

# case study



## Mattress Recycling Mission Australia Bellambi, NSW

Industrial Ecology Facilitators in the South East region have developed a voluntary stewardship and take-back program with the potential to significantly increase recycling rates and recover these valuable materials under the NSW EPA Industrial Ecology Program, Circulate.

### Background

Each year in Australia around 1.25 million mattresses are sent to landfill. Each mattress contains:

- 12.5kg of steel
- 2kg of wood
- 1.5kg of foam.

Only a small portion of mattresses disposed per year are recycled. The rest ends up in landfill, taking up a massive 0.75 cubic metres of landfill space per mattress (source: [softlanding.com.au](http://softlanding.com.au)).

Typical methods of disposal include kerbside pickup, landfill drop-off and illegal dumping with legal waste disposal costs varying between \$40 and \$80 per mattress.

### Situation

Soft Landing is a business that trades to achieve a social outcome and generate enough income to cover its running costs, turning waste into wages. For 25 years, Soft Landing utilised Industrial Ecology facilitators in the South, Resource Recovery Australia, to identify the potential to reduce the number of mattresses going to landfill and increase resource recovery.

**The challenge was to change business systems - procedural and operational - to streamline pick up and disposal models while reducing costs for the businesses involved.**

### Solution

Through business and product stewardship development, the mattress recycling project established a business case and strategic commercial partnerships to increase the supply and processing of used mattresses.

The mattress recycling project aims to achieve higher recycling rates by:

- developing and implementing a voluntary stewardship program with mattress manufacturers and retailers
- increasing mattress recycling tonnage through a point-of-sale take-back program.

The mattress recycling project targeted industry wholesalers and retailers Harvey Norman, IKEA, AH Beard, Sealy, Fantastic Furniture, DeRucci, and Comfort Group.

### How it works

The mattresses are dismantled at Mission Australia's facility in Bellambi on the South Coast of NSW.

Components of the mattresses separated for recycling are:

- steel springs – sold as scrap metal
- foam – on-sold and used for carpet underlay
- husk – weed matting and mulch
- felt pad – used to make boxing bags
- timber – made into kindling, mulch & animal bedding
- fabric – used to make boxing bags.

The model has enormous scalability and can also be expanded to incorporate industrial recovery of mattresses including hotels, motels and aged care facilities that these retailers distribute to.

### Outcomes

The mattress recycling project has resulted in the:

Development of a voluntary stewardship program with manufacturers and retailers which is currently achieving diversion of 120,000 mattresses per annum.

Retailers IKEA and De Rucci committed to point of sale recycling resulting in an additional 157 tonnes of mattresses recycled as of May 2015 and a twelve month forecast in the first year of:

- 1,315 tonnes including an additional 934 tonnes of steel
- 160 tonnes of foam
- 33 tonnes of textiles
- 187 tonnes of timber and other materials.

**This additional recycling in the first year is estimated to save 40,049 m<sup>3</sup> of avoided landfill space.**

Mission Australia supports the local community by offering employment opportunities for people who experience barriers entering the open labour market. This can result in improved economic wellbeing, better social, physical and mental health, reduced substance abuse, more secure housing and a less abuse and neglect – outcomes that help build a safe and productive community.

### Resource Recovery Australia

Resource Recovery Australia work with local government and communities to broker, establish and scale social enterprises that sustainably manage waste and generate local training and employment opportunities.

Resource Recovery Australia bring decades of experience and a multi-award winning operation that saves councils money and delivers environmental and social impact to local communities.

Resource Recovery Australia also work with peak industry bodies, social enterprise intermediaries, regional waste groups, strategists and industry consultants to achieve economic, social and environmental benefits.



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### Circulate, NSW EPA Industrial Ecology

Over four years, Circulate, NSW EPA Industrial Ecology seeks to engage with 1000 medium-to-large enterprises to establish approximately 100 industrial ecology projects. During this period the program is targeting 160,000 tonnes of landfill diversion and \$21 million dollars in additional income and/or savings for participating businesses. The program will focus on the recovery of wastes currently being sent to landfill.

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