

# National Waste Reporting 2013

## CASE STUDY – SOFT LANDING RECYCLING OF MATTRESSES<sup>1</sup>

### The problem with mattresses

Most Australians change their mattress every eight to 10 years, meaning that around 1.25 million mattresses go to landfill each year. This equates to around 15 625 tonnes of steel, 2500 tonnes of wood and 1880 tonnes of foam per year. In total 20 000 tonnes of material, or one per cent of all waste going to landfill.

Mattresses are also bulky items, using up around 0.75 cubic metres of landfill space<sup>2</sup>. Because of this bulk, and because the springs cause excessive wear to landfill machinery, fees for disposing mattresses have increased in recent years, particularly in urban areas, with one major waste services provider charging \$50 for each mattress.

### The Soft Landing model

While recycling seems the obvious solution, mattresses are not easy to recycle at large volumes. Without significant investment into the purchase and maintenance of industrial shredders they must be filleted, a labour intensive process involving manual disassembly of the mattress using box cutters. Filleting, however, results in a higher percentage of the mattress material being recycled. Foam is sold for carpet underlay, mattress quilting and wadding goes into filling sports goods such as punching bags for a commercial supplier, steel is recycled, and the husk and timber are also on-sold.

This is the model for Soft Landing, a Mission Australia mattress recycling social enterprise which began operating as a pilot in the Illawarra region of NSW in 2009. It provides a unique solution to both reduction of landfill and work and training for marginalized job seekers. The nature of the business has lent itself well to servicing the long-term unemployed, with the work providing an easy step to employment, and the required skill mix suiting the available labour. Soft Landing has a dual social purpose and is able to create both social and environmental value.

Importantly for its future survival, it also remains a sustainable business. As each component part is recycled into an income generation stream, Soft Landing's business model has proved sound and the enterprise has experienced rapid growth. Once they began collections, they were receiving mattresses by the truckload, including from commercial retailers who accepted trade-ins at their stores.

In the four years since its start-up Soft Landing has increased to three sites and its contracts from one to 30. Working with many local councils through a social procurement approach Soft Landing has assisted both a local government and community re-think on the disposal of mattresses. From an environmental perspective, the Soft Landing program helps meet waste and resource recovery targets.

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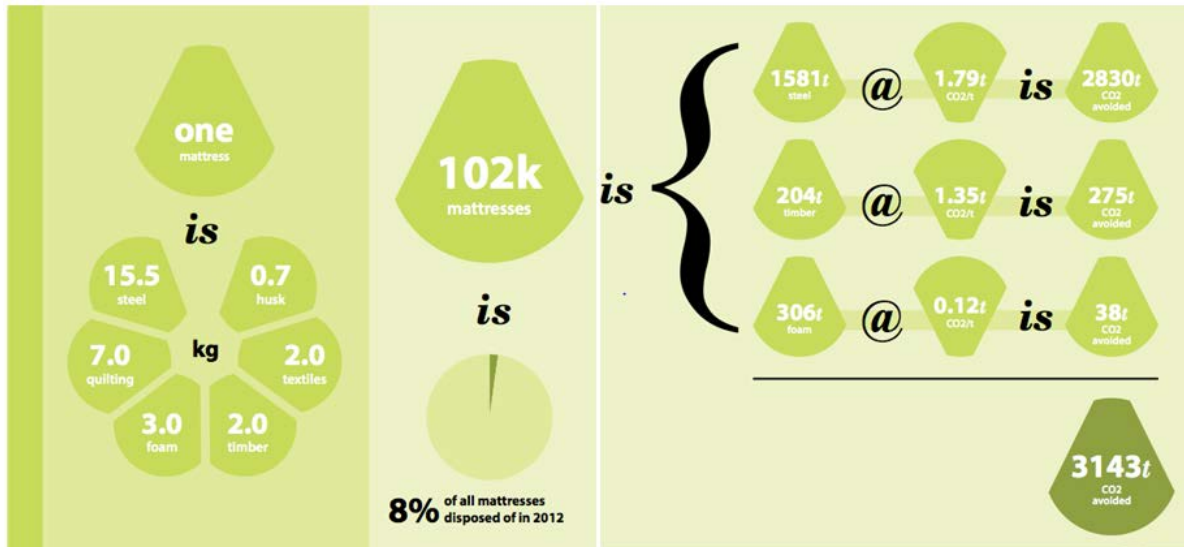
<sup>1</sup> Information provided by Associate Professor Cheryl Kernot, Director of Social Business, the Centre for Social Impact, University of New South Wales.

<sup>2</sup> EMRC. (2009). *Mattress Recycling Project Expansion: Final Report*. – Accessed 7 June 2012, from [http://www.wasteauthority.wa.gov.au/media/\\_les/grant\\_projects/SWIS\\_2009\\_Final\\_Report\\_EMRC\\_mattress.pdf](http://www.wasteauthority.wa.gov.au/media/_les/grant_projects/SWIS_2009_Final_Report_EMRC_mattress.pdf).

## Environmental benefit

Soft Landing reused or recycled an estimated 102 000 mattresses in 2012, or eight per cent of all mattresses destined for landfill that year. This resulted in the reclaiming of 1581 tonnes of steel, 204 tonnes of timber and 306 tonnes of polyurethane foam. In total, 3143 tonnes of CO<sub>2</sub> emissions were avoided through recycling this material

Figure 1: Environmental impacts and recycling benefits of a mattress<sup>3</sup>



<sup>3</sup> Georgouras, M. 2013. *Soft Landing: Social Return on Investment Study*. Sydney: Centre for Social Impact.