Sircel ESG Progress Report
January - June 2023

Report Contents

Context

We’re a green-tech company tackling the global challenge of e-waste. Our mission is to eradicate e-waste from landfill and redirect the valuable commodities back into the circular economy.

E-waste is the fastest growing domestic waste-stream and globally, is predicted to grow by 30% by 2030. Australia is among the world’s largest per capita producers of e-waste with an average of 21.7 kg per capita in 2019. As a nation, in 2019 Australia created a mass of 554 kt of e-waste - the equivalent of 220 Olympic swimming pools. It’s a big problem and one that recycling isn’t keeping up with.

So where does Australia’s e-waste go? Currently over 46% of e-waste in Australia ends up in landfill. The remaining 54% is sent to recycling processes which typically recover approximately 35% of the material inputs. Legislation is seeking to change this, and many states have implemented e-waste to landfill bans. It’s a slow process. Keeping e-waste out of landfill (and into alternative systems) will require an all-in effort from governments, community groups, organisations and citizens.

Sircel’s world-leading proprietary system enables up to 100% diversion of e-waste from landfill. Our process enables the materials within e-waste to be redirected back into the economy. As part of this process, we are committed to transparent reporting and remaining accountable for our role in the e-waste system. This Progress Report demonstrates our impact and achievements from the first six months of 2023 and our first six months of operation.

Key Achievements

"So far, in 2023, Sircel has been guided by two key focuses. The first is continuing to invest in automated process improvements. The second is to seek out industry collaborations which are vertically aligned. These two projects mean that Sircel now offers a solution that provides a more efficient separation of e-waste plastics (into colours). In doing so we can make a tangible contribution to the circular economy whereby entire products can be made entirely from the recycled plastics we generate. The on-going commitment from our technical, commercial and operational teams will continue to drive these important incremental improvements in the ESG space."

-- Anthony Karam, CEO

Increasing e-waste awareness

Many people don't realise when they put their devices, appliances and gadgets into the bin they often end up in landfill. Nor do manufacturers always design products with recycling front of mind. From coverage in mainstream media to panels at the Australian Circular Economy Conference and the Australasian Waste and Recycling Expo, we continued to raise awareness about the challenges facing e-waste recyclers.

Focus on partnerships

We established partnerships with local councils and some of Australia's largest and most influential organisations. These partnerships are critical to preventing electronics from ending up in landfill.

Innovating our process

We're continuing to innovate our process to expand the types of e-waste (and materials) our system can address. Plastics are one of the trickier materials to recycle. We've been improving and refining our processes to increase efficiency in processing these materials.

Impact and Progress Overview: January - June 2023

636 t
Diverted from landfill

From phones and laptops to circuit boards and telecommunication exchanges, we've kept these items out of landfill and transformed the output into new materials.

1435
Items reused

A significant amount of laptops and desktop computers we receive are in working condition. First, they are data-erased and then distributed for reuse via partners.

50
Partners

Through take-back schemes, community drop-off points or one-off collections our partners play a key role in enabling us to divert e-waste from landfill.

30,779 KG
Plastic diversion

Today we divert clean, hard plastic from landfill by supplying plastic to several partners. Remaining lower quality plastic will be diverted via thermal degradation (pyrolysis).

237,501 KG
Processed metals output

Our main outputs were aluminium, steel, and copper. Each metal offers an alternative source to raw materials.

3 Operational sites

We have three operational sites in Victoria and NSW.


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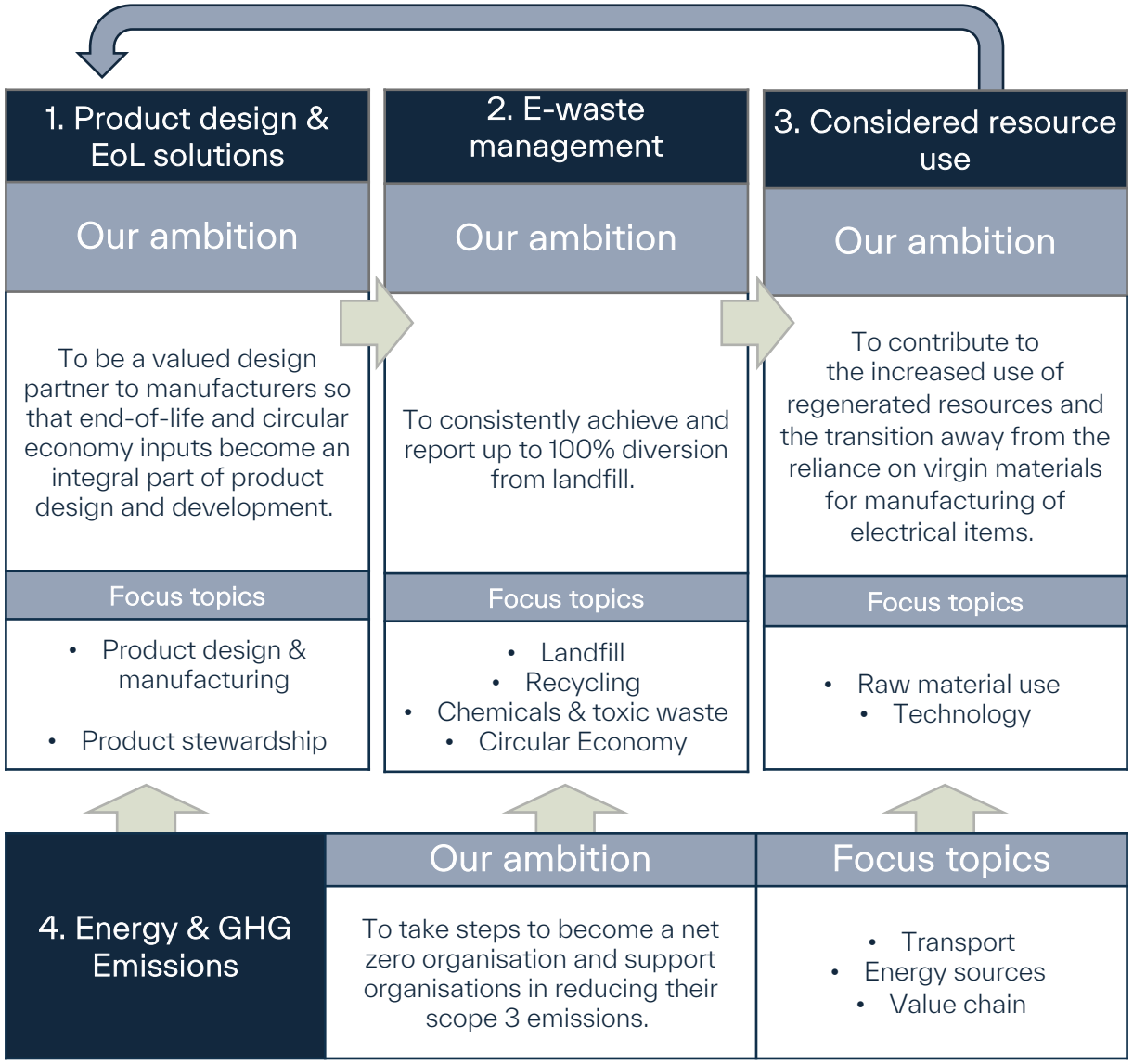
Our Focus Areas

Our mission is to eradicate e-waste from landfill and redirect valuable commodities back into the circular economy. To achieve this our focus is directed into four key areas.

Our impact areas represent the material issues we prioritise for sustainability measurement, reporting, and innovation.



How we're tracking: e-waste management

Goal: To consistently achieve and report up to 100% diversion from landfill with the resources entering a Sircel facility.				
Initiative	Achieved	In-progress	Not started	Progress
Measure the total amount of e-waste processed by Sircel in a financial year.	■			We achieved a total of 636 t of e-waste diversion from landfill during the period January 1 to June 30, 2023.
Measure the efficiency of our machines to ensure up to 99% of diversion remains consistent.		■		We're working towards achieving 100% diversion from landfill of the e-waste processed through our machines. We have a particular focus on achieving this efficiency for phones, laptops, PCB's and communication hardware. We are seeking to achieve granular visibility on machine volumes processing e-waste weight and this capability is currently being built.
Identify the types of material items diverted from landfill and take steps to quantifying the amounts of each processed.		■		There are several categories of e-waste. In the first six months of 2023 we processed items including: laptops, desktop computers, phones, street lamps, coffee machines, hard drives, switchboards and cables. We're focusing on improving our data systems to provide increased transparency on the types of items we are processing.
Set targets for the total amount of e-waste processed within a financial year.	■			Our goal is to process 5800 t from landfill in the financial year July 1, 2023 – June 30, 2024.
Become a processing partner to organisations with a sizeable e-waste footprint.		■		We serviced 50 clients within the Jan 1 - Jun 30 2023 reporting period. This included local councils and some of Australia's largest and most influential organisations.
Establish partnerships with local councils for involvement in their waste collection days.		■		We worked with councils in Victoria, NSW and QLD to support e-waste drop-off days and provide community members with a clear drop-off point for their broken or unwanted electrical items. We participated in 7 Council drop-off days between Jan 1 -Jun 30 2023.
Generating national interest in why e-waste to landfill is a major challenge.		■		Key achievements during the first six months of 2023 saw Sircel exhibit at the Coffs Harbour Waste Conference, our CEO speak on the e-waste panel at the Australasian Waste and Recycling Expo and our Chief Operations Officer speak at the University of Sydney for the Australian Circular Economy Conference. Sircel's CEO was also quoted in a SMH / The Age article about the importance of end-of-life design of electronics.

How we're tracking: energy and GHG emissions

Goal: To take steps to become a net zero organisation and support organisations in reducing their scope 3 emissions.				
Initiative	Achieved	In-progress	Not started	Progress
Calculate the exact emissions savings provided by purchasing recycled metals from Sircel, compared to their raw counterparts.		▪		We are currently undertaking an emissions analysis to calculate the carbon footprint of our processing approach. In future we aim to be able to quantify the average volume of avoided emissions from the Sircel process (compared to raw mining).
Measure the emissions impact of our company-wide operations across scope 1, 2 and 3 emissions.			▪	Our current focus is on understanding the emissions associated with the Sircel process in comparison to raw mining of the same materials. Once this portion of work is complete, we intend to measure the emissions impact of our company-wide operations.
Reduce the energy impact of our operations.		▪		One of our key focuses was to increase our solar capacity. We have 830KW installed at our Melbourne site and have plans to install solar at our other facilities in the next reporting period. Once we have measured the emissions impact of our company-wide operations we will have increased our transparency on the most emissions intensive parts of our operations and be able to identify opportunities to reduce or change them.
Evaluate what it will take to achieve net zero operations.			▪	As above, our current focus has been on quantifying the emissions associated directly with the processing of various metals. In future, we aim to measure the emissions impact of our company-wide emissions across scope 1, 2 and 3.

How we're tracking: product design and stewardship

Goal: To be a valued design partner for manufacturers to ensure waste reduction and circular economy inputs are factored in at the design phase of product development.				
Initiative	Achieved	In-progress	Not started	Progress
Establish the product types Sircel can provide material input for.	▪			Our focus for this period was on understanding and quantifying the metals we can process and getting clear on the output quantities we can reliably produce. Our primary outputs included: aluminium, steel, copper and plastic.
Quantify the impact of Sircel's material processing vs extracting raw materials		▪		We are currently quantifying this from an emissions perspective. Please refer to 'energy & GHG emissions' progress.
Develop a partnership program with manufacturers and designers of electrical and consumer goods.		▪		We have received several types of items which posed challenges to our machines. For example, some items contained multiple types of plastic. Typically, these items were difficult to break down which made them costly and time-consuming to achieve recycling outcomes. When we learn something we share it with our partners. This might be an observation around the number of plastics used within a product. Or the challenges with disassembling an item. These informal feedback loops provide our partners with visibility around what happens to the products at their end of life. In turn, this demonstrates how choices throughout the manufacturing process can improve diversion rates.
Educate consumers on purchasing items made from repurposed materials or those with an end-of-life strategy.			▪	Our focus has first been on organisations where we have established partnerships. Over time, we hope to extend out communication directly to consumers, too.

How we're tracking: regenerated resources

Goal: To contribute to the increased use of regenerated resources and the transition away from reliance on virgin materials for manufacturing of electrical items.				
Initiative	Achieved	In-progress	Not started	Progress
Measure the material output Sircel generates within a financial year including plastic, metal and critical minerals.	▪			Between Jan-Jun 2023 we prepared 237,501 KG of metals to re-enter the economy. We also provided 30,779 KG of extracted plastic to our plastics partners who use it to manufacturer bollards, fence posts and sleepers.
Set annual targets for tonnes of metals Sircel are contributing to the circular economy.			▪	We are currently testing the machine process to forecast potential outputs.
Develop a process for diverting items to reuse.	▪			Council collection days are one of several ways we receive electrical items which are broken or no longer wanted. Our team pinpoint items which may work, test them to see if they do work, and if necessary erase all data using Blancco erasure software. Next, the items are redirected to a consumer-facing organisation for reuse.
Measure the quantity of items Sircel diverts from landfill to reuse in a financial year.	▪			A total of 1,435 laptops and desktop computers were diverted from landfill to reuse.
Increase transparency on the outcome of our metal output and the types of items it is used within.		▪		At this stage, we have visibility on our total metals output and who it is sold to. In future we're exploring opportunities for closed-loop partnerships in which our reprocessed materials are used in the manufacturing for the same organisations who supplied them.

Where to Next?

"By bringing recyclers, like us, into the conversation early we can use our expertise to help design products or parts of products, that won't end up in landfill, allowing the commodities in these devices to be unlocked and given another life."

- Anthony Karam, CEO.

For the next 12 months, until the end of FY24, we have committed to two key areas as highlighted below. These projects are in addition to maintaining our current broader ESG focus.

Quantifying the GHG emissions footprint of our process.

We are working towards being able to demonstrate the emissions benefit of our process (vs mining of raw materials). In doing so we are seeking to achieve VERA/GOLD standard Carbon accreditation. We are working through this process with support from OBH Partners.

Increasing our use of renewables and decarbonising our own operations.

We are rolling out a program with Lotus Energy to install solar power alternative at two of our operational sites.

Appendix: Definitions

Diverted from landfill: This figure is calculated by the total weight of items that come into a Sircel facility, from here they are assessed to determine if they are fit for re-use or if they will move through the recycling process.

Plastics diversion: All plastic goes through our machine process and is diverted from landfill. This figure includes two plastic outputs. The first type of output is clean hard plastic. We supply several partners with clean hard plastic who turn it into wood replacement products, such as fence bollards and carpark car stops. Any remaining lower quality plastic is diverted via thermal degradation (pyrolysis). Our pyrolysis process is highly controlled.

Reuse: This figure is calculated by the total number of items that are distributed to partners for re-use. We supply several partners with working laptops, desktop computers and hard drives. Our visibility on their outcome ends once they become part of our partner's operational control.

Critical minerals: Critical minerals face potential supply risks and projected demand increases. A sub-set of these, known as critical energy minerals, play a key role in low-emissions technologies including solar and EVs. See: CSIRO Critical Energy Minerals Roadmap.

Circular economy: An economic system that replaces the 'end-of-life' concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes (Kirchherr et al. 2017).

Net zero: Net refers to a state where an organisation has reduced its greenhouse gas emissions as far as possible (by a minimum of 90-95% against their base year), and have compensated any unavoidable trailing emissions through investment in projects that generate permanent removal and storage of carbon from the atmosphere.

Scope 1: Scope 1 emissions are direct emissions generated from sources owned, produced, and controlled by an organisation including manufacturing /processing of materials, company vehicles, and refrigerants.

Scope 2: Scope 2 emissions are indirect emissions generated by the purchase of electricity, heating, steam or cooling by the organisation.

Scope 3: Scope 3 emissions are indirect emissions generated in an organisations' supply chain including business travel, freight, waste, employee commuting and purchased goods & services.

Better for business, better for the community and better for the planet.

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