

**Committee Secretary
House of Representatives
Standing Committee on Industry, Innovation and Science**

***Submission on the inquiry into the current state of the Australian tyre industry,
and any challenges and opportunities for the industry within the context of a
circular economy***

23 January 2026

Prepared by Northern Sydney Regional Organisation of Councils (NSROC)

Member Councils: Hornsby Council
 Hunter's Hill Council
 Ku-ring-gai Council
 Lane Cove Council
 Mosman Council
 North Sydney Council
 City of Ryde Council
 Willoughby City Council

Contact: Dr Meg Montgomery
 Executive Director, NSROC
 mmontgomery@lanecove.nsw.gov.au

1.0 Context

The Northern Sydney Regional Organisation of Councils (NSROC) is pleased to provide this submission to the House of Representatives Standing Committee on Industry, Innovation and Science for their inquiry into the current state of the Australian tyre industry, and any challenges and opportunities for the industry within the context of a circular economy. This submission has been prepared with the input and support of our member councils but should be considered draft until formal NSROC Board endorsement. Please note, individual councils may also make independent submissions.

NSROC is a voluntarily formed association of eight local government authorities in Sydney. NSROC assists member councils collaborate on key issues and activities, develops regional solutions and generates social, environmental and economic benefits – for local communities and the region overall.

2.0 Introduction

NSROC member Councils, representing over 650,000 residents across the Northern Sydney region, are directly impacted by ongoing poor management and related practices, of end-of-life tyres (EOLTs) - which are illegally dumped, primarily in bushland areas, or stockpiled causing pollution to the local environment and posing a significant fire hazard. The current voluntary stewardship model does not cover the full cost of managing EOLTs, which places an undue financial and environmental burden on local government and communities. The cost of cleaning up illegal dumped tyres to local government in Australia was around \$6.5 million in 2022-23¹.

Tyres present a particular challenge for northern Sydney councils due to:

- High vehicle ownership rates with resulting increased tyre usage;
- Limited local processing or storage capacity;
- Strong community sensitivity to environmental and health risks; and
- A regulatory and cost burden that often falls disproportionately on local government.

NSROC strongly advocates for a transition to a mandatory product stewardship scheme and Federal government support to increase the market pull for the use of tyre derived products including further research into alternative uses which also consider potential environmental risks and mitigation measures. Please note that some Terms of Reference have not been included in this response as NSROC has not formed a substantial view on them.

3.0 Response to Terms of Reference

1. Reviewing tyre manufacturing, distribution, importation, and retail trends.

The current model relies on a "user-pays" disposal fee at the point of sale, which is frequently decoupled from actual recycling outcomes. In parts of the NSROC region there are high-density retail hubs for automotive services (e.g., Artarmon, Ryde, and Waitara)—the high volume of tyre replacements creates a significant "waste pressure" that is not currently matched by local recovery infrastructure. Retailers in Northern Sydney often have limited onsite storage due to high commercial land values, leading to frequent, high-emission transport movements to move tyres out of the region. Retail competition and thin margins in tyre sales discourage retailers from absorbing the full end-of-life management costs.

Recommendation: Incentivise the development of "Micro-Processing Facilities" within industrial zones to reduce transport costs for local retailers and councils.

¹ Blue Environment, [Stockpiling and illegal dumping of tyres: cost to local governments and others](#), report prepared for Tyre Stewardship Australia (TSA), April 2024, p. 12 (accessed 23 Jan 2026).

2. Investigating current practices in tyre reuse, retreading, recycling, and resource recovery, including reviewing federal, state, and local regulations governing tyre production, disposal, and recycling

Despite high recovery rates for truck tyres, passenger car tyres (which make up the majority of NSROC EOLTs) have lower recovery rates. The lack of standardised procurement at the council level prevents the scaling of local rubber-recycling markets. Fragmented regulation across jurisdictions and limited enforcement capacity undermine confidence in legitimate recycling pathways. Development of a national Australian Standard may provide a uniform, nationally recognised benchmark for engineers and asset owners, potentially reducing uncertainty and enabling consistent application across states, territories and local governments. The *Crumb Rubber Modified Dense Graded Asphalt (CRM DGA) Model Specification – Light to Medium Duty Roads* (2025) released by the Australian Flexible Pavement Association, following collaboration with Tyre Stewardship Australia, may provide the basis for a national Australian Standard for the use of tyre-derived crumb rubber in roads. Consideration and development of any new standard would require very close consultation with local government engineers to assess the risks and benefits of introducing such a standard and ensuring any potential risks are fully addressed.

Recommendation: In consultation with key stakeholders including local government engineers consider the potential benefits and risks of developing a uniform standard for the use of tyre-derived crumb in road construction and maintenance.

3. Exploring technological advancements in tyre design, recycling processes, and alternative materials

Innovation in tyre design (e.g. longer-life tyres, recyclable compounds) is largely disconnected from local government operations. Advanced recycling technologies (e.g. devulcanization, pyrolysis) are emerging but not widely available at commercial scale in NSW. Councils have limited ability to trial or support new technologies due to performance risk, procurement constraints, planning approvals and lack of technical expertise.

Recommendation: Federal leadership and funding are needed to help innovative technologies progress beyond pilot scales and provide sustainable alternative pathways for recycling.

4. Identifying opportunities to develop high-value uses for waste tyres and tyre-derived materials, including applications in construction, manufacturing, and other commercial sectors

NSROC councils manage thousands of kilometres of local roads. Crumb Rubber Modified (CRM) asphalt is technically viable but commercially disadvantaged by a lack of "Circular Economy" price-bridging. A 2024 SSROC Life Cycle Assessment² (which includes NSROC-adjacent council data) confirmed using tyre derived crumb rubber in pavement construction and maintenance operations can make a significant contribution to low-carbon infrastructure, minimising long-term maintenance costs, maximising performance and promoting a more sustainable approach.

Councils are potential end-users of tyre-derived products through road construction, playgrounds, sports fields and noise mitigation. Inconsistent specifications, performance data, potential human health and environmental risks and pricing, limit uptake.

Recommendation: Provide Federal "Market Development Grants" to councils to subsidise the price premium often associated with the adoption of CRM asphalt on local roads. Councils can help drive other markets, but only where products meet performance, safety and whole-of-life cost requirements.

² RMIT, [Life Cycle Assessment and Potential Environmental Benefits of Crumb Rubber Asphalt using Field Data](#), prepared for Southern Sydney Regional Organisation of Councils – SSROC, February 2024 (accessed 23 Jan 2026).

6. Considering the role of commercially viable product stewardship schemes and whether these should be made mandatory, and identifying infrastructure gaps in collection, processing, and recycling facilities

The current voluntary product stewardship scheme does not cover the full market cost of tyre recycling and disposal. Councils pay for tyre collections and compliance activities for tyres generated by commercial activities. Metropolitan councils lack access to nearby, compliant processing facilities. The current stewardship body, Tyre Stewardship Australia, has actively sought a mandatory scheme³, and tyres are a class of products which are well suited to a mandatory product stewardship scheme due to the limited number of tyre brands imported, known collection pathways, and existing regulation on transport and disposal.

Recommendation: Implement a mandatory national product stewardship scheme to provide for equitable cost-sharing and infrastructure investment.

7. Investigating environmental, community, and health and safety concerns related to tyre waste and recycling operations

7.1 Illegal Dumping

Councils experience persistent illegal tyre dumping in industrial and bushland interface areas, requiring clean-up funded by ratepayers. Anecdotal evidence suggests some rogue operators collect disposal fees from Northern Sydney residents and then "leak" those tyres into the environment to avoid processing costs. The "Urban-Bushland Interface" (e.g., the edges of Lane Cove National Park and Berowra Valley) makes NSROC councils uniquely vulnerable to large-scale commercial dumping. Fire risk from illegally dumped tyres and stockpiles also poses significant concerns in urban environments.

Recommendation: By introducing a mandatory scheme (like New Zealand's Tyrewise) a set fee is collected at the point of import. Because the recycling cost is already "pre-paid" into a central fund, there is no fee to pay at the recycling / disposal gate. This removes the financial motive for a collector to dump the tyres, as they gain nothing by avoiding a recycler. Since its launch in March 2024, the New Zealand Tyrewise scheme has exceeded its initial targets for tyre collection and processing, demonstrating effectiveness managing tyre waste and promoting recycling.

7.2 Tyre Wear Particles from Motor Vehicles

Beyond whole tyre dumping and stockpiles, Tyre Wear Particles (TWP) are a primary source of microplastics in sensitive waterways. TWPs are composed of synthetic rubber polymers, reinforcing fillers, and chemical additives, including heavy metals such as zinc and copper and organic compounds like polycyclic aromatic hydrocarbons (PAHs). Tyre wear contributes 5–18% of total global plastic in the oceans and 3–7% of particle fractions as PM_{2.5} in urban air⁴.

Recommendation: To minimise TWP microplastic emissions into the environment, the Federal Government should adopt the same (or similar) abrasion and durability limits being phased in by the European Union under the new **Euro 7 standards which in a world first, set limits on tyre abrasion**. If Australia does not follow the EU standards, it risks becoming a dumping ground for older, high-wear tyres which do not meet the EU requirements.

³ Tyre Stewardship Australia, [Response to the Productivity Commission's \(PC\) Inquiry's Interim Report: Australia's circular economy: Unlocking the opportunities \(the Interim Report\)](#), April 2025 (accessed 23 Jan 2026).

⁴ Sustainable Communities and Waste Hub, [Investigating Tyre and Road Wear Particles: Source and Analytical Techniques in Microplastic Pollution](#), National Environmental Science Program (NESP), November 2024 (accessed 23 Jan 2026).

7.3 Chemical and Physical Contamination from Tyre Crumb on Surfaces

Tyre crumb is of concern when it is used as soft fall playground surfaces and infill for synthetic sports fields. The NSW Chief Scientist & Engineer's 2022 '*Independent review into the design, use and impacts of synthetic turf in public open spaces*' found that synthetic sports fields that use crumbed rubber infill without suitable measures to reduce infill loss, shed hundreds of kilograms of crumbed rubber per sports field per year, created microplastic pollution to adjacent land and stormwater systems. The stormwater runoff exceeded permissible chemical concentrations, and some chemicals could bioaccumulate in aquatic environments⁵. Other studies have found that chemicals from tyre crumbs can cause DNA damage and oxidative stress to aquatic life^{6,7}, and the crumbed rubber in sports fields contained levels of chemicals such as Polycyclic Aromatic Hydrocarbons (PAHs) that exceeded statutory limits⁸.

Recommendation: As recommended by the NSW Chief Scientist & Engineer, further research needs to be undertaken to assess the human and environmental health impacts from synthetic sports fields and best practice guidelines be developed on maintenance and design. A good starting point would be evaluating the work done by the European Union in this area which has recognised the human and environmental health risks associated with the use of these materials and implemented regulations to minimise these risks. Under the EU REACH framework which regulates the Registration, Evaluation, Authorisation, and Restriction of Chemicals, there are two EU regulations of specific relevance to the use of tyre crumb on playgrounds or sporting fields:

- **Chemical Safety (EU Regulation 2021/1199):** Sets limits on hazardous chemicals (e.g. PAHs) found within the tyre rubber used for playgrounds. The EU has set a maximum limit of 20 mg/kg for the sum of eight specific polycyclic aromatic hydrocarbons (PAHs) in rubber granules and mulches used as infill material in synthetic turf pitches and playgrounds. Granules exceeding this limit cannot be placed on the EU market or used in these applications
- **Physical Containment (EU Regulation 2023/2055):** Acknowledges that loose granules are inherently prone to environmental "leakage" and transitions the EU toward bonded surfaces that lock the microplastics into a solid matrix. In the EU, a ban on the sale of loose rubber crumb for sports fields will be effective from October 17, 2031. If the rubber crumb is incorporated in a solid matrix (like a Poured-in-Place surface or bonded rubber tiles), it is not banned.

4.0 Conclusion

The current voluntary management of end-of-life tyres (EOLTs) in Australia is failing local governments, the environment, and ratepayers. For the NSROC member councils, the status quo results in significant financial "cost-shifting," the degradation of sensitive urban bushland through illegal dumping, and the uncontrolled release of microplastics into Sydney's iconic waterways.

To transition the Australian tyre industry toward a genuine circular economy, NSROC urges the Committee to adopt the following recommendations:

- **Mandate Product Stewardship:** Transition from the current voluntary scheme to a **mandatory, co-regulated model** which covers the full cost of recycling tyres and ensures all industry participants contribute to the cost of recovery.

⁵ NSW Chief Scientist & Engineer, [Independent review into the design, use and impacts of synthetic turf use in public open spaces, Final Report](#), October 2022 (accessed 23 Jan 2026).

⁶ LaPlaca, S et al, [Chronic toxicity of tire crumb rubber particles to mummichog \(*Fundulus heteroclitus*\) in episodic exposures](#), Department of Biological Sciences, Clemson University, July 2022 (accessed 23 Jan 2026).

⁷ Tangaroa Blue Foundation, [Rubber Crumb Impact Report, Australia Maritime Debris Initiative](#), 2021 (accessed 23 Jan 2026).

⁸ Armada, D et al, [Global evaluation of the chemical hazard of recycled tire crumb rubber employed on worldwide synthetic turf football pitches](#), ScienceDirect, December 2021 (accessed 23 Jan 2026).

- **In close consultation with local government engineers consider the risks and benefits of an Australian Standard for the use of tyre-derived crumb in roads**, potentially using the existing CRM DGA model specification as a basis.
- **Adopt Euro 7 Abrasion Standards:** Update Australian Tyre standards to align with **Euro 7 standards**, setting mandatory limits on tyre wear rates to reduce microplastic emissions at the source.
- **Create new or modify existing regulations to set** limits on hazardous substances (e.g. PAHs) found within the tyre rubber used for playgrounds (like EU Regulation 2021/1199) and physical containment (like EU Regulation 2023/2055) that lock the microplastics into a solid matrix to enable safe, high-value uses of recycled tyre materials.
- **Incentivise High-Value Infrastructure:** Provide Federal "Market Pull" grants to local governments to offset the price premium of **Crumb Rubber Modified (CRM) asphalt**, creating a reliable domestic market for recycled tyre rubber.

By implementing these reforms, the Federal Government can move the burden of tyre waste away from local ratepayers and onto a sustainable, industry-led framework that protects Australia's environment and infrastructure.