litter stream.

The NLI codes litter into six broad categories: glass, metal, miscellaneous, plastic, paper/cardboard and cigarette butts. Within those broad categories, litter is classified into 83 separate types. For policy purposes, the NSW EPA splits the data into more relevant categories such as CDS materials, non-CDS eligible beverage containers, takeaway food and cigarette-related materials (butts, packaging, lighters etc). In the NSW NLI, results are presented in eight key litter categories defined by the EPA:

- CDS beverage container
- Non-CDS beverage container
- Industrial container
- Domestic container
- Cigarettes (including packaging)
- Print and advertising
- Takeaway container
- Miscellaneous

The Importance of Product Stewardship for Tobacco in Australia

With a primary focus on cigarette butts, No More Butts has engaged with multiple local, State and Commonwealth Government departments, environmental organisations, individuals, businesses, research companies and the tobacco industry to understand the status of product stewardship for tobacco products. It was quickly identified that the well-meaning minor actions of some groups have been limited in their impact. Many often only dedicate a portion of their time to this issue, and are not scaled to have a national impact when addressing the issue of cigarette butts, let alone the emerging trend of vaping related litter.

A Product Stewardship Scheme would enable a greater focus on data and insights to be facilitated to help standardise national reporting. There is currently no adequate database for litter. These insights can assist in pushing for extended producer responsibility, along with requesting support from the Federal Government for redirection of taxes and planned price rises towards litter prevention and collection programs.

- In overseas markets, data has driven both governments and tobacco industry to action, leading to successful waste redirection and recycling initiatives.
- A Scheme could also pave the way for a stronger discussion on a State level to access funds from the Recycling Modernisation Fund, by defining cigarette butts as waste plastic.

With a new focus on remanufacturing, a product stewardship program could also aim to standardise Australian made butt bins to manufacture at volume, reducing cost impacts on local governments.

The implementation of a Product Stewardship Scheme will facilitate discussions across all stakeholders to drive the change required for a positive environmental impact.

The History of Tobacco Product Stewardship in Australia

In 2003, tobacco companies in Australia came together to participate in a product stewardship scheme, led by British American Tobacco Australia. They reportedly generated \$5 million in funding and implemented a Butt Litter Trust. However, this made little impact into the issue. The funds seemingly focused on clean up events, rather than awareness and research. Whilst there was a recycling trial, the engagement was seemingly from environmental organisations, not businesses and retailers. This formal engagement and Trust appears to have ceased years ago.

Battery Stewardship in Australia

The Australian battery stewardship program doesn't currently include Vaping devices, such as e-cigarettes.

Battery producers are charged based on imports at a rate of \$0.02 per 24g (equivalent to an AA battery).

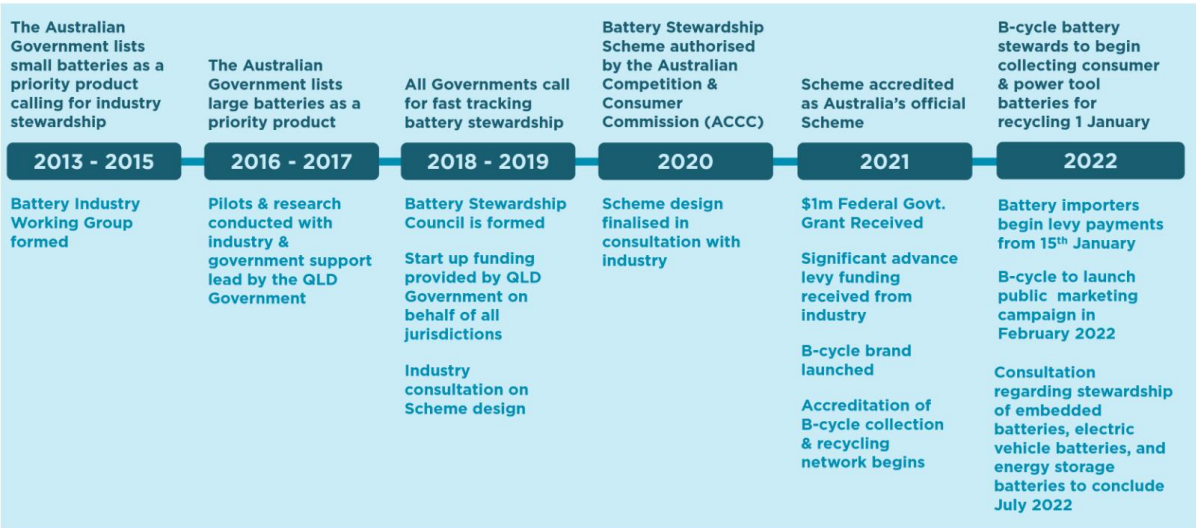


Image sourced from www.bsc.org.au

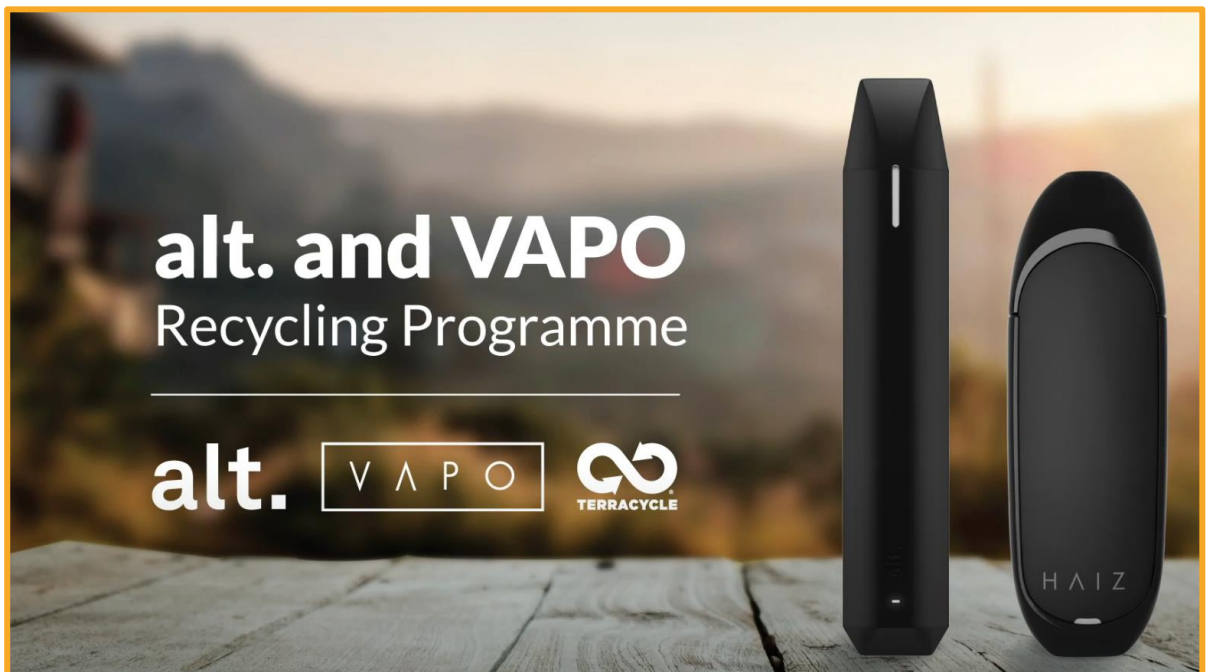
Current programs

TerraCycle®, Tweed and Tokyo Smoke have partnered to create a national recycling program for any brand of cannabis packaging and for Canopy Growth produced vape products.

This program accepts all Canopy Growth produced vape products. This includes cartridges and batteries of the following brands:

- JUJU Power™ battery
- 510 cartridges in the following brands: Tweed, LBS, Twd.
- Tokyo Smoke™ Luma cartridges and battery

New Zealand has a scheme set up with TerraCycle and a vape brand to recycle vapes. In a world-first for nicotine vaping pod systems, VAPO has collaborated with the global recycling giant Terracycle to develop a recycling programme specifically for VAPO and alt. branded products, including bottles, devices and pods.



SECTION 2



RECOMMENDATIONS

NOMOREBUTTS®

Recommendations

Outside of the implementation of a formal umbrella product stewardship scheme, No More Butts makes the following recommendations to the Western Australian Government when considering vaping devices to be included in e-Waste product stewardship discussions.

- Integration with B-Cycle (Battery Stewardship) and/or Mobile Muster
- Introduction of a Refund scheme
- Consideration of awarding necessary licences to satisfy and cover both the nicotine and e-waste requirements
- Consideration of a mandatory 'recycling' bag for overseas imported vaping devices and accessories
- Implementation of recycle points at Vape resellers & Pharmacies
- Drive public awareness of e-waste drop-off centres
- Greater alignment of sales reporting for visibility into brand / sponsor volumes
- Introduce reporting of vaping devices and vaping accessories into National Litter Index and equivalent Reports
- Introduce specific 'dangerous' littering fine at same rate of lit cigarette

Recommendations

Yogi Hale Hendlin, a research associate at the Environmental Health Initiative at the University of California, San Francisco, is quoted as saying:

“It is the consensus of public health researchers working on the environmental costs of tobacco that e-cigarette manufacturers need to put a product deposit system into action,” he said.

Heidi Sanborn, executive director of the National Stewardship Action Council, has been working on a bill in California to increase recycling rates of e-cigarettes.

Manufacturers do not include recycling or waste information for e-cigarettes and recycling company TerraCycle said that a recycling program targeting the products has been less than successful.

A spokesperson for popular e-cigarette Juul said the company is increasing their recycling and takeback programs and tells customers to dispose of cartridges properly.

Recommendations

Best Practices for Safe Disposal:

- Check with your state and local environmental agencies for rules and guidance about e-cigarette and e-liquid waste disposal.



- Deliver the sealed container of e-cigarette waste to a local hazardous waste facility at least every 90 days.

- Turn off the device and remove the rechargeable battery before disposal. If the device isn't yours, have the user do this.

- Do not rinse e-cigarette items, such as spent cartridges, to remove the liquid nicotine residue. That water will become hazardous waste, and you will need to store and dispose of the water properly.

- Store all items--especially rechargeable batteries--in a cool, temperature-controlled environment and in a container that is sealed and clearly labeled for hazardous waste.



- Never throw rechargeable batteries into the trash. Keep them in a separate container for hazardous waste.

- Handle used and discarded cartridges carefully to avoid unintentional exposure to unused nicotine. Do not throw them away in the regular trash.

- Always be careful handling products. Liquid nicotine can be absorbed through the skin and cause accidental poisoning.



Image sourced from www.fda.gov

SECTION 3



PROPOSER

NOMOREBUTTS®

Proponent

Founded in June 2020 under the original entity name, NO BUTTS ABOUT IT (INTERNATIONAL) LTD, No More Butts is a registered charity, entered into the Register of Environmental Organisations in December 2020.

In August 2020, No More Butts made a submission to the New Product Stewardship Investment Fund for cigarettes. Since then, No More Butts has continued to work extensively across industry, environmental groups, peak bodies, and Commonwealth, State and Local government departments to build a strong network.

In December 2020, No More Butts consulted to Equilibrium in their preparation of the report commissioned by WWF regarding cigarette butt litter, which has just been released in November 2021. In June of 2021, NSW EPA contracted No More Butts to consult on this topic, helping to prepare monitoring and evaluation framework and provide guidance for future programs.

Based on an abstract submission, No More Butts were invited to present on the considerations and proposed framework for a national Product Stewardship Scheme for tobacco at KAB NSW Litter Congress in April at UTS in Sydney, with their presentation titled “Igniting a new scheme: Addressing our most littered item - cigarette butts”. Following this presentation, No More Butts were guests on the Ocean Protect and Banish podcasts to talk about the issue. This was followed up by another speaking engagement at Waste and Recycle Conference 2021.

In 2022, No More Butts spoke again at the WA Waste and Recycle event about the emerging threat that vaping devices pose to the environment.

No More Butts has engaged with the Commonwealth Plastics Plan team across since 2021 around different actions in their plan, including the creation of a national framework for litter reporting. No More Butts has also engaged with the leadership team of the Product Stewardship Centre of Excellence and with the offices of the Federal Minister and the Assistant Minister for the Environment to discuss potential actions and considerations to address this waste problem. No More Butts has deployed cigarette butt programs in Wollongong, Perth and Cairns to bring solutions to LGAs.

With a board containing a former senior Microsoft executive, and a Director of an Australian manufacturing and retail brand, No More Butts bring the experience required to deliver this project for the Australian Government. As a company limited by guarantee, it is run by volunteers based across Australia and has members across the world.

Our Vision

“A butt free environment”.

We see a future where cigarette butts will be recycled, with the products created having a further positive impact on the community.

Our Mission

We run national awareness campaigns on the impact of littering and recycling options, with the aim to make people think twice before carelessly discarding their butts.

We assist in the beautification and regeneration of our natural environment through participation in, or coordination of, clean-up events.

We intend to scale national recycling programs and research alternative solutions whilst challenging industry to identify more environmentally friendly materials for cigarette butt filters.

Our Approach

Re-educate - We re-educate people, businesses, governments and organisations on the importance of the correct disposal, options for awareness programs and infrastructure, and on the ability to recycle.

Retrieve - We retrieve cigarette butts where they have been discarded, promoting the preservation and recovery of the natural environment. We partner with groups and run our own events.

Recycle - We promote existing recycling options and intend to scale these into as many communities and workplaces as possible.

Research – We work across research foundations and engage industry to identify alternative recycling methods, commercialise products made from the recycled materials, and progress research into alternative materials for filters.

Reward - We plan to pilot rewards schemes, with support from companies and governments, to drive a step-change in awareness and mindset.

Our Values



Respect

“We respect the natural environment and we respect the diverse backgrounds and opinions of those involved in our charitable purpose.”



Preserve

“We preserve the natural environment by supporting activities related to sustainable litter and waste management along with clean-up events.”



Question

“We question and challenge how things have been done and how innovation can lead towards the best outcomes for the environment and our charity.”



Grow

“We seek opportunities to support the personal and professional growth of our team. We identify opportunities for funding to help our charity grow.”

Governance

Board

Roderic Byrnes (Executive Director)

Samuel Hawkins (Executive Director)

Shannon Mead (Executive Director)

Natalie Pharaoh (Company Secretary)

Public Fund Committee

Roderic Byrnes

Shannon Mead

Natalie Pharaoh

Structure

NO MORE BUTTS LTD is an Australian based charity, as a public company, limited by guarantee.

The No More Butts Public Fund has been granted Deductible Gift Recipient status in Australia, and as such, all donors are entitled to a tax receipt and a full tax deduction for their donations.

Policies

The Board works with a number of Policies, which provide a framework for the corporate governance of NO MORE BUTTS LTD.

All Directors are required upon appointment to disclose any conflict of interest and must complete a Declaration for Responsible Persons, confirming that they are not disqualified under Governance Standard 4 to hold a Director position on the Board.

Founder's Biography

After an early work history spanning hospitality and entertainment, our CEO - Shannon Mead, forged a successful corporate career over two decades with multi-national companies, including Nokia and Microsoft.

Most recently, Shannon led Commercial Operations & Go-to-market for a global consumer electronics company, accountable for governance, analytics, training, and retail operations across 14 countries in the Asia Pacific region, reporting to the Global Chief Commercial Officer. During his tenure, Shannon held the role of General Manager for Philippines, Singapore, Indonesia and Pacific Islands, living in the three former countries, giving him a greater sense of worldwide impact and cultural understanding.

Prior to joining this company, Shannon led Sales Operations across Australasia for Microsoft Devices after being involved in sales, product management, and training roles with Nokia.

Shannon has presented across various conferences since the inception of No More Butts on the topic of cigarette butt litter, considerations for recycling and the importance of democratisation of data. More recently, he has spoken about the importance of e-waste programs to cater for the rise in vaping devices.

Along with a team of 10 others, Shannon works as a volunteer in the organisation, as a full-time focus and is an Executive Director. Shannon was presented with the Cairns Regional Council 2022 Australia Day Awards "Volunteer of the Year" for his efforts with No More Butts.



Our Volunteer Leadership team

As at 30th September 2022



Rod Byrnes
Operations Manager



Samuel Hawkins
Controller



Natalie Pharaoh
Copywriter



Emma Frampton
Legal Counsel



Ingrid Jones
Grant Writer



Julie Tkalec
Volunteer Coordinator



Yut Cheng
Admin & Analytics



Yuki Sako
Accountant

Membership

In order to be entered and retained on the Register of Environmental Organisations (REO), No More Butts conducted a recruitment drive in the first year of our operation.

Using our website, along with organic Facebook, LinkedIn, and Instagram marketing, we reached and retained the requirement of a minimum of 50 members.

As a public company, limited by guarantee, our members have a financial obligation to the company. This obligation can either be fulfilled up front, or if ever called upon. In our constitution, we resolved to have this membership fee at \$10.

There is currently no separation of obligations or entitlements for members who have already contributed their obligation.

We are required to submit a annual report to retain our REO status, confirming the current level of membership. This was completed after the Annual General Meeting, where a motion was passed to change the name of the legal entity from NO BUTTS ABOUT IT (INTERNATIONAL) LTD to NO MORE BUTTS LTD.

Memberships



One planet
handle with care

Alignment with United Nations SDGs



APPENDICES

- ACRONYMS

- FURTHER RESEARCH

NOMOREBUTTS®

Acronyms

Acronym	Definition
AIHW	Australian Institute of Health and Welfare
AMDI	Australian Marine Database Initiative
EPA	Environmental Protection Agency
HSN	Harmonized System Nomenclature
KAB	Keep Australia Beautiful
MPL	Minister's Priority List
RACGP	Royal Australian College of General Practitioners
RMIT	Royal Melbourne Institute of Technology
TIPSS	Tobacco Industry Product Stewardship Scheme
UNU	United Nations University Keys
UCSF	University of California, San Francisco
WWF	World Wildlife Fund

Further research

- <https://vapingfacts.health.nz/the-facts-of-vaping/what-is-vaping/>
- <https://www.health.qld.gov.au/news-events/news/whats-really-in-vape-juice>
- <https://www.tobaccoinaustralia.org.au/chapter-18-harm-reduction/indepth-18b-e-cigarettes/18b-3-extent>
- <https://www.statista.com/statistics/1189066/australia-electronic-cigarette-and-vaping-sales-value/>
- <https://www.aihw.gov.au/reports/phe/221/alcohol-tobacco-other-drugs-australia/contents/drug-types/tobacco>
- <https://www.drugabuse.gov/publications/drugfacts/vaping-devices-electronic-cigarettes>
- <https://tobaccofreeca.com/environment/vape-waste-more-harmful-than-you-think>
- <https://www.tga.gov.au/resource/nicotine-vaping-products-and-vaping-devices>
- <https://www.tga.gov.au/authorised-prescribers-unapproved-nicotine-vaping-products>
- <https://www.tga.gov.au/nicotine-vaping-products-information-prescribers>
- <https://www.athra.org.au/vaping/the-law/>
- <https://www.myduke.com.au/pages/how-it-works>
- <https://www.terracycle.com/en-CA/brigades/tweed>
- <https://www.onegreenplanet.org/environment/how-e-cigarettes-and-vapes-create-electronic-environmental-waste/>
- <https://iquitplastics.com/blog/boycott-the-vape>
- <https://thewest.com.au/news/environment/smokers-butts-causing-global-litter-havoc-c-3338044>
- <https://808novape.org/your-vape-litter-is-becoming-an-environmental-disaster/>
- <https://truthinitiative.org/research-resources/harmful-effects-tobacco/toxic-plastic-problem-e-cigarette-waste-and-environment>
- <https://www.vapo.co.nz/pages/the-only-recyclable-pod>
- https://ec.europa.eu/health/scientific_committees/consultations/public_consultations/scheer_consultation_10_en
- <https://www.csiro.au/en/research/health-medical/diseases/health-impacts-of-electronic-cigarettes>
- <https://www.quitclinics.com/>

- <https://adf.org.au/talking-about-drugs/parenting/vaping-youth/vaping-australia/>
- http://www.healthstats.nsw.gov.au/Indicator/beh_esmo_age/beh_esmo_age
- <https://www.athra.org.au/blog/2020/07/22/over-500000-vapers-in-australia-now-according-to-government-study/>
- <https://www.drugabuse.gov/publications/drugfacts/vaping-devices-electronic-cigarettes>
- https://www.researchgate.net/figure/Components-of-an-electronic-cigarette_fig1_269875112
- <https://www.athra.org.au/vaping/the-law/>
- <https://www.tga.gov.au/node/939767>
- <https://www.health.nsw.gov.au/tobacco/Pages/e-cigarettes.aspx>
- <https://www.health.gov.au/health-topics/smoking-and-tobacco/about-smoking-and-tobacco/about-e-cigarettes>
- <https://www.hopkinsmedicine.org/health/wellness-and-prevention/5-truths-you-need-to-know-about-vaping>
- <https://www.thevapestore.com.au/pages/what-is-vaping>
- <https://insightplus.mja.com.au/2021/38/new-laws-wont-drive-vapers-back-to-smoking-say-experts/>
- <https://legislation.nsw.gov.au/view/html/inforce/current/act-2001-058#sec.15>
- <https://www.9news.com.au/national/federal-politics-news-fears-tough-new-vaping-laws-will-drive-people-back-to-smoking/2c6c8e54-1b65-4231-8c12-5b60c9065580>
- <https://www.theguardian.com/society/2021/oct/01/australian-vaping-law-changes-e-cigarette-users-now-need-a-doctors-prescription>
- <https://www.gizmodo.com.au/2021/09/vaping-ban-australia/>
- <https://www.legalisevaping.com.au/australian-law>
- <https://www.tobaccoinaustralia.org.au/chapter-18-harm-reduction/indepth-18b-e-cigarettes/18b-9-regulatory-overview>
- <https://www.smh.com.au/business/consumer-affairs/vapers-told-to-head-to-the-doctor-ahead-of-new-import-rules-20210813-p58iet.html>
- <https://sydneyvapeco.com.au/blogs/news/australian-nicotine-laws>
- <https://www.afr.com/policy/health-and-education/the-secret-money-trail-behind-vaping-20210217-p573bi>
- <https://www.news.com.au/lifestyle/health/health-problems/global-experts-call-on-world-health-organisation-to-ditch-prohibitionist-antivaping-stance/news-story/1cdb3b0bb47df36dde7cfb87ef92fe21>

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ABN: 48 641 916 903



NOMOREBUTTS®

Good morning,

If a regulatory approach is adopted, this will have the outcome of most likely shifting the cost burden to local government and ultimately the rate payers of that municipality. This of course means that those ultimately responsible, being the manufacturers, escape from being impacted by the regulatory change.

In remote areas this is exacerbated. If indeed there is a recycling centre, it is potentially many kilometres away. Our closest regional centre is Kalgoorlie, which is 130 km distant or a 260 km round trip. Fuel use alone may negate any advantage in preventing e-waste to landfill.

I believe this process should be market driven. I acknowledge though that this would have its own issues to solve. Regulatory fiat however is quite the blunt instrument in a state such as WA.

Finally, is there even a process in WA to recover rare earths or metals? Or does the waste need to be sent interstate or even overseas?

Regards

Ron Stewart

Dear E-waste team,

Herewith is my submission to the consultation:

Banning of E-Waste from Landfills is appropriate. However, the analysis is significantly lacking in detail.

Including white goods in the E-waste calculation is also something of a furphy. Once fridges are degassed, they and washing machines will mostly end up in the lower value metal recycling stream as happens at present.

The cost benefit analysis seeks to aggregate the costs and benefits of the E-waste ban on the basis of net benefits and net costs but fails to identify who gets the benefit and who pays the cost. The present situation, as outlined in the discussion paper is that the major e-waste recycler is only operating at two thirds of their capacity. If there was indeed a mature market for recycled components you would expect this latent capacity would be taken up through the purchase of E-Waste. That is not happening.

Existing E-Waste collection points are funded. They are paid to collect E-Waste and it is collected by recyclers. This happens on a very limited basis outside Perth Peel and major regional centres.

It sounds like the proposed model will require Local Governments to set up recycling arrangements. There will be some modest capital injection through a contested grants process. Contested grants usually means the rich get richer and the poor miss out. In all likelihood the Local Government will need to pay for E-Waste to be collected and will need to fund the process through increased waste levies.

A fairer model would be to provide start up funding to all local governments rather than those who have the capacity and wherewithal to write the best grant application. It is a strange decision to offer the grant program before the consultation has been completed. This suggests that decisions have been made and consultation is tick a box. There is no point in consulting if the consultation will have no impact on the outcome. That is telling not asking.

The Synergies report says:

This section examines the financial impact of the implementation options on stakeholders, including:

- *reduced revenue to landfill operators due to volumes of e-waste being diverted from landfill;*
- *reduced landfill waste levy revenue to the State Government; and*
- *additional waste collection rates to households and commercial businesses to fund the additional costs of collecting and handling e-waste (to the extent that these costs are not*

funded by Government or are unable to be passed on to recyclers), less financial cost savings due to reduced payments to landfill operators to dispose e-waste and reduced levy payments to Government.

These impacts are not specified in the CBA model because they are 'financial transfers' as opposed to economic costs. For example, the total cost of collecting and handling e-waste is identified in the CBA but the model does not specify 'who pays'.

In other words the report does not seek to quantify winners and losers. The result of the changes will be a distorted market for E-Waste recycling. Local Governments must dispose of E-Waste and recyclers will have the whip hand. The "who" pays will be small local governments and regional households.

Best Regards

Stan Scott

Chief Executive Officer

Hi,

Further to the attached invitation, please accept this advice as a formal Shire of Dumbleyung submission to the above WA State Government proposal.

The Shire of Dumbleyung would support a ban on e-waste disposal to landfill on the following conditions:-

1. No net cost to Local Government in establishing and operating the new e-waste banning arrangements
2. That the new arrangements follow the recent successfully introduced 'containers for change' program that provides financial incentives for waste owners to offer up their expired e-waste products to a local recycler in return for a pre-determined refund.
3. That local government also be incentivised to support the program with a potential percentage commission revenue of all e-waste products collected for recycling, rather than landfill.

It is also recommended that a mandatory 3 year program review period be implemented to ensure that the ban on e-waste to landfill program is delivering on its intended aim including an assessment on whether local government is supportive of the initiative.

Hope this advice proves useful. Thank you for the opportunity to respond.

Cheers,

Gavin



Gavin Treasure
Chief Executive Officer

SHIRE OF DUMBLEYUNG | WESTERN AUSTRALIA
32 HARVEY ST | PO BOX 99, DUMBLEYUNG WA 6350

Website: www.dumbleyung.wa.gov.au

Office Hours: 8:30am - 4:30pm, [Transport Licensing](#): 9:00am - 4:00pm



Option 1 is the preferred option for rural and remote based local governments. If recycling of e-waste is economically viable then recyclers should be collecting e-waste from non-metropolitan local authorities. If it is not economically viable for e-waste to be recycled then money and energy should not be wasted creating an industry that will ultimately fail. Is the current e-waste recycling industry large enough to cope with a whole of state waste collection/recycling regulatory approach. If not the State would be better off funding pilot plants to test the proposition that e-waste can be 100% recycled viably. Once this is proven then create a regulated system where recyclers can collect and recycle waste from around the state viably thereby not imposing costs onto taxpayers/ratepayers.

Regards

[REDACTED]

[REDACTED]

Shires of Leonora, Laverton & Menzies



E-waste to Landfill Ban Consultation
Department of Water and Environmental Regulation
Locked Bag 10
Joondalup DC, WA 6919

Via email: e-waste@dwer.wa.gov.au

31/3/23

Dear Sir/Madam

Ban on e-waste disposal to landfill in WA

Please find enclosed our submission on the ban on e-waste disposal to landfill in WA. Whilst our submission is at a high level, we would be pleased to discuss this further with you. First and foremost, we are supportive of the incoming ban.

1. Opportunities/Benefits of the ban

- There is an opportunity with the ban to support/promote asset reuse. This could combine educating the public as well as supporting legitimate business operators in the reuse industry. Reuse clearly has a better outcome than recycling.
- There are considerable technological advances in recycling machinery. Whilst not commercially viable from a business perspective in WA given the volumes currently available, with Government financial support, there are opportunities for businesses to create world leading outcomes.
- Education of the public will be a key outcome of the ban, in terms of what the legitimate opportunities are for disposing of their e-waste and who the legitimate operators are. The consultation paper at Section 5.2 notes this, but needs to be expanded upon.
- A collective e-waste approach from household, councils, and businesses, to ensure e-waste is correctly, safely and cost effectively disposed of, and not stockpiled. All parties need to work together to achieve this.

- We have the opportunity to learn from our East Coast counterparts who have already implemented the Ban, with negative outcomes being as set out in Section 3.3 of the Consultation Ban. We confirm from our experiences these include:
 - Unsustainable business practices from “fly by night” operators promising low cost recycling options, stockpiling material and ceasing operations. This is driven by cost minimization behavior with an absence of due diligence and enforcement of regulations.
 - Poor recycling outcomes where E-waste is intentionally processed by metal recyclers without battery removal processes, resulting in preventable facility fires. Again this is driven by cost minimization behavior with an absence of due diligence and enforcement of regulations
 - The lack of differentiation among e-waste categories has led to the accumulation of hard-to-process e-waste items, such as Bluetooth speakers, at recycling facilities. This issue arises from e-waste being treated as a general waste stream and recycling operators using average prices when bidding on tenders. Consequently, the average price often falls below the production cost for challenging items. Proper segregation of e-waste would enable appropriate pricing, eliminating this unintended outcome.

2. Scope

Consideration needs to focus on materials such as vapes through to solar:

- Vapes are rightly receiving negative publicity in terms of the e-waste it is generating and the challenge in recycling them, not to mention the fire risks associated with disposal in the general waste stream.
- The size of the end-of-life PV panel waste stream in Western Australia is estimated at c.2,500 tonnes p.a., mainly originating from household installations (<100 kW systems). The waste stream is expected to grow to 5,000 tpa by 2025, in line with greater numbers of PV panels from both household installations and large-scale PV power plants (> 100 kW systems). We support the second phase of the ban that intends to include

solar panels, as these include valuable materials and represent a significant waste arising stream in the near future.

- Consideration should also be given to the application of the ban, ensuring it is a statewide ban, if this is not the case, it is likely that the same issues that exist with waste levy avoidance will occur.

3. Legitimate operators in the WA e-waste market.

- The ban will create an opportunity for new entrants to the market, which we welcome in terms of bringing new capabilities and expertise to this problem. However, it is recommended that there is one designated Government Agency with appropriate powers to regulate the industry to ensure materials are not stockpiled, inappropriately dealt with locally, or exported. Operators should also have to be licensed, to ensure the right material outcome and a level playing field for all operators.
- As the landfill ban and grant funding availability attract new entrants to the e-waste recycling industry, it is essential to carefully consider the support provided to newcomers. This is crucial because there is a risk of market cannibalization due to the limited volume needed for business viability and capital expenditure decisions. This phenomenon is particularly evident on the eastern seaboard, where most large recyclers either withdrew from the market due to cost competition or faced business failure owing to financial viability. This can be a vicious cycle that stifles investment and innovation in the space.

4. Collection and transport

- A key consideration, especially for Local Council Authorities, will be the safe storage and transport of the e-waste collected at their sites. Having e-waste stored in suitable cages, separated into specific and identifiable cages, will assist with the manual handling, collection and safe transport of the e-waste to appropriately licensed operators.

- A key issue is the WA urban sprawl and regional centres, and the somewhat unviable transport cost to collect and transport the e-waste to an appropriate licenced operator. A consideration could be to support Customers or transport operator(s) via reduced collection costs for this stream, depending on location (remote and regional WA)

5. Shared Stewardship

- At Section 2.4 of the Consultation Paper, you reference the National Television and Computer Recycling Scheme (NTCRS). Our views on the NTCRS are well known, it is not fit for purpose in its current form and has propagated several unintended consequences. The NTCRS funding flowing to WA has reduced year on year and unless structural change is made, this trend is likely to continue. Positively the NTCRS is under ministerial review and some of the changes proposed will benefit W.A, particularly around distribution of funds.
- We recommend that the state does not rely on federal schemes in respect to implementation of the Ban.

6. Are the principles appropriate to guide our approach to the ban?

- Yes, for the most part. Considerations could include:
 - Establishing acceptable recycling outcomes for each asset class, to ensure operators are completing the requisite level of work required to recycle the assets. For example, Televisions would have a different recyclability than fridges.
 - Further emphasis on developing the local infrastructure, although “benefits to the state” and “future proofing” partly address this. Processing in Australia is rudimentary in comparison with other developed nations. A focus on best practice and innovation should be at the forefront of the guiding principles.

7. Do you think the preferred option is the one most suited to Western Australia, and why

- Total Green Recycling supports the recommendation of the department of Option 2 “Regulatory Approach with Voluntary Elements”.
- This approach balances flexibility and collaboration which will promote best practice, whilst having the regulatory controls to set a minimum standard, ultimately creating the far and level playing field required for an effective e-waste recycling industry.

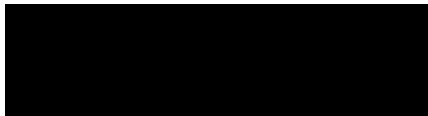
8. What other actions can we take to manage e-waste, in Western Australia and nationally?

Key actions that can be taken include.

- Providing the broader community more easily accessible drop off points to conveniently dispose of their E-waste. Convenience is the main barrier to good disposal behaviour.
- Deliver a targeted education program to the broader community to educate them on the risks of incorrectly disposing of their E-waste (particularly battery fires)

We would welcome the opportunity to discuss this Ban and our feedback further with you directly, or via the Technical Advisory Group that is being set up.

Yours faithfully,



Michael & James Coghill
On behalf of Total Green Recycling



Ms Michelle Andrews
Director General
Department of Water and Environmental Regulation
Locked Bag 10
Joondalup DC WA 6919

Email: e-waste@dwer.wa.gov.au

31 March 2023

Dear Ms Andrews

Re: E-waste to landfill ban in Western Australia - Consultation Paper

The Waste Management and Resource Recovery Association of Australia (WMRR) appreciates the opportunity to provide comment on the *E-waste to landfill ban in Western Australia - Consultation Paper*. WMRR is the national peak body representing Australia's \$15.8 billion waste and resource recovery (WARR) industry. With more than 2,000 members from over 500 entities nationwide, we represent the breadth and depth of the sector, within business organisations, the three (3) tiers of government, universities, and NGOs.

WMRR recognises that the government is pursuing this ban to support its objectives under the *Waste Avoidance and Resource Recovery Strategy 2030*. However, WMRR would reiterate that bans in and of themselves do not work, rather WARR is a shared responsibility and to effectively address e-waste it is necessary to incorporate circular economy principles to ensure that products are appropriately designed, as well as having appropriate repair, share and recycling opportunities and systems in place to enable true alternatives to disposal, rather than assuming by focusing simply on end-of-life that these solutions will miraculously appear. In 2023 we have overwhelming economic and regulatory reasons to do so - this must be the overwhelming lesson that WA has learned from the successful creation of the container refund scheme in WA.

WMRR's 2022 submission on the federal government's *Stewardship for Consumer and Other Electrical and Electronic Products* as well as this consultation submission, do not support a landfill ban in the absence of an integrated WARR system that has the processes, infrastructure, and pathways to collect and recycle/reprocess banned materials, and importantly, the end markets to consume recycled materials. Simply imposing a landfill ban without established comprehensive and effective product stewardship schemes and end markets will have the unintended consequence of stockpiling these materials that have no home, and worse lead to illegal dumping.

Mandated extended producer responsibility (EPR) schemes are not only logical and proven globally and locally, that they provide moral, legal, and financial imperatives for product manufacturers to take responsibility for the products they create. This policy approach has the potential to drive a paradigm shift in the creation of products at first instance, with greater thought and emphasis given to material selection and product design to minimise the costs associated with total lifecycle management.

WMRR NATIONAL OFFICE
57 ST JOHNS ROAD
GLEBE NSW 2037
(02) 8746 5000
INFO@WMRR.ASN.AU

WMRR.ASN.AU



Further whilst WMRR appreciates that this proposal is in fact an election commitment, WMRR would encourage WA to align with the Federal proposal to address e-waste as per the Environment Ministers Meeting in October 2022 decision. What can get lost in WARR policy that is state led is that we are in fact one nation with one common market, and the expectation of business and community is that we collaborate nationally to provide a consistent and certain framework within which we can all operate for the benefit of all. We have seen in recent years with for example Single Use Plastic Bans, whilst in theory operating nationally, the desire of some states to be seen as 'stronger' than others has resulted in poor outcomes for business, confusion for community and real challenges with implementation. If governments are bona fide in their desire to assist with addressing real challenges with materials, chemicals and waste, it may mean that their desire to be first, may need to be subsumed to the greater benefits that can be achieved by working consistently nationally.

WMRR's responses to the consultation questions can be found at **Annexure A**. Please contact the undersigned if you wish to further discuss WMRR's submission.

Yours sincerely



Gayle Sloan

Chief Executive Officer

Waste Management and Resource Recovery Association of Australia

Submission:

1.4 Impact on community, environment and economy Do you support the incoming ban on e-waste from disposal to landfill in Western Australia? What other opportunities or benefits could a ban bring to Western Australia? What impacts does e-waste have on the community, environment, and economy and how big is the problem?	Banning materials only at disposal stage and not considering all other aspects of the supply chain or the systems within which we operate, will go no further than perpetuating our business as usual, linear approach. Time, resources, and efforts should not be focused on landfill bans but on how to ensure that the entire supply chain takes responsibility for designing and managing materials to ensure that materials remain at their highest and best value for as long as possible and that there are clear systems and markets for these materials to end of life. The real concern is that a ban in the absence of an integrated system with product responsibility results in illegal dumping and/or possibly stockpiling that has a real chance of significant environmental harm through for example fires. As such in the absence of this integrated system WMRR does not support the proposed ban. WMRR notes that the WA government undertook extensive work in establishing a comprehensive product stewardship regime for beverage containers to ensure that the challenges associated with their single use nature and impact at end of life was addressed. This scheme has been very successful at diverting material from landfill and recovering resources via clean material streams, as well as creating significant jobs and investment in WA. The health and environmental impacts of e-waste outlined in the paper are significantly greater than those posed by container litter and yet containers have a robust product stewardship scheme in place in WA. It is submitted that a similar comprehensive scheme, accompanied by a robust community education campaign, which aligns with a national scheme, given we have seen first-hand the impact of states going it alone and then attempting to retrofit for consistency is required for managing e-waste. This is particularly true when one considers the significantly higher risks e-waste poses to the community and environment.
2.4 Shared responsibility and product stewardship	What is currently lacking in Australia are mandatory schemes that will place obligations on generators to manage end-of-life, including the costs of managing materials at this stage. While WMRR acknowledges that at least a portion of these costs will be passed to the consumer, the reality is that at present, these costs are often managed through council rates and the resulting disposal costs, given that a vast proportion of e-waste is utilised in the household. An e-waste scheme must place the true cost of end-of-life on the item (in fact France places this cost transparently on the point of purchase label to ensure that the consumer can make an informed choice



What other actions can we take to manage e-waste, in Western Australia and nationally?	about the true cost of an item through its life). These funds, can then be utilised to fund costs associated with design, collection and reprocessing (as per the CDS). As the proposed ban currently stands Local Government, especially regional and remote, will bear the cost of collection and recycling, however there is no obvious market for this material, and we have recently witnessed that plastic from e-waste can no longer be exported easily due to export restrictions. Creating significant challenges for recyclers, albeit there may be demand internationally for this material. Other actions that could be considered include a national avoidance campaign to disincentivise the continual upgrade of electronic devices, with an explanation as to why this should be dissuaded. Greater emphasis on companies enabling open repair of devices to enable longer life, or in the alternate, making repair shops available (like Apple does), assisting with sharing platforms, as well as requiring design for disassembly in order that valuable materials in these devices can be recovered and re-used at lesser cost.
Are the current actions adequate and working?	Put simply no. There is limited obligation on e-waste producers in Australia to truly fund and manage end-of-life, nor create markets for these materials at end of life. The existing actions rely heavily on local councils and charities to take responsibility for these items to avoid them being landfilled with limited regulatory or financial assistance.
4.2 Scope Would you change anything about the way e-waste for initial ban has been defined? Why? (e.g. more recovery, less environmental harm, stimulate recycling/re-use industry)	WMRR would encourage national alignment on scope and timing of the implementation, as well as ensuring that there is complete consistent coverage of items within the scheme, in order to make sense to the general public. That is all battery-operated items (which are currently excluded from the Battery Recycling Scheme) must be incorporated within this scheme. A coordinated community education campaign on the distinction between ban phases and each product categorisation is needed to mitigate the risk of improper disposal and raise the profile of these items as a valuable recyclable resource. There needs to be awareness raised on how to safely dispose of damaged or possibly damaged items and the locations and process to do this needs to become more accessible.
4.3 Guiding principles for ban option design	The ban must ‘cover the field’ of e-waste products (which can be staged incrementally), however it must also align nationally. Ideally there will also be international alignment to ensure that products entering Australia meet internationally consistent standards to support the EPR scheme.

Are the principles appropriate to guide our approach to the ban?	Reasonable access should consider integrating with schemes that are effectively driving the same behaviour (source separated disposal) and/ or providing a financial incentive for consumers to return, as we have seen success in the CDS. WMRR encourages WA to further investigate access points regarding availability.
4.4 Outcomes of the ban Are there any outcomes that need to be measured and are not reflected in the above? Could the ban affect you, your industry or business in ways that have not been outlined?	WMRR suggests that the below be investigated as part of outcomes of the ban and/or evaluation activities: • Promotion and increase of value preservation for products -repair and reuse. • Products designed for greater resource efficiency - disaggregation and reuse. • The amount of recycled Australian e-waste material that is used in new products. The 'Stimulation of new markets' measure is not sufficient. • Reduction in use/reliance on virgin material. • Community awareness of resource management. • Number and ease of access to depots/ collection/ recovery pathways for the community.
5 E-waste ban implementation options Do you have comments on the proposed ways the ban would apply to you as an individual, business or industry? Are there any other key stakeholder sectors, groups, or applications that we need to consider in the ban framework?	WMRR notes that the Implementation Options focus on end-of-life as it reflects the landfill ban without incorporating EPR. The revised options will need to include the costs to manufacturers and incentives for processors/ manufacturers to create the systems to prolong the life of these products and drive relevant markets. WMRR cautions setting unrealistic timeframes for the ban to come into effect. WA must consider regional and remote capacity to collect and recycle and the current and anticipated national schemes. And again, WMRR states that a landfill ban in the absence of system support is extremely problematic and cannot be supported.
6.3 Preferred option identification Do you think the preferred option is the one most suited to Western Australia, and why?	Bans in absence of supply chain intervention and genuine alternatives do not work. WMRR would support Option 3, with the EPR obligation on all stakeholders and enforced. Again, we also state this must be a national approach.

Submission on the Consultation paper: E-waste to landfill ban in Western Australia

March 2023

About WALGA and Local Government

The Western Australian Local Government Association (WALGA) is the peak industry body for Local Government in Western Australia. WALGA is an independent, membership-based organisation representing and supporting the work and interests of 137 mainland Local Governments in Western Australia plus the Indian Ocean Territories of Christmas Island and Cocos (Keeling) Islands.

WALGA provides an essential voice for 1,213 Elected Members, 23,000 Local Government employees and the 2.6 million constituents that they serve and represent. WALGA also provides professional advice and services to Local Governments.

Local Governments across Western Australia are diverse in their size and economic and social profiles, ranging in population from less than 100 to more than 230,000 people; with geographic areas of 1.1 square kilometres to 372,000 square kilometres; and employing 10 to more than 1,000 people.

WALGA's vision is for agile and inclusive Local Governments that enhance community wellbeing and enable economic prosperity.

Introduction

WALGA welcomes the opportunity to provide comment on the Department of Water and Environmental Regulation (DWER) [Consultation Paper: E-Waste to landfill ban in Western Australia](#).

The Western Australian Government has committed to deliver a statewide ban on e-waste disposal to landfill by 2024, with the aim of improving management and recycling of e-waste produced by households and businesses across the State.

Approximately 70,000 tonnes of e-waste (electrical, electronic and battery powered items) are currently generated in WA every year, with an estimated 27 per cent of this material being recycled. Material flows analysis, undertaken on behalf of DWER, shows that the amount of e-waste is expected to increase by 250 per cent to approximately 175,000 tonnes (including batteries and photovoltaics) a year by 2043.

Objectives of the ban include supporting increased recovery of value from e-waste materials, protecting the environment by better management of hazardous products, and expanding the State's e-waste collection, recycling and processing networks. The ban will apply to e-waste collected for the purposes of recycling. Incidental disposal, such as items placed in a kerbside bin, will not be subject to the ban.

The e-waste landfill ban will initially focus on:

Electrical, electronic and battery-powered items that have been collected and aggregated purposes of recycling or recovery that:

- a) *are covered by effective product stewardship schemes, particularly those accredited schemes under the Recycling and Waste Reduction Act 2020*

- b) *have established markets or systems for collection, recycling and processing in Western Australia that can grow with increased supply or that have access to national processing infrastructure*
- c) *contain recoverable base materials of value, for example metals, including precious metals.*

A list of the proposed items to be covered by the ban initially, and in a future phase, are included in Appendix 1.

WALGA acknowledges the objectives of the ban and its alignment to global, national and local environmental and recovery targets, in particular the [Waste Avoidance and Resource Recovery Strategy 2030](#). However, **the implementation of an e-waste to landfill ban by 2024, in its proposed form, will have significant financial implications for Local Governments, and the communities they service.**

In 2006, the then Western Australian Waste Management Board commissioned work to investigate the environmental, social and economic impacts of potential landfill bans on household packaging, building products and organic waste. The WALGA Submission made a key recommendation:

Any future investigations into a potential ban to landfill for any material type only be undertaken as a part of a multi-tool approach incorporating Extended Producer Responsibility programmes and other appropriate policies and mechanisms.

WALGA's 2022 [Submission](#) on the Stewardship for Consumer and Other Electrical and Electronic Products did not support a landfill ban for e-waste in the absence of a fully effective product stewardship scheme for products which would be subject to the ban.

While it is acknowledged that there are Product Stewardship Schemes in place for some of the products subject to the ban, such as the National TV and Computer Recycling Scheme (NTCRS) and Flurocycle, a new National Product Stewardship Scheme, anticipated to cover a wider scope of e-waste, is not scheduled for introduction until mid-2025, with on ground implementation timeframes still to be determined.

WALGA reiterates its position that **comprehensive and effective product stewardship schemes must be implemented for products subject to the e-waste landfill ban prior to the ban taking effect.**

Product Stewardship

The "polluter pays" principle requires that producers should pay the full social cost of the products they produce, including the environmental costs.

Product stewardship schemes are based on this principle, and are an instrument to manage the environmental, health and safety impacts (negative externalities) associated the full lifecycle of products and materials. These schemes require that all parties involved in producing, selling or consuming a product have a responsibility for the full environmental, social and economic costs of the product.

Without Product Stewardship arrangements in place for all items covered under the proposed e-waste ban, the burden of managing the product at end of life falls disproportionately to Local Governments.

Many of the items proposed to be banned from landfill in the first stage of implementation (Under Screens, IT and telecommunications in Appendix 1) are accepted under the

National Television and Computer Recycling Scheme (NTCRS). The NTCRS was established in 2011 to provide households and small businesses with free access to e-waste recycling, with collection and processing services offered through co-regulatory arrangements with recyclers.

In 2014, the services provided under these arrangements were reduced to the minimum legislated requirements for collected tonnes and number of access points provided. This resulted in reduced services in regional and remote areas of the state and increased costs to all Local Governments or Regional Councils hosting an e-waste drop off site.

A 2021 survey of 29 Local Governments which offer e-waste collection services to the community showed that each Local Government provides staffing, infrastructure and sites which contribute to the in-kind costs of recycling e-waste. The amount of financial in-kind costs varied from \$1,000 - \$150,000 per year per Local Government, for both in and out-of-scope NTCRS products. WALGA understands that recycling of NTCRS material costs \$350 per tonne and e-waste not included in the NTCRS \$650 per tonne.

These costs are also distributed inequitably, as they are only borne by those Local Governments or Regional Councils which operate e-waste drop off facilities; and are required to provide a 'free' service to any member of the community. The Local Governments and Regional Councils which operate these facilities are effectively subsidising the e-waste recycling costs for residents from other Local Governments.

Flurocycle, the voluntary national product stewardship scheme, does not provide any funding for recycling of fluorescent lighting. 22,403 kg of fluorescent lighting materials were collected through the Household Hazardous Waste Program in 2021-22 and cost \$70,568 to recycle, excluding transport. This material comprised 5 per cent of the overall material collected through the HHW Program.

Regional considerations

Due to Western Australia's dispersed population, transport costs have a significant impact on the viability of collection mechanisms in regional and remote areas.

Individual collection sites within the Perth metropolitan area have reported costs of up to \$1,000 per tonne for staffing, sorting, transport and recycling of both in and out-of-scope NTCRS products. This cost will be significantly higher for regional areas due to required transport distances and limited economies of scale. Consumers, Local Governments and retailers operating in regional and remote areas of WA are subject to higher than average costs of living and operation, which places added pressure on meeting any additional costs outside of scheme operations.

WALGA's 2006 Submission on the investigation into landfill bans made the following recommendation:

That investigation of any proposed regulatory waste management instrument incorporate a triple bottom line impact analysis applied specifically to the Western Australian context.

While a [cost benefit analysis](#) has been undertaken and provided alongside the discussion paper, feedback from Local Governments has highlighted that the figures used, particularly regarding transport cost, do not reflect the costs experienced in regional Western Australia. For example, the figure used for transport cost of \$100 per tonne has been slightly increased from the tonne per kilometre rate in a Victorian study and based on an average transport distance of less than 50km. Applying this rate to a remote

Western Australian context would result in costs per tonne of approximately \$5,000 for transport of e-waste from the Kimberley to Perth, which is not a realistic or viable cost and disproportionately disadvantages regional and remote Local Governments.

The cost benefit analysis and discussion paper have not clearly delineated the disproportionate costs between metropolitan and regional collection points, by applying a standard cost across the state which primarily reflects a metropolitan perspective. In order to present a more accurate figure, **consultation with regional Local Governments is recommended to assess current transport costs and incorporate this into an overall cost per tonne.**

The additional cost to regional Local Governments not currently collecting e-waste would include ensuring sites are appropriately licenced to collect e-waste for recycling, potentially installing collection infrastructure, ongoing maintenance and resourcing of the collection site, transport costs to an approved recycler and recycling costs. WALGA has received feedback from a number of Local Governments expressing considerable concern regarding their ability to resource such a requirement.

Implementation options

The Discussion Paper identifies three options for implementation:

- *Option 1: Voluntary approach, no legislation or new regulatory amendments, grant funding available for stakeholders, existing community education and engagement initiatives.*
- *Option 2: Regulatory approach with encouragement, regulations made under relevant legislation with obligations on some stakeholders, grant funding available for some stakeholders, with improvements to existing community education and engagement initiatives.*
- *Option 3: Regulatory approach with extensive obligations: regulations made under relevant legislation with wide range of stakeholder obligations, grant funding available for stakeholders, existing community education and engagement initiatives.*

Of the three options, **Option 2 is preferred.** The voluntary option set out in Option 1 would not provide sufficient incentive for the ban to be successful as no obligation is placed on the stakeholders to meet the objectives. The regulatory options set out in Option 3 are also likely to lead to adverse outcomes such as illegal dumping of material, which would be a further cost to Local Governments through monitoring and disposal.

All options include community education and engagement. Feedback from Local Governments highlighted that the implementation of an e-waste to landfill ban will require the development of a comprehensive communications and education campaign to ensure effective community participation and minimise administrative and resourcing burden on Local Governments. Local Government feedback shows community confusion currently exists around the definition of e-waste, and Local Governments are primarily the point of contact for residents with queries on disposal options. Existing e-waste recycling messaging needs to be further developed and expanded to clarify which items are accepted under product stewardship schemes such as the NTCRS, as well as how the ban will affect disposal options for different items.

It is recommended that the **regulatory option pursued allow for situations where an exemption to the landfill ban would be required.** For example, in a flood or other emergency event if the e-waste was damaged beyond recovery.

The stakeholder analysis in the Discussion Paper does not specify the organisations providing co-regulatory arrangements under product stewardship schemes as a separate stakeholder group. **WALGA recommends the inclusion of this group as key stakeholders to ensure consistent communication and understanding on the ban objectives across all sectors.**

While the Paper is primarily focused on recycling options, it is **recommended a reuse and repair element is considered as part of the ban**, with collection points offered support and incentives to establish or expand these services where possible.

WALGA's [2021 Submission](#) to the Productivity Commission's Right to Repair report included the results of a survey of Local Governments, where 75% of respondents (29 Local Governments) actively facilitate reuse or repair options for their communities. This included reuse shops or services such as hosting a Repair Café for small electrical and electronic items. Offering repair and reuse options as a standard service would encourage circular economy principles and increases the potential for community participation in the scheme.

Conclusion

WALGA acknowledges the provision of grant funding to assist in increasing the capacity of recyclers in WA to accept increasing amounts of e-waste and to assist with collection and reuse. However, this does not address the key concern of Local Government regarding ongoing funding to cover all costs associated with e-waste recycling.

The implementation of an e-waste to landfill ban by 2024, will have significant financial implications for Local Governments, and the communities they service, if a comprehensive and effective product stewardship scheme, or alternative funding mechanism, is not in place.

Appendix 1: Scope of products covered by the landfill ban (initial and future)

Table B1: Categories and item examples

Category		Item examples (sourced from UNU-Keys)
Western Australian e-waste ban initial scope	Screens, IT, and tele - communications	Laptops and tablets
		Cathode Ray Tube Monitors and Televisions
		Flat Display Panel Monitors (LCD, LED)
		Flat Display Panel Televisions (LCD, LED, PDP)
		Professional IT (servers, routers, data storage, copiers)
		Small IT (routers, mice, keyboards, external drives, accessories)
		Desktop PCs and printers (including scanners and faxes)
		Mobile Phones (including smartphones and pagers)
		Telecom (cordless phones, answering machines etc.)
	Lighting and lamps	Compact fluorescent lamps
		Straight tube fluorescent lamps
		Special (mercury, high and low pressure, sodium vapour, other professional lamps)
		LED
		Lamps (pocket, Christmas)
		Luminaires (including household incandescent fittings)
	Large household appliances	Dishwashers
		Kitchen (large furnaces, ovens, cooking equipment)
		Washing Machines (including combined dryers)
		Dryers (wash dryers, centrifuges)
		Large leisure (including large toys, exercise, large musical instruments)
	Batteries	Dispenser (non-cooled vending, coffee, tickets, etc.)
		Batteries including those in the Household Hazardous Waste program and the Commonwealth Battery Stewardship Scheme.
	Temperature exchange equipment	Lead acid batteries
		Freezers and Fridges (including combi-fridges)
		Air Conditioners (household installed and portable)
		Other Cooling (dehumidifiers, heat pump dryers)
		Professional Cooling (large air conditioners, cooling displays)
Future phase	Medical devices	Dispenser (cooled vending, bottles, candy, etc.)
		Heating and Ventilation (household and professional)
	Photovoltaics	Professional medical (hospital, dentist, diagnostics, etc.)
		All items listed under the future Commonwealth Photovoltaic Systems Product Stewardship Scheme (anticipated for 2022/23)
		Microwaves (including combined, excluding grills)
		Other Small Household (small ventilators, irons, clocks, adapters)
		Food (toaster, grills, food processing, frying pans)
		Hot Water (coffee, tea, water cookers)
		Vacuum Cleaners (excluding professional)
		Personal Care (toothbrushes, hair dryers, razors)
		Small Consumer Electronics (headphones, remote controls)
		Portable Audio and Video (MP3, e-readers, car navigation)
		Music Instruments, Radio, HiFi (including audio sets)
		Video (video recorders, DVD, Blu-ray, set-top boxes)
		Speakers
		Cameras (camcorders, photo, and digital still cameras)
		Tools (all household saws, drills, cleaning, garden, etc.)
		Toys (small toys, vehicles, small music)
		Game Consoles (video games and consoles)
	Monitoring and control equipment	Monitoring (professional monitoring and control, garage, diagnostic, etc.)
		Monitoring (alarm, heat, smoke, security, excluding screens)
		Household health monitoring (small thermometers, blood pressure meters)

WMRC submission on the E-waste to landfill ban Consultation Paper

Status of this submission

The Western Metropolitan Regional Council (WMRC) collects e-waste and other source separated materials from Perth west central metropolitan residents at its West Metro Recycling Centre.

WMRC's e-waste services are relied upon by residents of its five Member Councils - City of Subiaco, Towns of Claremont, Cottesloe and Mosman Park and Shire of Peppermint Grove - and participant council the Town of Cambridge.

In 2021-22 WMRC collected 44 tonnes of e-waste material classified under NTCRS as well as substantial quantities of the other items included in the proposed ban.

This submission was considered and ratified by the Council of the WMRC at its OCM of 30 March 2023.

WMRC thanks DWER for this opportunity to comment on the proposed e-waste landfill ban.

Summary

WMRC strongly supports minimising the quantity of e-waste and their constituent materials disposed of in landfill. However, we are concerned that neither the proposed ban or the target 85% recovery rate will succeed without effective producer responsibility schemes being established.

WMRC is also seriously concerned that without effective producer responsibility in place the proposed ban could impose high costs on those Local Governments providing e-waste drop-off services.

WMRC also has misgivings about grouping disparate items like white goods with car batteries as this will make effective public communication problematic.

In addition to these overarching points, the WMRC position on questions posed in the consultation paper is set out below.

Section	Question	WMRC Position
1.4	Do you support the incoming ban on e-waste from disposal to landfill in Western Australia?	• The WMRC supports the principal of the ban only in the presence of effective product stewardship schemes, established markets and collection systems and commercially recoverable materials. • The WMRC considers that there are currently few items on either the Phase 1 or Phase 2 lists which fulfil these criteria. • The WMRC has serious concerns about how to communicate this ban to the public as the definitions and groupings are different to those currently in use. • The WMRC has concerns that the Local Governments who collect these materials will be required to cover the cost of collection, storage and processing of these items. These costs should instead be borne by the importers / retailers of these items through product stewardship arrangements. • The WMRC has concerns that as the proposed ban does not apply to unsorted e-waste and as the Waste to Energy plants progressively come online, this ban will become almost meaningless. • A ban on landfilling white goods including refrigerators, freezers and air-conditioners must provide for a mechanism to ensure that refrigerant gasses are properly recovered. In effect, such materials should not be consigned for any form of recycling or disposal without certification of refrigerant gas recovery.
1.4	What other opportunities or benefits could a ban bring to Western Australia?	• With appropriate funding this could benefit the reuse and repair market for some of these goods (household appliances, computer equipment etc).
1.4	What impacts does e-waste have on the community, environment, and economy and how big is the problem?	• We acknowledge the problem is a growing one, however we are concerned that in the absence of effective product stewardship schemes etc, this ban will have unintended negative consequences.
2.4	What other actions can we take to manage e-waste, in Western Australia and nationally?	• Extended producer responsibility must be defined, scoped, worked through with stakeholders and form an essential element of the E-Waste plan.

		• Schemes in WA must be coordinated and congruent with any national or interstate schemes. of schemes. • It would be beneficial to increase the accessibility and convenience of schemes to keep these items out of landfill. • It would be beneficial to encourage more competition in the e-waste recycling market, which lacks sufficient depth to ensure value-for-money, particularly for local governments already facing high haulage and processing costs (in the order of \$900 per tonne when labour costs are considered). • Many more collection points will need to be established if serious inroads are to be into the Government's 85% recovery rate. Of necessity, these will need to be operated by industry in addition to local government. • Cost sharing arrangements must be transparent. On no account should the few local government operating drop-off services be left to bear the additional costs associated with progress towards an 85% recovery rate.
2.4	Are the current actions adequate and working?	• Clearly as e-waste generation and recycling statistics show that most of the e-waste is being landfilled, current actions are overall not adequate or working. • Current actions are adequate in some areas (eg lead acid batteries) but not across the whole range of categories implicated in the ban. • Current actions impose most of the collection, transport, and processing costs on local government, with product producers mostly not involved nor contributing.
4.2	Would you change anything about the way e-waste for initial ban has been defined? Why? (e.g. more recovery, less environmental harm, stimulate recycling/re-use industry)	• It would be beneficial to ensure that the ban is easily communicated to the public. • Convenient access to drop off points would also be beneficial.
4.3	Are the principles appropriate to guide our approach to the ban?	• Principles are appropriate but they are not all reflected in the ban

4.4	Could the ban affect you, your industry or business in ways that have not been outlined?	• Yes, this ban implies significant extra cost to Local Governments who collect these waste streams as currently proposed (WMRC estimates that drop-off points could face an additional \$22 million a year in processing and haulage costs to reach the target 85% recycling rate)
5.5	Do you have comments on the proposed ways the ban would apply to you as an individual, business or industry?	• Unless other funding or collection arrangements are made, we would need to introduce fees for residents who wish to separate their items for responsible recycling. This would likely act to discourage residents from separating these items.
5.5	Are there any other key stakeholder sectors, groups, or applications that we need to consider in the ban framework?	• Importers and retailers must be part of the solution. Cost sharing must extend beyond those local governments like WMRC who are currently providing drop-off services for e-waste and other materials proposed for the landfill ban.
6.3	Do you think the preferred option is the one most suited to Western Australia, and why?	• As a small, distant market WA without a comprehensive suite of effective producer responsibility schemes for the items included in the ban, nor sufficient infrastructure to process the materials into saleable commodities, the ban on its own risks being ineffective in reaching the stated recycling target. • Once these conditions change, Option 2 is an appropriate approach.