

Resource Recovery – TIMBER – Collection and Transportation

This guide provides good-practice advice to improve recovery rates for all types of waste timber from construction and demolition (C&D) sites.

The aim is to assist the resource recovery industry to provide collection and transportation services that:

- maximise the amount of waste timber diverted from landfill and cleanfill
- minimise contamination and damage
- meet the requirements of the construction or demolition client and the recycling operator.

This guideline covers:

- finding good markets for waste timber
- collection and transportation services
- health and safety
- resources and contacts
- other guidelines in this series

Read the REBRI Resource Recovery – All Waste Types – Collection and Transportation guide for more detail on finding markets for wastes, separating wastes, developing contracts with clients, meeting expectations of the recycling operators and the building industry, disposing of waste appropriately and transporting materials safely and efficiently.



Timber waste sorted on a Hawkins construction site ready for collection, Christchurch.

Finding good markets for waste timber

Waste timber includes treated and untreated timber, hardwood, native timber, demolition, off-cuts, cladding, interior fittings and linings, engineered wood products (EWP) (MDF, fibreboard, particle board etc.), joinery, panels, lengths, pallets and packaging.

You need to find good sustainable markets for waste timber and understand the requirements of your clients in terms of the quality and quantity of feedstock. Timber is a versatile material and can be reused, burnt for fuel or recycled into a variety of new products. However, treated timber (and EWP) can limit the options for recycling or fuel.

Timber products can be reused in the original or near original form.

EWP, treated and untreated lengths, beams, boards, panels, pallets and joinery can be salvaged from site for reuse.

As a guide, the following is in demand:

- Hardwood (lengths greater than 0.6 metres, architectural features, no borer or other damage, preferably nail-free).
- Native timbers (greater than 0.6 metres, architectural features, no borer or other damage, preferably nail-free).
- Lengths of untreated timber greater than 0.6 metres.
- Lengths of treated timber greater than 0.6 metres.
- panels of EWP, trellis and other timber products greater than 0.5 square metres,

Confirm current demand with manufacturers, second-hand retailers and exporters.

Untreated softwood, native timber and hardwood timber can be chipped into:

- landscaping mulch
- boiler fuel
- EWP manufacture
- timber composite materials and domestic fire pellets.

Points to note:

- EWP may be acceptable for some uses.
- Timber should be chemical-free (paint, adhesives, treatment chemicals etc.) and free of foreign objects such as plastic and nails.
- Confirm feedstock specifications with the recycling operator or manufacturer.
- For a general indication of feedstock requirements, visit www.wrap.org.uk.

Treated timber may be acceptable for:

- timber composite materials (although the technology is still in development and research is required to confirm this)
- reuse (as discussed above).

Know your markets

You won't be in business long without securing a sustainable market for your waste timber. The waste timber market is constantly changing, so it pays to do your homework. Here are a few suggestions for starting your search.

- Use local waste-recycling directories ([www.branz.co.nz/REBRI Recycling Directory](http://www.branz.co.nz/REBRI_Recycling_Directory)), the Yellow Pages (www.yellowpages.co.nz), the Waste Exchange (www.nothrow.co.nz) and buy recycled directories (www.zerowaste.org.nz) to identify demand for waste timber products. These change often, so it pays to keep checking.
- Network with businesses and councils with an interest in sustainability. Join organisations such as the Sustainable Business Network (www.sustainable.org.nz) or the Waste Management Institute of New Zealand (www.wasteminz.org.nz).
- Do business with recycling operators, transport operators and other agencies that follow the REBRI Guide to C&D Resource Recovery or are accredited to a nationally recognised environmental management programme such as ISO14001 or Enviro-Mark® NZ. This way, you can have greater assurance that they are working to good environmental standards and are doing what they say they do.

Understand the requirements of your clients

- Each market will have its own feedstock specifications – it's best to confirm these before you start. Getting it wrong can cost you.
- Obtain clear specifications from second-hand retailers, manufacturers, exporters and other clients. This may change over time as markets change. Things to check include:
 - types of timber acceptable (treated, native, untreated etc.)
 - minimum and maximum sizes of board and lengths of timber
 - minimum and maximum quantities
 - contamination tolerances (for nails, paint, concrete etc.)
 - any pre-processing requirements such as sorting or grading
 - how timber is to be received (for example, loose, stacked in containers or on pallets).

- Use the REBRI Waste Transfer Form to confirm to clients the source and nature of the timber products provided.

Collection and transportation services

Provide your C&D clients with good information to maximise the quality of materials

To maximise the quality of materials you collect and transport, your C&D clients need to understand your specifications. If you can provide good information and an efficient collection system, clients should be able to give you a quality product.

- Provide clear instructions to your C&D clients on your specifications. Many companies have a contract with their client in which the specifications are clearly stated along with any unacceptable materials.
- Visit the site or discuss with the contractor prior to construction or demolition to identify timber suitable for reuse, processing and recycling.
- Separating timber on site increases the recovery for reuse compared to off-site sorting facilities, because it is easier to identify timber types (including treated versus untreated) and there is less likelihood of damage and contamination.
- Contamination such as steel, dirt and soil should be avoided or removed prior to transportation.
- Provide suitable containers to separate timber for reuse from timber for recycling and from other wastes (see below for details).
- Use the RONZ recycling symbols for untreated and treated timber to provide clear signage on containers ((downloadable from www.wasteminz.org.nz/pubs/ronz-symbols).
- Include a list of unacceptable materials on the containers. Be specific, for example, “No treated timber” or “No screws and nails”.



Transportation services and methods

- Provide pallets, shipping containers or flat-deck trailers to construction or demolition clients for separate storage of timber. Storing and transporting timber flat is more efficient and reduces the potential for damage compared to using skips. Flat-deck trailers are useful for moving around a site, particularly if the timber will be sourced from different parts of the building, and where forklifts are not available on site for moving pallets or shipping containers.
- Alternatively, have clients store timber panels and lengths in a designated area and collect using a flat-bed truck, container transporter or similar.
- Timber for reuse can be collected along with other salvage items.
- Provide skips, trailers or front-loading bins to construction or demolition clients for separate collection of waste timber for processing.

Using an excavator with a wide bucket to load pre-sorted timber from a demolition site onto trucks for transportation to a retail facility (Ward Demolition, Auckland).



- Trailers or wheelie bins are useful for moving around a site, particularly if the timber will be sourced from different parts of the building and where cranes are not available on site for moving skips. Smaller containers are also useful for areas such as near wood-cutting machinery.
- Many sites would benefit from a collection round to remove quantities smaller than a skip load. Accumulate a truckload of timber for recycling from several sites. Use front-loading bins or a tipper truck in circumstances where timber can be safely loaded into the tipper unit at the building site and safely unloaded at the sorting or recycling facility.

Keep treated timber separate at the point of collection, prior to transportation

- Treated timber contaminates the waste timber stream for most processing or recycling uses.
- Treated timber is best separated at source because it is difficult to identify once mixed with untreated timber.
- Treated timber that is not sorted for reuse should be collected, with any remaining waste going to a municipal solid waste landfill.

Health and safety

Good practice wouldn't be complete without considering the effects of your operation on the neighbourhood, local environment and the health and safety of you and your workers. Read the REBRI Resource Recovery – All Waste Types – Collection and Transportation guide for an overview of the issues.

Resources and contacts

Relevant legislation and regulations

- Health and Safety in Employment Act 1992
- Local Government Act 2002
- Transport Act 1962
- Transport Amendment Act 1997
- Resource Management Act 1991
- Regional and district plans
- District bylaws.



Collecting wood from Fletcher Construction for firewood, Christchurch

Links, resources and contacts

- Resource Efficiency in the Building and Related Industries (REBRI) www.rebri.org.nz
- UK Waste and Resources Action Programme (WRAP) www.wrap.org.uk
- Yellow Pages www.yellowpages.co.nz
- The Waste Exchange www.nothrow.co.nz
- Waste Management Institute of New Zealand (WasteMINZ) www.wasteminz.org.nz
- Enviro-Mark® NZ www.enviro-mark.co.nz

Other guidelines in this series

All Waste Types

- Collection and Transportation
- Centralised Sorting and Storage

Timber

- **Collection and Transportation**
- Processing into Mulch and Chip

Plasterboard

- Collection and Transportation
- On-site Sorting, Storage and Processing
- Centralised Sorting, Storage and Processing

Concrete

- Collection and Transportation
- Processing and Storage

Metal

- Collection and Transportation

TIMBER – Collection and Transportation – Audit Sheet

Use this sheet to check the practice of your service provider against the good practice guidelines in this guide. If you are a waste transporter, you can use this sheet to do your own checks of your performance against the guides. Just consider each point and put a tick for compliance, cross for non-compliance or NA for not applicable. Put any comments at the bottom of the sheet, then sign and date it. Keep these sheets for your records and any discussions between you and your clients or suppliers.

Collection and transportation

1. A list of specifications is provided to C&D clients that includes such things as:
 - types of wood that can be reused or recycled
 - contamination tolerances
 - whether treated timber is accepted
 - minimum and maximum quantities
 - minimum and maximum sizes of board and lengths of timber
 - sorting or grading requirements
 - handling requirements on site to ensure quality for reuse and maximise recovery rates
2. A detailed list of unacceptable materials is provided (for example, “No treated timber” or “No screws and nails”)
3. The REBRI Waste Transfer Form is used to trace the source and destination of waste wood.
4. Wood is collected separately to other wastes from the site to allow easier identification of wood types (including treated versus untreated) and to reduce the likelihood of contamination.
5. Containers that maximise reuse and recycling are available (for example, pallets, shipping containers or flat-deck trailers for wood for reuse, or skips and front-loading bins for wood for recycling).
6. The RONZ recycling symbols for wood or some other type of clear signage have been used on containers. A list of unacceptable materials is included.
7. Collection staff visually inspect each load prior to removing it from the site. Where possible, any pieces of contamination are removed.

Internal procedures and compliance

In addition to the procedures above, consider whether the following apply to the operation:

8. Documented emergency procedures, including spill responses.
9. Documented health and safety procedures.

- 10. Documented quality and environmental monitoring.

- 11. Current resource consents or other approvals for land use and discharges to the environment.

- 12. External accreditation (for example, Enviro-Mark® NZ).

- 13. Prefer clients and suppliers that work to good environmental standards by using the REBRI guides and/or have external accreditation.

- 14. Licensed under district bylaw.

Comments

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Signed

Person, company and responsibility

Date

Signed

Person, company and responsibility

Date