



## Appendix C

### Equivalent Passenger Tyre Ratio Units, Australia Tyre Stewardship



## Equivalent Passenger Unit Ratios (EPUs) Tables

An equivalent passenger unit (EPU) is a standard passenger car tyre. The weight of an EPU for a new standard passenger car tyre is standardised as 9.5kg; and the weight of an EPU for an end-of-life standard passenger car tyre is standardised as 8 kg.

The following EPU ratios reflect the potential recoverable resources from the various types of tyres.

The first set is to be used by tyre importers, vehicle manufacturers and importers and miners for reporting data to TSA as part of their specific commitments.

The second set is to be used by recyclers for reporting data to TSA as part of their specific commitments.

Each set reflects the categorisations used by the respective industries.

Reporting can be in EPUs or by weight.

EPUs for reporting by TYRE IMPORTERS, VEHICLE MANUFACTURERS and MINERS	
Type of Tyre	EPU Ratio
Motorcycle	0.5
Passenger Car 1	1
Light Truck/SUV/RV	2
Truck small (17.5" & 19.5")	3
Truck large (20" & 22.5")	5
Small Specialty/Ag (skid steer, forklift 8"-15", front tractor & backhoe 15" to 18")	3
Medium Specialty/Ag (20" – 30")	5 to 8
Large Specialty Ag (32" and above)	20 to 30
Small Earthmover (24" – 25")	50
Medium Earthmover (29" – 35")	100
Large Earthmover (above 35")	200

EPUs for reporting by RECYCLERS	
Type of Tyre	EPU Ratio
Motorcycle	0.5
Passenger	1
Light Truck	2
Truck	5
Super Single	10
Solid small (up to 0.3m high)	3
Solid medium (>0.3m up to 0.45m)	5
Solid large (>0.45 m up to 0.6m)	7
Solid extra large (> 0.6m)	9
Tractor small (up to 1m high)	15
Tractor large (>1m up to 2m)	25
Fork lift small (up to 0.3m high)	2
Fork lift medium (>0.3m up to 0.45m)	4
Fork lift large (>0.45m up to 0.6m)	6
Grader	15
Earth mover small (up to 1m high)	20
Earth mover medium (>1m up to 1.5m)	50
Earth mover large (>1.5 up to 2m)	100
Earthmover extra large (>2m up to 3.0m)	200
Earthmover giant (>3 up to 4m)	400
Bobcat	2

## **Appendix D**

### **Fire Protection Measures Report**

3-105

Measured form and function



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## Tyre Storage and Shredder

437 Woolmers Lane  
Longford

## Fire Protection Measures Report



<b>Issue</b>	01
<b>Date</b>	1 September 2016
<b>Project Number</b>	15.242
<b>Project Name</b>	Tyre Shredder, Tyre Storage and Delivery – Environmental Effects Report
<b>Author</b>	Heidi Goess
<b>Document</b>	I:\2015\15242\1 Administration\6 Authorities\2 Council\Planning Permit Tyre Shredder and Ongoing Delivery and Storage of End-of-Life Tyres 6 April 2016\R16-08-02 Tyre Shredder Environmental Effects Report

**Fire Protection Measures Report**

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## 1.0 Introduction

Planning application P16-077 has applied for a permit seeking approval to construct and operate a tyre shredder and continuation of the storage of 'end-of-life' tyres (ELTs) on land identified in Certificate of Title 105810/1 at 437 Woolmers Lane, Longford.

ELTs will be stored on the abovementioned land until such time they can be processed on the site. This use and development is categorised as "*recycling and waste disposal*" under the Northern Midlands Interim Planning Scheme 1 July 2013.

The purpose of this report is to provide specific information on the fire protection measures being implemented for the proposed use and development of the land. These protection measures have been implemented as part of the planning permit P13-199.

The area identified for the storage of tyres will occupy 1.5% of the total land area of the property. The location for the storage of used tyres was selected for the following reasons:

- The property is in a remote location, approximately 5.0 km south-east from the edge of the urban area of Longford and approximately 1.5 km south from Woolmers Lane, reducing the opportunity for ELTs stored on the property to be deliberately set alight;
- The location for the storage of tyres is more than 900m from any sensitive use;
- The large land area means that more than adequate defensible space around the storage area can be established, minimising the potential for ELTs to ignite from a grass fire that has spread from within the property and/or adjoining land;
- The land containing the storage area is grazed by sheep, which maintains the surface in a minimal fuel condition between the piles of stacked tyres and the surrounding area adjacent to the tyre storage;
- There is an accessible water supply from a number of adjoining storage dams for fire fighting purposes. These dams have a minimum combined volume of 140ML; and
- The adjoining farm land is predominately irrigated cropping, reducing the fire hazard due to the minimal fuel loading of the land.

A site plan has been prepared for the proposed use and development. This depicts the location of dams, fire breaks and the separation between piles of stacked tyres and forms part of the fire protection measures being implemented.

## 2.0 Fire Hazard

The storage of used tyres is considered to be an inert activity. However, if these tyres are set alight, there can be adverse impacts on the environment.

These include:

- Contaminated smoke being released from the source of the fire into a surrounding area impacting adversely on air quality; and



- Water used to extinguish a fire of burning tyres becomes contaminated and if released as run-off, could have a detrimental impact on groundwater resources.

These impacts have been documented by the Environment Protection Agency of Tasmania for previous fires that have broken out at a tyre recycling depot at Longford and Perth. Accordingly, fire is considered the primary hazard associated with this development.

## 2.1 Causes of Fire

There are three probable causes of fire that can threaten the stored tyres on the property. These are:

- Stored tyres have been deliberately or accidentally lit on-site by a person or persons;
- A grass fire that breaks out on adjoining land and encroaches into the area where used tyres are stored; and
- A grass fire that breaks out within the property boundaries and spreads to where used tyres are stored.

The Wind Rose charts show the range of wind directions and speeds likely at the site. These charts are obtained from the Bureau of Meteorology (refer to Appendix A) and give indication of the prevailing winds likely to be experienced on the property and hence the direction a grass fire may travel. As there is no weather station located at Longford, data was obtained for the three closest weather stations being the Launceston Airport, the Cressy Research Station and at Powranna (Tasmania Feedlot).

The prevailing wind records from all three sites suggest that the main threat from a grass fire would be from the north or north-west (Appendix A). The fire threat is considerably reduced from this direction given that the land north and north-west of the location of the stored tyres is cleared cropping land, generally under irrigation and which also accommodates significant water storages.

Winds from the southern quadrant are experienced although less frequently and with generally much lower wind speeds. Again the site is well protected from fire due to the irrigated cropping land and the presence of large dams. There are no shrubs or standing vegetation within 700m of the area used for the storage of tyres.

## 2.2 Existing Vegetation – Site

The site is an irregular shaped parcel of land comprising an area of 1054ha. The land is primarily utilised for irrigated cropping and grazing. Excavation works are also undertaken on the site.

The land immediately surrounding the storage of used tyres is gently undulating and utilised for irrigated cropping and grazing of sheep.

While the land is largely cleared from vegetation, a dense vegetation cover of standing vegetation (approximately 300ha) identified as eucalyptus amygdalina inland forest and woodland on canozoic deposit (Tasmanian Vegetation Map, DPIPWE) is located some 700m south-west and south-east of the used tyres. Smaller scatterings of trees are also located on the land and there are three distinctive wind breaks on the property. The wind breaks are located:

- At the edge of the northern property boundary, along the southern side of Woolmers Lane;
- Approximately 400m south of Woolmers Lane and approximately 1km north of the area used for the storage of tyres;
- Approximately 30m south of the used tyre location 2 (Figure 7, Environmental Effects Report).

### 2.3 Existing Vegetation – Adjoining Land

The land to the east and west of the property is irrigated cropping and pasture. A dense cover of vegetation, forming part of the vegetation community identified as eucalyptus amygdalina inland forest and woodland on canozoic deposit (refer to 2.2 above), is located on adjoining land to the south and south-east of the subject land. These areas of vegetation are located approximately 2km and 1.5km respectively from the location of the stored used tyres.

### 3.0 Development

The proposal is for the storage of ELTs and tyre shredder. ELTs will be stored on the land until such time the shredder becomes operational. Once the tyre shredder becomes operational, ELTs will be processed immediately rather than being stored within the development area.

There are no habitable buildings proposed as part of this use and development of land or located within the immediate vicinity of the area used for the storage of tyres. Additionally there are no hot work activities such as oxy cutting, welding and grinding taking place in close proximity to the storage area. There are no flammable or combustible liquids, hazardous waste or other easily ignitable materials within 30m of the storage area. The tyre shredder is powered by electricity.

The storage of ELTs is in two main locations within the development area shown as location 1 and location 2 on the proposal plans, drawing numbers C01-C04. Location 1 is approximately 1.4km south from Woolmers Lane and location 2 is approximately 1.5km south from Woolmers Lane and the two locations are separated by a row of trees.

Location 1 will store the majority of the ELTs carted to the development area, although allowance has also been made for additional tyres to be stacked at location 2. Fire breaks are already established around each location, in particular on the northern and southern side of the row of trees and on the southern side of location 2 (refer to site plan). An additional fire break is constructed around the northern perimeter of the location 1. The proposed fire break around the northern perimeter of location 1 is

exposed bare earth with a minimum width of 4m. This fire break will also establish a bund around the northern perimeter of location 1.

There is no access to a reticulated supply of water other than spray irrigators. In the event of fire, dams located within 300m of the area used for the storage of tyres will become the supply of water for fire fighting purposes. The dams are accessible by vehicles from multiple locations. The dams located to the north of location 1 and south of location 2 will provide in excess of 140ML.

Additionally, an irrigation line, delivering water from the South Esk River, is also located to the north of the tyres. This also provides water for fire fighting purposes.

Permission has been obtained by the property owner to utilise this water supply in the event of fire (refer to Appendix B). To ensure that water utilised for fire fighting purposes does not contaminate the dams, two collection ponds are constructed. These collection ponds are designed to collect run-off of water utilised for fire fighting purposes and have a capacity of approximately 162KL each.

No landscaping around the development area are proposed. Landscaping is not deemed necessary as the proposed storage of used tyres will not be visible from Woolmers Lane as it is screened by the Hawthorn Hedge along the northern property boundary and also by the wind break located 400m south of Woolmers Lane.

#### 4.0 Fire Protection Measures

The proposal is to reduce the threat of fire to used tyres by a combination of site works and the maintenance of surrounding vegetation in a minimum fuel standard. Specifically, these include the following:

##### a) Construction of Fire Breaks and Bunds

The ignition temperature of tyre rubber is considerably higher than weatherboard – typically 510C versus 250C. The key issue is that rubber, once alight, has much more heat and stored energy to burn than the equivalent weight of timber.

The *AS3959 (2009), Construction of buildings in bushfire-prone areas*, while not completely applicable, has been considered in context of this development.

In examining the underlying maths of AS3959, it can be shown that stacked tyres are very difficult to ignite from radiant heat from a grass fire. The grass, even if it might be un-grazed for a season, simply does not generate enough heat.

The fire break of 4m with and bund around the perimeter of each location will generate sufficient volume of soil to form the protective bund and prevent direct flame attack from a grass fire to the stacks of stored tyres.

##### b) Pod Formation

This existing storage area utilises a pod layout that has been modelled on the *South Australian Guidelines* (refer to Appendix C) so that the tyres are stored in

discrete stacks of limited size and provided with aisles between each pod to restrict the spread of fire and to provide access by fire fighting vehicles.

**c) Provision of Water Supply**

An irrigation line is also provided north of location 1 which receives water directly from the South Esk River. The irrigation line will be the main supply of water.

**d) Land Maintained in a Minimal Fuel Condition**

The area immediately surrounding locations 1 and 2 will continued to be grazed to ensure that the land is maintained in a minimal fuel condition.

**e) Accessibility and Security of the Site**

The storage of tyres has occurred on site since 2011. The site is accessible by an farm paved road from Woolmers Lane. The site receives a delivery of tyres every weekday and is a managed farm ensuring that there is a presence on site on a daily basis.

## 5.0 Conclusion

The fire protection measures integrated as part of the proposed development will ensure that the storage of ELTs is laid out in accordance with recommended standards.

The fire protection measures documented in the preceding report has demonstrated the following:

- The fire breaks and bunds protect a grass fire igniting the stored tyres;
- There is more than an adequate supply of water for firefighting purposes;
- The grazed land and irrigated crops will ensure that the minimal fuel condition of the area surrounding locations 1 and 2 are maintained; and
- The pod formation has clear separations around each pod ensuring that the spread of fire within locations 1 and 2 are minimised.

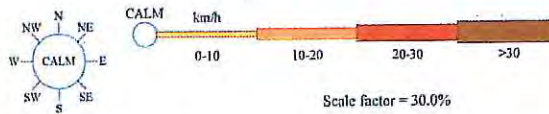
## **Appendix A**

### Wind Rose Charts

**WIND FREQUENCY ANALYSIS (in km/h)**

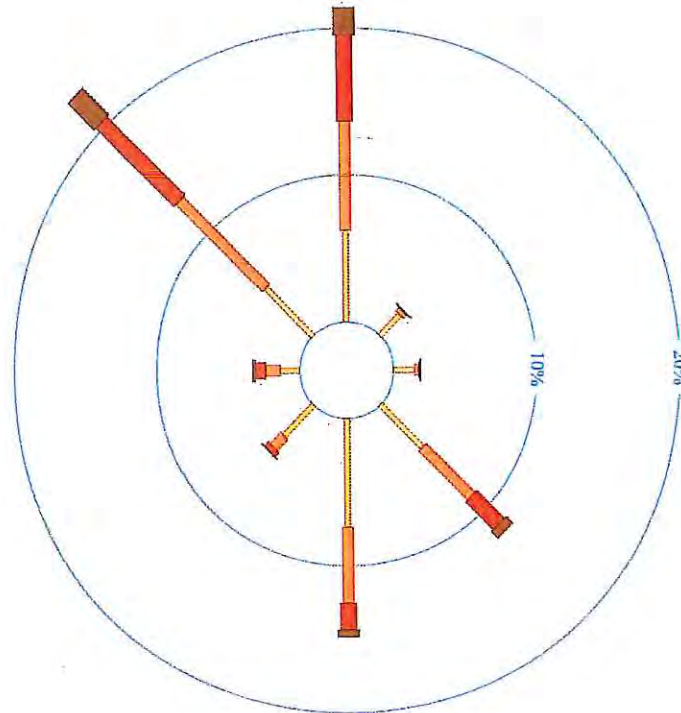
**LAUNCESTON AIRPORT COMPARISON STATION NUMBER 091104**

Latitude: -41.54 ° Longitude: 147.20 °



9 am  
22769 Total Observations (1939 to 2004)

Calm 16%



Wind directions are divided into eight compass directions. Calm has no direction.  
An asterisk (\*) indicates that calm is less than 1% .  
An observed wind speed which falls precisely on the boundary between two divisions (eg 10km/h) will be included in the lower range (eg 1-10 km/h). Only quality controlled data have been used.



Australian Government  
Bureau of Meteorology

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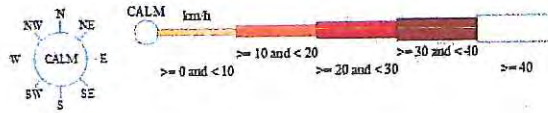
**Rose of Wind direction versus Wind speed in km/h (02 Oct 1991 to 18 Dec 2008)**

Custom times selected, refer to attached note for details

**POWRANNA (TASMANIA FEEDLOT)**

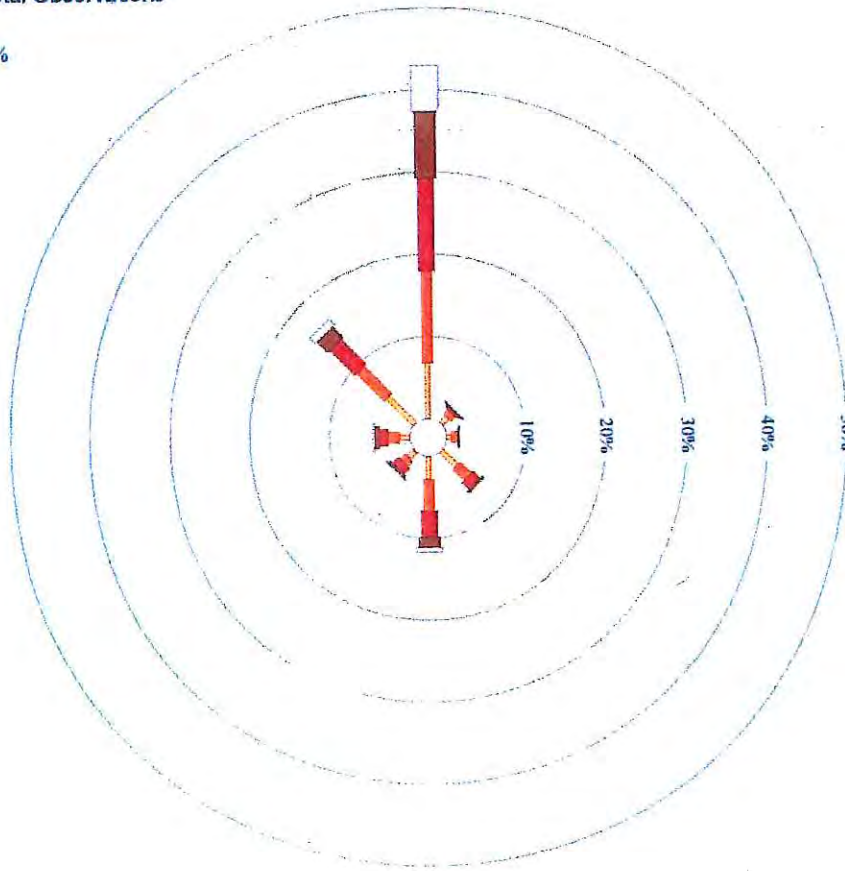
Site No: 091269 • Opened Oct 1991 • Closed Dec 2008 • Latitude: -41.6639° • Longitude: 147.2831° • Elevation 173m

An asterisk (\*) indicates that calm is less than 0.5%.  
Other important info about this analysis is available in the accompanying notes.



3 pm  
5701 Total Observations

Calm 11%



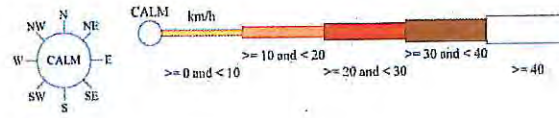
**Rose of Wind direction versus Wind speed in km/h (01 Jan 1965 to 30 Sep 1990)**

Custom times selected, refer to attached note for details

**CRESSY RESEARCH STATION (MAIN OFFICE)**

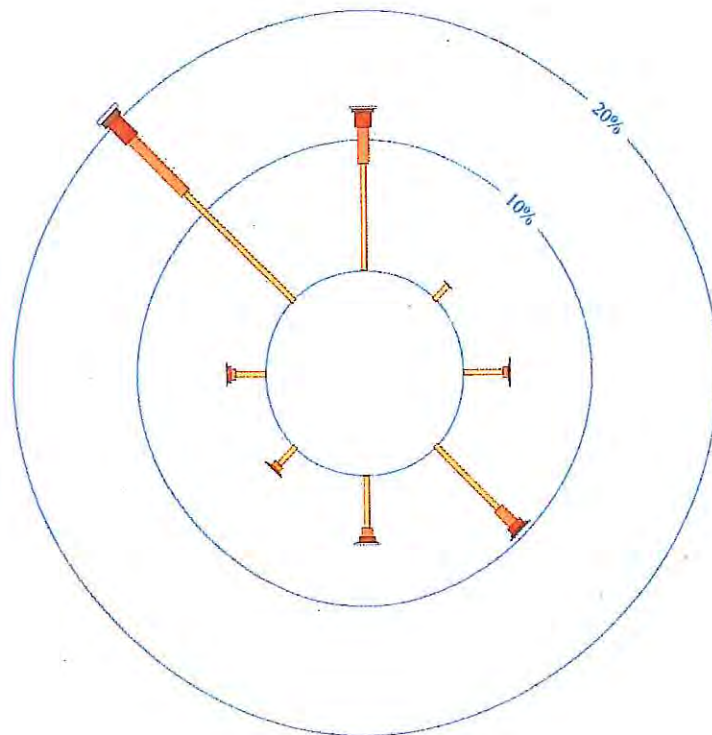
Site No: 091022 • Opened Jan 1939 • Still Open • Latitude: -41.7219° • Longitude: 147.0811° • Elevation 148m

An asterisk (\*) indicates that calm is less than 0.5%.  
Other important info about this analysis is available in the accompanying notes.



9 am  
7413 Total Observations

Calm 40%



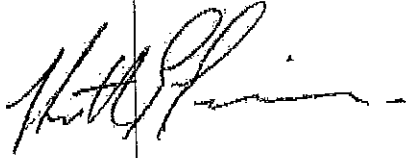
## Appendix B

### Permission of Use of Water Supply

28<sup>th</sup> October 2013

To whom it may concern,

I consent to Tasmania Fire Service utilising irrigation dam water for fire fighting in the event of a tyre fire on my property ("Rhodes")



Keith Gatenby

0427911121

## Appendix C

### General Guidelines for the Outdoor Storage of Used Tyres

	First Issued	01 November 1999
	Author	FSE Marchant & FSO Czerwinski
	Review date	28 July 2014
	Reviewed by	SO D Kubler
	Version	1.0
	Authorised by	ACFO Community Safety & Resilience

## SOUTH AUSTRALIAN FIRE AUTHORITIES

Community Safety Department

### BUILT ENVIRONS SECTION GUIDELINE NO. 13

#### General Guidelines for Rubber Tyre Storage



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**BUILT ENVIRONS SECTION GUIDELINE 013:  
General Guidelines for Rubber Tyre Storage**


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**Revision History:**

Version	Revision Description	Date
A	First issue	01 November 1999
1.0	General Departmental Rewrite – all sections	10 April 2014

**List of Amendments:**

Clause	Amendment
Document control/revision history	added
Table of contents	added
Reference Standards	added
General	minor revisions and formatting
Indoor Storage	added
Outdoor storage.	amended separation distances
References	added
Bibliography	added

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**BUILT ENVIRONS SECTION GUIDELINE 013:  
General Guidelines for Rubber Tyre Storage**

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**REFERENCED STANDARDS**

The following Australian (and other) Standards are referred to in this Schedule:

AS 1851	Australian Standard 1851 – <i>‘Maintenance of fire protection systems and equipment’</i> .
AS 2118	Australian Standard 2118 - <i>‘Automatic fire sprinkler systems’</i> .
AS 2441	Australian Standard 2441 - <i>‘Installation of fire hose reels</i>
AS 2419	Australian Standard 2419 - <i>‘Fire hydrant installations’</i> .
NFPA 101	National Fire Protection Association 101 – <i>“Life Safety Code”</i>
FM 8-3	Factory Mutual Global, Data Sheet 8-3 <i>“Rubber Tire Storage”</i>

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**BUILT ENVIRONS SECTION GUIDELINE 013:  
General Guidelines for Rubber Tyre Storage**

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**BUILT ENVIRONS SECTION GUIDELINE 013:  
General Guidelines for Rubber Tyre Storage**

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## 1 GENERAL

This fire safety guideline have been developed to assist businesses that store tyres on site (indoors and outdoors).

Tyre fires present significant challenges in terms of fire fighting and environmental and community impact. Each of these areas must be addressed when considering tyre storage on site.

This guideline is applicable to sites storing more than 100 individual tyres or 10 tonnes of tyre product (whichever is the lesser).

Note that the South Australian Environmental Protection Agency (EPA) requires that premises handling in excess of 500 tyres or 5 tonnes of waste tyres (or tyre pieces) per annum require licencing (environmental authorisation) (EPA, 2001).

Where the requirements of these guidelines do not fit site-specific circumstances, advice should be sought from the South Australian Metropolitan Fire Service (MFS) Community Safety and Resilience Department, phone (08) 8204 3611.

### 1.1 Overview of tyre fires

Tyre fires produce very high heat outputs and produce large volumes of thick black, toxic smoke. Tyre piles are very difficult to penetrate with fire fighting water and/or foam. The nature and behaviour of burning tyres limits the effectiveness of direct fire fighting operations when compared to most other combustible goods.

Large quantities of water are required to extinguish tyre fires due to many factors, including the rubber tyre surface repelling water and the burning inner surface of a tyre being shielded from the water spray. A significant portion of the water applied provides only a limited cooling effect and does not wet the ignited surface of the tyre casing.

Type piles provide an open, porous and well vented fire mass providing a fast rate of fire growth that also extends downwards into the pile. Over time, the pile will deform and compress, with a risk of flaming tyres rolling off the pile and spreading the fire to surrounding exposures. In this compression phase, the effects of pyrolysis include the rendering of rubber into oil, creating pool fire burning characteristics.

The environmental impacts are very significant and include air born pollution, soil contamination and large volumes of contaminated run-off water.

As a result, emphasis must be placed upon:

- Adequate separation distance from site boundaries and buildings to restrict the spread of fire,
- Limiting pile sizes with access between piles to restrict fire size and facilitate effective fire fighting operations,
- Maintaining access between piles to facilitate effective fire fighting operations
- Effective fire prevention practices to minimise the risk of a fire outbreak,
- Protection of the environment from damage in case of a fire.

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**BUILT ENVIRONS SECTION GUIDELINE 013:**  
**General Guidelines for Rubber Tyre Storage**

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**1.2 Site selection and access**

Select a level site with impervious soil, remote from surface watercourses and human habitation. Avoid sites with streams, rivers or dams on the property or close-by.

Ensure the site is large enough for the business operation, including allowances for future expansion. Take into account the limits placed on pile sizes and the required separation distances from buildings, boundaries and individual piles.

Each facility should have two separate access points that shall provide not less than four metres clearance to allow access for larger fire appliances. Site access roads should be of hardstand, all weather material and designed for fire appliance weight limits.

For major sites, specific advice should be sought from the MFS Community Safety and Resilience Department.

**2 OUTDOOR STORAGE SITES****2.1 General**

Outdoor tyre storage must be arranged as piles of tyres or contained in metal cages, in rows not exceeding the dimensions set out below.

The separation distance of tyre storage from allotment boundaries is considered to be a critical factor in reducing the likelihood of fire spread between properties

The intent of these requirements is to limit fire size and restrict spread, thus reducing the potential impact of a fire.

**2.2 Pile sizes**

Storage heights should be determined by the stability of the pile and must not exceed 3 metres high (as per NFPA 101) due to the potential for instability.

It is considered that “on-flat” or “laced” tyre storage will be employed for all outdoor tyre piles.

Tyre piles shall be arranged in “thin” rows to assist fire fighting operations and shall be no more than 6 metres wide.

Tyre pile rows shall be no more than 20 metres in length to limit the total volume of tyres contained in a pile to a maximum of 360m<sup>3</sup>.

**2.3 Separation distances****Between piles**

Tyre piles shall be arranged to provide suitable aisle separation in order to reduce the risk of fire spread between piles and afford safe travel of fire appliances through the site.

These aisles must remain clear at all times, be free from combustible materials and tyre scraps and shall have a minimum width of 20 metres.

**Allotment boundaries**

Tyre piles shall be set-back from allotment boundaries as follows:-

- Where the pile narrow ends face the boundary – 12 metres, and
- Where the pile long sides face the boundary – 20 metres.

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**BUILT ENVIRONS SECTION GUIDELINE 013:**  
**General Guidelines for Rubber Tyre Storage**

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Where the allotment boundary adjoins a public road affording perimeter fire appliance access, the total applicable set-back distance may include the far boundary of the roadway. However, in this instance, the set-back off the perimeter fence line should be not less than 3 metres.

Where the allotment boundary is of fire resisting construction to a minimum height of 3 metres (above the finished ground level of the site) and has a minimum fire resistance level (FRL) of -/60/60, the boundary set-back distance may be reduced to a minimum of 6 metres.

**Buildings on site**

Separation distances of tyre piles from buildings on the same allotment shall be 12/20 metres (as applicable from above) where the building's exposed façade is not protected.

Where the building's exposed façade is protected with automatic fire sprinkler system in accordance with AS2118.1 or a wall wetting sprinkler system in accordance with AS2118.2, the separation distance may be reduced to 10 metres.

**3 FIRE HYDRANTS FOR OUTDOOR STORAGE FACILITIES**

A fire hydrant system complying with AS2419.1 shall be installed to provide fire fighting water supplies to tyre storage facilities.

Fire hydrant system design shall be in accordance with AS2419.1 Clause 3.3 for Open Yard Protection, with the exception that the minimum number of hydrants flowing simultaneously shall be as follows:

**3.1 Small storage facilities**

Notwithstanding the requirements of AS2419.1, where the total storage volume on site is less than or equal to 750m<sup>3</sup> (up to two piles as defined in Section 2.2 above), the facility shall have a hydrant system capable of providing simultaneous hydrant flows of two outlets (10l/s each).

**3.2 Large storage facilities**

Where the total tyre storage volume on site is greater than 750m<sup>3</sup>, the facility shall have a hydrant system capable of providing minimum simultaneous hydrant flows of three outlets (10l/s each).

Where the facility is of a size that AS2419.1 requires additional heads to flow (with respect to total yard areas), then the requirement of AS2419.1 takes precedence.

**4 INDOOR STORAGE FACILITIES****4.1 General**

Tyre storage fires within an enclosed structure present very significant hazards to fire fighters, due to the heat and excessive smoke being contained within the space.

Under the Building Code of Australia (BCA), MFS will require that Clauses E1.10 and E2.3 are reviewed and addressed appropriately.

It is considered that incorporation of the systems and recommendations outlined in Section 5 meet the above BCA Clauses.



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## **BUILT ENVIRONS SECTION GUIDELINE 013: General Guidelines for Rubber Tyre Storage**

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### **4.2 Tyre storage systems and arrangement**

Storage of tyres within premises shall be within open framed fixed or portable racking systems or palletised and shall be arranged to prevent tyres from becoming dislodged and falling/rolling from the storage system.

“On-flat” or laced tyre storage allows water penetration into the piles. “On-edge” storage is generally not supported by this Department as the tight spacing and vertical alignment reduces water penetration between individual tyres and into the internal casing.

On edge stored tyres shall be adequately restrained to prevent roll-away.

### **4.3 Classification of occupancy hazards**

This Department recommends that buildings of greater than 500m<sup>2</sup> floor area used as tyre storage facilities be provided with the following fixed fire suppression/smoke hazard management provisions in addition to any other fire and life safety measures required by the BCA.

#### **Tyre storage >10 tonnes or 1000 tyres (whichever is the lesser)**

Shall be provided with;

- permanent natural ventilation as per BCA Table 2.2a; or
- automatic smoke hazard management systems designed in accordance with BCA Specification E2.2b; or
- automatic smoke and heat vents designed in accordance with BCA Specification E2.2c.

#### **Tyre storage >20 tonnes or 2000 tyres (whichever is the lesser)**

Shall be provided with;

- automatic fire sprinkler protection in accordance with BCA E1.5; and

Shall be provided with;

- automatic smoke hazard management systems designed in accordance with BCA Specification E2.2b; or
- automatic smoke and heat vents designed in accordance with BCA Specification E2.2c.

### **4.4 Automatic fire sprinkler protection design criteria**

This Department supports the design of automatic fire sprinkler protection in accordance with FM Global Data Sheet 8-3 and AS2118.1.

### **4.5 Internal steel column protection**

This Department recommends that internal steel columns be protected in accordance with NFPA 101 Clause 34.8.2.1 to reduce the likelihood of premature building collapse from the intense heat from a tyre fire.

## **5 FIRE FIGHTING WATER CONTAINMENT**

### **5.1 General**

This section is applicable to both indoor and outdoor tyre storage facilities.

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**BUILT ENVIRONS SECTION GUIDELINE 013:**  
**General Guidelines for Rubber Tyre Storage**

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Bund walls, sealed kerbing and blind sumps/catchment pits should be provided to contain water run-off from the site during fire fighting activities.

The rate at which water can be applied to a fire is often limited by the rate at which the contaminated waste fire water can be contained, treated and/or removed from site.

The proposed site containment systems shall also meet EPA SA licensing conditions.

### **5.2 Non-sprinkler protected premises**

The bunded capacity shall be designed to cater for a run off of not less than 30 litres a second (fire hydrant flows) for 90 minutes, which equates to 162,000 litres (162kl).

### **5.3 Sprinkler protected premises**

The bunded capacity shall be designed to cater for a run off of not less than the combined volume of 20 litres a second (fire hydrant flows) for 90 minutes (108kl) **AND** the design sprinkler system flow rate for 20 minutes.

## **6 FIRE FIGHTING EQUIPMENT**

### **6.1 Fire hydrant systems**

Refer Section 4 above for specific flow rate and design requirements for outdoor tyre storage facilities.

As noted in Section 5 above, indoor tyre storage shall be provided with fire hydrant systems in accordance with the requirements of the BCA.

Note that as of 2014, all new premises' on site hydrant valves shall be Storz fittings in accordance with MFS Storz Specification (refer MFS Website).

Location of on-site hydrants, boosters **and** primary fire brigade access points should be presented to this Department for review during the design phase for new tyre storage facilities.

### **6.2 First Attack Fire Fighting Equipment**

It is considered that effective first attack fire suppression may be achievable within the first five minutes of a tyre fire, during its ignition and propagation phase (RMA, 1993). Adequate first attack fire fighting equipment should be available for staff use.

Fire hose reels provided in accordance with AS2441 that reach all parts of the site are considered necessary first attack fire fighting equipment.

Consideration shall be given to the provision of Class A foam fire hose reels (with nozzle compatibility) as this medium has been found to provide improved fire suppression performance in this early stage due to the wetting agent actions of the foam (FEMA, 1998).

It is also recommended that all fuel powered vehicles be fitted with a dry chemical powder extinguisher with a minimum rating of 4A:60B(E).

Dry chemical powder extinguishers are considered to provide an effective initial suppression measure as the powder penetrates into the tyre pile void spaces and provides chemical suppression actions.

All fire protection equipment on the site must be maintained and regularly tested in accordance with Ministers Specification 76 and AS1851 as applicable.

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**BUILT ENVIRONS SECTION GUIDELINE 013:**  
**General Guidelines for Rubber Tyre Storage**

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**6.3 Staff Training**

Optimum fire safety standards cannot be attained unless staff are conversant with basic fire prevention methods and the operational use of installed fire equipment.

Division 4, Regulation 43 of the Work Health and Safety Regulations (SA Gov, 2012) requires that staff be informed, trained and instructed in the implementation of emergency procedures.

**7 SITE EMERGENCY PLAN**

A responsible staff member should be appointed as Site Safety Officer to ensure that fire prevention standards are maintained on the site.

Prepare an emergency plan for the property (displayed in a prominent position), which includes:

- Emergency service telephone numbers,
- After hours contact telephone numbers for a minimum of three staff members,
- Site evacuation procedures,
- Control strategy for all fire-fighting water run-off
- Tactical fire plan for the site showing:
  - Location of all fire hydrants, fire plugs
  - Location of all first aid fire-fighting equipment
  - Fire-fighting actions appropriate to the site
  - Locations of all access points to the site
  - Locations of all drains
  - Locations of all hazardous materials stored on the site

**8 FIRE PREVENTION REQUIREMENTS****8.1 Housekeeping**

It is important that sound housekeeping practices are maintained across the entire tyre storage facility.

Vegetation and combustible rubbish must be routinely cleared and removed from the site.

Perimeter clearances between piles and site boundaries must be clear of vegetation to prevent fire spread to adjacent allotments.

Any required combustibles must be adequately separated away from stored tyres. For example, empty wood pallets should be stored in a separate designated area, with clearances as specified in Section 2.3.

**8.2 Site Security**

The site should be fenced to ensure security and prevent unwanted persons entering the premises, particularly after hours. Additional security measures may be required including CCTV, perimeter lighting and proximity alarms (PIR).

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**BUILT ENVIRONS SECTION GUIDELINE 013:  
General Guidelines for Rubber Tyre Storage**

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**8.3 Eliminate Potential Ignition Sources**

Adequate fire safety precautions must be in place to eliminate unwanted fires, which should include:

- All hot work activities such as oxy cutting, welding and grinding shall be controlled via a “Hot Works” permit system and measures employed such as a fire spotter (with extinguisher/s).
- Inspection of electrical equipment, machinery and vehicles on a regular basis in relation to potential fires and sparking.
- Restriction of smoking to designated safe areas. “No Smoking” signs should be appropriately displayed.
- No open fires, in accordance with EPA guidelines (EPA, 2003) and the South Australian Environmental Protection Policies (SA Gov, 1994).
- No storage of flammable or combustible liquids, hazardous waste, or other easily ignitable materials within 30 metres of any tyre storage.

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**BUILT ENVIRONS SECTION GUIDELINE 013:**  
**General Guidelines for Rubber Tyre Storage**

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**9 REFERENCES**

BCA, "Building Code of Australia – Volume 1 of the National Construction Codes", Australian Building Codes Board, (Edition applicable at time of Development Approval) ACT Australia.

EPA (2001), "Waste tyres – EPA Guidelines", Environmental Protection Agency, Adelaide SA.

EPA (2003), "Burning in the open – EPA Guidelines", Environmental Protection Agency, Adelaide SA.

FEMA (1998), "Report on Tire Fires", Federal Emergency Management Agency - United States Fire Administration, Maryland, United States.

RMA (1993), "Guidelines for the Prevention and Management of Scrap Tire Fires", Scrap Tire Management Council, (undated) Rubber Manufacturers Association, United States.

Downloaded from: [http://www.rma.org/download/scrap-tires/general/GEN-021-Guidelines for the Prevention and Management of Scrap Tire Fires.pdf](http://www.rma.org/download/scrap-tires/general/GEN-021-Guidelines%20for%20the%20Prevention%20and%20Management%20of%20Scrap%20Tire%20Fires.pdf) (April 2014).

SA Gov (2012), *Work Health and Safety Regulations 2012*, Attorney General's Department, government of South Australia.

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**BUILT ENVIRONS SECTION GUIDELINE 013:**  
**General Guidelines for Rubber Tyre Storage**

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Fire and Rescue New South Wales (FRNSW), *Policy No. 2: Guidelines for the bulk storage of rubber tyres*, , *Version 02 (2009)*, FRNSW Structural Fire Safety Unit, Greenacre, NSW Australia.

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Waste Authority Western Australia (WA), *Tyres legislation*, Downloaded: <http://wasteauthority.wa.gov.au/publications/tyres-legislation>, April 2014.

Motor Trade Association of SA, *Environmental Fact Sheet – Waste tyres*, MTA SA, Downloaded from: <http://greenstampplus.com.au/downloads/GPG/SA/Fact Sheet - Waste tyres.pdf>.

Motor Trade Association of ACT, *Standard 7 – Storage and Disposal of Waste Tyres – Environmental Guidance Note*, Downloaded from: [http://www.mtaact.com.au/f.ashx.Government/Environmental/ Standard 7 – Storage and Disposal of Waste Tyres – Environmental Guidance Note](http://www.mtaact.com.au/f.ashx.Government/Environmental/Standard 7 – Storage and Disposal of Waste Tyres – Environmental Guidance Note).

Waste and Resources Action Programme (WRAP), *UK Waste Tyre Management Best Practice: Handling of Post-Consumer Tyres – Collection and Storage (2006)*, Oxon, United Kingdom.

Viking Group Inc. *Technical Article – Protection of Rubber Tyre Storage Using Open high Challenge Nozzle*, (2006) Viking Group Incorporated, United States.

Australian Standard 1940 (2004), "The storage and handling of flammable and combustible liquids", Standards Australia, Sydney NSW Australia.



## Appendix E

### Fire Emergency Plan



### **1. DETERMINE WHAT TYPE OF INCIDENT**

On arriving on site establish the type and location of incident.

- **GRASS FIRE ON OR ADJOINING PROPERTY** - A grass fire is burning on the property or an adjoining property with potential to threaten the tyre storage area.
- **MINOR FIRE** - There are 1 or 2 tyres alight at the edge of one of the tyre pods.
- **LARGE FIRE** - >2 tyres alight or inaccessible due to location in pods.
- **MAJOR FIRE** - Tyre pods fully alight.

### **2. CONTACT TASMANIA FIRE SERVICE**

IN ALL CIRCUMSTANCES, irrespective of the type of incident contact the **TASMANIA FIRE SERVICE - DIAL 000**.

If a mobile phone service is not available, please go to **Dennis Jones** or **Rhodes Homestead** to notify emergency services.

WHEN SPEAKING TO TASMANIA FIRE SERVICE, ALWAYS INCLUDE THE FOLLOWING:

**What Type of Incident:**

Grass fire
Minor fire
Large fire
Major fire

**Where:** 437 Woolmers Lane, Longford

**Who:** Persons currently on site attending to fire.

### **3. CONTACT PROPERTY OWNER, TYRE RECYCLE TASMANIA & DENNIS JONES**

After emergency services have been contacted, contact the following persons:

- **KEITH GATENBY** 0427 911 121 (property owner) to mobilise property water tanker and request irrigation line pumps to be activated.
- **TIM CHUGG**, TYRE RECYCLE TASMANIA 0400 692 023.
- **DENNIS JONES** 0408 133 285 OR **CRAIG JARMAN** 0438 132 351- request top loader or excavator to be moved to site.

### **4. IF KEITH GATENBY CANNOT BE CONTACTED, MOBILISE WATER TANKER TO LOCATION OF INCIDENT FOR USE (SEE INSTRUCTIONS)**

### **5. CONTACT THE FOLLOWING PERSON(S) TO TURN ON THE IRRIGATION PUMP TO ALLOW FILLING POINT TO BE ACTIVATED**

- |                         |              |
|-------------------------|--------------|
| • <b>KEITH GATENBY</b>  | 0427 911 121 |
| • <b>STEVEN MCARTHY</b> | 0418 134592  |
| • <b>KIERAN WOODS</b>   | 0437 179300  |
| • <b>LEE JOHNSTONE</b>  | 0438 268587  |
| • <b>GREG BRYANT</b>    | 0417 035299  |

### **PROCEDURE FOR A MINOR FIRE**

After taking the above actions, the following procedure should be followed for a minor fire.

1. Assess the location of the fire and if burning tyres can be removed from pod.
2. Remove tyres from stack with tools such as a shovel or a rake where tyres are accessible and the risk of injury is low.
3. Smother the tyres with dirt or hand held extinguisher.
4. Monitor the smothered tyres and pods to ensure that the fire has been extinguished.
5. If fire is not extinguished, block outlet pipe of collection ponds prior to any water being utilised for fire-fighting purposes.
6. On arrival of excavator and water tank, where risk to injury is low commence moving tyres and dampening tyres of adjacent pods.
7. Wait for Tasmania Fire Service to arrive for further instructions.

### **PROCEDURE FOR A LARGE FIRE AND MAJOR FIRE**

After the Tasmania Fire Service has been contacted, the following procedure should be followed for a large fire.

1. Avoid radiant heat and smoke.
2. Block outlet pipe of collection ponds to prevent polluted firefighting water from leaving the site.
3. Where risk to injury is low, remove tyres from unengaged portions of the stack with farm equipment to reduce available fuel.
4. Consider use of earthmoving machinery such as an excavator to remove fuel from burning stack or to smother with excavated soil.
5. Consider use of earthmoving machinery to increase the aisle width and/or to remove adjoining piles of tyres.
6. Utilise on site water tanker to dampen tyres in adjacent pods.
7. With Tasmania Fire Service Crew, extinguish if possible or prevent the spread of fire to adjoining tyre piles.
8. Monitor fire with Tasmania Fire Service until fire is extinguished.

### **PROCEDURE FOR A GRASS FIRE ON THE PROPERTY OR ADJOINING PROPERTY.**

After the Tasmania Fire Service has been contacted, the following procedure should be followed for a grass fire.

1. Re-assess the extent of the grass fire and the direction it is moving.
2. Check firebreak for debris that may allow fire to cross the road. If risk to injury is low, remove debris.
3. Where risk of injury is low, defend firebreak with the property water tanker to prevent fire crossing road.
4. Check for windblown ambers and extinguish if possible.
5. Continue to fight fire with the Tasmania Fire Service Crew until it is extinguished.

## INSTRUCTIONS TO START TRUCK

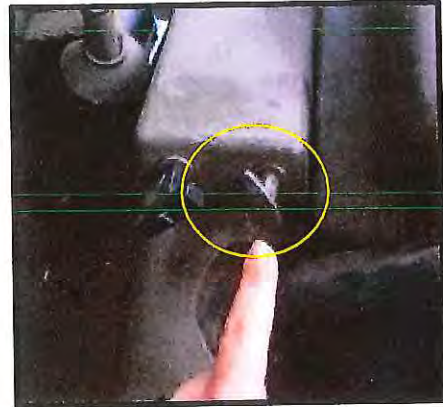
1. Activate **Isolator Switch** - located on left hand side of dash



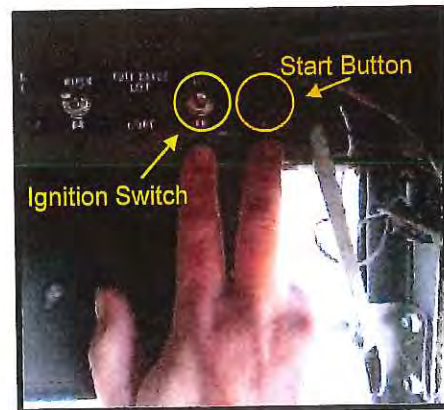
2. Activate **Fuel Pump** - located on dash directly in front of driver



3. Pull out **Choke** - located between seats



4. **Switch on Ignition** - located above driver side sun visor



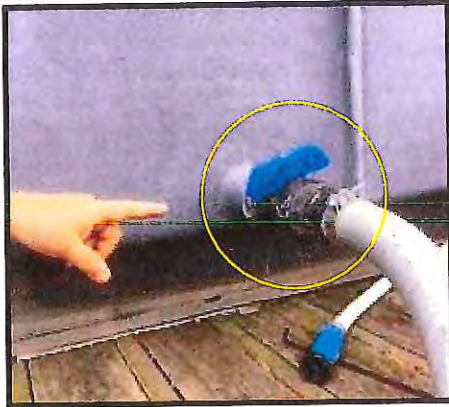
5. **Push Start button** - located next to Ignition Switch

After starting allow time for brake air supply to build up



**INSTRUCTIONS TO START WATER PUMP LOCATED AT REAR OF TRAY**

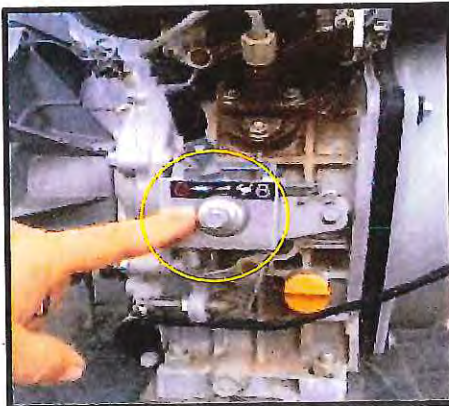
1. Turn on tap between Tank and Pump



4. Activate water outlet tap



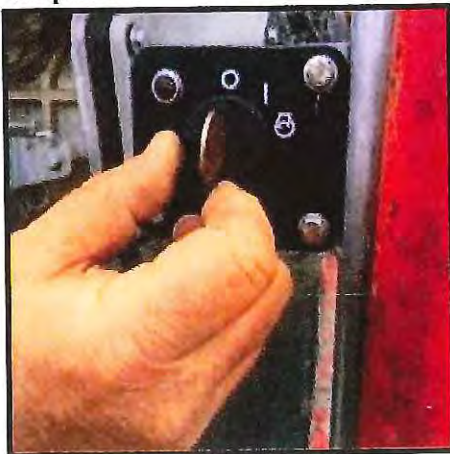
2. Set Throttle to half



Tap for opening spray bar



3. Start Engine – key start  
If battery is flat pull start will be required.



## Appendix F

### Tyre Shredder Specifications

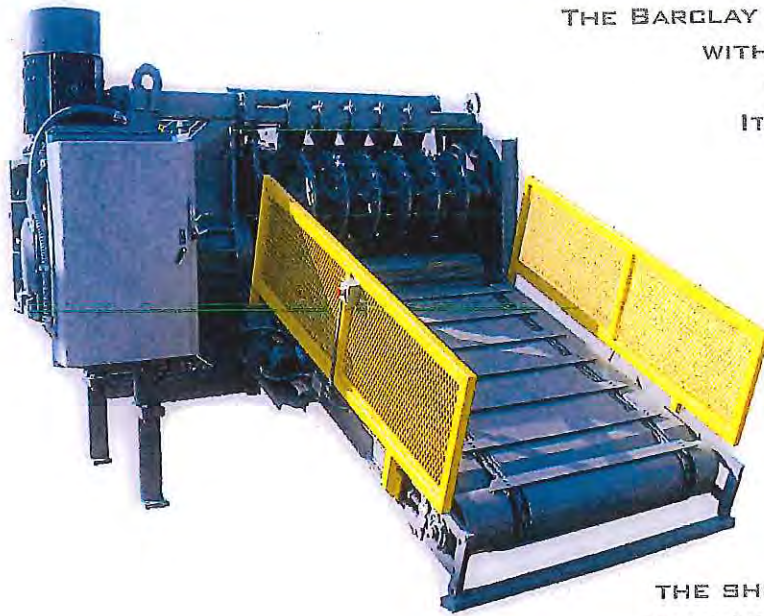


BARCLAY



ROTO-SHRED

## PRODUCT SHEET



THE BARCLAY 4.9 PRIMARY SHREDDER WAS DESIGNED WITH THE PURPOSE OF BEING THE FIRST AND FOREMOST CUT IN ANY SHREDDING LINE. IT IS CAPABLE OF CUTTING RIM FREE TIRES RANGING IN SIZE FROM PASSENGER TO SUPER SINGLE TIRES.

UTILIZING A STANDARD 8' LONG IN-FEED CONVEYOR AND EFFICIENT UPPER AND LOWER FEED MECHANISMS, THE 4.9 PRIMARY SHREDDER ALLOWS THE USER TO INDISCRIMINATELY BULK FEED. GONE ARE THE DAYS OF HAVING TO HAND FEED OR SINGLE FILE FEED RESULTING IN LOWER COSTS.

THE SHREDDER IS POWERED BY A HELICAL BEVEL GEAR MOTOR AND CONTROLLED WITH SOFT START CONTROLS ENCLOSED IN AN INTEGRAL ELECTRIC PANEL. IT CAN BE WIRED TO ACCOMMODATE A WIDE RANGE OF VOLTAGE/HERTZ RATIOS. WHETHER YOU ARE DOING SINGLE PASS SHREDS OR MAKING CRUMB RUBBER, THE BARCLAY 4.9 PRIMARY CAN HELP INCREASE PRODUCTIVITY.

## SPECIFICATIONS / FEATURES

- WEIGHT:** 26,000 LBS
- GEARMOTOR:** 75 - 100 HP, 3 PHASE, 380-460V, 50 - 60 HZ
- SHAFT DIAMETER:** 9 1/2"
- ROTATION SPEED:** 9 RPM @ 75HP, 12 RPM @ 100HP
- ORIENTATION:** VERTICAL.
- CONTROLS:** FULLY WIRED TO ACCEPT LINE CONNECTION. REMOTE MOUNTED CONTROL BOX WITH INDEPENDENT CONTROL OF SHREDDER AND INFEED CONVEYOR.
- SAFETY:** EMERGENCY STOP BUTTONS ARE MOUNTED ON FRONT AND BACK OF THE SHREDDER.
- CUTTING CHAMBER:** 72" WIDE WITH 12 TOTAL CUTS SPACED 4.9" APART
- CUTTING KNIVES:** VASCO-WEAR (TM) TOOL STEEL. 1.50" THICK HEAT TREATED AND PRECISION GROUND. REVERSIBLE BLADES RESULTS IN TWO CUTTING EDGES PER BLADE. 288 BLADES TOTAL.
- KNIFE BASES:** AISI D-2 TOOL STEEL. MODULAR, REPLACEABLE PIECES.
- DRIVE PROTECTION:** COUPLERS WITH SHEAR PINS PROTECTS OVERLOADING.
- STRIPPERS:** FIXED WELDMENTS WITH REPLACEABLE WEAR PLATES.
- FEEDERS:** CHAIN-DRIVEN BY MAIN SHAFT WITH TORQUE LIMITER.
- THROUGHPUT:** 16-20 TONS/HOUR (SINGLE PASS)
- CAPACITY:** NO WHOLE TIRES WITH A COMPRESSED CROSS SECTION GREATER THAN 5 1/2"
- INFEED CONVEYOR:** DETACHABLE 2HP CONVEYOR WITH IMPACT ABSORBING SPRING STEEL SLATSS. LENGTHS ARE 8' OR 16' LONG.

# Appendix G

## Natural Values Report



# Natural Values Report

**Report for:** Green Distillation Tech Corp Ltd  
& 6TY Pty Ltd

**Property Location:** Title no: 105810/1  
437 Woolmers Lane, Longford

**Prepared by:** Scott Livingston  
AK Consultants,  
40 Tamar Street,  
LAUNCESTON, TAS. 7250

**Date:** 16<sup>th</sup> May 2016



**Summary**

**Client:** Green Distillation Tech Corp Ltd

**Property** 437 Woolmers Lane, Longford

**Identification** Zoning: Rural Resource (*Northern Midlands Interim Planning Scheme 2013*).

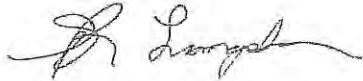
CT 105810/1 (1045 ha).

**Proposal:** A Tyre Recycling Plant to be built on a portion of the property.

**Assessment comments:** *Under the Northern Midlands Interim Planning Scheme 2013, consideration of the impact on natural values under the E8 Biodiversity Code is required. A field inspection was conducted on the 3<sup>RD</sup> May 2016 to confirm or otherwise the desktop study findings.*

**Conclusion:**

The development area supports no native vegetation communities. The development within agricultural land will have minimal impact on threatened fauna species that may forage in the area, no other natural values will be impacted



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Scott Livingston,  
Master Environmental Management,  
Natural Resource Management  
Consultant.



## INTRODUCTION

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The title CT 105810/1 (1045 ha) is located on Woolmers Lane, Longford. Current zoning is Rural Resource, (Northern Midlands *Interim Planning Scheme, 2013*).

Development of a tyre recycling facility is proposed adjacent to existing tire stockpiles in the central portion of the property. The majority of the property is agricultural, including irrigated cropping. Some areas of native vegetation occur on the property with (DAZ) *Eucalyptus amygdalina inland forest and woodland on Cainozoic deposits* occurring around 800m to the south and 1km to the south east. Under the *Northern Midlands Interim Planning Scheme 2013*, consideration of the impact on natural values from the proposed development is required.

An initial desktop assessment was undertaken followed by a field inspection on the 3<sup>rd</sup> May 2016 to confirm or otherwise the desktop study findings and determine the vegetation community and potential habitat for threatened species. This report summarises the findings of the desktop and field assessment.

## METHODS

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A Natural Values report was accessed from the DPIWE website on 28/4/2015. This report covers known sightings within 5km and fauna species whose predicted range boundaries overlay the site.

This was followed by a site visit on 3/5/16 by Scott Livingston. The site inspection concentrated on the immediate vicinity of the proposed development and adjacent tire storage area. Given the small area of the assessment the site was inspected with a narrowly spaced wandering meander technique, with all areas of variation within the site vegetation inspected.

The survey was conducted in May, which is outside a peak flowering period of many flora species. No survey can guarantee that all flora will be recorded in a single site visit due to limitations on seasonal and annual variation in abundance and the presence of material for identification. While all significant species known to occur in the area were considered, species such as spring or autumn flowering orchids may have been overlooked. Given the small area of vegetation assessed and the conversion to agricultural use the likelihood of plants being overlooked is low.

All mapping and Grid References in this report use GDA 94, Zone 55, with eastings and northings expressed as 6 & 7 digits respectively.

Flora taxonomy nomenclature used is consistent with *Census of Vascular Plants of Tasmania*, Tasmanian Herbarium 2015, *From Forest to Fjaeldmark*, Descriptions of Tasmania's Vegetation (Edition 2) Harris & Kitchener, 2005, *Little Book of Common Names for Tasmanian Plants*, Wapstra et al.



## **DESCRIPTION**

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The title is zoned as Rural Resource. TasVeg 3.0 maps the subject title as Agricultural Land (FAG) this was confirmed on the site inspection.

There are records of threatened flora species recorded on the title, however these are within the native forest (DAZ) and greater than 3km from the site. There are no records of threatened fauna species on the title (Department of Primary Industries, accessed 28/416).

See Appendix 1 for maps and Appendix 2 for photos.

## **NATURAL VALUES**

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### VEGETATION

Vegetation on and surrounding the proposed development area is exotic pastures, a *Pinus radiata* shelterbelt bounds the recycling plant to the south. A single *Eucalyptus pauciflora* (Cabbage Gum) occurs south of the shelterbelt, outside the proposed development area. All other vegetation is exotic grasses, pasture weeds with gorse common.

### FLORA

No record of exotic pasture and weed species was taken.

### FAUNA

The Natural Values Atlas has records of threatened species *Pseudemou pagenstecheri* (tussock skink) and *Sarcophilus harrisii* (Tasmanian devil) within 500m of subject title. Table 3 includes suitable habitat for threatened fauna species within 500m of the subject title (based on range boundaries).

Construction of buildings and associated infrastructure will have an impact on native vegetation and habitat, however the surrounding land provides similar habitat and the free ranging fauna species, which possibly forage in the area, will not be impacted to a great extent.

### RAPTOR NESTS

Nest for both *Aquila audax* (wedge-tailed eagle) and *Tyto novaehollandiae* (masked owl) have both been sited within 5000m of title. The site has a low (0-1/10) probability for Eagle Nest (FPA Model) and a mature habitat rating of nil in the Forest Practices Biodiversity Database, no evidence of existing nests or suitably sized hollows for masked owl was found on title.

Table 2: Threatened flora within 500m of subject title, Natural Values Atlas

Scientific Name	Common name	State	National	Within 500m	within 5km	Habitat Description	Habitat suitability development area	Survey time
<i>Caesia callantha</i>	blue grasslily	R		Yes*		Found predominately throughout the Midlands in grassland or grassy woodland habitat, including grassy roadsides.	no suitable habitat	Oct-Dec
<i>Isoetes elatior</i>	tall quillwort	R		Yes*		Aquatic plant. Low altitudes with roots in gravel and silt substrates in moderately flowing waters. In calmer waters it grows in mud or silt. Only found in South Esk, St Pauls, Prosser, Break O'Day and Apsley Rivers.	no suitable habitat	Oct-Dec
<i>Rhodanthe anthemoides</i>	chamomile sunray	R		Yes*		Montane grasslands, heath and heathy scrub in central and north western Tasmania	no suitable habitat	

\* >500m from development area

Table 1: Threatened fauna recorded on or with suitable habitat within 500m of the subject titles from the Natural Values Atlas.

Common name	Scientific Name	State	National	within 500m	within 5 km	Range class	Habitat Description	Habitat suitability development area
grey goshawk	<i>Accipiter novaehollandiae</i>	e	~	NO	Yes	Potential Range	Potential habitat for the grey goshawk is native forest with mature elements below 600 m altitude, particularly along watercourses. FPA's Fauna Technical Note 12 can be used as a guide in the identification of grey goshawk habitat. Significant habitat for the grey goshawk may be summarised as areas of wet forest, rainforest and damp forest patches in dry forest, with a relatively closed mature canopy, low stem density, and open understorey in close proximity to foraging habitat and a freshwater body (i.e. stream, river, lake, swamp, etc.). FPA's Fauna Technical Note 12 can be used as a guide in the identification of grey goshawk habitat.	No suitable nesting/foraging
wedge-tailed eagle	<i>Aquila audax subsp. fleayi</i>	Pe	PEN	No	Yes	Potential Range	Potential habitat for the Wedge-tailed Eagle comprises potential nesting habitat and potential foraging habitat. Potential foraging habitat is a wide variety of forest (including areas subject to native forest silviculture) and non-forest habitats. Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest. Nest trees are usually amongst the largest in a locality. They are generally in sheltered positions on leeward slopes, between the lower and mid sections of a slope and with the top of the tree usually lower than the ground level of the top of the ridge, although in some parts of the State topographic	No suitable nesting habitat with 500m, foraging may occur.

							shelter is not always a significant factor (e.g. parts of the northwest and Central Highlands). Significant habitat for the wedge-tailed eagle is all native forest and native non-forest vegetation within 500 m or 1 km line-of-sight of known nest sites (where the nest tree is still present).	
Green Lined Ground	<i>Catadromus lacordairei</i>			NO	No	Potential Range	Potential habitat for the Green-lined Ground Beetle is open, grassy/sedgy, low altitude grasslands and woodlands associated with wetlands and low-lying plains or flats adjacent to rivers/streams. Key habitat elements that need to be present include sheltering sites such as patches of stones, coarse woody debris and/or cracked soils. The species is a highly active and mobile flyer that often comes to ground close to water sources and is rarely found further than 250 m from such a source.	No native grasslands

spotted-tailed quoll	<i>Dasyurus maculatus</i>	r	VU	No	Yes	Core Range	Potential habitat for the spotted-tailed quoll is coastal scrub, riparian areas, rainforest, wet forest, damp forest, dry forest and blackwood swamp forest (mature and regrowth), particularly where structurally complex areas are present, and includes remnant patches in cleared agricultural land or plantation areas. Significant habitat for the spotted-tailed quoll is all potential denning habitat within the core range of the species. Potential denning habitat for the spotted-tailed quoll includes 1) any forest remnant (>0.5ha) in a cleared or plantation landscape that is structurally complex (high canopy, with dense understorey and ground vegetation cover), free from the risk of inundation, or 2) a rock outcrop, rock crevice, rock pile, burrow with a small entrance, hollow logs, large piles of coarse woody debris and caves. FPA's Fauna Technical Note 10 can be used as a guide in the identification of potential denning habitat.	No suitable denning habitat, foraging may occur.
eastern quoll	<i>Dasyurus viverrinus</i>	E		No	Yes	Potential Range	The species is found in a variety of habitats including rainforest, heathland, alpine areas and scrub. However, it seems to prefer dry forest and native grassland mosaics which are bounded by agricultural land.	No suitable denning habitat, foraging may occur.



Swan galaxias	<i>Galaxias fontanus</i>			NO	No	Potential Range	Potential habitat for the Swan Galaxias is slow to moderately fast flowing streams containing permanent water (even when not flowing), which have good instream cover from overhanging banks and/or logs, and shade from overhanging vegetation. A population can only be maintained where barriers have prevented establishment of trout and redfin perch. The nature of these barriers is variable and can include permanent natural structures such as waterfalls and chutes and also low flow-dependent features such as marshes, ephemeral water-losing and remnant channels, braided channel floodplain features. Significant habitat for the Swan galaxias is all potential habitat and a 30m stream-side reserve within the core range. This includes the Wildlife Priority Areas (Fauna Special Management Zones) on the upper Swan River, Tater Garden Creek and upper Blue Tier Creek, and other upper catchments of tributaries of the Macquarie, Blackman and Isis Rivers.	No suitable watercourses
white-bellied sea-eagle	<i>Haliaeetus leucogaster</i>	v	~	NO	No	Potential Range	Potential habitat for the White-Bellied Sea-eagle species comprises potential nesting habitat and potential foraging habitat. Potential foraging habitat is any large waterbody (including sea coasts, estuaries, wide rivers, lakes, impoundments and even large farm dams) supporting prey items (fish). Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest within 5 km of the coast (nearest coast including shores, bays, inlets and peninsulas), large rivers (Class 1), lakes or complexes of large	No suitable nesting habitat with 500m, foraging may occur.

							farm dams. Scattered trees along river banks or pasture land may also be used. Significant habitat for the white-bellied sea-eagle is all native forest and native non-forest vegetation within 500 m or 1 km line-of-sight of known nest sites (where nest tree still present).	
Hydroptila scamandra	caddis fly	R		NO	Yes	Outside Known Range	Upper Scamander River	Outside Range
Lathamus discolor	swift parrot	E	EN	NO	Yes			No suitable nesting or foraging
green and gold frog	green and gold frog	V	VU	NO	Yes	Potential Range	Potential habitat for the green and gold frog is permanent and temporary waterbodies, usually with vegetation in or around them. Potential habitat includes features such as natural lagoons, permanently or seasonally inundated swamps and wetlands, farm dams, irrigation channels, artificial water-holding sites such as old quarries, slow-flowing stretches of streams and rivers and drainage features.	No suitable waterbodies

eastern barred bandicoot	<i>Perameles gunnii</i>		VU	No	Yes	Core Range	Potential habitat for the eastern barred bandicoot is open vegetation types including woodlands and open forests with a grassy understorey, native and exotic grasslands, particularly in landscapes with a mosaic of agricultural land and remnant bushland. Significant habitat for the Eastern Barred Bandicoot is dense tussock grass-sagg-sedge swards, piles of coarse woody debris and denser patches of low shrubs (especially those that are densely branched close to the ground providing shelter) within the core range of the species.	May occur in adjacent gorse areas, no impact expected.
australian grayling	<i>Prototroctes maraena</i>			NO	NO	Potential Range	Potential habitat for the Australian Grayling is all streams and rivers in their lower to middle reaches. Areas above permanent barriers (e.g. Prosser River dam, weirs) that prevent fish migration, are not potential habitat.	
tussock skink	<i>Pseudemoia pagenstecheri</i>	v	~	No	Yes	Potential Range	Potential habitat for the tussock skink is grassland and grassy woodland (including rough pasture with paddock trees), generally with a greater than 20% cover of native grass species, especially where medium to tall tussocks are present.	No native grasslands
glossy grass skink	<i>Pseudemoia rawlinsoni</i>			NO	NO	Potential Range	Potential habitat for the Glossy Grass Skink is wetlands and swampy sites (including grassy wetlands, teatree swamps and grassy sedgeland), and margins of such habitats.	No native swampy areas

tasmanian devil	<i>Sarcophilus harrisii</i>	E	EB	Yes	Yes	Potential Range	<p>Potential habitat for the Tasmanian devil is all terrestrial native habitats, forestry plantations and pasture. Devils require shelter (e.g. dense vegetation, hollow logs, burrows or caves) and hunting habitat (open understorey mixed with patches of dense vegetation) within their home range (4-27 km<sup>2</sup>). Significant habitat for the Tasmanian devil is a patch of potential denning habitat where three or more entrances (large enough for a devil to pass through) may be found within 100 m of one another, and where no other potential denning habitat with three or more entrances may be found within a 1 km radius, being the approximate area of the smallest recorded devil home range (Pemberton 1990). Potential denning habitat for the Tasmanian devil is areas of burrowable, well-drained soil, log piles or sheltered overhangs such as cliffs, rocky outcrops, knolls, caves and earth banks, free from risk of inundation and with at least one entrance through which a devil could pass. FPA's Fauna Technical Note 10 can be used as a guide in the identification of potential denning habitat.</p>	No suitable denning habitat, foraging may occur.
-----------------	-----------------------------	---	----	-----	-----	-----------------	--	--

masked owl	<i>Tyto novaehollandiae</i>	Pe	PVU	Yes	Yes	Core Range	<p>Potential habitat for the masked owl is all areas with trees with large hollows (&gt;=15 cm entrance diameter). In terms of using mapping layers, potential habitat is considered to be all areas with at least 20% mature eucalypt crown cover (PI-type mature density class 'a', 'b', or 'c'). From on-ground surveys this is areas with at least 8 trees per hectare over 100 cm dbh. Remnants and paddock trees in agricultural areas may also constitute potential habitat. Significant habitat for the masked owl is any areas within the core range of native dry forest with trees over 100cm dbh with large hollows (&gt;=15 cm entrance diameter). In terms of using mapping layers for an initial desktop assessment prior to an on-ground survey significant habitat may occur in all areas within the core range classified as dry forest (TASVEG dry Eucalypt forest and woodland) with at least 20% mature eucalypt crown cover (PI-type mature density class 'a', 'b', or 'c'). From on-ground surveys this is areas with at least 8 trees per hectare over 100 cm dbh. Remnants and paddock trees in agricultural areas may constitute significant habitat.</p>	No suitable nest trees within development area, foraging may occur.
------------	-----------------------------	----	-----	-----	-----	------------	---	---

**DISTURBANCE**

The Natural Values Atlas records 5 weed species (see table below) as being present within 500m. 3 of these species were found on the title during the site inspection with another weed species identified that is not recorded in the Natural Values Atlas.

Species	Common Name	Located on Site
<i>Erica lusitanica</i>	Spanish heath	No
<i>Foeniculum vulgare</i>	Fennel	No
<i>Centaurea erythraea</i>	Common centaury	Yes
<i>Onopordum acanthium</i>	Scotch thistle	Yes
<i>Rubus fruticosus</i>	Blackberry	no
<i>Ulex europaeus</i>	Gorse	Yes

**PREVIOUS CLEARING**

All areas of the proposed development and surrounding areas have been cleared and converted to pasture.

**PROPOSED DEVELOPMENT/CLEARING OF VEGETATION**

The proposed development will not require the clearing or disturbance of any native vegetation.

**CONCLUSIONS**

The development area supports no native vegetation communities. The development within agricultural land will have minimal impact on threatened fauna species that may forage in the area, no other natural values will be impacted.

**REFERENCES**

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- Department of Primary Industry, P. W. (accessed 28/5/16). Natural Values Report, Derived from the Natural Values Atlas, online database.
- DPIPWE. (2013). Tasmanian Vegetation Monitoring and Mapping Program TASVEG 3.0. Department of Primary Industries, Parks, Water and Environment.
- Northern Midlands. (2013). Northern Midlands Interim Planning Scheme 2015.
- Harris & Kitchener, (2005), From Forest to Fjaeldmark, Descriptions of Tasmania's Vegetation (Edition 2)
- Tasmanian Herbarium (2015), Census of Vascular Plants of Tasmania,
- Southern Tasmania Council Authority (2013). Guidelines for the use of Biodiversity Offsets in local government planning approval process.
- Wapstra et al (2010), Flowering Times of Tasmanian Orchids: A Practical Guide for Field Botanists,
- Wapstra et al. (2007) Little Book of Common Names for Tasmanian Plants,

APPENDIX 1 – MAPS

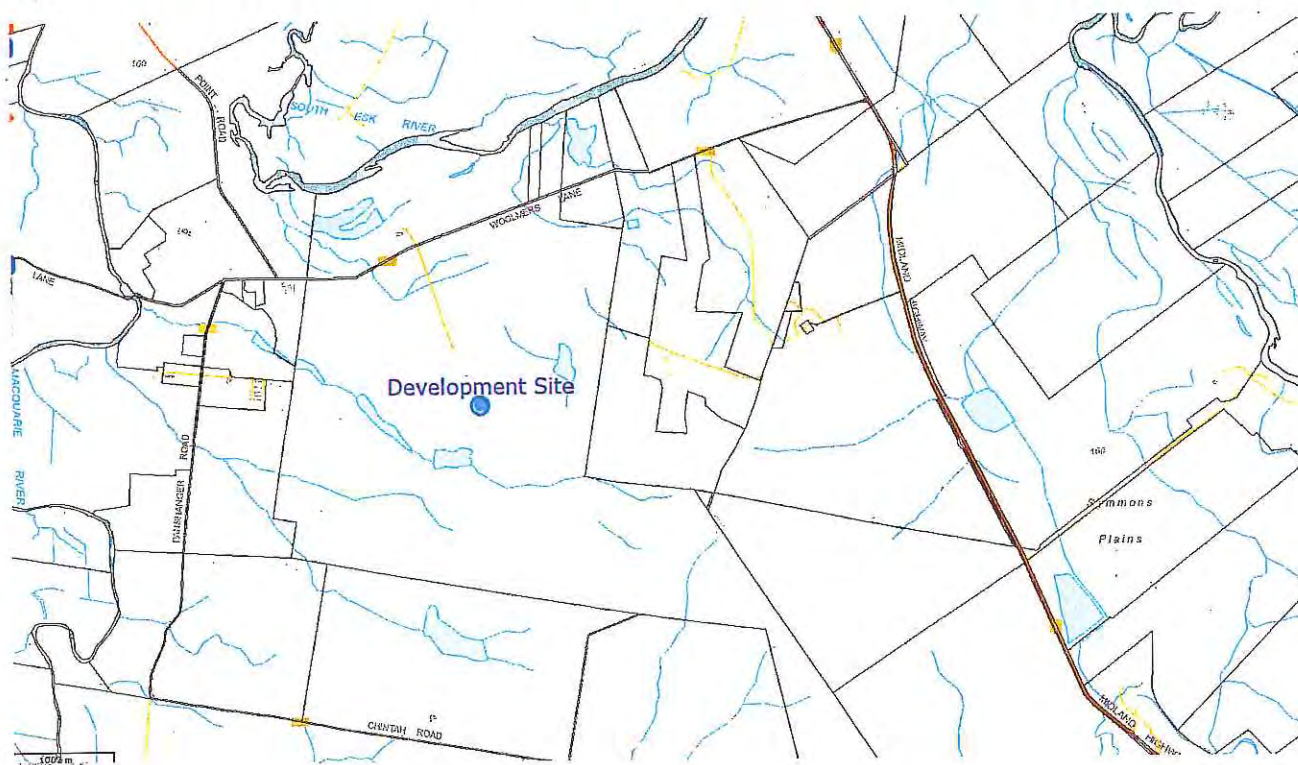


Figure 1. Location,



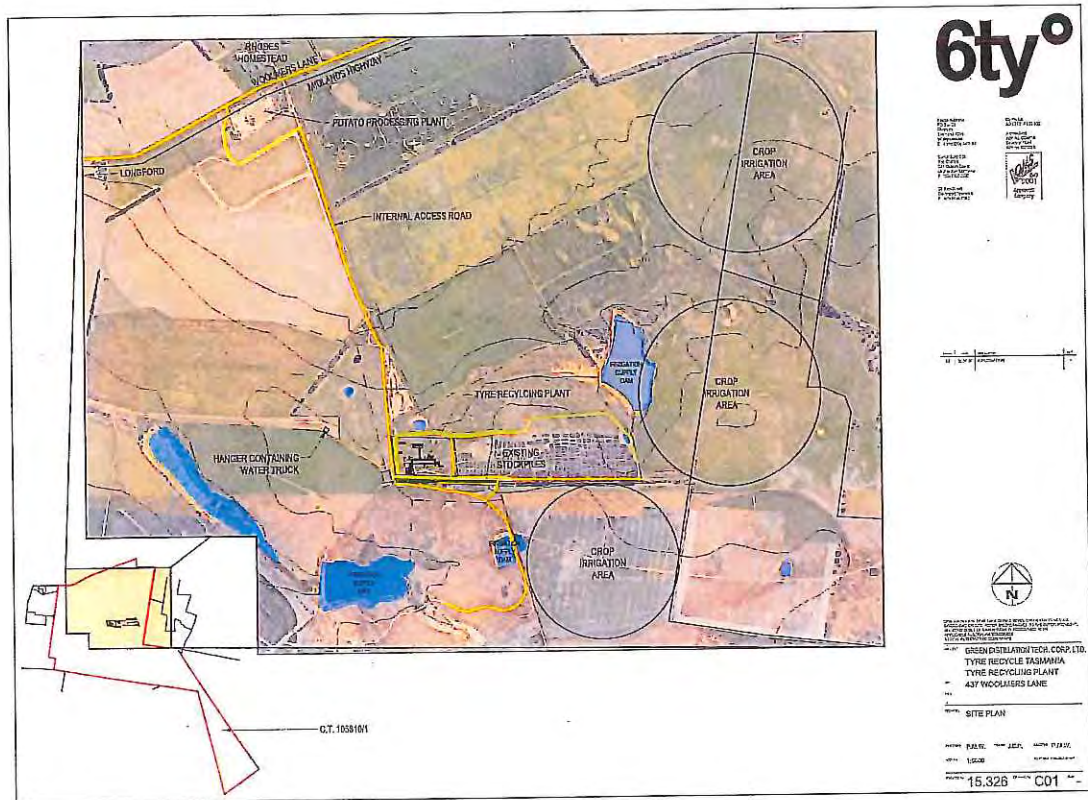


Figure 2. Site Plan  
Natural Values Report

APPENDIX 2 – PHOTOS

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Taken by Scott Livingston 12<sup>th</sup> November, 2015



Figure 5: View north across development site from behind shelterbelt



Figure 6. view SE across development site





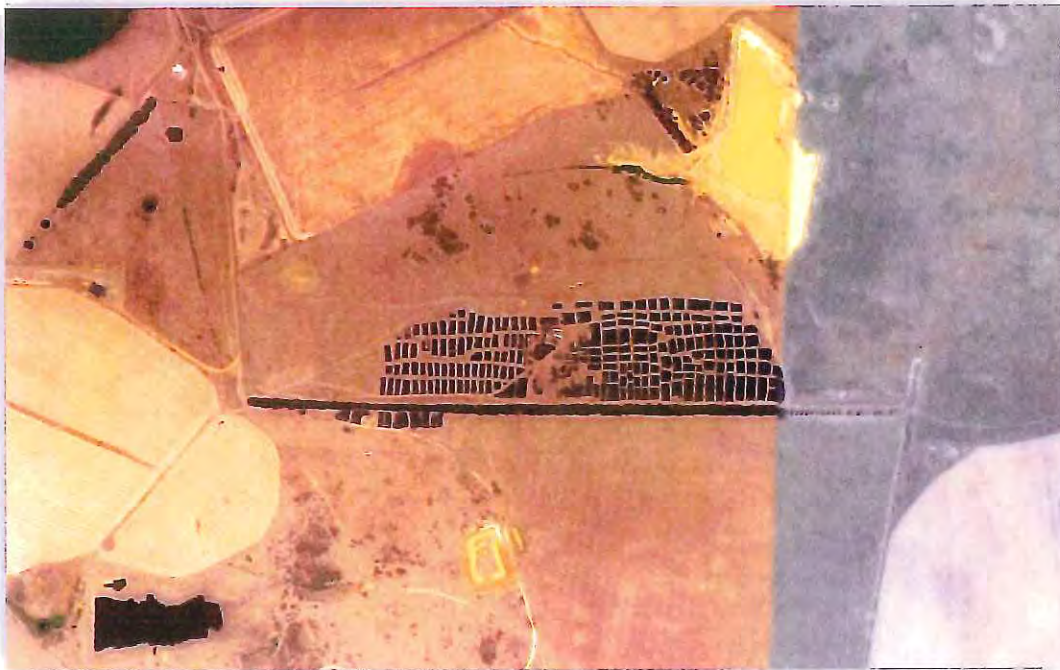
Figure 7. *E. pauciflora* south of development site

## Appendix H

### Environmental Noise Assessment Report

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**437 Woolmers Ln, Longford**  
**Tyre shredder**  
**Environmental noise assessment**



Report No. 421448-01

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Vipac Engineers & Scientists Ltd  
PO Box 506  
Kings Meadows TAS 7249

**VIPAC**





## DOCUMENT CONTROL

**6TY°**  
**437 WOOLMERS LN, LONGFORD**  
**TYRE SHREDDER**  
**ENVIRONMENTAL NOISE ASSESSMENT**

<b>Report No.</b> 421448- 01	<b>Library Code</b> ACS
<b>Prepared for</b> 6ty° Tamar Suite 103, The Charles 287 Charles Street Launceston 7250	<b>Prepared by</b> Vipac Engineers & Scientists Ltd PO Box 506 Kings Meadows Tasmania 7249
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<b>Author</b>	Alex McLeod Senior Consultant	Date: 14 July 2016
<b>Reviewed by</b>		Date:
<b>Authorised by</b>	Peter Bunker Manager, Tasmania	Date: 14 July 2016
<b>Approved by</b>		Date:
<b>Revision History</b>		
<b>Revision No.</b>	<b>Date Issued</b>	<b>Reason/Comments</b>
0		
<b>Distribution</b>		
<b>Copy No.</b> _____	<b>Revision No.</b>	<b>Location</b>
1	0	Project/Client File
2	0	Client
3	0	Vipac Library
<b>Keywords</b>	Tyre shredder, dBA, SWL, environmental noise emissions.	



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## References

- [1] SoundPLAN Acoustic modelling software - Braunstein & Berndt GmbH.
- [2] CONCAWE The oil companies' international study group for conservation of clean air and water – Europe (est. 1963) report 4/81.



## Executive summary

6ty°, on behalf of TD & SE Chugg Pty Ltd, commissioned Vipac to undertake an environmental noise assessment for a proposed tyre shredder to be installed at 437 Woolmers Lane, Longford.

Vipac proposed the following:-

- Develop an environmental noise model of the tyre shredder installation
- predict noise emission levels from the installation at the site boundary and noise sensitive receiver locations.

Predicted noise levels at noise sensitive locations surrounding the site were all below 20 dBA under neutral weather noise propagation conditions. At this level it is considered unlikely a noise emission from the installation would be audible during the day period.

Given the prediction results noise mitigation strategies are deemed unnecessary.





## 1 Introduction

6ty°, on behalf of TD & SE Chugg Pty Ltd, commissioned Vipac to undertake an environmental noise assessment for a proposed tyre shredder to be installed at 437 Woolmers Lane, Longford. This forms part of an Environmental Effects Report (EER) as requested by the Tasmanian Environmental Protection Agency (EPA).

The section relevant to noise from the Environmental Effects Report Guidelines, as provided by the Tasmanian EPA, is shown below:-

### 9. Noise emissions

- Will the activity include fixed or mobile equipment that emits noise? If yes, provide details of the noise sources including size, power ratings, noise attenuation and hours of operation.
- Show the expected locations of the noise sources on the site plan and the location of nearby residences and other noise sensitive premises on the area map (see Part B of these Guidelines).
- A suitably qualified acoustic consultant must be engaged to provide estimates of the resulting sound pressure levels at the site boundary and at any nearby noise sensitive areas, including businesses and rural dwellings.
- Potential impacts from noise generated by the activity must be described, and potential mitigation measures are to be considered and discussed.

To address the EER Guidelines as shown above Vipac proposed the following:-

- Develop an environmental noise model of the tyre shredder installation using the SoundPLAN<sup>[1]</sup> modelling software package. Sound power spectral data sourced from manufacturers data where available, measured data from similar installations or Vipac library data.
- Use the model to predict noise emission levels from the installation at the site boundary and noise sensitive receiver locations.

The proposed installation is to be housed in a shed structure as detailed in figure 1 below. Vipac assumes that operation of the tyre shredder would occur during the day period only (0600 – 1800 hrs).



Figure 1 – Site layout for tyre shredder installation (provided by 6ty°).

## 2 Site description

437 Woolmers Ln is located approx. 6.5 km south-east of the centre of Longford. The location of the proposed tyre shredder installation is adjacent to an existing stockpile of used tyres. The surrounding land is generally riverine floodplain and utilised predominantly for agricultural purposes. Noise sensitive locations surround the proposed installation with the closest approx. 1.5 km away to the north.

From previous experience in acoustic environments that Vipac would expect to be similar to this site it is expected that day time noise levels at sensitive receiver locations surrounding the proposed tyre installation would typically be between 40 and 45 dBA during the day. At times where there is minimal surrounding agricultural and commercial activity there is some potential that noise levels could drop to as low as 35 dBA.

Table 1 provides location information for noise sensitive receiver locations identified in the areas surrounding the proposed tyre shredder installation. Figure 1 provides an aerial view of the site with surround sensitive receiver locations marked.



Noise sensitive locations		
Location number	Position (Datum: WGS84 / GDA94 Zone 55)	
	Easting	Northing
1	514684	5391959
2	513129	5391564
3	512761	5391019
4	512295	5391727
5	516946	5390819
6	518093	5391167
7	514817	5388321
8	512357	5389057
9	512642	5390117

Table 1 – Noise sensitive locations.

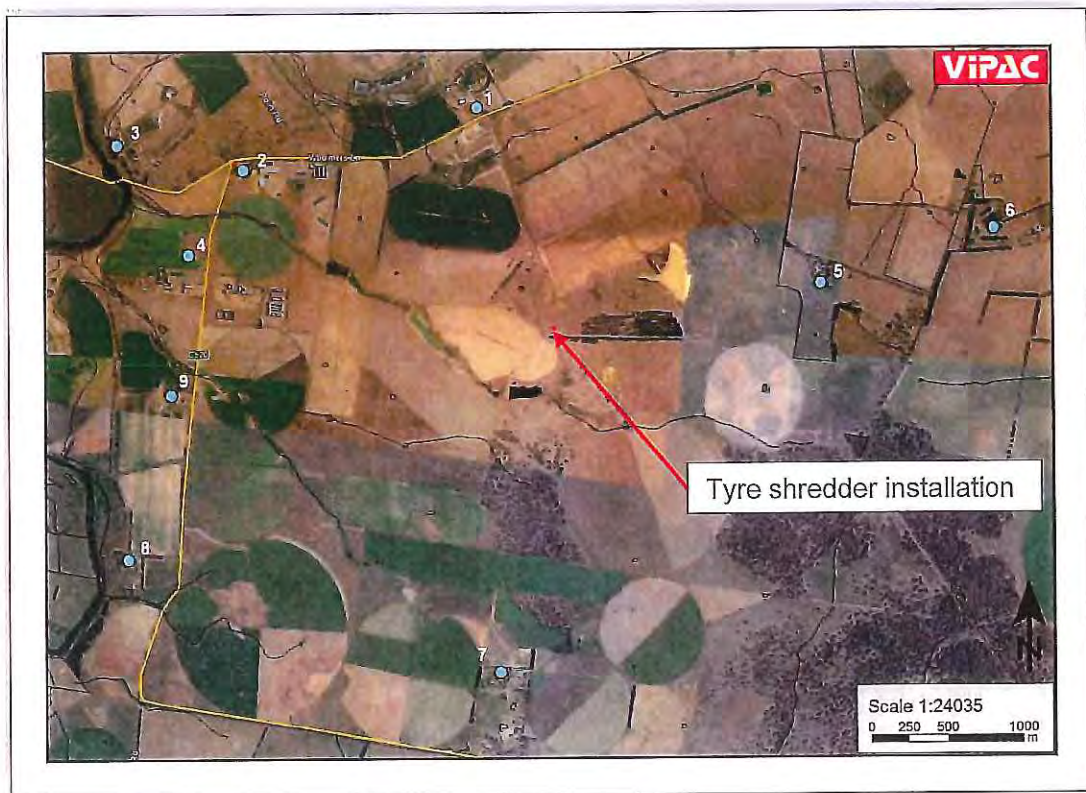


Figure 1 – Aerial view of 437 Woolmers Ln, Longford, and surrounding area with noise sensitive locations marked.



### 3 Environmental noise model

#### 3.1 Model input data

Manufacturers data and data from similar installations was found to be not available. Examination of technical information about the tyre shredder installation (see Appendix section for details) suggests that the likely noise sources would be associated with the electric motor driving the cutting head and conveyors for input and output of material. The low rotational speed of the cutting head (0.15 to 0.2 Hz) suggests that any noise generated by the cutting action is likely to be negligible from an environmental noise emission perspective.

Table 2 provides Vipac library source sound power data (SWL) and information for the sources used in this assessment while table 3 provides 1/1-octave band SWL spectra.

Overall sound power Levels (dBA)		
Area	SWL	Comment
Shedder electric motor	94	Vipac library data for 75 kW 1500 rpm motor.
Conveyers	89	Vipac library data, 18 m of conveyor length assumed.

Table 2 – Sound power levels.

Sound Power Level Spectra (dBA)										
Area	SWL spectra (Hz)									
	31	63	125	250	500	1k	2k	4k	8k	Total
Shedder electric motor	-	62	74	83	87	90	87	84	79	94
Conveyers	52	76	79	81	83	83	79	79	68	89

Table 3 – Sound power spectra.

The sources presented in tables 2 and 3 above were assumed to be housed in metal deck clad shed with openings on the east and north sides to accommodate material inputs and outputs. A reverberant sound pressure level spectrum calculated from the above data and assumed shed construction and material transmission loss data were used to parameterise the model.

#### 3.2 Model views

A model plan view and wire frame model view is shown in figures 2 & 3 respectively.





Figure 2 – Model plan view.

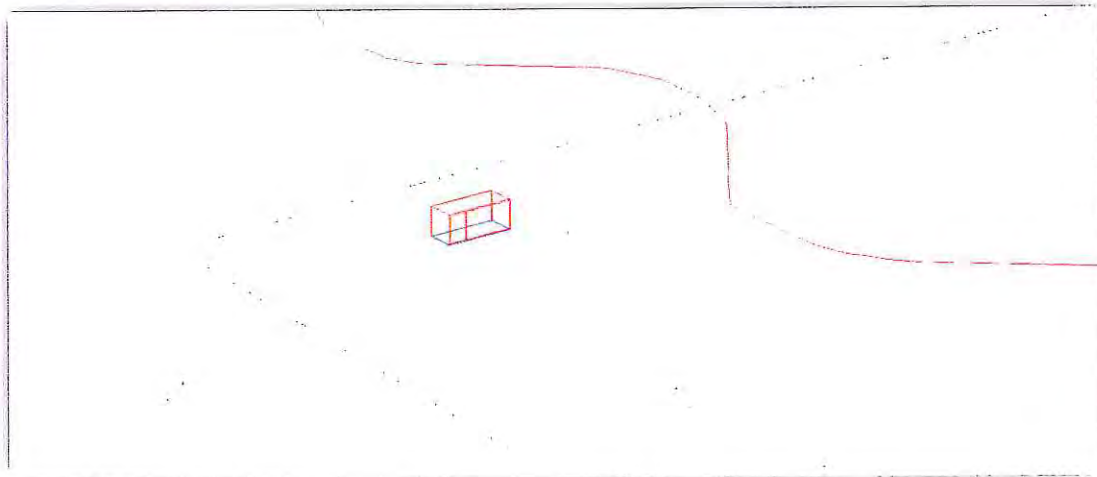


Figure 3 – Wire-frame model view, view from the south-east

### 3.3 Atmospheric conditions

SoundPLAN<sup>[1]</sup>, via the CONCAWE<sup>[2]</sup> prediction algorithm, models atmospheric attenuation using Pasquill stability indices. These indices are influenced primarily by vector wind speed and direction and solar radiation levels. Combinations of these conditions are used to determine appropriate frequency dependent attenuation/amplification parameters. In this study the following propagation condition has been modelled:

- **Neutral propagation:** Situations where the atmospheric conditions are considered to be neutral occur with a Pasquill stability class D and no wind. These conditions can typically occur in the hour before sunset and the hour after sunrise. Neutral conditions also occur fairly frequently during still, cloudy conditions.

## 4 Modelling results and discussion

### 4.1 Predicted noise contours

Using the acoustic model, a noise contour maps were generated to assist in the visualisation of noise propagation, see figure 4 below.

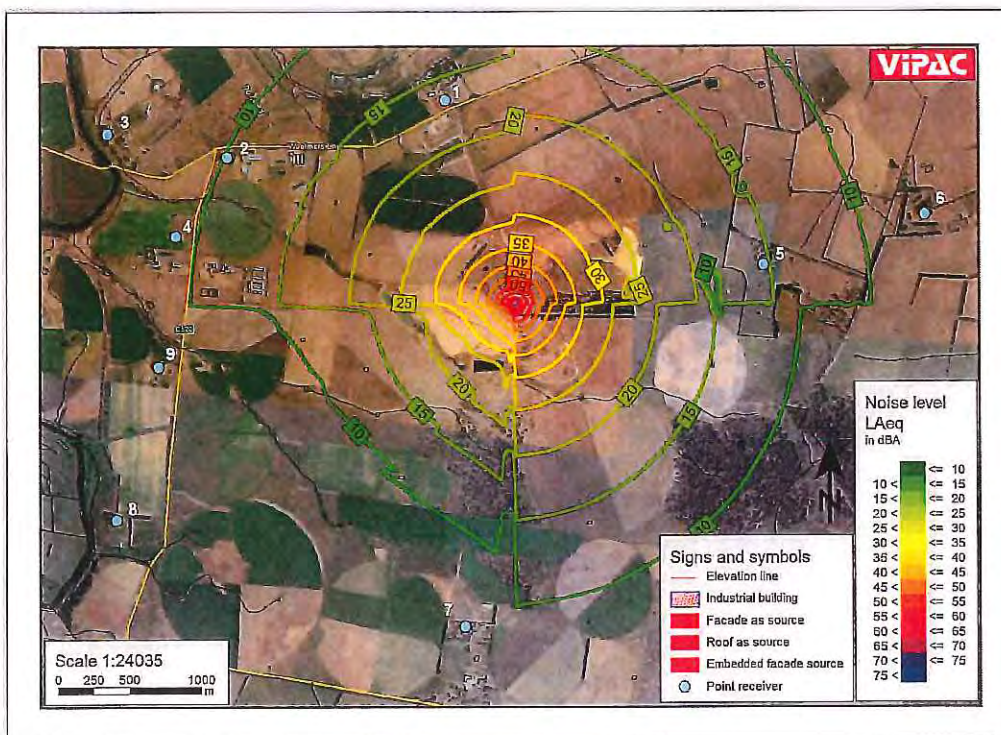


Figure 4 – Predicted noise contours under neutral weather conditions.





## 4.2 Received levels

Table 4 presents predicted received levels at each of the noise sensitive locations listed in section 2, table 1.

Predicted SPL (dBA)	
Position No	Predicted
1	17
2	10
3	9
4	5
5	15
6	7
7	5
8	-
9	1

Table 4 – Predicted received levels.

From the above we noted the following:-

- All predicted noise levels are below 20 dBA. At this level these sources would be unlikely to be audible during the day period.

## 5 Conclusions

1. Vipac has developed and parametrised an environmental noise model of a proposed tyre shredder installation to be located at 437 Woolmers Ln, Longford.
2. Predicted noise levels at noise sensitive locations surrounding the site were all below 20 dBA under neutral weather noise propagation conditions. At this level it is considered unlikely noise emission from the installation would be audible during the day period.
3. Given the prediction results noise mitigation strategies are deemed unnecessary and are not provided here.

**NB:** Details of mobile equipment operations at the site where not considered. Vipac recommends that any equipment utilised on site (e.g. front end loader, forklift... etc) have a SWL level below 106 dBA.

Truck traffic on and off the site associated with transport of materials is likely to occur. Vipac would expect that the frequency off such activity wouldn't not results in the addition of significant amounts acoustic energy to the environment beyond that that already exists from commercial and agricultural activities present in the area.



## 6 Appendix



**BARCLAY**  
ROTO-SHRED

### 4.9 PRIMARY SHREDDER

**PRODUCT SHEET**



THE BARCLAY 4.9 PRIMARY SHREDDER WAS DESIGNED WITH THE PURPOSE OF BEING THE FIRST AND FOREMOST CUT IN ANY SHREDDING LINE. IT IS CAPABLE OF CUTTING RIM FREE TIRES RANGING IN SIZE FROM PASSENGER TO SUPER SINGLE TIRES.

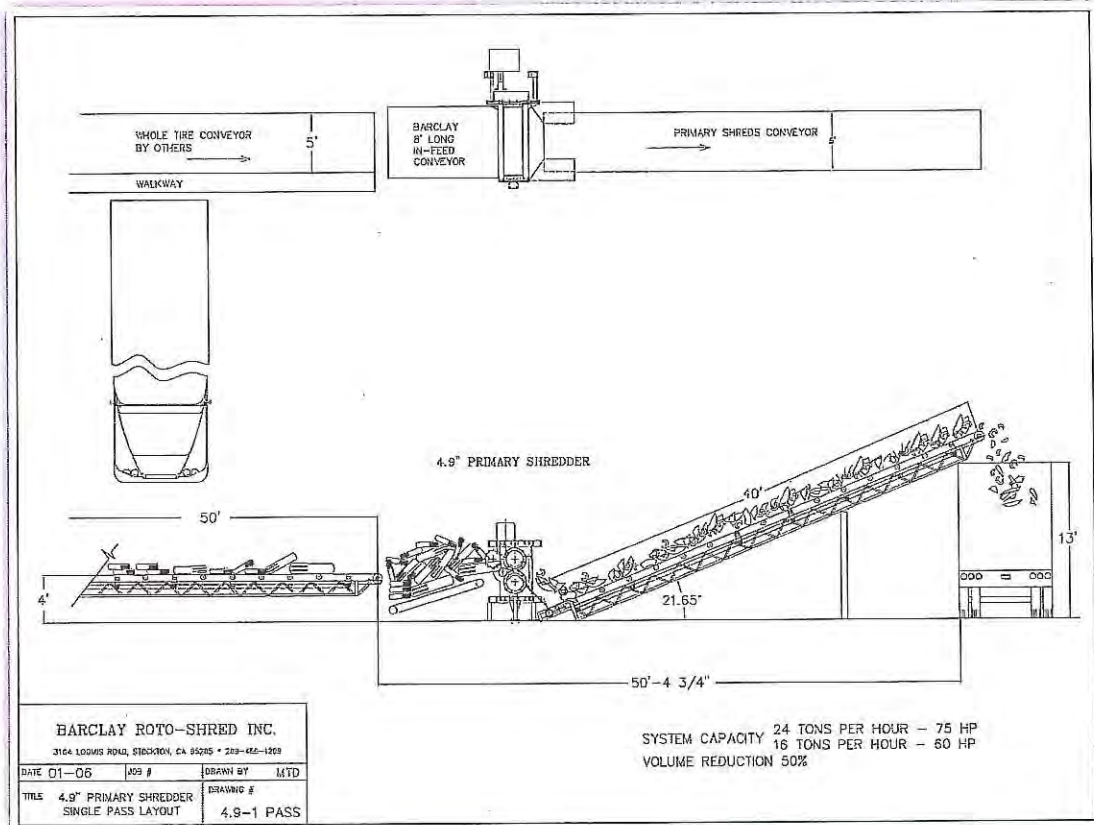
UTILIZING A STANDARD 8' LONG IN-FEED CONVEYOR AND EFFICIENT UPPER AND LOWER FEED MECHANISMS, THE 4.9 PRIMARY SHREDDER ALLOWS THE USER TO INDISCRIMINATELY BULK FEED. GONE ARE THE DAYS OF HAVING TO HAND FEED OR SINGLE FILE FEED RESULTING IN LOWER COSTS.

THE SHREDDER IS POWERED BY A HELICAL BEVEL GEAR MOTOR AND CONTROLLED WITH SOFT START CONTROLS ENCLOSED IN AN INTEGRAL ELECTRIC PANEL. IT CAN BE WIRED TO ACCOMMODATE A WIDE RANGE OF VOLTAGE/HERTZ RATIOS. WHETHER YOU ARE DOING SINGLE PASS SHREDS OR MAKING CRUMB RUBBER, THE BARCLAY 4.9 PRIMARY CAN HELP INCREASE PRODUCTIVITY.

**SPECIFICATIONS / FEATURES**

- WEIGHT:** 26,000 LBS
- GEARMOTOR:** 75 - 100 HP, 3 PHASE, 380-460V, 50 - 60 HZ
- SHAFT DIAMETER:** 5 1/2"
- ROTATION SPEED:** 9 RPM @ 75HP, 12 RPM @ 100HP
- ORIENTATION:** VERTICAL.
- CONTROLS:** FULLY WIRED TO ACCEPT LINE CONNECTION. REMOTE MOUNTED CONTROL BOX WITH INDEPENDENT CONTROL OF SHREDDER AND INFEED CONVEYOR.
- SAFETY:** EMERGENCY STOP BUTTONS ARE MOUNTED ON FRONT AND BACK OF THE SHREDDER.
- CUTTING CHAMBER:** 72" WIDE WITH 12 TOTAL CUTS SPACED 4.9" APART
- CUTTING KNIVES:** VASCO-WEAR (TM) TOOL STEEL, 1.50" THICK HEAT TREATED AND PRECISION GROUND. REVERSIBLE BLADES RESULTS IN TWO CUTTING EDGES PER BLADE. 288 BLADES TOTAL.
- KNIFE BASES:** AISI D-2 TOOL STEEL. MODULAR, REPLACEABLE PIECES.
- DRIVE PROTECTION:** COUPLERS WITH SHEAR PINS PROTECTS OVERLOADING.
- STRIPPERS:** FIXED WELDMENTS WITH REPLACEABLE WEAR PLATES.
- FEEDERS:** CHAIN-DRIVEN BY MAIN SHAFT WITH TORQUE LIMITER.
- THROUGHPUT:** 16-20 TONS/HOUR (SINGLE PASS)
- CAPACITY:** NO WHOLE TIRES WITH A COMPRESSED GROSS SECTION GREATER THAN 5 1/2"
- INFEED CONVEYOR:** DETACHABLE 2HP CONVEYOR WITH IMPACT ABSORBING SPRING STEEL SLATSS. LENGTHS ARE 8' OR 16' LONG.

PH: (209) 466 1209 FAX: (209) 466 2012 WEBSITE: WWW.TIRESHREDDERS.COM  
3164 LOOMIS ROAD, STOCKTON, CA 95205



# Appendix I

## Desktop Assessment – Aboriginal Heritage



Thu 07-Jul-16 12:49 PM  
aboriginal@heritage.tas.gov.au  
Application for an Aboriginal Heritage Desktop Assessment

To: Heidi Gosas

You forwarded this message on 11-Jul-16 11:41 AM.



Unanticipated Discovery Plan.pdf

RE: ABORIGINAL HERITAGE DESKTOP ASSESSMENT  
AHTP2331 - Tyre Recycling, Shredding, Storage - Longford

Dear Heidi,

Aboriginal Heritage Tasmania (AHT) has completed a search of the Aboriginal Heritage Register (AHR) regarding the proposed Tyre Recycling, Shredding and Storage Facility at Longford, and can advise that there are no Aboriginal heritage sites recorded within or close to the property. Due to a review of previous reports and the area being highly disturbed it is believed that the area has a low probability of Aboriginal heritage being present.

Accordingly there is no requirement for an Aboriginal heritage investigation and AHT has no objection to the project proceeding.

Please be aware that all Aboriginal heritage is protected under the Aboriginal Relics Act 1975. If at any time during works you suspect Aboriginal heritage, cease works immediately and contact AHT for advice. Attached is an Unanticipated Discovery Plan, which you should have on hand during ground disturbing works, to aid you in meeting your requirements under the Act.

If you have any queries please do not hesitate to contact AHT.

Kind Regards,

Adam Marshall

Aboriginal Heritage Tasmania  
Cricket Road, Hobart, Tasmania  
PO Box 100, Hobart, TAS, 7000  
6525 3131  
aboriginal@heritage.tas.gov.au  
www.aboriginalheritage.tas.gov.au





# Unanticipated Discovery Plan

## For proponents and consultants dealing with Aboriginal Heritage in Tasmania

This paper provides a Plan that should be followed when dealing with unanticipated discoveries of Aboriginal Cultural Heritage such as sites and objects. The plan provides guidance to project personnel so that they may meet their obligations with respect to Aboriginal heritage in accordance with the *Aboriginal Relics Act 1975* and the *Coroners Act 1995*.

The Unanticipated Discovery Plan is in two sections. The first section primarily explains mitigation strategies that should be employed when any Aboriginal Cultural Heritage sites or items are discovered excluding skeletal remains (burials), while the second process deals specifically with skeletal remains (burials).

### Discovery of Cultural Heritage Items

- Step 1: Any person who believes they have uncovered Aboriginal Cultural Heritage material should notify all employees or contractors that are working in the immediate area that all earth disturbance works must cease immediately.
- Step 2: A temporary 'no-go' or buffer zone of at least 10m x 10m should be implemented to protect the suspected Aboriginal Cultural Heritage site or relics. No unauthorised entry or works will be allowed within this 'no-go' zone until the suspected Aboriginal Cultural Heritage relics have been assessed by a recognised Aboriginal Heritage Practitioner.
- Step 3: Aboriginal Heritage Tasmania (AHT) in Hobart (ph 6165 3152) needs to be notified and consulted as soon as possible and informed of the discovery. AHT will then provide further advice in accordance with the *Aboriginal Relics Act 1975*.

### Discovery of Skeletal Material

- Step 1: Call the Police immediately. Under no circumstances should the suspected skeletal remains be touched or disturbed. The area must now be considered a crime scene. It is a criminal offence to interfere with a crime scene.
- Step 2: Any person who believes they have uncovered skeletal material should notify all employees or contractors that are working in the immediate area that all earth disturbance works must cease immediately.
- Step 3: A temporary 'no-go' or buffer zone of at least 50m x 50m should be implemented to protect the suspected skeletal remains. No unauthorised entry or works will be allowed within this 'no-go' zone until the suspected skeletal remains have been assessed by the Police and or Coroner.
- Step 4: Should the skeletal remains be determined to be of Aboriginal origin, the Coroner will contact an Aboriginal organisation approved by the Attorney-General, as per the *Coroners Act 1995*.





## Unanticipated Discovery Plan

### **Guide to the most common sites types in Tasmania.**

#### Stone Artefact Scatters

A stone artefact is any stone or rock which has been modified by Aboriginal people. Often this is the result of fracturing or 'flaking' fine grained rocks to produce sharp cutting or scrapping implements. The most common stone types utilised by Tasmanian Aboriginal people are silcrete and chert, on account of their availability and excellent tool making properties. However we also find hornfels, chalcedony, spongelite, quartzite and other stone types where locally available.

In Tasmania, stone artefacts are typically recorded as being 'isolated' (i.e. only one) or in a 'scatter' (i.e. two or more within a 50m radius). Stone artefacts are found all over Tasmania, in all landscapes and situations, and are the most basic indicator of Aboriginal occupation.

#### Shell Middens

Middens are occupational deposits created through an accumulation of debris from human activity. Midden sites can range in size from large mounds to small scatters of shell. The most common shellfish species found in middens in Tasmania are abalone, oyster, mussel, warrener and limpet, however they can also contain other debris such as animal bone, charcoal from campfires and discarded tools made from stone, shell or bone. These sites are usually found near waterways and coastal areas.

#### Rockshelters

Caves and rock overhangs which bear signs of human activity are, for the purpose of the Aboriginal Heritage Register (AHR), collectively called occupied rock shelters. Aboriginal people utilised these places for shelter, ceremony and other cultural practices, leaving behind occupational deposits such as middens and hearths, tools, or in some cases, rock markings. Rock shelters are usually found where the geology is conducive to the formation of caves and rock overhangs.

#### Quarries or Stone Procurement Sites

A quarry is a place where material has been extracted from a natural outcrop by Aboriginal people. The two types of quarry recorded on the AHR are stone and ochre; each typically being located wherever suitable ochre for painting and decoration, or stone for tool-making appear. Quarries can be recognised by evidence of human manipulation, and by the debris left behind from processing the material. Quarries can be extensive or discrete, depending on the size and quality of the outcrop, and how often it was utilised and visited.

#### Rock Marking

Rock marking is the term used in Tasmania to define markings on rocks, which are the result of Aboriginal practices. Rock markings come in two forms; engraving and painting. Engravings are made by removing the surface of a rock through pecking, abrading or grinding, whilst paintings are made by adding pigment or ochre to the surface of a rock.

#### Burials

Burial sites are highly sensitive places. They can occur anywhere, and have previously been recorded in sand dunes, shell middens and rock shelters.



Level 6, 134 Macquarie Street, Hobart TAS  
GPO Box 1550, Hobart, TAS 7001 Australia

Enquiries: Damien Blackwell  
Ph: +61 3 6165 4508  
Fax: +61 3 6173 0254  
Email: Damien.Blackwell@environment.tas.gov.au  
Web: [www.epa.tas.gov.au](http://www.epa.tas.gov.au)  
Our Ref: (EN-EM-EV-DE-249375/H594597 /CouncilLetter\_2ABC\_Advertise)zp



18 October 2016

Mr Des Jennings  
General Manager  
Northern Midlands Council  
PO Box 156  
LONGFORD TAS 7301

PROPERTY	
Attachments	
REC'D 21 OCT 2016	
GM	MYR
P&DM	CRS
	PLAM
	PLD

Dear Mr Jennings

**ADVERTISING OF PERMIT APPLICATION (16/077)**  
**TYRE RECYCLE TASMANIA PTY LTD – TYRE STORAGE AND SHREDDING, 437 WOOLMERS LANE, LONGFORD**

I refer to the EPA Director's earlier correspondence dated 2 May 2016, acknowledging the referral of the above application to the Board of the Environment Protection Authority (the Board) for assessment under the *Environmental Management and Pollution Control Act 1994* (EMPC Act).

I note that an Environmental Effects Report (EER) was submitted in support of the application. A draft EER was reviewed by EPA Tasmania prior to its finalisation.

In my capacity as the Board's delegate, I am satisfied that the document entitled *EER for Tyre Storage and Shredding* dated 17 October 2016 contains sufficient information to satisfy the requirements of section 74(3) of the EMPC Act for the purposes of public and agency consultation. Note, however, that the Board may later require additional information to be prepared by the proponent, including addressing matters raised in the public and agency consultation process.

In accordance with section 27G(1)(a) of the EMPC Act, and as delegate for the EPA Director, I direct Northern Midlands Council to advertise permit application number 16/077 and to call for public submissions in respect of it.

In accordance with section 27G(2) of the EMPC Act, a 14 day period is to be made available for public representations. In order to ensure that Council's notice of the application and representation period under the *Land Use Planning and Approvals Act 1993* will also satisfy the Board's requirements for public consultation under the EMPC Act, I enclose a draft advertisement which specifies the Board's minimum requirements. In the event that Council modifies the information contained in the enclosed draft, I would appreciate receiving a copy of the proposed advertisement for my endorsement prior to finalisation.

If you have any queries regarding the above please contact Damien Blackwell on (03) 6165 4508.

Yours sincerely

Mr John Mollison  
**DEPUTY GENERAL MANAGER, EPA TASMANIA**  
**Delegate for the Director, Environment Protection Authority**

Encl: *Draft advertisement*

NMC: [planning@nmc.tas.gov.au](mailto:planning@nmc.tas.gov.au)



Newspaper: **The Examiner**  
Date of advertisement: **19 October 2016**

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**Tyre Recycle Tasmania Pty Ltd**  
**Tyre Storage and Shredding, 437 Woolmers Lane, Longford**

**Northern Midlands Council**

**NOTICE OF APPLICATION FOR PERMIT UNDER S.57 OF THE LAND USE PLANNING  
AND APPROVALS ACT 1993**  
**Permit Application 16/077**

*The proposal involves the storage and shredding of up to 7,800 tonnes of tyres per year for beneficial reuse or recycling.*

The above proposal has been referred to the Board of the Environment Protection Authority (the Board) for assessment under the *Environmental Management and Pollution Control Act 1994* (EMPC Act). An Environmental Effects Report (EER) has been lodged in support of the above proposal.

***Public exhibition of documentation***

A copy of the supporting documentation for the above proposal will be available for public inspection during the period specified below and may be examined during normal business hours at:

- The Northern Midlands Council Offices: 13 Smith St, Longford.
- Service Tasmania: 134 Macquarie St, Hobart, 7000

The EER can be viewed on the internet at:

<http://epa.tas.gov.au/assessment/Pages/Assessments-in-Progress.aspx>

A guide for preparing a public submission can be found on the internet at:

<http://epa.tas.gov.au/assessment/Pages/Guide-for-Preparing-a-Public-Submission.aspx>

Copies of the EER may be requested from 6ty<sup>o</sup> (Ms Heidi Goess, 0438 155 035).

***Public representations***

In accordance with section 57(5) of the *Land Use Planning and Approvals Act 1993* any person may make a representation relating to the above proposal and the supporting documentation from **Wednesday 19 October 2016 to Wednesday 2 November 2016**, by writing to:

**General Manager**  
**Northern Midlands Council**  
**PO Box 156**  
**LONGFORD TAS 7301**

**Or by emailing the General Manager at: [planning@nmc.tas.gov.au](mailto:planning@nmc.tas.gov.au)**

**From:** Rosemary Jones  
**Sent:** Thu, 10 Nov 2016 15:17:23 +1100  
**To:** Register Email in ECM  
**Subject:** Advising EPA Board of representations to P16-077  
**Attachments:** Representation to P16-077 - Tyrecycle Rep 3.pdf, Representation P16-077 Tyre Recyclers submission Rep 2.pdf, Representation - Salhani Rep 1.pdf, Representation P16-077 Tas Conservation Trust - Tyre Recycle Tas TCT Representation 2 November 2016 Rep 4.pdf

#ECMBODY  
#QAP Default  
#SILENT

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**From:** NMC Planning  
**Sent:** Thursday, 10 November 2016 3:15 PM  
**To:** 'Blackwell, Damien M (Environment)' <Damien.Blackwell@environment.tas.gov.au>  
**Subject:** Advising EPA Board of representations to P16-077

Hi Damien,

Please find attached a copy of representations to P16-077. Please note there are 4 representations total.

Kind Regards,

*Rosemary Jones*



Administration Officer – Development Services | Northern Midlands Council  
Council Office, 13 Smith Street (PO Box 156), Longford Tasmania 7301  
T: (03) 6397 7303 | F: (03) 6397 7331  
E: [rosemary.jones@nmc.tas.gov.au](mailto:rosemary.jones@nmc.tas.gov.au) | W: [www.northernmidlands.tas.gov.au](http://www.northernmidlands.tas.gov.au)  
*T a s m a n i a ' s H i s t o r i c H e a r t*

---

**From:** Jan Cunningham [<mailto:Jan.Cunningham@nmc.tas.gov.au>]  
**Sent:** Monday, 31 October 2016 4:55 PM  
**To:** Register Email in ECM <[ecm@nmc.tas.gov.au](mailto:ecm@nmc.tas.gov.au)>  
**Subject:** email from EPA re P16-077 - Advising EPA Board of representations

#ECMbody  
#QAPdefault  
#silent

1<sup>st</sup> November 2016 .

Planning Department  
Northern Midlands Council  
13 Smith Street  
Longford 7300  
Tasmania

**Submission against proposed development P16-077**

**Tyre recycling facility (tyre storage & shredding), ongoing delivery & storage of up to 7800 tonnes of 'end of life' tyres per year for beneficial reuse or recycling (level 2 activity under EMPCA)**

Dear Sir or Madam:

I oppose the above development application for the establishment of a tyre recycling operation at 437 Woolmers Lane Longford and the expansion and extension of tyre storage on the site post 20 December 2016 for the following reasons:

1. The original permit P13-199 was for only temporary tyre storage and according to council, further storage of ELT was to cease on 20<sup>th</sup> December 2016 and the site cleared by December 2020.
2. The proposal entails a significant expansion of the tyre storage area on site by approximately 1/3
3. The proposal expands the tyre storage capacity of the the site from 2600 tonnes per year to 7800 tonnes per year
4. The proposal indicates that it will expand ELT on the site for up to 9 months before commencing shredding of ELT.
5. The proposal is inconsistent with the NMPS applicable standards of the Rural Resource zone and the relevant codes
6. The proposal is inconsistent with the local area objectives as stated in the Planning scheme
7. The proposal is inconsistent with the values and community objectives of the communities of Perth and Longford.
8. The proposal is a major increase in risk to persons and property of the residents in the adjacent communities of Perth and Longford.
9. The AK consultants report (on behalf of the applicant) on the environmental impact of the proposal on local flora and fauna in the Priority habit area is insubstantial and unconvincing.
10. The proposal is inconsistent with state government Initiatives to increase tourism in the Northern Midlands by establishing a heritage corridor from Woolmers Lane and the World Heritage sites to Longford

In the last year two ELT recycling operations have been established in neighbouring councils which cast doubt on the viability of this proposal. Furthermore, it is unacceptable that council should approve the expansion of the tyre storage capacity of the site in Woolmers lane given the circumstances under which the original permit was issued and subsequent actions by the applicant in dumping contaminated material on site in May 2016.

Sincerely

Michael Salhani



General Manager  
Northern Midlands Council  
PO Box 156  
LONGFORD TAS 7301  
By email: [planning@nmc.tas.gov.au](mailto:planning@nmc.tas.gov.au)

2<sup>nd</sup> November 2016

Dear Sir

**PRIVATE AND CONFIDENTIAL**

**RE; TYRE RECYCLE TASMANIA P/L - TYRE STORAGE AND SHREDDING – 437 WOOLMERS LANE, LONGFORD**

The Australian Tyre Recyclers Association (ATRA) is pleased to provide input to the above cited development application relating to the disposal of used tyres in Tasmania.

**INTRODUCTION**

ATRA is the peak body representing Australia's used tyre collectors, processing and recycling industry. ATRA is also a full member of Tyre Stewardship Australia (TSA). ATRA members service every state and territory in Australia and includes representation in Tasmania.

ATRA members recover for recycling around 20 Million (170,000 tonnes) end of life tyre (ELT) units per annum. This is around 95% of Australia's used tyre recycling activity and 85% of the available market. Used tyre products from ATRA member operations include sports fields, soft fall surfaces, rubber matting, adhesives, civil works and tyre derived fuels replacing coal in various energy generation applications.

ATRA members are independently audited for compliance with all jurisdictional requirements where they operate as well as ATRA principles and policies including:

- all EPA licences
- insurances
- fire and worker safety and health
- and the requirement to process and minimize stockpiling of used tyres and avoid baling of whole tyres for export.

**OVERVIEW**

Longford in Tasmania and the Northern Midlands Council (NMC) region have become the dumping ground for Tasmania's used tyres.

As outlined in the NMC brochure titled, *The Problem of Waste Tyres in Tasmania*<sup>1</sup>, there have been two fires associated with this stockpile and the risk of further fires remain. While it should never have got to this point – whereby over 1 million used tyres are stored in a fire prone area, without any thought going into their ultimate processing and removal, it would be poor governance on behalf of NMC to sink

<sup>1</sup> [http://www.northernmidlands.tas.gov.au/files/Strategic\\_Projects/Waste\\_Tyre\\_Presentation\\_180215.pdf](http://www.northernmidlands.tas.gov.au/files/Strategic_Projects/Waste_Tyre_Presentation_180215.pdf)

'good money after bad' and allow ongoing stockpiling on the site.

There are now alternatives in Tasmania with Barwicks in Brighton able to recycle for export every used tyre produced in the state.

#### THE CURRENT PROBLEM

Over one million used tyres are now stockpiled at the Woolmers Lane site. The basis for this stockpiling is that the operator and proponent of this new proposal has not sought to process this material for recycling.

Both the former NMC Planning officer responsible for issuing the original permit and Tyre Recycle Tasmania (TRT) should be held responsible for this situation. As noted below, TRT had no plan as to how to remove this material and are only now reacting due to the imminent closure of the Woolmer site to further storage.

*Tyre Recycle Tasmania's Tim Chugg, who currently holds the temporary licence, has meanwhile asked how he is supposed to clear the site of 1.3 million tyres. "This entire situation has not been thought through, and I only hope some wise heads prevail to come up with a solution before we reach a locked in stalemate position," Chugg said.<sup>2</sup>*

In contrast Tyrecycle p/l has in the past year shifted a mobile shredding facility to the site and processed around 400,000 of the tyres at the site. All of this material has been subsequently exported out of the state for further processing and various secondary uses.

In every other state in Australia ATRA members collect, transport, process and then export or in some other way reuse used tyre material. In the vast majority of cases 100% of the income for all of this activity is gained from the charge imposed on the retailer<sup>3</sup>.

TRT have according to media reports, '*... been trying to get a viable recycling plant established at Longford for sixteen years ...*' TRT had previously stated, '*... that the GDT technology is by far the best option to recycle end of life tyres in Tasmania.*' The GDT 'solution' now appears to be off the table.

NMC is now again being put in the position of being forced to accept further stockpiling at the Longford site – under a false premise that this material will be processed.

#### THE PROPOSED SOLUTION

The proposal before council is for a shredder to be purchased but only on the basis that continued collection and stockpiling is permitted.

This is similar to the threat raised by another proponent associated with TRT, GDT Ltd, in November 2015 which stated<sup>4</sup>, "*Clearly, unless we get a written undertaking from the council that the tyre storage ban will be lifted, it would not make commercial sense for us to build the plant without long-term access to supply of end of life tyres*". NMC was right to resist this threat and GDT seems now to have vacated

<sup>2</sup> <http://sustainabilitymatters.net.au/content/waste/news/tasmanian-tyre-recycling-plant-under-threat-810766329#ixzz4OFH29NFw>

<sup>3</sup> The only additional income option is installation of a 'crumbing plant' for further reduction in size of the rubber and sale of this material for sports fields, adhesives, use in asphalt etc. This kind of facility will cost between \$5-\$10M to install.

<sup>4</sup> <http://www.abc.net.au/news/2015-11-18/shredding-of-massive-tyre-stockpile-begins-as-solution-sought/6952024>

and not be proceeding with its purported development – ATRA is extremely concerned GDT represents little more than a ponzi-scheme as a mechanism to attract grants and private sector capital funding. There is no evidence their 'pilot plant' at Warren in NSW will ever be commercial.

As Trevor Bailey from GDT has previously stated in regards to paying for the removal of the Longford stockpile, *"The obvious place to start with generating funds to pay for tyre recycling is with the fee paid by each motorist when they dispose of their old tyres and get a new one fitted. This amount varies with different retailers across the State, but could be as high as \$8 to \$9 and of this a fixed amount of \$2.50 is paid for collection and storage, but not for end of life management"* Mr Bayley said.<sup>5</sup>

It's understood TRT has been charging tyre retailers around this figure cited above of \$2.50 per unit for collection, transport and storage. It is worth noting ATRA members in mainland capital cities in many cases only generate this kind of income from retailers for the full suite of collection, transport, processing and recycling. i.e. there is generally no additional income for the vast majority of used tyres collected in Australia after this retailer charge.

These operators successfully operate profitable companies including the capital equipment, maintenance etc for the processing and recycling of their ELT's. Given TRT has only been stockpiling for this income it begs the question as to where the over \$3M of income has gone?

That said, Mr Bayley is correct in asserting the figure of \$2.50 is insufficient a price for 'end of life management' in Tasmania, given our export freight costs and the limited demand that would exist for used tyre products in the state.

The true cost for collection, transport, processing and recycling/ reuse out of Tasmania is around \$4 per passenger tyre and this is approximately the charge being applied by Barwicks in Brighton for the permanent removal from Tasmania to the mainland for reuse of Tasmania's tyres.

Mr Bayley is however incorrect in asserting that retailers may be charging consumers \$8-\$9 and it is likely to be much less.

TRT are not however proposing to build a plant capable of producing material for use or sale – except perhaps as landfill cover.

The Barclay 4.9 Primary Shredder<sup>6</sup>, proposed for operation in the application currently before NMC, is a first pass through unit designed simply to reduce the volume of material – from a whole tyre to smaller 'chips'. These chips still contain steel and other materials that have to be removed for the beneficial reuse of the rubber.

As the following excerpt outlines, even for disposal of this material as a Tyre Derived Fuel (TDF is exported at a 'cost' of about \$20 per tonne out of Australia for combustion in cement kilns in South Korea and Japan) further processing machinery, processes and costs are required.

*"Some applications, such as mono-fill or disposal require only that the tire no longer be intact," Smith*

<sup>5</sup> <http://www.gdtc6.com/tyre-recycler-determined-longford-plant-go-ahead/>

<sup>6</sup> <http://www.tireshredders.com>

says. "Barclay Roto-Shredder makes an excellent primary shredder that will reduce huge volumes of tires to 4.9-inch-wide strips for this type of application (i.e. landfill). The Saturn (Grand Prairie, Texas) and Columbus McKinnon type shredders can also be quite effective at producing chips for further processing as TDF."<sup>7</sup>

Unless there are additional facilities applied at the site at Longford this shredded material will simply be stored on site. This appears to be confirmed by the proponent's comments in the Examiner newspaper when they stated, "Tyre Recycle Tasmania's Tim Chugg said that further processing of the tyre chips was covered in a separate development application to be lodged. "This is just the first step," he said"<sup>8</sup>."

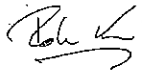
#### CONCLUSION

NMC should not risk the Longford site remaining a permanent and growing storage site – even if the whole tyres are converted to chip - by relying on the proposal currently before it from Tyre Recycle Tasmania. 'Sixteen years' seems sufficient time to have been allowed to develop a recycling facility and the NMC should now 'cut its losses'. Ultimately, the State government and TRT will have to foot the bill for the clean up of the legacy stockpile.

There is no risk to NMC or the state from the closure of the Longford site in terms of a lack of options for retailers to dispose of their used tyres. The local community expects the closure of the Longford site to occur as scheduled. Barwicks in Brighton have sufficient capacity to process every used tyre in Tasmania and it is simply up to the retailers to pay the appropriate waste disposal charge which is in most instances already collected from consumers.

I would be pleased to provide any further representations to NMC Councillors as required.

Sincerely



Rob Kelman  
Executive Officer  
ATRA

<sup>7</sup> <http://www.recyclingtoday.com/article/shredding-equipment-focus--off-road/>

<sup>8</sup> <http://www.examiner.com.au/story/4255902/critics-slash-tyre-plan-photos/?cs=12>





**tasmanian conservation trust inc**

General Manager  
Northern Midlands Council  
PO Box 156  
LONGFORD TAS 7301  
planning@nmc.tas.gov.au

2 November 2016

**Tyre Recycle Tasmania Pty Ltd, Tyre Storage and Shredding, 437 Woolmers Lane, Longford**

**GENERAL COMMENTS**

As stated on page 6 of the Environment Effects Report (EER), the proponent current stockpiles tyres at the development site, subject to the permit P13-199 issued by the Northern Midlands Council, but has now made the planning application P16-077 which seeks permission to store and shred tyres at the same site.

The proposal aims to continue to collect tyres at the site and shred these plus those currently stockpiled at the site.

While the Project Description, contained in the EER, states that it is the proponent's intention to take shredded tyres off the site there is no management comment to this effect in Part D.

The TCT finds it difficult to know exactly what the scope of the project is, what the extent of the Council and EPA's authority is and how the existing permit P13-199 will relate to any approval that might be granted by the EPA and Council.

For example, it is unclear whether the EPA and/or Council are regulating the removal of tyres from the site and whether it intends applying controls, in particular in regard to fire management, over the currently stockpile of tyres as well as those proposed to be sent to the site? This is critical given our concerns regarding how the current stockpile is managed (see below).

The TCT wants to see the current stockpile and any additional tyres taken to the site removed as soon as possible, that the amount of tyres stockpiled at the site is kept to a minimum and that all tyres are stored in a manner that minimises the risk from fire.

Assuming the EPA and Council have the required authority, it is critical that conditions are applied that:

- guarantee that all tyres currently stored at the development site and those proposed to be sent there are managed subject to the current best practice fire guidelines; and
- guarantee the tyre stockpile is removed entirely from the site by the end of 2020 (preferably with annual targets of at least 25%), either by the proponent or, if this is not possible, by another approved operator; and
- that tyres proposed to be sent to the development site are also removed from the site, with an appropriate level of 'new' tyres able to be stockpiled e.g. 100 tonnes.

The TCT recommends that the proponent be required to pay a \$ 2million bond to the EPA to be used to remove the tyre stockpile if the proponent fails to do so. We understand this amount is sufficient to have the tyres shredded and transported to a mainland recycling facility.

Furthermore, the proponent should be required to meet annual or six month targets, e.g. 25% per year of the total stockpile, and that failure to do so will trigger the closure of the business and the use of the bond to remove the tyres.

## **SPECIFIC COMMENTS ON THE ENVIRONMENT EFFECTS REPORT (EFR)**

### **Potential Environmental Effects**

#### **1.0 Flora and fauna - Weed management**

The proposal in the EER to "grub out" gorse as a measure to minimise fuel build up is not sufficient. It is important to control weeds such as gorse for reasons other than fire management e.g. to control its impacts on environmental and agricultural values. Grubbing gorse out is a sure way to assist with spreading seeds and stimulating germination. Smaller mature plants can very easily be cut and pasted and bigger plants and clumps sprayed and dead wood later cut out and removed. Grubbing out is also only possible once plants are established and younger plants are best controlled through spot spraying.

A condition should be applied requiring the development of a weed management plan.

#### **12.0 Hazardous substances and chemicals - biosecurity and human health risk**

The EER fails to make any assessment of the potential for tyres that are transported to and from the site to contain weed seeds or other biological material that poses a biosecurity risk. Clearly shredding would only slightly reduce the risk by removing some but not all soil and other biological matter.

A condition should be applied requiring the development of a biosecurity management plan.

The EER fails to make any assessment of the potential for tyres to store water and be an environmental health risk. This is of particular concern given the way the tyres are stacked, which allows easy entry of water (see below for further comment).

A condition should be applied requiring an assessment of the risk of disease from tyres accumulating water and appropriate management measures be applied.

### 13.0 Fire risk

The existing stockpile seems to not comply with the stacking requirements for outdoor storage of tyres as per the 'General Guidelines for Rubber Tyre Storage' (2014), which is attached to the EER.

The attached aerial photo of the site (dates from December 2015) and more recent image from the Examiner newspaper (also attached) show numerous non-compliances with stacking requirements, including:

- Tyres not laid flat or laced;
- Tyres are in rows greater than 20 metres in length and greater, in some cases, than 6 metres in width (see aerial photo)
- Aisles are less than the required 20 metres (see aerial photo).

We note that in Figure 1, Appendix H, the correct pile layout is shown, overlaid on the aerial image of the existing tyre piles. This clearly shows the non-compliance with the stacking requirements.

The EER states that stacking of tyres will be according to the 'General Guidelines for Rubber Tyre Storage' but there has been no assessment as to whether the tyres currently stored at the site comply with these requirements. We assert that they do not comply and that a condition must be applied to require an assessment of the current stacking and that remedial action be taken to correct non-compliances prior to the operation commencing.

Additionally, the row of mature pines trees shown in the aerial picture poses a fire risk and should be removed.

The EER states that water is available from an irrigation pipeline and dams on the property but makes no assessment of the potential for these water sources to be limited during the hotter period of the year when fire might be expected to be a higher risk. There is no management commitment made in this regard. A condition should be applied that requires an appropriate quantity water to be kept in storage at all times.

Yours sincerely,



Peter McGlone  
Director  
Tasmanian Conservation Trust  
0406 380 545

- Attachment 1: Examiner photo of tyre stockpile
- Attachment 2: Aerial photo of tyre stockpile





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ABN 64 085 545 053

NATIONAL PHONE NUMBER  
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30-56 Encore Avenue  
Somerton Victoria  
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T: +61 3 8339 3555

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E: sales@tyrecycle.com.au

[www.tyrecycle.com.au](http://www.tyrecycle.com.au)2<sup>nd</sup> November 2016General Manager  
Northern Midlands Council  
PO Box 156  
LONGFORD TAS 7301  
By email: [planning@nmc.tas.gov.au](mailto:planning@nmc.tas.gov.au)**PRIVATE & CONFIDENTIAL****Re: Tyre Recycle Tasmania Pty. Ltd. – Tyre Storage & Shredding, 437 Woolmers Lane,  
Longford**

To Whom it May Concern,

Tyrecycle welcomes the opportunity to provide input the above mentioned proposal to install shredding equipment on the site at 437 Woolmers Lane, Longford.

**TYRECYCLE**

Tyrecycle started in 1992 as a waste tyre division of a major tyre manufacturer. It soon expanded into a national tyre recycler for all types of tyres and today is part of the highly regarded integrated resource recovery group, ResourceCo. Tyrecycle is continually seeking new applications for tyre-derived products in our quest to decrease the number of tyres entering waste streams and landfill. We want to collect and process over 50% of waste tyres generated in Australia, in an efficient, environmentally sound and socially responsible manner.

Our commitment is to eliminate the sending of tyres to landfill or whole-baled tyres being sent offshore. We are the only producer of Tyre Derived Fuel (TDF) that can guarantee a full chain of custody for all materials received, processed and supplied; ensuring that our Rubber Crumb and TDF is used in an environmentally sound way.

**BACKGROUND**

Until recently, Tyre Recycle Tasmania (TRT) was a contract collector for Tyrecycle, collecting on our behalf from our major corporate clients; Bridgestone, JAX Quickfit, Kmart Tyre & Auto and Bob Jane. This arrangement was terminated in August 2016 when it became evident that there was a misalignment between the goals and time-frames associated with those goals between TRT and Tyrecycle.

For several years TRT has collected and stockpiled tyres at the site at 437 Woolmers Lane, Longford with no apparent desire to process that stockpile of whole end-of-life (EOL) tyres. In essence, Longford has become the primary dumping location for all of Tasmania's waste tyres, a situation due to be





brought to an end, at least as far as adding to the stockpile, as of 20 December 2016. This is now a stockpile worthy of national if not global infamy.

There have been two fires associated with this stockpile already and as a result Tyrecycle sought to extinguish it and its customers' liability from the Longford site. Accordingly in late 2015, Tyrecycle mobilised a purpose-built mobile shredder to the site and processed and removed some 4,000 tonnes of EOL tyres. Subsequently the primary processed material was taken to our major processing plant at Somerton in Melbourne, where they were re-processed and re-purposed into products for re-sale and re-use.

Since that time Tyrecycle has formed an alliance with Barwick's Landscaping Supplies in Hobart and established a processing plant capable of processing every single waste tyre generated in Tasmania on an annual basis.

#### THE PROBLEM

By the proponent's own admission, by December 2016 there will be 11,500 tonnes (equivalent to circa 1.35 million EPU or passenger tyres). It is clear that the proponent is **solely** responsible for the management and removal of these tyres and that the current permit to add to that stockpile expires on 20 December 2016; the proponent then has a further 4 years to process and remove the tyres for the site.

TRT has repeatedly made comments in the public domain that the problem is not of their making and not their sole responsibility to clean up; this is untrue. Tyrecycle make the point that if this stockpile was of any other waste type, e.g. household waste, then there would be no questioning of whose responsibility the eradication of the stockpile is. TRT placed the stockpile there and it is therefore their responsibility to clean it up. There is no requirement for the viability of the clean up to be contingent on continuing to place tyres at the site, the two are mutually exclusive and the proponent has had several years to understand that stockpiling will cease as at 20 December 2016 and that processing/removal is to then be completed 4 years later. This is not new news!

#### THE PROPOSED SOLUTION

There are many concerns regarding the proposal, please find below points of note from the Environmental Effects Report.

##### Part B – Project Description

- New planning application P16-077 seeks to vary existing permit (P13-199) and as a result of mediation between Chugg and NM Council.
- *"The purpose of this application is two-fold, both to enable the removal of the existing ELT stockpile and to provide an ongoing and sustainable method of **reusing** ELT into the future".* This statement is erroneous as TRT has no markets and will be unable to ever use that quantity as a filling medium (refer last paragraph on p.6 of the proposal).
- The above point means that unless TRT have identified secondary production facilities to take the rough shred to and that facility has existing markets then TRT will be forced to either stockpile shred instead of whole tyres or landfill what TRT shreds.
- There is no classifier screen in the proposed plant so TRT cannot sell this as TDF on the global market (which is why Tyrecycle re-process Barwick's shred in its Melbourne plant).



### 1.0 Project Overview

- Collecting 2,600 tpa
- Shredding 7,600tpa

### 1.1 Delivery and Storage

- Currently 10,500 tonnes (1.235 EPU), growing to 11,500 tonnes (1.352 million EPU) by December 2016.
- As a point of comparison Tyrecycle's Victorian licence only allows for 650 tonnes of whole waste tyres.
- Under 1.1.1 the proponent acknowledges that the area removed and processed by Tyrecycle has already been partially "re-stocked" with more tyres. So all the good work we did is already starting to be undone.

### 1.2 Plant & Equipment

- It seems remarkable that no firefighting equipment listed under Plant & Equipment.

### 1.2.3 Processing of ELT

- Last paragraph of p.11. The material will not be suitable for use in road construction in the format TRT is proposing to process it to; i.e. un-classified 6"+ size shred.
- When examining the proponent's claim that the processed material will be used "*for use in other rubber production areas (e.g. for playgrounds, rubber matting etc.)*", TRT would have to sell as much Tyrecycle sells nationally in Tasmania for these uses. This seems unlikely at best.

### 1.5 Timeframe

- The timeframe to build the plant of 6-9 months seems extraordinarily long. Given our experience with purchasing shredding equipment for Barclay in the USA, delivery and order timeframe on a Barclay 4.9" shredder is approximately 12 weeks.
- TRT can build the shed in parallel to the shredder being delivered.
- The proponent makes a statement that "*The Ordering and delivery of plant and equipment for overseas is anticipated to take 6 months*". This is simply not true. Tyrecycle could build this plant in a matter 3-4 months at most.
- This deadline has been approaching for 5 years. The variation to his permit was handed down in April of this year so I am unsure why the proponent is only coming up with a solution now and that this solution requires adding to the stockpile for it to be commercially viable.
- Reference 2.4 Land Uses on p.15 where the proponent states "*The stockpiling of ELT began in 2011 and has expanded over time*".

### 4.0 Rationale and Alternatives

- Paragraph 1 of the Environmental Effects Report states that TRT's permit was varied by the Environment Protection Notice dated 10 March 2016 which prevents further depositing of ELT to the Woolmers Lane site after 20 December 2016.
- If TRT are unable to comply with the above point then there is a suitably licensed facility to take tyres and process them in Bridgewater Tasmania. The Barwick's site at Bridgewater did not stockpile tyres ahead of being ready. Therefore, rather than adding to already





enormous stockpile of tyres at Longford then Tyrecycle proposes that the proponent should be forced to cease taking tyres at Longford.

- Paragraph 4 says that the GDT proposal is the preferred method for the development area. It is noteworthy that GDT do not have commercial plant operating anywhere in Australia and have been raising capital and “talking” about commissioning plants since 2008.
- Paragraph 5 (half way): *“Without approval of continued delivery on site, it will not be economic to install a shredder on site and accordingly delivery 20 December 2016 is an integral component of this application”*. This is a false statement as the two should be mutually exclusive of one another. Tyrecycle fails to see how this is a relevant factor in any way, unless the proponent never planned to remove the tyres from the Woolmers Lane site?

### 7.0 Liquid Effluent

- 1<sup>st</sup> paragraph says there are *“two main sources of liquid effluent that may result from the proposed use and development of the land. These are:*
  - *Liquid waste collected by a single portable toilet; and*
  - *Water run off utilised for firefighting purposes in the event of a tyre fire.”*
- Tyrecycle uses very large amounts of recirculated water to assist with the shredding process. This is a broadly utilised system as it greatly increases the ability and ease with which tyres can be shredded. Either the proponent doesn’t know that you need water to shred tyres or TRT is intentionally leaving that fact out of the proposal; not sure which one is worse!!
- There seems to be no evaluation of the potential impact of contamination of the water table as a result of a fire. Given the nature of the stockpile being housed in a paddock in bushland this must be taken into consideration.
- Refer 18.0 Rehabilitation (last paragraph) which says that the proponent will carry out soil sampling and then carry out work as required so that any contaminated soil can be treated appropriately. Tyrecycle would expect there to be a financial surety covering this eventuality.

### Fire Plan

This isn’t detailed in the proposal but there are so many issues with it. See below:

- Page 5 of 13 (Fire Guidelines) – last line.
- 2.2 Pile Sizes – the site isn’t currently in the format of 20mx6mx3m so where is the commitment to get it into that format and the time frame requested to comply in terms of tyre stockpile sizes.
- Fire Hydrants – there isn’t any mention of fire hydrants being on-site, it also fails to mention flow rates, etc.
- As above for “Fire Fighting Equipment”.
- 8.2 Site Security – is there any additional site security to be installed? (e.g. CCTV)?
- The Emergency Fire Plan and the *“Procedure for a Large Fire and Major Fire”* (refer page 2.) is completely lacking in detail and scale. Tyrecycle understands that in developing the fire plan TRT consulted the fire department however we cannot understand how it is deemed to cater for such a large stockpile.



**CONCLUSION**

We ask that Council considers the above points and rejects the proposal and enforces the pre-existing permit conditions to halt adding to the stockpile at Longford as of 20 December 2016.

If your office would like to contact me for further information I can be contacted directly via email at [jim.fairweather@tyrecycle.com.au](mailto:jim.fairweather@tyrecycle.com.au) or on 0419 809 871.

Yours faithfully,

A handwritten signature in blue ink, appearing to read "Jim Fairweather".

**Jim Fairweather**  
**Chief Executive Officer**  
**Tyrecycle Pty Ltd**



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Our Ref: (EN-EM-EV-DE-249375/H612253/Proponent5ABC\_Supplement)zp



9 December 2016

Mr Tim Chugg  
5 Blackwood Drive  
PERTH TAS 7300

NORTHERN MIDLANDS COUNCIL				
Location				
File No.				
Property				
Attachments				
REC'D 13 DEC 2016				
		A		A
CEM		MYR		A
CEM		CBS		
CEM		PLAN		
CEM		BLD		
CEM		HLT		

Dear Mr Chugg

**TYRE STORAGE AND SHREDDING, 437 WOOLMERS LANE, LONGFORD  
EER  
REQUEST FOR ADDITIONAL INFORMATION**

The assessment relates to permit application 2016/077. The application was referred to the Board of the Environment Protection Authority (the Board) by Northern Midlands Council on 13 April 2016.

The period for public representations on the proposal has now ended and four representations were received. Comments on the project have also been received from a number of State Government agencies and bodies. A summary of the representations and relevant comments is provided in the enclosed document.

While the Environmental Effects Report (EER) addresses a number of the public, State Government and Council comments, a number of issues raised require that further information is provided before the assessment of the application can be completed by the Board.

Table 1 in the enclosed document lists the issues raised during the public consultation period that require further information for the purpose of assisting the Board in its determination of the application.

In accordance with section 27I(1) of the *Environmental Management and Pollution Control Act 1994* (the EMPC Act), and acting under delegation from the Board, I require you to submit the further information specified in Table 1 of the enclosed document, to assist the Board in its assessment.

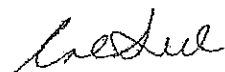
You should note that, in accordance with section 27I(2) of the EMPC Act, the periods specified in section 27H, for completion of the assessment, cease to run until the further information required is provided to the satisfaction of the Board.

Table 2 lists other matters raised during the public consultation period. You are encouraged to address these matters as the information may be relevant to conditions or restrictions required by the Board or of consequence for decisions made by other authorities.

The Additional Information should be provided in the form of a Supplement to the EER and clearly identify where information or commitments made in the EER have been revised or replaced.

If you have any queries regarding the above, please contact Damien Blackwell on (03) 6165 4508.

Yours sincerely



Malcolm Budd  
**SECTION HEAD (ASSESSMENTS)**  
**Delegate for the Board of the Environment Protection Authority**

**Encl:**

Table 1: Additional Information required by the EPA Board.  
Table 2: Other matters raised during the public consultation period.  
Figure C02: Proposed operations area.

**cc:** Mr Des Jennings, General Manager, Northern Midlands Council, PO Box 156, Longford TAS 7301  
Ms Heidi Goess, [hgoess@6ty.com.au](mailto:hgoess@6ty.com.au)



## Tyre Recycle Tasmania Pty Ltd – Tyre storage and shredding, 437 Woolmers Lane, Longford

In the following tables, EER means the document titled *Tyre storage and shredding, 437 Woolmers Lane Longford, Environmental Effects Report* dated 17 October 2016

**TABLE 1: ADDITIONAL INFORMATION REQUIRED BY THE EPA BOARD**

Represent. Agency	EER Section no.	EER Page no.	Comments and issues	Additional information required
1,4	1.2	6, 10	The quoted tyre shredder (Barclay 4.9" primary shredder) is designed as a first pass unit to reduce the volume of material, namely from whole tyres to smaller chips or shreds. Further processing (e.g. to remove steel) is necessary before chips can be beneficially reused. The stated end use as fill for road construction is disputed.	Clarify the market arrangements for the products of tyre shredding.
88				
1				
3	7.0	22	The absence of water as part of the tyre shredding process is queried.	Provide technical details about the quoted shredder to clearly demonstrate whether or not water is a necessary component of the shredding process. In the event water is required, provide information to address the amount required (e.g. volume per day) and how any wastewater discharges will be managed.
4				
4	14.0, 18.0	14, 27	Potential contamination of groundwater by a tyre fire has not been considered.	Discuss the potential for a tyre fire to negatively impact on groundwater resources and outline how this risk will be managed. Where relevant, refer to information contained in the EER dated 17 October 2016.
3	Part B	6	A condition should be applied to ensure the existing tyre stockpile is entirely removed by December 2020.  A condition should be applied to ensure new deliveries of tyres to the development site are removed and a tyre storage/stockpile limit be imposed.	Clarify (e.g. by providing a diagram or figure) the land parcel for which the level 2 activity operates on and is thereby subject to application P16/077.  A condition to impose a limit on the amount of tyres stored within the operations area is envisaged.

**TABLE 2: OTHER MATTERS RAISED DURING THE PUBLIC CONSULTATION PERIOD**

Representat ion No./ Agency	EER section no.	EER Page no.	Comments and issues	Further Info requested [Yes/no]	EPA Comments
3	1.1.4	9	A condition should be applied to ensure all tyres currently stored at the development site and those intended to be sent there are managed in accordance with best practice fire guidelines.	No	The proponent commits to storing and managing all new deliveries of end of life tyres (ELT) in accordance with the <i>South Australian Fire Authorities, Community Safety Department (2014) Built Environments Section Guideline No. 13, General Guidelines for Rubber Tyre Storage</i> . A condition to specify that storage and management of tyres in accordance with this guideline is anticipated. Storage associated with P16/077 will be confined to the proposed operations area included with these tables.
3-199					Storage and management of existing tyres is governed by level 1 planning permit P13-199, as amended by an Environment Protection Notice dated 10/3/16.
3, 4	1.1.4	9	The configuration/ layout of the existing pods of tyres, in terms of being in accord with the relevant guidelines, is queried. An audit of existing stockpile configuration and steps to correct any non-compliance is suggested.	No	The Board's assessment is confined to the proposed operations area, included with these tables as Figure C02. Regulation of the existing storage activity is governed by level 1 planning permit P13-199, as amended by an Environment Protection Notice dated 10/3/16.
4	1.2; Appendix D	10	Firefighting equipment is not included in the equipment inventory.	Yes	Describe what firefighting equipment is necessary for a proposal of this nature and indicate where this equipment will be located on site.
1, 4	Part B; 1.2	6, 11	The merits of the business case are queried. The concern is that further stockpiling (of tyre chip) at the site will occur in the event the proponent has not identified viable markets for the shredded material.	No	Refer Table 1, row 1.

4	1.5	12	The period quoted by the proponent to procure and install the proposed shredder is considered an over-estimate.	Yes	Discuss whether or not the proposed shredder can be sourced and installed more quickly than the proposed period of up to nine months.
1	4.0	18	The concern is that tyre shred/chip will be stored at the development site.	No	The proponent commits to shredding ELT and removing shredded material from the development site. A condition to limit the quantity of tyre shred/chip on the proposed operations area at any one time is envisaged.
1, 2, 4	4.0	18	The proponent should be forced to cease delivery and storage of tyres at 437 Woolmers Lane Longford from 20 December 2016, stipulated by planning permit P13-199 as varied by an Environment Protection Notice dated 10/3/2016.	No	It is anticipated the planning authority will regulate against planning permit P13-199 as varied by an Environment Protection Notice dated 10/3/2016.
1	4.0	18	Linking the viability of the proposal (i.e. purchase of the shredder) with ongoing delivery of ELT is disingenuous. The true cost of collection, transport, processing/ re-use out of Tasmania is not reflected in the proponent's business model.	No	The matter is not in the Board's area of responsibility.
200					
3-5	Part C; 1.0	19	A condition should be applied to require the preparation of a weed management plan. The proponent should adhere to the Department of Primary Industries, Parks, Water and Environment's (DPIPWE's) <i>Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania</i> (2015).	No	A condition to require the proponent to prepare a weed management plan in accordance with the DPIPWE's <i>Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania</i> (2015) is envisaged.
3	12.0	25	A condition should be applied to require an assessment of the disease risk posed by tyres accumulating water. Appropriate management measures should then be applied.	No	ELT delivered to the proposed operations area will be stored and managed in accordance with the <i>South Australian Fire Authorities, Community Safety Department (2014) Built Environments Section Guideline No. 13, General Guidelines for Rubber Tyre Storage</i> . The 'on-flat' or laced storage of tyres and short term nature of their storage (until the shredder is installed and operating) are considered appropriate to limit disease risk.
			A condition should be applied to require the development of a biosecurity management plan.	No	Refer to the comment directly above.