

Case study

CLOSE THE LOOP

Since 2000, Close the Loop has been delivering world class product stewardship and resource recovery solutions to manufacturers of consumer products and their customers. The company makes end products — a premium asphalt additive and the world's first fully recycled pen are examples — from their **zero waste-to-landfill recycling processes**.

Close the Loop's simple but ambitious vision is **"a circular world"**.

And they are already well on their way. What started as a small operation in the Melbourne suburb of Thomastown in 2000 has now expanded into the USA and Europe.

The company's services include all aspects of product stewardship:

- Designing products with circularity in mind
- Effective collection programs
- Keeping products and materials in circulation for as long as possible
- Developing innovative end use solutions

Collection and processing is just the start, companies like Close the Loop must rally support from government and industry to embrace new materials, change outdated barriers to entry and change counterproductive relationships that block progress.

"The foundations of circularity — design out waste, keep products and materials in circulation and build regenerative businesses — are empowering to me."

Steve Morriss,
founder of Close the Loop

Close the Loop has diverted millions of products from landfill and converted them into valuable new materials.

They were also among the first to promote the idea of product stewardship - an approach to managing the impacts of products and materials that acknowledges producers, retailers, users and disposers have a shared responsibility for their impacts - in Australia.

One of their earliest product stewardship schemes in the country, **Cartridges 4 Planet Ark**, was established in 2003 in collaboration with Planet Ark. The program offers Australians a free, easy and environmentally accredited way to dispose of their printer cartridges.

That single commitment has driven significant innovation at Close the Loop including the development of eWood, a timber alternative made from recycled rigid plastics.

Other notable innovations include what is possibly the world's first ever recycled pen made with 100 per cent recycled printer cartridge ink. This recycled ink is popular among consumers and is now promoted and also used by the funky brand Lousy Ink, owned by Melbourne street artists Mike Eleven and Oli Ruskidd.



However, Close the Loop's proudest innovation to date is a newer product called **TonerPlas™**; an **award-winning asphalt additive invented by Close the Loop** and refined in partnership with Downer over more than eight years of intense research and development, lab testing, road trials and monitoring. The real breakthrough of TonerPlas™, according to Steve, is the circular supply chain model which has been developed to turn plastic waste into a high performance asphalt road.

“Used ‘waste’ toner cartridges are collected via the Cartridges 4 Planet Ark program. These toner cartridges are then recycled by Close the Loop. Waste soft plastics are also collected and shipped to Close the Loop where they are blended with waste toner powder via an advanced manufacturing process.

The result is 100 per cent recycled asphalt additive that improves the performance and life span of asphalt roads. Testing of numerous asphalt samples shows the addition of **TonerPlas™ increases the lifespan of a road by around 15%.**

One of the company's more recent innovations is rFlex, a new polymer for injection moulding made from **100 per cent post-consumer mixed soft plastics.**

Post-consumer mixed soft plastics are often called the 'mongrel' mix. Close the Loop has developed an advanced process to turn this mix into a homogenous polymer that performs similar to virgin plastics. Small amounts of known additives can transform the mix into a polymer to mimic either PE or PP. This technology development has global export potential and is a direct result of Close the Loop's innovative culture.

