

CLEAN & GREEN

WINTER NEWSLETTER

CLEAN & GREEN WINTER NEWSLETTER 2021

The Complete Wood & Paper Waste Issue

*Your Complete Guide to Wood &
Paper Recycling, Composting and
Tips for Reuse in your home!*

WINTER GARDENING GUIDE

Tips & Tricks of the Trade

pg. 8

PAPER & FOOD WASTE

Sustainably Recycling Food Contaminated
Paper Wastes

pg. 7

Contents

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FEATURES:

Contents Page

To Bin or Not to Bin?
Paper Waste Spotlight..... 3
Paper & Cardboard Recycling Infographic..... 3

How Much Wood Does a Wood Chuck Waste?
Wood Waste Spotlight..... 4
Wood & Timber Recycling Infographic..... 4

Paper & Wood Waste Statistics
Visual Infographic..... 5

Composting Wood Waste
8 Tips for Composting Wood Waste..... 6

Sustainable Paper Disposables
Recycling food-contaminated paper waste..... 7

Winter Gardening Special
Fruit & Veggies that thrive in Winter 8
Winter Gardening Tips 8

Warm Up with Hot Winter Recycling Tips
4 Winter Recycling Tips..... 9

Winter Cooking Recipe
Minestrone Recipe..... 9

Treated Wood Waste
Can I Compost Treated Wood Waste?..... 10
What Can I Do With My Treated Wood Waste?..... 11

Source & Article References..... 12



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www.cleangreenrecycling.com.au

To *Bin* or Not to *Bin*? That is the paper question.

Paper & Cardboard waste is an extremely versatile and recyclable waste stream!

But how do we know which paper and cardboard wastes to recycle in our blue bin? and which ones to add to our compost pile?

Paper and cardboard waste is defined as an organic waste stream, since it derives from a plant or animal source and is biodegradable.

Paper waste can include any paper or cardboard based item from newspapers, to boxes, from tissue paper to shredded paper and so forth.

In Australia, 5.9 million tonnes of paper and cardboard waste was generated (2018-19), with 2.2 million tonnes being generated by households alone. The average aussie person consumes approximately 230kg of paper per person, per year!

Only 65% of paper and cardboard waste in Australia is recycled.

Worldwide, 150 million tonnes of paper is produced each year and accounts for 26% of total waste in landfill globally.

Australia exports 1.12 million tonnes of sorted and mixed cardboard/paper every year. However by July 2024, paper and cardboard exporting will be banned, meaning Australia will need more efficient methods to collect, sort, and recycle paper and cardboard waste to reduce waste to landfill.

In Australia, most councils issue residents with blue-lidded paper and cardboard recycling bins, designed to separate clean paper and cardboard wastes from general landfilled waste, to be recycled and repurposed into second-life materials.

While in theory this works, in application it is much more complicated.

Many councils issue co-mingled bins: whereby bottle and canned recyclables are mixed with paper and cardboard recyclables. This causes a higher level of unsorted and mixed cross-contamination, and risks other wastes such as plastic and residual food waste from entering the mix, making recycling much more difficult, and in some cases impossible.

Furthermore, some paper and cardboard wastes which might seem appropriate to discard in the blue-lidded recycling bin, such as uncoated pizza boxes, or food residue paper towels, or wooden chopsticks, to name a few, are actually contaminated and cannot be recycled in the conventional way, but must be composted instead!

Recycling just one tonne of paper saves 13 trees!

Paper can be recycled up to 5 - 7 times in a life cycle. After which, its cellulose paper pulp can be composted to create compost soils which can aid environmental forestation and regeneration.

Composting paper and cardboard wastes adds brown 'carbon' matter to your compost pile, which is essential for the decomposition process. Composting ensures maximum recycling output, forestation and soil regeneration, and minimises unnecessary paper waste to landfills!

PAPER & CARDBOARD RECYCLING

COMPOST BIN



BLUE RECYCLING BIN



How Much Wood, Does a Wood Chuck WASTE!

Wood & Timber waste is an organic waste stream that *can* and *must* be repurposed, recycled or composted to ensure forestation preservation and minimise environmental harm produced from wood waste in landfills!

Wood waste is an organic waste stream, usually combined with “Garden waste” under the collective “Green waste” term.

Wood waste consists of sawdust, shavings, wood chips, cut offs, untreated timbers, wooden crates and pallets. It also includes whole trees, tree branches, logs and stumps however these are often categorised as Garden waste.

According to the Australian Forest and Wood Products Statistics (ABARES, 2020), Australia’s log harvests equate to 32,565 m³ in 2018-19. This includes both commercial and native plantations as well as hardwood and softwood species. Victoria alone harvests 8,859 m³ and NSW harvests 6,377 m³. The value of total log harvests (2018-19) equates to \$2.75 million AUD.

ABS statistics show that 13% of total material going to landfill is wood waste. Wood waste in landfill produces methane gases which are 21 times more potent than CO₂ gases and when mixed with other waste streams in landfill become a fire hazard and environmental risk.

Wood wastes, especially untreated timbers, pallets and crates have a greater potential for reusability and recyclability. Every year hundreds and thousands of “lost” pallets are landfilled.

The Australian Greenhouse Office estimated the average life span for hardwood pallets, palings, and packaging to be 10 years, and treated pine, softwood furniture and hardwood poles to be 50 years. Meaning these timbers can be used and reused multiple times before needing to be recycled or composted.

Furthermore second-hand timbers can be reused in building and construction. Floorboard recovery is in high demand to create that antique and original style, as well as reusing second-hand timbers for display and designer home builds and features.

Other methods of wood recycling include organic decomposition into compost and mulch products for gardens and environmental regeneration and reforestation. However, only untreated timbers and wood products, without any metals, nails, staples or glass, can be composted due to the impact of toxic contaminants from treated chemicals.

Therefore it’s best to reuse treated timbers in building and construction purposes, and recycle or compost untreated timbers and woods.

Repurposing wood and timber waste is critical for forestation and environmental preservation!

WOOD & TIMBER RECYCLING

COMPOST



Wood Cut Offs



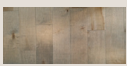
Wood Chips



Untreated Softwood



Shredded Branches / Twigs



Untreated Hardwood



Untreated Timber Pallets



Untreated Wood Sawdust / Shavings



Ash



Shredded Stumps / Logs / Trees



Untreated Wooden Fences, Posts, other Building Materials

CANNOT BE COMPOSTED

BUT CAN BE REUSED OR REPURPOSED INSTEAD!



All Treated, Coated or Stained Timbers

(e.g. hardwood, softwood, pallets, crates, other building materials)



Particleboard



Medium Density Fibreboard (MDF)



Plywood



Laminated Veneer Lumber / Glue Laminated Lumber

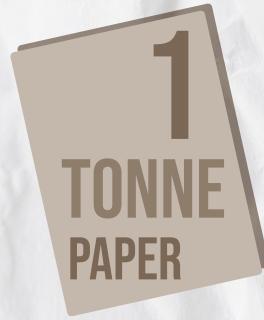


Treated Wood Sawdust / Shavings



ON AVERAGE
1 AUSSIE
CONSUMES
230 KG
OF PAPER
YEARLY

RECYCLING



=



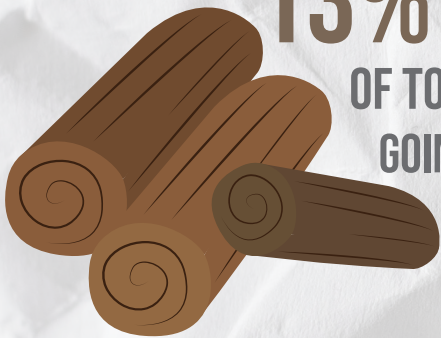
METHANE PRODUCED IN LANDFILL
FROM PAPER &
WOOD WASTE

IS 21X
MORE POTENT THAN CO2.

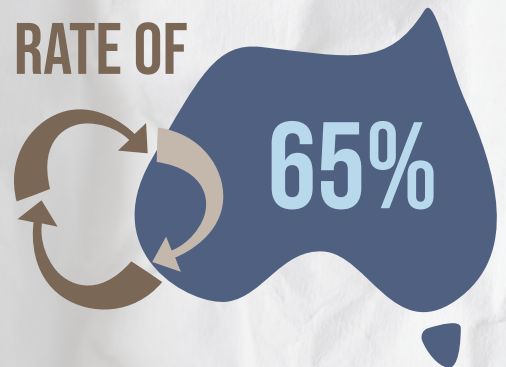
PAPER CAN BE
RECYCLED
5 -7 TIMES



13%
OF TOTAL MATERIAL
GOING TO LANDFILL
IS WOOD



AUSTRALIA HAS A
PAPER RECYCLING
RATE OF



AUSSIE HOMES & OFFICES
USE 2.4 MILLION TONNES
OF PAPER
YEARLY!



**PAPER & WOOD
WASTE STATS**



Composting Wood Waste

Composting organic untreated wood waste is super beneficial for our environment! Here are some interesting things about composting wood waste you need to know!

1. Wood waste is a “brown” material in composting.

No, not because of its colour, but because of its “carbon” content it adds to the compost mix!



Composting wood waste helps balance the nutrients and texture of the compost pile.

2.



4. Likewise, without wet (green) materials, the compost will be too dry and won't activate microbes, necessary for decomposition! It's also a fire risk.



3.

Without the help of “brown materials” the compost mixture would be too wet and nitrogen-heavy, and would cause the compost to decompose slowly and smell really bad!

Home composting is great! But dealing with wood waste can be tricky without the right equipment to safely or properly shred and mix your compost ingredients.

5.



Composting facilities like Clean & Green Organics use commercial grade technologies to shred, process and compost wood waste into organic compost soils!



6.

8. Take the risk out of doing good. Give your wood waste to a certified commercial composting facility.



You can do this by directly contacting a collection facility or adding your smaller wood cuts to your green waste bin.



7.

Without the correct safety equipment, shredding your own wood waste at home can result in a number of personal injuries, cuts or problems and can become a fire risk if not mixed correctly in your compost.

SUSTAINABLE PAPER DISPOSABLES

Paper plates, straws, cutlery and cups made from vegetable based extracts, pulps and PLA, are the modern sustainable replacement for plastic disposables!



What are some vegetable-based materials used in biodegradable paper disposables?

Eco materials used to make compostable and sustainable picnicware disposables, include:

- PLA - plant based sugars like Corn starch, Sugar cane (Bagasse), Cassava and Beets.
- Recycled paper, paper pulp & wood pulp
- Palm leaf; Mycelium foam (from mushrooms) or Cornstarch foam (from corn)
- Algae, Corn, Soy, Coconut, & Canola inks for printing and labelling
- Hemp bioplastics; Hemp oil; Soybean oil; Bamboo disposables.

What is PLA?

PLA is a compostable bioplastic made from sugar plants. PLA means polylactic acid and can be made from any natural sugar including corn starch, cassava, sugar cane or sugar beet.

It replaces traditional plastic lining or treated coating used in non-recyclable cups, straws and plates as waterproofing.

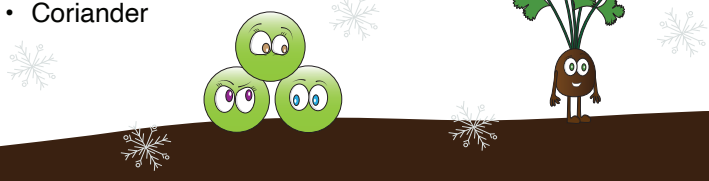
PLA is the natural and sustainable waterproofing solution for paper disposables and can be industrially composted!



Winter Gardening Special

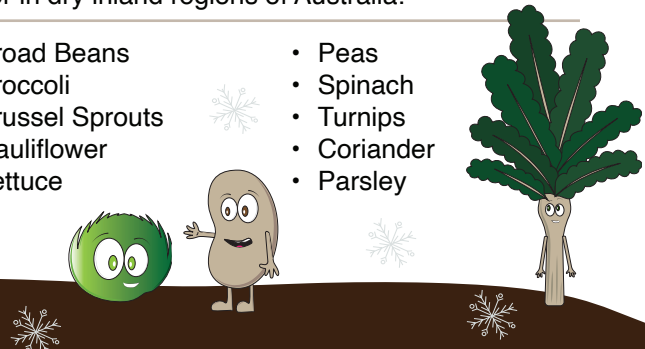
Here are a list of fruits & vegetables that thrive during winter in temperate regions of Sydney & coastal NSW.

- Broad Beans
- English Spinach
- Green Beans
- Peas
- Coriander
- Oregano
- Parsley
- Thyme



Here are a list of fruits & vegetables that thrive during winter in dry inland regions of Australia:

- Broad Beans
- Broccoli
- Brussel Sprouts
- Cauliflower
- Lettuce
- Peas
- Spinach
- Turnips
- Coriander
- Parsley



Gardening Tips

Winter is the time for garden care and maintenance! Here are our top 4 gardening care tips:

1. Pruning

Don't be afraid to prune right back to three or four stems if necessary. Many plants greatly benefit from pruning before the Spring season.

2. Weeding

As a result of the extra rain and moisture in the atmosphere, unfriendly weeds will start popping up. It's best to remove these straight away before they seed and germinate over Spring.

3. Protect your tropical plants

Your warmer plants need extra care over the chilly months to avoid the roots going into chill shock (yes this is a thing!). Try potting them and moving them into direct sunlight or indoors if you can.

4. Water in the morning

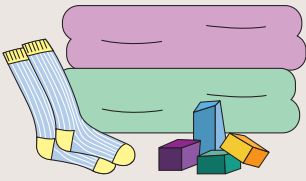
Water sparingly and water in the mornings. This gives the plant the full day of sunshine to dry off and reduces the risk fungal diseases.

WARM UP

With these *hot* winter recycling tips!

CLOTHES & BLANKETS

Recycle or donate old blankets, clothes & toys for people who can't afford to keep warm.



REAL TREES & WOOD

Celebrating Christmas in July? Get a real tree instead. That way your tree can be composted! Remember to shred or chop up the wood & branches into small bits first!



AUTUMN GARDEN CLEANSE

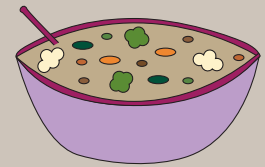
Clean out all the fallen autumn leaves from your gutters and add them to your compost pile or light-green recycling bin.



WINTER VEGGIE SOUPS

Use all your almost-off veggies to cook a delicious winter soup.

Better still, collect all the veggie peels, skins and cut offs and add these to your compost pile!



MINISTRONE

Hearty winter veggie soup recipe!

Serves
6 people

Dish
Gluten Free*
Dairy Free
Vegan Friendly*

Ingredients

Carrots - grated
Celery - finely cut
Onion - diced
Garlic - finely cut
Zucchini - chopped
Potato - chopped
Pumpkin - chopped
Cabbage - chopped
Green Beans
Green Peas
Rice-based Pasta

Method

- Add carrots, celery and onion to pot (4L pot) and cook until soft
- Then add garlic and cook for 2mins
- Add all other mixed veggies and cook for another 5mins or until soft
- Cover veggies with 1-2L of chicken stock (or vegetable stock if vegan)
- Bring to boil, then simmer for 20mins
- Add rice or pasta (rice-based pasta) and a handful of parmesan cheese and let simmer for another 10mins



CAN I COMPOST MY *Treated* WOOD WASTE?

Treated wood waste cannot be added to our compost piles as its hazardous chemicals would degrade the soil and impact our health! But perhaps there are other ways these treated wood wastes can be salvaged?

Potential contaminants used in treated woods, such as Arsenic (As), Chromium (Cr) and Copper (Cu), as well as some Lead (Pb) from wood paints and dyes, will significantly degrade and toxify compost soils and garden health if added to your compost pile; not to mention also have a significant impact on human health.

This is especially true for treated timbers installed prior to 2004 when the use of CCA (Chromated Copper Arsenate) treatment was banned for residential use due to the poisonous arsenic toxin. However many homes built prior to its discontinuation

still use these treated timbers. This is often why these treated woods from Construction and Demolition (C&D) waste are discarded in landfills; since burning, composting or recycling would only release these hazardous toxins into our environment and create further damage and harm.

For some modern-day treated timbers which use safer or less chemical treatment, composting is still not an option. However, there are other ways to safely *discard* or *reuse* or *repurpose* these treated timbers that can reduce waste to landfill and minimise excessive methane production caused by decaying wood.

WHAT CAN I DO WITH MY *Treated* WOOD WASTE?

Since we cannot compost treated wood waste, nor burn it because of the chemical toxins used to treat the wood, we have researched and provided 3 alternative ways you can sustainably reuse your spent treated timber waste before considering discarding it in landfill:

1. SAFELY DISCARD TREATED TIMBERS AT A CERTIFIED RENEWABLE ENERGY FACILITY TO BE CONVERTED INTO PEF.

Some certified Australian waste to energy facilities recycle selective treated timbers into Processed Engineered Fuel (PEF) - a new, practical and sustainable alternative to the use of fossil fuels. This not only reduces waste to landfill but also reduces greenhouse gas emissions, improving our environment.



2. SAFELY REUSE GOOD QUALITY TREATED TIMBERS FOR OTHER DECORATIVE OR FUNCTIONAL PROJECTS.

The treatment in treated timbers can last for a long time and is quite expensive to replace. If you're replacing your old deck boards and the timber (treated after 2004) is still in good shape; reuse the wood to make flower planter boxes (not veggie ones), new benches or seats, picture frames, or as garden decorations.

3. SAFELY REPURPOSE YOUR TREATED TIMBERS BY GIVING IT AWAY OR SELLING IT ONLINE TO OTHERS THAT NEED IT.

As we mentioned above, treated timbers can be quite costly but the treatment in the timber can last a long time making them still useful. If your old treated timber boards are of no use to you and are still in good quality shape (and made after 2004), then perhaps giving them away or selling it online could be an idea.



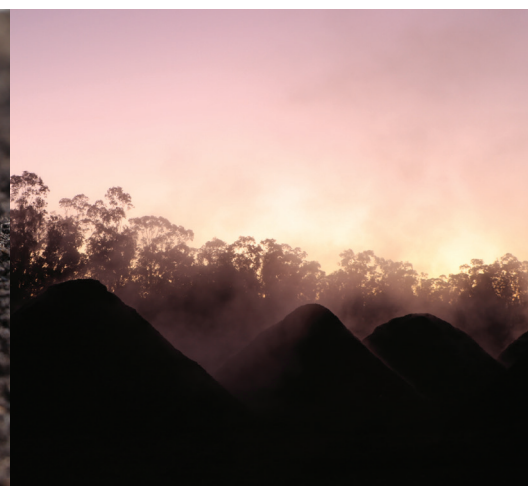
* Please note this does not apply for woods treated prior to 2004, as these woods contain arsenic and other hazardous treatments which can cause serious health issues for humans and other species. Therefore in accordance with regulatory governing bodies, these wood wastes should be safely discarded in landfill until future technologies allow for safer sustainable alternatives.

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