SALVATION ARMY TRADING COMPANY

Avoided Emissions Methodology

Version 3.1 | August 2026

Our business model helps to avoid new product emissions

We are Salvation Army Trading Company (SATCoL) and as the trading arm of our charity, a large part of our work involves the reuse and recycling of products. We encourage the reuse and recycling of textiles and other items through our nationwide network of charity shops, donation centres and clothing banks. Every year around 250 million items are donated to us.

As a reuse and recycling business we prioritise the waste hierarchy and play an enabling role in extending the life of products. We do this through collecting, reprocessing and selling or distributing second-hand clothes and other textiles which account for around 80% of donations we receive by weight. We also accept and sell books, shoes, bric-a brac, furniture and electrical items.

Through our activities we help to prevent carbon emissions by enabling consumers to purchase second-hand products, which reduces the need to produce and consume brand new products.

This document sets out to explain how SATCoL:

- helps to avoid emissions
- calculates avoided emissions

If you have any queries, please contact environment@satcol.org

Thank you

We’re on a mission to reduce our carbon emissions

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Reduce our own emissions

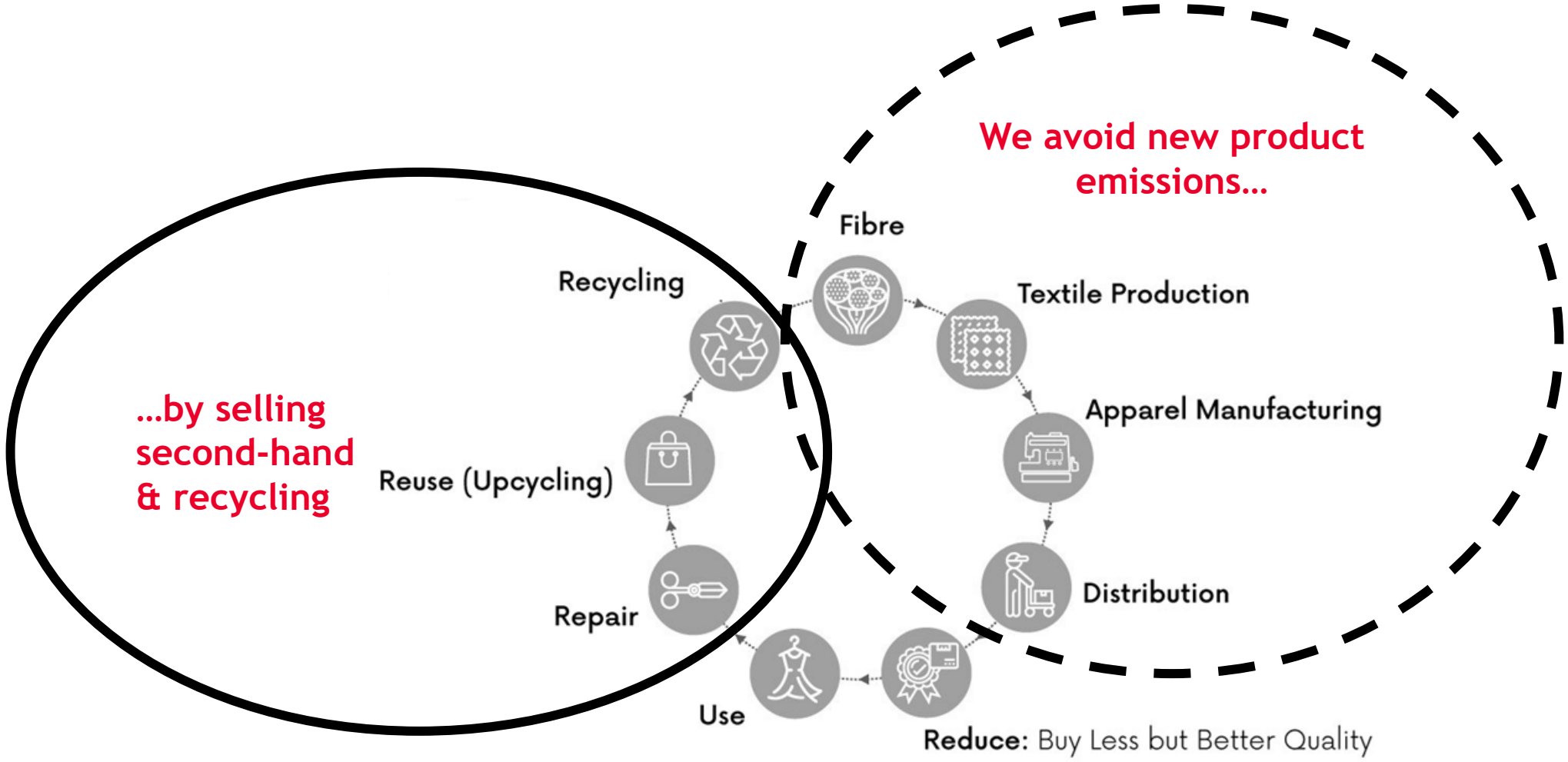
Procurement
Transport
Buildings
Travel

Resale of second-hand products
Recycling of non-reuseable items

Help avoid emissions

We avoid emissions of the production of new products

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In FY2025/26 we've avoided a lot of emissions, equivalent to…



Avoided emissions
467,000 tCO_{2e}

We estimate our avoided emissions using this calculation

Avoided emissions

=

1 Carbon footprint of a tonne of new product

x

2 Weight of products resold

x

3 Displacement rate of reuse

-

4 Emissions

What does this mean?

1 Footprint of a new product

We use the UK Government GHG Conversion Factors for Company Reporting (1), or where specific factors aren't available in the UK database we have used Zero Waste Scotland's Carbon Metric (2020) (2) and other public referenced data sources.

It is estimated that clothing production generates *22,310 kgCO_2e per tonne*.

For other products, emissions range from *448 kgCO2e* for production of a tonne of new books to *3,050 kgCO_2e* for electrical items.

CO_2e (carbon dioxide equivalent) is a metric used to compare the emissions of various greenhouse gases based on their global warming potential relative to carbon dioxide.

2 Weight of products resold

Now that we have an indication of the avoided emissions per tonne of product type or material, we need to multiply by the total amount of goods reused through SATCoL.

In 2025/26, our supporters donated 110,000 tonnes of goods (86,900 tonnes through clothing banks and 23,100 tonnes through our charity shops). This is equivalent to around 330 million items. On average 49% *of items were suitable for reuse* (53,500 tonnes). Items that couldn't be resold were either recycled or otherwise disposed of (majority to energy from waste).

What does this mean?

3 Displacement rate of reuse

This is the degree which second-hand clothing replaces the purchase of similar new items.

In the UK, a research study by WRAP (3) indicates that *54%* of people who purchased pre-loved items say this had led to a reduction in the amount of new clothing they purchased. We therefore applied this rate to our calculations.

This means that roughly speaking, the purchase of 2 second-hand items will avoid the need for production of 1 new item.

4 Emissions

Our own carbon footprint is around 31,000 tCO2e. We have also included a further 23,000 tCO2e downstream emissions (beyond the boundaries of our corporate footprint).

The majority of our emissions arise from transport (61%), this covers:

- transporting items from our clothing banks to our warehouses and from there to our shops and customers
- shop collections and deliveries (mainly furniture)
- collection of unsold items by third parties (mainly textile merchants)

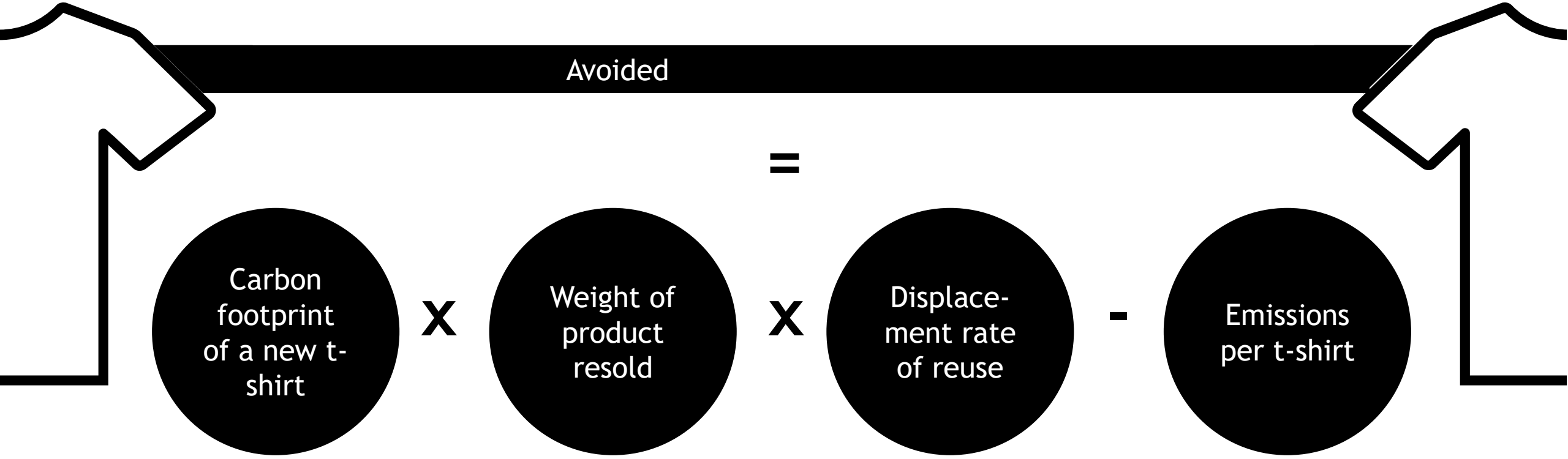
Other emissions (39%) are from:

- Procurement of goods and services to run our business
- Energy (electricity and gas) to run our buildings
- Colleague commuting and business travel
- Waste management (energy from waste)

For further details, please see our annual impact report (5).

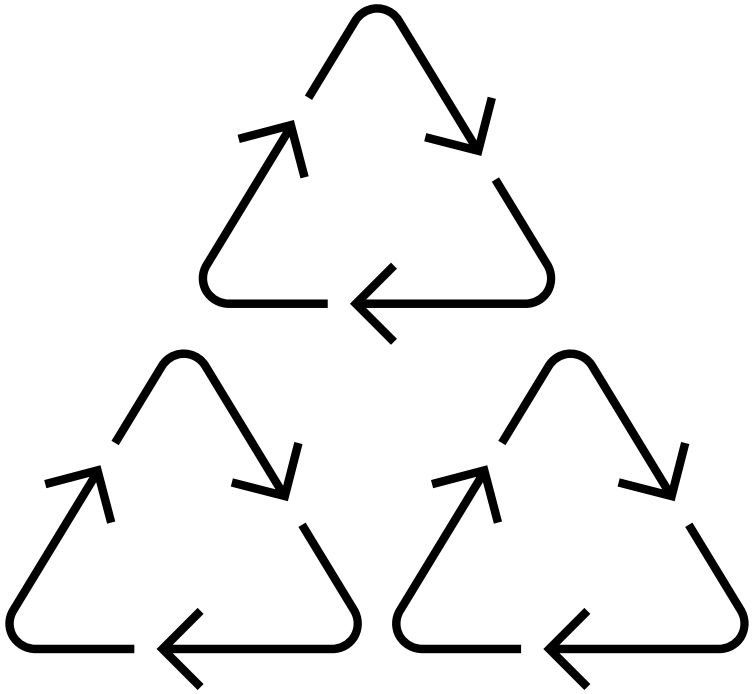
An example of estimated avoided emissions by reselling 1 t-shirt in the UK

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What about items we are not able to sell?

The majority of the donations we receive are resold, and this is always our preferred option. Unfortunately, there are some items which we are unable to sell so we work with partners to recycle them responsibly, turning them into new materials.



Avoided emissions per tonne of recycled material are much lower than for reuse. This is because further processing is required to turn them into the desired recycled materials.

We use the same avoided emissions calculation, without the displacement rate.

Avoided emissions range from *576 $kgCO_2e$* for chemically recycled textiles to *2,537 $kgCO_2e$* avoided for electrical items. We use the EURIC Textiles LCA (2023) (4), Zero Waste Scotland's Carbon Metric (2020) (2) and a WRAP report (2012) (6).

We've made a number of assumptions

There is no industry recognised standard on how to calculate avoided emissions, therefore the avoided carbon emissions method we have used provides indicative estimates based on various research and assumptions.

Buying second-hand items does not guarantee that new items will not be purchased instead, therefore the displacement rate is indicative.

Displacement rates vary by consumer behaviour, the context of use, and regionally. Outside of the UK, we estimate that the average displacement rate for other countries is 40%, however this is hard to accurately quantify.

Global product production emissions data is used rather than country-specific production and recycling energy mixes.

Not all data is available. Over time it is possible that more accurate or up-to-date data may become available, at which point we will update the model. This would change the quantities of avoided emissions calculated.

Some operational impacts have not been included in our estimates. These are categories where we have insufficient data to make any estimates, for example on private transport to make donations to our clothing banks and charity shops, which are often shared with other activities such as other shopping. These are not expected to make a significant difference to the results of the calculations.

The model also does not account for reprocessor and retail energy use for third party managed products. However, these are likely to be small/insignificant since these tend to be manual activities.

Why do we use the WRAP displacement rate?

To quantify the avoided emissions associated with our clothing reuse activities, we use WRAP's industry standard displacement rate of 54%. In 2025, we also conducted our own customer displacement survey during Great Big Green Week using the WRAP displacement rate methodology, a recognised and widely used approach across the UK reuse and circular economy sector. The results were independently peer reviewed and validated by WRAP, confirming a 74% organisation specific displacement rate - meaning that 74 out of every 100 clothing items bought from us replace the purchase of a brand new item.

While these findings provide strong evidence of the impact of our textile reuse activities, there is currently limited comparable displacement data available across the charity retail sector. For transparency, consistency, and alignment with sector wide reporting, we therefore continue to use the WRAP sector average displacement rate of 54% in our current avoided emissions calculations. This ensures our figures remain credible, conservative, and in line with recognised industry practice.

We are actively engaging with WRAP, CRA members, and other charities, and we are happy to share our learnings and insights. By contributing our findings and collaborating with others who face similar evidence gaps, we aim to help build a stronger and more consistent evidence base for the sector. As further robust data becomes available - through future surveys, partnerships, and collaborative initiatives - we intend to refine our methodology to better reflect both our organisation specific performance and wider sector understanding.

Where do we source our data?

To make our calculations, we rely on publicly available data sources. To ensure we are open and transparent about our calculations, here is a list of the data sources we have referenced throughout this document and use to work out our avoided emissions.

1. UK Government GHG Conversion Factors for Company Reporting, available here
2. Zero Waste Scotland's Carbon Metric (2020), available here
3. WRAP (2022) Clothing longevity and circular business models receptivity in the UK, available here
4. EuRIC Textiles (2023) LCA-based assessment of the management of European used textiles, available here
5. SATCoL impact report, available here
6. WRAP (2012) Valuing our clothes: The true cost of how we design, use and dispose of clothing in the UK, available here

The data available to us will change over time, and we will continually review to ensure our calculation remains as accurate as possible.

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Thank you

For more details on our progress, please read our annual impact report which can be found on our website