

Resource Recovery – METAL – Collection and Transportation

This guide provides good-practice advice to improve recovery rates for all types of metal 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 metal diverted from landfill and cleanfill
- minimise contamination
- meet the requirements of the construction or demolition client and the recycling operator.

The metal recycling industry in New Zealand is well established. This guide is not about how to process or recycle metal, but gives tips on providing a collection and transportation service that suits the demands of the building industry. This is relevant to both the recycling operators who provide a collection service and the transport operators who serve the recycling industry.



Sims Pacific Metals, Auckland.

This guideline covers:

- what metal can be recycled from a C&D site
- collection and transportation services
- resources and contacts
- other guidelines in this series.

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

What metal can be recycled from a C&D site?

Most metal from C&D sites can be recycled

Some examples include:

- roofing and cladding
- reinforcing bar
- steel beams
- aluminium window and door frames
- electrical wire
- aluminium soft drink cans and steel food cans
- wire mesh

- plumbing fixtures and pipes
- spouting
- empty paint cans
- heating and air-conditioning ducts
- light fixtures (not including bulbs).

Know your markets

You won't be in business long without securing a sustainable market for your metal. The scrap metal recycling industry is well established in New Zealand, so finding outlets for the material is not difficult, but demand and prices change over time so it pays to keep abreast of the market. Here are a few suggestions for sources of market information.

- Use local waste-recycling directories (www.branz.co.nz/REBRI_Recycling_Directory), the Yellow Pages (www.yellowpages.co.nz) and the Waste Exchange (www.nothrow.co.nz) to find local scrap metal recyclers.
- 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 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 metal recyclers

- The most effective way of maximising the diversion rates from landfill and cleanfill is to meet the requirements of metal recyclers.
- Obtain specifications from recycling operators and operate according to the specifications. Things to check include:
 - metal types accepted
 - minimum or maximum quantities accepted
 - contamination tolerance (for plastics, leftover product in containers etc.).
- Use the REBRI Waste Transfer Form to confirm to clients the source and nature of the concrete products provided.

Collection and transportation services

The key issue with metal recycling from the perspective of the C&D client is a good collection and transport service. Many site managers are put off recycling because of recycling operators who won't collect small volumes or low weights of metal. Be flexible to meet the needs of these types of building jobs.

Minimise contamination and maximise recovery

- Maximising metal recovery starts with good handling on site. Provide clear instructions to your C&D clients on your requirements.
- Provide skips, trailers or other containers to separate metal from other wastes for collection and transportation (see below for details).
- Avoid or remove contamination (such as plastic or concrete) prior to transportation.
- Use the RONZ recycling symbols for metal to provide clear signage on skips (downloadable from www.wasteminz.org.nz/pubs/ronz-symbols).
- Include a list of unacceptable materials on the containers (for example, "No concrete or plastic").





Metal that has been sorted for collection at a Ward Demolition project.

Transportation services and methods

- Provide skips, trailers or other suitable bins to clients for on-site waste separation. Consider the following.
 - Trailers are useful for moving around sites, particularly if there is no crane on site to move gantry bins or skips.
 - Provide small bins or barrels that can be located directly where metal waste is created, for example, for reinforcing bar off-cuts, cladding or spouting off-cuts.
- Because many site managers are put off recycling metal if they have small volumes or weights, consider providing a collection round to accumulate a truckload of metal for recycling from several sites. Use front-loading bins or a tipper truck in circumstances where metal can be safely loaded into the tipper unit at the building site and safely unloaded at the sorting or recycling facility.
- Provide a drop-off service with clear instructions of the metal types and volumes that can be received and how metal should be transported.

Waste Management NZ Ltd provides metal skips for segregated waste collection at a Fletcher Construction project, Christchurch.



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.

Links, resources and contacts

- Resource Efficiency in the Building and Related Industries (REBRI) www.rebri.org.nz
- Waste Management Institute of New Zealand (WasteMINZ) www.wasteminz.org.nz
- The Waste Exchange www.nothrow.co.nz
- Scrap Metal Recycling Association of New Zealand www.scrapmetal.org.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**

METAL – 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 metal transporter or recycler, 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 metal that are accepted
 - contamination tolerances
 - minimum and maximum quantities
 - sorting requirements.
2. A detailed list of unacceptable materials is provided (for example, “No concrete or plastic”).
3. The REBRI Waste Transfer Form is used to trace the source and destination of metal.
4. The RONZ recycling symbols for metal or some other type of clear signage have been used on containers. A list of unacceptable materials is included.
5. Suitable containers and/or collection services have been provided to the C&D client, based on the requirements of the building site.
6. Collection staff visually inspect each load prior to removing it from the site. Where possible, any pieces of contamination are removed.
7. A drop-off service is provided, together with information on the volumes or weights that can be received and how metal should be transported.

Internal procedures and compliance

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

8. Documented health and safety procedures.
9. Documented quality and environmental monitoring.
10. External accreditation (for example, Enviro-Mark® NZ).

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

12. Licensed under district bylaw.

Comments

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Signed

Person, company and responsibility

Date

Signed

Person, company and responsibility

Date