

# Waste Wisdoms

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**Welcome! In this edition, we focus on RECOVER, the fifth tier on the Waste Hierarchy. We explain its role and challenges, share some tips and more.**

## RESOURCE RECOVERY: WHAT IS IT?

When a product is made, many components go into it - manual labour, the energy in creating the machinery and to manufacture the product plus the various natural resources or minerals and the energy used in mining these resources.

All these components make up the product/service we buy and use - often referred to as the embodied energy of something i.e. the sum of all the 'energy' present in the product - some seen and some unseen.

When we can no longer use the product and it reaches the end stage of its life (after we have considered all other options in the waste hierarchy), energy and resource recovery is a step before disposal.

Recovery means trying to recoup all or some of the energy that was used in the making of the product by asking what components of this can be extracted to be used again? Or how can we use this embodied energy to create energy?

There are many valuable minerals such as gold, silver, nickel, steel, etc. present in products. If we extract these, they can be used again in the manufacturing process which means we do not need to mine again for them.

The cost of extraction along with the value of that resource are motivating factors in whether that resource's 'energy' is recovered.

Solid waste, wastewater and excreta, organic matter and industrial waste are all sources where we can recover energy. For example, organic materials can be treated by composting and turned into energy, compost or fertiliser. Similarly, wastes currently stored in industrial landfills and around old mines can be treated to recover metals such as lithium, cobalt and vanadium for use in low carbon technologies such as electric vehicles and wind turbines.

Incineration is another process of energy recovery. An incinerator is a furnace for burning waste. The high temperatures produced shrink waste down reducing the solid mass of the original waste by 80%-85%. In some cases, the heat that is generated by incineration can be used to generate electric power. Denmark and Sweden have been leaders in using the energy generated from incineration for more than a century.

The Urban Mine Platform, the first of its kind, charts the metals in end-of-life goods across Europe. It shows 18 million tonnes of valuable materials are recovered or lost from discarded vehicles, batteries, computers, phones, appliances and other products annually.



### HANDY TIP

Don't throw out the water you cook or steam vegetables in, allow it to cool and use it to water your indoor plants. Your plants will thank you for the extra nutrients in the water.



### CRAFTY TIP

Do you have a favourite jumper or other knitted item that you no longer wear? Don't send it to landfill, see if you can unravel the jumper, wind the yarn into balls and use it to knit or crochet with or donate your recovered yarn to an op shop for someone else to use.





**Electronic waste** contains lots of valuable materials including nickel, aluminium, copper, silver, gold and plastic. A million mobile phones contain an estimated 15-16 tonnes of copper, 340-350 kilograms of silver and 24-34 kilograms of gold. Don't send your e-waste to landfill drop it off at Officeworks, Citywide at 437 Dynon Road or Kensington Town Hall (small items).

**Metal from whitegoods** can be recycled again and again to make new products. Make sure they go into your hard rubbish collection. Copper, steel and plastics are recovered and reprocessed into new metal and plastic products.

**Compost** is another example of resource recovery. The process of composting turns kitchen fruit and vegetables waste into a valuable resource for our gardens.

**X-ray films** contain silver in the form of halides, which can be extracted and converted into pure silver. Check the website **RecyclingNearYou.com.au** for options on where to send your old x-rays.

**The steel wire from your old unwanted inner spring or box spring mattress** can be stripped out and melted down and cast back into new steel. Other mattress components can also be recovered. Foam can be recycled and turned into foam padding for carpet. Mattresses can go into the hard rubbish collection.

**DID YOU KNOW?**

## NEW LIFE FOR YOUR HARD WASTE

Unison's hard waste collection at Kensington is provided by Speedie Waste, a practitioner of Australia's circular economy. At Speedie Waste's transfer station, hard waste is separated by hand to ensure maximum items of value are recovered to on sell, reuse or be donated.

For example, metal is recovered and sold back to suppliers who in turn repurpose into new metal products. Foams and fabrics from discarded lounges and mattresses are reduced to pulp and used in boxing bags, caravan seats and Yarra Tram seating. Branches and green waste are turned into premium grade garden mulch. Plastic components are reduced to liquid form and repurposed as bitumen for road works.

## REPAIR TO REUSE

The next repair pop up is coming to Kensington Town Hall for jewelry, clothing, small wooden, miscellaneous items and bike repairs, on Sunday 19 September, 11am to 3pm. Put the date in your diary and bring items to repair and reuse!



# KENSINGTON commUNITY FESTiVAL

## WHAT'S IMPORTANT TO YOU?

We're currently reviewing the future of Kensington Community Festival and need your help. Click on the QR code or go to <https://www.surveymonkey.com/r/M8NDBVP> and let us know what matters to you.



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