

Building Out Waste

A guide for developers and building contractors



Find out more: phone 09 301 0101
or visit makethemostofwaste.co.nz

Understanding the waste hierarchy

Waste is costly for business and for the environment.

The waste hierarchy sets out priorities for using resources in the most efficient way and reducing the amount of waste that is produced.

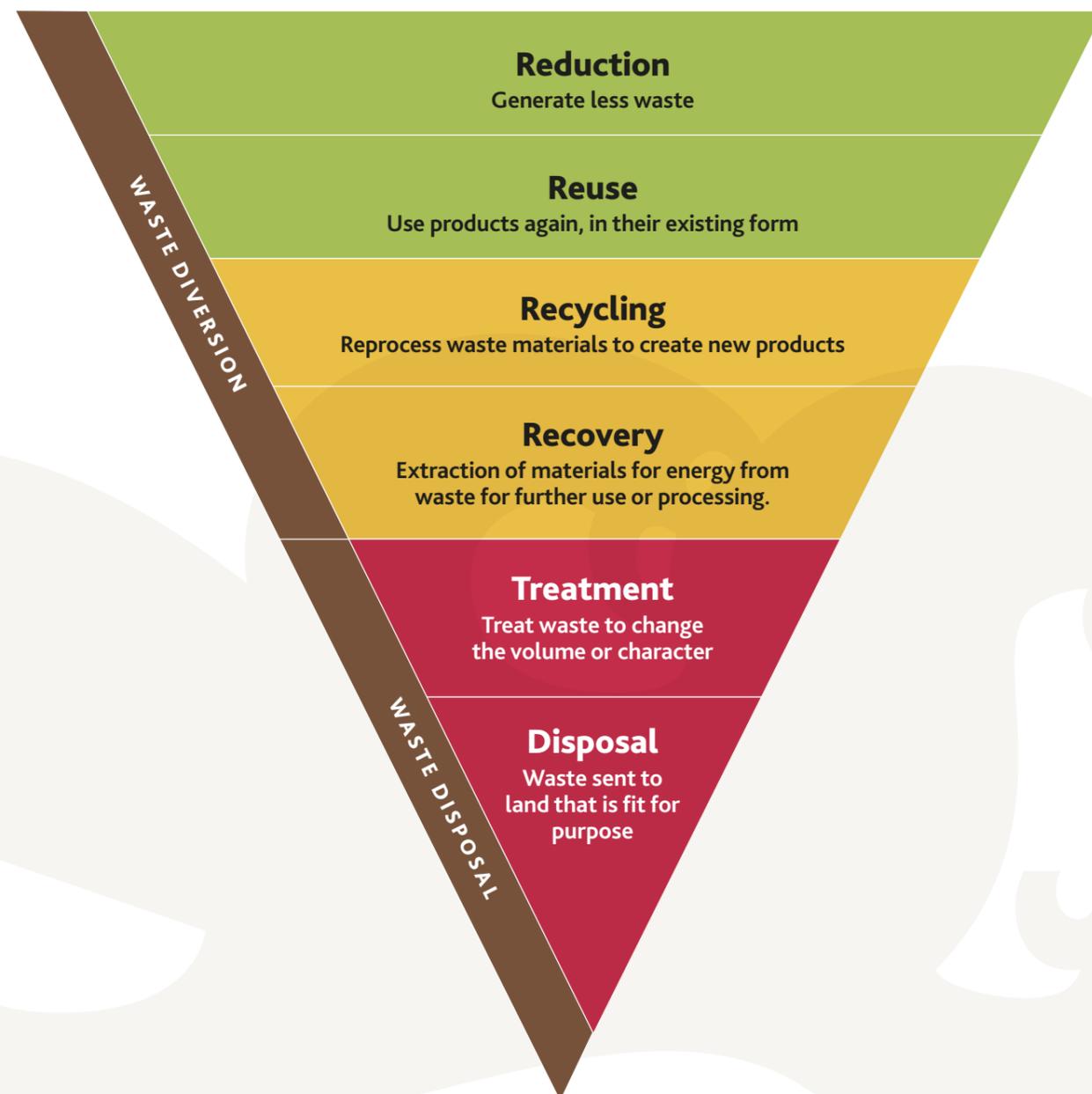
The upper part of the waste hierarchy focuses on ways to divert waste from landfill. It helps us to think about how we can:

- Avoid creating waste and reduce the amount of waste we generate

Recover resources by:

- Reusing
- Recycling
- Energy recovery

The lower part of the waste hierarchy shows us how to manage waste and dispose of it in the most environmentally responsible manner.



Why construction waste matters to you

Save money

By designing out waste from project start to finish, you can:

- Save money on purchase costs of materials wasted
- Save money on cartage to landfill, disposal costs, and landfill levy
- Save money by earning revenue from recovered materials
- Avoid non-compliance costs

Save time

- More effective on site waste practices

- Avoid time spent on managing regulatory non-compliance

Save stress

- Enjoy a hassle-free, waste-free build

Save your environment

- Buy only what you need
- Use materials efficiently
- Prevent environmental damage caused by poor materials handling and storage
- Contain waste within your work site

Keys to minimising waste on construction projects

- Plan waste minimisation into the project from the time of its inception
- Develop a Site Specific Waste Plan (SSWP) for your project to divert construction and deconstruction waste from landfill.
- Build the implementation of your project's SSWP into project contracts
- Specify waste minimisation actions, such as:
 - relocating structures
 - deconstructing existing structures
 - diverting materials from landfill through reuse, recycling, and recovery
- Use materials efficiently and manage on-site storage to optimise materials' use and avoid wastage.
- Make sure that deconstruction materials and construction waste are managed to divert as much as possible from landfill.
- Tap into Auckland Council for assistance on how to support community-based organisations to have access to much-needed deconstructed materials for reuse.



Project checklist

Before you begin your project:

1. Set waste minimisation goals and objectives.
2. Analyse waste types and quantities.
3. Include SSWP in contract documentation (see pages 5-7).

At the start of your project:

1. Make someone responsible for on-site waste management.
2. Brief/communicate SSWP to all contractors, managers, staff, and subcontractors.
3. Set targets for reducing amount of each waste type sent to landfill.
4. Direct contractors to REBRI for resources and practical guides.
5. Set out resource recovery methods for each material.
6. Engage a waste collector licensed by Auckland Council.

During your project:

1. Implement materials handling standards.
2. Check materials storage.
3. Monitor/audit contractors/sub-contractors.
4. Track progress.

At the end of your project:

1. Collate data from waste and recycling collection contractors.
2. Evaluate results.
3. Calculate savings.

Getting started

Below is an example of how you can go about building a SSWP into your project contract. Start by including a glossary of terms, like the one below:

GLOSSARY OF TERMS	
REBRI	Resource Efficiency in the Building and Related Industries (REBRI). Resource Guides are available at rebri.org.nz . The REBRI programme has been developed by BRANZ to help the building industry to reduce waste.
Clean Fill	Fill material that is predominantly inert materials
Landfill	An appropriately consented waste management facility for the receipt of waste for disposal.
Recovery	The extraction of materials or energy from waste or diverted material for further use or processing.
Recycling	Means the reprocessing of waste or diverted material to produce new materials.
Reuse	The further use of waste in its existing form for their original purpose or a similar purpose.
SSWP	Site Specific Waste Avoidance & Resource Recovery Plan.

Prepare and submit a SSWP in partnership with the deconstruction contractor (if any), waste collectors/processors and any community resource recovery organisation(s). The submitted plan should be guided by the REBRI Waste Management Plan template and should include the following elements:

SECTION	DESCRIPTION	IMPLEMENTATION
Scope and Analysis	The scope of the waste plan will include building removals and construction.	Indicate the nature of work and expected waste types and sources. Analysis of the proposed job site waste to be generated, including reusable, recyclable and waste materials (by volume or weight).
Personnel and Responsibility	Person(s) responsible for implementing and reporting on the SSWP.	The contractor shall provide on-site instruction of salvage, deconstruction and material handling techniques to minimise waste. This includes ensuring all site management, staff, subcontractors, product suppliers, and waste disposal companies are made aware of the SSWP and its implementation.
Waste avoidance	Measures to manage waste avoidance or reduction of waste at source to be taken during the project	Methods of deconstruction, reducing construction waste, waste separation and storage. Description of bins/containers that will be used and the signage that will be used on the containers. Identification of measures to be taken to prevent contamination of materials to be reused or recycled and to ensure materials are consistent with requirements for acceptance by designated facilities.
Destination of materials	Proposed alternatives to landfill and clean fill disposal	A list of each material proposed to be salvaged, reused, or recycled during the course of the project and the destination. Where possible, the contractor shall give consideration to giving community-based organisations access to salvage materials for reuse. Only approved waste collectors can be engaged.
Record keeping	The contractor will maintain a record of all waste material leaving the site, volume/weight and its destination.	This will be done in partnership with the deconstruction and salvage contractors (if any), and any community resource recovery organisation engaged in the project. Reporting should be guided by the REBRI C&D Waste Transfer forms or similar. The contractor shall submit to the Contract Administrator the REBRI Waste Management Plan, REBRI C&D Waste Transfer Forms or bills, invoices and other documentation confirming that all materials have been received at the required locations.



Priority materials

Materials listed **✘** (not allowed) for landfill or clean fill **MUST NOT** be directed to these destinations. Any materials listed for recovery, recycling or reuse should be handled in a way that maintains their value and increases their chances of achieving those destinations.

For further information visit branz.co.nz

KEY:  Preferred  Alternate  Forbidden

	LANDFILL OR CLEAN FILL	RECOVERY	RECYCLING	REUSE	NOTES
Contaminated or degraded material	✓	!	!	✓	Contaminated (e.g. asbestos, mould, etc.) or degraded (damaged or of an uneconomic size) material should be directed to the appropriate destination.
Whole structures for removal	✘			✓	Where a structure is sound and suitable for removal, consideration should be given to removing it intact to a new site for reuse.
Strip out items, fixtures and fittings	✘	!	!	✓	Any deconstruction should start with a comprehensive and careful strip out of usable fixtures and fittings that have a suitable destination. This includes kitchen and bathroom fittings and furniture. Care shall be taken to remove items and material in a way that preserves their value.
Metal	✘	!	✓	✓	Separate and recycle steel reinforcing. Remove metal fixtures and fittings in such a way that maximum value is retained for reuse (first preference) or recycling.
Native Timbers	✘	!		✓	Remove native timbers in such a way that maximum value is retained. Only uneconomic lengths to be sent for recovery.
Non-Native Timbers	✘	✓		✓	Separate and store timber for reuse (preferred) or recovery.
Plasterboard	✘	✓			All plasterboard (including deconstructed) to be sent for recovery.
Concrete and Asphalt	✘		✓	✓	Concrete and asphalt to be sent for crushing or reprocessing.
Cardboard	✘		✓	✓	Cardboard to be sent for recycling or reuse. Cardboard should not be placed in comingled bins.
Plastic Film	✘		✓		Plastic film to be sent for recycling or reuse. Plastic film should not be placed in comingled bins.
Packaging Containers	!	✓	✓	✓	Utilise product stewardship schemes where they are available. Discourage suppliers from using polystyrene packaging.

YouTube videos

See how Auckland Council is designing out waste in its projects:

Birkenhead War Memorial Park Grandstand Deconstruction Project | Auckland Council

<https://www.youtube.com/watch?v=m5ZLLY81I&t=15s>

Three Kings Deconstruction Project | Auckland Council

<https://www.youtube.com/watch?v=wrzvTr5tByw>

To find out more about managing your construction waste, phone Auckland Council on 09 301 0101 or visit makethemostofwaste.co.nz



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