Department of Climate Change, Energy,
the Environment and Water

# Understanding recycled content in procurement


A NSW Government guide for purchasing materials and products with recycled content

July 2026

NSW GOVERNMENT

# Acknowledgment of Country

Department of Climate Change, Energy, the Environment and Water acknowledges the traditional custodians of the land and pays respect to Elders past, present and future.

We recognise Australian Aboriginal and Torres Strait Islander peoples' unique cultural and spiritual relationships to place and their rich contribution to society.

Artist and designer Nikita Ridgeway from Aboriginal design agency – Boss Lady Creative Designs, created the People and Community symbol.

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**Understanding recycled content in procurement**

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# Introduction

Government procurement plays an essential role in accelerating the uptake of recycled materials across NSW. Prioritising products with recycled content is an effective way for agencies to reduce their environmental impacts, stimulate local industries, and demonstrate alignment with NSW Government sustainability commitments.

Nearly half of global emissions come from the production, consumption and disposal of products and materials. By transitioning to a circular economy, Australia could reduce carbon emissions by 165 million tonnes a year by 2040 (PricewaterhouseCoopers 2021). Increasing the demand for products that contain recycled content is a direct and practical lever available to help government achieve this shift.

By choosing products and materials that incorporate recycled content, procurers can directly support local resource recovery industries and reduce the quantity of valuable materials going to landfill. This drives positive outcomes for sustainability, innovation, and economic resilience.

Preferencing products that contain recycled content can improve value for money outcomes, which must be considered in your purchasing decisions. It can also support NSW Government environmental objectives and policy commitments. This includes compliance with Action 22 of the Net Zero Government Operations Policy.

This guide supports NSW Government agencies to consider and preference recycled content in procurement decisions.

By transitioning to a circular economy, Australia could reduce carbon emissions by **165 million tonnes a year** by 2040.

# About this guide

## Why we created this guide

The NSW Government spends around $40 billion every year on goods, services and infrastructure (NSW Government n.d.). As a major purchaser, we are in a unique position to influence and encourage the transition to a more sustainable NSW economy.

This guide is intended for NSW Government procurement professionals who buy goods, services, and construction materials. It can help to define what recycled content is, why it matters, and how to confidently integrate it into purchasing decisions. It complements the NSW Guide to environmentally sustainable procurement by offering practical guidance, specifically on recycled materials.

This guide is applicable to any procurement, including:

- construction materials such as concrete
- furniture such as workstations, tables, chairs, soft furnishings and storage furniture
- interior fit-out products such as acoustic panels and floor finishes
- information and communication technology (ICT) hardware such as computers and accessories
- medical equipment and consumables
- office supplies such as paper, pens, notebooks and ink and toner cartridges
- infrastructure and road maintenance materials such as asphalt and aggregate
- textiles such as uniforms and branded clothing, sheets and towels.

# Outcomes from using the guide

Use this guide as a practical resource when procuring products and materials containing recycled content to help:

- understand the benefits of sourcing products containing recycled content
- identify different types of recycled materials and product categories
- recognise procurement opportunities for products and materials containing recycled content
- incorporate recycled content requirements into the Plan, Source and Manage stages of your procurement.

The guide is structured to support quick navigation, with more detailed information provided in the appendixes.

**Figure 1:** Green Square Library, awarded a 6 Star Green Star rating by the Green Building Council of Australia. The project incorporated recycled content in its construction and material selection. Photo: Jessie Lindsay/DCCEEW

# Recycled content and why it matters

## What is recycled content?

Recycled content is the proportion, by mass, of recycled material in a product or packaging. In other words, it shows how much of a product is made from recycled materials instead of brand new (virgin) raw materials.

A recycled material is classified as one that has been recovered from the waste stream and reprocessed into a new product or material. The direct reuse of a material without reprocessing (e.g. movement of excavated soil from one part of a site to another) is not considered recycled material under this definition.

Recycled materials can comprise both pre-consumer and post-consumer waste materials.

This guide focuses on recycled materials as inputs into the production of a product or material. It does not address whether a product is recyclable at the end of its life. Recyclability refers to a product's ability to be collected, separated and reprocessed for future use.

## Why does recycled content matter?

Many products can and already do incorporate recycled content. This includes consumer and commercial goods, construction materials, industrial equipment and packaging.

Using products and materials containing recycled content offers a range of benefits. By rethinking what materials we procure, we can:

## Improve economic and industry outcomes

### Value resources and divert material from landfill

In NSW, landfill capacity is a key challenge that will continue to intensify over coming years. In Greater Sydney, many landfills are projected to reach capacity by 2030 unless waste volumes are significantly reduced (NSW Environment Protection Authority 2024).

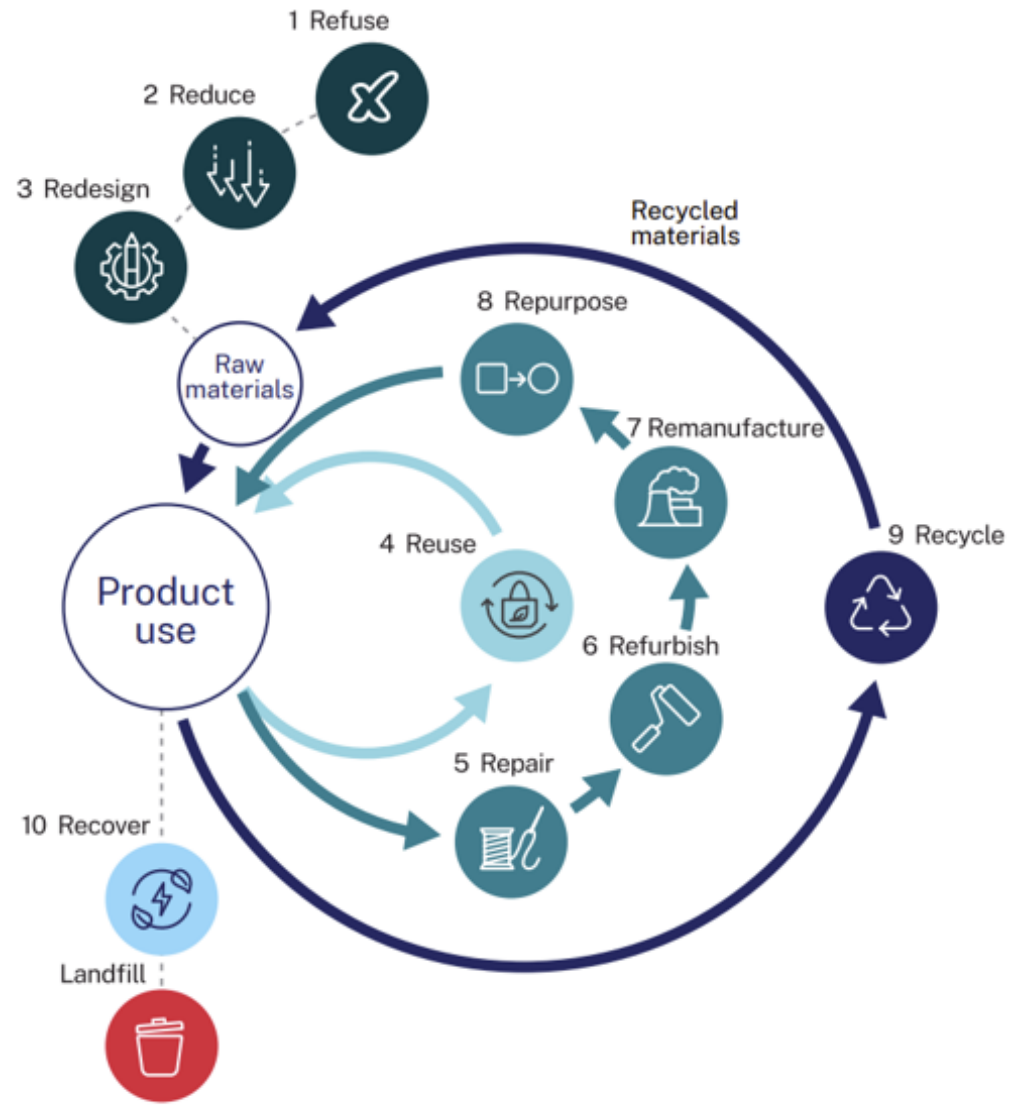
There is a need to rethink the way materials are consumed and disposed of to address this issue.

We currently operate a primarily linear economy, which follows a 'take–make–dispose' model of resource use. Raw materials are extracted, manufactured into products, used for a relatively short time and then discarded as waste (Figure 2). Products are often designed without consideration for how they could be reused, repaired, renewed or recycled.


**Figure 2:** Linear economy model showing the typical flow of materials to consumption and disposal

By contrast, a circular economy values resources by keeping products and materials in use for as long as possible, and out of landfill. It prioritises reuse, repair, refurbishment and recycling in product design and business processes.

A commonly used framework is the '10 R-strategies of circularity' (Figure 3), which helps users to prioritise the most impactful approaches. Higher-order options in a circular economy eliminate the need for a product in the first place ('Refuse', 'Reduce', 'Redesign').




1. **Refuse**
Prevent the use of raw materials

2. **Reduce**
Decrease the use of raw materials

3. **Redesign**
Design the product for greater circularity

4. **Reuse**
Secondary use by different owner for same purpose

5. **Repair**
Maintain and repair products for longer use

6. **Refurbish**
Restore and improve products for longer use

7. **Remanufacture**
Make new products from second hand parts/products

8. **Repurpose**
Reuse the product or product parts for a different purpose

9. **Recycle**
Salvage material streams with highest possible value for manufacturing

10. **Recover**
Process waste to recover energy

Figure 3: The 10 Rs of circularity. Source: Building a circular Future: Ten takeaways for Global Changemakers

Although ‘Recycle’ appears lower on the hierarchy, it remains a critical strategy for reducing demand for virgin materials and associated embodied carbon, particularly where higher-order options are not yet feasible. It also supports the recovery of valuable resources and helps keep materials out of landfill.

**Stimulate NSW markets and innovation**

Purchase of products and materials containing recycled material helps create more stable demand for recycled materials, improving the economic viability of local recycling industries. Stable demand from government encourages businesses to invest in circular product development, remanufacturing and other circular service models. It can encourage innovation, improve product performance over time, and help grow new markets across NSW.

Locally sourced recycled materials can reduce exposure to volatile global commodity markets and support more resilient domestic supply chains. Keeping materials circulating within local economies reduces reliance on imported raw materials and supports supply resilience.

Recycling and re-manufacturing activities also create more jobs per tonne of material than landfill disposal. For every 10,000 tonnes of material, recycling generates 3 times as many jobs as landfill disposal (Access Economics 2009).

## Improve environmental sustainability outcomes

**Protect nature by reducing virgin resource extraction**

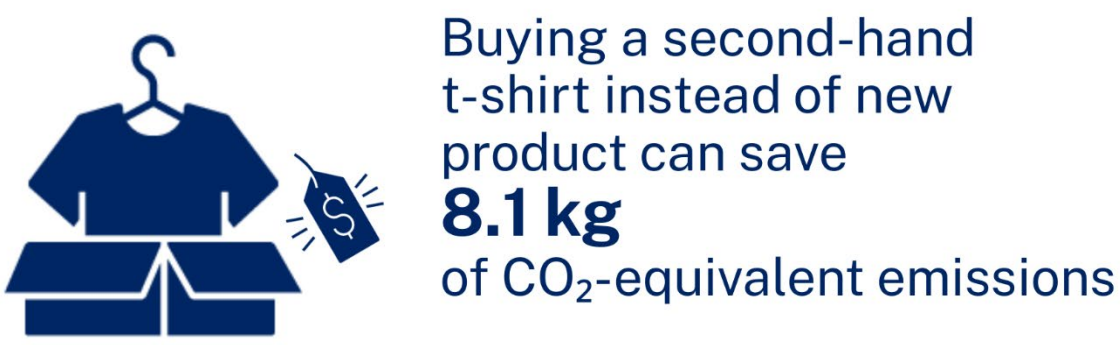
Substituting virgin inputs with recycled materials reduces the demand for raw material extraction and the associated environmental impacts. These impacts commonly include land clearing, deforestation, biodiversity loss, soil disturbance and contamination of waterways.

Extracting and processing virgin raw materials often depends on fossil fuels, water and chemicals. Using recycled materials instead reduces the need for these resource-intensive processes and helps lower the associated environmental impacts.

**Reduce greenhouse gas emissions**

Using products and materials containing recycled content can reduce greenhouse gas emissions by avoiding emission-intensive stages of the product life cycle, such as raw material extraction, crushing, transportation and initial processing. Products containing recycled content can require less energy to produce than those made from virgin materials which can lower embodied carbon and support emissions reduction objectives.

As an example, recycled textiles require significantly less water, energy, and raw materials than producing new fabrics. This translates to emissions reductions too. Buying one t-shirt second-hand rather than new can save 8.1kg of CO2-equivalent emissions (Reuse Calculator – Charitable Reuse Australia 2026).



## Align with government priorities

### Compliance with the Net Zero Government Operations Policy

The Net Zero Government Operations (NZGO) Policy sets mandatory requirements to reduce emissions from NSW Government operations and support NSW's legislated target of net zero by 2050.

Action 22 of the NZGO Policy requires government agencies to preference recycled content in goods and services, and report on recycled content procurement. The *NSW Recycled content reporting guide* outlines key requirements and provides tools to help agencies comply with these requirements.

This guide also supports the Action 22 requirements, by providing guidance on how to implement recycled content decision making through the procurement process.

### Improve value for money for government spending

In the NSW Procurement Policy Framework, value for money is a primary objective and must underpin all purchasing decisions. Value for money must be delivered on a whole-of-life basis, and consider both financial and non-financial factors, including sustainability.

The Framework embeds value for money across the 3 procurement stages (Plan, Source and Manage). Outcomes such as sustainability, economic development and social benefit forms part of value for money decision-making.

In addition to the economic and environmental benefits outlined above, products and materials containing recycled content can also offer savings when lifecycle costs are considered. This can be due to efficiencies in production and reduced disposal costs.

### Support broader government objectives

There are a range of policies, strategies and frameworks that facilitate the transition to a circular economy and support our Net Zero goals. Procuring products and materials containing recycled content can support these outcomes.

Full details on all policies are provided in Appendix B: Recycled content policies, strategies and frameworks.

# Procurement opportunities for recycled content

### How to use this section

The examples in this section are not mandatory or exhaustive. They are intended to illustrate where procurement can play an active role in supporting markets for products and materials containing recycled content in NSW. This guidance should be applied flexibly and proportionately, consistent with procurement policy requirements and value for money outcomes.

## What to select

Recycled material used in Australia is sourced from both domestic waste streams and imported feedstock.

Opportunities to procure products and materials containing recycled content exist across a wide range of material streams and product categories. Some recycled material markets in NSW are well established, while others are emerging or transitioning and benefit from stronger and more consistent demand signals.

This section highlights key opportunities where procurement can support the use of recycled material, particularly in areas where there are:

- forecast growth of waste streams
- low recycling rates
- restrictions over exporting certain waste materials
- opportunities to increase local recycling and manufacturing capacity.

The examples outlined below are intended to help in the identification of practical entry points for increasing the use of products and materials containing recycled content and are not intended to be prescriptive. Decisions should continue to be based on value for money, performance requirements, risk and market readiness.

## Benefits of locally sourced products and materials

Procuring recycled content sourced within NSW or Australia supports domestic recycling markets, reduces transport-related emissions, and increases the value of recovered materials. Consider procuring from NSW based enterprises where possible.

Examples of recycled content that can be sourced locally include:

- crushed bricks, masonry and tiles
- crushed glass and glass wool
- reclaimed asphalt pavement
- recycled concrete aggregate
- steel.

Some materials and products contain imported recycled content. Examples include aluminium products, architectural glazing and ICT products. If a product is sourced from overseas, ask the supplier where the recycled content in that product comes from.

### Building demand while also reducing embodied carbon

Plastic products manufactured in Australia containing Australian recycled plastic can have significantly lower embodied carbon than imported virgin plastics. However, Australia's current plastic recycling capacity is operating at only around 53% utilisation. This is below commercially viable levels. Without stronger demand for locally recycled content, Australia risks facility closures, job losses, stranded infrastructure investment and reduced sovereign recycling capability. This highlights the important role procurement can play in supporting local recycling markets and circular economy outcomes (Rennie Advisory 2025).

# Key opportunities for recycled content

The material streams outlined below represent key opportunities for procurement of products containing recycled content, where NSW Government purchasing can help stimulate demand, support emerging supply chains and strengthen recycling outcomes:

- coal combustion products
- food and garden organics
- materials derived from clean energy waste
- materials derived from e-waste
- plastics
- paper and cardboard
- textiles
- tyres.

NSW Government agencies are encouraged to explore the use of products and materials that include these recycled streams, in their purchasing decisions.

## Coal combustion products

Coal combustion products are the materials that remain after coal is burned in coal-fired power stations. This includes fly ash and bottom ash. Where this has been stored it is referred to as pond ash.

**Procurement opportunities**

- Fly ash as a cement replacement in concrete applications
- Fly ash as an addition in plasterboard
- Fly ash and bottom as a soil amendment, pipe bedding material, filling material in earthworks and pavement construction, as permitted by the NSW EPA
- Bottom ash and pond ash are being trialled as a cement replacement in low-risk concrete applications

**Co-benefits**

- Reduces NSW stockpiles of fly ash and bottom ash, currently estimated at over 200 million tonnes (NSW Environment Protection Authority n.d.)
- Substituting fly ash for cement can reduce the embodied carbon of concrete by up to 40% (Arup 2024)
- Substituting fly ash for cement can improve thermal control of concrete during curing and durability performance of concrete in aggressive conditions

### Fly ash as cement replacement

Major and select independent Australian concrete suppliers incorporate up to 30% fly ash as a supplementary cement replacement into their low carbon concrete mixes. As a waste material requiring minimal additional processing, fly ash has a low carbon footprint compared to most cementitious materials.

In addition to sustainability outcomes, fly ash provides durability performance benefits. These include reduced heat emissions during concrete cure and increased resistance to acid sulphate soils and alkali-silica reaction.

**Figure 4: Industrial cement plant** iStock

## Food and garden organics

Food and garden organics can include fruit and vegetables, carbohydrates, meat, dairy products, green waste and other natural garden materials.

**Procurement opportunities**

- Compost or mulch for urban renewal projects, infrastructure, landscaping, highways/roads, parks and gardens

**Co-benefits**

- Diverts organic waste from landfill, reducing associated methane emissions
- Improves soil structure, moisture retention and nutrient cycling through the application of compost and mulch

### Compost for stabilisation and erosion control

Compost has been used to facilitate stabilisation and revegetation of slopes. At Lake Macquarie a tailored mix of native plant seeds blended with compost was used to facilitate regrowth along a roadside. Minimal maintenance was required. The compost blankets also have high germination rates and improve existing soil structure and biology.

**Figure 5:** Composting. Source: iStock

## Materials derived from clean energy waste

Clean energy waste is material derived from solar panels, wind turbines and batteries. Materials include platinum, lithium, silicon, glass, fibreglass and rare earth elements.

**Procurement opportunities**

- Lithium batteries, and in future solar panels, containing recycled content
- Tiles containing recycled content from solar panels
- Solar glass sand as a replacement for traditional construction sand

**Co-benefits**

- Addresses a rapidly growing waste stream from clean energy infrastructure with limited existing circular solutions
- Supports recovery of high-value materials (e.g. lithium, rare earth elements and silicon) as clean energy assets reach end of life or are replaced

## Benchtops containing clean energy waste

In NSW, benchtop products with up to 90% clean energy waste are being manufactured. The University of NSW's research program MICROfactorie Technologies developed a green ceramic technology which has been commercialised by multiple suppliers (University of New South Wales n.d.).

Green ceramics can incorporate clean energy waste such as glass from solar panels.

**Figure 8:** Rooftop solar installation. Source: DCCEEW

## Materials derived from e-waste

E-waste is material derived from televisions, computers, mobile phones, printers and electronic appliances. This includes copper, silver, gold, lithium, rare earth elements, plastics and glass.

**Procurement opportunities**

- ICT equipment incorporating recycled e-waste.
- Asphalt containing additives from recycled printer cartridges

**Co-benefits**

- Addresses a rapidly growing waste stream with low rate of recycling (only 54% of e-waste is currently recycled) (Blue Environment Pty Ltd 2022)
- Recovers valuable materials, with precious metal concentrations in e-waste often being higher than in natural ore bodies

### Asphalt additives from printer cartridge

Post-consumer ink cartridges and soft plastics are being used in asphalt pavements. Waste cartridges and soft plastics can be used in the production of asphalt additives, an initiative which is allowable under EPA regulations. The recycled content additive has been adopted by over 30 councils (Close the Loop n.d.).

## Plastic

Recycled plastic material is produced by collecting and reprocessing plastic waste from household, commercial and industrial sources into a raw material that can be used to manufacture new plastic products. Sources include packaging, soft plastics and manufacturing offcuts, which can be transformed into applications ranging from packaging and furniture to engineered products such as pipes.

**Procurement opportunities.**

- Cables and ICT hardware
- Office stationery
- Internal linings including vinyl flooring, wall lining panels and acoustic insulation
- Furniture and outdoor equipment
- Conduits and non-pressurised pipes

**Co-benefits**

- Reduces consumption of virgin plastics, which are derived from fossil fuels (NSW Environment Protection Authority n.d.)
- Can reduce water consumption and emissions. For example, recycling one tonne of PET (polyethylene terephthalate, commonly used for beverage bottles, food packaging, and polyester fibres) saves approximately 1.2 tonnes of $CO_2$-e and 68 kilolitres of water compared to virgin plastic production (Carre et al. 2015).

### Pipes from recycled bottles

An Australian manufacturer produces irrigation, agricultural and stormwater pipes made from 100% recycled plastic milk and orange juice grade bottles. Non-pressurised recycled piping has been used in the Victorian West Gate Freeway Alliance and North East Link projects (The Green Pipe Company n.d.).

## Paper and cardboard

Paper and cardboard includes material sourced from domestic and commercial waste streams such as boxes, card, bags, wrapping paper and office paper.

**Procurement opportunities**

- Paper and cardboard for office stationery, kitchen supplies and toilet paper
- Cardboard boxes and packaging
- Construction materials and finishes with recycled paper content such as kitchen joinery, plasterboard and other internal lining panels

**Co-benefits**

- Reduces pressure on forestry resources – approximately 26 trees are required to produce one tonne of virgin paper (NSW Environment Protection Authority 2021)

### Recycled paper in wall linings

100% recycled paper (such as newspapers and cartons) is used in the lining of plasterboard products. This includes boards manufactured in Australia and translates to a total product recycled content of between 2 and 10% (CSR Gyprock n.d.).

Alternative wall-lining products are emerging which contain significantly higher levels of recycled content and packaging waste in the board core. A local NSW manufacturer has developed a recycled paper based, self-binding material for wall lining boards as well as furniture and fittings. The paper-pulp-based products are designed for use in both residential and commercial buildings (saveBOARD n.d.).

## Textiles

Textiles are yarns, filaments, threads and fabrics, and include both natural and synthetic materials. Recycled content is derived from both post-consumer textiles (such as clothing, uniforms, linens and soft furnishings at end of use) and pre-consumer textiles (such as manufacturing offcuts and rejects).

**Procurement opportunities**

- Textiles for uniforms and linens, furnishings and homewares
- Fit out materials including underlay, carpets and tiles

**Co-benefits**

- Reduces pressure on landfill capacity in NSW, where approximately 305,000 tonnes of textiles are discarded annually (Australian Circular Textile Association 2021)
- Addresses low circularity rates, with only around 24% of discarded textiles currently reused or recycled (the remaining 76% is sent to landfill) (Australian Government Department of Climate Change, Energy, the Environment and Water n.d.)

### Recycled content in carpet underlay

Carpet underlay can be made almost entirely from recycled content. Australian-made products are available that use around 98% recycled polyurethane foam and waste textiles from bedding and furnishing industries. The material is shredded, reprocessed and remanufactured into high-performing underlay. It has been installed across commercial and domestic buildings including in Parliament House, Canberra, Government House in Brisbane and the Sydney Opera House.

## Tyres

Tyres are processed into crumb rubber for use as recycled content in a range of applications.

**Procurement opportunities**

- Crumb rubber incorporated into asphalt, for use in roads, carparks and footpaths
- Crumb rubber in building matting, flooring and underlay
- Crumb rubber in soft fall surfaces

**Co-benefits**

- Addresses a significant waste stream, with 132,000 tonnes of end-of-life tyres generated in NSW in 2022–23 (NSW Department of Climate Change, Energy, the Environment and Water 2025)
- Responds to declining recovery rates, which have fallen from 70% in 2019–20 to 58% in 2022–23 (Tyre Stewardship Australia 2020)
- Use of crumb rubber in road infrastructure can reduce carbon emissions by up to 30% over the service life of roads (Tyre Stewardship Australia 2024)

### Crumb rubber in asphalt

Transport for NSW Specification R118 allows for the use of crumb rubber in asphalt for paving. Benefits identified include:

- higher resistance to deformation
- improved skid resistance
- excellent ability to resist reflection cracking
- fatigue resistance resulting in a longer road pavement life.

**Figure 6:** Crumb rubber from recycled tyres. Source: iStock

# How to procure recycled content

The checklists in this section group the procurement process into 3 stages: Plan, Source and Manage. This aligns with best practice methodology for NSW Government procurement and the Guide to environmentally sustainable procurement.

When implementing the checklists, consider:

- the level of effort for all actions should be proportional to the size and complexity of the procurement
- recycled content is only one sustainability metric and should be considered alongside other metrics
- the actions should be integrated into existing procurement processes.

### Where can I find suppliers?

- Choose Circular Directory - NSW DCCEEW (launching soon)

### Additional resources:

- Buy NSW Best practice procurement webpage
- Built Environment Circular Economy Supplier Directory – Forward Thinking Design
- Buy NSW Supplier Hub – NSW Government
- Guide to environmentally sustainable procurement – NSW Government
- Hunter Region Circular Economy Directory – Hunter Circular
- Product Aware Database – Architects Declare
- Recycled Materials Guidance Document – Bradfield Development Authority
- Sustainable Materials Directory – Breathe Architects
- Warp It Resource Redistribution Platform – Waste Action Resource Efficiency Ltd

# Quick reference guide to procuring recycled content

This page provides a high-level summary of the recommended approach to integrating recycled content into procurement activities. It is intended as a practical reference to support planning, sourcing and contract management decisions.

## Plan

### Analyse business needs

- ☐ Review policy, agency strategies and circularity commitments
- ☐ Analyse business needs and performance requirements
- ☐ Identify benefits, risks and mitigation actions
- ☐ Identify co-benefits (local manufacturing, Aboriginal-owned, SMEs, regional suppliers)
- ☐ Set recycled content targets

### Analyse and engage the market

- ☐ Confirm probity, regulatory and specification boundaries
- ☐ Scan the market for products and material containing recycled content
- ☐ Conduct early market engagement
- ☐ Test supplier capacity and verification pathways
- ☐ Communicate NSW Government reporting and preference obligations

### Finalise your procurement strategy

- ☐ Select procurement method to enable recycled content
- ☐ Define KPIs and reporting requirements

## Source

### Approach the market

- ☐ Clearly state recycled content goals in tender documentation
- ☐ Include minimum standards or specifications

### Select suppliers

- ☐ Require justification where recycled content is not proposed
- ☐ Request verification evidence
- ☐ Consider requiring a Supplier Recycled Content Plan
- ☐ Assess compliance with performance requirements
- ☐ Evaluate recycled content claims and supporting evidence

### Negotiate and award the contract

- ☐ Embed commitments in contract schedules
- ☐ Include reporting and monitoring clauses
- ☐ Provide feedback to support market maturity

## Manage

### Manage the contract

- ☐ Track against targets and recycled content commitments
- ☐ Verify claims remain valid
- ☐ Conduct audits where appropriate
- ☐ Work collaboratively to increase recycled content
- ☐ Capture lessons learned
- ☐ Refresh objectives in long-term contracts

# Plan: Identify opportunities, set recycled content targets

**Table 1:** Identify opportunities, set recycled content targets checklist

| Analyse business needs | Tick box |
|---|---|
| Review relevant policy and any agency strategies or plans related to circularity to identify recycled content related ambitions. | ☐ |
| Identify benefits and risks of recycled content adoption and develop mitigation actions if needed. | ☐ |
| Identify co-benefits of recycled content adoption such as supporting local manufacturing, Aboriginal-owned businesses, small-to-medium enterprises (SMEs) and regional businesses. | ☐ |
| Check probity guidelines, standards, agency specifications/requirements and regulatory requirements to understand barriers and risks. | ☐ |
| **Analyse and engage the market** | **Tick box** |
| Scan the market for products and material containing recycled content (see the additional considerations below). | ☐ |
| Conduct early market engagement to understand capacity to supply products and material containing recycled content and explain NSW Government obligations to preference and report on these (see example questions to ask suppliers below). | ☐ |
| **Finalise your procurement strategy** | **Tick box** |
| Consider different procurement types and methods and how these may influence the ability to procure recycled content. | ☐ |
| Set recycled content key performance indicators (KPIs) which can include percentage of recycled content, total volume of recycled content, origin of recycled content and priority recycled content. | ☐ |

### Example questions to ask suppliers

- Does 'X' product have recycled content? If not, what products with recycled content do you have available?
- What proportion of the product is recycled content? Where does the recycled content come from and where is it processed?
- What technical documentation can you provide to demonstrate the recycled content of the product?
- Does your product meet 'X' specification or 'Y' technical requirement? How does performance of the product compare to virgin content products?
- What timeframe do you need to be able to supply products containing recycled content?
- What is the cost comparison of the recycled product compared to a traditional one?

## Source: Specifications, evaluation criteria, market engagement

**Table 2:** Tender brief and conditions checklist

| Approach the market - tender brief and conditions | Tick box |
|---|---|
| Clearly outline the agency's recycled content KPIs/requirements within tender briefing documentation. | ☐ |
| Include recycled materials requirements or minimum standards in tender requirements (refer to the *NSW Recycled content reporting guide* for example model tender clause). Clearly state the measurement basis (weight, volume or % recycled content). Provide baseline expectations and target ranges, if known. | ☐ |
| Where feasible, request suppliers provide verification information of recycled content claims, noting that independent verification is preferred (refer to *Understanding recycled content claims and evidence*). Include these verification requirements as clauses in the tender documentation. | ☐ |
| If data is to be collected, provide requirements and/or templates. If your procurement triggers the reporting requirements under the *NSW Recycled content reporting guide*, the accompanying Recycled Content Data Template | ☐ |

| Approach the market - tender brief and conditions | Tick box |
|---|---|
| (Appendix B of the *NSW Recycled content reporting guide*) should also be included. | |

**Table 3:** Tender evaluation criteria checklist

| Approach the market - tender evaluation criteria | Tick box |
|---|---|
| Integrate recycled content into tender evaluation criteria (see callout box below). This could be quantitative (specific recycled content % has been procured) or qualitative (a product with recycled content has been procured). | ☐ |
| Require suppliers unable to provide products and material containing recycled content to give written justification with their tender submission. Reasons may include cost or supply chain constraints such as product availability. | ☐ |
| Consider requiring a Supplier Recycled Content Plan (SRCP) or similar that asks suppliers to demonstrate how they will maximise recycled content, address any opportunities and/or barriers to recycled content inclusion, and then manage, track and report performance (see SRCP template in Appendix D of the *NSW Recycled content reporting guide*). | ☐ |

**Table 4:** Selecting suppliers checklist

| Select suppliers | Tick box |
|---|---|
| Evaluate suppliers against tender evaluation criteria. Example criteria are included in the SRCP template. When comparing tender responses, consider the suppliers' ability to provide requested data and their ability to innovate over time.<br>The procured product should meet performance requirements required of the agency's business-as-usual product, unless previously outlined and agreed upon. This includes standards compliance. | ☐ |
| Evaluate the recycled content claims validity (refer to *Understanding recycled content claims and evidence* section of this guide for information on evidence). | ☐ |

**Table 5:** Negotiate and award the contract checklist

| Negotiate and award the contract | Tick box |
|---|---|
| Where possible, provide written feedback to unsuccessful tenderers specifically on recycled content. | ☐ |
| Review contract to align with the successful supplier's proposal to ensure recycled content commitments are embedded in contractual documentation. Consider inclusion in the purchase order. | ☐ |
| Insert any approved plans such as the SRCP into contract schedules for performance monitoring. | ☐ |

## Watch it!

When asking suppliers about recycled content, make sure that they are not counting rework, regrind or scrap. These do not meet the formal definition of pre-consumer recycled content under AS 14021:2018.

Pre-consumer recycled content has been diverted from a waste stream during a manufacturing process, left the production facility and then been reused. Examples include offcuts or defective products that are collected and processed into new materials before reaching consumers.

# Manage: Implementation, reporting, continuous improvement

**Table 6:** Manage the contract checklist

| Manage the contract | Tick box |
|---|---|
| Monitor progress in achieving recycled content commitments within agreed timeframes (and conduct any audits if appropriate). | ☐ |
| Establish regular reporting intervals (e.g. quarterly). Ensure compliance with recycled content reporting requirements. | ☐ |
| Monitor for timely and complete submission of recycled content data using agreed templates, or alternatively track the number or percentage of identified non-conformances. | ☐ |
| Check verification claims remain up-to-date and valid (refer to *Understanding recycled content claims and evidence*) section of this guide for what to look for). | ☐ |
| Work collaboratively with the supplier to identify opportunities to increase recycled content further, improve data collection and manage risks. | ☐ |
| Capture lessons learned to share within your team, agency and/or communities of practice. | ☐ |
| For long-term contracts, regularly identify opportunities to update or add new objectives that support recycled content. | ☐ |

# Additional considerations when procuring recycled content

| Consideration | Mitigation actions |
|---|---|
| **Cost:** Procurement of recycled content materials may incur a cost premium. This can be either real or perceived. | Recycled content requirements should be communicated at the tender stage to allow suppliers to plan and price accordingly. Early engagement with suppliers enables the costs to be understood and any costs associated with risk to be reduced. Incentivised targets can be used to encourage uptake. Consider costs across the whole lifecycle of the good or service. |
| **Hazardous materials:** Use of waste materials may result in the incorporation of hazardous content into new products. | The NSW Environmental Protection Authority (EPA) regulates how waste materials can be beneficially and safely reused in land application and thermal treatment scenarios. See more information in *Confidence in procuring recycled content*.<br>Products and materials can also be tested for hazardous substances present. Evidence of testing or product ingredient lists can be requested from suppliers. The Living Building Challenge Red List provides a list of chemicals that should be avoided. |
| **Existing supplier relationships**: As with all procurements, there may be existing or preferred suppliers who may not offer products containing recycled content. | Recycled content expectations should be clearly communicated in procurement documentation to ensure all existing and prospective suppliers understand the requirements. Early market engagement can signal upcoming expectations and give suppliers time to adapt. Collaboration and knowledge sharing can encourage existing suppliers to explore recycled content options within their own supply chains. |
| **Supply chain limitations:** There may be fluctuations in availability or inconsistent product appearance due to limited availability of recycled content feedstock for manufacturers. | Specifications should be written to ensure recycled content materials are still pursued, even if a proportion of the procurement must be sourced from virgin materials due to a lack of availability of recycled content. |
| **Complying with standards:** There can be uncertainty around compliance with standards when incorporating new materials. | Where a product does not meet applicable standards and specifications, it is recommended to engage with suppliers to find out further information. Additional supplier testing or an exception from meeting project requirements may help to overcome these challenges for future procurements. |

# Confidence in procuring recycled content

This section helps procurement teams confidently procure products and materials containing recycled content by ensuring products are fit for purpose and understanding recycled content claims and evidence.

## Ensuring products are fit for purpose

### Standards and specification compliance

Products and materials containing recycled content must meet the regulatory, technical and performance requirements intended for their application. There should be no compromise on functionality, safety or fitness for purpose unless agreed upon.

When procuring products or materials containing recycled content:

- identify any relevant Australian Standards, codes, or technical specifications that apply to the product or material
- identify any performance requirements beyond standards
- clearly include these requirements in procurement documentation and contracts
- confirm with suppliers that recycled content does not alter compliance with these requirements.

### Alignment with specifications

In addition to the relevant standards (e.g. Australian, ISO, ASTM for the product type) a product may also need to meet agency-specific specifications. Some agencies have their own specifications and standards, that include defined limits for recycled content.

For example, Transport for NSW's QA Specification 3051 Granular Pavement Base and Subbase Materials outlines maximum allowable proportions for recycled content in the mix by material e.g. the limit for crushed brick in unbound subbase is 20%.

Where standards exist, seek to maximise recycled content within the stated limit (typically provided as a percentage). Where no standards exist, seek to optimise the recycled content while meeting the performance requirements.

## Environmental and human health and safety

You should request information on product safety, just as you would for products made from virgin materials.

Products and materials containing recycled content must meet all relevant health and safety requirements, the same as the equivalent product made from virgin materials. Where appropriate, request:

- safety data sheets
- information on contaminants or additives
- confirmation that recycled inputs do not introduce new risks
- evidence that the product can be safely used for its intended purpose.

### Food safety standards

Where recycled plastics such as high-density polyethylene (HDPE) or polyethylene terephthalate (PET) are used with food, they must meet additional food safety standards.

## NSW Resource Recovery Framework

Through the NSW Resource Recovery Framework (the framework), the NSW EPA regulates how waste materials can be beneficially and safely reused in land application and thermal treatment scenarios. The framework's aim is to enable the reuse of waste materials while ensuring they will not cause harm to human health or the environment.

**Resource Recovery Orders and Exemptions**

Under the framework, there are orders and exemptions that allow the waste material to be applied to land, used as a fuel or used in connection with a process of thermal treatment (for example, using sawdust in brick manufacture). The EPA issues Resource Recovery Orders and Resource Recovery Exemptions as a package for specific waste materials, such as biosolids, food waste or recovered glass sand. There are over 40 general orders and exemptions that are available for use by anyone as long as they meet the requirements.

**Resource Recovery Orders (RRO)**
These apply to generators and processors of waste materials. To supply a waste material, they must meet all conditions of the order, which may include:

- material specifications, such as concentration limits of chemicals such as heavy metals
- record-keeping requirements, such as quantities supplied or sampling results
- reporting, for example notifying the EPA of any non-compliance.

**Resource Recovery Exemptions (RRE)**
These apply to consumers who reuse waste materials. To reuse a waste material, consumers must meet all the exemption conditions, which may include:

- Restrictions on reuse. For example, the recovered aggregate exemption stipulates that recovered aggregate can only be applied to land in road making activities, building, landscaping and construction works. It does not allow it to be used in dams or related water storage infrastructure or mine site rehabilitation among other applications.
- Record-keeping requirements, for example quantities received and supplier name and address.
- Reporting, for example making records available to EPA officers upon request.

The framework only applies if the waste material is intended to be applied to land, used as a fuel or used in connection with a process of thermal treatment. For waste material used in other ways, for example plastics from kerbside bins recycled into new plastic bottles, is covered by the relevant product standards and general consumer safety laws.

You should include an obligation to comply with the framework in the agreement with your supplier, where relevant.

## Quality and technical performance

Check the product meets required performance requirements outlined in the relevant standards and specifications for its intended use. This may include quality requirements, structural performance, fire resistance and durability. Where relevant, request information on:

- product testing results
- durability and maintenance performance
- warranties or guarantees
- past use in similar applications
- performance in local conditions.

Recycled content should not impede how a product performs in use.

# Understanding recycled content claims and evidence

Evidence plays a critical role in giving buyers confidence that recycled content claims are accurate, transparent and fit for purpose. Appropriate evidence helps agencies assess supplier claims and reduce the risk of greenwashing.

## What are recycled content claims?

Recycled content claims are statements made by suppliers about the proportion, origin and type of recycled material used in a product or its packaging. These claims may appear in product specifications, labels, certifications or procurement responses.

Claims may include the percentage of recycled content within the product, the source of the recycled material, or whether the material is pre- or post-consumer recycled content.

Recycled content claims should:

- be stated as a percentage of the total product content by mass
- clearly specify the scope of the claim (e.g. whole product, component, or material type)
- be reported separately from recycled content in product packaging
- be supported by appropriate evidence.

## Types of evidence

Evidence increases confidence in recycled content claims and provides assurances on their accuracy and veracity.

There is currently no single, standard approach for verifying recycled content across all industries. As a result, suppliers may provide different forms of evidence depending on the product and market maturity. Common forms of evidence may include:

- environmental labels
- supplier declarations
- environmental product declarations
- independently verified reports
- product certifications.

The ISO 14020 family defines 3 main types of environmental labels (Type I, II, and III) that provide different levels and styles of assurance. For more information refer to Appendix C: Environmental labels and declarations under ISO 14020 (types I, II, III).

Some forms of evidence focus specifically on verifying recycled content, while others include recycled content alongside broader environmental information, such as material origin or carbon footprint. Appendix D provides examples of industry-recognised certification systems and standards commonly used to support recycled content claims.

Confidence in recycled content procurement is strengthened where suppliers can clearly demonstrate the provenance, composition and quality of recycled materials.

The Australian Government's *National Framework for Recycled Content Traceability* provides nationally consistent guidance on how traceability information can support accurate recycled content claims, reduce greenwashing risk, and improve transparency across supply chains.

### Watch it!

Greenwashing is the practice of making false, misleading and/or deceptive claims about the environmental practices of a company or the environmental attributes or benefits of its products or services. A 2022 review by the Australian Competition and Consumer Commission (ACCC) found that 57% of 247 businesses and brands had made concerning environmental sustainability claims. These included product-specific and company-wide claims, as well as claims using logos and symbols including certification trademarks.

## Choosing appropriate evidence

Evidence requirements should be proportionate to procurement risk, value and complexity while providing confidence in recycled content claims.

In some lower-risk procurements, a supplier declaration may provide sufficient confidence. In high-value or high-risk procurements, independently verified evidence may be more appropriate.

The level of evidence requested should be practical and appropriate to the procurement context. Certification processes can be costly and time intensive which may limit uptake, especially for smaller companies. In some cases, a supplier declaration may be sufficient.

It is up to the procurer to determine what constitutes sufficient evidence for a purchasing decision.

## What to check when reviewing evidence

Regardless of the evidence type, the procurers should:

- obtain and review supplier documentation
- ensure that it clearly relates to the specific product being procured
- confirm the document is current and valid
- check it has been issued by a credible and relevant organisation
- look for relevant information such as licence or certificate numbers
- ensure the scope of the evidence aligns with the product and claim.

Information that has been independently verified is preferable because it provides confidence that the supplier's claims are accurate, ensuring that procurement decisions are based on reliable information.

> Industry verification practices are still evolving. As verification becomes more common, this guidance may be updated to reflect improved standards and market practices.

For evidence not listed in this guide, procurers can assess the credibility by considering the following questions:

- Market acceptance: is the evidence or program recognised within Australia or referenced in established sustainability rating systems? For example, the Green Star Buildings rating tool by the Green Building Council of Australia.
- Governance: is the system or organisation operated by a reputable, independent organisation with clear oversight and stakeholder involvement? For example, does it have a board or advisory group with diverse stakeholders?
- Independent verification: are the claims independently verified by a qualified organisation to support the accuracy and reliability of the suppliers recycled content claims?

# Key takeaways for procurers

Procuring products and materials with recycled content is most effective when it is embedded across the full procurement lifecycle.

## Start early and plan ahead

- Consider recycled content at the plan stage of your procurement, alongside policy obligations, performance requirements and market capability.
- Early consideration allows time for market engagement and reduces risk later in the process.

## Carry recycled content through source and manage stages

- Clearly communicate recycled content expectations during the source stage, including how claims will be assessed and verified.
- Use the Manage stage to monitor commitments, verify claims and work with suppliers to improve outcomes over time.

## Keep actions proportionate

- The level of effort should always be proportionate to the size, risk and complexity of the procurement.
- Not every procurement will require detailed targets or independent verification. Apply what is reasonable to your procurement.

## Use the support available

- A wide range of tools, templates, directories and guidance are available to support you.
- You do not need to start from scratch. Use existing resources to build confidence and consistency.

# Appendixes

# Appendixes

## Appendix A: Glossary

**Certification** is a formal recognition that a product meets established sustainability standards, based on evaluation conducted by an independent verification. These standards are not governed by ISO standards but can be accredited against a code of practice or accredited standards authority.

**Circular economy** A circular economy values resources by keeping products and materials in use for as long as possible. It maximises the use and value of resources to create economic, social and environmental benefits.

**Embodied carbon** refers to the total greenhouse gas emissions generated throughout the lifecycle of a product or system. This includes emissions from raw material extraction, transportation, manufacturing, construction, maintenance, renovation and end-of-life disposal. Essentially, it encompasses all the carbon emissions associated with a product before it is even used, as well as those generated during its use and eventual disposal.

**Emissions** are gases and particles that are put into the air or emitted by various sources. These include greenhouse gas emissions and air pollutants which can affect human health and indoor air quality.

**Environmental labels or declarations** are product level sustainability schemes that contain information on environmental claims. The ISO 14020 series of standards provides internationally recognised requirements for environmental labels and declarations. Environmental labels are classified as either Type I, II or III under the standards.

**Environment Product Declaration (EPD)** is an independently verified and registered document that communicates transparent and comparable information about the life-cycle environmental impact (including carbon emissions) of products and services in a credible way. An EPD is compliant with the standard ISO 14025 and is known as a Type III environmental declaration.

**Goods** are rights, interests, or things that are legally capable of being owned, and include, but are not limited to, physical goods and real property as well as intangibles such as intellectual property, contract options and goodwill.

**Key performance indicator (KPI)** refers to high level performance measurements within an agreement between parties. Contract KPIs are specific, real, time-based, attainable, measurable, strategic goals within an agreement that details the success of its components and how they relate to the overall contract objective.

Linear economy is a traditional ‘take-make-waste’ system. It involves extracting finite raw materials, manufacturing them into products, and discarding them after use. This model operates in a straight line, often ignoring full resource potential, creating significant waste, and relying on high consumption.

Material is a substance or combination of substances that is used as an input to manufacture or produce a product. Materials may be virgin or recycled and include substances that are processed, transformed or combined during manufacturing, construction or production processes.

Net zero. Net zero emissions are achieved when human-caused emissions of greenhouse gases to the atmosphere are balanced by their removal over a specified period.

Post-consumer waste materials are waste materials generated and discarded by households or commercial, industrial and institutional facilities, as end-users of the product which can no longer be used for its intended purpose. This includes return of material from the distribution chain.

Pre-consumer waste materials are materials that have been diverted from the waste stream during a manufacturing process. Excluded is reutilisation of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

Procurement is the process that begins with the basic 'make or buy' decision and then spans the 'whole life' of supplier arrangements. It includes defining business needs, designing and implementing arrangements, monitoring and managing contract and supplier performance, and reviewing outcomes to assess the effectiveness of arrangements.

Product(s). An item that results from a manufacturing or production process and is supplied for distribution, purchase or use. A product may incorporate one or more materials, including recycled materials, and may be a consumer good, industrial or commercial good, component, or construction product.

Recyclability is the ability of component parts, materials or both to be separated and reprocessed from products and systems and subsequently used as material input for the same or different use or function.

Recycled content as defined in AS 14021:2018, is the proportion, by mass, of recycled material in a product or packaging. Only pre-consumer and post-consumer materials shall be considered as recycled content, consistent with the following usage of terms:

1. Pre-consumer material: material diverted from the waste stream during a manufacturing process. Excluded is reutilisation of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

2. Post-consumer material: material generated by households or by commercial, industrial and institutional facilities in their role as end users of the product which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.

**Recycled content product** is a product that incorporates recycled materials. This includes consumer products, industrial and commercial materials and goods.

**Recycled material** as defined in AS 14021:2018, is a material that has been reprocessed from recovered (reclaimed) material by means of a manufacturing process and made into a final product or into a component for incorporation into a product.

**Recycling** is activities through which waste is collected, sorted, reprocessed (including through composting), and/or converted into raw materials for use in a production system, excluding for energy.

**Reused materials** are materials or products that are used again for the same purpose or for another purpose without changing their structure significantly.

**Scope 1 emissions** are direct greenhouse gas emissions from sources that are owned or controlled by agencies.

**Scope 2 emissions** are indirect greenhouse gas emissions from the generation of purchased electricity.

**Scope 3 emissions** are indirect greenhouse gas emissions that occur in the value chain of an agency, including both upstream and downstream emissions.

**Sustainability schemes** aim to improve transparency and support decision making. They contain information relating to environmental credentials of a product, material, service or process. Sustainability schemes include declarations, labels, standards and certifications.

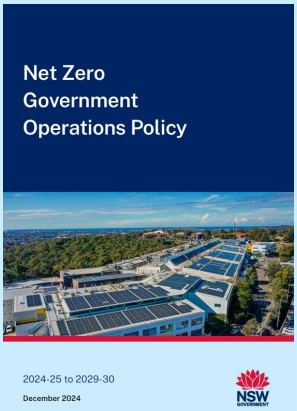
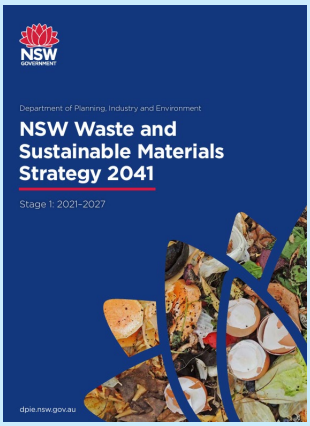
**Tender** is a formal invitation seeking submissions from tenderers, service providers or contractors for the provision of goods, services, works or activities per specified requirements.

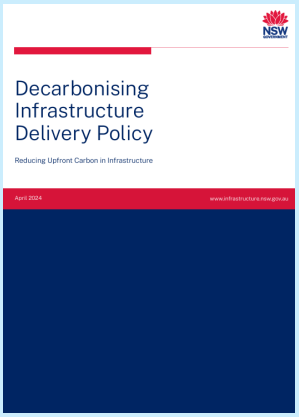
**Tenderer** is an entity or person that has responded to a request for tender or other approach to market.

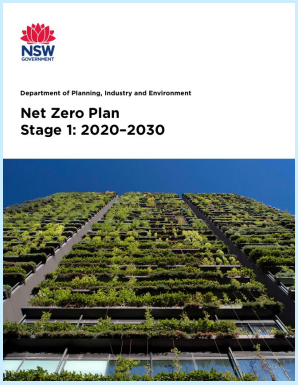
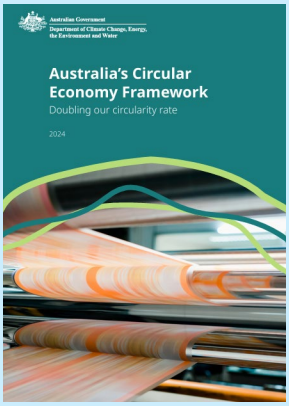
**Verification** is the process of confirming the truthfulness of claims.

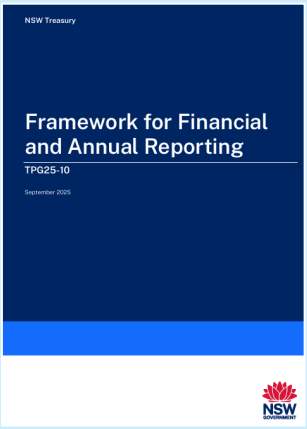
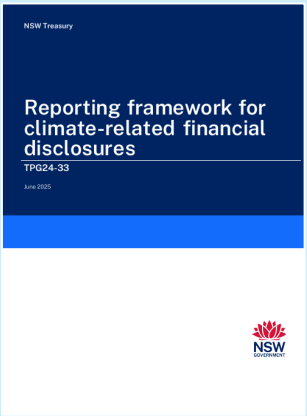
# Appendix B: Recycled content policies, strategies and frameworks

**Table 7:** Details of relevant recycled content policies, strategies and frameworks

| Policy, strategy or framework | Relevant recycled content requirements |
|---|---|
| Net Zero Government Operations (NZGO) Policy   | The NSW Net Zero Government Operations Policy encourages government sector agencies to lead by example in reducing greenhouse gas emissions and contribute to the state's legislated emission reduction targets. The policy sets 24 requirements across common aspects of government operations that significantly impact emissions and includes broader sustainability measures that complement emissions reductions, such as saving water and minimising waste. The NZGO Monitoring and Reporting Framework supports overall implementation of the NZGO Policy.<br>Action 22 requires agencies to preference the procurement of products and materials that contain recycled content in identified goods and services categories on an 'if not, why not' basis. In addition, agencies must report annually on their compliance with this requirement and the procured products that contain recycled content.<br>To help agencies comply with Action 22, the NSW Recycled content reporting guide has been developed. The *NSW Recycled content reporting guide* sets the framework and provides resources, to guide agencies in what and how they must report in relation to recycled content of their procured goods and services. |
| NSW Waste and Sustainable Materials Strategy 2041: Stage 1 – 2021-2027   | In 2021, the NSW Government released the NSW Waste and Sustainable Materials Strategy (WaSM). The strategy outlines the actions to be taken to deliver on long-term objectives to transition NSW to a circular economy through to 2041.<br>The WaSM included a commitment for NSW Government agencies to preference products containing recycled content on an 'if not, why not' basis, including building materials, office fitouts and supplies.<br>The strategy also sets targets to measure progress towards a circular economy. Key targets adopted from the National Waste Policy Action Plan are significantly increasing the use of recycled content by governments and industry and reducing the total waste generated per person by 10 per cent by 2030. |

| Policy, strategy or framework | Relevant recycled content requirements |
|---|---|
| NSW Circular Economy Policy Statement<br>  | Released in 2019, the NSW Circular Economy Policy Statement helps to guide NSW decision making and support the transition to a circular economy. The statement does this by setting the ambition for the state, outlining guiding principles, and establishing focus areas.<br>The focus areas are:<br>• support innovation – including targeting grant programs and service hubs<br>• sustainable procurement – to drive demand for recovered material and reusable products.<br>• high quality, consistent recycling – generating higher quality products containing recycled content<br>• value organics – avoiding waste as well as encouraging recovery and reuse<br>• mainstream product stewardship – encouraging producers to take responsibility for the management of the end of product life<br>• responsible packaging – reducing packaging as well as increasing recyclability and recycled content use<br>• support reuse and repair – to keep products in use for longer<br>• circular design – supporting increased durability and repairability of products.<br>The statement recognises the need to replace raw materials with products containing recycled content and to develop local markets for high-quality recycled materials. |
| Decarbonising Infrastructure Delivery Policy<br>  | In April 2024, Infrastructure NSW released the Decarbonising Infrastructure Delivery Policy. The policy provides guidance to NSW Government infrastructure delivery agencies on expectations in managing upfront carbon in public infrastructure projects. The policy applies to all NSW Government building projects valued over $50 million and linear infrastructure projects valued over $100 million. The policy ensures upfront carbon is a key consideration in the early stages of these projects.<br>The policy specifically mentions how recycled content can reduce carbon emissions, with case studies from NSW government agencies. |

| Policy, strategy or framework | Relevant recycled content requirements |
|---|---|
| Net Zero Plan Stage 1: 2020–2030<br>  | The NSW Government has legislated emission reduction targets to achieve net zero by 2050. It aims to deliver a 35% emissions reduction in NSW by 2030 compared to 2005. It is part of the framework set by the NSW Government for the state to achieve these emission reduction targets.<br>One of the 4 key priorities of the plan is for NSW Government to lead by example, and it acknowledges the NSW Government's purchasing power in supporting the market for low emissions products and services. Diversion of food and garden waste from landfill to create high-quality compost is a key action under the plan and highlights the role of products containing recycled content in enabling the transition to Net Zero. |
| National Waste Policy<br>and<br>National Waste Policy Action Plan<br>  | In 2018, the Australian Government released its national framework for waste and resource recovery. The framework outlines the roles and responsibilities of businesses, governments, communities and individuals. To support the move to a circular economy, the policy outlines 5 key waste management principles. One of these principles is to increase the use of recycled materials and build demand and markets for recycled products.<br>Since then, the Australian Government has released 2 action plans to implement the policy. The latest National Waste Policy Action Plan, released in 2024, builds on progress towards the targets in the initial policy, including significantly increasing the use of recycled content by government and industry. |
| National Circular Economy Framework<br>  | The Australian Department of Climate Change, Energy, the Environment and Water released the National Circular Economy Framework in 2024. The framework aims to double Australia's circularity rate by 2035 and has set 3 targets to achieve this:<br>• reducing the material footprint by 10 per cent<br>• increasing material productivity by 30 per cent, and<br>• increasing the recovery rate to 80 per cent.<br>The framework sets out priorities for 4 key sectors, which are: industry; the built environment; resources; food and agriculture. Enablers to achieve the targets in these sectors include verifying the provenance, properties and performance of recycled materials, developing recycled content markets and improving the quality of recycled organics. |

| Policy, strategy or framework | Relevant recycled content requirements |
|---|---|
| Annual reports<br>  | NSW Treasury requires certain government entities to prepare a climate-related financial disclosure in line with Treasury policy and guidance issued under the *Government Sector Finance (GSF) Act 2018*. These disclosures include reporting on greenhouse gas emissions across scopes 1 & 2. Government entities must publish annual reports, which contain a section on sustainability. The sections are an opportunity for agencies to highlight sustainability initiatives being implemented in their operations, including the procurement of products and materials that contain recycled content and related impacts. |
| Climate-related financial disclosures<br>  | NSW Treasury requires government entities to make climate-related financial disclosures under TPG24-343: Reporting framework for climate-related financial disclosures. Under the Treasury policy, the requirements are being applied in a phased manner across agencies and require the disclosure of operational emissions, including the Scope 3 emissions of entities.<br>From 1 January 2027, NSW Government entities will also need to publicise their net zero transition plans. Sustainable procurement, including the procurement of products and materials that contain recycled content, is expected to be a part of many of these plans. |

# Appendix C: Environmental labels and declarations under ISO 14020 (types I, II, III)

This appendix outlines environmental labels and declarations under the *ISO 14020 Environmental labels and declarations – general principles* framework. It explains how each type operates, highlights key strengths and limitations, and provides case studies.

## Verifying recycled content claims:

Suppliers may use several ways to verify claims made regarding the use of recycled material in their products. The ISO 14020 series defines 3 recognised types of environmental labels – Type I, II, and III, each representing a different level of assurance. These standards help ensure that environmental claims are credible, consistent and transparent, supporting more informed procurement decisions.

## Type I – Ecolabels (ISO 14024)

Type I ecolabels are independently certified labels that assess products against multiple environmental criteria across their lifecycle. One of these criteria can include recycled content.

**How it works:**

- Environmental performance criteria are developed for a specific product category (e.g. furniture, paper, cleaning products), based on life-cycle considerations.
- Suppliers apply for certification and provide evidence that the product meets criteria.
- An independent third-party assesses the product against the criteria.
- If compliant, the product is certified and awarded the ecolabel.
- Approved products then carry the ecolabel. Certification is typically time-bound and subject to periodic review to ensure ongoing compliance.

Table 8: Strengths and limitations of ecolabels

| Strengths | Limitations |
|---|---|
| • Considers environmental performance over a product's lifecycle.<br>• Widely recognised and based on standard environmental criteria.<br>• Encourages manufacturers to meet environmental performance criteria, drives innovation and improved sustainability. | • Certification processes can be costly and time intensive. This may limit uptake, especially for smaller companies.<br>• Criteria may vary across certification organisations, leading to differences in products meeting different label standards (not always specific to recycled content).<br>• Limited coverage for niche or emerging products and markets. |

## Case study

### Type I example: Good Environmental Choice Australia (GECA)

A Type I ecolabel schemes assess products against multiple environmental, human health and social criteria across their lifecycle. GECA standards apply to a wide range of product categories, with some standards also including minimum recycled content requirements.

For example, GECA's Building Insulation Materials Standard includes the requirement for recycled content, see Figure 12. There are also 37 other criteria, such as product performance and modern slavery.

Under this standard, there is a certain minimum amount of recycled content.

This means that if your building insulation material has the GECA ecolabel, you know that it has this amount of recycled content at a minimum and that this information has been independently verified.

If manufacturers do not want to meet all the criteria in the standard, they may choose to instead focus their attention on a particular environmental area.

5.1 **Recycled Content**

**Criterion 13:** Certified products shall meet the minimum resource efficiency requirements outlined below for recycled material content by weight.

| Material | Recycled Content |
|---|---|
| Glass wool | 65% |
| Rock Wool | 40% |
| Slag wool | |
| Cellulose | 100%, minimum<br>80% post-consumer |
| Wool | 80% |
| Synthetic Polymers | 85% |

**Figure 7:** Example of recycled content requirements under a Type 1 ecolabel standard (GECA Building Insulation Materials Standard).

## Type II – Self-declared environmental claims (ISO 14021)

Self-declared environmental claims and labels are made by manufacturers or suppliers about specific attributes of their products. These are sometimes supported by independent verification.

**How it works:**

- Self-declared claims are made by suppliers about their products.
- Claims typically focus on specific product attributes, such as ‘made from 100% recycled plastic’.
- Claims may be:
  - self-declared (no external verification)
  - independently verified (audited against a standard like UL 2809, refer to Appendix D).
- Evidence should be available upon request.

**Table 9**: Strengths and limitations of self-declared environmental claims

| Strengths | Limitations |
|---|---|
| • Allows manufacturers to communicate environmental credentials of products.<br>• Relatively low cost and easy to apply for suppliers.<br>• Entry point towards stronger certification. | • Independent verification is not mandatory, which may present a risk of greenwashing.<br>• May lack consistency or compatibility. Claims are not assessed against a single standardised framework, which makes it difficult to compare products. |

## Case study

### Type II example: Self-declared claim (with independent verification)

An example of a Type II claim may be a supplier of office furniture stating that a workstation or chair contains 70% recycled plastic content.

The supplier makes the environmental claim directly about the product, as Type II claims usually focus on a specific product attribute.

In some cases, the claim may also be independently verified through a program, such as UL Environmental Claim Validation (ECV) for Recycled Content, as depicted in Figure 13.


**Figure 8:** Example of a fabricated office chair with Type II example, which also includes a verification through UL Environmental Claim Validation (ECV) for Recycled Content label

During procurement, Type II claims should be checked for things such as:

- which part of the product the recycled content claim applies to
- whether it is pre- or post-consumer recycled content
- whether the claim has been independently verified.

## Type III – Environmental product declaration (ISO 14025)

Independently verified environmental product declarations (EPDs) provide quantified environmental data of a product or material based on a product life-cycle assessment. These declarations allow comparisons between products intended for similar purposes. EPDs report the proportion of 'secondary materials', which is the proportion of non-virgin material in a product. This could be a combination of both reused and recycled materials.

**How it works:**

- Products undergo a life cycle assessment.
- The results are compiled into an EPD.
- The EPD is verified by an independent third party.
- The EPD is published in a standardised format.

**Table 10** Strengths and limitations of environmental product declarations

| Strengths | Limitations |
|---|---|
| • Provides detailed, quantified environmental performance data that is independently verified.<br>• Enables robust comparisons between products with similar functions (like for like comparison)<br>• High transparency and credibility. | • Relatively expensive and time intensive<br>• Data can be complex and technical, making it less accessible to stakeholders without the relevant expertise.<br>• The standard provides information but does not define performance thresholds.<br>• Unable to determine exact recycled content amount used from the 'secondary material' amount. |

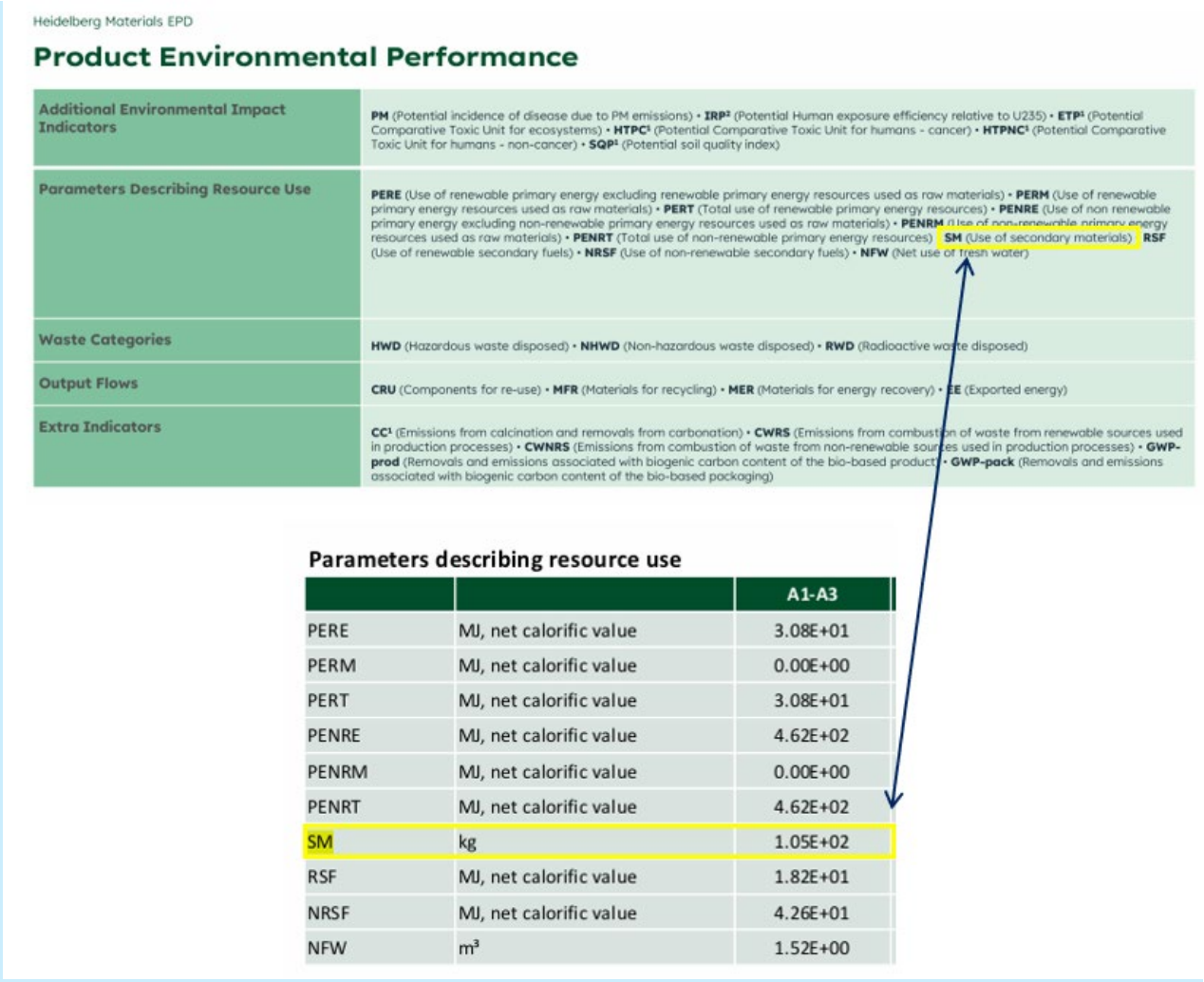
### Case study

Type III example: Environmental Product Declaration (EPD)

An EPD for normal class concrete (20 MPa General Purpose blend) is shown in Figure 14.

The EPD provides independently verified environmental data for the product, including indicators for the product's environmental performance. In this EPD example, the proportion of Secondary Materials (SM) (reused and/or recycled material inputs) contained in the concrete mix. This allows the procurer to:

- Identify the proportion of non-virgin material used in the product
- Compare products with similar performance requirements
- Be confident that the SM component has been independently verified.



Heidelberg Materials EPD

## Product Environmental Performance

| | |
|---|---|
| **Additional Environmental Impact Indicators** | **PM** (Potential incidence of disease due to PM emissions) • **IRP**[2] (Potential Human exposure efficiency relative to U235) • **ETP**[1] (Potential Comparative Toxic Unit for ecosystems) • **HTPC**[1] (Potential Comparative Toxic Unit for humans - cancer) • **HTPNC**[1] (Potential Comparative Toxic Unit for humans - non-cancer) • **SQP**[1] (Potential soil quality index) |
| **Parameters Describing Resource Use** | **PERE** (Use of renewable primary energy excluding renewable primary energy resources used as raw materials) • **PERM** (Use of renewable primary energy resources used as raw materials) • **PERT** (Total use of renewable primary energy resources) • **PENRE** (Use of non renewable primary energy excluding non-renewable primary energy resources used as raw materials) • **PENRM** (Use of non-renewable primary energy resources used as raw materials) • **PENRT** (Total use of non-renewable primary energy resources) **SM** (Use of secondary materials) **RSF** (Use of renewable secondary fuels) • **NRSF** (Use of non-renewable secondary fuels) • **NFW** (Net use of fresh water) |
| **Waste Categories** | **HWD** (Hazardous waste disposed) • **NHWD** (Non-hazardous waste disposed) • **RWD** (Radioactive waste disposed) |
| **Output Flows** | **CRU** (Components for re-use) • **MFR** (Materials for recycling) • **MER** (Materials for energy recovery) • **EE** (Exported energy) |
| **Extra Indicators** | **CC**[1] (Emissions from calcination and removals from carbonation) • **CWRS** (Emissions from combustion of waste from renewable sources used in production processes) • **CWNRS** (Emissions from combustion of waste from non-renewable sources used in production processes) • **GWP-prod** (Removals and emissions associated with biogenic carbon content of the bio-based product) • **GWP-pack** (Removals and emissions associated with biogenic carbon content of the bio-based packaging) |

### Parameters describing resource use

| | | A1-A3 |
|---|---|---|
| PERE | MJ, net calorific value | 3.08E+01 |
| PERM | MJ, net calorific value | 0.00E+00 |
| PERT | MJ, net calorific value | 3.08E+01 |
| PENRE | MJ, net calorific value | 4.62E+02 |
| PENRM | MJ, net calorific value | 0.00E+00 |
| PENRT | MJ, net calorific value | 4.62E+02 |
| SM | kg | 1.05E+02 |
| RSF | MJ, net calorific value | 1.82E+01 |
| NRSF | MJ, net calorific value | 4.26E+01 |
| NFW | $m^3$ | 1.52E+00 |

**Figure 9:** Example contents of a Type III EPD. This EPD provides independently verified environmental performance data across a range of impact indicators, including the proportion of Secondary Materials (SM) used in the concrete mix. It also details the parameters for the resource use (product lifecycle stage and weight amount). Source: EPD-IES-0018911:001 Enrich - 30 Normal - Class 20 MPa | EPD International

# Appendix D: Recognised certifications and declarations supporting evidence for recycled content

**Table 11:** Examples of certification and declarations relevant to support evidence of recycled content in procurement. They are all independently verified.

| Certification name | Description | Applicable products | Type | Geographical application | ISO type, if relevant |
|---|---|---|---|---|---|
| Cradle to Cradle Certified | A framework for assessing the safety, circularity, and sustainability of materials and products. It evaluates performance across Material Health, Product Circularity, Clean Air & Climate Protection, Water & Soil Stewardship, and Social Fairness. Certifications are independently verified. | Works across a wide range of product categories. | Certification and standard | International | Type I – Ecolabel |
| Environmental product declaration (EPD) | An environmental product declaration (EPD) is an independently verified life cycle assessment (LCA) of a product or material. An LCA is an evaluation methodology which assesses a product's environmental performance over its lifecycle.<br>Most EPDs report recycled content of products. | EPDs apply to a broad range of products across multiple industries | Declaration | International | Type III – EPD |

| Certification name | Description | Applicable products | Type | Geographical application | ISO type, if relevant |
|---|---|---|---|---|---|
| EPEAT | EPEAT is a global sustainability certification for electronics, including computers, displays, and other IT products. It evaluates products based on environmental criteria such as energy efficiency, material selection, product longevity, and end-of-life management. EPEAT includes requirements for recycled content, encouraging the use of recycled content, specifically post-consumer. It is an ISO 14024 Type I ecolabel and products are independently verified to ensure compliance. | Electronics | Certification | International | Type I – Ecolabel |
| FSC Recycled | The Forest Stewardship Council (FSC) Recycled certification ensures that products are made from 100% recycled content, verified as reclaimed or post-consumer waste. It is independently verified by independent certification bodies to ensure compliance with FSC standards, promoting the use of recycled inputs. | Wood or paper-based products made with recycled content | Certification | International | Type I – Ecolabel |

| Certification name | Description | Applicable products | Type | Geographical application | ISO type, if relevant |
|---|---|---|---|---|---|
| GECA Recycled Products (RPv1.0ii-2015) | Sets sustainability benchmarks for recycled products, considering their full lifecycle impacts. This standard ensures recycled products meet environmental, health, and social criteria during manufacture, use, and disposal. | Plastic, rubber, fill and foundation materials, timber and glass. | Certification | Australia | Type I – Ecolabel |
| Global GreenTag – Manufacturer Claim Verifications | The Manufacturer Claim Verification can assess and verify a product's key green characteristics, such as recycled content. | Broad range of products that contain recycled content. | Certification | International | Type II – Self-declared environmental claim |
| Global Recycled Standard (GRS) | A comprehensive certification framework spanning the entire supply chain and requiring a minimum of 20% recycled content for a product to be eligible. The standard also covers supply chain impact on people and environment. GRS is overseen by Textile Exchange (ISEAL Code Compliant), who also oversee RCS. | Originally textile based, can support any product with recycled content | Certification and standard | International | N/A |

| Certification name | Description | Applicable products | Type | Geographical application | ISO type, if relevant |
|---|---|---|---|---|---|
| Living Product Challenge   | The Living Product Challenge certification is based on a framework developed by the International Living Future Institute (ILFI), focusing on areas such as material health, product circularity, water and energy stewardship, and social fairness. While ILFI manages the certification process, third-party assessors independently verify compliance with these criteria. | Broad range of products that contain recycled content | Certification | International | Type I – Ecolabel |
| Recycled Claim Standard (RCS)   | A certification standard that verifies the presence and amount of at least 5% recycled material in a product. It is developed and overseen by Textile Exchange, which also oversees GRS. | Broad range of products that contain recycled content | Certification and standard | International | N/A |
| Recycled Material Standard (RMS)   | A certification framework designed to verify and certify the recycled content of materials and products. It ensures accurate tracking and reporting of recycled material use through chain-of-custody systems and third-party verification. | Broad range of products that contain recycled content. | Certification and label | International | N/A |

| Certification name | Description | Applicable products | Type | Geographical application | ISO type, if relevant |
|---|---|---|---|---|---|
| ReMade in Australia | A certified label supported by the Australian Government to distinguish products made in Australia using local recycled content. Products certified under the label are likely to be required to meet minimum recycled content levels amongst a range of other criteria.<br>The rules are currently being assessed by ACCC with the label likely to be launched in 2026. | Broad range of products that contain recycled content | Certification | Australia | N/A |
| SGS Recycled Content Certification | Conducts comprehensive third-party assessments that lead to certifications validating the inclusion of recycled content in products, adhering to ISO 14021 standards to demonstrate commitment to sustainable development. | Broad range of products that contain recycled content. | Standard and certification | International | – |
| TCO Certified | A certification scheme for IT products covering climate, substances, circularity and supply chain. | Range of IT products. | Certification | International | Type I - Ecolabel |

| Certification name | Description | Applicable products | Type | Geographical application | ISO type, if relevant |
|---|---|---|---|---|---|
| UL 2809, Environmental Claim Validation Procedure (ECVP) for Recycled Content | Evaluates products for various types of recycled content, including post-consumer, pre-consumer, closed loop, ocean plastic, and by-product synergy. It provides third-party validation of sustainability claims, ensuring accuracy and credibility in reporting recycled material usage. | Broad range of products that contain recycled content. | Standard and certification | International | Type II – Self-declared environmental claim |
| Version 8.0. SCS Recycled Content Certification | Designed for manufacturers using post-consumer or pre-consumer recycled content seeking to substantiate claims about their products. The certification process involves an independent third-party audit by SCS, examining manufacturing data, processes, chain of custody procedures, and material calculations to ensure conformance with the SCS Recycled Content Standard. | Broad range of products that contain recycled content. | Certification | International | Type II |

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## For more information

Phone: 1300 361 967

Email: choose.circular@environment.nsw.gov.au

www.energy.nsw.gov.au