

## Eastern Metropolitan Regional Council: wood is too good to waste

### Introduction

The Hazelmere Timber Recycling Centre (Hazelmere) in Perth, Western Australia recovers and processes industrial timber waste so it can be diverted from landfill and recycled as a reusable woodchip. Hazelmere, operated by the Eastern Metropolitan Regional Council (EMRC), opened in 2008 and is the only one of its kind in Western Australia. Hazelmere aims to recycle at least 10 000 tonnes of timber waste per year. Previously the timber processed at Hazelmere was destined for landfill.

Uncontaminated timber waste is sorted and shredded into woodchip. The shredding process removes steel contaminants such as nails, nuts and bolts. The recycled woodchip is then used as a raw material for identified end markets including particleboard, manufacture of compost and animal bedding, and as biofilter medium. Currently, untreated softwood or pine timbers in the form of pallets, packing materials, wooden crates, low-pressure laminated particleboard off-cuts (without plastic edging) and cable drums are accepted for recycling at Hazelmere.

The EMRC has committed to diverting all grades of timber waste from landfill for re-use. Hazelmere is working to establish markets for untreated hardwoods so that they can be accepted and processed in the future.



### Use of recycled and re-used material

Hazelmere aims to reclaim and recycle 10 000 tonnes of timber per year. Timber recycled currently includes:

- untreated (including fumigated and sterilised timbers) and unpainted timber
- untreated timber (including fumigated and sterilised timbers) which carry the markings 'HT' (heat treatment) or 'MB' (methyl bromide: chemical fumigation)
- particleboard timbers with plastic edging removed
- low-pressure laminated board with plastic edging removed
- medium-density fibreboard (MDF)
- timber containing ferrous metal (nails, gang nail plates, and/or bolts)

Hazelmere only accepts timber waste where viable end markets have been established. The EMRC is committed to developing markets for a broad range of timbers and the range of timbers accepted will continue to expand.

### Drivers and benefits

Drivers:

- The Government of Western Australia Waste Authority 'Towards Zero Waste' initiative
- Saving of airspace in landfill

Benefits:

- Financial savings for the community and councils—disposal fees at Hazelmere are approximately \$50 per tonne less than landfill costs
- Diverting timber from Perth's landfill reduces the burden on the environment and conserves landfill airspace
- Timber disposed at Hazelmere is processed into a reusable woodchip and used in a number of new products. This reduces the reliance on tree harvesting for raw materials



### Problems and challenges

Contamination is the main challenge when recycling timber from mixed waste. Contamination in the form of rags, plastic, strapping, and construction waste, (such as concrete) wraps around processing equipment and causes damage to machinery. Contamination in the form of aluminium (such as drink cans), rocks and limestone carries through into the final product which means that market specifications cannot be met. Timber treated with copper chromium arsenic and household waste causes environmental issues when grinding and poses a safety risk to animals when re-used. Contamination in the form of high pressure laminate affects processing as it is too hard and abrasive to break down into a reusable size.

### Solutions

Hazelmere staff work hard to identify contamination at the gates, and are constantly looking for more efficient methods of identifying and removing contamination to improve the production process.

A price incentive is given at the gate: mixed loads with potential contamination are more expensive.

Educating and engaging the public is an ongoing initiative—pamphlets, handouts and signage outline Hazelmere’s operation and achievements.

The ultimate solution would be segregation of wastes at source, allowing a clean stream of timber waste to be recycled.

The timber industry is working on this, establishing the National Timber Product Stewardship Group in 2007 to address these types of issues.

### Opportunities for other projects

On 6 April 2011 the EMRC officially opened a fully automated wood grinding plant at Hazelmere, which is designed to recycle 20 tonnes of wood waste per hour. HAAS-Recycling (Germany) designed and manufactured the plant which turns waste wood usually destined for landfill into two separate streams of chipped and cleaned products that EMRC sells as animal bedding and for particleboard manufacturing.

If markets for treated timber could be found, this case study shows an opportunity to recycle and re-use a new type of timber resource. The industry requires research into markets for treated timber waste.

### Contacts and links

Timber Product Stewardship Group

[www.timberstewardship.org.au](http://www.timberstewardship.org.au)

Eastern Metropolitan Regional Council’s Hazelmere Timber Recycling Centre

<http://www.emrc.org.au/hazelmere-recycling-centre>



### Consultation

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### Photos

Courtesy of Hazelmere Recycling Centre

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