

Asbestos in playground mulch—how to avoid a repeat of this circular economy scandal

April 18 2024, by Salman Shooshtarian, Peter S.P. Wong and Tayyab Maqsood



Credit: Mike Anderson from Pexels

Asbestos has been found in mulch used for playgrounds, schools, parks and gardens across [Sydney](#) and [Melbourne](#). Local communities naturally [fear for the health](#) of their loved ones. Exposure to asbestos is a serious health risk—depending on its intensity, frequency and duration—as it may lead to chronic lung diseases.

The source of contamination is believed to be [timber waste](#) from construction and demolition sites that was turned into [mulch](#). So far, [60 locations in Sydney](#) and [12 in Melbourne](#) have been identified as contaminated with [asbestos](#) to various degrees. The numbers could increase as investigations continue.

Following the initial detection in New South Wales and Victoria, an [investigation in Queensland](#) detected asbestos in one compost and one mulch product.

The severity, spread and impact of the issue convince us to call it the largest scandal in the history of Australia's [circular economy](#). A circular economy recycles and reuses materials or products with the goal of being more sustainable.

[Our research](#) highlights the importance of making it mandatory to certify recycled products such as mulch to ensure their safety. We found none of the local, state or national policies on sustainable procurement practices recommend recycled product certification as a preventive strategy. We also found significant levels of ignorance and resistance to certification schemes in the recycling sector.

These obstacles must be overcome so we have certification of recycled products that [ensures their quality](#), performance, environmental friendliness and safety.

Scandal is damaging for the circular economy

The discovery in January of asbestos in mulch in NSW triggered a series of actions. These have involved the NSW and Victorian Environment Protection Authorities, [local councils](#), [Fire and Rescue NSW](#) and a [NSW taskforce](#), drawing from agencies such as SafeWork, Public Works and the Natural Resources Access Regulator. The actions include testing in identified areas, cordoning off and signposting affected garden beds, engaging licensed asbestos removalists, and sampling to determine disposal options.

Unfortunately, this contaminated mulch raises concerns about the reckless implementation of circular economy principles in Australia. This scandal could make users of recycled materials, particularly local councils, hesitate about procuring these resources, if not dissuade them altogether.

Understandably, the waste management and resource recovery sector is in a state of shock. More broadly, this scandal could [undermine efforts](#) to advance the circular economy in Australia.

It's a reminder that the circular economy concept is based on a system-thinking approach, where all elements must work in harmony. A failure in one can result in the entire system collapsing.

Regulations don't go far enough

Under NSW legislation, mulch must not contain asbestos, engineered [wood products](#), preservative-treated or coated wood residues, or physical contaminants such as glass or plastics.

However, [it isn't mandatory](#) for suppliers to test for contaminants in

mulch. There are no specified procedures they must follow to ensure mulch doesn't contain asbestos.

The fact is existing policies and regulations, such as the NSW Environment Protection Authority's [Mulch Order 2016](#), failed to prevent mulch contamination. It's a reminder of the need for effective strategies to ensure a [circular economy](#) will not go wrong.

These strategies must integrate encouragement, education and enforcement. Otherwise, we risk facing unintended economic, environmental and social consequences.

Why isn't certification standard practice?

At RMIT University's Construction Waste Lab ([CWL](#)), we have been researching and sharing key strategies with policymakers and industry. In 2022 and 2023, working with researchers from Griffith and Curtin universities and our industry partners, [we explored](#) the use of recycled product certification schemes.

In [our research](#), supported by the [Sustainable Built Environment National Research Center](#), we gathered insights from 16 industry professionals engaged in projects involving large quantities of recycled materials. We specifically asked for their views on certification schemes for these materials.

We found only nine of them were aware of such schemes in Australia. A similar number supported their use for construction projects. The main reasons for not supporting them are shown below.

Reasons for not supporting recycling certification applications

-  Unjustified application in presence of product specifications
-  Abundance of recycled product certifications with different requirements
-  Lack of transparency in certification process and testing criteria
-  Limited applicability for certain products
-  Unjustified cost
-  Certifiers' poor performance
-  Recyclers' limited capacity to be certified

Credit: The Conversation

David Baggs is chief executive and cofounder of [Global GreenTag International](#), a recycled product certifier that operates nationally and internationally. He told us a major barrier to the uptake of these schemes is that they're simply not a priority for many organizations. He added, "The cost of certification is a fraction of whatever their marketing budget might be in any single month, let alone a year. So, particularly for the bigger companies, it's not about cost, it's about priorities. If they can see that their certification becomes part of their marketing budget, then the cost of certification is a single-digit percentage of most marketing budgets."

What more can be done?

To encourage builders to use these schemes, the [Green Building Council of Australia](#) provides a list of endorsed certifiers. Our research identified seven major drivers for adopting certification schemes when procuring recycled materials, as shown below.

Ways to increase adoption of recycled product certification

Robust legislation	Government intervention through robust legislation and standardisation
Contractual obligation	Mandatory use of certified recycled products in public construction projects
Promotional activities	Government-led promotions to change public attitudes
Education of stakeholders	Education (including regular training) to change industry attitudes
Training qualified material engineers	More qualified material engineers to reduce the cost of certification
Simple set-up	Development of simple, effective procedures to increase adoption of recycled product certification
Use of advanced technologies	Use of technologies to improve storage and communication of tracing and testing information

Table: The Conversation • Source: S. Shoostarian et al 2023 • Created with Datawrapper

Credit: The Conversation

The CEO of the Waste Management and Resource Recovery

Association of Australia, Gayle Sloan, has [highlighted](#) the need for effective reforms of waste regulations.

In addition, we stress the importance of directories of approved recyclers to ensure end users have access to quality, uncontaminated recycled materials. An example is Sustainability Victoria's [Buy Recycled Directory](#).

These directories should require listed suppliers to provide [certification](#) for their recycled products. It will help distinguish reputable suppliers from rogue suppliers.

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