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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 9 February 2026 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).

Table 1 includes a summary of DWER's requested information along with TRP and Talis' responses. Talis was also in discussions with the DWER via telephone in mid-February to obtain greatly clarity and guidance in relation to the preparation of this response. Based on these discussions, Talis has provided clear guidance on the following:

- Outline of the requirements that the proponent and Site can comply with in relation to Department of Fire and Emergency Services (DFES) *Guidance Note 2: Bulk Storage of Rubber Tyres Including Shredded and Crumbed Tyres* (GN02); and
- Outline the GN02 requirements that cannot be completed due to the existing site infrastructure/constraints as well as the measures that will be adopted at the Site in relation to the prevention, preparedness and responses for fire management to mitigate the residual risks as low as possible.

The following sections provides this information as well as direct responses to the Schedule 1 queries raised in the RFI letter.

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 further 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 (minimum 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 a minimum distance 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 hour 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. No fire hose reels are proposed at this time;
  - Daily wipe-down of all equipment following shut down and general housekeeping;
  - Training of all staff in early fire detection and response including the use of all fire suppression equipment; 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.

2 Previous RFI Response

As discussed in the previous letter response provided to DWER in January 2026, there have 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 period 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 **Error! Reference source not found.**.

3 Schedule 1 Response

There were eight items raised in the latest RFI letter, which are reproduced in Table 1 along with TRP's/Talis' response.

Table 1: Additional Information Required by the DWER

Item		Information requirements	Response
1	Part 2.9 – Attachment 1B ASIC company extract	Please provide a current ASIC company information extract providing current and historical company information. An ASIC company extract must be purchased from the ASIC Connect website.	The ASIC company extract is provided in Appendix A.
2	Section 1 – Proof of occupancy	Please provide a current lease document.	The lease agreement for TRP is provided in **Error! R eference source not found.**.
3	Section 1 – Registered office address	The registered office address provided within the application form (1 Calgary St, Southern River WA 6110) doesn't align with the ASIC registered office address (Suite 6, Level 1, 695 Burke Rd Camberwell VIC 3124). Please confirm the correct registered office address.	TRP confirms that the Registered Office address is Suite 6, Level 1, 695 Burke Rd Camberwell VIC 3124.
4	Part 9 – Emissions, discharges and waste	Please provide technical drawings for all processing equipment including the debeader, shredder and conveyor belts, along with further technical specifications and a detailed description of the processing that occurs at each step of the process. Please also provide certification that the machinery meets electrical and safety standards.	Citing intellectual property, the manufacturer of the proposed equipment is unable to provide technical drawings. The details/description and photos of how the shredder and debeader operates were provided in the previous RFI response. An example of the certifications provided by the manufacturer is provided in Appendix C. The actual certificates will only be provided once the equipment has been ordered/purchased, which will only be done once a Works Approval has been finalised with the DWER.

5	Part 9 – Emissions, discharges and waste	The Fire and Emergency Management Plan (FEMP) states that up to 100 litres of lubricants and fuels (diesel, oils & hydraulic fluid) will be stored in a bunded cabinet within the warehouse building. Additional information is required regarding the specific storage location and how these materials will be stored and used.	Section 3.6.2 of the FEMP has been updated accordingly. TRP will store up to a year's worth of industrial gear oil and grease for parts lubrication up to 15kg (industrial gear oil 7-10kg and grease 4-5kg; i.e., up to 3 months' supply). The location of this will now be within the administration building since it will only be used occasionally. The risk assessment in Section 7 has also been updated.
6	Part 9 – Emissions, discharges and waste	Please provide further information relating to the following points within the Fire and Emergency Management Plan (FEMP):	The updated FEMP based on the below comments 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.* It has not been demonstrated that the street fire hydrant will supply a minimum flow of 20 L/s at 200kPa for a 4-hour period (DFES minimum recommendation). Please demonstrate how will the shortfall in water supply to the premises during a fire event be addressed? Please outline where the additional water supply required to extinguish a special hazards fire will originate from.	Section 4.3 of the FEMP states what is capable for the Site in terms of fire water supply. As is, the Site's sole water supply is capable of providing 13 L/s at 200 kPa. There is no capability of addressing this shortfall by TRP. The responding Career Fire and Rescue Service crews will be able to provide additional water supply as discussed in Section 1.4 of the FEMP; however, it will not be enough to fully meet the shortfall. Therefore, the 20 L/s at 200kPa recommendation cannot be met at the Site.
		2. *How volumes of firefighting water (generated during a fire event), will be contained within the premises and prevented from discharging to the environment.* Please provide technical product information and specifications for the proposed drain covers and FloodSax products (or equivalent) to demonstrate that these measures will:	There are several products on the market in terms of weighted drain covers and flood prevention sandless sandbags. Example technical product information is attached in Appendix D; however, the specific design, model, and manufacturer may change at the time of procurement, but the same design principles will be considered. The example product for the drain covers is designed and intended for commercial/industrial at facilities that may have significant chemical

		• provide an impervious barrier and adequate seal capable of containing firewater; • prevent firewater or contaminants from entering the stormwater drainage system and migrating to neighbouring properties/off-site; • provide an effective method to contain firewater within the premises and their use will prevent discharge off-site to adjacent properties. Please also include an assessment of the safety implications of using these products for firewater containment, with evidence showing that their use—and the resulting accumulation of firewater on-site—will not impede DFES personnel from safely and effectively accessing the site or suppressing a fire during an emergency. Please provide evidence of consultation with DFES to confirm that proposed methods will not compromise fire-fighting operations. Please demonstrate that the bunding surrounding the entire carpark hardstand area is able to effectively contain firewater (e.g. that there are no cracks, holes, damage that would prevent full containment and allow discharge into the environment) and please demonstrate how firewater will be prevented from leaving the premises in areas where bunding is absent (e.g. via neighbouring properties and the site's access driveway).	spills/incidents. The example product for the sandless sandbags is designed and intended for floodwaters, which is considered to be equivalent to firefighting waters given that the majority of the liquid would be water from a hydrant or fire-fighting unit. A draft of the FEMP (Version 3.0) was provided to DFES' District Officer Hills for comment, and no issues were raised with regards to the containment strategy for the firefighting waters, as shown in Appendix F. If a fire were to occur within the building, then there is a potential to be compliant with the containment of a maximum of 20L/s for 4hrs, which equates to 288m^3. If a fire were to occur within the sea container, then the Site will not be compliant; however, given the smaller footprint and smaller fuel load, DFES may consider a different recommendation. In terms of using the car park as a secondary containment, it is estimated that average kerbing height around the car park is approximately 150mm and the calculated height needed to use the car park as secondary containment is 120mm as discussed in Section 5.2.1 of the FEMP. Therefore, there is contingency of 30mm before the firefighting waters would breach the car park. There will be extra sandless bags which can be used as needed if the secondary containment is used. In order to demonstrate that the carpark is effectively sealed that would ensure full containment and mitigate discharge into the environment, a condition assessment of the existing area could be undertaken to document its current condition and to propose

			remediation works (if any required) to demonstrate that the area is fit for purpose. This could be provided to the DWER as a condition within the Works Approval for the Site. Ultimately, if there are any breaches, then the firefighting water will enter into the City of Armadale's municipal stormwater drainage system along Dickens Place, which is what would occur if there was a fire incident in any of the other units at 12 Dickens Place.
		3. *Development of an emergency response plan in consultation with the local DFES Fire Station or Regional Office.* The FEMP does not reference consultation or engagement with DFES fire stations, the Built Environment Branch, or the DFES regional office in the development of the emergency response plan. Additionally, the plan does not consider the location, staffing levels, capabilities of the local fire station, or the expected response times.	Please refer to Section 1.4 and Appendix E of the updated FEMP provided in Appendix D.
		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 a fire event.* Please provide fire equipment locations, type, quantity, specifications, equipment reach and equipment fire-fighting capacity for all fire equipment including the 'B class fire-fighting foam extinguishers', 'larger scale/capacity fire suppression units' and fire hose reels. Additionally, please provide technical specifications, coverage range, location and product type of infrared cameras and smoke detectors.	Please refer to the layout of the existing fire protection systems provided in Appendix G. An updated layout and the requested technical information of the additional fire-fighting and fire detection equipment could be provided to the DWER as a condition within the Works Approval for the Site following procurement by TRP. Section 4.1 of the FEMP already provided the general location of the proposed additional fire-fighting and fire detection equipment. The most up-to-date layout will be appended to the final FEMP for the Site.

			There are several products on the market in terms of infrared cameras and smoke detectors. Example technical product information is attached in Appendix D; however, the specific design, model, and manufacturer may change at the time of procurement, but the same design principles will be considered. For the thermal infrared cameras, it is anticipated that within the building there will be 2-4 fixed cameras mounted at a high level and angled to cover the shredder infeed and discharge as well as the whole tyre and shredded tyre stockpiles areas. It is intended to have overlapped fields of view to avoid blind spots. For the sea container it will be one camera that can be temporarily mounted and will be removed once the filled sea container is taken offsite by a third-party contractor. For the smoke detectors, it is anticipated that aspirating smoke detection devices will be installed within the administration building and in areas within the warehouse building away from the processing area where dust, rubber fines and other particulates could cause false alarms.
		13. A premises map showing the location of fire safety systems and fire safety equipment. The FEMP states that the fire safety systems and fire safety equipment locations are shown in the building layout and site layout maps; however, the location and layout of fire-fighting equipment and safety systems are absent.	Refer to response above.

		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. The configuration of tyres within the 'tyre storage area' has not been provided. Please provide a detailed storage map showing the arrangement and configuration of tyres within the 'tyre storage area' that is compliant with DFES GN02. For example, will the tyres be stored in racks vertically, will they be strapped together in bundles or will they be stored within a portable rack system?	An updated W-101 has been provided within the FEMP, which shows that if required, the tyres will be stacked sidewalls down as per Figure 14 of the DFES Guidance Note 2. Section 3.2.1 of the FEMP provides additional information on the storage of whole tyres. However, as noted in the FEMP, the need to stack the tyres to these maximum dimensions will be unlikely since the loose tyres being delivered will be regularly fed directly into the tyre processing machinery, and there will be no whole tyres left overnight within the building.
7	Part 9 – Emissions, discharges and waste	The FEMP mentions grinding, cutting and welding in designated maintenance zones. Please provide further information on where the maintenance zones are located and please outline in detail, the activities that will occur on site relating to this.	This was in reference to any required hot works/maintenance, and if possible, would take place outside of the building. However, TRP has confirmed that no hot works for maintenance will be taking place on site. If there are issues with the equipment, then this will be managed by a qualified 3rd party contractor for the manufacturer. Section 3.6.2 and Section 7 have been updated accordingly.
8	Part 9 – Emissions, discharges and waste	Clarification and review of the number of tyres proposed to be stored on site is required.	TRP are proposing to accept up to 1,100 whole tyres during an operational day with no whole tyres stored overnight. The building could store more and still be compliant with DFES GN02 in terms of maximum storage areas and separation distances as shown in Drawing W-101 and discussed in Section 3.2.3 of the FEMP. In addition, the proposed processing equipment has the capability of processing 200-300 tyres per hour

			which would equate to a maximum of 1,600-2,400 tyres over an 8hr operational period. However, TRP is intended to only initially process 400-600 tyres per day but as business grows the anticipated maximum throughput per day would be up to 1,100 tyres, which is less than 70% of what the equipment can process at a minimum during an operational day. Section 3.2.3 of the FEMP has been updated to remove any discrepancies.

4 Additional Discussion

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 profile 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 with 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 1,100 whole tyres;
- Design standards for the facility;
- Storage requirements for the tyre shred within the sea container;
- Provision of all technical data sheets and information on all fire detention and management systems;
- Provision of all technical data sheets and information on all fire-fighting waters management system;
- 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	20/03/2026	CP	RC	CP
2.0	Second Approved Release	20/03/2026	CP	RC	CP

Approval for Release

Name	Position	File Reference
[redacted]	Waste Infrastructure Team Lead (WA) & Senior Waste Engineer	TW25040-V01-Work Approval Follow-up RFI Response _2.0
Signature		

APPENDIX A
ASIC Company Extract

APPENDIX B
Lease Agreement

APPENDIX C

Tyre Processing Equipment Information and Example Certifications

APPENDIX D

Updated Fire Emergency and Management Plan

APPENDIX E
Product Technical Information

APPENDIX F
DFES Communications

APPENDIX G
Existing Fire Protection Systems