

Positively

PENRITH

Building the Future with Circular Solutions

A spotlight on industrial waste reduction in the building sector, and exploring the opportunities and challenges of meeting the needs of a growing population as we transition towards a circular economy.



An Australian Government Initiative



Regional
Development
Australia

 **PENRITH
CITY COUNCIL**

Penrith Local Government Area Case Studies

Food Organics Garden Organics (FOGO)

In 2009, Penrith City Council became the first metropolitan Council in Australia to introduce a Food Organics Garden Organics (FOGO) collection service to the urban areas of Penrith.

This service was then extended to rural areas in 2019. The FOGO bin takes items such as garden vegetation, cardboard takeaway boxes, animal droppings, tissues, meat, bones, dairy and other food scraps. Collected FOGO is turned into compost before being used on local parks, gardens and sports fields.

Vegepods have been supplied to Council owned and operated children's centres to give children an opportunity to be involved in growing their own food.

The Vegepods demonstrate to children the benefits of FOGO's circular economy:

1. Placing leftover food in the FOGO bin
2. FOGO is processed into compost
3. FOGO is reused as compost to grow vegetables
4. Food is eaten.



Sustainable Roads

In 2019, Penrith City Council trialled the use of glassphalt, an environmentally sustainable alternative to the traditional asphalt. Where asphalt uses sand in the road paving mix, glassphalt uses ground glass. Approximately 50 tonnes of ground glass was used to pave Stafford Street in Penrith. After the success of the trial, Council made a commitment to use recycled glass in all future road works.

DV Safe Phones

Penrith City Council is asking the community to donate unused mobile phones to support DV Safe Phone. DV Safe Phone refurbish and distribute the phones to registered DV agencies who gift the mobile phones to people experiencing domestic violence. For people experiencing domestic violence the mobile phone is often the first thing to be destroyed or monitored to prevent people from calling for help. The mobile phones are provided as part of an individual's safe or escape plan, giving them the ability to call for help in an emergency. To date, Council has collected 150 mobile phones from the community. DV Safe Phone also supports the circular economy by promoting re-use and recycling of old mobile phones, which helps to reduce electronic waste and conserve resources.



Bike Drop-off and Repair Event

Penrith City Council hosted a free Bike Drop-off and Repair Event in May 2023. Sixty residents brought their bikes for a check and tune by Revolve ReCYCLING, saving residents money and diverting them from ending up in landfill. Unwanted bikes and scooters were donated by 150 people to charity. Revolve ReCYCLING repair and deliver the bikes to charitable causes that provide transport and recreation to underprivileged children. Any bikes that are not salvageable are dismantled and recycled. The rubber from tyres and tubes is used in playground equipment, bike lanes and in asphalt, and the bike frames are melted down for their steel and aluminium to make new metal products.



Today's coffee cups paving tomorrow's roads

The take-away coffee cup that you had your coffee in this morning could be in the road you drive on tomorrow, under a revolutionary Australian-first recycling project for sustainable road surfaces.

Penrith City Council has partnered with State Asphalt Services for the resurfacing of 390 metres of Jamison Road at South Penrith, and 350 metres of Swallow Drive, Erskine Park where the PAK-PAVETM road surface will include a mixture containing almost 136,000 coffee cups. In addition to the cups, the asphalt will include over 1.2 million glass bottles – a mix that has proven successful in the resurfacing of 8.4 kms of pavement throughout the Penrith Local Government Area (LGA).

Penrith Mayor Tricia Hitchen said Council is proud to be leading the way in a move that leads to a more sustainable circular economy and delivers a high-quality road surface for all road users.

“Council has a proven track record when it comes to re-using waste products in innovative ways, and this is yet another way of reducing landfill by giving a waste product new life in an alternative use,” Cr Hitchen said.

“With over 1,208 km of roads maintained by Penrith City Council, and countless kilometres of state roads in our LGA, we have the opportunity to make our roads far more environmentally friendly through the use of recycled materials.”

“Road users may not notice the subtle differences between PAK-PAVETM and other road surfaces under normal driving conditions apart from it being quieter, however in adverse conditions the new surface is reported to improve braking and wet weather performance,” Cr Hitchen said.

John Kypreos, Director of State Asphalts NSW said, “I’m incredibly proud of the team at State Asphalts NSW and our collaborating partners, who have worked tirelessly over the past three years to develop PAK-PAVE™ Roads.”

“We have enjoyed great support from government at all levels to get to this point and congratulate Penrith Council for being the first to use PAK-PAVE™ Roads.”

Closed Loop Managing Director, Rob Pascoe, was equally enthusiastic.

“The Simply Cups program has saved more than 30 million paper cups such as coffee cups and take-away soft drink cups from landfill since beginning in 2017,” said Mr Pascoe.

“We have explored dozens of practical applications for the cups which contain very high-quality fibre but are challenging to recycle because of their waterproof lining.”

The cups being used in the PAK-PAVETM surface are collected through Simply Cups, an initiative by Closed Loop, with 85% of the paper cups collected for recycling in the Penrith LGA in 2022 being used in these roads. Simply Cups is Australia’s largest paper cups recycling program and uses innovative technology capable of mixing used cups with other materials to produce items of higher value.

To find a collection point, go to [simplycups.com.au/locations](https://www.simplycups.com.au/locations)

72,000 – the approximate number of coffee cups used in the road surface on Jamison Road, South Penrith

64,000 – the approximate number of coffee cups used in the road surface on Swallow Drive, Erskine Park

136,000 - the approximate number of takeaway cups diverted from landfill for this project.

1.2 million - the number of glass bottles used for the Jamison Road and Swallow Drive resurfacing projects.

Total recycled content in the asphalt for this project is **greater than 50%**.



Useful Links & Resources

Penrith City Council - Circular Economy Information <https://www.penrithcity.nsw.gov.au/waste-environment/sustainability/circular-economy>

Australian Circular Economy (ACE) Knowledge Hub - <https://acehub.org.au/knowledge-hub>

Circular Economy Case Studies - <https://acehub.org.au/knowledge-hub/case-studies/all>

ACE Hub Circular Community Portal - <https://acehub.org.au/network/portal>

Sustainability Advantage - <https://www.environment.nsw.gov.au/topics/sustainability/sustainability-advantage>

Circular Australia - <https://circularaustralia.com.au/>

NSW Government Treasury: Office of Energy and Climate Change - <https://www.treasury.nsw.gov.au/office-energy-and-climate-change>

Western Parkland City Authority: Resources - <https://www.wpca.sydney/resources/>

AHURI: Informing a strategy for circular economy housing in Australia - <https://www.ahuri.edu.au/research/final-reports/403>

AHURI: Building materials in a circular economy - <https://www.ahuri.edu.au/research/final-reports/402>

Green Building Council Australia - <https://new.gbca.org.au/>

Urban Development Institute of Australia NSW - <https://www.udiansw.com.au/>

saveBoard Circular Economy Solutions - <https://www.saveboard.nz/circular-economy>

Centre for Regenerative Design & Collaboration - <https://crdc.global/>

Bingo Industries: Sustainability - <https://www.bingoindustries.com.au/sustainability>

NSW Government Department of Regional NSW - <https://www.nsw.gov.au/departments-and-agencies/departments-of-regional-nsw>

NSW Environment Protection Authority (EPA) - <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse>

Coreo - <https://coreo.com.au/>

Boomerang Labs Circular Economy Accelerator Program - <https://boomeranglabs.org.au/>

Regional Development Australia (RDA) Sydney - <https://www.rda.gov.au/sydney>

SuperYard Sustainable Construction Marketplace for Australia - <https://superyard.com.au/>

Packshare Australia - <https://packshare.com.au/>

Business Council of Australia - https://www.bca.com.au/achieving_a_net_zero_economy

This brochure is a summarised version of our extensive **Circular Economy Toolkit**. Scan the QR code to access the complete toolkit.



For more information on sustainability and circular economy initiatives contact Penrith City Council's Sustainability and Resilience Team

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For business support please contact Penrith City Council's Economic Development Team

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