



Building out waste across the construction value chain

OUTPUTS FROM THE CONSTRUCTION INDUSTRY
WORKSHOP ON WASTE

18 APRIL 2023



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01

Foreword

JENNIFER TAYLOR

TRANSFORMATION LEAD – ENVIRONMENT
CONSTRUCTION SECTOR ACCORD

The Construction Sector Accord (the Accord) and our partners the Sustainable Business Network (SBN) share a vision to build out waste in construction. In Aotearoa New Zealand, construction is estimated to be the largest contributor to landfill out of any sector. Waste is a visual representation of carbon and inefficiency in our sector. In a world of finite resources, carbon limits and climate change, our behaviour must move towards a circular model and every part of our supply chain has a role to play.

The circular economy provides a framework for achieving our ambitious goals. It enables us to rethink the entire life-cycle of construction materials and methods to design out waste and pollution, keep products and materials

in use, and incorporate the regeneration of natural systems. In Aotearoa New Zealand there is a huge opportunity to enhance this framework further by incorporating a Te Ao Māori world view. We need to transform our sector to recognise waste as a resource, rather than rubbish. As we reduce our waste, we also reduce our carbon emissions, material use and costs, along with increasing our material efficiency and productivity.

Our ideal is to build waste completely out of the construction sector. However we need to begin the journey with today's reality - to avoid and reduce waste where possible, followed by reuse, recycling and recovery.

The ideas developed at this workshop build upon the expertise of those already working to reduce waste in construction. You have provided valuable insights and innovative ideas to help construction build out waste - thank you.

JAMES GRIFFIN

GENERAL MANAGER – PROJECTS
SUSTAINABLE BUSINESS NETWORK

We are delighted to be working in partnership with the Accord and key industry stakeholders to help transition the construction industry in Aotearoa New Zealand towards a circular economy. The opportunities identified via the industry workshop, and shared in this report, are the starting point for the partnership. It is through the collective efforts of more than 50 key stakeholders brought together in one workshop, that we have embarked on a transformative journey.

It is important to take these opportunities forward into action and this is where the hard work begins. In an industry that has traditionally been associated with linear (take-make-waste) and resource-intensive practices, this report provides a strong foundation

for the coordinated and sustained action required for both workshop participants and the wider sector to play a leading and positive role in the transition to a low carbon circular economy.

The opportunities identified in this report serve as a call to action. We want to focus on resource efficiency, minimising waste generation and developing a closer relationship with our environment.

I extend my deepest gratitude to all the stakeholders who have contributed their time, expertise, and unwavering commitment to this work, and will continue to do so. Your dedication and collaboration have set the stage for transformative change, and I am confident that together we will help forge a circular future for the construction industry in Aotearoa New Zealand.

02

Summary

Building out waste across the construction value chain change workshop.

Strategic Opportunity

Eliminating construction waste throughout the commercial, residential and infrastructure value chains to accelerate the transition from a 'take-make-waste' linear economy to a circular one.

Purpose of workshop

To bring together a wide range of participants from across all areas of the construction value chain working to reduce waste, including local and central government.

To use the varied and valuable experience of the participants to identify and agree on key action areas and opportunities to reduce waste and maximise material efficiency.

This slide pack includes contextual information that was provided to participants as preparation for the workshop.

Workshop Outputs

- Vision – creation of a potential vision to achieve goals
- Assessment of barriers to be addressed
- Overview of existing initiatives
- Key opportunities identified
- Five priority action areas selected and developed

Next steps

Next steps for the five key action areas. SBN and the Accord to:

- Establish working groups for:
 - Integrated Design Process
 - Product Stewardship
 - Reverse Logistics
- Set up two enabling projects for:
 - Information Hub
 - Knowledge Sharing opportunities



03

Introduction

The Accord and the SBN are partnering to work with industry with an ultimate aim to eliminate construction material waste in Aotearoa New Zealand.

Our partnership is committed to accelerating the transition of the sector from a predominantly ‘take-make-waste’ linear economy to a circular one with a focus on eliminating the waste arising throughout the value chain. In reducing waste in construction, we will also reduce the sector’s emissions through the reduction of embodied carbon from the reduced use of materials.

This effort builds on existing work to address construction industry waste. Our aim is to enable the **building out of waste** at a systemic level across the sector, using the **circular economy principles** of designing out waste and keeping materials in high value use for as long as possible.

In April 2023, the Accord and the SBN hosted a full day workshop that brought together nearly 50 representatives from across all areas of the construction value chain, including local and central government.

This report provides an overview of the workshop outputs and the key opportunities identified in the workshop to reduce waste and maximise material usage.

The workshop broke into five groups to work through a structured process focusing on individual focus areas: design, demand, operations and business models, infrastructure and technology.

Each group agreed on opportunities within its focus area. These opportunities were then prioritised into the top five action areas by all workshop participants based on their impact and effort. Individual groups then considered each of the five action areas and how they could be progressed.

Circular Economy Framework

As a base for the workshop, we adopted a construction specific framework* to bring circular economy principles to life.

Build Nothing by refusing unnecessary new construction.

Build for Long Term Value by increasing building utilisation and designing for longevity, adaptability, disassembly and re-use of materials at the outset.

Build Efficiently by refusing unnecessary components and increasing material efficiency.

Build with the Right Materials by reducing the use of virgin material, use of carbon intensive materials and designing out hazardous/pollutant materials.

* From ARUP and Ellen MacArthur Foundation

04 Construction waste and emissions

The building and construction sector is an important contributor to the New Zealand economy, comprising nearly 7% of total GDP in the year to March 2022.^[1] The sector accounts for 10.7% of the workforce, employing over 300,000 people.^[2]

Construction Waste

It is estimated that waste generated from construction and demolition activities is the largest source of refuse to Class 1 landfills in New Zealand (up to 50% of all waste).^[3]

An Auckland study in 2017 found that construction waste by weight is made up of timber (20%), plasterboard (13%), packaging (5%), metal (5%) and other (45%).^[4] An average new house build produces 4.5 tonnes of waste, with materials estimated to be worth more than \$31,000 if they were avoided rather than sent to landfill.^[5]

New Zealand has one of the lowest landfill tax rates in the OECD.^[6] It also has one of the highest waste to landfill rates.^[7] Recent studies have shown that the Netherlands, Germany and Denmark are diverting over 85% of waste materials from landfill.^[8]

We know that New Zealand does not yet achieve these levels of diversion, and that reducing waste from construction and demolition will have a major impact on the financial and environmental performance of the sector.

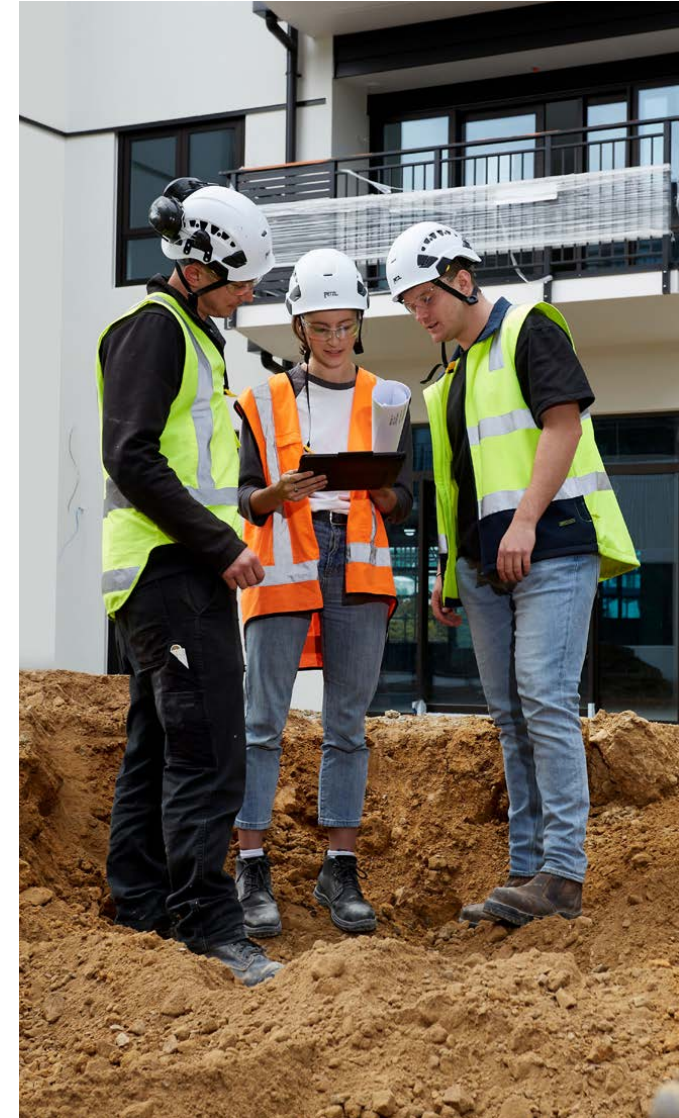
Carbon emissions

Construction materials contribute to a significant amount of embodied carbon emissions. A reduction in the waste of construction materials will therefore significantly reduce the sector's overall emissions.

Ministry for the Environment figures show that in 2018, nearly 9.4% of domestic emissions were building-related.^[9] These emissions are largely accounted for in the energy and industry, transport and waste sectors and include:

- Emissions from the energy and other resources used when operating a building.
- The carbon emitted by the manufacturing, transportation, use, and disposal of the materials and products in a building across its life – including construction, maintenance and deconstruction.

Counting only emissions directly produced from operating buildings (predominantly fossil fuels used for space heating and cooling), building and construction produced 3.6% of total domestic emissions for that year (excluding biogenic methane).^[10]



05

Key areas for intervention to transition to a circular economy

To accelerate the transition from a linear to a circular economy, SBN has identified **six key areas** for intervention.

1. Design

Circular outcomes should be designed in at the outset of projects to enable longevity, adaptability and the deconstruction and reuse of materials.

2. Demand

Customers need to demand circular solutions in their procurement processes. Ideally these need to match the linear economy alternatives in cost, desirability and functionality.

3. Business models and operations

Alternative business models need to be scaled up. These include providing products as services (e.g. where the lighting supplier retains ownership of the light fixtures and charges for the light used by the customer), product take-back schemes at the end of first life, resource sorting and collection

processes, an increase in off-site manufacturing, and the use of products with recycled content.

4. Infrastructure

As well as recycling facilities, this includes increased availability of, and access to, second-hand markets for materials. This includes reverse logistics to be able to redistribute materials to where they can be processed or reused at the end of life.

5. Technology

We need to maximise the use of technology for circular outcomes. This include ‘material passports’ where materials can be tracked throughout their life to enable greater reuse, 3D printing of structures, digital modelling, and artificial intelligence (AI) to predict maintenance requirements ahead of failures.

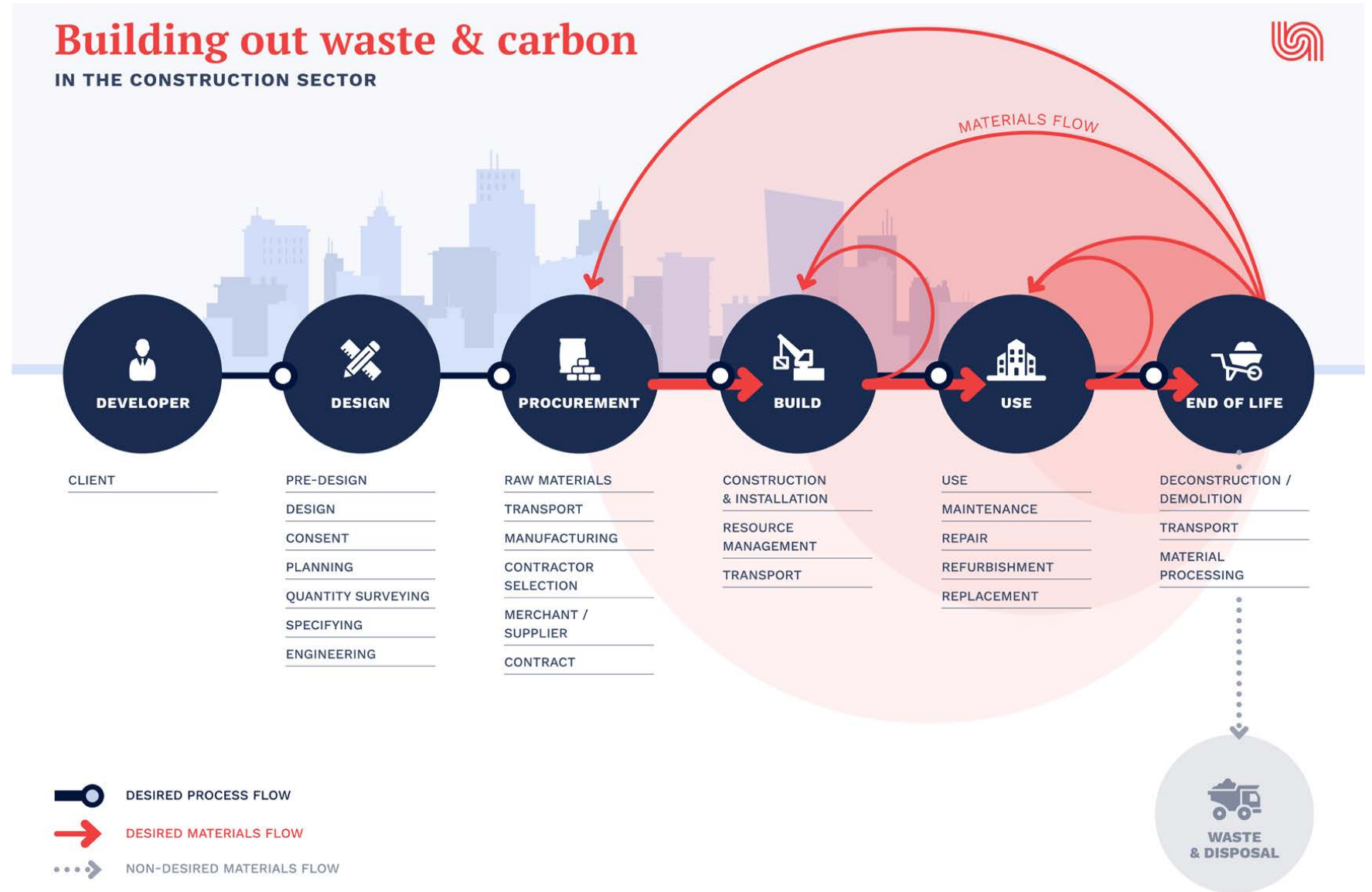
6. Legislation*

Appropriate incentives and disincentives are required at a legislative level to drive mainstream change.

*Please note that legislation was not the focus of this specific workshop as it was designed to stimulate industry-led action.

06 The construction value chain

The desired materials flow in the construction sector where materials are kept in use at their highest value.



07

Moving forward – a vision for the future

The workshop participants developed a vision for how a circular construction sector might look.

From the design stage and throughout the building process, all our material choices respect the inherent value of Earth's resources. We utilise only what is necessary, we re-use existing materials and we produce no waste... at all.

In our **ideal future**, industry collaboration and innovation has enabled a radical rethink of the traditional construction value chain. In essence, the ability to repurpose or reuse materials is considered at the design stage.

Owners, developers, designers and builders consider a project's end-of-life and material use at its concept, then work through how to build, procure and design to maximise a material's life-cycle and avoid waste.

There are better choices available that are easy to navigate. Existing and recycled materials are available, allowable, accessible, and preferred over virgin sources. Any excess or damaged materials have pre-designated usage streams which are easily accessible and can be engaged with digitally. These resource streams are developed and maintained by suppliers acting as responsible stewards of their products throughout the lifecycle. Suppliers

provide options for pre-cut, or pre-fabricated components to prevent excess materials entering the supply chain.

Materials are tracked from usage to usage by their material passport.

The waste impact assessment processes and systems, such as Site Waste Minimisation Plans and BRANZ appraisals that were successfully introduced years earlier, are now obsolete as waste is no longer produced.

Designing out of waste, and circular usage, is as pervasive across our industry as health and safety. Circular best practice is taught as a core part of the learning curriculum across all disciplines. Waste elimination and maximising the value of materials is a regular topic, from on-site team talks to industry conferences.

Ultimately, we see a world where problematic materials and packaging

are no longer considered, where each material's use is maximised, where all materials are circular and there is no waste skip on site.

We are committed to making the changes to make this ideal future our reality.

08 Barriers that need to be addressed

Workshop participants identified several barriers that need to be addressed if we are to achieve the sector vision for the future.

These barriers include:

Waste is an afterthought and not considered as a key parameter at early project stages.

There is a **lack of communication and collaboration** across the value chain.

Procurement practices are conservative, resulting in “over ordering” in both quantity and size.

Demand for bespoke outcomes limits the use of standard, repeatable and modular or off-site designs.

Lack of information limits industry understanding of the scale and harm of landfill waste, and the alternatives to landfill.

Lack of formal training and expertise to advance circular practices to minimise waste.

Lack of accurate and accessible data to benchmark progress and measure success.

Uncertainty of legislative changes fosters an environment of inaction.

There is pressure on the sector to build fast and **not enough time or resources** to focus on waste.

There is no standardised methodology across the sector to ensure that everyone is speaking the same language.

Several of the barriers identified are the focus of work streams already in motion across the industry. These are presented in section 09.

09

Areas already in motion

Examples of initiatives currently underway.

Waste Minimisation Plans

In December 2022, the Government proposed amendments to the Building Act that will include mandatory Waste Minimisation Plans (WMPs) for certain building or demolition work.^[11] The legislation is not yet in place, with changes to be phased in from 2025 onwards. A number of local authorities already have WMPs in place and are working with the construction sector to reduce waste to landfill in their areas.

Waste Levy

The Ministry for the Environment is expanding the waste disposal levy rate to include all landfills that take construction and demolition waste. The levy rate will also be increased.

Designing Out Waste

Kāinga Ora has conducted a deep review of waste produced across its key activities. It has identified major barriers and practical opportunities for using the design stage to drive substantial

waste reductions via education, changes to procurement decisions, and standardised designs. Rollout of findings across Kāinga Ora and industry is underway.

Offsite Manufacturing, Pre-Cut and Standardised Components

Manufacturers are active across a number of areas to reduce site waste. A number of manufacturers offer factory built components which can reduce waste to site significantly.

Rating Tool Incentives

Rating tools provide credits specifically for reduce, reuse and recycle efforts of designers, developers and builders, rewarding diversion of waste disposed into landfill.

Contractor Behaviour

Early-adopter waste minimising contractors have reported diversion from landfill of up to 91% of material resource through on-site sorting.^[12]

Local Authorities

A number of local authorities have construction waste information hubs e.g. Auckland Council's Make The Most of Waste and Building Out Waste portals.

Deconstruction

Many commercial and not-for-profit organisations also provide more sustainable options for construction and demolition waste.

Digital Reuse Platforms

There are currently apps available to assist construction companies to utilise surplus materials, maximise their economic value and make greater use of equipment capacity.

10 Specific opportunities

There were over 150 opportunities identified during the working sessions.

The following pages show the prioritised five key action areas as voted by workshop participants.

Next steps for the five key action areas. SBN and the Accord to:

- Establish working groups for:
 - Integrated Design Process
 - Product Stewardship
 - Reverse Logistics
- Set up two enabling projects for:
 - Information Hub
 - Knowledge Sharing opportunities

Other actions:

- Invite all workshop attendees to contribute via consultation on work as it is undertaken.
- Work with industry to identify other initiatives already underway in the sector to advance the move to a circular economy and reduce waste.
- SBN and the Accord to review remaining opportunities identified by the workshop and consider next steps.



ACTION AREA 1

Integrated Design Process

An interdisciplinary design approach with an emphasis on collaboration. For construction, this means that projects are designed through a collaborative process that involves stakeholders from across the value chain from the very beginning.

What

Integrated Design Process (IDP) considers the architecture, engineering and building inputs of construction as a whole system. IDP involves multiple cross-discipline stakeholders and seeks to gather more input and discussion at the planning and design phases, with decisions made jointly by participants. The IDP system is iterative, and considers the connections between the various disciplines.

Why

Joint decision-making creates a more robust and considered initial design, with better communication between disciplines leading to improved environmental outcomes. The process can identify points of improvement and build them into construction design with regard to: functionality, operation, material selection, material efficiency, waste creation, end-of-life deconstruction and reuse, amongst others.

What would success look like?

This is to be scoped further by the working group due to the breadth of this topic.

Create widespread understanding and use of IDP to optimise the whole of life value of a building and integrate future use at the start of design.

Ideas for Consideration

Selected examples – to be scoped further by working group

- Work with design and construction industry associations and educational institutions to increase awareness and knowledge of IDP.
- Create a design workshop framework for using IDP in a construction project.
- Design awareness/training to maximise material efficiencies, selection of most appropriate materials (e.g. through guidance).

- Find an exemplar project and create a case study to illustrate the process and benefits.
- Do a stocktake of existing successful IDPs and find IDP experts in Aotearoa New Zealand.
- Engage widely with the construction sector, including: developers, clients, project managers, professional organisations (architects, engineers, quantity surveyors, specifiers, ecologists), contractors, manufacturers, suppliers, rating organisations, as well as building owners, tenants, facilities management, building operations and Māori organisations.

ACTION AREA 2

Product Stewardship

Increasing the availability and use of supplier and manufacturer led initiatives enabling materials and products to be returned at the end of life for reuse or recycling.

What

Product stewardship aims to reduce a product's environmental impact by 'stewarding' it throughout its life-cycle, 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.

Why

Without a product stewardship scheme in place, responsibility for the environmental impacts, including waste, created by a product's delivery to site, installation, use and at the end of life are passed down the value chain to the site team. Often, stakeholders at the end of the value chain do not have options to effectively deal with these impacts. 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.

What would success look like?

A comprehensive matrix has identified products with product stewardship schemes in place, by product group. This matrix is widely used to influence procurement choices. New product stewardship schemes become available where there are currently gaps. Suppliers will design product stewardship into their construction products at the outset.

Ideas for Consideration

- Start with identifying current product stewardship schemes available in the sector.
- Educate the industry to ensure preference for manufacturers with product stewardship schemes.
- Enable and support suppliers to establish product stewardship schemes.
- Look for economies of scale and synergies across the various product stewardship schemes.

ACTION AREA 3

Reverse Logistics

An integrated transport system for the return of excess, damaged and end-of-life construction materials.

What

A system that enables excess, damaged and end-of-life construction materials to be economically and efficiently collected and transported back to a suitable reprocessing facility for reuse, repurposing or recycling.

Why

Onsite waste can be created during the build, maintenance or at end-of-life. These materials could often be reused, repurposed or recycled. However, there are limited collection and transport options to move these secondary materials efficiently, which often results in these materials going landfill.

What would success look like?

There is a widely used logistics system that provides efficient and cost-effective transport of secondary materials to reprocessors, resellers and recyclers. This service reaches all regions and allows for efficient smaller collections.

Ideas for Consideration

- Establish a pilot to aggregate current return systems.
- Focus on specific material collections.
- Develop collection methodology.
- Accurately measure materials being sent for reprocessing (secondary materials and materials at their end-of-life).

ACTION AREA 4

Information Hub

A “one stop shop” digital information platform for designing out waste and recovering resources that covers the full circular building supply chain.

What

A centralised information site about all aspects of construction waste. The hub will cover a broad range of materials, products, services and approaches, which will help to build out waste across all types of construction projects. The information supports key decisions and actions across design, procurement, construction, use and end-of-life.

Why

The existing information about construction waste and how to deal with it is scarce and held in a variety of places. There is no one place to find and access information about how to reduce or eliminate construction waste. Information on the environmental impact of construction materials, designing out waste, and what can be recycled (and how) in various regions is almost non-existent.

What would success look like?

There is a single place that holds the information commonly used at all critical decision points of the New Zealand construction life-cycle to maximise waste reduction. This information hub would be user-friendly and an everyday resource for all parts of the construction sector.

Ideas for Consideration

- Review existing information platforms e.g. Civil Share, Mutu, SBN, Circlr.
- Understand the work underway on material passports in Aotearoa New Zealand.
- Develop an information gap analysis across the value chain.
- Do a comparative exercise of what other countries and industries are doing in this space.

- Explore funding options (e.g. Waste Levy).
- Speak to industry stakeholders early on (including local and central government, BRANZ, manufacturers, suppliers, construction associations and businesses).

ACTION AREA 5

Learning and Knowledge Sharing

A comprehensive learning framework covering all aspects of building out waste and material use maximisation.

What

Accessible waste knowledge relevant to each stage of construction, from concept discussion to completion and end-of-life. These educational resources would enable waste reduction from the smallest residential build to the largest infrastructure projects.

Why

At present there is a lack of knowledge and training around how to design out waste and what to do with waste onsite. Waste reduction is not routinely taught in construction related courses, and there is no forum in which to share industry learnings. Educational resources would help the sector develop standardised best practice processes of designing out, reducing, managing, and diverting waste in Aotearoa New Zealand.

What would success look like?

Creation of a widely-used open-source learning platform that represents best

practice across the industry, covering every stage of the construction life-cycle and associated waste creation points. Every new construction hire has a waste reduction component to their role. Waste reduction knowledge is embedded into the offerings of educators and industry associations.

Ideas for Consideration

- Set up an Environmental Managers' monthly online call for interested people in construction to discuss good work and share learnings. Send these out following the meetings and record the information in the "Info Hub".
- Pick and engage a key construction sub-sector, research waste-related information, develop resources and rollout training.
- Collaborate with industry to collect existing knowledge and develop information.
- Work with educational institutions to include waste in construction

qualifications.

- Develop Toolbox waste talks.
- Explore existing waste management educational resources.
- Engage and collaborate with construction sector stakeholders, including industry learning providers.
- Explore funding options.

11 Glossary

Business model

The underlying structure of how a company creates, delivers and captures value. In its most simplistic form, it is how a business makes money.

Carbon footprint

Total emissions of greenhouse gases (in carbon equivalent) for an activity or organisation over a given period of time.

Carbon intensive materials

Materials that have high levels of embodied carbon.

Circular economy

An economy where waste and pollution are designed out, products and materials are kept in use and natural systems are regenerated.

Collective impact

Cross-sector coordination to bring about large-scale change.

Deconstruction

A method of dismantling buildings to ensure that materials can be reused, repurposed or recycled.

Embodied carbon

The carbon dioxide (CO₂) emissions associated with materials and

construction processes throughout the whole lifecycle of a building or infrastructure. It includes any CO₂ created during the manufacturing of building materials, the transport of those materials and the construction practices used.

Greenhouse gases

Gases that trap heat in the atmosphere including carbon dioxide, methane, nitrous oxide and water vapour.

Integrated design process (IDP)

An interdisciplinary design approach with an emphasis on collaboration.

Linear economy

An economy in which finite resources are extracted to make products that are used - generally not to their full potential - and then thrown away.

Material passports

Sets of data that list all the materials that are included in a product or construction.

Prefab or prefabricated

Parts that have been manufactured offsite.

Product stewardship

A concept where businesses take responsibility for the environmental impact of the products they make, sell or buy. This involves all stages of the product's life cycle, including end-of-life management.

Secondary materials

Materials that are not the primary products from manufacturing and other industrial sectors. These materials can include excess and damaged materials from production processes and materials that have been recovered at the end of their useful life.

Value chain

The progression of activities needed to create a product or service across its full lifecycle.

Waste impact assessment

An assessment undertaken to define the nature and scale of potential environmental impacts of a project in terms of waste.

Zero waste

A target of sending no waste for disposal via landfill or burning.

12 References

[1] Ministry of Business, Innovation and Employment. (2022). [Building and Construction Sector Trends](#). [Annual Report].

[2] StatsNZ. (2023). [Labour market statistics: March 2023 quarter](#).

[3] Level. (n.d.). [Minimising Waste](#).

[4] BRANZ. (2022). [Level: Construction and Demolition Produce Large Amounts of Waste](#).

[5] Our Auckland. (2020). [Building the path to zero waste](#).

[6] Ministry for the Environment. (2019). [Reducing waste: a more effective landfill levy](#) [Consultation document].

[7] *ibid.*

[8] *ibid.*

[9] Ministry for the Environment. (2022). [Aotearoa New Zealand's First Emissions Reduction Plan: building and construction](#).

[10] *ibid.*

[11] Woods, M. (2022). [Building Act changes put the environment at the heart of how we build](#).

[11] The Construction Sector Accord. (2023). [Case study: Naylor Love - Diverting construction waste](#).

Additional sources:

Seadon, J., Aladwan, A. & Golding, K. (2022). [Mandatory Site Waste Management Plans](#). AUT.

thinkstep-anz. (2019). [Under Construction: Hidden emissions and untapped potential of buildings for New Zealand's 2050 Zero Carbon Goal](#). New Zealand Green Building Council.

Luangcharoenrat, C., Intrachotoo, S., Peansupap, V. & Sutthinarakorn, W. (2019). [Factors Influencing Construction Waste Generation in Building Construction: Thailand's Perspective](#). Sustainability, 11(13):3638.

Rohani, M., Huang, T. Hoffman, L., Roberts, M. & Ribeiro, B. (2019). [Cost Benefit Analysis of Construction and Demolition Waste Diversion from Landfill: A case study based on HLC Ltd development in Auckland](#). [Technical Report] RIMU.

Ministry of Business, Innovation and Employment. [Building for Climate Change programme](#).

13

Workshop Attendees

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13

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Building out waste across the construction value chain

OUTPUTS FROM THE CONSTRUCTION INDUSTRY
WORKSHOP ON WASTE

18 APRIL 2023

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