



WASTE MINIMISATION IN THE CONSTRUCTION AND DEMOLITION INDUSTRY

**NAYLOR LOVE, DCC CIVIC
CENTRE REFURBISHMENT,
2022–2025**

This case study shows how a business approach to waste minimisation during deconstruction can save costs and reduce the environmental impacts caused by sending waste to landfill. It also demonstrates customer demand and how this can influence diversion targets.

Background

The Civic Centre was purpose built in the early 1980s to house the Dunedin City Council (DCC) offices. From 2022 to the end of 2025, refurbishment took place floor by floor over seven levels, with staff from each floor moving out for the duration of work on their space.

Naylor Love already has a company-wide diversion target of a minimum of 70% of waste by weight diverted from landfill. While not formalised in the contract, the DCC asked Naylor Love to ensure the demolition process of the second level had a minimal environmental impact. Naylor Love says that its clients are increasingly making similar requests and its team was “keen to give it our best shot”.

Waste diversion during demolition phase

Some diverted materials were removed by subcontractors, some were processed for reuse by waste partners, and Naylor Love’s team reused some of the materials on shed and garage upgrades. Specifically:

- metals, cardboard, window glass, doors, internal windows and plasterboard were reused or recycled via Naylor Love’s waste partners.
- plasterboard was crushed and the gypsum used as fertiliser
- cabinets found new homes in sheds and garages across Dunedin
- timber was reused by the team in their projects at home
- some untreated timber was bagged up and used by staff as firewood
- many carpet tiles were reused in the building. Some in poor condition were reused in Naylor Love site sheds and staff garages and sheds.
- plugs, switches and anything electrical was removed by the electrical contractor for reuse or recycling.

Building phase waste management

Naylor Love’s Site Waste Management Plan for construction ensured the right bins were on site at each stage to make it easy for site teams to divert as much waste as possible.



Civic Centre diversion achieved:

On the second level alone, over 90% of the waste by weight every month during the demolition phase, with 36 tonnes of waste diverted during demolition. Over the entire project, 77 tonnes of waste was diverted.



Recycling piles

Building waste diversion into projects

Naylor Love's approach to reducing waste:

- develop a detailed waste management plan for every project.
- begin jobs with subcontractor pre-let meetings, including our waste diversion and management requirements.
- work with subcontractors to figure out what waste streams they will generate at each stage, if they have a diversion scheme in place, e.g. whether they can recycle packaging.
- have a trained resource sorter on site who has completed a Resource Sorter – Construction qualification. This is a great way to upskill a team, even earning NZQA credits.
- have clear, consistent waste signage at all sites so people can find their way easily around our waste diversion set ups.
- once on site, log every kilo of waste and recycling on a [REBRI form](#) to make it straightforward to estimate diversion rates from volume to weight.
- use the REBRI information to produce a monthly waste dashboard for every site. The dashboards make it easy to see and share progress with both with its teams on site and clients.
- the Project Administrator and Site Manager for the Civic Centre ensured that at toolbox meetings positive stories of material reuse and meeting diversion targets were shared. There was even some friendly competition over the shed and garage upgrades.
- any new Naylor Love or subcontractor person arriving on site undergoes an induction that clearly explains expectations, including site-specific waste goals and targets.

Challenges and solutions

Usually, Naylor Love tries to have a resource sorting area of skips behind a hoarding for easy pick up. This wasn't an option at the Civic Centre which had no vehicle access to site. Everything was carried in and out via a narrow alleyway shared with the public, then through lifts and stairwells shared with other building users. There was a spot on the street for skips, but there was a risk that meticulously sorted materials would be contaminated by passers-by in the busy central city location.

Instead, materials were gathered in a site resource sorting area, and a skip was delivered once enough material was gathered. Then it was all hands on deck to get it filled and picked up. This meant double handling, but it was still more economical than putting everything into one skip to be sorted offsite by Naylor Love's waste management partner, and much more economical and acceptable to the team than sending everything to landfill.

Costs and benefits

Naylor Love says:

- *even with the labour costs of breaking down and sorting materials, significant savings were made sending everything straight to landfill.*
- *it was nice to be able to send the team home with free firewood.*
- *the team was happy to put extra effort into waste diversion when they understood the goal and were kept informed about the outcomes. They were all proud to have made a difference, to be doing the right thing.*
- *we're always learning, always finding new ways to reuse, repurpose and recycle waste materials.*
- *we pass the lessons learned from one project to another with our waste management plans and waste partnerships.*

Find out about potential support for your waste reduction ideas

DCC Waste Minimisation Team: phone 03 477 4000, or email waste.minimisation@dcc.govt.nz