Decision Report

Choose an item.

Division 3, Part V *Environmental Protection Act 1986*

Licence Number	L9210/2019/1
Applicant	AMC Metals Recyclers Pty Ltd
ACN	610 071 111
File Number	DER2019/000315
Premises	AMC Metals Recyclers Pty Ltd Lot 1943 on Deposited Plan 213940 Karratha Industrial Estate, WA 6714 Certificate of Title Volume 1806 Folio 356
Date of Report	23 June 2020
Status of Report	Final

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1. Definitions of terms and acronyms

In this Decision Report, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
AACR	Annual Audit Compliance Report
ACN	Australian Company Number
AER	Annual Environment Report
AS 1851	Australian Standard AS 1851-2012: *Routine service of fire protection systems and equipment* (as amended from time to time)
AS 2419.1	Australian Standard AS 2419.1: 2005 *Fire Hydrant Installations, Part 1: System design, installation and commissioning* (as amended from time to time)
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
Decision Report	refers to this document.
Delegated Officer	an officer under section 20 of the EP Act.
Department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DFES	Department of Fire and Emergency Services.
DWER	Department of Water and Environmental Regulation As of 1 July 2017, the Department of Environment Regulation (DER), the Office of the Environmental Protection Authority (OEPA) and the Department of Water (DoW) amalgamated to form the Department of Water and Environmental Regulation (DWER). DWER was established under section 35 of the *Public Sector Management Act 1994* and is responsible for the administration of the *Environmental Protection Act 1986* along with other legislation.
EPA	Environmental Protection Authority
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
Guidance Note GN02	means Department of Fire and Emergency Services guidance Note GN02 BULK STORAGE OF RUBBER TYRES including SHREDDED and CRUMBED TYRES

Licence Holder	AMC Metal Recyclers Pty Ltd
m^3	cubic metres
T	tonnes
Minister	the Minister responsible for the EP Act and associated regulations
Noise Regulations	*Environmental Protection (Noise) Regulations 1997* (WA)
Occupier	has the same meaning given to that term under the EP Act.
PM	Particulate Matter
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report
Risk Event	As described in *Guidance Statement: Risk Assessment*
UDR	*Environmental Protection (Unauthorised Discharges) Regulations 2004* (WA)

2. Purpose and scope of assessment

AMC Metal Recyclers Pty Ltd (applicant) submitted an application for a new Licence to operate a scrap metal recycling facility (category 47), used tyre storage and recycling facility (category 57), solid waste facility (category 61A) and solid waste depot (category 62), on 22 May 2019. The proposed new Licence is for Lot 1943 on Plan 213940, Karratha Industrial Estate, WA, 6714 (premises).

The premises is fully constructed and has been operational but below threshold trigger values, as per the *Environmental Protection Regulations 1987*, Schedule 1, Part 1. No additional construction is proposed as part of the new Licence.

The application has defined potential environmental risk from the proposed premises operation as being noise, dust, leachate and fire.

2.1 Application details

Table 2 lists the documents submitted during the assessment process.

Table 2: Documents and information submitted during the assessment process

Document/information description	Date received
Licence Application received via email from, Mr Zahir Ghambarie (Applicant)	22 May 2019
Email: Certificate of title received from Mr Zahir Ghambarie	30 July 2019
Email: RE: Fire Assessment Report – Request for further information - fire engineering brief received from Fire Design Solutions on behalf of Mr Zahir Ghambarie	15 November 2019
Email: Fire Engineering compliance report 201908003c004	6 May 2020
Email: Fire Extinguisher layout received from Fire Design Solutions on behalf of Mr Zahir Ghambarie	6 May 2020
Email: Application for development approval submitted to City of Karratha confirmation, received from Mr Zahir Ghambarie	6 May 2020

3. Background

The premises is located in an area zoned “General Industry” under the City of Karratha Town Planning Scheme No 8 (TPS8).

The Applicant is a privately owned company that operates from Lot 1943 on Plan 213940, Millars Well, WA, 6714.

The premises is currently operational for the acceptance, sorting, recycling of scrap metal and bailing tyres for local use or export.

The applicant now proposes to accept tyres and plastics for the purpose of bailing and shredding. The compacted or shredded products will be stored within the premises boundary, and placed into sea containers when ready for export.

The applicant has identified the nearest sensitive receptor as being located approximately 1.5 km from the premises.

Table 3 lists the prescribed premises categories that have been applied for.

Table 3: Prescribed Premises Categories in the Existing Licence

Classification of Premises	Description	*Approved Premises production or design capacity or throughput*
Category 47	Scrap metal recovery	Not more than 2,000 tonnes per year.
Category 57	Used tyre storage	No more than 2,000 tyres (excluding baled and shredded tyres) onsite at any one time.
Category 61A	Solid waste facility	5,000 tonnes per year
Category 62	Solid waste depot	10,000 tonnes per year

4. Overview of Premises

4.1 Operational aspects

Waste material arrives at the Premises in trucks which are from the Applicant's own fleet, sourced from mine sites around Karratha, or privately owned by external customers. The Applicant has provided an overview of the process to be initiated at the Premises which has been summarised below.

Tyre recycling process

The product will be shredded rubber derived from used tyres that will be either be sold locally or exported. Used tyres will be transported to site offloaded and separated according to size appropriateness for shredding. The shredding and baling process will occur outside the existing industrial shed on the Premises. The industrial shed is approximately 1000m^2 and will only be used for storing tyres and plastics prior to the shredding and baling process.

Tyres will be fed into a shredding system that will shred the tyres to between 25mm to 60mm portions. The shredded tyres will be stored inside the shipping containers that will be filled to capacity and removed from site to be exported or sold locally. The shredder will operate at three tonnes per hour, and will be operating for eight hours per day at the Premises. Some un-shredded tyres, depending upon size, will be baled and stored inside the shipping containers that will be filled to capacity and removed from the site for export purposes.

The containers will be located on the semi-impervious hardstand. The shipping containers (six) will have a tyre storage capacity of 2,000 tyres (144 tyre bales) under normal operating conditions.

Plastics recycling process

The receival, shredding and export of plastics will also be undertaken on the Premises. The materials accepted include plastic bottles, High-density polyethylene **(**HDPE) pipes, low-density polyethylene (LDPE) plastics, mixed plastics and polypropylene bags. Materials are received, either loose or in baled form, and stockpiled inside the shipping container or inside the workshop. The baled materials and some loose materials require reprocessing, which involves placing the materials inside the shredder for shredding and storing inside IBC containers or bulka bags. The current throughput is approximately 5,000 tonnes per annum (tpa).

Metal Recycling Process

Incoming scrap metal is source selected by the Applicant, with only acceptable size scrap

metal being purchased by the Applicant and transported to the site. Once at the Premises, scrap metal wastes are visually inspected to ensure it contains minimal contamination. All ferrous and non-ferrous metals received at the Premises are separated and ultimately placed inside the shipping container for export. No more than 60 tonnes of scrap metal is stored at the Premises.

Management of dust emissions

Dust from stockpiles will be managed through use of water tanks brought to site as required, and the application of water to stockpiles will be monitored to ensure that there is minimal generation of potentially contaminated water runoff. Regular road sweeping and speed restrictions of 10km/hr will also be implemented.

Management of noise emissions

The Applicant has not provided a noise assessment for Premises activities on the basis that no sensitive receptors are located within a 500m radius of the site. The Applicant has indicated that site equipment will be regularly serviced to ensure there is no additional noise or vibration generated. A complaints register will also be maintained at the Premises, and if any noise related complaints are received, the source of the excessive noise will be identified and removed from operational work until the issue is resolved. The facility will operate from 7:00am to 7:00pm Monday to Friday, 8:00am to 12:00pm Saturday, and will be closed Sundays and Public Holidays.

The Premises is constructed across all operational areas with semi-impervious road base hardstand, concrete or metal deck buildings. The premises includes the following infrastructure:

- Enclosed metal workshop area with impermeable concrete base;
- Administration office;
- Parking bays (semi-impervious road base hardstand);
- Storage areas (outdoor, semi-impervious road base hardstand) with sea containers.

No additional construction or changes/ alternations to the current Premises operation will be undertaken as a result of the proposed operation, however the premises will continue to operate the conveyor belt recycling facility at a greater volume than currently being undertaken.

4.2 Infrastructure

The infrastructure, as it relates to Category 47, 57, 61A and 62 activities, is detailed in Table 4 and with reference to the Site Plan (attached in the Issued Licence).

Table 4 lists infrastructure associated with each prescribed premises category.

Table 4: Waste depot- Category 47, 57, 61A and 62 infrastructure

	Infrastructure	**Site Plan Reference**
	Prescribed Activity Category 57	
Tyre storage		
1	Semi-impervious road base hardstand	Refer to figure 2 in the licence
2	Shipping containers for storage of tyres prior to shredding and bailing activities	
3	Trucks	
	Prescribed Activity Category 61A	
Shredding/bailing tyres and plastics		
1	Tyre/plastic shredding/bailing shed with a concrete floor area of 1000 m^2 that houses the shredding and baling equipment	Refer to figure 2 in the licence
2	Dual Shaft shredder	
3	Bailer/compacter machine	
4	Trucks	
5	Front end loader to move whole/bailed/shredded tyres and plastic	
	Prescribed Activity Category 47	
Sorting and separating scrap metal wastes		
1	Trucks	Refer to figure 2 in the licence
2	Front end loader to move ferrous and non-ferrous materials	
3	Concrete hardstand for separating ferrous and non-ferrous materials	
4	Water tank	
	Prescribed Activity Category 62	
Materials recovery and storage		
1	Sea containers for use in exporting shredded/bailed tyres, plastics and scrap metals overseas for final disposal	Refer to figure 2 in the licence

	Infrastructure	Site Plan Reference
2	Sea container forklift	Refer to figure 2 in the licence
3	Excavator with sorting grab	
	Other activities	
1	Fire hydrants	NA

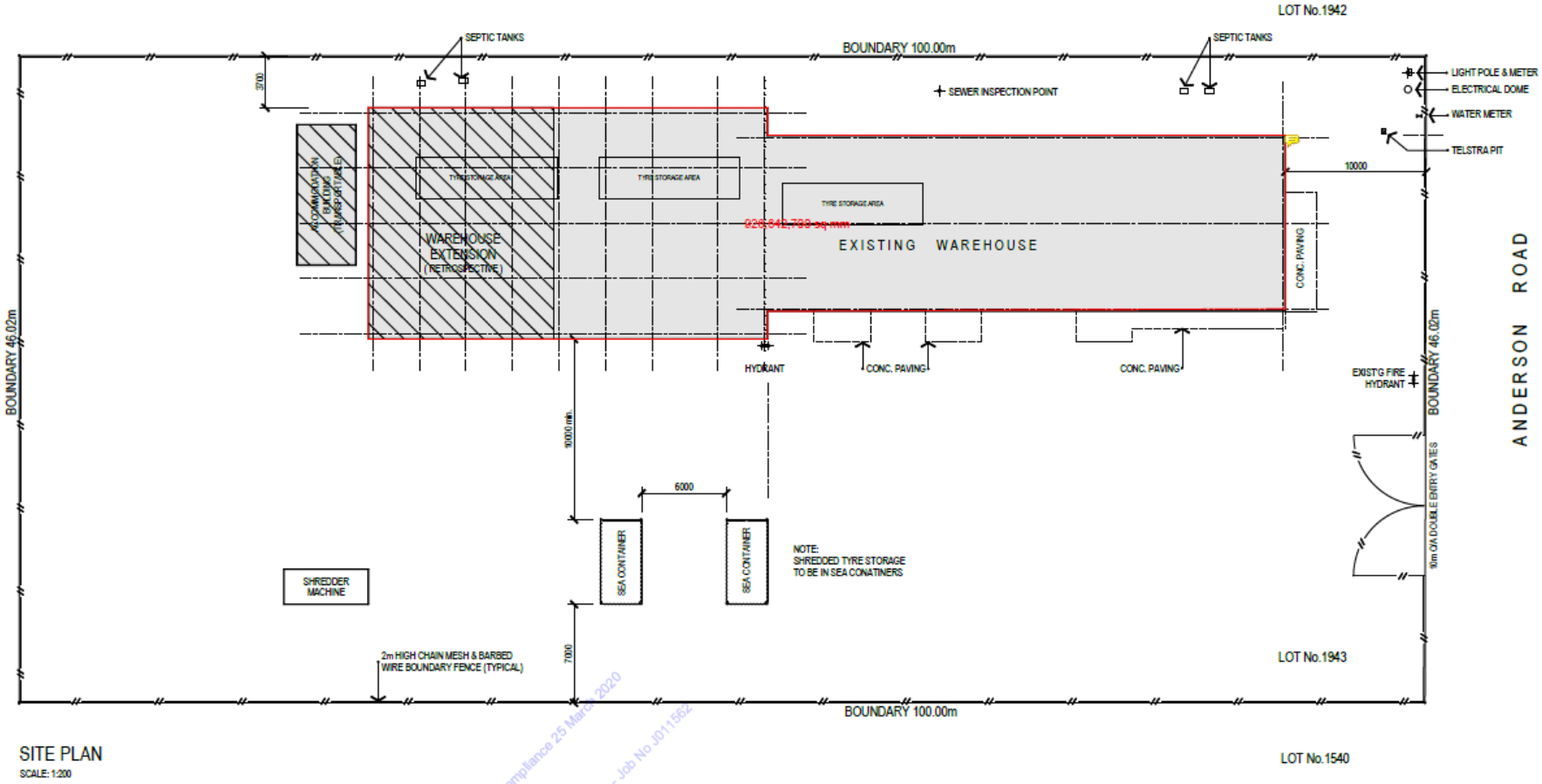

Figure 1

5. Legislative context

Table 5 summarises approvals relevant to the assessment.

Table 5: Relevant approvals and tenure

Legislation	Number	Subsidiary	Approval
Planning and Development Act 2005	20083	AMC Recyclers Pty Ltd.	Applicant has lodged a development application with City of Karratha. Confirmation from City of Karratha (18 June 2020) that the applicant must comply with the Environmental Protection (Noise) Regulations 1997.

5.1 Contaminated sites

Lot 1943 on Deposited Plan 213940 is not listed on DWER's contaminated sites database.

5.2 Other relevant approvals

5.2.1 Planning approvals

The Applicant contacted City of Karratha, Planning Officer (via email on March 2016), who confirmed that planning approval is not required for the scrap metal business as it is permitted under City's Town Planning Scheme No 8 (TPS8), however for all other activities a development application was required to apply for an 'Industry-Noxious' use in order for the other prescribed activities to be permitted on site. The application was lodged with City of Karratha on 21 April 2020.

5.3 Part V of the EP Act

5.3.1 Applicable regulations, standards and guidelines

The overarching legislative framework of this assessment is the EP Act and EP Regulations.

The guidance statements which inform this assessment are:

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Land Use Planning (February 2017)*
- *Guidance Statement: Licence Duration (August 2016)*
- *Guidance Statement: Publication of Annual Audit Compliance Reports (May 2016)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessments (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

5.3.2 Licence history

Table 6 summarises the works approval and licence history for the premises.

Table 6: Licence history

Instrument	Issued	Nature and extent of works approval, licence or amendment
L9210/2019/1	25/06/2020	New Licence to permit operation of a Category 47 (scrap metal recovery facility), Category 57 (Used tyre facility), Category 61A (Solid waste facility) and Category 62 (Solid waste depot),

5.3.3 Key and recent works approvals

The prescribed premises was not constructed under a works approval, and has been operating below *Environmental Protection Regulations 1987* category threshold trigger values.

The applicant has recently identified that the premises production volumes are increasing and will require a Licence to operate, in accordance with the *Environmental Protection Act 1986*.

5.3.4 Clearing

No clearing is required as part of this application process. The premises is currently fully operational and located within a zoned 'industrial area'.

6. Consultation

The application for a licence was referred to the City of Karratha on 20 December 2019 inviting comments on the proposal. The Application was also advertised for public comment in The West Australian newspaper on 29 July 2019.

7. Location and siting

7.1 Siting context

The premises is located within the entire Lot 1943 on Plan 213940, Karatha Industrial Estate, WA 6714, within the City of Karratha local government authority area.

The premises is within the 'general industry' zoned area of the City's town planning scheme No 8 (TPS8) with no residential sensitive receptors adjacent to or in close proximity of the Premises. The Premises is predominately surrounded by commercial premises.

7.2 Residential and sensitive receptors

The distances to residential and sensitive receptors are detailed in Table 7.

Table 7: Receptors and distance from activity boundary

Sensitive Land Uses	Distance from Prescribed Activity
Caravan Park	Approximately 1.5km from the premises boundary.
Residential Premises	The applicant has determined that the closest residential sensitive receptor is approximately 10 km from the prescribed premises (residential area of Bulgarra). DWER GISViewer and Geocortex dataset review of the premises location identifies that it is located well

	within a 'General industry' zoned area, under Local Planning Scheme.

7.3 Specified ecosystems

Specified ecosystems are areas of high conservation value and special significance that may be impacted as a result of activities at or Emissions and Discharges from the Premises. The distances to specified ecosystems are shown in Table 8. Table 8 also identifies the distances to other relevant ecosystem values which do not fit the definition of a specified ecosystem.

The table has also been modified to align with the *Guidance Statement: Environmental Siting.*

Table 8: Environmental values

Specified ecosystems	Distance from the Premises
Threatened Ecological Communities	Roebourne Plains Gilgai grasslands approximately 300m south

7.4 Groundwater and water sources

The distances to groundwater and water sources are shown in Table 9.

Table 9: Groundwater and water sources

Groundwater and water sources	Distance from Premises	Environmental value
Groundwater	Depth to groundwater at approximately 25 mBGL	No beneficial groundwater use. Any groundwater beneath the site is expected to be brackish to saline. Water abstracted is mainly for irrigation purposes and for mine dewatering purposes
RiWI Act	Within the Pilbara Groundwater and Surface Water area	Surface and groundwater are contained within the Pilbara Surface and Groundwater Areas, which are proclaimed and protected under the Rights in Water and Irrigation Act 1914 (RiWI Act).

7.5 Soil type

Table 10 details soil types and characteristics relevant to the assessment.

Table 10: Soil and sub-soil characteristics

Groundwater and water sources	Distance from Premises	Environmental Value
Soil type classification	Soils underlying the area are described as clay soils surrounding the stony soils	Does not drain easily. Soil permeability 1.16 x 10^{-9}m/s

7.6 Meteorology

The following meteorological data and information was extracted from the Bureau of Meteorology website using Karratha weather station 004083 – located at Karratha Airport.

The wind direction is predominately from the east during the dry season between April and August with wind speeds ranging from 17 to 24 km/h. Morning winds are associated with the east and south-easterly patterns and shifting to a northeasterly direction due to diurnal land temperature changes.

Wind direction from October to February is predominately westerly in the morning and shifting to a northwesterly onshore wind in the afternoon. Mean wind speed ranges from 19 to 30 km/h.

7.6.1 Regional climatic aspects

Karratha has a hot semi-arid climate, with temperatures warm to hot all year round and with low rainfall, most of which falls in late summer due to the influence of tropical cyclones and the monsoon, although there is a second rainfall peak in early winter as the northern edges of cold fronts occasionally cause rain in the region. It is very rare for any rain to fall in the period from August to December. Summers are very hot and usually dry although the erratic influence of the monsoon can cause periods of high humidity and thunderstorms. The hot wet summer season is from October to April and the mild winter season from May to September. The average maximum summer temperature is 34.8°C and the average minimum winter temperature is 17.2°C. The Pilbara region is also subject to occasional tropical cyclones, usually between January and April, with a frequency of approximately one every two years.

8. Risk assessment

8.1 Determination of emission, pathway and receptor

In undertaking its risk assessment, DWER will identify all potential emissions pathways and potential receptors to establish whether there is a Risk Event which requires detailed risk assessment.

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission. Where there is no actual or likely pathway and/or no receptor, the emission will be screened out and will not be considered as a Risk Event. In addition, where an emission has an actual or likely pathway and a receptor which may be adversely impacted, but that emission is regulated through other mechanisms such as Part IV of the EP Act, that emission will not be risk assessed further and will be screened out through Table 11.

The identification of the sources, pathways and receptors to determine Risk Events are set out in Tables 11 below.

Table 11. Identification of emissions, pathway and receptors during operation

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**		
Category 61A – Solid waste facility **Category 62 – Solid waste depot**	Receipt of used tyres by trucks Processing, movement and storage of tyres and plastics	Fire/ smoke (Abnormal operation)	Residential receptors 1.5 km from the premises. TEC Roebourne Plains Gilgai grasslands approximately 300m from the premises.	Air / wind dispersion	Health/ amenity (smoke), Potential suppression of photosynthetic functions (TEC) due to the emissions from the premises (release of particulate matter)	*Yes*	See Section 8.4.
		Fire water leachates (Abnormal operation)	Groundwater dependent ecosystems. TEC Roebourne Plains Gilgai grasslands approximately 300m from the premises.	Land/ soil	Groundwater contamination (PFOS/ PFAS, PAH, BTEX, Carbon particulates)	*Yes*	See Section 8.4.

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
Category 57- Used tyre storage		Dust: truck movements Unloading of tyres Processing and stockpiling of materials	Residential receptors 1.5 km from the premises. TEC within 300m. General industrial premises in the area.	Air/ wind dispersion	Health & Amenity impacts, Potential suppression of photosynthetic functions (TEC)	No	Approximately two vehicle movements per day is expected during operational hours. Periodical sweeping of the storage area and workshop area will be undertaken at the premises by the applicant. All vehicles will be required to travel at ≤10 km/ hr within the premises boundary. The Delegated Officer considers that adequate controls are in place and that low risk dust emissions can be adequately regulated under the EP Act 1986.
		Noise: truck movements and reversing alarms Unloading of metal waste onto hardstand, use of shredder and bailer.	Residential receptors 1.5 km from the premises.		Health & Amenity impacts	Yes	See Section 8.5.

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**		
Category 47 – Scrap metal recovery	Operation of equipment involved in metal recycling process	**Noise:** truck movements and reversing alarms Unloading of metal waste onto hardstand Processing and stockpiling of materials	Adjacent industrial Premises. No residential premises in close proximity.	Air / wind dispersion	Health & Amenity impacts	Yes	See Section 8.5.
		Dust: truck movements Unloading of waste onto hardstand Processing and stockpiling of materials	Adjacent industrial Premises. No residential premises in close proximity. TEC located within 300m (Roebourne Plains Gilgai grasslands).		Health & Amenity impacts. Potential suppression of photosynthetic and respiratory functions	No	Slow vehicle movements on hardstand areas that are regularly swept and will not produce large quantities of dust Metal wastes do not generally produce large amounts of dust and a water tank will be brought on-site to manage any dust lift-off from stockpiles if required. Small localised dust generation may occur. The Delegated Officer considers dust emissions can be adequately regulated under the EP Act 1986.

8.2 Consequence and likelihood of risk events

A risk rating will be determined for risk events in accordance with the risk rating matrix set out in Table 12 below.

Table 12: Risk rating matrix

Likelihood	Consequence				
	Slight	Minor	Moderate	Major	Severe
Almost certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	Extreme
Unlikely	Low	Medium	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High

DWER will undertake an assessment of the consequence and likelihood of the Risk Event in accordance with Table 13 below.

Table 13: Risk criteria table

Likelihood		Consequence		
The following criteria has been used to determine the likelihood of the Risk Event occurring.		The following criteria has been used to determine the consequences of a Risk Event occurring:		
			Environment	Public health* and amenity (such as air and water quality, noise, and odour)
Almost Certain	The risk event is expected to occur in most circumstances	Severe	• **onsite impacts**: catastrophic • **offsite impacts local scale**: high level or above • **offsite impacts wider scale:** mid-level or above • Mid to long-term or permanent impact to an area of high conservation value or special significance^ • Specific Consequence Criteria (for environment) are significantly exceeded	• Loss of life • **Adverse health effects:** high level or ongoing medical treatment • Specific Consequence Criteria (for public health) are significantly exceeded • **Local scale impacts:** permanent loss of amenity
Likely	The risk event will probably occur in most circumstances	Major	• **onsite impacts**: high level • **offsite impacts local scale**: mid-level • **offsite impacts wider scale**: low level • Short-term impact to an area of high conservation value or special significance^ • Specific Consequence Criteria (for environment) are exceeded	• **Adverse health effects:** mid-level or frequent medical treatment • Specific Consequence Criteria (for public health) are exceeded • **Local scale impacts**: high level impact to amenity
Possible	The risk event could occur at some time	Moderate	• **onsite impacts**: mid-level • **offsite impacts local scale**: low level • **offsite impacts wider scale**: minimal • Specific Consequence Criteria (for environment) are at risk of not being met	• **Adverse health effects:** low level or occasional medical treatment • Specific Consequence Criteria (for public health) are at risk of not being met • **Local scale impacts:** mid-level impact to amenity
Unlikely	The risk event will probably not occur in most circumstances	Minor	• **onsite impacts**: low level • **offsite impacts local scale**: minimal • **offsite impacts wider scale**: not detectable • Specific Consequence Criteria (for environment) likely to be met	• Specific Consequence Criteria (for public health) are likely to be met • **Local scale impacts:** low level impact to amenity
Rare	The risk event may only occur in exceptional circumstances	Slight	• **onsite impact**: minimal • Specific Consequence Criteria (for environment) met	• **Local scale**: minimal to amenity • Specific Consequence Criteria (for public health) met

^ Determination of areas of high conservation value or special significance should be informed by the *Guidance Statement: Environmental Siting.*

* In applying public health criteria, DWER may have regard to the Department of Health's *Health Risk Assessment (Scoping) Guidelines.*
"onsite" means within the Prescribed Premises boundary.

8.3 Acceptability and treatment of Risk Event

DWER will determine the acceptability and treatment of Risk Events in accordance with the Risk treatment table 14 below:

Table 14: Risk treatment table

Rating of Risk Event	Acceptability	Treatment
Extreme	Unacceptable.	Risk Event will not be tolerated. DWER may refuse application.
High	May be acceptable. Subject to multiple regulatory controls.	Risk Event may be tolerated and may be subject to multiple regulatory controls. This may include both outcome-based and management conditions.
Medium	Acceptable, generally subject to regulatory controls.	Risk Event is tolerable and is likely to be subject to some regulatory controls. A preference for outcome-based conditions where practical and appropriate will be applied.
Low	Acceptable, generally not controlled.	Risk Event is acceptable and will generally not be subject to regulatory controls.

8.4 Risk Assessment – Fire risk event

8.4.1 Description of fire risk

The premises has the potential to result in a fire risk through:

- shredding of the tyres (outside/open area); and/ or
- abnormal ignition sources outside of the premises operation (arson or external fire sources entering the premises boundary) within the storage areas.

8.4.2 Identification and general characterisation of emission

The burning of natural/ synthetic rubber will result in dense, heavy, black smoke that will burn for an extended period of time requiring extensive volumes of water and fire retardant chemicals to effectively extinguish the source of the fire. The smoke is likely to contain high amounts of carbon particulates, sulfur dioxide (SO_2), PAHs and BTEX.

In addition, significant volumes of contaminated fire water will be generated which will flow across the premises and potentially infiltrate into surrounding soil/ land. Roebourne Plains Gilgai grasslands TEC is situated approximately 300m from the premises. The contaminated firewater may contain hazardous compounds such as PFAS/ PFOS, BTEX PAHs and carbon rich oils.

8.4.3 Description of potential adverse impact from the emission

Due to the high calorific content and constituents (including sulphur) of rubber (synthetic/ natural) tyres, smoke generation has the ability to cause acrid, potentially carcinogenic (toxic)

smoke that will affect the health and amenity of people within the immediate and surrounding areas causing respiratory issues.

The discharged fire waters may result in the contamination of surrounding soil/ land where discharged off the premises boundary and not adequately captured through the use of temporary bunding, or escape via stormwater drainage channels/ pipelines. Roebourne Plains Gilgai grasslands TEC is situated approximately 300m from the premises.

8.4.4 Criteria for assessment

The National Environment Protection (Ambient Air Quality) Measure (NEPM) 2003 recommends air quality standards that must be maintained. The potential discharges to air that will occur during a tyre fire on the Premises would contain mostly very fine particulates that can cause significant health impacts if inhaled. The NEPM contains criterion for these fine particles ($PM_{2.5}$) which have been applied to inform this Assessment.

Any discharges into the environment may be subject to the Environmental Protection (Unauthorised Discharges) Regulations 2004. Fire wastewater and any other wastes generated in the event of a fire may be subject to the Environmental Protection (Controlled Waste) Regulations 2004.

8.4.5 Applicant controls

Potential sources of ignition will be restricted in the tyre storage and processing areas and fire-fighting equipment will be maintained on the Premises.

The burning time and severity of tyre fires can be reduced by the appropriate storage of whole and shredded tyres. The Applicant will be required to comply with the recommendations made by DFES for the storage of tyres.

This assessment has reviewed the controls set out in Table 15 below.

Table 15: Applicant's proposed controls for air emissions during tyre fires

Site infrastructure	Description	Operation details	Reference to issued licence plan (Attachment X)
Controls for fire			
Workshop and Shredding area	Shredding of tyres and plastics	All tyres and plastics will be stored inside shipping containers prior to shredding. Shredded tyres will be stored on the semi-impervious hardstand area in shipping containers prior to removal from the Premises. Surplus tyres will be baled and stored inside shipping containers. The Premises will be enclosed by fences to	Application supporting documentation Fire Specialist Report.

Site infrastructure	Description	Operation details	Reference to issued licence plan (Attachment X)
		prevent arson. The shipping containers will act as non-combustible walls. The tyre shredding equipment will be fitted with misters to prevent heat build-up that could result in combustion. The Applicant has stated that the site will comply with the Department of Fire & Emergency Services Guidance Note 02: *Bulk storage of rubber tyres including shredded and crumbed tyres*.	
	Fire management plan	Trained personnel Fire response protocol. Purchase and use of temporary bunding to contain firewater. Storage of whole, shredded or bailed tyres inside shipping containers to reduce any fire risk. Installation of adequate fire hydrants, and fire extinguishers to be able to address the risk of fire to the premises. The site is fitted with CCTV and a security system.	Application supporting documentation Fire Specialist Report.
	Compliance	BCA (National Construction Code Series 2016, Volume 1 Building Code of Australia Class 2 to Class 9 Buildings	Application supporting documentation Fire Specialist Report.

Site infrastructure	Description	Operation details	Reference to issued licence plan (Attachment X)
		(ABCB 2016)) AS 2419.1	

8.4.6 Key findings

The Delegated Officer has reviewed the information regarding the fire risk and has found:

1. *Tyre storage controls can reduce the risk of impacts from fire.*
2. *Storage of used tyres can be regulated through conditions of the licence.*
3. *The applicant has installed two fire hydrants to ensure sufficient volume and velocity fire water to the premises, as assessed through an independent third party, to efficiently and effectively extinguish any fire risk that may occur.*
4. *The fire hydrants and operation of the premises are required to be in compliance with AS 2419.1, AS 1851-2012 and DFES Guidance note GN02.*
5. *In total nine fire extinguishers are located throughout the workshop. This has been assessed to be the safest means for occupants to undertake an initial fire response.*
6. *The premises consists of a low permeability semi-impervious hardstand throughout and with the use of temporary bunding, in the event of an accidental fire, will assist in the containment of any leachates or firewater that may occur as a result of putting out accidental fires.*
7. *The risk event is acceptable subject to multiple regulatory controls.*

8.4.7 Consequence

If a fire event occurs, then the Delegated Officer has determined that the impact of a fire risk will have mid-level on-site environmental impacts and low level or occasional medical treatment. Therefore, the Delegated Officer considers the consequence of *a fire risk event* to be **moderate**.

8.4.8 Likelihood of Risk Event

The premises has been operating under EP Regulation threshold for Categories 47, 57, 61A and 62, for approximately one year and has no recorded incidents of fire at the premises.

The applicant controls, as shown in Table 15, define the mitigation measures currently in place, with the proposed improvements defined for expansion/ increase of the number of appropriate fire hydrants.

The Delegated Officer has determined that the likelihood of a fire risk causing emissions (with consideration of application controls) will probably not occur in most circumstances. Therefore, the Delegated Officer considers the likelihood of a fire risk to be **unlikely**.

8.4.9 Overall rating of emission during fire

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 12) and determined that the overall rating for the risk of a fire event is **medium.**

8.5 Risk Assessment – Noise emissions

8.5.1 Description of noise risk

Noise may be generated by the operation of shredder and bailer outside, and vehicle movement on the premises may cause unacceptable noise levels at neighbouring premises which negatively impact on their workers' health and amenity.

8.5.2 Identification and general characterisation of emission

General operation of equipment and truck movements will generate noise. This level may cause noise levels at the boundary of the premises that could exceed the assigned noise levels in the *Environmental Protection (Noise) Regulations 1997*.

8.5.3 Description of potential adverse impact from the emission

Industrial noise can cause health issues at various levels.

8.5.4 Criteria for assessment

During the operational phase, the Applicant is required to comply with the specified assigned levels in regulation 8 of the Noise Regulations.

8.5.5 Applicant controls

This assessment has reviewed the controls set out in Table 16 below.

Table 16: Applicant's proposed controls for noise emissions

Site infrastructure	Description	Operation details	Reference
Controls for fire			
Shredder/ bailer area	Shredding and bailing tyres and plastics	The premises will rely on the separation distance to the nearest residential sensitive receptor. Day time operation only Regular maintenance of the equipment's	Application supporting documentation
	Noise management plan	Site operation hours 7:00am to 8:00pm Monday – Friday, and 8:00am – 12:00pm Saturday. Complaints management	Application supporting documentation
	Compliance	*Environmental Protection (Noise) Regulations 1997*	Application supporting documentation

8.5.6 Key findings

The Delegated Officer has reviewed the information regarding the noise impacts from the premises and has found:

1. *The Applicant has not provided a noise assessment for premises activities.*
2. *Operational noise, particularly with the shredder and bailer located outside, has the potential to cause amenity impacts on industrial and sensitive receptors.*
3. *The Applicant is required to comply with the assigned levels in Regulation 8 of the Environmental Protection (Noise) Regulations 1998 (Noise Regulations) during the operational phase.*
4. *There is insufficient information in the application to demonstrate that noise emissions from the premises activities will meet the Noise Regulations.*
5. *The Licence Holder should undertake a noise survey of operational equipment to assess whether activities meet the prescribed standard and if necessary, determine what level of mitigation is required for each source. Mitigation may include the enclosure or cessation of tyre shredding activities or other engineering controls.*
6. *Conditioning of additional proponent controls required to meet assigned levels will be considered subject to the outcomes of noise monitoring.*

8.5.7 Consequence

The premises is adjacent to industrial zoned premises. The nearest residential receptor is approximately 1.5 km from the premises. If the noise emissions from the shredder and the bailer exceed the assigned levels at the boundary of the premises then local scale impacts may occur. Therefore, the Delegated Officer considers the consequence of noise emissions to be ***Moderate***.

8.5.8 Likelihood of Risk Event

The Delegated Officer has determined that the likelihood of noise emissions causing a negative impact on adjacent premises could occur at some time since the shredding and baling equipment will be located outside the workshop. Therefore, the Delegated Officer considers the likelihood of the consequence of noise impacts to be ***Possible***.

8.5.9 Overall rating of emission during fire

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 12) and determined that the overall rating for the risk of operational noise emissions is **Moderate.**

8.6 Summary of acceptability and treatment of Risk Events

A summary of the risk assessment and the acceptability or unacceptability of the risk events set out above, with the appropriate treatment and control, are set out in Table 17 below. Controls are described further in section 9.

Table 17: Risk assessment summary

	Description of Risk Event			Applicant controls	Risk rating	Acceptability with controls (conditions on instrument)
	Emission	**Source**	**Pathway/ Receptor (Impact)**			
1.	Fire/ Smoke (abnormal operation)	Burning of whole shredded tyres/[plastics	Air/ wind dispersal Health/ amenity (smoke), Respiratory problems	The tyre shredding equipment will be regularly sprayed with water to prevent heat build-up that could result in combustion High pressure fire hydrants (fire control) Materials stored inside shipping containers. Premises operation to occur on a low permeability hard stand area. Storage of whole and shredded tyres will be in accordance with Department of Fire & Emergency Services Guidance Note 02: *Bulk storage of rubber tyres including shredded and crumbed tyres*.	Moderate consequence Unlikely likelihood **Medium Risk**	Acceptable subject to proponent controls conditioned / regulatory controls
2.	Discharge of leachates/ or firewater (abnormal operation)	Contaminated stormwater, and land and soil (off site)	Directed stormwater to marine environment causing impacts on water quality and visibility.	Infrastructure and management controls. Semi impervious hardstand storage area; and Management controls: Purchase and use of temporary bunding structures, use of absorption materials. Contaminated water will be collected and disposed of offsite by a licensed contractor to an appropriate licensed waste disposal facility.	Moderate consequence Unlikely likelihood **Medium risk**	Acceptable subject to proponent controls conditioned / regulatory controls
3	Noise emissions from the operation of the tyre shredding and baling equipment causing unacceptable noise levels at the neighbouring premises which could negatively impact on workers' health and amenity.	Tyre shredder & Tyre bailer	Air/ wind dispersion Health/ amenity impacts	Site operation hours 7:00am to 7:00pm Monday – Friday, and 8:00am – 12:00pm Saturday. Regular servicing of machinery. Complaints registered maintained and actioned. Speed restrictions (10kph) apply on-site.		

9. Regulatory controls

A summary of regulatory controls determined to be appropriate for the Risk Event is set out in Table 18. The risks are set out in the assessment in section 8 and the controls are detailed in this section. DWER will determine controls having regard to the adequacy of controls proposed by the Applicant. The conditions of the Licence will be set to give effect to the determined regulatory controls.

Table 18: Summary of regulatory controls to be applied

		Controls (references are to sections below, setting out details of controls)			
		9.1.1 Infrastructure and equipment	**9.1.2 Specified action**	**9.1.3 Monitoring**	**9.1.4 Reports**
Risk Items (see risk analysis in section 8)	**1. Fire/ smoke**	●	–	–	●
	2. Firewater/ leachates	●	–	–	●
	3. Noise	●	●	●	●

9.1 Licence controls

The following environmental controls, infrastructure and equipment should be maintained and operated onsite for fire risk management:

(a) Fire:

Installation, accessibility and operation of two fire hydrants. A 60m hose plus 10m hose stream that can be connected to the hydrants and all areas of the premises can be reached.

Maintenance of all fire hydrants within the premises in accordance with relevant Australian Standards.

(b) Fire water/ leachates:

Removed from the premises via a controlled waste carrier for disposal to a licenced facility, in accordance with the *Environmental Protection (Controlled Waste) Regulations 2004.*

Purchase and use of temporary bunding, absorption material for the containment of any leachates or fire water generated as a result of accidental fire at the premises.

(c) Noise:

The licence will specify the hours of operation with the aim of preventing any noise generation from the operation during the work periods between 0800 to 0400 Mondays to Fridays and 0800 to 1200 Saturdays.

9.1.1 Specified actions

The following requirements will be included in the licence:

- Retain the services of person qualified and experienced in the area of environmental noise assessment to compile and provide AMC Metal Recyclers Ltd with a report detailing the nature and extent of noise emissions from the premises;

9.1.2 Monitoring requirements

The Applicant will be required to submit a noise monitoring report to DWER.

No other monitoring requirements are defined within the proposed Licence for abnormal operations, however monitoring of inputs and outputs will be required in consideration of the Category 62 – Solid waste facility regarding scrap metals, plastics and tyres received for disposal or reuse.

9.1.3 Reporting

The Licence will include regulatory controls for the recording and reporting of all waste types received, rejected or disposed of via reuse.

Liquid waste containment and removal as a result of abnormal fire risk (leachates/ fire water) will be addressed through controlled waste mandatory recording of liquid waste which will be removed from the premises for disposal to a licenced facility.

The applicant will be required to report any section 72 events in accordance with the *Environmental Protection Act 1986.*

All reporting will have a requirement to be submitted to DWER annually, in a format that is readable, clear and relate to the reporting requirements of the Licence.

10. Determination of Licence conditions

The conditions in the issued Licence in Attachment 1 have been determined in accordance with the *Guidance Statement: Setting Conditions*.

The *Guidance Statement: Licence Duration* has been applied and the issued licence expires in 20 years from date of issue.

Table 19 provides a summary of the conditions to be applied to this licence.

Table 19: Summary of conditions to be applied

Condition Ref	Grounds
Infrastructure and Equipment 1 to 4	These conditions are valid, risk-based and contain appropriate controls.
Waste processing 5	This condition is valid, risk-based and consistent with the EP Act.
Fire controls 6	These conditions are valid, risk-based and contain appropriate controls.
Dust management 7	This condition is valid, risk-based and consistent with the EP Act.
Noise management 8	These conditions are valid, risk-based and consistent with the EP Act.
Monitoring and Reporting 9 to 13	These conditions are valid, risk-based and consistent with the EP Act.
Site security 14	This condition is valid, risk-based and contain appropriate control.

Information 15 to 18	These conditions are valid and are necessary administration and reporting requirements to ensure compliance.

DWER notes that it may review the appropriateness and adequacy of controls at any time and that, following a review, DWER may initiate amendments to the licence under the EP Act.

11. Applicant's comments

The Applicant was provided with the draft Decision Report and draft Licence on 29 May 2020. The Applicant provided comments on 19 June 2020 which are summarised, along with DWER's response, in Appendix 2.

12. Conclusion

This assessment of the risks of activities on the Premises has been undertaken with due consideration of a number of factors, including the documents and policies specified in this Decision Report (summarised in Appendix 1).

Based on this assessment, it has been determined that the Issued Licence will be granted subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

Stephen Checker

Digitally signed by Stephen Checker
Date: 2020.06.23 17:28:35 +08'00'

Stephen Checker
MANAGER WASTE INDUSTRIES
REGULATORY SERVICES

Delegated Officer
under section 20 of the *Environmental Protection Act 1986*

Appendix 1: Key documents

	Document title	In text ref	Availability
1.	Email: Licence Application received from Mr Zahir Ghambarie (Applicant)on 22/05/2019 with supporting information: • DWER Application – Final.pdf • Asics summary • Baler information • Permeability results	AMC Recyclers Pty Ltd.	DWER records (A1802728)
2.	Email: Certificate of Title copy received from Mr Zahir Ghambarie on 30/07/2019.	AMC Recyclers Pty Ltd.	DWER records (A1822364)
3.	Email: RE: Fire Assessment Report – Request for further information - fire engineering brief received from Fire Design Solutions on behalf of Mr Zahir Ghambarie	15 November 2019	DWER records (A1874561)
4.	Email: Fire Engineering compliance report 201908003c004 received from Mr Zahir Ghambarie	6 May 2020	DWER records (A1891296)
5.	Email: Fire Extinguisher layout received from Fire Design Solutions on behalf of Mr Zahir Ghambarie	6 May 2020	DWER records (A1891313)
6.	Email: Application for development approval submitted to City of Karratha confirmation, received from Mr Zahir Ghambarie	6 May 2020	DWER records (A1891296)
7.	DER, July 2015. *Guidance Statement: Regulatory principles.* Department of Environment Regulation, Perth.	DER 2015a	accessed at www.dwer.wa.gov.au
8.	DER, October 2015. *Guidance Statement: Setting conditions.* Department of Environment Regulation, Perth.	DER 2015b	
9.	DER, August 2016. *Guidance Statement: Licence duration.* Department of Environment Regulation, Perth.	DER 2016a	
10.	DER, November 2016. *Guidance Statement: Risk Assessments*. Department of Environment Regulation, Perth.	DER 2016b	
11.	DER, November 2016. *Guidance Statement: Decision Making*. Department of Environment Regulation, Perth.	DER 2016c	

Appendix 2: Summary of applicant's comments on risk assessment and draft conditions

Condition	Summary of Licence Holder comment	DWER response
Condition 10 – Noise monitoring requirements	The Applicant requested for 180 days instead of 90 days to retain the services of a qualified and experienced person in relation to monitoring of noise emissions from the premises.	As the noise validation results are critical in determining compliance against the relevant assigned levels specified in the *Environmental Protection (Noise) Regulations 1997*, a condition will be added to the licence requiring the Applicant to advise DWER the commissioning date of the shredder. Delegated Officer has also agreed to extend the period from 90 to 120 days regarding noise emission assessment.
NA	The Applicant requested to recycle 3000 tonnes of conveyor belt.	Not supported. The application as submitted has been advertised, referred to the City and assessed. Significantly changing the application at this late stage would require repeating consultation and assessment processes particularly with regard to fire risk). The Applicant is welcome to apply for an amendment after the Licence has been granted.

Attachment 1: Issued Licence L9210/2019/1