11 April 2025

Productivity Commission
Via email: circular.economy@pc.gov.au

Productivity Commission Inquiry - Australia's Opportunities in the circular economy

Interim Report

Australia's circular economy: Unlocking the opportunites

Dear Productivity Commission

Tyre Stewardship Australia (TSA), Australia's product stewards on tyres, in support of our initial submission (PC #148[1]), is pleased to provide a response to the Productivity Commission's (PC) Inquiry's Interim Report: Australia's circular economy: Unlocking the opportunities (the Interim Report).

With weak productivity growth a significant concern for Australia, the Inquiry's focus on creating a more circular economy is an important response. As such, TSA recommends that the final report be aligned with the principles of a circular economy, as outlined in Australia's Circular Economy Framework: 1) Design out waste and pollution 2) Keep products and materials in use at their highest value 3) Conserve natural resources and regenerate nature.

As you are aware, TSA has been working hard for over a decade to deliver better sustainability and advanced manufacturing outcomes for the over 500,000 tonnes of used tyres generated each year in Australia.

We are not there yet, but for its part, TSA has spent the past ten years and has disbursed over $10M in funding (a trend of committing circa 40% of its budget each year) to support industry R&D and related market development, with this leveraging a ratio of 1:3 of private sector investment over the past five years.

TSA, to unlock the opportunities on tyres, has advocated actively to government to request to transition the existing voluntary Tyre Product Stewardship Scheme (the Scheme) to a more fully regulated scheme that mandates participation. Voluntary product stewardship is undermined by free riders, who will only participate if compelled to do so by regulation.

All tyres are imported into Australia, and TSA's view is that all tyres should be part of a product stewardship scheme. To achieve this outcome, mandatory participation in product stewardship is a basic requirement.

[1] TSA, submission to the Productivity Commission Inquiry, Australia's opportunities in the circular economy. https://www.pc.gov.au/__data/assets/pdf_file/0012/387678/sub148-circular-economy.pdf (accessed 9 April 2025).

Unfortunately, since our initial submission, it has become clear that the Australian Government is not yet ready to lead on the advancement of product stewardship – the cornerstone of material circularity in Australia. Leaving states to go it alone, with NSW taking the lead with the new *Product Lifecycle Responsibility Act 2025* (PLR Act).

As identified in the Interim Report, a patchwork of different product stewardship schemes and other circularity policies and legislation, in each state and territory, is not ideal.

Voluntary measures won't be enough to drive real progress in circular economy practices. And unfortunately, the Interim Report downplays the need for the federal regulatory intervention, which is necessary to push industries toward circularity.

Arguments about more regulation being a burden on industry neglect the current mess of half-measures, and limits on results. What is needed is efficient regulation geared towards success.

Accordingly, TSA's principal request is that the Inquiry engage on the issue of federal legislation and leadership; to outline a reform direction for an overarching national Circular Economy Act (this regulatory framework could be achieved through a new Act or by amending the existing *Recycling and Waste Reduction Act 2020,* as suggested by the Circular Economy Ministerial Advisory Group[2]) **and associated new governance system.**

This should be designed to achieve material circularity objectives most efficiently.

This reform will help deliver the new Circular Economy Framework[3] (CE Framework) principles and targets and build on the recommendations of the Circular Economy Ministerial Advisory Group[4] (CEMAG), which specifically calls for a Circular Economy Act and harmonised circular economy rules to boost productivity.

Although the Interim Report mentions the CE Framework and the CEMAG report, the PC content is not, in our opinion, sufficiently attentive or additive to either.

Paying attention to material circularity is not a drag on value creation and the environment and the economy, but in fact, quite the opposite. We need the PC to champion productivity and enable the circular economy. Generational reform is required. Tinkering is not sufficient. Tinkering has left us with the fragmented patchwork of half-measures and complexity that we have today.

TSA, to assist with the preparation of the Inquiry's Final Report, has structured our response to the Interim Report in three parts:

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[2] Circular Economy Ministerial Advisory Group, Final Report, The Circular Advantage https://www.dcceew.gov.au/sites/default/files/documents/circular-advantage-final-report-cemag.pdf (accessed 9 April 2025).

[3] Australian Government, DCCEEW, Australia's Circular Economy Framework 2024, https://www.dcceew.gov.au/sites/default/files/documents/australias-circular-economy-framework.pdf (accessed 9 April 2025).

[4] Circular Economy Ministerial Advisory Group, Final Report, The Circular Advantage https://www.dcceew.gov.au/sites/default/files/documents/circular-advantage-final-report-cemag.pdf (accessed 9 April 2025).

- **General comments**
- **Comments specific to tyres**
- **Responses to requests for information**

Ultimately product stewardship is about creating a shared mission, and the operating environment for industry to succeed in economically sustainable markets. All of Australia's environment ministers have agreed and reiterated their commitment to transition Australia toward a more resilient and regenerative circular economy.

It is now time for the PC to make recommendations that set us on the course towards dynamic efficiency. In the words of the PC: *'Expressed most succinctly, best practice regulation achieves worthy objectives at least cost*[5]*.'*

A more circular economy is a worthy objective, and we would welcome the opportunity to assist in any way, beginning with the revision of the content on tyre retreading.

To discuss this submission please contact Sandra Scalise, Director, Strategic Marketing and Communications

Yours sincerely

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[5] Productivity Commission Research Report, 2011, Identifying and Evaluating Regulatory Reforms https://www.pc.gov.au/inquiries/completed/regulation-reforms/report/regulation-reforms.pdf (accessed 9 April 2025).

Tyre Stewardship Australia

Response to the Interim Report

Australia's circular economy: Unlocking the opportunities

Part 1: General Comments

The Productivity Commission is correct: Progress has been slow

TSA agrees with the PC's perspective that despite recent efforts, Australia's progress towards a more circular economy has been slow.

TSA advocated in our first submission (#148[6]), and reiterates, that we believe that a long-term perspective on improving material circularity is needed.

Not making systemic changes means that Australia will be left behind on the opportunities, and remain strategically exposed to the downside risks, including geopolitical shifts.

To be clear, for new tyres, Australia is totally reliant on imports.

For used tyre management, domestically, we are still reliant on disposal, being landfills and onsite burial at mines. And of the material we do recover, 75% is exported, with four out of every five tonnes destined for energy recovery applications abroad (e.g., cement kilns in India).

Focus on the long game: Dynamic efficiency is the goal

TSA believes that achieving dynamic efficiency[7] should be the overarching productivity approach.

Focusing on dynamic efficiency means prioritising long-term (more circular) economic growth through innovation, adaptation, and the efficient allocation of resources over time. Rather than just focusing on short-term gains, or by trying to soothe systemic problems in a piecemeal way.

A change of approach must happen and be aligned with the principles of the circular economy.

Enable success: With a fit-for-purpose operating environment

[6] TSA, submission to the Productivity Commission Inquiry, Australia's opportunities in the circular economy. https://www.pc.gov.au/__data/assets/pdf_file/0012/387678/sub148-circular-economy.pdf (accessed 9 April 2025).

[7] Productivity Commission Staff Research Note 2013, On efficiency and effectiveness: some definitions. Definition: Dynamic efficiency is a measure of how well resources are allocated over time to meet the current and future preferences of the population. https://www.pc.gov.au/research/supporting/efficiency-effectiveness/efficiency-effectiveness.pdf (accessed 9 April 2025).

Importantly, enabling dynamic efficiency requires a fit-for-purpose regulatory operating environment. **TSA and industry are aligned in wanting a stronger regulatory framework.**

Fit-for-purpose legislation and a well-designed policy framework with good programs and partnerships, can foster competition, incentivise research and development (R&D), reduce unnecessary bureaucratic barriers, and promote investment in innovative technologies.

Importantly, a supportive operating environment that is clear and predictable will reduce uncertainty and encourage long-term investments.

The tyre recycling industry, as an example, is rearing to go, but is being held back by half-measures and a lack of government resolve to follow through on its messages and regulate.

Acknowledge the elephant in the room: Effective, efficient federal legislation is key

TSA's view is that the Interim Report ignored the elephant in the room.

While the Interim Report does suggest a range of policy and regulatory changes, and flags the need for harmonisation and cooperative federalism, it seems to be anti-regulation biased[8].

To the extent that the legislative key required for 'unlocking the opportunities' for Australia in the circular economy has been left hanging on the proverbial hook.

There is no justification given for the PC position[9] that standalone pieces of regulation or legislation are more likely to be appropriate than an overarching act.

The PC view is counter to that of the expert advice Circular Economy Ministerial Working Group (discussed below) and counter to the international experience of best practice.

Evaluate: The existing Act is demonstrably not fit-for-purpose

From TSA's perspective, the current overarching *Recycling and Waste Reduction Act 2020* (*RAWR Act*) has demonstrated that it is not fit-for-purpose.

Stewardship schemes are not enabled to advance from voluntary status to more fully regulated schemes.

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[8] Noting that a general policy guideline of the *Productivity Act 1998 S8* is to reduce regulation. https://www.austlii.edu.au/cgi-bin/viewdoc/au/legis/cth/consol_act/pca1998310/s8.html (accessed 9 April 2025).

[9] Productivity Commission Inquiry, Australia's opportunities in the circular economy, Interim Report, 2025, Statement: *'The PC has previously noted that best practice regulatory and legislative reform involves taking a stepped approach to emerging issues. This involves three stages: assess existing regulation and legislation to see if it is fit-for-purpose to address emerging issues; if not, clarify or amend them to address gaps; and if this is not possible, then introduce new regulation or legislation that appropriately balances benefits and costs.[9] In proposing reform directions for this inquiry for both specific sectors (chapters 4–9) and system-wide (this chapter), the PC has generally been able to identify existing regulations that could amended or improved in how they are applied. Where new regulation or legislation is required, this is likely to be more appropriately introduced as a standalone piece, rather than an overarching Act.'*[9] https://www.pc.gov.au/inquiries/current/circular-economy/interim (accessed 9 April 2025).

The Interim Report notes that voluntary product stewardship schemes are not effective (e.g., batteries). Then promotes co-regulatory schemes as a solution (e.g., for PV panels), while also noting that co-regulatory schemes are not working where they are applied (e.g., plastics and packaging). This just leaves mandatory approaches, which the Interim Report seems to dismiss with insufficient reasoning and against the grain of the majority opinion expressed in submissions.

There is a definite need for effective and efficient overarching legislation, through either significant reform of the *RAWR Act*, or new legislation.

In the words of the Product Stewardship Centre of Excellence (Submission #159): *'In its current form, the Act appears to be politically challenging for governments, and too complex for policy makers to implement in a timely and effective manner. The Act should be revised with great urgency...'*[10]

The time is ripe to connect the dots - between the reform of the waste and recycling sector, decarbonisation, and infrastructure construction - to unlock the opportunities.

Legislative reform was a primary recommendation of the recent report of Circular Economy Ministerial Advisory Group: *Recommendation 4: Legislating for a circular future: a Circular Economy Act*. Supported by other recommendations, including *Recommendation 5: Harmonising circular economy rules to boost productivity*.

For information, TSA did make a submission (attached) and provide input into the current review of the *RAWR Act*. This was done with consideration of the terms of reference and the questions posed online by the Department of Climate Change, Energy, the Environment and Water (DCCEEW). However, we hold the views that this Review does not replace the need for strong direction from this PC Inquiry on this matter, and that the Review is very unlikely to deliver the substantial reforms necessary.

Leadership is wanting too: The Federal Government must be directed to lead

TSA, in our first submission to this Inquiry, made the case for and recommended that a *'regulated product stewardship scheme for tyres and conveyor belts should be established under the Recycling and Waste Reduction Act 2020.'*

Subsequent to our November 2024 submission to the PC, in December 2024 the Environment Ministers' Meeting (EMM) considered the issue of better tyre management, but only for information, without any decision-making intent.

The Discussion (Options) Paper presented recommended, as the preferred option, to move to a more fully regulated product stewardship scheme for all tyres. This was supported in principle by all jurisdictions (other than Queensland, which did not agree with many decisions at this EMM).

[10]Product Stewardship Centre of Excellence, Submission to the Productivity Commission Inquiry, Opportunities in the Circular Economy https://www.pc.gov.au/__data/assets/pdf_file/0011/388199/sub159-circular-economy.pdf (accessed 9 April 2025).

With the view formed that a cost-benefit analysis would be led by a state in 2025. As the Federal Government lacked the capacity and priority interest in respect to leading this cost-benefit analysis/regulatory impact analysis.

Tyres has been on the Federal Environment Minister's Product Stewardship Priority List for two consecutive years - 2022/23 and 2023/24 - with industry put on notice that government regulation would be forthcoming if significant action by industry was not taken (which it wasn't) to improve material circularity[11].

The time to act is now, and TSA made a federal budget submission requesting that sufficient funding is allocated to DCCEEW in the 2025-2026 budget to enable them to progress Australia towards more fully regulated product stewardship schemes.

Progress: But as additions to the patchwork

Without Federal Government leadership, states are left to go it alone. With NSW the first mover, enacting their *Product Lifecycle Responsibility Act 2025* (PLR Act) to create a framework for mandatory product stewardship.

Effectively, NSW has become the first state in Australia to require brand owners/importers to take responsibility for the entire lifecycle of regulated products, starting with batteries.

While this leadership is laudable, it creates more of the patchwork of approaches and (jurisdictional) harmonisation issues that the Interim Report identifies as a productivity barrier.

PC leadership is needed: Productivity needs a champion

As stated in TSA's first submission *'For circularity to be achieved, innovation needs an environment in which it can thrive.'*

It is not thriving on tyre recycling[12], due in large part to the Federal Government's slow pace in sorting out how to best to design and govern regulated product stewardship schemes that mandate participation.

The upcoming findings of the Senate Inquiry into Waste Reduction and Recycling Policies[13] seems likely to criticise this Federal Government paralysis, and industry is frustrated.

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[11] Minister's Priority List 2023-24, https://www.dcceew.gov.au/environment/protection/waste/product-stewardship/ministers-priority-list-23-24#tyres (accessed 9 April 2025).

[12] TSA Tyre Consumption & Recovery Fact Sheet, Summary: In the 2023-24 financial year Australia generated approximately 537,000 tonnes or 67 million used tyres (passenger tyre equivalents units). 34% was unrecovered, meaning it was disposed to landfill or buried onsite at mines, stockpiled in long-term storage, or dumped to the open environment and not cleaned up. In addition, 40% was sent to energy recovery. This means that nearly three-quarters (74%) of our end-of-life tyres are still going to end fates that are not circular. Only a quarter is going to recycling and waste reuse[12]. https://www.tyrestewardship.org.au/handbooks/tyre-consumption-recovery-fact-sheet/ (accessed 9 April 2025).

[13] Parliament of Australia, Senate Standing Committee on Environment and Communications, Inquiry: The effectiveness of the Albanese Labor Government's waste reduction and recycling policies in delivering a circular economy. See TSA submission #47 and other submissions.

An efficient, overarching, integrated regulatory framework for the circular economy in Australia is needed.

TSA's view is that the most useful role of this PC Inquiry would be to outline how this can be designed to achieve circularity and productivity objectives most efficiently.

Noone wants excessive regulation. TSA has long advocated for a more fully regulated product stewardship scheme for tyres for good reasons. And we will continue to be stymied in our product stewardship leadership role until the shift occurs.

Arguments about more regulation being a burden on industry neglect the current mess of half-measures, and limits on results. What is needed is efficient regulation geared towards success.

Parroting the Treasurer, at TSA *'We want the independent PC to be as strong and effective as possible so that it can provide more influential, constructive and timely advice.'* [14]

Focus

As a short-term measure, the focus of the PC Inquiry should be to strengthen product stewardship by requiring mandatory participation by product brands and importers.

The benefits of acting are numerous. The Product Stewardship Centre of Excellence 2024 report *Investing in Intelligent Regulation*[15] - *The economic benefits to government of regulated product stewardship* delineates why regulated product stewardship is especially effective in:

- Stimulating investment: Regulation provides incentives for private sector investment, including in more challenging economic conditions.
- Ensuring that the investment is efficient: Well-designed regulation ensures that investment is aligned with the long-term interests of the community, promoting long-run economic efficiency.
- Driving productivity and competitiveness: Regulation provides incentives for innovation and technological growth, driving productivity and competitiveness.

In addition: Revisit the terms of reference

In respect to the Inquiry's terms of reference, as a general comment, TSA would like to highlight areas that have thus far been under-explored. These relate to international examples and emissions:

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https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Wastereduction (accessed 9 April 2025).

[14] Treasurer media announcement, Refocusing and renewing the Productivity Commission, release of Statement of Expectations for the Productivity Commission. https://ministers.treasury.gov.au/ministers/jim-chalmers-2022/media-releases/refocusing-and-renewing-productivity-commission (accessed 9 April 2025).

[15] Product Stewardship Centre of Excellence, Investing in Intelligent Regulation PSCOE_108062_whitePaper_Investing_in_Intelligent_Regulation_Final.pdf (accessed 9 April 2025).

In the case of tyres, there are significant examples of stronger product stewardship occurring overseas, and the linking of circularity into net-zero emissions strategies. These are articulated in the submission by the CSIRO (#57[16]).

The CSIRO report Best practice case studies for increasing value recovery from end-of-life tyres and conveyor belts[17] looks at international best practice case studies for overcoming barriers and increasing value recovery from used tyres and conveyor belts in Australia.

Also, of interest will be:

- TSA's recent collaborative report with the CSIRO: Exploring global influences on the tyre industry: Chemicals of concern, microplastics and design - Literature Review[18]. It outlines that global priorities on tyre regulation are generally aligned on improving safety and reducing environmental impact.
- TSA's report on Understanding carbon emissions and targets to support tyre recovery in Australia[19].

TSA's recommendations remain relevant

TSA, in our first submission (Sub #148[20]) proposed five recommendations, and these remain relevant:

- Regulate Product Stewardship Schemes
- Consider Industry Policy
- Leverage Government Procurement
- Align Jurisdictions
- Enable Consumer Choice through Labelling.

These recommendations are proposed as the 'big moves' needed to drastically improve material productivity on end-of-life tyres and conveyor belts in Australia. They have been proposed on a whole-of-system approach, to help address the opportunities and barriers.

[16] CSIRO, Submission to consultation on the Opportunities in circular economy https://www.pc.gov.au/__data/assets/pdf_file/0010/387370/sub057-circular-economy.pdf (accessed 9 April 2025).
[17] CSIRO, Best practice case studies for increasing value recovery from end-of-life tyres and conveyor belts https://www.nespsustainable.edu.au/sites/default/files/documents/IP5.02.02%20Improving%20the%20circularity%20of%20end-of-life%20tyres%20and%20conveyor%20belts%20v2%20%28Sept%202024%29.pdf (accessed 9 April 2025).
[18] CSIRO, Exploring global influences on the tyre industry: Chemicals of concern, microplastics and design https://www.tyrestewardship.org.au/reports-facts-figures/exploring-global-influences-on-the-tyre-industry/ (accessed 9 April 2025).
[19] TSA, Understanding carbon emissions and targets https://www.tyrestewardship.org.au/wp-content/uploads/2023/02/TSA-Understanding-Carbon-Emissions.pdf (accessed 9 April 2025).
[20] TSA, submission to the Productivity Commission Inquiry, Australia's opportunities in the circular economy. https://www.pc.gov.au/__data/assets/pdf_file/0012/387678/sub148-circular-economy.pdf (accessed 9 April 2025).

Part 2: Comments specific to tyres

TSA provides the following comments and corrections specific to the content on tyres.

8.1 Overview of the vehicles sector (page 125)

Efficient, low-emission transport assists circular transformation

Comment: Tyres make a significant contribution to fuel efficiency (up to 20-30%[21]), and tyre choice and management should be mentioned as a low-tech, ubiquitous way to lower transport emissions.

TSA has made submissions on this topic including to the Australian Government, Transport and Infrastructure – Net Zero Consultation Roadmap. Our key message being that tyres can make a material contribution to decarbonisation.

Energy efficient tyres can:

- reduce the fossil fuel consumption and tailpipe emissions (scope 1) of internal combustion engine vehicles; and
- reduce the electrical energy consumption and non-tailpipe emissions (scope 2) of electric vehicles.

Importantly, energy efficient tyres may be one of the least cost approaches to reducing emissions from road transport, with the added benefit of achieving fuel cost savings for consumers.

8.2 Opportunities for greater circularity in vehicles (page 127)

Comment: This section includes a statement that *'…opportunities to improve materials productivity and efficiency for vehicles and tyres are concentrated in the use and end-of-life phases of the product life cycle'.*

In addition to the use and end-of-life stages, there is a significant opportunity at the reuse/recirculation stage to increase the uptake of tyre repair and retreading for OTR tyres, and for commercial trucks and buses. Reuse is simply a sensible cost-effective way to extend the life of heavy-duty tyres.

TSA released a Retreading Fact Sheet[22] that may be of interest to the PC. Retreading reduces the demand for raw materials, provides energy savings, reduces waste and supports Australian jobs of strategic importance, such as those employed by Bandag[23].

[21] Council of the European Union, First reading with view to adoption of regulation https://data.consilium.europa.eu/doc/document/ST-14649-2019-INIT/en/pdf (accessed 22 July 2024).

[22] TSA, Retreading, The repeated benefits https://www.tyrestewardship.org.au/wp-content/uploads/2021/11/TSA-Retreading.pdf (accessed 9 April 2025).

[23] https://www.bridgestone.com.au/tyres/bandag?srsltid=AfmBOoprVgKJrMR7TeKUARZLAmDWlAPFD5v121ckTK7Xzpuw6Ba-_35w (accessed 9 April 2025).

The retread of tyres is being undermined by cheaper, lower quality tyres, that are single use. The CSIRO has recommended that '*Standards should also be implemented for imported tyres, to ensure that they are of good enough quality to allow retreading.*'[24]

There is also the connected issue of the issues associated with the importation of second-hand tyres, as raised in the Parliament of Australia[25]. Unfortunately, the Australian Design Rules (ADR) for tyres do not appear to be being enforced, other than when new tyres are part of new vehicles, and so poor quality, potentially unsafe tyres are coming into Australia by the container load.

Comment: This section includes a statement that *'The relative costs of disposal and recovery options significantly influence decision making by consumers and retailers in relation to vehicle end of life. Factors such as landfill levies and the value of recovered materials and products impact these decisions (FCAI and MTAA 2024, p. 12). In addition, regulations such as Victoria's landfill ban on whole tyres and environmental concerns influence decisions on disposal and materials recovery (FCAI, sub. 85, p. 5).'*

The relative costs of disposal versus recovery options are the most significant influence on the recovery of tyres. TSA has made submissions on this topic including to the NSW review of landfill levies[26].

To create a circular economy on tyres it will be necessary to put an end to the ability to landfill tyres, and for the ability to bury tyres onsite at mines. These disposal methods currently account for 30% of the end fate of tyres in Australia by weight. The phase out of landfill/burial should consider the role of levies to level the playing field for recycling options to smooth the transition.

Tyre collection and recycling opportunities (page 129)

Comment: This section includes a statement about the participation of tyre importers by market share. It should also mention the participation of automotive manufacturers/importers.

Automotive imports account for around 16% of tyre imports, but only two brands, out of around 70, participate in tyre stewardship, being Mercedes-Benz and Porche.

This means that the automotive sector, as a whole, is a significant recalcitrant when it comes to taking responsibility for the tyres they import into Australia. A requirement to participate in

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[24] CSIRO, Best practice case studies for increasing value recovery from end-of-life tyres and conveyor belts https://www.nespsustainable.edu.au/sites/default/files/documents/IP5.02.02%20Improving%20the%20circularity%20of%20end-of-life%20tyres%20and%20conveyor%20belts%20v2%20%28Sept%202024%29.pdf (accessed 9 April 2025).

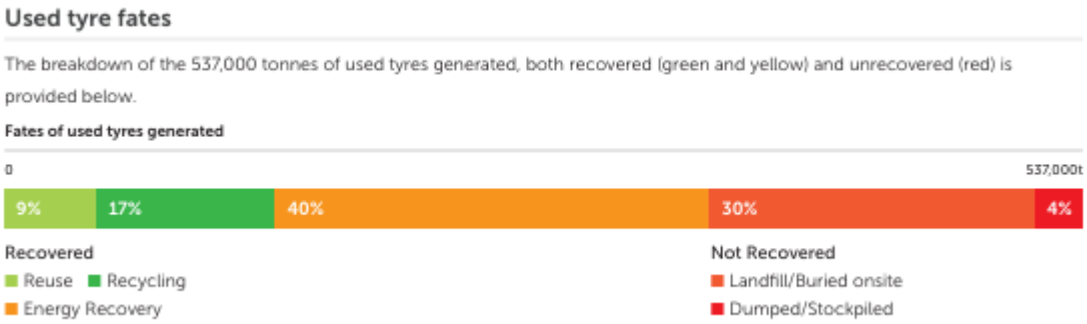
[25] Parliament of Australia, Hansard, Adjournment – Environment: Tyres, Rob Mitchell MP https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=chamber/hansardr/28030/&sid=0233 (accessed 9 April 2024).

[26] Review of the NSW waste levy: Issues paper https://yoursay.epa.nsw.gov.au/nsw-waste-levy-review#:~:text=Why%20is%20the%20NSW%20Government,to%20effectively%20increase%20resource%20recovery. (accessed 9 April 2024).

product stewardship would remedy this situation overnight. And this should include mobile plant and machinery importers (e.g., earthmoving and construction plant).

Correction: This section states that *'Of the tyres recovered, 13% were reused, 25% were recycled and 62% were used in energy recovery (tyre derived fuel) (based on TSA 2024b, p. 2).'*

This should be corrected to state that, of the tyres recovered, the end fates were that 9% were reused, 17% were recycled, and 40% were used in energy recovery (as per the reference below)[27].



Vehicle body collection and recovery opportunities (page 130)

Comment: In reference to establishing a co-regulated product stewardship scheme for vehicle bodies, this section includes a statement that the *'...PC does not consider this a priority opportunity for governments to pursue in Australia.'*

If this is the case the PC should consider how the component parts of a vehicle are managed via product stewardship schemes.

For example, the refrigerants in all vehicles are required to be part of a product stewardship scheme. But it is not yet required that all tyres entering the country on a vehicle are part of a product stewardship scheme.

As mentioned above, only two automotive brands participate in the voluntary product stewardship scheme for tyres, but these brands contribute 16% of new tyres entering Australia.

If the PC is opposed to vehicle body product stewardship, it should include a **reform direction** requiring automotive brands, as significant tyre importers, to participate in the Tyre Product Stewardship Scheme, and in other relevant schemes such as for batteries.

Retreading tyres (page 131)

This section on retread needs to be corrected. Please contact TSA to discuss a rewrite.

Correction: This section states that *'Increasing the uptake of retreaded tyres may provide some environmental benefits, mainly overseas, by displacing new tyre production. However, the*

[27] TSA Tyre Consumption & Recovery Fact Sheet https://www.tyrestewardship.org.au/handbooks/tyre-consumption-recovery-fact-sheet/ (accessed 9 April 2025).

environmental benefits are limited by the narrow range of vehicles (predominantly trucks and buses) that use retreaded tyres (TSA 2019, p. 2).'

Let's not forget about circularity.

Firstly, increasing the uptake of retread tyres provides material efficiency and productivity benefits, cost savings to Australian businesses, and employment opportunities in the domestic retread business (which includes exports, mainly to New Zealand) and the export of tyres to be retread overseas (via an export licence).

Secondly, retread is not limited to a narrow range of vehicles. It is common for commercial vehicle tyres and OTR tyres - and has a multiplier effect in terms of productivity.

The ADR support tyres that are fit for purpose which includes retread. As mentioned, the reason for the decline in the domestic retread industry is the importation of cheap, single use tyres not able to be retread. This issue is compounded by a lack of enforcement of the ADR in relation to quality and safety overall, and the lack of any requirement for tyres to be able to be suitable for retreading.

Correction: This sections states that '*Trucks and buses account for less than 4% of vehicles in Australia (based on ABS 2021a). As such, the PC does not consider this a priority opportunity in line with the prioritisation framework (chapter 3).'*

To be clear, truck and bus tyres form the largest component of used tyres generated in Australia, accounting for 35.75% in 2023/24. Combined with the contribution of OTR, at 28.86% of used tyre generation in 2023/24, **retreading is applicable to almost 65%** of all used tyres generated in Australia. Please correct this section.

The numbers compound further once the actual retread process is considered. If a tyre has a good quality casing, and is retread three times, this means a third of the number of end-of-life tyres that need to be managed.

If only half of all OTR and truck and bus tyres were retread, this would have a huge impact to reduce the generation of used tyres and would promote jobs and industry growth.

8.3 Policy interventions to address barriers to circularity

Tyre collection and recycling (page 131)

Comment: This sections states in reference to a shift from a voluntary to a more fully regulated product stewardship scheme for tyres that *'Given relatively high recovery rates for passenger and truck tyres, the overall costs to the community of such a change would likely exceed the benefits.'*

This is conjecture and not consistent with the evidence including international experience.

A more fully regulated product stewardship scheme, inclusive of all types of tyres, has already been determined by government (the EMM) analysis, to be the preferred next step option, with a cost-benefit analysis to be led by a state in the coming year.

There is already a cost for the disposal of used tyres for truck and bus, and for passenger tyres. Even if they go to landfill, and even if they are dumped into the environment, there is a cost.

TSA commissioned consultants Blue Environment to research the cost of illegal tyre dumping, finding that local governments face an estimated $6.5 million annual cleanup cost, highlighting the environmental and financial burden of such practices[28].

The only segment that has very little cost imposed on it is the mining sector, which is allowed, with few restrictions, to dispose onsite at mines at close to zero marginal cost, leading to a lack of financial incentive for better management, and thus the woeful circa 2% recovery rate for mining OTR.

New Zealand is a case study of the cost reductions that can be achieved by a regulated scheme. An upfront 'advanced' tyre disposal fee is now charged. For example, $6.65 (excluding GST) is now charged on standard passenger tyres (around 9.5kg). This fee is now known as the 'Tyre Stewardship Fee' and is part of the national Tyrewise scheme to manage end-of-life tyres. The fee is included in the price of new tyres sold in New Zealand and covers the cost of tyre collection, processing, and recycling.

Prior to regulation consumers were paying for disposal at point of sale for new tyres, or at a transfer station, anywhere between NZ$10 to NZ$25 per passenger tyre.

Under the scheme, given the upfront fee, tyre 'generators', such as tyre shops, can have their end-of-life tyres collected for free. And members of the public can also dispose of up to five worn-out tyres per day, for free, at registered public collection sites around the country. Thus, the mandatory scheme is achieving significant cost savings, and environmental benefits including a reduction in illegal dumping of tyres.

Correction: This section states in reference to OTR recovery that *'The main barrier is the higher cost of collecting and transporting tyres from regional and remote areas.'*

To clarify, the main barrier is the legality of onsite burial (in essentially unregulated landfills), at mines (80% of OTR), and the close to zero marginal cost of this management method to the mining companies. There is no landfill levy applied anywhere in Australia to this method.

Reverse logistics could easily manage the collection and transport of the tyres. Mining is paying the logistics for the tyres to come on site, reverse logistics can reduce the cost of moving the tyre offsite at end-of-life. The development of OTR processing capacity is an issue, but one that can be resolved relatively quickly, with investments such as the new Tyrecycle[29] facility in the Pilbara providing proof. Leading mining companies want to do the right thing and recycle their tyres, but quite reasonably, they want a level playing field that requires tyre recycling by all mining companies.

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[28] Blue Environment, Stockpiling and illegal dumping of tyres: cost to local governments and others https://www.tyrestewardship.org.au/reports-facts-figures/stockpiling-and-illegal-dumping-of-tyres-cost-to-local-governments-and-others/ (accessed 9 April 2025).

[29] Tyrecycle, Australia's first dedicated OTR mining tyre recycling facility opens in Port Hedland https://tyrecycle.com.au/australias-first-dedicated-otr-mining-tyre-recycling-facility-opens-in-port-hedland/ (accessed 10 April 2025).

Part 3. Response to information requests

This Interim Report suggests that there is scope for the Australian Government to more actively coordinate stewardship for products with higher-risk and/or higher-value waste streams, and where arrangements are currently underdeveloped, ineffective or inconsistent across different jurisdictions. TSA, as Australia's tyre stewards, would welcome this federal leadership on tyres.

Of the six priority areas identified in the Interim Report, TSA provides the following comments the built environment, mining, and vehicles. We have also provided comments on system-wide arrangements.

The built environment

Information request 4.1: Enabling fit-for-purpose use of recycled materials in public projects

TSA supports the mandated use of recycled materials in public projects. This can be done through technical specifications. For example, in Western Australia, the use of crumb rubber in road construction is governed by specific technical specifications developed by Main Roads Western Australia. These specifications outline the requirements for incorporating crumb rubber into asphalt and bitumen mixtures including the rubber concentration e.g., Crumb Rubber Gap Graded Asphalt (Specification 517)[30]. Western Australia is leading on the use of crumb rubber in roads.

There is scope to harmonise standards and specifications through the adoption of national technical specifications. In Queensland, the new Technical Specification Transport and Main Roads Specifications MRTS18 Polymer Modified Binder (including Crumb Rubber) March 2025[31] modifies Austroads Technical Specification ATS 3110 Supply of Polymer Modified Binders as part of national harmonisation. It sets out the requirements for the supply (including transport and storage), sampling and testing of polymer modified binders (PMBs), and crumb rubber modified binders for use in both sprayed sealing and asphalt applications, including the rubber concentration.

Information request 4.2: Coordination mechanisms to enhance the benefits of sustainable procurement policies

[30] Main Roads Western Australia, Crumb Rubber Gap Graded Asphalt (Specification 517) https://www.mainroads.wa.gov.au/4a7583/globalassets/technical-commercial/technical-library/specifications/500-series-pavements/specification-517-crumb-rubber-gap-graded-asphalt-pdf.pdf (accessed 10 April 2025).

[31] Department of Transport and Main Roads, Queensland Technical Specification Transport and Main Roads Specifications MRTS18 Polymer Modified Binder (including Crumb Rubber) March 2025 https://www.tmr.qld.gov.au/-/media/busind/techstdpubs/Specifications-and-drawings/Specifications/5-Pavements-Subgrade-and-Surfacing/MRTS18.pdf?la=en (accessed 10 April 2025).

In Victoria, ecologiQ has made a noticeable impact integrating recycled and reused materials into road and rail infrastructure projects across Victoria. A cornerstone of ecologiQ's approach is the Recycled First Policy which mandates that contractors prioritise the use of recycled and reused materials in major transport projects.

TSA has been providing input into the draft NSW version - the Protection of the Environment Policy, Sustainable Construction. Our review commented that this NSW policy is less forthright than it needs to be to achieve parity with the Victorian policy.

At the national level, there would be benefit in having a standard approach to sustainable procurement policies, backed by a clear requirement from the Australian Government that its funding for major infrastructure projects is tied to implementation of these policies.

Mining

Information request 7.1: Reducing regulatory barriers to circular economy opportunities for mining waste and alternative post-mining land uses

In Australia, the practice of burying tyres in mining operations has been a controversial issue. Mining companies are allowed to bury used tyres onsite (e.g., as a licence condition), and this has remained the preferred disposal method as it is significantly cheaper and easier than other disposal methods.

However, this practice raises significant environmental and social concerns, as tyres buried in the ground can take centuries to decompose and may cause harm to the surrounding ecosystem. And the practice is in conflict with Indigenous Caring for Country values.

There have been increasing calls from community groups, TSA and regulatory bodies to reduce the use of tyre burial and instead encourage recycling and reuse. Mining companies have shown a growing interest in alternative options.

A phase out of onsite burial of tyres is needed to redirect the significant quantity of mining tyres and related products such as conveyor belts, to sustainable outcomes.

Information request 7.2: Ways governments could facilitate circular economy opportunities for mining waste and alternative post-mining land uses.

For OTR tyres used in the mining sector, in addition to the abovementioned phase out of onsite burial, attention should be given to industry policy incentives and funding.

The Recycling Modernisation Fund has supported a number of tyre projects including in the OTR tyre generation hotspot of the Pilbara in WA.

For example, in collaboration with the WA government, East-West Pilbara Rubber Recycling Pty Ltd received $675,000 worth of land allocation to establish a dedicated OTR tyre recycling and devulcanisation facility in Port Hedland capable of processing 12,000 tonnes each year.

Vehicles

Information request 8.1: Targeted measures to improve the collection and recovery of off-the-road tyres

In 2023, TSA published the **leading national report** on the myriad issues, and the opportunities, relating to the recovery of the OTR tyres used in mining, agriculture, construction and by other industries: *Tipping the balance: The business case for a circular economy for Australia's off-the-road tyres, conveyors, and tracks*[32]. TSA also published a *Summary and Action Plan*.

The Tipping the Balance comprehensive analysis key findings are that:

Annual Generation and Recovery Rates: Australia generates approximately 245,000 tonnes of OTR rubber products (including OTR tyres and rubber conveyor belts) each year, with **80% from mining** and **10% from agriculture**.

However, less than 15% of these materials are currently recovered, while the remainder is buried, stockpiled, or sent to landfills.

As a global comparison, Australia's recovery rate stands in stark contrast to international best practice, with countries like Denmark achieving 100% recovery, Ontario (Canada) at 87%, and France at 78%. These countries don't allow onsite disposal at mines.

Tipping the Balance identifies several challenges hindering OTR tyre recycling:

- Mining being allowed to conduct onsite disposal by states/territories.
- High logistics and recovery expenses from rural and remote locations.
- Uncertainty regarding recycling technologies and waste management approaches.
- Ambiguity about market size and capacity for recycled OTR products.
- Low priority assigned to tyre waste stewardship by industry and government.

Recommendations: To address these challenges, the report recommends:

- Implementing a regulated product stewardship scheme to ensure consistent participation in recovery efforts.
- Engaging stakeholders, including tyre manufacturers, mining and agricultural companies, governments, and Indigenous communities, to establish a viable market for recycled OTR products and to encourage recovery.
- Focusing recovery efforts on key generation areas in mining regions such as Western Australia's Pilbara, Queensland's Bowen Basin, and New South Wales' Hunter Valley.

By adopting these measures, Australia can enhance the recovery and recycling of OTR rubber products, yielding environmental, social, and economic benefits, particularly in regional and remote areas.

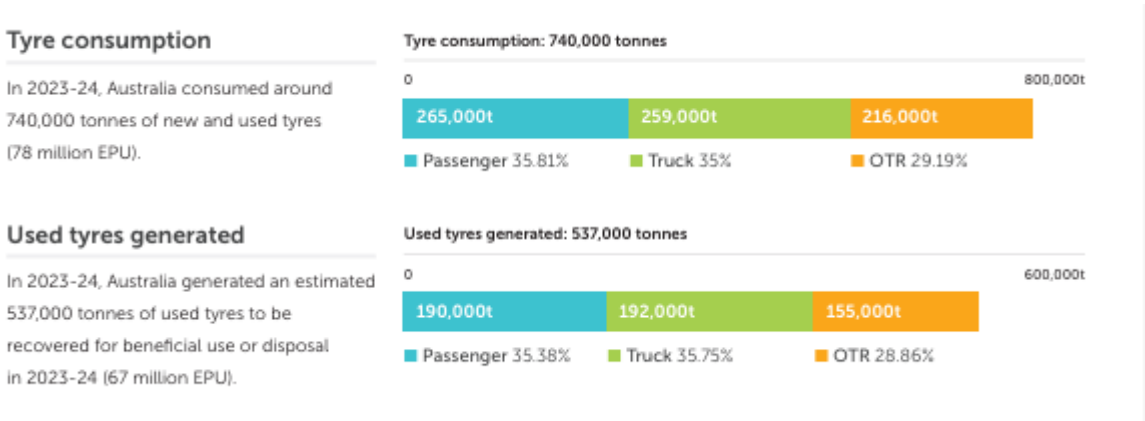
[32] TSA, Tipping the balance: The business case for a circular economy for Australia's off-the-road tyres, conveyors, and tracks https://www.tyrestewardship.org.au/wp-content/uploads/2024/01/TSA-OTR-Tipping-the-balance-Full-report.pdf (accessed 10 April 2025).

The **PC** should review the Tipping the Balance report in detail to gain an understanding of the impacts of OTR tyres, including the disproportionate impact on Indigenous communities.

The policy action that would be most effective would be for the phased end to the onsite disposal of used tyres in all Australian states and territories. This should be synchronised with an increase in the capacity of logistics, processing, and end markets.

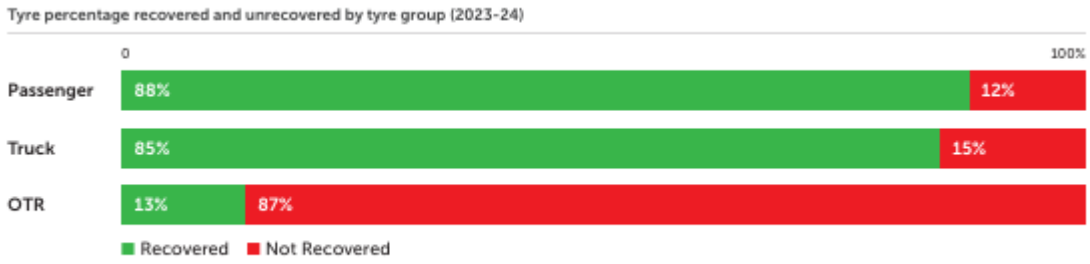
Current Status:

In 2023-24 OTR tyre generation was 155,000 tonnes, close to 29% of all generation.



[33]

The OTR 2023-24 resource recovery rate was 13%.



The recovery rate for OTR tyres and conveyor belts from mining remains extremely low.

EMM Analysis:

In late 2024 the Federal Government and state and territory governments through the EMM, reviewed a Discussion (Options) Paper on the better management of used tyres in Australia.

The Options Paper, prepared by the West Australian Government after consultation with industry stakeholders, DCCEEW and state and territory jurisdictions, highlighted that only comprehensive approaches can resolve and provide an effective solution to the myriad issues related to used tyres (both OTR and passenger, truck and bus).

The finding was that a regulated product stewardship scheme is the most suitable solution. This aligns with best practice global experiences and TSA's position.

[33] TSA Tyre Consumption & Recovery Fact Sheet https://www.tyrestewardship.org.au/handbooks/tyre-consumption-recovery-fact-sheet/ (accessed 9 April 2025).

The Options Paper analysis included additional analysis specific to OTR tyres.

The **PC** should contact the WA Government to gain access to the Options Paper. It will also become a public document in the coming months.

To reiterate, the Options Paper considered that it was best to create a robust all-encompassing product stewardship scheme for all tyres - OTR, passenger, truck and bus tyres. **Addressing only OTR was considered but found to be a sub-optimal option**.

TSA advocacy for a regulated scheme design:

TSA believes that a fully regulated product stewardship scheme should be designed on circular economy principles, learn from regulated schemes operating globally, and be fit-for-purpose in the Australian context.

There is much to be gained for Australia in compulsory product stewardship, including:

- **Driving economic growth and innovation**: Increased resource recovery will generate jobs and economic growth. Effective market development incentives, funded by an increase in levy income, can create strong onshore markets for recycled products, leading to new business opportunities.
- **Enhancing resource efficiency**: By embracing the circular economy and enhancing resource efficiency, we can reclaim valuable resources from used tyres, mitigate against the risks associated with the current reliance on exporting tyre waste to foreign destinations, and deliver advanced products like more durable roads.
- **Protecting the environment**: By ensuring all tyres are recovered, we can end our reliance on landfills, avoid the onsite burial of tyres at mines, and assist farmers and other businesses to dispose of used tyres responsibly to protect the environment. We can also assist indigenous communities to care for country.
- **Promoting public health and safety**: By stamping out illegal dumping and stockpiling we can prevent public health and safety hazards like mosquito breeding, rodent infestations, and toxic fires, ensuring a safer, cleaner environment.
- **Ensuring compliance and fairness**: A robust compulsory stewardship approach will provide all stakeholders with consistent environmental and safety standards, increasing compliance, reducing administration, streamlining enforcement, and promoting fairness across the country including in regional and remote areas. It will also ensure better reporting and information, improving the measurement and evaluation of outcomes and the management of the scheme itself. Reporting on metrics will be possible.

Where there is a will, there is a way:

The example below illustrates that the recovery of OTR tyres can be done. This project, by Rio Tinto, was undertaken as part of a mine closure and rehabilitation, for return of land to the Traditional Owners – the Miriwoong and Gija people. The goal being to preserve ecological and cultural heritage values and ensure a smooth transition for the local community.

Tipping the balance for mine restoration and waste recycling [34]

In November 2023, 800 tonnes of used OTR tyres and conveyor belts were recovered from a remote region in Western Australia in the first project of its type and magnitude undertaken in Australia.

It provides a real-world demonstration of the possibilities of a circular economy for big rubber product users, such as the mining industry.

It is also an example of how collaboration between recyclers and rubber product users can move through perceived barriers to viable solutions for used OTR tyres, conveyor belts and tracks that would otherwise go to waste.

System-wide arrangements

Information request 10.1: Governance arrangements to harmonise regulations that pose barriers to circularity

As discussed, TSA has firsthand experience of the challenge of gaining the attention of the EMM in respect to product stewardship, and in gaining the necessary concurrent commitment by the Australian Government to undertake projects, e.g., a regulatory impact analysis for a more fully regulated product stewardship scheme.

Thus, TSA sees significant merit in the proposal of the CEMAG *Recommendation 5: Harmonising circular economy rules to boost productivity: to 'develop, with states and territories, a new governance model to modernise and harmonise regulations, standards and specifications related to the circular economy, resource recovery and waste that will accelerate productivity and support industry to innovate and scale.'* [35]

TSA supports the CEMAG view that an arrangement stronger than an intergovernmental forum such as the EMM is needed e.g., similar to the Australian Building Codes Board.

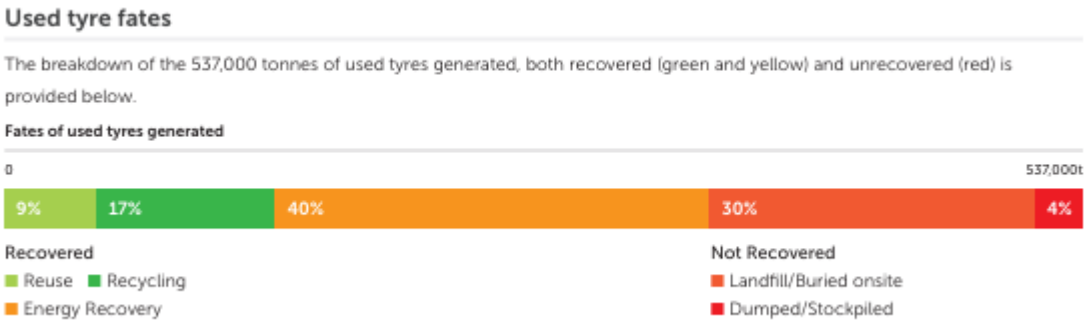
Alternatively, it may be warranted that National Cabinet establish a formal, ongoing, Circular Economy Ministerial Council (CEMC), similar to the Energy and Climate Change Ministerial Council, within the streamlined model of Australia's federal relations architecture. The Australian Government should coordinate harmonisation efforts. Noting the significance of state and territory, and local government in waste management and material circularity.

In addition to the matters raised in the information request, harmonisation efforts could correct inconsistent regulations relating to the landfill of tyres and for the onsite disposal of used tyres at mines sites.

[34] TSA Case Study, Tipping the balance for mine restoration and waste recycling https://www.tyrestewardship.org.au/project/tipping-the-balance-for-mine-restoration-and-waste-recycling/

[35] Circular Economy Ministerial Advisory Group, Final Report, The Circular Advantage (accessed 9 April 2025). https://www.dcceew.gov.au/sites/default/files/documents/circular-advantage-final-report-cemag.pdf (accessed 9 April 2025).

Disposal of tyres to landfill and onsite burial (landfill/buried onsite - below in red) currently accounts for 30% of the end-fate of all used tyres in Australia[36].



A new institutional body could focus on matters pertaining to waste and material circularity. The current scope of the EMM is arguably too broad to enable it to give these issues the attention required. This includes support for end markets through government procurement, such as the inclusion of crumb rubber in bitumen, as explained below.

The Case for Crumb Rubber in Road Projects

Incorporating crumb rubber into bitumen for use in asphalt and sprayed seals enhances road resilience, sustainability, and long-term cost efficiency, and aligns with modern engineering standards.

Boosting Resilience

- Crumb rubber-modified asphalt offers greater elasticity, improving resistance to cracking and deformation caused by repeated loading and extreme weather.
- In sprayed sealing, crumb rubber-modified binders create a waterproof membrane, preventing water infiltration, reducing potholes, and enhancing flood resilience.

Improving Safety

Crumb rubber increases skid resistance in asphalt, reducing the risk of hydroplaning in wet conditions. In sprayed seals, it enhances aggregate retention, maintaining a stable road surface and minimising hazards like loose stones on high-traffic roads.

Advancing Sustainability Goals

Crumb rubber contributes to Australia's net-zero emissions strategy and supports the circular economy by:

- ✅ Diverting waste tyres from landfills and onsite burial.
- ✅ Lowering emissions through reduced embodied carbon and maintenance needs.
- ✅ Reducing reliance on virgin materials by repurposing waste.

[36] https://www.tyrestewardship.org.au/wp-content/uploads/2025/01/Australian-Tyre-Consumption-and-Recovery-2023-24.pdf

Tyre Recycling Impact

A two-lane highway can recycle 2,000 end-of-life tyres per kilometre in asphalt applications and 300-400 tyres per kilometre in sprayed seals. This large-scale recycling effort significantly reduces waste while delivering high-performance road infrastructure and supporting local jobs.

Conclusion

Integrating crumb tyre rubber into major road projects enhances resilience, safety, and sustainability. This innovative approach delivers longer-lasting, cost-effective roads while supporting environmental responsibility. By embracing crumb rubber, we can build a stronger, safer, and more sustainable transport network for the future.

Information request 10.2: Supporting coordination, facilitation or brokering services

Product stewardship organisations, such as TSA, are the existing platforms for information sharing and collaboration in relation to the products that they oversee.

There are many examples of TSA partnering with intermediaries, such as industry associations, universities, and government to support collaboration. This collaboration could be strengthened by requiring all brand owners to take responsibility for the entire lifecycle of regulated products.

If TSA did not have to focus effort on advocacy to government for action on regulation and so all product brands/importers were participating, product stewardship would be better resourced and more able to focus on the core role of market development and consumer education.

There would be minimal cost to government as the stewardship scheme would be self-funded by a levy (e.g., on each passenger tyre equivalent unit). The only costs to government would be related to industry compliance with the scheme, and to scheme oversight e.g., the ACCC authorisation.

The benefits of mandatory participation are outlined in detail in TSA's first submission. As will be the case for mandatory schemes for other products (e.g., packaging), a mandatory scheme for tyres can support success.

Lessons can be learned from the lack of a national container deposit scheme. By having a different scheme in each state and territory, the administrative burden is increased eight-fold. We need national product stewardship schemes that mandate participation.

At the program level, Victoria is leading the way. Having recognised the link between the reform of waste and recycling and the opportunity of transport infrastructure, the ecolgiQ program, focused on Victoria's Big Build, has proven the benefit of integrating recycled content across transport infrastructure projects and making the use of greener materials business-as-usual.

There is still work to do to get the Big Build to use crumb-rubber modified asphalt, and TSA has been advocating actively for this change, but overall, this is a program that should be scaled across Australia.

Information request 10.5: Government support for place based circular initiatives

There is a clear case for place-based interventions for tyres.

The Tipping the Balance Report highlighted a number of hotspots of OTR tyre generation in Australia: Western Australia's Pilbara, Queensland's Bowen Basin, and New South Wales' Hunter Valley. These are all candidates for place-based interventions.

Supporting analysis has also been conducted, for example, the joint project and report Exploring the opportunities for increasing value recovery from end-of-life tyres and conveyor belts in WA[37].

TSA has also conducted business cases for other areas in Australia where place-based circular initiatives are warranted. For example, TSA's Tyre Recycling in the Northern Territory[38] report, developed in partnership with the NT government, Local Government Association of NT, local government, industry associations, resource recovery sector participants and community members, outlines a business case for increased tyre recovery in the NT.

Information request 10.6: Expanding the set of circular economy indicators

TSA is authorised by the ACCC for certain conduct that is necessary to undertake administration of the Scheme. The authorisation includes performance metrics that assess the recovery rate of used tyres, and the attribution of change to the activities of TSA and Scheme participants.

Overall, the ACCC is interested in understanding the 'public benefit' of the policy solution of product stewardship.

Thus, from our perspective, circular economy indicators should enable the general public to understand the problem (e.g., used tyres), and the solution/s (e.g., product stewardship), and the attribution/effectiveness of each solution (e.g., product stewardship leads to outcomes).

Ideally, indicators should be designed so that they are useful to product stewardship schemes, individually and as an aggregate. So that the causal link between the policy and the intervention can be seen and communicated (e.g., product stewardship is very effective when participation is mandatory).

ENDS

Attachment 1: TSA submission to the RAWR Act Review

[37] Exploring the opportunities for increasing value recovery from end-of-life tyres and conveyor belts in WA https://www.nespsustainable.edu.au/report-end-life-tyres-and-conveyor-belts (accessed 10 April 2025).

[38] TSA, Tyre Recycling in the NT, https://www.tyrestewardship.org.au/reports-facts-figures/tyre-recycling-in-the-northern-territory/ (accessed 10 April 2025).