



Mattress Recycling

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**Re: Inquiry into the waste and recycling industry in  
Australia, submission from TIC Group**

Thank you for the opportunity to present a submission to  
this inquiry.

**TIC Group and TIC Mattress Recycling**

TIC Group is an Australian company specialising in  
reverse logistics, asset management and resource  
recovery and recycling. The company has been in  
operations for more than 20 years and operates from  
more than 10 sites in Australia and overseas.

TIC Group provides inventory and supply chain services to  
retailers for retail accessories, returned merchandise and  
other products. TIC Group works to stop products and  
materials becoming waste in the first place, re-tasks and  
reuses products for extended life and environmental  
performance, and has a dedicated mattress recycling  
business with world leading technology in Melbourne and  
Sydney.

The company was founded on a pioneering approach to  
the take-back and re-use of garment hangers in Australia  
and other countries. In Australia presently TIC Group  
collects and re-purposes more than 300 million plastic  
garment hangers a year. Through reverse logistics and  
supply chain support we recover and re-purpose more  
than 10 million units of electronic and household products  
every year – saving them from disposal and landfill.

TIC's engagements range from one-off projects to retrieve  
or salvage unwanted inventory, through to ongoing

outsourcing services involving international supply chain partners. Our most integrated customers have us collect everything “not leaving via the cash register” and retrieve it for centralised processing. After analysis, we coordinate the final sale and/or disposition of the goods in the most cost-effective manner.

TIC Mattress Recycling built Australia’s first automated mattress deconstruction facility, opening in Melbourne in 2016 after three years of technology searching and research and development.

The technology enables processing of about 60 mattresses per hour through a fully automated system that recovers the textile covering, core foam, padding and steel springs. The system is superior to existing methods and more sustainable because it:

- Increases material recovery and reduces landfill
- Increases throughput achieving economies of scale and processing capacity
- Reduces pollution and plastics in the marine environment arising from mattress shredding
- Reduces occupational health and safety (OH&S) issues associated with manual dismantling.
- Recovers about 75% of materials

### **Response to the Terms of reference**

#### ***The accreditation and management of landfills***

TIC Group does not have any comment on accreditation and management of landfills specifically but more broadly on the accreditation and licensing of all waste and recycling facilities.

Australia continues to have an uncoordinated and ad hoc series of site licensing and accreditation requirements for waste and recycling facilities. This state of affairs enables some companies to operate in a sub-standard, dangerous and polluting manner that enables them to undercut operators that are meeting standards and operating in an appropriate manner.

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For example, in our area of mattress recycling, a number of our competitors shred mattresses outdoors in industrial grinders and recover only the steel component for recycling. This type of operation releases micro plastics and pollution into the environment when shredding.

Also, the recovery of only the steel is about 35% of a mattress by weight, meaning that with these operators 65% of the mattress is not being recycled and is going to landfill or released as pollution in an uncontrolled manner.

We have raised this matter with regulatory authorities and in some jurisdictions, it is considered a low risk and therefore is not regulated in any way.

To put this problem and opportunity in perspective, in Australia in excess of 2 million mattresses are sold every year. Of those, 1.6 to 1.8 million mattresses are disposed of (with the remainder being reused, stockpiled or illegally dumped). Of the 1.6 million being disposed of, more than half are disposed of to landfill or in the manner noted above with the bulk of the waste still going to landfill.

The mattress waste being disposed of to landfills in Australia every year totals about 900,000 cubic metres of landfill. That volume of space is equivalent to 360 Olympic swimming pools or 3.7 million household wheelie bins of mattress waste that is going to landfill every year at present.

This situation is also a lost revenue opportunity for landfill operators and Government. Mattresses in landfill, whether compacted or not, constitute 50 kilograms of waste per cubic metre of space taken up, in comparison general waste constitutes 350 kilograms of waste per cubic metre of landfill space. That means that the space being consumed to landfill 45,000 tonnes of mattress waste could be used to dispose of 315,000 tonnes of general waste.

As landfill operators charge by weight, and State Governments raised landfill levies per tonne of material,

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there is an opportunity cost realised when mattresses are sent to landfill. For example, a \$50 per tonne landfill charge or levy for 45,000 tonnes of mattress waste raises \$2.2 million, whereas the same charge for 315,000 tonnes of general waste raises \$15.7 million.

If State Governments and local councils continue to allow the landfilling of mattresses and continue to accept poor practices such as shredding, there will continue to be negative economic, environmental and social consequences.

***The role of landfill levies in determining the end destination of material, including the hypothecation of collected levies for enforcement and waste diversion purposes;***

Landfill levies are a blunt but effective instrument providing a price signal that rewards material recovery recycling ahead of disposal to landfill.

The levies have the greatest impact on large generators of waste and are not a significant burden on general consumers.

Levies should in part be returned to the recycling industry in order to incentivise investment. Whether it is a direct hypothecation or not is irrelevant but such funds have a good record of enabling green field operators and new technologies to get established.

For the record, TIC Mattress Recycling has benefited from Government support in Victoria and New South Wales.

The States and Territories should also provide more relief from the levy for genuine recyclers. Currently, the levy is still paid by recyclers on the residual materials they have to dispose of to landfill. That is, after the materials have been sorted and processed for recycling, there is often an amount of material that is contaminated or has no downstream recycling option, and therefore can only be disposed to landfill.

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It is therefore a disincentive for recyclers to have to pay the levy on residual waste.

In a similar fashion, some States provide relief from the landfill levy for charitable recyclers. That is, if an operator is a genuine charity it can either get a rebate on any levies paid or get an exemption at the point of disposal. This should be extended to genuine recyclers.

***The role of the Australian Government in providing a coherent, efficient and environmentally responsible approach to solid waste management, including by facilitating a federal approach.***

There is a fractured and inefficient approach to waste management and recycling in Australia with States and Territories implementing a range of uncoordinated policies and regulations.

While it is accepted that waste and recycling related policy and regulation is primarily a matter for the States and Territories, the lack of coordination creates administrative inefficiencies and uneven performance.

This fractured approach is not delivering a good outcome for Australia, for our environment or our economy.

What progress the States and Territories have made serves to highlight that as a nation we have not travelled far. What progress has been made is, for the whole nation, piecemeal.

The National Waste Policy that was agreed to by the Commonwealth and all States and Territories in 2009 sets out a way to take a shared responsibility whereby each government could work to its strengths and progress the 16 key waste strategies. It is a well-developed approach informed by extensive consultation.

However, the National Waste Policy seems to have been largely ignored by all Governments since about 2011 or 2012. States and Territories in particular seem to have ignored having a national consistent approach.

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One approach arising from the National Waste Policy is working well, and that is Product Stewardship. The Product Stewardship Act and the schemes that have been established shows that's collaboration between industry, government and other stakeholders can provide cost-effective and efficient processes to recover and recycle more materials.

The Australian Government is currently reviewing the Product Stewardship Act and the National Television and Computer Recycling Scheme. This is an opportunity to extend the reach of the current Act and regulations to support greater industry participation. Factors such as rewarding more up-stream material recovery and efficiency rather than just using product stewardship as an "end-of-pipe" approach warrant close consideration. If the committee and indeed the Senate can provide support and input into the review it would enhance this important project and, hopefully, lead to better economic, environmental and social outcomes for the waste and recycling industries and the Australia community.

### **Conclusion**

TIC Group again appreciates the opportunity to make this submission.

If you have any questions or require any further information please don't hesitate to contact me.

Yours sincerely

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