Easy ways to reduce waste on site

THERE ARE MANY WAYS TO LIMIT THE AMOUNT OF CONSTRUCTION WASTE GOING TO LANDFILL. PUT EVEN A FEW STRATEGIES IN PLACE AND YOU CAN DRAMATICALLY LIMIT WASTAGE AND MAKE SAVINGS.

Build Right

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EACH NEW HOUSE CONSTRUCTION typically generates around 3–3.5 tonnes or two to three 9 m³ skips of waste, and much of that ends up in landfills. Yet some builders divert over 80% of their waste away from landfills, saving on disposal costs and landfill levy. Here’s how.

Work with clients or developers

Raise the issue with clients or developers to see if they are keen to minimise waste. House designs that use standard or modular dimensions produce fewer off-cuts, which can make up 40% of site waste. Grouping wet areas together reduces plumbing lengths.

When it comes to construction, ask if clients are happy for clean off-cuts to be used from their site or other jobs. Ask if they are happy for some surplus materials to be left on site – they could use surplus bricks for a barbecue, for example, or surplus carpet for doormats or weed mats in a garden.

Work with suppliers

Talk with suppliers about minimising unnecessary packaging – this can make up around a fifth of construction waste – and look for suppliers and manufacturers who take back unused materials and materials containers. For example, some paint suppliers take unused paint and pails, while some brick suppliers take back unwanted bricks and brick pallets.

Reduce off-cuts on site by preparing accurate cutting lists for timber and plasterboard before ordering and by ordering premade timber or steel trusses, framing and joinery.

Find new homes for items

Talk with recycling firms about what is accepted locally. You can also find firms and people to take things through websites such as:

- www.wikiwastenz.com
- www.nothrow.co.nz
- www.freestuff.co.nz
- www.target sustainability.co.nz (Christchurch only)
- www.trademe.co.nz.

A national directory of recycling resources is listed on the REBRI tool at www.branz.co.nz/rebri.

On site

Reusing and recycling will work best with buy-in from on-site staff and subcontractors. Consider developing a waste management plan – see www.branz.co.nz/rebri for an example.

Waste can be separated on site, but this requires space and team discipline. If space is tight, recyclable materials can go into one bin to be sorted off-site by a contractor.

Keep recyclable material clean – don’t put food scraps in the recycling skip, and let paint dry in the tins before they go in. Clear labelling is very important.

Tell staff and subcontractors that they should use off-cuts before cutting into a new length.
**Tips by material type**

**Concrete**
- Form up accurately, reuse wooden boxing, use timber scraps for bracing.
- Consider a proprietary concrete foundation block that does not produce boxing waste.
- Use crushed concrete for sub-base and basecourse if available.
- Form up a small area of path to accept any remnants.
- Break waste remnants into small pieces before final set to allow later use.
- Store waste concrete separately from other waste for crushing and recycling.

**Brick and tile**
- Keep tile pieces separate for reuse.
- Return oversupply to the supplier, use on the next job, on-sell or donate to charity.
- Recycle broken bricks and tiles with waste concrete.
- On renovation or demolition jobs, old bricks with lime mortar can be sold or reused for landscaping.

**Timber**
- Have a single timber cutting area and keep off-cuts in one bin or pile. Treated timber off-cuts – depending on treatment – may possibly be reused in roof overhangs, for example.
- Separate treated and untreated timber waste and label each bin or area. Untreated timber can usually be recycled – check with recycling operators – and used for firewood or chipped for mulch. Treated timber waste goes to landfill. Hardwoods and native timbers can be sold for furniture making if they have no borer, are nail-free – which is preferable – at least 25 mm thick and in lengths over 0.6 m.

**Plaster**
- Have one plasterboard cutting area to keep off-cuts together, clean and dry. Disposal of mixed waste to landfill can cost $120 per tonne, while recycling sorted plasterboard waste is as little as $40 per tonne.
- Installing plasterboard horizontally can be more efficient than installing it vertically. Recycle plastic buckets or donate for reuse. Scrape out plaster first into the landfill skip.

**Paint**
- Mark leftover paint well and leave for clients’ use later, donate to charities with clients’ permission or return to the supplier.
- Some landfill recycling facilities accept unused paint.
- Do not tip liquid materials down drains, on the ground or into waterways.

**Soil and plants**
- Design to natural site contours to avoid cut and fill, retaining existing topsoil and vegetation where possible.
- Mark the area where soil is to be stockpiled, clear of trees or waterways.
- Avoid mixing topsoil with subsoil.

- Replace topsoil after construction so existing nutrients can be returned to the site.
- Keep soil storage periods as short as possible and ideally programme earthworks for summer to minimise rain erosion.
- Talk with clients about removing and replanting trees and shrubs or giving them away or chip for mulch.

**Building components**

After renovations, old windows, doors or joinery in good condition can go to recycling yards. Old kitchen cabinets may be reinstalled in a garage for storage.

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**Target Sustainability**

Target Sustainability House Builders Project was an initiative of the Christchurch City Council, aiming to divert house construction waste from landfill and clean fill. On average, over 73% of waste from the new houses of participating building firms was reused, recycled or stockpiled for future recycling.

With one house, just 16% of the waste went to landfill.

For more Case studies can be seen at www.targetsustainability.co.nz.