



**Product
Stewardship
Centre of
Excellence**

**CASE
STUDY**



Fairview EcoLoop ACP recycling initiative

Tragedies such as the Lacrosse tower fire in Melbourne and the Grenfell tower fire in London demonstrate the risks associated with using aluminum composite cladding (ACP) on medium and high-rise towers. With important rectification work underway to remove this cladding, a new waste stream from the construction industry has been created. In this case study, we look at how the Fairview EcoLoop recycling initiative has created a made-in-Australia product stewardship solution to address this growing waste stream.

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Product Stewardship in Action with



ecoloop

FAÇADE SUSTAINABILITY / A FAIRVIEW INITIATIVE

WHAT IS NON-COMPLIANT CLADDING?

In recent years, tragedies such as the Lacrosse tower fire in Melbourne, Australia¹ and the Grenfell tower fire in London, England² have brought the issue of non-compliant cladding to the forefront.³ In response to the safety risks posed by this material, legislation in New South Wales⁴, Victoria⁵ and Queensland⁶ has banned the use of aluminum composite cladding (ACP) in multi-story developments.

The NSW EP&A defines external combustible cladding, in relation to a building, means:

(a) any cladding or cladding system comprising metal composite panels, including aluminium, zinc and copper, that is applied to any of the building's external walls or to any other external area of the building, or

(b) any insulated cladding system, including a system comprising polystyrene, polyurethane or polyisocyanurate, that is applied to any of the building's external walls or to any other external area of the building.⁷

Across the country, rectification work is underway to remove the highly flammable

ACP cladding.⁸ Some of this work is being driven by state initiatives, including the Cladding Rectification Program funded by Cladding Safety Victoria⁹ or the recently launched Project Remediate in New South Wales¹⁰.

While the removal of ACP is no doubt necessary, it has also created a new and growing waste stream for the construction industry in Australia, which already produces 36% of the country's total waste.¹¹ In particular, it has been estimated that 4.2 million square metres of cladding is in need of replacement¹².

In this case study, we examine one product stewardship initiative aimed at addressing this issue, the Fairview Ecoloop ACP recycling initiative.

ABOUT ECOLOOP

The Fairview Ecoloop program was the result of an over AUD\$2 million investment that was approved to operate by Lithgow City Council. Fully operational since January 2021, Fairview Ecoloop recycles and repurposes ACP cladding – regardless of brand – that would otherwise be sent to landfill or exported overseas.

¹ City of Melbourne (2015). [Lacrosse Building Fire](#).

² Grenfell Tower Inquiry (2022). [About](#).

³ It is important to note that the terms 'cladding', 'combustible cladding' and 'external combustible cladding' are often used interchangeably to refer to cladding that has been applied to the external part of a building. The inappropriate use of certain combustible cladding products on the external areas of building poses a risk to the spread of fire. For more information, see: NSW Department of Planning, Industry and Environment (2019). [Guide for the Assessment of Buildings with Combustible Cladding](#).

⁴ NSW Fair Trading (2022). [Aluminium composite panel ban](#).

⁵ Victorian Government (2021). [Banning dangerous cladding and keeping Victorians safe](#).

⁶ Queensland Government (2018). [Building and other legislation \(cladding\) amendment regulation 2018](#).

⁷ NSW Department of Planning, Industry and Environment (2019). [Guide for the Assessment of Buildings with Combustible Cladding](#).

⁸ ABC News (2017). [Combustible cladding: More than 5,000 buildings in Victoria may not be complaint, experts say](#).

⁹ Victorian Government (2021). [Insuring Victoria's landmark cladding rectification program](#).

¹⁰ <https://www.vic.gov.au/insuring-victorias-landmark-cladding-rectification-program> NSW Government (2022). [Replacing flammable cladding through Project Remediate](#).

¹¹ Inside Waste (2021). [Ecoloop gets accredited under the Product Stewardship Scheme](#).

¹² Fairview (2021). [Ecoloop Australia's first ACP recycling solution](#).

The Ecoloop recycling program is in compliance with the Green Building Council of Australia's (GBCA) Construction and Demolition Waste Reporting Criteria¹³ and is the fifth Australian program to have its national recycling scheme accredited by the Australian Government, which recognised the program as Australia's first circular ACP solution.¹⁴

In recognition of the fact that Fairview Ecoloop is the first facility of its kind in the world that can process all types of ACP cores in large quantities, Fairview was a finalist in the 2021 Urban Developer Awards for Industry Excellence in the Category of Sustainability Excellence.¹⁵

At the 2022 Product Stewardship Excellence Awards, Fairview received the award for Best Stewardship Outcomes – Individual Business or Brand (SME). In selecting Fairview, the award judges were inspired by the complete circular nature of their program, and its successes in ensuring that each component of the separated materials were further utilised, namely aluminum, polyethylene, ferrous metals, mixed residuals. They also noted that the program has considerable potential to be scaled.

RECYCLING ACP PANELS

As described by Fairview, ACP panels consist of the following four key components:

- 1) Aluminum panel skins,
- 2) Polyethylene panel core,
- 3) Ferrous metals including screws and steel flashings, and
- 4) Mixed residuals (including sealant,

¹³ Fairview (2021). Ecoloop ACP recycling.

¹⁴ Australasian Waste & Recycling Expo (2021). [Ecoloop: Australia's first circular ACP solution.](#)

¹⁵ Fairview (2021). [Ecoloop named as a finalist for industry expert award.](#)

¹⁶ Fairview (2021). [Ecoloop Australia's first ACP recycling solution.](#)

backing rod, paint, tapes, and all other components. that make up a façade).¹⁶

There are three main options for managing this waste: landfill, export, and re-processing.¹⁷ Sending this material to landfill is not only unsustainable but is a waste of the recyclable and reusable materials housed within the panels. Moreover, there is also no guarantee that panels exported will be properly recycled and may still end up in landfills overseas.

In recognition of these limitations, Fairview Ecoloop sought to create a domestic recycling solution to manage this waste that meets Australian standards.¹⁸

RECYCLING OUTCOMES

To help reduce the environmental impacts of non-compliant cladding, Ecoloop diverts 100% waste from landfills by collecting and recycling it domestically. Panels are weighed and recorded before being shredded. Once shredded, the resulting material enters the Ecoloop Separator which separates aluminium, the panel core, ferrous metals, and mixed residuals.¹⁹ The separated materials are bagged and distributed to be repurposed in a range of new products including window frames, park benches and building products.²⁰ What cannot be recycled (estimated at 2% of waste) is then converted in a waste-to-energy process used to offset the use of coal.²¹

ASSESSING EFFECTIVENESS

To demonstrate the benefits and effectiveness of the Fairview Ecoloop program, Fairview engaged a third party, Lifecycles, to assess the "potential environmental benefits of

¹⁷ Ibid.

¹⁸ Fairview (2021). [Ecoloop – An Australian first.](#)

¹⁹ Fairview (2021). [Ecoloop ACP recycling.](#)

²⁰ Ibid.

²¹ Ibid.

processing and recycling of noncompliant flammable panel cladding, through a life cycle assessment.”²²

The Life Cycle Impact Assessment (LCIA) found that Ecoloop’s “process of recycling faulty panels result in a net environmental benefit.”²³ Much of this can be attributed to avoiding the production of virgin materials and in particular, the displacement of virgin aluminium through the recovery of secondary materials, with the recycling of panels also determined to be a significant opportunity to reduce the environmental of ACP panels.²⁴

The report also estimates that Fairview Ecoloop could save approximately 784,000 tonnes of CO₂ from entering the atmosphere if the 4.1 million square meters of non-compliant ACP panels are recycled rather than sent to landfill.²⁵

Thus far, the Fairview Ecoloop initiative has diverted 309 tonnes of cladding rectification waste from landfill.²⁶ Since the start of the 2022 financial year, the following resources have been collected from rectification works in ACT, NSW, Queensland and Victoria:

- Aluminium: 65 tonnes
- Fire Retardant Core: 48 tonnes
- Polyethylene Cores: 39 tonnes
- Mixed Residuals: 5 tonnes
- Ferrous Metals: 0.5 tonnes

The estimated carbon offset associated with material recovery is 2,157 tonnes. Ecoloop also states that it was able to divert 100% of received materials away from landfill. Of this, 98% of the material is recovered and the

²² Lifecycles. (2021). Life Cycle Assessment of Recycling Building Cladding.

²³ Ibid.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Fairview (2022). [Ecoloop publishes first report on combustible cladding recycling.](#)

remaining 2% is utilised as processed engineered fuel.²⁷

VOLUNTARY PRODUCT STEWARDSHIP SCHEME ACCREDITATION

Fairview Ecoloop was accredited by the Australian Government Voluntary Product Stewardship Scheme in December 2021 and is the fifth Australian company to receive this accreditation.²⁸

Fairview identified a number of reasons for applying for voluntary product stewardship scheme accreditation including:

- Demonstrating commitment to sustainability;
- Strengthening reputation and relationships with customers, regulators, and associations;
- Improving and expanding sustainability initiatives;
- Maximising the value of recycled products and material streams;
- Helping customers to achieve their sustainability objectives.²⁹


As the first business to recycle ACP in Australia, accreditation is a way for Fairview to demonstrate its leadership in the field while also raising awareness of the importance and opportunities of engaging in product stewardship.

According to Gary Norris, Fairview’s National Rectification Manager, pursuing accreditation was a useful process that helped the business

²⁷ Fairview (2021). [Ecoloop – Helping you achieve your sustainability targets.](#)

²⁸ Inside Waste (2021). [Ecoloop gets accredited under the Product Stewardship Scheme.](#)

²⁹ Fairview (2021). [Stewardship in Australia.](#)



reflect on what makes their approach to product stewardship unique. As Norris put it, there is “no textbook” for a business to follow when it comes to embedding stewardship within a business and then communicating those activities to industry.

Because the spirit of pursuing voluntary product stewardship scheme accreditation is not a commercial one, Norris described how accreditation also acts as a signal to industry that the business is serious about stewardship and moving forward with a positive intent that hopefully others will follow.

NOTE

The content of this case study is information of a general nature sourced from public sources and investigations conducted by the Product Stewardship Centre of Excellence. It does not represent advice, direction or endorsement from the Product Stewardship Centre of Excellence, nor does it represent the only method or practice to address the topics laid out in this document. Individuals or organisations are encouraged to conduct their own analysis and consideration of strategic options relevant to their situation before taking action in regard to the matters covered.

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