Sustainable Business Network | CONSTRUCTION SECTOR ACCORD

Breaking the Waste Cycle: A guide to product stewardship in construction

FOR MANUFACTURERS AND SUPPLIERS OF CONSTRUCTION PRODUCTS AND MATERIALS

JUNE 2024

Product stewardship

What?

Product stewardship is when a producer, brand owner, importer, retailer or consumer accepts responsibility for reducing a product's environmental impact [1]. Product stewardship aims to reduce a product's environmental impact by 'stewarding' it throughout its lifecycle, so it doesn't end up polluting our environment or end up in landfill. Often product stewardship involves manufacturers or suppliers providing a 'take back' option at the end of the product's first use life. In construction, these schemes should also consider offcuts, excess and damaged goods.

There is no "one size fits all" product stewardship scheme. Schemes will vary depending on the product, location, infrastructure and objectives of each business. Product stewardship is a flexible and effective way to manage waste minimisation, reduce the need for new material and in some cases, save money. Product stewardship requires businesses to examine the entire life cycle of a product and collaborate with stakeholders to ensure the scheme achieves its objectives. By working closely with stakeholders, product stewardship schemes can be adjusted to ensure maximum efficiency.

Without a product stewardship scheme in place, responsibility for the waste created throughout a product's lifecycle is passed on to the site team. Increasing the availability and use of product stewardship schemes in the sector will reduce the volume of materials wasted and impact the design of products.

Why?

It is estimated that waste generated from construction and demolition is the largest source of refuse to Class 1 landfills in New Zealand (up to 50% of all waste) [2]. An average stand-alone house can produce up to 5.7 tonnes of waste during construction [3], while materials being wasted are estimated to be worth more than $31,000 if they were saved rather than being sent to landfill [4]. Construction materials contribute to a significant amount of embodied carbon emissions. A reduction in the waste of construction materials will significantly reduce the sector's overall emissions.

Increasing the availability and use of supplier and manufacturer-led product stewardship schemes will help reduce waste across the construction sector. By enabling excess, damaged or end-of-life products and materials to be returned for reuse, remanufacture or recycling, we can improve the environmental and financial performance of the sector. A product stewardship scheme can also help build your brand, contribute to risk reduction, improve customer and staff satisfaction, and reduce your greenhouse gas emissions.

How?

Product stewardship schemes require cooperation and collaboration between multiple parties. In an ideal scheme, all stakeholders would work together to ensure that the product or material has minimal environmental impact.

- Product stewardship schemes allow all stakeholders a chance to use their position in the supply chain, their specialist knowledge, or their infrastructure to provide the best solution.
- Cooperation between clients, manufacturers, merchants, contractors, recyclers, local councils and government is important to ensure the scheme achieves its objectives.
- Communication between stakeholders is important to ensure that barriers within the scheme are overcome and the scheme works for all parties involved.

Benefits for business

Product stewardship should be used alongside the design and manufacturing process to ensure that the most efficient solutions are implemented. It supports:

- designing out waste from the start
- designing products that last
- designing for repair
- designing for disassembly and deconstruction
- the use of safe materials
- collaboration across the value chain
- internalising environmental costs
- transparency

What are the potential benefits of product stewardship?

The benefits for...	Are that product stewardship can...
manufacturers and suppliers	• achieve significant cost savings from resource reduction via reuse, recycling or recovery of materials • show clients and customers that you value your product • reduce waste and the need for new and virgin materials • attract new clients and customers interested in reducing waste • reduce greenhouse gas emissions • future-proof your business and stay ahead of legislative changes • reduce risk associated with importing materials • build your brand • improve staff satisfaction and retention by showing that you're committed to sustainability • marketing opportunities
clients and customers	• provide more information about the environmentally sound management of the product • result in the extension of the life of a product • solve waste disposal problems • achieve waste minimisation without adversely affecting cost and functionality • reduce greenhouse gas emissions
contractors	• solve waste disposal problems • achieve waste minimisation goals • save on landfill costs • achieve significant cost savings from resource reduction via reuse, recycling or recovery of materials • reduce greenhouse gas emissions • attract new clients and customers interested in reducing waste • save space by getting products and materials offsite i.e. offcuts, damaged products and materials

Developing a product stewardship scheme

For manufacturers and suppliers looking to create a product stewardship scheme.

The following section offers direction in developing product stewardship schemes for construction products and materials. Figure 1 shows the generalised areas that need to be addressed when creating a product stewardship scheme. Each area will be discussed in more depth below, as well as questions that all suppliers should consider when creating a product stewardship scheme.

Things to keep in mind throughout the process:

- **Make note of any change of ownership**. Although ownership of the product may change, you will still maintain responsibility for ensuring it does not cause environmental harm.
- **Collaboration is crucial.** It will take dedication and leadership from those involved in every stage of the product's life to ensure that product stewardship schemes work effectively.
- **Where you can't control the product stewardship scheme, you need to influence.** This may mean providing educational resources about the scheme, clearly labelling products or asking for proof of actions taken on-site.
- **Learn as you go.** You may not get your scheme perfect immediately, but by communicating with stakeholders along the value chain you can learn and alter the scheme accordingly.

"Product stewardship offers us a solution to the landfill crisis. It gets us questioning, "What happens to this product at the end of its life?". Going circular is our answer. A circular economy goes beyond just diverting materials from landfills, it is critical if we are to avoid complete climate breakdown."

- Renee Jacobsen, CEO, Jacobsen.

Construction product stewardship cycle

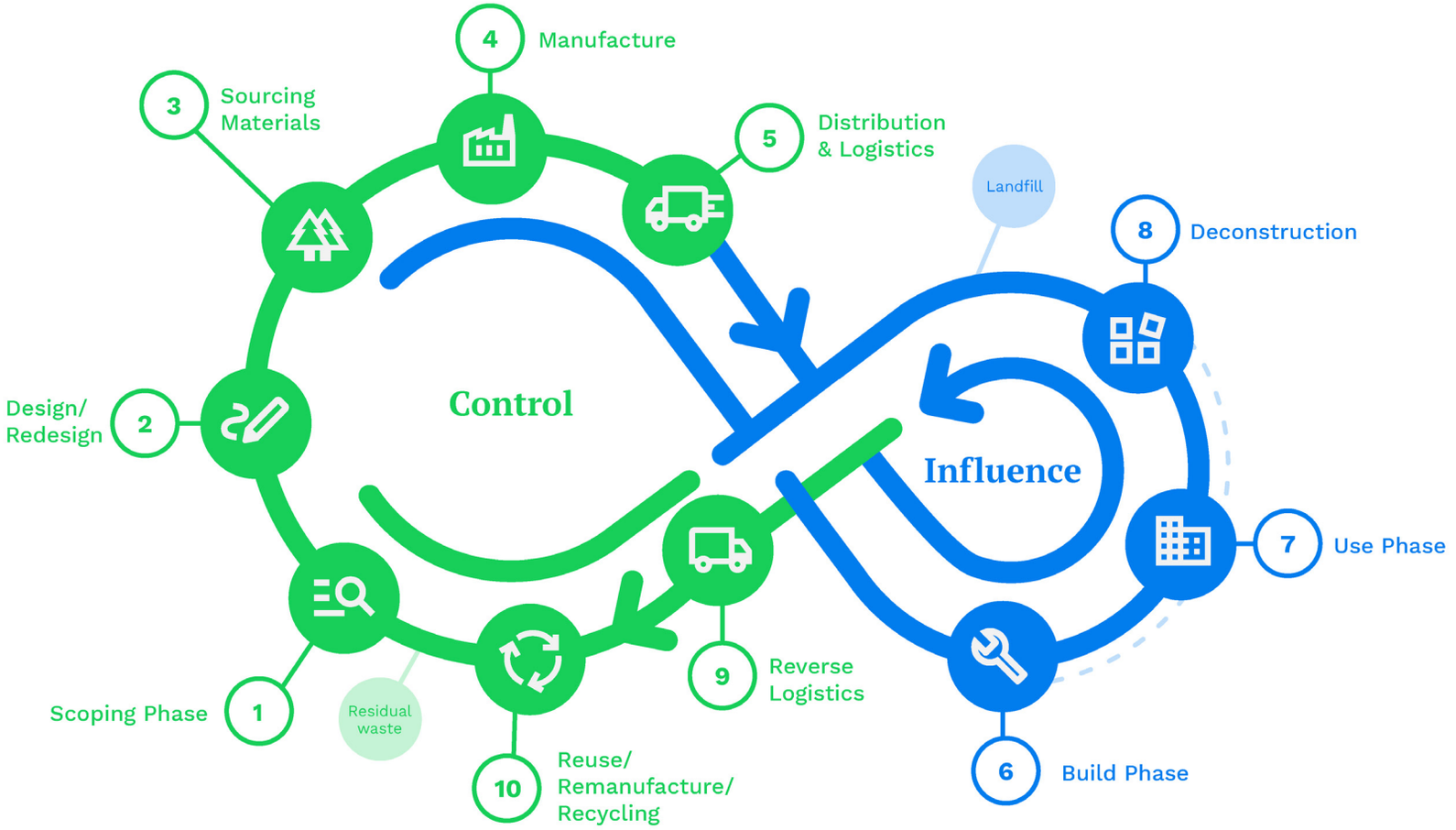


FIGURE 1: Construction product stewardship cycle
SOURCE: Adapted from FUJIFLIM & Ministry for the Environment, *Product Stewardship Roadmap*, 2022.

01

Scoping phase

Before you start designing your product stewardship scheme, it's important that you understand your market. Desktop research will help you understand what product stewardship schemes are already out there, as well as potential resources, expertise or infrastructure that you could leverage. You do not want to 'reinvent the wheel' or duplicate an existing product stewardship scheme.

There may be obvious collaboration opportunities. Organisations that work with similar materials or operate in your region may be facing similar challenges. Identify and engage with these stakeholders early to understand their perspectives and find willing partners.

This scoping phase is also important to identify 'low hanging fruit'. You may want to start with the easy stuff before moving onto the more challenging areas. For example, remanufacturing or recycling your product may be quite straightforward. You may want to tackle this before looking at something like reverse logistics.

Below are questions that you should consider at this point:

- What do I want to achieve? Define the scope and goals of the product stewardship scheme from the beginning.
- Who else is working with this product or material? Are they interested in product stewardship? What knowledge or resources are they willing to share?
- What is already happening in the regions I operate in? Is there anything happening nationwide?
- What does my value chain look like? Remember, the full 'value chain' of a product or service extends beyond production and distribution and use, into reuse and end of life.
- What infrastructure is already in place?
- What does my network look like? It's a good idea to engage with stakeholders at the very beginning.
- Who might be willing to partner? Explore collaboration opportunities and spend time identifying who might be able to support you.
- Is there any low hanging fruit? It may be a good idea to start with the easy stuff.

Winstone Wallboards has achieved a return rate of over 96% for its timber pallets.

"The success of the pallet return system in achieving a high return and reuse rate is ultimately based on having strong collaboration and communication between Winstone Wallboards, stores and trade customers so that product delivery, pallet collection and credit processes are all as painless as much as possible."

- Gordon White, Residential Market Manager, Winstone Wallboards.

Case study: Marley NZ

Marley NZ, part of the global Aliaxis business, supplies plastic piping systems made from uPVC and high-density polyethylene (HDPE) for use in building, infrastructure and agriculture industries. Marley was looking for ways to recycle its materials to keep them in use and reduce the need for virgin uPVC and HDPE resources.

While there was demand for a uPVC recycling system Marley had to ensure it could collect, transport and sort the materials to make it viable.

“While the project itself has been a massive success, the real achievement here is the collaboration,” says Dwayne Carroll, Recycling Project Lead at Marley NZ. “The problem of uPVC waste is a big one, but if you get everyone working together then systemic problems like this can be solved. That’s exactly what we’re doing, and is the reason why we’re able to solve such a big challenge.”

Case study: EXPOL/Mitre 10

Mitre 10 has partnered with EXPOL to help solve a tricky waste challenge – what to do with expanded polystyrene (EPS).

The programme encourages customers to recycle EPS whether purchased from Mitre 10 or not. EXPOL then repurposes the material into new products including EXPOL Tuff Pods, Quick Drain, Under Floor, Therma Slab Sheet, StyroDrain and Earth Green Beans Bean Bag Fill, which is made of 100% recycled polystyrene. EXPOL diverts over 400 tonnes of polystyrene from landfill each year.

Mitre 10 and EXPOL’s polystyrene recycling trial began in August 2019 at Mitre 10 MEGA New Lynn. Early adopters Henderson, Takanini, Botany and Onehunga quickly joined the programme. As of June 2022, Mitre 10 had helped divert 17,920 cubic metres of polystyrene. While this service isn’t yet available nationwide, Mitre 10 is working behind the scenes to look at expanding the service and adding more stores.

02

Design/Redesign

By considering the end of a product or material's life at the design stage, you can save costs by recovering and reusing materials in new products [5]. Circular outcomes should be designed in at the outset to enable longevity, adaptability and the deconstruction and reuse of materials. It is important to design products for easy disassembly with materials and components that can be repaired, as well as reused and repurposed at end-of-life.

Collaboration can help you design products that reduce waste, cut costs and function well. This will help you create a product stewardship scheme that works for all stakeholders, ensuring that barriers to successful material recovery are removed.

Questions that you should consider at the design stage in relation to product stewardship:

- Is your product designed for easy reuse, repair, remanufacture and finally, recycling?
- Is your product reliant on other products to work? How can you work with these partners to improve shared sustainability performance?
- What packaging does your product require, how can you design the packaging out? You should also consider a take back scheme for your packaging. Can the packaging be reused, remanufactured or recycled?
- Is your product single use? Can it be redesigned to be reusable or have its life extended through maintenance and repair?
- It is important to think about how the product will be used, and what other products or materials it may be used alongside. Will these products or materials contaminate yours? Will they make it more time consuming or difficult to reuse, remanufacture or recycle?
- Does your product typically result in offcuts onsite? Could you work with clients to ensure that offcuts are minimised?
- Is your product easily identifiable i.e. will future contractors know where the product came from and what it is made of?

Case study: Jacobsen

Flooring products often end up in landfills at the end of their life. When they are recyclable, they are usually downcycled into less valuable products.

Jacobsen believes that a strong product stewardship programme begins with products that are designed within a closed-loop system, partnering with brands who design products within the framework of Cradle to Cradle.

From concept, Jacobsen flooring products are designed to enter back into the supply chain at the end of their life. They can be infinitely remade into the same new, high-quality product. With growing resource scarcity, product stewardship can help fortify your business against potential resource shortages.

03

Sourcing materials

Approximately 70% of a business's sustainability impact comes from its supply chain, so it is important to review the materials you are using and where you are sourcing them from [6]. The materials used in construction have significant impacts, from extraction and processing to use and disposal. Sourcing materials with a focus on reusability and recyclability is important when looking at product stewardship. You should consider whether externally sourced materials could be replaced by recovered materials. This will help you reduce waste and can also help enhance supply chain resilience.

Questions that you should consider when sourcing materials in relation to product stewardship:

- Do you use virgin materials or non-renewable resources? Could you instead use recycled content i.e. could you use materials recovered via a product stewardship scheme?
- Are you using materials with comparatively low 'embodied carbon' (the greenhouse gas emissions that went into their production and supply)?
- Are the materials of high enough value to recover?
- Are your materials locally sourced or imported? Consider the carbon emissions associated with transportation. Recovering materials through product stewardship is a great way to minimise supply chain risk.
- What effects might remanufacturing have on the ability of the material to maintain its integrity? Does your product typically result in offcuts onsite? Could you work with clients to ensure that offcuts are minimised?
- Can you ensure that materials used do not contribute to unsustainable or unethical practices i.e. deforestation, modern slavery etc. Can you use certified materials?

04

Manufacture

Manufacturers often (at least partly) manage or facilitate product stewardship schemes. As the manufacturers and (often also) the remanufacturers of the product, they play a key role in determining how the product stewardship scheme will work. There may be third party processors involved, but these are some questions that should be asked at the manufacturing stage when creating a product stewardship scheme.

Questions that you should consider at the manufacturing stage in relation to product stewardship:

- Where is the manufacturing facility? Consider the carbon emissions associated with transportation. Are you using materials with comparatively low 'embodied carbon' (the greenhouse gas emissions that went into their production and supply)?
- Does your recovered product or material need to get back to the manufacturing facility? Consider the reverse logistics options available and associated carbon emissions.
- Is there waste produced during the manufacturing process? Could this be minimised or reused?

05

Distribution & logistics

Distribution and logistics involve interactions with various stakeholders, including manufacturers, merchants, contractors and transportation providers. Effective communication, collaboration and coordination among these stakeholders are essential to ensure you are minimising transportation costs and environmental impacts.

Transportation of construction products and materials is a significant contributor to greenhouse gas emissions. You can reduce these by designing distribution and logistics systems that prioritise efficiency, route optimisation and low-emission vehicles or transportation modes. The transportation of construction products and materials equates to approximately 30% of the total construction costs [7]. Effective distribution and logistics planning may also help you reduce long term transportation costs.

Note that you will need to think about your distribution and logistics and reverse logistics in relation to one another to create a working system.

Questions that you should consider at the distribution and logistics stage in relation to product stewardship:

- How will the product be stored and transported?
- Does your product require special handling and storage? Is it often damaged during transport?
- How can you minimise your product's transport carbon footprint? Is there potential to 'share' unused truck space with other companies?
    - ◊ Could your product or its packaging be changed to save on freight costs and emissions?
    - ◊ Could you refine your transportation process to allow for sea freight to the nearest port or utilise rail rather than trucks for transport between islands?
    - ◊ Could you initiate the purchasing process with clients earlier to avoid the need for carbon intensive transportation options such as air freight?
- Will you be using the same transport and logistics system for recovering your product at end-of-life? How can this be coordinated effectively?

Case study: David Trubridge

Originally, David Trubridge lights were transported fully assembled. However, a Life Cycle Assessment of one light in the product range revealed freight was a key area for emissions. In response, the business changed its designs to be transported in kit set form.

This had several positive outcomes. A kit set design takes up about 1/30th of the volume compared to an assembled version. This has a big impact on reducing freight emissions. It also makes freight much cheaper. An assembled light used to cost hundreds of dollars to ship overseas. Now it can be sent for less than $50. That saving has been passed on to customers.

06

Build phase

As shown in Figure 1, the build phase is where you will need to influence, rather than control, the product stewardship scheme. This involves making sure that information about the scheme is shared, including the correct storage and handling of the product or materials, and any damaged or excess stock. This may look like a training session, providing guidelines or clear signage. You may also want your scheme to be monitored onsite. This may look like regular inspections or audits, contractual obligations, or requiring photographic evidence, data or regular reporting.

Contractors can provide extremely useful feedback to improve your scheme.

Questions that you should consider throughout the build phase in relation to product stewardship:

- Do contractors need information about the product stewardship scheme i.e. handling or storing the product?
- Is there incentive for contractors to follow the schemes?
- Are there usually offcuts of your product? Is there an opportunity to work with contractors to ensure that your product is used more effectively?
- Does your product get damaged often? Could you provide contractors with better handling instructions?
- Is there a standard that recovered product or material must meet in order for it to be reprocessed?
- What could cause contamination of the product or material on-site? Does the product or material need to be stored in a certain way i.e. kept dry? Is it feasible to provide sites with storage cover?
- How will correct use of the product stewardship scheme be monitored?

Case study: Eco.Decorator

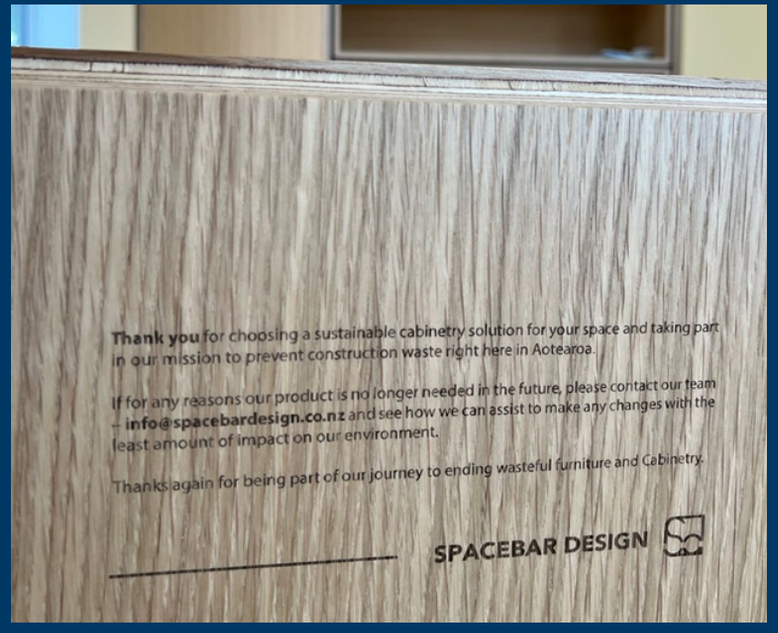
Painting contractors can choose to undergo assessment for the Resene Eco.Decorator programme, which includes assessments of principles in practice, sustainable work practices, waste management, project plans and project sign off processes. This includes ensuring that contractors use the Resene PaintWise scheme - a product stewardship scheme for paint and paint tins.

Only contractors that successfully meet these standards can promote themselves as an authentic Resene Eco.Decorator.

Eco.Decorators are audited each year to ensure they are following the sustainable work practices code.

Case study: Spacebar Design

“Yes, it’s important to design circular products”, says Anson Kong, Founder at Spacebar Design. “But it’s just as important to educate the user and make it easy for them to do the right thing”. At Spacebar Design, instructions and contact details are engraved on every component used in a project. This means that even if the project has changed hands, it is obvious what can and should happen with the components during refurbishments or renovations.



Case study: saveBOARD

saveBOARD provides a product stewardship programme for its own products. During construction the offcuts and waste from saveBOARD products are separated at source into a bulk bag and returned to the manufacturing facility in Hamilton to be shredded and reused in the manufacture of new boards. This enables the reuse of the boards as feed stock. End of life product can also be returned and remanufactured.

Returned products must be 100% saveBOARD, free of nails, screws and organic material, so not to damage the equipment. They must also be cut in strips of no more than 300mm by 1200mm and can be returned in bulk bags or on non-returnable pallets. saveBOARD does not charge for this. The arrangements and cost of transport to the manufacturing facility is covered by the sender.

The company believes all new buildings should have a ‘building passport’ so future generations know what the materials are and where they are located within the building. Then a building can be deconstructed, materials reused, refurbished, remanufactured or recycled appropriately, minimising waste.

07

Use phase

As with the build phase, the use phase is something you will not have direct control over. Instead, you will need to influence behaviours by ensuring your product is durable, easily repairable and traceable. It could be a good idea to create a user manual for your product or material.

Some areas of the construction sector are more prone to waste in the use phase than others. Commercial fitouts, kitchens, bathrooms and flooring are all more likely to be replaced and refurbished than other areas. If your product or material is used in these areas, you need to think about how your product stewardship scheme will work in the event of replacement or refurbishment.

Questions that you should consider throughout the use phase in relation to product stewardship:

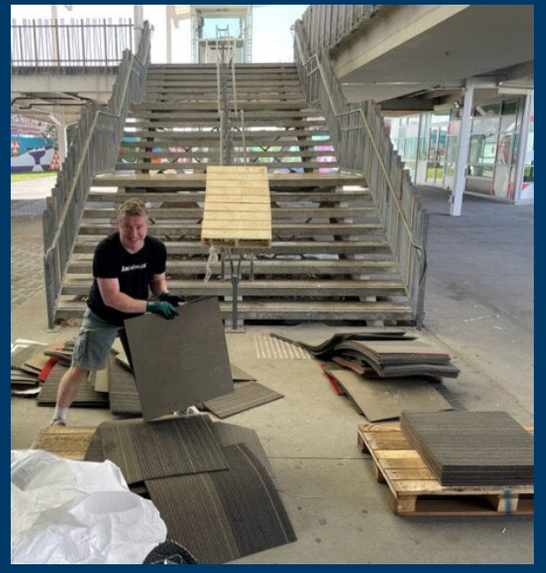
- How will contractors know what to do with my product or material?
- Is it likely that your product will need to be repaired at some stage? What instructions do your customers need to extend the product's life?
- If your product is replaced, how will the user know where it needs to go? Will the product or material have an identifiable logo or contact information?
- Would a guide outlining best practice care and maintenance be beneficial for property owners/managers?
- If the premise changes ownership, how will you communicate care, maintenance and product stewardship instructions to the new owner or leaseholder?

Case study: Jacobsen

In 2020, Jacobsen launched its product stewardship programme, Re.Form, in an effort to divert used flooring materials from landfills. Re.Form provides flooring contractors with an easy solution, facilitating the return of off-cut and uplifted materials in reuseable condition. Utilising waste hierarchy principles, Re.Form emphasises reuse before recycling, and with disposal or landfill as a last resort.

High-quality, reusable carpet tiles are donated to Habitat for Humanity, a non-profit organisation whose mission is helping Kiwis in need access warm, safe, and healthy homes. They then either sell the carpet tiles or utilise them in their projects.

Jacobsen flooring products are designed with their end of life in mind. Products that cannot be donated are reclaimed as high-quality, valuable materials that can be infinitely recycled within a closed-loop system to be remade into the same,



08

Deconstruction

Ideally, at the end of a building's life it will be deconstructed, allowing products and materials to be separated and reused, remanufactured or recycled as is appropriate. Deconstruction is an effective way to reduce construction and demolition waste and reduce greenhouse gas emissions at the end-of-life of a building [8]. Unfortunately, many buildings are still demolished, with valuable resources sent directly to landfill. This can often be a tricky space for product stewardship, as the building has often changed ownership at some stage since its construction.

Questions that you should consider when planning for deconstruction in relation to product stewardship:

- How will contractors know what to do with my product or material? Will the product or material have an identifiable logo or contact information?
- Is there a standard that recovered product or material must meet in order for it to be reprocessed?
- At what stage of the deconstruction process does a product or material need to be removed e.g. to avoid contamination?

"Deconstruction is most successful when there is an end of life plan for construction materials from the very beginning. If there is a plan in place for the materials, we can deliver faster turnaround times for deconstruction, get materials to end users efficiently and ensure that our diversion rates continue to rise."

– Jayda Iole-Pauga, TROW Group.

09

Reverse logistics

Reverse logistics is all about getting your resources from the construction site back to your facility or to a third-party processor through return or collection. This can be one of the hardest steps and you need to consider all options.

In general, construction products and materials are low value but high in volume and mass. This means that optimising your logistics can reduce costs significantly. However, most vehicles delivering products and materials to construction sites leave empty [9]. Some schemes recover product or materials as they deliver new product or material, whilst others collaborate with other organisations to 'share' unused transportation space. Some require contractors to drop the product or materials off at the reprocessing facility themselves, and others have drop off points at various locations across the country.

As you progress with your scheme, it is a good idea to establish feedback loops with construction and transportation companies to continuously improve the reverse logistics process.

Questions that you should consider for reverse logistics in relation to product stewardship:

- What volumes of product or material do you expect to be recovering, and how often? Will this need to be aggregated before transport is viable?
- Who is responsible for returning the product or material? Will you collect it from site or do the contractors need to take it to drop off points? If you are collecting it, who will pay for the collection of the product or material?
- Are there other organisations operating in the sector that you can collaborate with to share logistics or provide drop off points?
- Will you use a logistics provider to collect the product or material, or will you do this yourself?
- Are you creating collection hubs? Could the merchant be an aggregation point for recovered product or material?
- What is the feasible distance you can recover product or material from? In some instances, it will cost too much to recover a product due to distance. In these cases, are there any local reuse or recycling options available?
- What are the associated carbon emissions? Could you use electric vehicles? As with distribution, you may be able to 'share' unused truck space.
- Could you collect recovered product or material as you drop off new product or material? This would reduce the number of empty truck trips on the road and therefore greenhouse gas emissions.
- Does the product or material need to be sent overseas for processing? What are the export requirements and how will you ensure these are met?

Case study: Winstone Wallboards pallet return system

The system starts when a trade customer places an order for GIB products with a local merchant store. When confirming the order, Winstone Wallboards lets the merchant know how many pallets will be used for the delivery. The merchant includes a set charge, based on size, for each pallet when billing the trade customer. The charge is marked on the side of each pallet to make its value clear.

Orders are dispatched by Winstone Wallboards on pallets using its Delivered to Site (DTS) service which is available in Auckland, Hamilton, Tauranga, Wellington and Christchurch. Alternatively, orders are delivered to merchant stores for dispatch to the trade customer from there.

Generally, when using the DTS service, GIB products are unloaded from the pallets and are taken away by the GIB delivery truck. However, the trade customer can request a pick-up later if the pallets need to be left on site for some reason.

Trade customers also have the option of picking up their order from a store.

In both scenarios, the merchant issues a full credit for the pallet charge once they have been returned.

Empty pallets are stockpiled by the merchant and are picked up by an approved transport provider back to a GIB distribution facility.

10

Reuse/Remanufacture/Recycle

When looking at what will happen to your returned product or material, it is important to remember the ‘waste hierarchy’ as shown in Figure 2. Options at the top of the waste hierarchy should be explored before those further down. For example, reuse and repair options should be utilised before recycling.

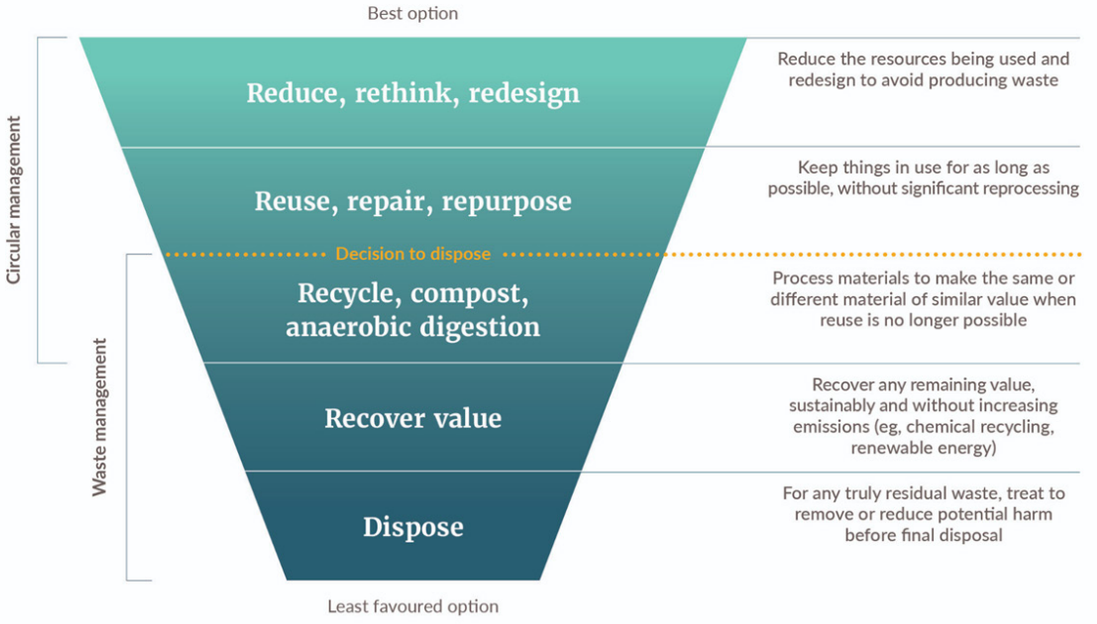


FIGURE 2: Waste hierarchy.
SOURCE: Ministry for the Environment, Te rautaki para/Waste strategy, 2023.

Case study: Marley NZ

Marley NZ is on a mission to reduce the amount of virgin materials - and therefore fossil fuels - used in its products. To do this, Marley NZ is closing the loop by recycling PVC and PE offcuts or taking back product at its end of life. In 2023, it recycled 702,000kg of plastic.

Because Marley uses the material to make new pipes with recycled content, it accepts any brand of PVC and HDPE piping. This will reduce New Zealand's overall plastic resin importation and the need for virgin materials.

Case study: Inzide Commercial

Carpet from Inzide Commercial is designed to last for 15 years - much longer than the industry average of 7 years. If it is removed before it reaches the end of its life and is in good condition, the carpet is reused instead of recycled. This carpet is sold at a discount. Ideally, once the carpet does reach its end of life, it would then be recycled it into new product.

Questions that you should consider for the reuse, remanufacture and/or recycling phase in relation to product stewardship:

- What will happen to your product or material? Will it be reused, remanufactured or recycled?
- Who will be reusing, remanufacturing or recycling your product? Is it you, a reuse partner or a third-party processor?
    - If it is reused, how will it be returned at the end of the reuse phase i.e. end of life?
- Is there a standard that recovered product or material must meet in order for it to be reused, remanufactured or recycled? If so, this will need to be shared in the build phase, use phase and deconstruction.
- Will I accept only my brand of product or material back? For example, Marley NZ takes back any PVC pipes, not just Marley branded pipes, for remanufacture.
- What volume of product or material do you have capacity to take back? There is no point in recovering more material than you can process.
- Will there be cost savings from the recovered product or material? Can you use recovered product or material to make new product or material that there is demand for?
- If you are not reprocessing the product or material yourself, are there any existing reuse, remanufacturing or recycling programmes that you could partner with?

"The construction sector has a complex value chain with a lot of different stakeholders. When material is ready to be reused or recycled, whether it's an offcut during install or at the product's end of life, it's critical to care for the material rather than treating it as waste. For a material to be reused or recycled, the manufacturer often requires minimal contamination as this can impact the ability to re-process the material and ultimately the value of the next generation of product. For this reason, I encourage people to engage with contractors on site to manage how they handle and store material on site. Just like recycling a milk bottle at home, we need to ensure our construction materials are clean to ensure they are transformed into a high-value product again."

- Aidan Hill, ex-Global Technical & Sustainability Manager, Autex.

What next?

The next step is to start! It is a good idea to begin with a smaller pilot or trial to test your scheme, and scale it up from there.

As you progress, you should:

- **set up a tracking and reporting system**
- **work to keep your customers and clients informed and engaged**
- **make sure it's working**
- **keep improving**
- **measure and communicate your success!**

Stories for your website, social media and other media are a great way to demonstrate the benefits of product stewardship, encourage wider adoption and maintain support for the effort. Make sure you stay informed about relevant regulations, standards and emerging technologies that may affect your scheme.

Useful resources:

ARUP. Circular Buildings Toolkit.

Commerce Commission New Zealand. (2019). The Commerce Act: Product Stewardship Schemes.

Circular Economy Directory.

Sustainable Business Network & Construction Sector Accord. (2024). Getting on the same page: A shared language for a circular construction sector.

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Thanks to...

The Construction Sector Accord, workshop attendees, Action Group participants and the countless industry stakeholders who contributed to this Guide.

Product Stewardship Action Group:

- Aidan Hill, ex-Autex
- Dwayne Carroll, Marley NZ
- Laura Gemmel, Eco Choice
- Debbie Summers, Summerset Group Holdings
- Julie Roberts, Mitre 10
- Anne Pezaro, Ministry for the Environment
- Karen Warman, Resene

Reverse Logistics Action Group:

- John Jamison, GIB
- John Tookey, Auckland University of Technology
- Kamal Dhawan, Auckland University of Technology
- Annette Day, Naylor Love
- Nigel Benton, Benton Ltd.
- Jono Kraenzlin, Sentinel Homes

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