SOUTH AUSTRALIAN REUSE IMPACT STUDY, 2023-24

Technical report

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Charitable Reuse AUSTRALIA

Government of South Australia

Green Industries SA

Date	Title	Prepared by	Approved by
29 April 2025	Draft South Australian Reuse Impact Study: 2023-24 Technical Report	L De Garis, M Ellis and K Heinrich	K Heinrich
4 June 2025	South Australian Reuse Impact Study: 2023-24 Technical Report	L De Garis and M Ellis	M Rawson

This project is an initiative of Charitable Reuse Australia and Green Industries SA. This report was prepared by Rawtec.

Acknowledgment of Country

We acknowledge the Traditional Owners and Custodians of Country throughout Australia and their spiritual relationship with Sea and Country. We pay our respects to them, their cultures, and Elders past and present.

Contributors

We extend our sincere gratitude to the individuals and organisations who contributed to this study, as listed in the Introduction section of this report. Your support has helped make this significant project possible.

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Definitions

Term	Definition
Post-consumer donations	Items donated by consumers to reuse organisations (both not-for-profit and commercial).
Handled for reuse	Sum of all post-consumer items handled by reuse organisations. Excludes items sent to landfills in Australia.
Resold in South Australia	Items sold by reuse organisations to local consumers.
Donated to South Australian welfare recipients	Items donated by reuse organisations to welfare recipients.
Exported	Items exported overseas by commercial organisations to be sorted.
Exported and reused	Sum of all items exported and go to reuse destinations (including reuse and upcycling).
Locally repaired	Items repaired by reuse organisations when handled for reuse. These activities occur instore, in South Australia.
Internationally repaired	Items repaired overseas. These items have been exported by Australian reuse organisations to be sorted and then repaired.
Upcycled	Unusable objects or materials are transformed into higher-value products while preserving the integrity of the original materials.

Executive summary

About the Project

This study represents the most comprehensive measurement of South Australia's (SA's) reuse sector to date, providing critical insights into its scale, composition, and impact. SA's reuse sector is highly diverse, with a strong presence of rent-a-rack shops, commercial secondhand retailers, major charities, and church-run op shops. Charitable Reuse Australia, in partnership with Green Industries SA (GISA), engaged Rawtec to conduct the research with support from the project team to better understand and quantify reuse activity and its benefits. The findings demonstrate the sector's significant contributions, including job creation, consumer savings, carbon emissions reduction, and wider environmental and social outcomes.

Project Methodology

We ran a survey with South Australian reuse organisations to capture data on their activities and impacts. The survey was developed following Monash University's National Reuse Measurement Guidelines. Survey returns were received from organisations representing over 140 reuse shops in South Australia. The data collected included detailed information on reuse categories and volume, employment, revenue, and social impacts. We reviewed, validated, and anonymised the data, converting it into metrics such as transaction averages and employment per tonnes handled. This information was extrapolated to estimate overall reuse activities, economic value, social benefits, and environmental impacts.

Key Findings

The study estimates reuse activity across South Australian charity shops, not-for-profit reuse organisations, secondhand clothing shops, rent-a-racks, tip shops, and commercial reuse collectors/exporters. In 2023-24, these organisations:

- **Reuse shops**: Operated 427 reuse shops in South Australia, or 23 shops per 100,000 people. SA's reuse sector has a unique makeup. The sector is largely made up of small, single-shop operators, often volunteer-led and affiliated with local churches. Alongside these community op shops, South Australia also pioneered the rent-a-rack model nationally, enabling individuals to sell high-quality secondhand clothing through short-term rental arrangements. Larger charities and major commercial secondhand retailers also play an important role in the sector.
- **Volumes**: Reused an estimated 34.8 million items or 16,000 tonnes. This is equivalent to 19 items or 8.4 kilograms per South Australian. Most of these items (68% by weight) are reused within the state, with the rest exported and reused overseas.
- **Employment impact:**
    - **Paid employment:** Generated paid employment for approximately 505 full-time equivalents (FTEs), including 188 FTEs for individuals facing barriers to employment.
    - **Paid employment compared to recycling and landfill:** Generated 21 times more jobs than recycling and 69 times more than landfill (on a per tonne basis).
    - **Volunteers:** Employed 1,057 FTE volunteers across South Australia.

- **Economic value:** Sold or donated approximately $112 million worth of secondhand goods that were reused in 2023-24.
- **Cost of living relief:** Saved the South Australian community an estimated $231 million through selling and providing secondhand goods, compared to buying new items. This is equivalent to around $300 per household.
- **Contributions to social and environmental purposes:** Raised an estimated $14.2 million in funds that was reinvested into social and community programs and initiatives.
- **Training and skill development:** Provided an estimated 41,000 hours of training to their paid staff and volunteers.
- **Community engagement:** Facilitated an estimated 7.1 million transactions between the public and reuse shops.
- **Intangible social benefits:** Reuse organisations deliver intangible benefits, strengthening social bonds and supporting individual growth. They offer staff and volunteers opportunities for connection, confidence building, and purpose, while encouraging community-wide pride and responsibility for minimising environmental impacts.
- **Repair:** Reuse organisations repair 3% of all reused items. Most of this repair occurs offshore. Of items that are exported from Australia, an estimated 300 tonnes are repaired internationally.
- **Environmental impact:**
    - **Waste diversion:** Diverted an estimated 16,000 tonnes of products from landfill to reuse.
    - **Resource conservation:** Avoided the direct consumption of about 7,100 tonnes of virgin materials contained in displaced products[1].
    - **CO_2-e emissions**: Saved an estimated 130,000 tonnes of CO_2-e, equivalent to removing 51,000 passenger vehicles from the road.
    - **Water savings:** Saved approximately 5,400 megalitres (ML) of water, equivalent to the volume of 2,200 Olympic-sized swimming pools.
    - **Land use:** Saved about 49,000 hectares of land, equivalent to the size of 68,000 soccer pitches.

Challenges

South Australian reuse shops face a range of challenges. Volunteer shortages, along with limitations in volunteer availability and commitment, have led to increased reliance on paid staff. Fast fashion has lowered the quality of donations, leaving shops to manage an increasing number of items unfit for reuse. Dumping adds further strain, often resulting in vandalism, theft, and damage. Charitable reuse organisations receive only partial landfill rebates (75%), and must cover the remaining disposal costs, whereas commercial organisations are responsible for the full cost of disposal. Rising rent prices and utility bills are putting many organisations under financial pressure. Many 'bricks and mortar' shops operate in low-visibility, space constrained locations, while also competing with online marketplaces. The lack of local recycling options, for textiles and other items received, leaves few alternatives for

[1] Secondhand products do not displace new products on a one for one basis. This estimate accounts for displacement rates and only includes the avoided virgin materials in the displaced end products. Secondhand displacement rates at which consumers displace new items for new, are assumed at 35% for Clothing and Footwear, 54% for furniture, and 50% for all other items. Additional volumes of virgin materials are avoided upstream (e.g. offcuts from producing textiles) but were not quantified in this study.

managing items that can't be reused. These challenges highlight the critical need for increased support for the South Australian reuse sector.

Opportunities

Reuse organisations in South Australia have identified a range of opportunities for targeted support. Key areas include incentives to boost volunteer engagement, such as enhanced mutual obligation and work-for-the-dole programs. As well as investment in staff training and subsidised wage schemes to strengthen workforce capacity. Financial relief through subsidised rent, utilities, waste disposal, and full landfill levy rebates for charitable organisations, would significantly ease financial pressures. Education and engagement initiatives, such as public awareness campaigns and school-based programs, can help build a more informed and supportive community. Investing in local recycling infrastructure and providing free community drop off points for textiles and other difficult to recycle items would help reduce dependency on landfill. Additional support for marketing opportunities, and the introduction of secondary markets for damaged or repairable goods were also highlighted. A critical opportunity lies in effective product stewardship schemes, which promote responsible product design and collection.

Closing remarks

This study confirms the vital role South Australia's reuse sector plays in delivering environmental, economic, and social benefits. Reuse organisations not only divert significant volumes of material from landfill but also create employment opportunities, provide cost-of-living relief, and foster stronger community connections. The sector's contribution extends well beyond environmental gains, helping to build more resilient communities and providing pathways to training and inclusion. As South Australia continues to strengthen its circular economy, sustained investment and targeted policy support for reuse will be critical to unlocking the sector's full potential.

1. Introduction

1.1. About this project

This study estimates reuse activity and impacts in South Australia (SA) in 2023-24. The project demonstrates the immense benefits that the sector delivers, including employment, consumer savings, raising funds for charitable programs, carbon emissions reductions and more. SA's reuse culture is community driven, rehoming millions of secondhand goods each year.

1.2. Who is behind this study?

This project is an initiative of Charitable Reuse Australia in partnership with Green Industries SA (GISA). Rawtec was engaged to lead research for the project.

Project partners	Charitable Reuse Australia and Green Industries SA (GISA)
Research partner	Rawtec
Project team	Omer Soker, Martin Nordstrom, Salma Ghoraba (Charitable Reuse Australia), Han Tran, Serena Yang, John Vanzo (GISA), Kat Heinrich, Lucas De Garis, Meg Ellis (Rawtec).
Organisations that participated in research	ADRA Australia, All Nations Baptist Church, Animal Welfare League of SA, Australian Red Cross, Australia Wide Recycling, Bede's Bazaar, Bikes for Refugees, Bus Stop 30+2, Cummins Community Op Shop, Dulcie's Vintage Shop, FRWA Tip Shops, Garage Sale Trail, Goods @ Gertrude, Grenville Hub, Lifeline South East, Lions Club of Richmond Op Shop, Lyndoch Op Shop, Millicent Adventist Community Op Shop, Mitcham Village Uniting Church, North East Community Assistance Project Inc (NECAP) & Thrift Shop, OP Shop Club Fleurieu, Prelove, Quaker Opportunity Shop, Recycle Care Australia, ReUse Market - City of Mount Gambier, ReNew Fashion, RSPCA South Australia, Saint Hilary Green Shed Op Shop, Salvos Stores, Save the Children, SCR Group, St Paul's Anglican Church Op Shop, St Peter's Anglican Church - Glenelg, St Vincent De Paul Society, Statewide Australia, Tweedehands Preloved Market, Two Wells Craft Shop, Upcycle Adelaide Closet, and Worn Again.

1.3. How was data collected and reported?

The project followed the National Reuse Measurement Guidelines (Monash University, 2024) to quantify reuse activity across SA and estimate triple bottom line impacts. Data on reuse volumes was collected via a survey with South Australian reuse organisations using point-of-sales data where available and extrapolated to estimate reuse activity in SA. In addition, a subset of data was collected on repair prior to reuse. This report provides background on the project methodology and key assumptions for estimates.

1.4. What reuse activity is covered in this report?

This project estimates reuse activity across South Australian reuse organisation types listed in Table 1. This includes charity reuse/op shops, other not-for-profits[2], secondhand clothing shops, rent-a-racks and consignment shops, tip shops, and commercial reuse collectors/exporters. These organisations are referred to throughout the report as 'reuse organisations'. Secondhand items sold or reused via online marketplaces were separately reported (see Section 4).

Reuse activities not captured in this study include pawnshops, salvage yards, auction houses, commercial secondhand furniture shops, reclaimed timber shops[3]. The project survey could be expanded in future years to capture these additional volumes of reuse activity.

Pre-consumer items are new items sold/donated from retailers and manufacturers to organisations for resale. Data on pre-consumer items was excluded from the project analysis because these items have not previously been worn or used and therefore are not technically counted as 'reuse'.

Table 1: Reuse organisation types included and not captured in study

Reuse organisation types included	Separately reported	Not captured
• Charity reuse/op shops • Other not-for-profit reuse shop[2] • Secondhand clothing shops (commercial) • Rent-a-racks and consignment shops • Commercial reuse collectors/exporters • Tip shops (both council and third-party run)	• Online Marketplaces	• Pawnshops • Auction houses • Commercial secondhand furniture shops and salvage yards • Reclaimed timber shops[3] • Other reuse shops not listed and informal reuse activity

[2] Includes other not-for-profit reuse organisations that don't identify as traditional charities, with their focus on enterprise to help society.

[3] Reclaimed timber was captured, but not from organisations that handle timber exclusively.

2. Methodology

We undertook the following methodology to deliver this project.

2.1. Survey with reuse organisations

We developed a project survey to capture information on reuse activity and impacts in SA. The survey form was:

- designed to capture data on reuse activity and impact data across SA (see Box 1)
- prepared in line with the Monash University National Reuse Measurement Guidelines (2024)
- promoted via Charitable Reuse Australia and GISA's networks
- distributed to reuse organisations across SA (based on a list of reuse organisations compiled by the project team)

The project team provided support to organisations with completing survey returns. We received data from 39 reuse organisations (large and small), representing over 140 reuse shops in SA.

Box 1: Information captured by survey

- Organisational information (e.g. name, organisation type, number of reuse shops, etc)
- The number of items reused by product category (Tier 1) and type (pre- vs post- consumer)
- A further breakdown of reuse by product category at Tier 3 level.
- Transaction data on the number secondhand items sold in SA, donated to welfare recipients, and exported overseas
- Employment data – paid vs volunteer, open and targeted employment
- Workforce training and support provided to staff and volunteers
- Reuse-derived revenue spent on social/environmental purposes
- Public education and outreach relating to reuse activities in SA
- Repair activities undertaken on reuse items prior to sale
- Challenges and opportunities for reuse
- Average weight of products sold for reuse

A list of product categories (by Tier) from the National Reuse Measurement Guidelines is provided in Appendix 3.

We also developed and distributed a separate survey to organisations exporting secondhand items from SA. The survey captured data on items exported at the Tier 1 level. The survey collected information on the proportion of items upcycled or repaired, and final destinations; returned to Australia for reuse, reused in other countries, downcycled into rags/cleaning clothes, recycled, recovered through energy from waste, and landfilled.

2.2. Reviewing and validating survey responses

Survey data was reviewed, data gaps were filled where possible, and anomalies were identified and either validated or refined in consultation with data custodians.

All data was anonymised and aggregated, and transformed into reuse activity and impact metrics, for example:

- The average number of transactions per shop
- Paid employment (FTEs) per 10,000 tonnes of reuse
- Average sale price by item

The metrics were then presented to the project partners for review, and some estimates were refined in line with reality checks.

2.3. Estimating items reused

Data was extrapolated to estimate reuse activity in SA.

2.3.1. Secondhand items resold in South Australia

Data was extrapolated by reuse organisation type (e.g. charity, tip shops, etc). For each organisation type, we summed reported survey data on the number of items resold (at tier 3 level). We then used these totals to estimate average items resold per shop. The average number of items per shop was then multiplied by the total number of reuse shops in SA (see Section 3).

2.3.2. Secondhand items donated to South Australian welfare recipients

Donations were reported at the tier 1 level. To estimate donations at the tier 3 level, we applied the proportion of resold tier 3 items to the tier 1 donation data. Using the surveyed data, we calculated the number of items donated per shop for each product category and extrapolated these figures based on the total number of reuse shops in SA.

2.4. Estimating economic impacts

The following sections outline methods for estimating economic impacts. Survey data was grouped and analysed by organisation type and then aggregated to estimate SA's total economic impact, as reported in Section 5.

2.4.1. Employment

Survey data on the total number of paid FTEs was summed and divided by total reuse tonnes handled by the surveyed organisations. This provided metrics on paid FTEs per 10,000 tonnes. This data was extrapolated using total tonnes reused to estimate total paid employment in SA. The same method was repeated to estimate total volunteer FTEs.

2.4.2. Value of secondhand items sold or donated

Surveyed organisations provided a resale value per item ($/item) at the tier 1 level. For each organisation, total resale revenue was calculated based on these values and total number of items resold. The total revenue was summed from surveyed organisations, divided by the total number of items resold by surveyed organisations. This provided a weighted average price per item at the tier 1

level. For donated items, we assumed that the value per item was the same as the value of resold items. These item values were multiplied by the total number of items resold and donated respectively to determine the total value of the items resold or donated.

2.5. Estimating social impacts

The following sections outline methods for estimating social impacts. Survey data was grouped and analysed by organisation type and then aggregated to estimate SA's total social impact, as reported in Section 6.

2.5.1. Cost of living relief

Community savings from buying or receiving secondhand goods were estimated. Survey data was used to estimate the average sale price of secondhand goods (see Appendix 2). For secondhand goods sold, savings were calculated as the difference between the cost to buy new and the cost to buy secondhand. For welfare recipients, savings were calculated as the full value of buying new (since they received the secondhand items at no cost).

2.5.2. Reinvestment of surplus into social and community programs

Reuse shops provide an important source of revenue for social and community programs. Survey data was used to calculate the proportion of resale revenue that is reinvested in programs (and by program category). This was then extrapolated to estimate total reinvestment.

2.5.3. Hours of training provided per year

Survey data was used to estimate hours of training per FTE per year. This included estimates by training category; formal work-readiness training, informal work-readiness training, life skills (e.g. personal presentation, communication, etc), case-management support and professional development. This data was then extrapolated by the total FTEs to estimate total hours of training per year.

2.5.4. Community engagement

Survey data was used on unique transactions[4] across reuse shops. A metric for 'items per transaction' was calculated, and total unique transactions were extrapolated from this data.

2.6. Estimating environmental impacts

We estimated the following environmental impacts across SA:

- Diversion of waste from landfill
- Avoided consumption of virgin materials
- Carbon emission savings
- Water use savings
- Land use savings

[4] Unique transactions refer to the individual sale or purchase event at a reuse shop, regardless of the number of items purchased in that transaction.

Displacement rates were applied to the total tonnes of reuse to estimate avoided consumption of virgin materials (see key assumptions in Appendix 2). The method estimates avoided virgin materials contained in the displaced end products. Additional volumes of virgin materials are avoided upstream (e.g. offcuts from producing textiles) but were not quantified in this study. As such, these estimates are conservative.

Environmental conversion factors (ECFs) for carbon, land and water were applied to estimate environmental savings from displacing products through reuse. ECFs were adopted from a Lifecycles study 'Environmental impact factors for products displaced from reuse, 2024', commissioned by Charitable Reuse Australia. See Appendix 4.

The findings are summarised in Section 7.

2.7. Estimating repair

Repair activities performed by reuse organisations on secondhand items prior to sale were estimated. Survey data provided the proportion of items repaired (%), including for 'Clothing and textiles' and 'Household and homewares, toys and games'. Estimates were derived for per cent locally repaired items, and per cent for items repaired after export (for organisations that specified this). These percentages were extrapolated using the locally resold tonnes (for the locally repaired items), and the total exported tonnes (for the internationally repaired items).

The locally repaired method was undertaken for each type of reuse organisation and summed to estimate the full scale of repair across SA in Section 8.

3. Findings: Reuse shops

We identified a total of 427 reuse shops in SA across the organisation types within the study's scope. This is equivalent to 23 reuse shops per 100,000 people.

In South Australia, there are 23 reuse shops per 100,000 people

We classified large organisations as those operating 7 or more shops, and small organisations as those operating a single shop. Most reuse shops in SA fall into these two categories (Table 2). Small organisations make up the majority (58%) of the South Australian reuse sector, highlighting its unique make-up. These are typically volunteer-run and embedded in their local communities, often taking the form of independent church-affiliated op shops.

Table 2: Number of reuse shops by size of organisation in SA (for organisation types within the study's scope)

	Number of shops	Proportion of shops
Large Organisations (7+ shops each)	133	31%
Medium Organisations (2-6 shops each)	47	11%
Small Organisations (1 shop each)	247	58%
Total	**427**	**100%**

Table 3 presents a breakdown of reuse shop types and their frequency relative to population. We identified 361 charity/ NFP reuse shops[5], 8 tip shops, 23 consignment/rent-a-racks shops, and 35 commercial reuse shops.

SA was the first state in Australia to introduce the rent-a-rack model in 2018. There are now a total of 23 consignment or rent-a-rack shops statewide[6]. This model benefits the shop by generating income through rental fees and commission, while also providing community members with a way to earn money from selling unused garments in the store for a set period. SA's strong network of consignment/rent-a-rack shops play a crucial role in driving the economic impact of the reuse sector[7].

Table 3: Breakdown of reuse shops and their frequency relative to population.

	Charity/ NFP reuse shops[5]	Tip shops	Consignment/ Rent-a-racks	Commercial reuse shops	**Total**
Total number of shops	361	8	23	35	**427**
Shops per 100k people	19.2	0.4	1.2	1.9	**23**

[5] includes Neighbourhood Houses/Community Centres with op shops.

[6] There are some differences between the Consignment and Rent-a-rack models, but they both allow individuals to provide their unwanted items as stock for a set period, where the pre-loved clothing is sold.

[7] Items sold in these shops are typically high quality, which is reflected in their prices - even as secondhand goods.

4. Findings: Items reused

In 2023-24, an estimated 34.8 million secondhand items were rehomed through South Australian charity shops, other not-for-profits, secondhand clothing shops, rent-a-racks, tip shops, and commercial reuse collectors/exporters. This equates to 19 items per person, and 16,000 tonnes or 8.4 kilograms per person. Of these items:

- 17.1 million were resold in SA
- 230,000 were donated to SA welfare recipients, and
- the remaining 17.4 million items were reused overseas (Table 4).

South Australians reuse 8.4 kilograms per person per year.

Table 4: Estimated number of items reused via South Australian reuse organisations, 2023-24. Totals may not sum due to rounding.

	Items reused (#/yr)	Weight reused (t/yr)
Resold in SA	17,100,000	11,000
Donated to SA welfare recipients	230,000	100
Sold for overseas export and reuse	17,400,000	5,000
Total	**34,800,000**	**16,000**
Per South Australian	19 items/person	8.4 kg/person

Table 55 provides a further breakdown of total items reused by product category. Of the 34.8 million items:

- 24.2 million items (or 6,300 tonnes) were clothing
- 2.2 million items (or 1,200 tonnes) were other textiles
- 230,000 items (or 5,100 tonnes) were furniture and large appliances
- 8.1 million items (or 2,700 tonnes) were smaller household items and
- 100,000 items (or 500 tonnes) were building and hardware items (such as wood and timber products)

Box 2: Quantifying reuse across online marketplaces

Large volumes of secondhand items are exchanged via online marketplaces, such as eBay, Gumtree, and Facebook Marketplace operating primarily in the consumer-to-consumer space (C2C). To obtain this data, we analysed publicly available information on the value and types of items exchanged. We estimate that a further 4 million items are rehomed in SA through online marketplaces (across the same product categories listed in Table 5). These findings are presented separately from other data in this report due to the limited confidence in the accuracy of estimates for online marketplaces. Consequently, estimates for online marketplaces are omitted from the remainder of the report to maintain data integrity.

Table 5: Further breakdown of data from Table 4 showing the estimated number of items reused and weight (tonnes) per product category, 2023-24. Totals may not sum due to rounding. Note that these categories are based on the National Reuse Measurement Guidelines, which are drawn from the ABS charter of national accounts (see Appendix 3).

Product category	Items reused (#/yr)	Weight reused (t/yr)
Clothing & Textiles	26,400,000	7,500
Clothing	24,200,000	6,300
Clothing (knitwear)	210,000	100
Clothing (other than knitwear)	1,030,000	300
Clothing (not specified)	21,700,000	5,400
Footwear	1,230,000	500
Textiles	2,240,000	1,200
Textiles: Raw textiles and fabrics	350,000	100
Textiles: Products and carpet	770,000	800
Textiles: Handbags and suitcases	910,000	300
Textiles (not specified)	210,000	<100
Household & Homewares, Toys & Games	8,270,000	7,800
Furniture & Large Appliances	230,000	5,100
Indoor Furniture	130,000	1,900
Whitegoods and large appliances	98,000	3,200
Smaller items	8,050,000	2,700
Cushions & Furnishings	140,000	<100
Glassware	590,000	200
Ceramics and pottery	700,000	200
Metal homewares, cutlery & cookware	860,000	200
Toys, sports (including bikes), games, art supplies & bric a brac	1,120,000	300
Books, magazines, software and video games	1,520,000	400
Music and videos	570,000	100
Computers, peripherals and home electronics	270,000	200
Homewares/ Bric a brac / Electronics (not specified)	2,280,000	1,100
Building & Hardware	100,000	500
Metal tools and hardware	10,000	<100
Outdoor tools and machinery	<100	<100
Wood and timber products	<100	<100
Plastic products	600	<100
Rubber products	<100	<100
Ferrous metal	<100	<100
Non-ferrous metal	<100	<100
Other (not specified)	90,000	500
Total	**34,800,000**	**16,000**

5. Findings: Economic impact

5.1. Employment

In 2023-24, reuse organisations generated paid employment for an estimated 505 full time equivalents (FTEs). This included 316 FTEs in open employment, where employees perform work duties under typical conditions and don't receive targeted support. Additionally, 188 FTEs are held by individuals facing barriers to employment. This includes Long-term unemployed (27), Migrant/refugee background (8), Centrelink Mutual obligation (35), and Other (not specified) (118).

Further, an estimated 1,057 FTEs volunteer their time across reuse organisations. These volunteer FTEs are completed by over 17,000 people across SA. This does not specifically include any data from volunteer campaign events.

Reuse generates more jobs on a per tonne basis than recycling and landfill:

- The estimated direct FTE employment per 10,000 tonnes of waste is 9.2 for recycling and 2.8 for landfill disposal[8]
- This compares to 194 paid FTEs per 10,000 tonnes of material handled for reuse (Table 6).

In other words:

Reuse generates 21 times more jobs than recycling and 69 times more jobs than landfill (on a per tonne basis).

Table 6: Estimated employment by reuse organisations in SA, 2023-24. Totals may not sum due to rounding.

	Paid (FTEs)	Volunteer (FTEs)	Total (FTEs)
Open employment	316	670	987
Barriers to employment	188	387	575
Total	**505**	**1,057**	**1,562**
FTEs per 10,000 tonnes handled[9]	194	406	599

[8] Access Economics (2009), Employment in waste management and recycling.

[9] Denominator used accounts for the fact that material is handled twice in some instances across multiple organisations. E.g. material donated to a charity may be sent to a commercial reuse collector/exporter. Total tonnes handled for reuse = 26,000 t/yr, whereas total tonnes reused = 16,000 t/yr.

5.2. Value of secondhand items sold or donated

Secondhand items sold or donated were valued at an estimated $112.5 million dollars in 2023-24. This includes:

- $106 million of items resold in SA (e.g. through vintage and op shops)
- $1.5 million of items donated to SA welfare recipients, and
- $4.9 million of items exported overseas and reused (Table 7).

Table 7: Estimated value of secondhand items sold or donated by South Australian reuse organisations, 2023-24. Totals may not sum due to rounding.

	Value ($)
Resold in SA	$106,100,000
Donated to SA welfare recipients	$1,500,000
Sold for overseas export and reuse	$4,900,000
Total	**$112,500,000**

6. Findings: Social impact

6.1. Cost-of-living relief

Australia is facing a cost-of-living crisis. Reuse organisations provided an estimated $231 million in community savings in 2023-24, or around $300 of savings per household. This represents the savings to the community from buying or receiving secondhand goods compared to buying new.

Reuse organisations help to relieve cost of living pressures, saving South Australians an estimated $300 per household in 2023-24

6.2. Reinvestment of surplus into social and community programs

Reuse organisations provide an important source of revenue to fund social and community programs, primarily within SA, with some contributions extending across Australia and overseas. In SA, an estimated $14.2 million was reinvested by reuse organisations into social and community programs in 2023-24. This includes support for:

- People experiencing homelessness
- People with a disability
- Youth, elderly people, and families
- Targeted employment and workforce development
- Emergency relief
- Promoting reuse and circular economy principles.

Reuse organisations reinvested an estimated $14.2 million in social and community programs and initiatives.

6.3. Hours of training provided per year

Reuse organisations provided an estimated 41,000 hours of training to their paid staff and volunteers in SA in 2023-24. This included work-readiness training, life skills, case management support and professional development (Table 8).

Table 8: Training provided to paid staff and volunteers across South Australian reuse organisations (estimated hrs/yr), 2023-24. Totals may not sum due to rounding.

	Total Training Provided (hrs/yr)
Formal work-readiness training	3,200
Informal work-readiness training	34,000
Life skills (e.g. personal presentation, communication, etc)	2,500
Case-management support	200
Professional development (including training)	700
Total	**41,000**

6.4. Community engagement

Reuse shops offer the public a chance to participate in reuse activities. We estimate that the public undertook 7.1 million transactions across SA in 2023-24.

6.5. Intangible benefits

Reuse organisations also provide invaluable social benefits that extend beyond measurable outcomes.

For both paid and volunteer staff, these benefits include:

- Fostering social connections and a sense of belonging
- Providing purpose, routine, and meaningful engagement
- Boosting confidence, self-esteem, and personal fulfillment
- Facilitating intergenerational learning, skill-sharing, and personal growth
- Offering pathways to employment and skills development, particularly for those facing barriers to work

For the broader South Australian community, these benefits include:

- Instilling a sense of pride and collective responsibility for reducing environmental impacts of consumption
- Strengthening local networks and community resilience
- Creating opportunities for education and awareness around sustainable living
- Encouraging positive behavioural change by demonstrating the value of reuse
- Aiding the community through adjacent charitable programs

These social impacts reinforce the critical role reuse organisations play in not only reducing waste but also enriching the lives of individuals and communities across SA.

7. Findings: Environmental savings

7.1. Landfill diverted

Reuse organisations diverted an estimated 16,000 tonnes of products from landfill to reuse in 2023-24.

7.2. Avoided consumption of virgin materials

Buying secondhand reduces the need for consumers to buy new products. This, in turn, avoids consumption of virgin materials that would otherwise have been used to make the new products. The direct consumption of 7,100 tonnes of virgin materials was avoided through reuse activity by South Australian reuse organisations. This estimate considers rates at which consumers displace new items for new, assumed at 35% for Clothing and Footwear, 54% for indoor furniture, and 50% for all other items. The estimate only includes virgin materials in the displaced end products and does not account for additional virgin materials avoided upstream (e.g. excludes offcuts from production).

7.3. Carbon, water, and land savings

Extracting virgin materials and manufacturing them into new products generates greenhouse emissions, uses land, and consumes water. Using secondhand items avoids environmental impacts of making new products. Reuse activity saved an estimated[10]:

- 130,000 tonnes of carbon dioxide equivalent (tonnes of CO_2-e), equivalent to taking 51,000 passenger vehicles off the road,
- 5,400 megalitres (ML) of water, equivalent to the water volume of 2,200 Olympic-sized swimming pools, and
- 49,000 hectares (ha) of land, equivalent to the size of 68,000 soccer pitches.

These estimates are based on the Environmental Conversion Factors study completed by Lifecycles (2024), which assessed the environmental impacts of products displaced through reuse (Appendix 4).

[10] These estimates represent the environmental savings of avoiding making new products (through displacing them with secondhand items). Additional environmental savings are achieved by diverting items from landfill (and hence preventing materials breaking down anaerobically), however these were not quantified since the savings are minimal compared to the upstream environmental savings from preventing new products being made. In addition, the estimates do not account for environmental impacts of running reuse operations (e.g. collection of secondhand items, running reuse shops, etc), however, again, these impacts are negligible compared to the environmental savings from avoiding making new products.

Table 9: Estimated environmental savings of reuse activity through South Australian reuse organisations, 2023-24.

Landfill diversion to reuse (tonnes)	16,000
Avoided consumption of virgin materials (tonnes)	7,100
Carbon emission savings (tonnes CO_2-e)	130,000
> equivalent number of passenger vehicles taken off the road	51,000
Water savings (ML)	5,400
> equivalent number of Olympic size swimming pools	2,200
Land savings (ha)	49,000
> equivalent number of soccer pitches	68,000

8. Findings: Repair

Reuse organisations repair 3% of all reused items. Most repair occurs offshore. Of items that are exported from Australia, an estimated 300 tonnes are repaired internationally. Locally, it is estimated that 100 tonnes of items are repaired.

Table 10: Number of items repaired locally and internationally prior to reuse. Totals may not sum due to rounding.

	Locally Repaired (t/yr)	Internationally Repaired (t/yr)	Total (t/yr)
Clothing and textiles	<50	300	400
Household and homewares, toys and games	<50	-	<50
Building and hardware	-	-	-
Total	100	300	**400**
% of Total Reused			**3%**

9. Findings: Challenges and Opportunities

9.1. Challenges

South Australian reuse organisations face several challenges.

Volunteer shortages and limitations

A declining number of volunteers has increased reliance on paid staff, which in some cases has led to temporary shop closures. While many volunteers are committed and reliable, some can only provide limited support due to physical mobility challenges, and others may be less consistent or not fully committed, leading to gaps in volunteer support.

Donations and stock quality

Many donated items are unsuitable for reuse, often due to poor quality or being outright waste, partly driven by the influence of fast fashion. Extra time and resources are needed to sort through unsuitable goods, increasing costs. There is also a general lack of public education about what constitutes a suitable donation.

Vandalism and damage

Donations left outside after hours are subject to rummaging, vandalism, and theft. Items can also be damaged by weather, reducing their potential for reuse and adding to waste management challenges.

Financial constraints

High rent and utility costs make it difficult for reuse organisations to sustain regular operations. Organisations bear the cost of disposal for unsellable donations, which were never appropriate for reuse in the first place. South Australian charitable reuse organisations currently receive partial (75%) levy subsidy for disposal of unsuitable donations, leaving these organisations to cover the remaining costs of landfill disposal. Budget and resource limitations restrict investment in marketing opportunities.

Recycling challenges

A lack of accessible local recycling solutions, combined with disposal fees charged by facilities, presents ongoing barriers for reuse organisations trying to manage unsellable goods sustainably.

Export market challenges

Textile export prices have declined, and exporters are increasingly selective about what they accept.

Location and space constraints

Some shops suffer from poor foot traffic and low community awareness, reducing sales and engagement. Many shops also face storage and space constraints, limiting their ability to hold, sort, and display donations effectively.

Other challenges

Reuse shops face growing competition from online marketplaces. Additionally, their social and environmental contributions are often overlooked or undervalued by the broader community.

9.2. Opportunities

Reuse organisations identified several opportunities for support, as outlined below.

Workforce and Volunteers

Reuse organisations identified the need for improved workforce support. Suggestions included strengthening mutual obligation and work-for-the-dole programs by offering retail training and increasing participant hours. Organisations also highlighted the need for employment grants to help hire more staff, along with the development of sector-specific traineeships and targeted incentives to attract and retain volunteers.

Financial Relief and Support

Financial relief and support for the reuse sector would help ease financial pressures. Organisations also suggested that government assistance programs could provide support to alleviate core operating costs, including rent, utilities (electricity, water, and gas), waste disposal, and freight.

Education and Public Engagement

There is a big opportunity to invest in public education campaigns to promote appropriate donation practices and raise awareness of the environmental impact of reuse activities. Organisations also identified opportunities to provide recycling education to staff and volunteers and integrating sustainability education into schools to build long-term awareness about fast fashion, environmental responsibility, and conscious consumer behaviour.

Recycling and Waste Innovation

There is an opportunity to establish a local textiles recycling infrastructure to reduce reliance on overseas markets. Organisations also identified a need for greater access to recycling stations /drop off points for items like e-waste, mattresses, and textiles.

Other Opportunities

Further support is needed to boost visibility and engagement through financial and strategic support for advertising and marketing, particularly via social media. Organisations also called for the introduction of extended producer responsibility (EPR) schemes across industries. These schemes would require manufacturers to take responsibly for the end-of-life treatment of their products. Finally, there is an opportunity to grow secondary markets that can accept damaged goods for repair, resale, or sale of parts.

10. Data gaps/limitations and future research opportunities

This methodology is the most detailed of its kind in Australia and estimates reuse activity and triple-bottom-line impacts at the state level. However, as with any research endeavour, there were some data gaps and opportunities for enhancement. These areas for improvement and expansion in future reporting periods are summarised below.

10.1. Engaging online marketplaces

Large volumes of secondhand items are exchanged via online marketplaces, such as eBay, Gumtree, and Facebook Marketplace operating primarily in the consumer-to-consumer space (C2C). As recent attempts to engage these organisations for a NSW reuse study were unsuccessful, direct engagement was kept out of scope for this project.

To fill this data gap, we performed a high-level analysis of publicly available data on the value and type of items exchanged. We estimate that a further 4 million items are rehomed in SA through online marketplaces. These findings are presented separately from other data in this report due to the limited confidence in the accuracy of estimates for online marketplaces.

Recommendation 1: Charitable Reuse Australia should continue to engage with online marketplaces with the aim of securing data for future surveys.

10.2. Expanding survey to other local reuse activities

This study encompassed a diverse array of reuse organisations in SA, including charity shops, other not-for-profits, secondhand clothing shops, rent-a-racks, tip shops, and commercial reuse collectors/exporters. However, certain reuse activities were not included in this study, including reuse activity across pawnshops, salvage yards, reclaimed timber shops, auction houses, commercial secondhand furniture shops and uniform reuse. There is an opportunity to expand on this work, by capturing these organisations in future.

Recommendation 2: Consider expanding project scope in future years to capture additional volumes of reuse activity from pawnshops, salvage yards, commercial secondhand furniture shops, auction houses and online marketplaces.

10.3. Secondhand product weights for 'Building and Hardware'

Data was collected from reuse organisations on the average weight of secondhand items by product category (see Appendix 1). For example, the average weight of a piece of clothing (other than knitwear) in SA is around 250 grams. However, item weights can vary significantly within a category; for instance, the weight of baby clothing differs from that of an adult winter jacket. The data on the weight of clothing represents the average across thousands of donated clothing items, encompassing a variety of clothing types.

Data on tier 3 product categories within 'Clothing and textiles' and 'Household and homewares, toys and games' were gathered from organisations with a substantial number of shops. Conversely, data points for the weights of 'building and hardware' items were more limited. We recommend more data is collected on these items weights in future studies to refine these estimates.

Recommendation 3: Conduct research to gather more data points for product weights of 'building and hardware'. This could be addressed by expanding future surveys to include salvage yards (see Recommendation 1).

10.4. Displacement rates

Further research is needed to validate the 'offset effect' of reduced new-item consumption resulting from reused item purchases. We adopted displacement rates based on research by, and consultation with, BehaviourWorks Australia. This included displacement rates for clothing and footwear (35%) and furniture (54%). There were several items where we had gaps and assumed a displacement rate of 50% (see Appendix 2).

Recommendation 4: Commission research to develop a comprehensive suite of displacement rates aligning with Tier 3 product categories in the National Guidelines for Measuring Reuse.

10.5. Improving the capacity of reuse organisations to report on repair, public education and outreach activities

We sought data from reuse organisations on their public education and outreach activities. Several survey respondents reported data on the number of unique transactions across their reuse shops in SA (an indicator of the number of customers engaging in reuse).

A few organisations participate in community education opportunities; however, these are mostly organised externally. As a result, there was insufficient data to estimate public education efforts by reuse organisations across SA.

This study also sought to estimate repair activities performed by reuse organisations on secondhand items prior to sale. Data was collected on both local repair activities (e.g., repairs conducted by volunteers at op shops) and international repair efforts (e.g., garments sent overseas for repair prior to reuse). Many survey respondents indicated that the data provided was a high-level estimate and did not have systems to measure these repair activities regularly and accurately.

Recommendation 5: Undertake study with a sample of reuse organisations to improve their methods and processes for tracking repair, public education, and outreach activities.

10.6. Environmental conversion factors for avoided virgin material consumption

Choosing secondhand over new products reduces demand for new goods and the virgin materials required across the entire value chain—from resource extraction and manufacturing to transport, retail, and consumption. This study estimates avoided virgin material consumption and accounts only for the materials contained in displaced end products. However, additional volumes of material are avoided upstream reductions, such as textile production offcuts. Expanding the environmental conversion factors in Appendix 3 to include virgin material values will enable measurement of these additional environmental benefits.

Recommendation 6: Expand set of environmental conversion factors to include factors for avoided virgin material consumption at Tier 3 level.

Appendix 1 – Average weights of secondhand products/items

Table 11 below provides a list of average weights of secondhand products/items. This data was collected in the survey from reuse organisations and supplemented with data we developed for previous reuse studies we delivered for NSW and Tasmania. See Section 10.3 and recommendation 3 of main report.

Table 11: Average weights of secondhand products/items (g/item). "ND" represents no data reported.

Product category	Average item weight (g/item)
Clothing & Textiles	
Clothing	
Clothing (knitwear)	404
Clothing (other than knitwear)	251
Clothing (not specified)	250
Footwear	440
Textiles	
Textiles: Raw textiles and fabrics	300
Textiles: Products and carpet	1,000
Textiles: Handbags and suitcases	300
Textiles (not specified)	250
Household & Homewares, Toys & Games	
Furniture & Large Appliances	
Indoor Furniture	14,992
Whitegoods and large appliances	32,500
Smaller items	
Cushions & Furnishings	314
Glassware	265
Ceramics and pottery	299
Metal homewares, cutlery & cookware	264
Toys, sports (including bikes), games, art supplies & bric a brac	250
Books, magazines, software and video games	250
Music and videos	206
Computers, peripherals and home electronics	750
Homewares/ Bric a brac / Electronics (not specified)	486
Building & Hardware	
Metal tools and hardware	1,500
Outdoor tools and machinery	5,000
Wood and timber products	12,500
Plastic products	200
Rubber products	ND
Ferrous metal	ND
Non-ferrous metal	800
Other (not specified)	5,500

Appendix 2 – Key assumptions

Table 12: List of key assumptions and external data used during the analysis

Item	Value	Units	Notes
Number of reuse shops/sites in SA			
Number of Large NFP/Charity op shops identified	169	sites	Based on data received by Charitable Reuse Australia, Green Industries SA, and further online searches
Number of Small NFP/Charity op shops identified	184	sites	"". Extrapolated with "Neighbourhood Houses (Community Centre Op Shops)".
Number of Neighbourhood House (Community Centre Op shop) identified	8	sites	"". Extrapolated with "Small NFP/Charity op shops".
Number of Tip Shops Identified	8	sites	""
Number of Commercial Op Shops Identified	32	sites	"".
Number of Large Commercial Shops Identified	3	sites	"".
Number of Consignment Shops Identified	23	sites	""
Number of Commercial Second Hand Bookshops Identified	3	sites	"". Excluded from the analysis.
Number of Bike Reuse Shops Identified	1	sites	"". Excluded from the analysis.
Number of Reclaimed Timber Shops Identified	1	sites	"". Excluded from the analysis.
Displacement rates			
Displacement rate for clothing and footwear	35%	%	In line with National Reuse Guidelines
"" for furniture	54%	%	In line with National Reuse Guidelines
"" for all other product categories (not captured above)	50%	%	Assumption
Conversion factors			
Average emissions for Australian passenger vehicles per year	2.50	t CO2-e/yr	Based on average km per year and average GHG emissions per km
Minimum volume of an Olympic Swimming Pool	2.50	ML	Based on FINA Technical Guidelines for Olympic Swimming Pool sizes
Recommended size of a soccer pitch	0.71	ha	Based on FIFA Technical Guidelines for pitch dimensions
Average price of new items			
Clothing & Textiles	$23.48	$/item	Estimated from survey data
Household & Homewares, Toys & Games	$15.05	$/item	Estimated from survey data
Building & Hardware	$21.73	$/item	Estimated from survey data
Average price of secondhand items sold in Tas			
Price per item			
Clothing & Textiles	$ 7.81	$/item	Estimated from survey data
Household & Homewares, Toys & Games	$ 4.48	$/item	Estimated from survey data
Building & Hardware	$ 5.39	$/item	Estimated from survey data
Price per tonne			
Clothing & Textiles	$ 28,114	$/tonne	Estimated from survey data
Household & Homewares, Toys & Games	$ 4,758	$/tonne	Estimated from survey data
Building & Hardware	$ 1,064	$/tonne	Estimated from survey data
Export data			
Average price for clothing exported from South Australia	$ 0.60	$/kg	-
Export Destinations (rounded)			
Reused	61%	%	Estimated from survey data
Downcycled to Rags	16%	%	Estimated from survey data
Recycled	2%	%	Estimated from survey data
Energy From Waste & Landfill	20%	%	Estimated from survey data

Appendix 3 – Product categories from National Reuse Measurement Guidelines

The product categories from the National Reuse Measurement Guidelines are derived from the Input-Output tables of the Australian National Accounts, published by the ABS.

Table 13: Items sold for reuse and corresponding tiers according to Monash University's National Reuse Measurement Guidelines

Tier 1	***Tier 2***	***Tier 3***	**IOPG**
Clothing and textiles	Clothing	Clothing (knitwear)	1304
		Clothing (general)	1305
		Clothing (not specified)	1305
	Footwear	Footwear	1306
	Textiles	Raw textiles and fabrics	1301
		Textile products and carpet	1303
		Handbags and suitcases	1302
		Other textiles (not specified)	
Household & homewares, toys and games.	Furniture and large appliances	Indoor furniture	2501
		Whitegoods and large appliances	2404
	Smaller items	Cushions and furnishings	2501
		Glassware	2001
		Ceramics and pottery	2002
		Metal homewares, cutlery & cookware	2204b
		Toys, sports, games, art supplies and bric a brac	2502
		Books, magazines, software and video games	5401
		Music and videos	5501
		Computers, peripherals and home electronics	2401
		Homewares/ Bric a brac/ Electronics (not specified)	
Building and hardware	Building materials	Wood and timber products	1402
		Plastic products	1901
		Rubber products	1902
		Ferrous metal	2101
		Non-ferrous metal	2102
	Hardware	Metal tools and hardware	2204a
		Outdoor tools and machinery inc. powered outdoor tools and lawnmowers	2405
	Other building and hardware	Other building and hardware (not specified)	

Appendix 4 – Environmental conversion factors

Charitable Reuse Australia engaged Lifecycles to develop a list of Environmental Conversion Factors (ECFs) for products displaced from reuse. These ECFs align with Tier 3 categories of the National Guidelines for Measuring Reuse and were derived from a consistent source of data (Exiobase).

Table 14: Environmental conversion factors for products displaced from reuse (Source: Bontinck, P.A., Grant, T.F. (2024), Environmental impact factors for products displaced from reuse, Lifecycles, Melbourne, Australia).

	GHG Emissions (kg CO2e/kg)	Water Use (L/kg)	Land Use (m2/kg)
Clothing and textiles			
Clothing			
Clothing (knitwear)	38	1,039	263
Clothing (other than knitwear)	29	1,590	44
Clothing (not specified)	30	1,515	74
Footwear	12	540	57
Textiles			
Raw textiles and fabrics	16	1,456	66
Textile products and carpet	20	1,442	82
Handbags and suitcases	17	700	106
Other textiles (not specified)	19	1,352	85
Household and homewares, toys and games			
Furniture and large appliances			
Indoor furniture	6	167	102
Whitegoods and large appliances	10	295	9
Smaller items			
Cushions and furnishings	34	1,316	141
Glassware	1	13	0
Ceramics and pottery	1	48	1
Metal homewares, cutlery and cookware	8	178	8
Toys, sports, games, art supplies and bric a brac	5	175	64
Books, magazines, software and video games	29	1,086	254
Music and videos	8	287	32
Computers, peripherals and home electronics	143	3,596	127
Homewares/ bric a brac / electronics (not specified)	10	315	93
Building and hardware			
Metal tools and hardware	8	178	8
Outdoor tools and machinery	10	295	9
Wood and timber products	1	44	176
Plastic products	6	198	8
Rubber products	4	152	11
Ferrous metal	4	69	1
Non-ferrous metal	9	141	7
Other (not specified)	3	85	100