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Armadale Tyre Recycling Plant – Works Approval RFI

On behalf of Tyre Recycling Perth Pty Ltd (TRP), Talis Consultants (Talis) provides this response to the Department of Water and Environment Regulation's (DWER) Request for Further Information (RFI) dated 8 September 2025 regarding the works approval submitted (APP-0030523) under Part V Division 3 of the *Environmental Protection Act 1986* (EP Act) for the storage and processing of used tyres at Unit 1, 12 Dickens Place, Armadale (the Site).

DWER has requested the information outlined within Table 1 to assist with assessment process. The TRP's responses are provided in this table along with further discussions in Section 2.

1 Background

On 25 November 2025, TRP and Talis met with representatives from the DWER as well as the Built Environment Branch and HAZMAT branch of the Department of Fire and Emergency Services (DFES) to discuss the application and offer advice and feedback.

Following the meeting, TRP and Talis undertook additional discussions around the additional engineering and operational controls to be included within the application for consideration. A summary of the proposed additional measures and actions items is as follows and has been organised in line with the relevant DFES emergency management strategy of Prevention, Preparedness, and Response.

- Prevention
  - Shredder model includes 2 cooling water jets for temperature regulation during the shredder process;
  - No overnight storage of whole tyres within the building;
  - Enhanced fuel load isolation: No overnight storage of tyre shreds within the building. Instead, the product storage area within the building is a temporary daytime storage area while personnel are on site. The tyre shreds will now be stored within a sea container (either 10ft or 20ft) in the parking lot outside of the building. This will ensure

no tyres or tyre materials will be stored within the building overnight which is the biggest risk of an out-of-control fire establishing (i.e. when there are no personnel onsite who can attend to any fire incidents); and

- Sea container to maintain distance at a minimum of 3m from buildings, structures, etc and have 1m access around the full perimeter.

- Preparedness
  - Installation of CCTV with infrared cameras for early detection within the building and within the proposed storage sea container;
  - Installation of fire and smoke detectors for early detection within the building;
  - 1 hr shut down of all equipment prior to end of the operational day to allow for the cleaning of equipment of any tyre debris / dust;
  - Storage of whole tyres during the daytime to be within a designated area separated by a metal fence or equivalent form of infrastructure;
  - Provision of B class firefighting foam extinguishers or larger scale/capacity fire suppression units within the building for early response;
  - Daily wipe-down of all equipment following shut down and general housekeeping;
  - Training of all staff in early fire detection and response and use of all fire suppression equipment;
  - No fire hose reels are proposed at this time; and
  - Fire wall adjoining Unit 1 to Unit 2 is 125mm concrete pall with a fire rating of 120/90 (Insultation/Structural Adequacy).
- Response
  - A flow/pressure test of the existing hydrant system along Dickens Place indicated an average flow rate of 14 L/s at 200kPa;
  - Stormwater management system within the warehouse's car park consists of four soakwells connected to each other with PVC piping, indicating that these drains will need to be covered in the case of a fire in order to container fire-fighting waters; and
  - Any equipment nominated for fire-fighting water containment (i.e. water activated sandless sandbags, drain covers) to be provided in a nominated storage box away from the building and with a cuttable lock for easy accessibility by local fire department in case of an emergency.

The requested Fire and Emergency Management Plan (FEMP) developed for the proposal has included all of these elements listed above in order for TRP to put forward the best application possible for approval.

Table 1: Additional Information Required by the DWER

Item		Information requirements	Response
1	Part 3.1 – Premises Name	Please confirm the premises name.	Perth Tyre Recycling Pty Ltd
2	Part 2.9 – Attachment 1B ASIC company extract	Please provide a current ASIC company information extract, as purchased from the ASIC website.	The ASIC company extract is provided in Appendix A.
3	Part 9 – Emissions, discharges and waste	Please provide the design, model, technical specifications and instrumentation diagrams/images for the debeader, shredder, conveyor belts and other equipment to be installed within the warehouse.	The tyre shredder machine proposal including technical specification of all equipment is provided in Appendix B.
4	Part 9 – Emissions, discharges and waste	Please provide additional details regarding the fuelling bay, including location, bunding and hardstand specifications and the types and quantities of fuel and hydrocarbons to be stored on-site	As discussed via email there will be no fuelling bay and no storage of fuel and hydrocarbons on-site. The updated Environmental Assessment and Management Plan (report text only) is provided in Appendix C. Please note that Section 8.8 Dangerous Goods and Hazardous Materials and any references to this section have been removed.
5	Part 9 – Emissions, discharges and waste	Please develop a Fire and Emergency Management Plan (FEMP) outlining how fire will be prevented, detected, responded to, suppressed, contained, and controlled for all proposed activities including waste and product handling, sorting, storage, and processing; including, but not limited to, the following information:	The FEMP is provided in Appendix D.

		1. How adequate firefighting water will be provided to enable emergency services to extinguish a special hazards fire with consideration of flow rates and duration of supply. 2. How volumes of firefighting water (generated during a fire event), will be contained within the premises and prevented from discharging to the environment. 3. Development of an emergency response plan in consultation with the local DFES Fire Station or Regional Office. 4. The suitability of the site to accommodate firefighting operations (e.g. hardstand areas and site access for fire engines) using GL-11 DFES Site Planning and Fire Appliance Specifications (DFES, 2023). 5. Notification procedures for fire and major spill incidents. 6. Measures to mitigate and manage ignition and heat sources including but not limited to provisions such as machinery maintenance. 7. Fire safety systems and equipment inspection procedures and maintenance measures. 8. On-site provisions to detect and manage a fire event, detailing fire-fighting equipment locations, equipment type and specifications, equipment reach, fire brigade alarm alerts and equipment fire-fighting capacity. Please outline how they will be employed during afire event. 9. Identification of all fire hazards at the site and prediction of the likelihood of fire occurrence. 10. How impacts to the environment and human health will be mitigated in the event of a fire. 11. Resources and equipment to manage the consequences of a fire event.	

		12. How staff will be trained in fire and emergency response on an ongoing, annual basis. 13. A premises map showing the location of fire safety systems and fire safety equipment. 14. A detailed storage map showing arrangement and configuration of tyres, tyre shred, steel beads and equipment within the warehouse in compliance with storage requirements outlined in Department of Fire and Emergency Services Guidance Note 2: Bulk Storage of Rubber Tyres Including Shredded and Crumbed Tyres [DFES GN02]. Please include stockpile separation distances, stockpile sizes, stockpile height and access pathways. 15. Detailed information on the existing passive ventilation infrastructure of the warehouse, including specifications and location, and please demonstrate how requirements of DFES GN02 relating to internal tyre storage will be met.	
6	Part 9 – Emissions, discharges and waste	Please specify the maximum number of tyres which will be stored within the premises at any point in time. For the purposes of the regulations, 2 m3 of shredded, broken or pieces of used tyres are to be taken to equal 100 used tyres and any multiple of 2 m3 of shredded, broken or pieces of used tyres are to be taken to be equal to the corresponding multiple of 100 used tyres and where an intermediate quantity of shredded, broken or pieces of used tyres occurs the equivalent number of used tyres are calculated by interpolation. Also, the size of a whole tyre is to be disregarded when computing the number of tyres in question.	The premises will store up to 1,100 whole tyres within a 30 m^2 stack footprint to a maximum height of 3.7 m (tyre size disregarded). Shredded tyres will be stored in single layer Bulka bags across a 30 m^2 area (no stacking), equating to ~30 m^3 of shred at any time, which is 1,500 equivalent used tyres using the regulatory conversion of 2 m^3 = 100 tyres. The combined site maximum is therefore 2,600 tyres (equivalent) at any point in time.

2 Additional Discussion

As the DWER is aware, there has been a number of meetings with the DWER and DFES to present and works through some of the inherit challenges associated with the establishment and operation of the proposed tyre recycling facility. As outlined previously, TRP is committed to establishing a long term tyre recycling facility to ensure these materials are recovered as opposed of disposed to landfill, accordance with both federal and state government legislation and policy document. TRP has secured long term market opportunities both in the capture of used tyres but also recycling markets for the recovery of these materials.

TRP secured the opportunity to lease the warehouse in order to establish the first facility at the Site to commence operations. However, as part of its business planning, TRP intends to relocate to a new site in the next 3 to 6 years to provide a long term home for this business. Therefore, this Site will only be operational for a short duration and TRP is happy for the operational to be limited to a maximum of 6 years.

From the outset, TRP has been committed to establishing and operating the facility in compliance with all relevant federal and state legislation and policy guidelines. This is illustrated by TRP's proactive approach to obtaining all the relevant environmental and planning approvals for the facility. In addition, TRP has sought to comply with all the relevant requirements of the DFES' *Guidance Note 2: Bulk Storage of Rubber Tyres Including Shredded and Crumbed Tyres* (GN02) as much as possible. It is important to note that GN02 has been prepared to cater for the larger facilities, accepting significantly larger tonnages that poses much greater risk in comparison to the Site. This is illustrated within the following statement within the DFES Guidelines which specifies:

> "*This Guidance Note (GN) focuses on collectors and recyclers of used tyres. These facilities generally store large quantities of tyres in stockpile and usually carry more risk than storage of new products. However, this GN may be used by any business which stores a significant quantity of tyres on a permanent or temporary basis.*"

As before, TRP has sought to comply with GN02 where possible through the design and operation of the facility, including the following standards:

- Storage and spatial requirements for the stockpiling of both whole tyres and tyre shreds within the building;
- Natural ventilation requirements;
- Incorporating several standard methods for the mitigation of ignition risk of tyre shred from internal heating within shred stockpiles/spontaneous combustion;
- Appropriate site access for emergency fire service appliances; and
- A containment strategy for fire-fighting water and spills.

This again illustrates TRP's commitment to complying with all relevant legislation and policy guidelines. However, there are a few inherit challenges associated with the existing Site including the limited capacity for containing fire-fighting water both within the building and at the sea container and the water supply from the City of Armadale's hydrant system. Recognising that compliance with these requirements is not achievable, TRP and Talis have devised a range of amendments to the project to future reduce the risk as low as possible. These measures are outlined in Section 1 of this letter as well as in the FEMP attached in Appendix D.

TRP has undertaken significant works as well as provided long term commitments (which can be included in the relevant approvals) to mitigate the potential environmental impacts associated with the Site. Like with all facilities there is a residual risk remaining; however, through the implementation of these engineering and management measures, TRP has reduced both the likelihood and consequences as low as practicable. It is important to reiterate that DFES' GN02 has been prepared to cater for the large facilities and therefore are excessive in their application and the associated risk for this Site. There are numerous tyre facilities that have been approved across WA and Australia that pre-date GN02 and are continuing to operate and do so within significant potential impacts on the surrounding environment should a fire occur.

It is requested that DWER approves the Site including issuing of the Works Approval (and subsequent Licence) along with a variety of conditions to provide legal requirements to minimise the environmental risks including:

- Limitation on waste acceptance to 1,200 whole tyres;
- Design standards for the facility;
- Storage requirements for the tyre shred within the sea container;
- Monitoring and reporting requirements; and
- Undertaking of site inspections by DWER officers throughout operations at the Site.

DOCUMENT CONTROL

Version	Description	Date	Author	Reviewer	Approver
1.0	First Approved Release	23/01/2026	CP	RC	CP
2.0	Second Approved Release	27/01/2026	CP	RC	CP

Approval for Release

Name	Position	File Reference
Colleen Panizza	Waste Infrastructure Team Lead (WA) & Senior Waste Engineer	TW25040-V01-Work Approval RFI Response_2.0
Signature		

APPENDIX A
ASIC Company Extract

APPENDIX B
Tyre Shredder Machine Specification

APPENDIX C
Updated Environmental Assessment and Management Plan

APPENDIX D

Fire and Emergency Management Plan