



Application for Licence

Division 3, Part V *Environmental Protection Act 1986*

Licence Number	L9055/2017/1
Applicant	City of Swan
File Number	DER2017/000668
Premises	Recovery Centre Bullsbrook 121 Stock West Road Being Lot 6 on Diagram 55166 Certificate of Title Volume 1584 Folio 502
Date of Report	22 June 2017
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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
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CS Act	<i>Contaminated Sites Act 2003 (WA)</i>
DER	Department of Environment Regulation
Decision Report	refers to this document.
Delegated Officer	an officer under section 20 of the EP Act.
EPA	Environmental Protection Authority
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of, and during this Review
Licence Holder	City of Swan
m ³	cubic metres
Minister	the Minister responsible for the EP Act and associated regulations
MS	Ministerial Statement
NEPM	National Environmental Protection Measure
Noise Regulations	<i>Environmental Protection (Noise) Regulations 1997 (WA)</i>
Occupier	has the same meaning given to that term under the EP Act.
OEPA	Office of the Environment Protection Authority
PM	Particulate Matter
PM ₁₀	used to describe particulate matter that is smaller than 10 microns

	(µm) in diameter
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
Primary Activities	as defined in Schedule 2 of the Revised Licence
Risk Event	As described in <i>Guidance Statement: Risk Assessment</i>
UDR	<i>Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)</i>
µg/m ³	micrograms per cubic metre
µg/L	micrograms per litre

2. Purpose and scope of assessment

The City of Swan (**Applicant**) submitted a partial compliance document for works approval W5969/2016/1 to DER on 5 May 2017 with their application for a licence to operate the solid waste facility (category 61A) and depot (category 62), Recovery Centre Bullsbrook (RCB) in Bullsbrook. The works approval authorised the construction of the facility with a 7,000 tonnes and 40,000 tonnes per annual period throughput for the solid waste facility and depot respectively.

This licence application assesses the risks associated with a throughput of 10,000 tonnes and 7,000 tonnes per annual period for category 62 and 61A respectively for the facility. The **Applicant** will need to apply for a licence amendment once the remaining infrastructure authorised under W5969/2016/1 has been constructed which will also consider an increased throughput for category 62; the outstanding infrastructure and associated operations are excluded from this assessment.

2.1 Application details

An Application was received on 5 May 2017 from the **Applicant** to operate a 7,000 tonne solid waste facility (category 61A) and 10,000 tonne waste transfer facility (category 62) within Lot 6 on Diagram 55166, 121 Stock West Road, Bullsbrook.

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 form	5 May 2017
Bullsbrook material recovery centre compliance report	5 May 2017
Appendices A-D	5 May 2017

3. Background

A licence application was submitted by City of Swan to operate a solid waste facility (category 61A and depot (category 62), Recovery Centre Bullsbrook (RCB).

On 30 July 2016, Works Approval W5969/2016/1 was granted to City of Swan to install waste sorting and processing hardstand areas at Lot 6, 121 Stock West Road, Bullsbrook.

The City of Swan confirmed to DER that the construction works will be carried out in two stages after the works approval was granted.

As stated above, a partial compliance document for works approval W5969/2016/1 was submitted by the City of Swan on 5 May 2017 confirming that four waste storage sheds, storage area for construction and demolition waste, green waste and timber storage and chipping area has been constructed on the premises. The waste hardstand sorting and processing area, leachate collection infrastructure and leachate pond are yet to be constructed; compliance documentation is outstanding and will be provided with a licence amendment application, when submitted.

The City of Swan will be using several skip bins with lids to safely contain and dispose materials delivered onsite. The City of Swan will also be using three 660L skip bins to store non-conforming waste on-site.

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 throughput
Category 61A	Solid waste facility: premises (other than premises within category 67A) on which solid waste produced on other premises is stored, reprocessed, treated, or discharged onto land.	7,000 tonnes per annual period
Category 62	Solid waste depot: premises on which waste is stored, or sorted, pending final disposal or re-use.	10,000 tonnes annual period

4. Overview of Premises

4.1 Operational aspects

The facility will service the northern community of the City of Swan. The facility will be open to receive waste from the public from 8am – 4.30pm, Wednesday to Sunday but will undertake handle / load and process wastes on weekdays (8am to 4:30pm).

The operations at the site are proposed to include the following activities and infrastructure:

- Materials recovery facility for the acceptance of recyclables, construction and demolition inert waste and green waste, short term stockpiling of recycled commodities including paper, cardboard, metals and aluminum cans;
- Approximately 7,000 tonnes of green waste and timber (annually) is expected for downsizing (chipping) purposes;
- Approximately 10,000 tonnes of solid waste (recyclables, construction and demolition waste) is expected annually;
- Dry bulk material storage including:
 - E-waste and peripherals;
 - Bottles, containers (glass and plastic), cardboard and paper, batteries, mobile phones, fluorescent tubes and compact fluorescent lights;
 - Batteries;
 - White goods;
 - Brick and rubble;
 - Green waste;
 - Timber and office furniture;
 - Metals and alloys (steel, aluminium, copper); and
 - Mattresses; and
 - Tyres
- Self banded oil shed will be used to collect used oil; and
- A clothing bin will also be provided for local charities;
- Green waste material received at the site will be placed on a hardstand, chipped, downsized and removed from the site by City of Swan contractors.
- Provide resource recovery options for dry bulk materials accepted at the facility through a number of recognised recycling companies.

The following information in relation to site operations has been summarised from the application:

- Users will be required to drop off waste material in visually distinct containers using appropriate signage;
- Skip bins will be provided to public to drop off waste materials that will be brought back to site;
- Skip bins will be also be positioned in sheds for storing recyclables;
- Three 660L bins with tight fitting lids will be positioned in zone 3 to store non-conforming waste; and
- A road based hardstand area for storing no more than 100 tyres at any one time prior to removal.

4.2 Infrastructure

The City of Swan's waste transfer facility infrastructure, as it relates to Category 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 transfer facility Category 61A and 62 infrastructures

	Infrastructure	Site Plan Reference
	Prescribed Activity Category 62	
Waste Transfer Station- Construction and demolition waste and storage of recyclables		
1	Approximately 576m ² brick and rubble storage area placed on a 400mm compacted crushed road base hardstand.	Schedule 1: Premises site plan, Zone 5
2	A lean style shed with 750 mm containment wall around the three perimeters of the shed for the storage of white goods on a 100m ² area on 150mm reinforced concrete slab hardstand area.	Schedule 1: Premises site plan
3	Skip bins to store waste dropped off by the users.	
4	Three 660L bins with lids in zone 3 to store non-conforming waste.	Schedule 1: Premises site plan, Zone 3
5	Shed 1 with reinforced concrete floors (150mm thick with edge thickening) on 28m ² area to store mattresses.	Schedule 1: Premises site plan, Zone 9
6	Shed 2 with reinforced concrete floors (150mm thick with edge thickening) on 28m ² area to store aluminium cans, glass bottles and fluorescent CFL tubes.	
7	Shed 3 with reinforced concrete floors (150mm thick with edge thickening) on 28m ² area to store E- waste.	
8	Shed 4 with reinforced concrete floors (150mm thick with edge thickening) on 28m ² area to store batteries.	
9	Bunded pallets in shed 4 to store batteries.	

	Infrastructure	Site Plan Reference
10	Approximately 36 m ² area on a level hardstand (compacted road base) surface for the storage of tyres.	Schedule 1: Premises site plan, Zone 10
11	1.8m high chain wire mesh fence around the tyre storage area that measures (6m x 6m x 6m).	
12	Fully bunded used tyre storage area.	N/A
Prescribed Activity Category 61A		
Solid waste facility- Storing, chipping / downsizing of green waste on hardstand area prior to being removed from the site by City of Swan contractors.		
1	Approximately 1,952 m ² hardstand area for green waste storage, timber storage and chipping operation.	Schedule 1: Premises site plan, Zone 4
Directly related activities		
Fire Management		
1	water hose connections with sufficient fire-fighting capacity	Schedule 1: Premises site plan, Zone 6, 9 and 13
2	Six DCP fire extinguishers (9kg each)	
3	One form fire extinguisher (9 litres)	
Other activities		
1	1.8m high security fence with access to the facility through lockable gated entry/exit points.	N/A
2	Low speed signage (≤8 km/hr) within the premises boundary.	N/A
3	Signage describing type of materials accepted and opening hours	Schedule 1: Premises site plan, Front gate- zone 13
4	Gate house	Schedule 1: Premises site plan, zone 13
5	Storm-water directed away from storage areas	N/A

5. Legislative context

Table 5 summarises approvals relevant to the assessment.

Table 5: Relevant approvals and tenure

Legislation	Number	Subsidiary	Approval
<i>Planning and Development Act 2005</i>	Town Planning Scheme No.17- Amendment 102	City of Swan	The use of Lot 6, Stock West Road, Bullsbrook as a waste transfer station is subject to the following conditions: <ul style="list-style-type: none"> Inserting a definition of "local government waste transfer station"- means premises operated by the local

Legislation	Number	Subsidiary	Approval
			<p>government for the purpose of receiving, sorting and processing of dry bulk household waste materials, woodchips and garden waste for sale on-site or reuse, recycling or disposal off-site;</p> <ul style="list-style-type: none"> • No more than 200 tonnes of waste material (total) can be on the site at any one time; • No hazardous material, biosolids, manures or mulching is to be produced or stored on site; and • The management of leachate is to be to the satisfaction of the relevant State Authorities.
Part IV of the EP Act (WA)	Statement Number 13-244636	Environmental Protection Authority	Proposal not to be assessed under Part IV of EP Act. No advice given.

5.1 Contaminated sites

Lot 6 on Diagram 55166, 121 Stock West Road, Bullsbrook is not listed on DER's contaminated sites database.

5.2 Other relevant approvals

5.2.1 Planning approvals

The application details that:

- The site was previously zoned "Rural" under the Metropolitan Regional Scheme (MRS) and "General Rural" under the City of Swan's Local Planning Scheme (LPS) No.17;
- In 2013 an application was submitted for an amendment to the LPS to incorporate an additional use as a Local Government Waste Transfer Station.
- The amendment application was referred to the Office of the Environmental Protection Authority (OEPA) and the application was deemed as "Not Assessed"; and
- The final approval of the amendment was granted by the Minister for Planning in June 2015.

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. DER 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 Works approval and licence history

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

Table 6: Works approval and licence history

Instrument	Issued	Nature and extent of works approval, licence or amendment
W5969/2016/1	30 June 2016	To construct a materials recovery centre. The activities will trigger category 61A and 62 under schedule 1 of <i>Environmental Protection Regulations 1987</i> .
L9055/2017/1	22 June 2017	Licence application to operate a solid waste facility (category 61A and depot (category 62)).

5.3.3 Key and recent works approvals

On 30 July 2016, Works Approval (W5969/2016/1) was granted to City of Swan to install waste sorting and processing hardstand areas at Lot 6, 121 Stock West Road, Bullsbrook.

A partial compliance document for works approval W5969/2016/1 was submitted by the City of Swan on 5 May 2017 confirming that four waste storage sheds, storage area for construction and demolition waste, green waste and timber storage and chipping area has been constructed on the premises.

An amendment to the licence will be required post construction of the waste hardstand sorting and processing area, leachate collection infrastructure and leachate pond after the submission of the applicable works approval compliance documents have been assessed.

5.3.4 Clearing

The application references the proposed clearing of 56 eucalypt fence line trees. Clearing is less than 5 ha for the purpose of a building or other structure on a property; this is exempt from the provision of the legislation under regulation 5(1) of the *Environmental Protection (Native Vegetation Clearing) Regulations 2004*. According to the DER GIS (GISviewer), there is no declared rare flora, or priority flora, threatened fauna within the location.

6. Consultation

DER advertised the application for a licence in the *West Australian* on 29 May 2017 inviting public comment on the application. DER did not receive any comments.

7. Location and siting

7.1 Siting context

The RCB is situated within Lot 6 on Diagram 55166, Stock West Road, Bullsbrook (Premises),

within in the City of Swan boundary. Lot 6 is approximately 33 hectare (ha) in size and the proposed depot has a footprint of approximately 3.8 ha within the southern half of the site.

The site is located within a special rural land use zone comprising of 3-6 ha lots. Livestock grazing is the surrounding main land use. The nearest sensitive receptor is a local resident located 40 m from the eastern boundary. According to the DER geographic information system, a separation distance of 210 m will exist between the nearest residence and the proposed RCB facility; this resident however did not object to the proposed activity during the City of Swan public consultation.

7.2 Residential and sensitive Premises

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
Residential Premises	The closest residential area is located approximately 40 m away from the eastern boundary of the premises and 210 m from the facility.

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
Wally Jones Park	4.5 km to north east of the Recycling Centre Site

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	<p>Depth to groundwater encountered at approximately 1.8 m – 2.9 metres below ground level (mbgl) (based on information within works approval W5969/2016/1 application).</p> <p>According to the DER GIS (GISviewer) application (WIN BORE layer), there are two bores on the property.</p>	<p>Water is not used for potable or industrial use. The Department of Water Perth Atlas indicates the area is not suitable to install garden bore.</p> <p>According to the DER GIS (GISviewer) application (WIN BORE layer), there are two bores on the property; these have total dissolved solids at levels greater than 240,000 mg/L.</p>

7.5 Soil type

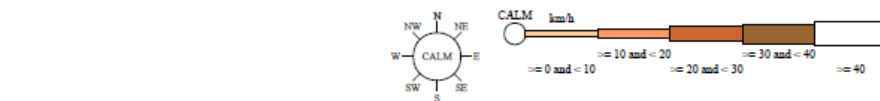
The application supporting material identifies a soil profile that consists of topsoil over Bassendean Sand which is underlain by coffee rock and Guildford clays with a moderate to low risk of acid sulfate soil or potential acid sulfate soils at depth of greater than 3 mbgl. These soils are considered to be of low to moderate risk of acid sulfate soils (ASS) or potential acid sulfate soils (PASS).

7.6 Meteorology

The premises are located in the Perth Region. The Perth Region experiences a Mediterranean climate characterised by mild and wet winters and warm to hot dry summers. Highest temperatures occur between December and March with average monthly maximum ranges from 30°C in December to 34°C in January. The summer period also experiences heat waves that last up to four to five days. Most rainfall occurs during winter in association with cold fronts from the south-west.

7.6.1 Wind direction and strength

The wind data for the area has been sourced from the Perth airport. The Bureau of Meteorology (BoM) provides the 9 am and 3 pm wind speed and direction for the Perth airport weather station. The prevailing afternoon wind will blow fugitive noise and dust emissions to the nearest residence (210 m east).



9 am
26262 Total Observations

Calm 13%

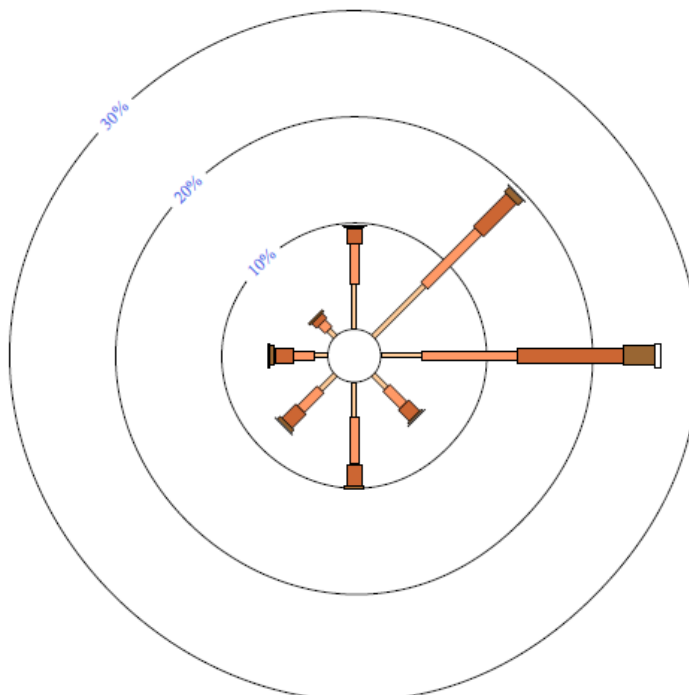
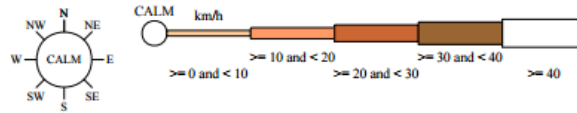


Figure 1: Perth Airport 9 am average wind speed and direction showing bias to easterly winds



3 pm
26246 Total Observations

Calm 4%

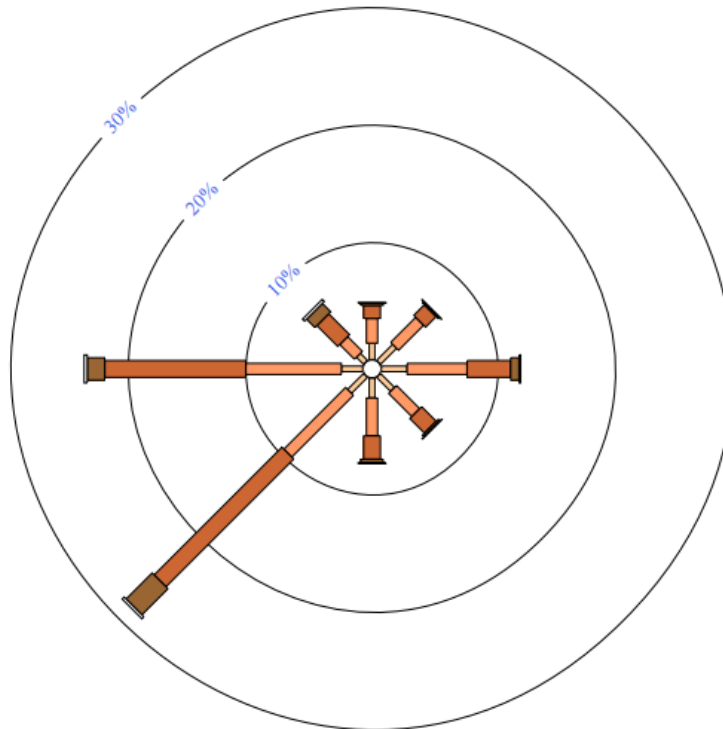


Figure 2: Perth Airport 3 pm average wind speed and direction showing bias to westerly and south to southwesterly winds

“It is important to note that these wind roses show historical wind speed and wind direction data for Perth airport weather station and should not be used to predict future data”.

7.6.2 Rainfall and temperature

The Perth area is characterised by cool wet winters and warm dry summers. Royal Australian Air Force's Base Pearce (Pearce) is the nearest weather station to the Premises. The Pearce weather station is located approximately 1.9 km from Bullsbrook, providing weather data most representative of the Premises. BoM (2017) provides the mean rainfall and maximum temperatures for Pearce weather station as depicted in Figure 5: Mean maximum temperature and mean rainfall for the Pearce Airforce Base weather station (mean rainfall 1937 to 2017 and mean maximum temperature 1940 to 2017).

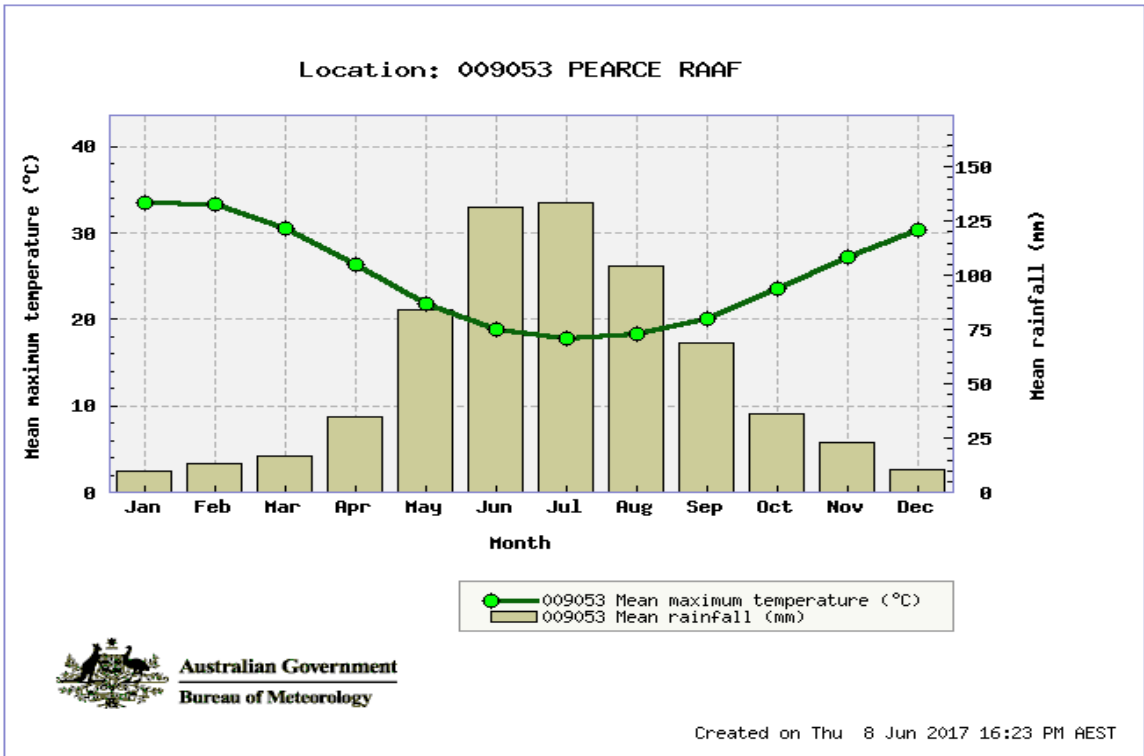


Figure 5: Mean maximum temperature and mean rainfall for the Pearce Airforce Base weather station.

8. Risk assessment

8.1 Determination of emission, pathway and receptor

In undertaking its risk assessment, DER 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 10.

The identification of the sources, pathways and receptors to determine Risk Events are set out in Tables 10 below.

Table 10: 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			
Waste acceptance and handling	Acceptance and handling of waste	Dust	Closest residential premises is located approximately 40m away from the eastern boundary of the premises.	Air/wind dispersion	Health and amenity impacts.	Yes	See section 8.4
		Noise			Potential suppression of respiratory functions.	Yes	See section 8.5.
					Health and amenity impacts.		
	Odour	Health and amenity impacts			No	No odorous putrescible wastes proposed to be accepted; no odour source	
	Construction and demolition inert waste contaminated with asbestos containing materials and/or fibres	Asbestos fibres from non-conforming waste types at the Premises being released into the air and included in final product.			Health impacts	Yes	See section 8.6
Processing of green-waste and timber	Chipping and downsizing of green waste	Dust	Air / wind dispersion	Health and amenity impacts.	Yes	See section 8.4	
		Noise		Potential suppression of respiratory functions.	Yes	See section 8.5	
			Air / wind dispersion	Health and amenity impacts.			

Risk Events					Continue to detailed risk assessment	Reasoning	
Sources/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts			
	Storage of green-waste	Leachate to the ground	Contamination of ground adjacent to hardstand area	Direct discharge	Soil contamination inhibiting vegetation growth and survival, increase in soil nutrient levels and growth of weeds.	Yes	See section 8.7
		Leachate to ground water	Groundwater dependent ecosystems, subterranean fauna	Direct discharge	Groundwater contamination	Yes	See section 8.7
Stockpiling	Unprocessed and processed waste stockpiled onsite.	Dust	Closest residential premises is located approximately 40m away from the eastern boundary	Air / wind dispersion	Health and amenity impacts. Potential suppression of respiratory functions.	Yes	See section 8.4
		Asbestos fibres from non-conforming waste types at the Premises being released into the air and included in final product.	Closest residential premises is located approximately 40m away from the eastern boundary		Health impacts	Yes	See section 8.6
Vehicle Movements	Vehicular movement	Dust	Closest residential premises is located approximately 40m away from the eastern boundary	Air / wind dispersion	Health and amenity impacts. Potential suppression of respiratory functions.	Yes	See section 8.4

Risk Events					Continue to detailed risk assessment	Reasoning	
Sources/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts			
		Noise	Closest residential premises is located approximately 40m away from the eastern boundary	Air / wind dispersion	Health and amenity impacts.	Yes No	See section 8.5
Storage of used tyres	Fire within the premises resulting in the combustion of used tyres	Air emissions	Closest residential premises is located approximately 40m away from the eastern boundary	Air / wind dispersion	Amenity and health impacts	Yes	See Section 8.8
		Emission of firefighting water to the ground	Soil and groundwater	Discharge to land; infiltration to groundwater	Land and groundwater contamination.	Yes	See Section 8.9

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 11 below.

Table 11: 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

DER will undertake an assessment of the consequence and likelihood of the Risk Event in accordance with Table 12 below.

Table 12: 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	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> onsite impacts: low level offsite impacts local scale: minimal offsite impacts wider scale: not detectable Specific Consequence Criteria (for environment) likely to be met 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> onsite impact: minimal Specific Consequence Criteria (for environment) met 	<ul style="list-style-type: none"> 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, DER 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

DER will determine the acceptability and treatment of Risk Events in accordance with the Risk treatment table 13 below:

Table 13: Risk treatment table

Rating of Risk Event	Acceptability	Treatment
Extreme	Unacceptable.	Risk Event will not be tolerated. DER 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 – Dust Emissions

8.4.1 Description of Dust

The operations on site have the potential to generate dust. Dust emissions can vary substantially from day to day, depending on the level of activity, the specific operations (mainly handling of construction and demolition material and processing of green waste), and the prevailing meteorological conditions.

8.4.2 Identification and general characterisation of emission

Particulate Matter (**PM**) and coarse particles may be generated due to truck and vehicle movement on unsealed surfaces, the acceptance, handling of C&D Waste, from dust lift off in the stockpiling of waste and products and dust emission from the downsizing of green-waste and timber operations

8.4.3 Description of potential adverse impact from the emission

Dust emissions can be harmful to human health and the environment. Elevated total suspended particulates (TSP) can impact ambient environmental quality resulting in amenity impacts and can smother vegetation. Particulate matter that are less than 10 (PM₁₀) or 2.5 (PM_{2.5}) micrometres in diameter can be drawn deep into the lungs causing human health impacts. The chemical and physical properties of the particles, the size of the particles and the duration of exposure are all factors which may affect human health.

Other potential impacts from dust and particulate emissions include increased degradation of local air quality. Nuisance impacts on the comfort and amenity of residential receptors located as close as 40m from the eastern boundary. Minor quantities of construction and demolition material may be dropped during the public opening hours but waste may be loaded during operating hours during the week.

8.4.4 Criteria for assessment

The Australian *National Environmental Protection Council* has developed national ambient air quality standards as per National Environmental Protection Measures (NEPM) for ambient air quality.

The NEPM air quality criteria applicable to air quality within residential areas is a goal for PM₁₀ of 50 µg/m³ over one day averaging period with the maximum allowable exceedance not more than 5 days a year.

8.4.5 Applicant/Licence Holder controls

This assessment has reviewed the controls set out in Table 194 below.

Table 14: Proposed controls for dust

Control	Description
Infrastructure	Most of the areas will be sealed and maintained Skip bins with covers to store non-conforming waste
Management	The premises will be secured when unattended; No more than 200 tonnes of waste will be stored at the premises at any one time. Public operating hours will be limited to Wednesday to Sunday and waste will be handled, processed and removed during weekday hours; Travel at 8 km per hour, signposted at appropriate locations; Traffic will be directed across fully sealed roads and one directional; All roadways within the site will be regularly checked and maintained to avoid any build-up of dust through regular road sweeper management programs; Exposed soil will be wetted down through water carts to mitigate dust while the area around the facility is largely mulched; Stockpiled waste products (including green-waste and timber) will be wetted down regularly to reduce dust risk; Demolition and Construction stockpile waste will not exceed 4 m in height; and Demolition and Construction products transported off site will be required to be wetted down prior to loading.

8.4.6 Key findings

The Delegated Officer has reviewed the information regarding dust impact from the premises and has determined that:

1. The nearby residence can be potentially impacted from dust emissions from the operations onsite since they are located approximately 40m away from the eastern boundary;
2. No more than 200 tonnes of waste will be stored at the premises at any one time;
3. The entire facility will have sealed surfaces extending from access driveways through to drop-off points and exit routes; and
4. The risk event is acceptable subject to multiple regulatory controls.

8.4.7 Consequence

Based upon the Applicant proposed controls as well as regulatory controls, the Delegated Officer has determined that the impact of dust on the neighbouring residence during operation will be minimal. Therefore, the Delegated Officer considers the consequence to be **Minor**.

8.4.8 Likelihood of Risk Event

Based upon the controls at the Premises the Delegated Officer has determined that the likelihood of minor impacts during operation will probably occur sometime. Likelihood is reduced based on operating hours per week. Therefore, the Delegated Officer considers the consequence to be **Possible**.

8.4.9 Overall rating of Dust

The Delegated Officer has compared the consequence and likelihood ratings described above through the Risk Matrix (11) and determined that the overall rating for the risk of dust impacts on sensitive receptors during operation is **Moderate**.

8.5 Risk Assessment – Noise

8.5.1 Description of Noise

Noise will be generated from the operation of equipment such as excavator loading construction and demolition waste, from vehicle traffic on site, and downsizing of green waste and timber (chipping equipment) during the operating hours. Noise has the potential to impact amenity for people. Weekend noise may result from vehicles dropping off wastes. Processing of green waste (chipping) and removal of wastes from the premises will be undertaken during weekday operating hours.

8.5.2 Identification and general characterisation of emission

General operation of heavy machinery within the Premises, as well as noise emitted from vehicle movements (including reversing beepers) associated with the general handling of waste and the explicit operation of green waste processing equipment at the Premises. No noise modelling or no sound power rating information for noise generating equipment was provided. It is possible that the noise levels at the boundary could exceed the assigned noise levels, as per the *Environmental Protection (Noise) Regulations 1997*. Noise levels may also exceed assigned levels during daytime on Sundays and public holidays.

8.5.3 Description of potential adverse impact from the emission

Industrial noise can cause health issues at various levels. The higher the noise levels the more severe noise can impact on someone's reduced health, well-being and comfort of sensitive noise receptors (residential dwelling) located approximately 40 m from the eastern boundary of the premises.

8.5.4 Criteria for assessment

The current applicable criteria for noise emission levels are detailed in the *Environmental Protection (Noise) Regulations 1997 (Noise Regulations)*.

8.5.5 Applicant/Licence Holder controls

The Applicant's controls to manage noise emissions are set out in Table 1915 below.

Table 15: Proposed controls for Noise Emissions

Control	Description
Infrastructure	<ul style="list-style-type: none"> The disposal and storage area for C&D waste and green-waste is constructed of 400 mm compacted base using recycled crushed concrete road base material. The siting of the operations will be undertaken on the western side of Lot 6, providing a 210 m separation distance to the nearest residence.
Vehicles	<ul style="list-style-type: none"> Vehicles will be restricted to a maximum speed of 8km/hour at the site. Vehicle movements within the facility will be managed using ring-roads and contra flow
Raw material storage, handling and processing	<ul style="list-style-type: none"> Waste acceptance and the operation of equipment and machinery on site will be restricted to operational hours only. Noise reducing workplace procedures will be adopted such as slow unloading of materials from the lowest height possible. No processing of C&D material proposed at the premises. Green waste processing (chipping) will be undertaken on week days, excluding public holidays.
Maintenance	<ul style="list-style-type: none"> All equipment and machinery will be maintained in good working condition.
Monitoring	<ul style="list-style-type: none"> Management of noise will be implemented by site personnel to ensure noise is compliant with the <i>Environmental Protection (Noise) Regulations 1997</i>.

8.5.6 Key findings

The Delegated Officer has reviewed the information regarding noise impact from the premises and has determined that:

- Noise producing works will only be undertaken during normal hours (07:00 to 19:00 hours Monday to Saturday as defined in the Noise Regulations).
- The nearby residence can be potentially impacted from noise generating activities at the premises onsite since they are located approximately 40 m away from the eastern boundary (210 m from the operations).
- The risk event is acceptable subject to multiple regulatory controls, and
- The provisions of the Environmental Protection (Noise) Regulations 1997 are sufficient to regulate noise and dust emissions during operation.

8.5.7 Consequence

The noise emissions from the operation could go above the assigned noise levels at the boundary of the premises, therefore the Delegated Officer has determined that relevant criteria are at risk of not being met and a low level impact can occur at local scale. 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 the closest residential receptor will be possible, as doors may not be kept closed all times chipping equipment is being operated. Therefore the Delegated Officer considers the likelihood of a negative impact from noise emissions to be **Possible**.

8.5.9 Overall rating of noise emission

The Delegated Officer has compared the consequence and likelihood ratings described above through the Risk Matrix (11) and determined that the overall rating for the risk of noise emissions on sensitive receptors during operation is **Medium**.

8.6 Risk Assessment – Asbestos

8.6.1 Description of Asbestos

Asbestos was used extensively in Australian buildings and structures from the 1950's through to 1990. Due to this widespread use, there is the potential for C&D wastes to contain asbestos fibres.

8.6.2 Identification and general characterisation of emission

Dust can be generated when C&D waste is received and handled at the Premises and when recycling companies are undertaking recovery activities of dry bulk materials. The use of heavy machines to load C&D waste for off-site transportation purposes will likely generate dust on site.

8.6.3 Description of potential adverse impact from the emission

There is potential for asbestos fibres to become airborne when sorted onsite, impacting on the residential property located approximately 40m away from the eastern boundary. Asbestos is a hazardous material that can cause mesothelioma, asbestosis or lung cancer.

8.6.4 Criteria for assessment

Asbestos content in final product is specified in DER's Asbestos Guidelines which specifies that any product deemed to contain 0.001% weight for weight must be treated as waste, deemed as potentially contaminated material and considered for off-site disposal, or it should be subject to further actions to remediate it or demonstrate its acceptability by further assessment.

8.6.5 Applicant/Licence Holder controls

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

Table 16: Proposed controls for asbestos waste accepted on-site

Control	Description
Infrastructure	All non-conforming waste will be placed in 660L skip bins within the premises for disposal at an approved facility.
Management	The premises will be secured when unattended; No wastes containing asbestos materials will be accepted at the premises; A controlled site entrance that includes trained and experienced personal to identify non-compliant loads; Signs at the entrance to the facility outlining wastes that will be accepted and those wastes that will not be accepted; Non-conforming wastes will be quarantined prior to removal; No crushing or screening of C & D material to be undertaken at the premises; A data management system at the gate that records the type, weight, source and

Control	Description
	customer for each waste load; A radio communication system linking the gate staff and operational staff at the drop off zones; Staff members will be located at the tipping area as “spotters” to identify non-compliant waste materials; and Operators of mobile machinery will also be trained in identifying contaminated loads.

8.6.6 Key findings

The Delegated Officer has reviewed the information regarding asbestos fibre impacts from the Premises and has determined:

1. The Licence Holder does not plan to receive asbestos containing wastes at the facility.
2. The Licence Holder will not process C&D material at the premises, which will reduce the risk of asbestos dust emissions.
3. There is potential for asbestos fibres to become airborne onsite if received, impacting on the residential property located approximately 40m away from the eastern boundary.
4. That the Licence Holder must ensure compliance with the management procedure outlined in DER’s Asbestos Guidelines.

8.6.7 Consequence

If the asbestos fibres become airborne, then the Delegated Officer has determined that the impact of asbestos exposure would be a **Severe** consequence with potential loss of life.

8.6.8 Likelihood of Risk Event

Taking into consideration the controls in place by the Licence Holder and the Licence conditions to manage asbestos wastes, the Delegated Officer has determined that health impacts from asbestos exposure will be **Unlikely** to occur.

8.6.9 Overall rating of Asbestos

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 11) and determined that the overall rating for the risk of being adversely exposed to the non-conforming asbestos wastes is **High**.

8.7 Risk Assessment – Leachate Impacts

8.7.1 Description of Leachate

The most significant impact of processing green waste on the surrounding environment and groundwater has been consistently identified as arising from leachate. Leachate can also originate from wastes not adequately banded or stored (e.g. non-conforming wastes, batteries and used oil). The leachate composition from the transfer station can vary depending on several factors, including the degree of compaction, waste composition, climate and moisture content in waste.

8.7.2 Identification and general characterisation of emission

Leachates which may contain organic compounds and/or a high biological oxygen demand and nutrient concentrations being generated from green waste stored at the premises if

stored for extended periods on a permeable surface. Leakage from battery storage will be acidic while used oils contain hydrocarbons and potentially heavy metals. Leachate discharges can enter the environment through runoff of contaminated storm-water from waste storage.

8.7.3 Description of potential adverse impact from the emission

There is potential for the contamination of the land surrounding the green-waste, the surface water drainage system and the groundwater.

The depth to ground water is approximately 1.8 to 2.9 mbgl. The Department of Water Perth Atlas indicates the area is not suitable to install garden bore. According to the DER GIS (GISviewer) application (WIN BORE layer), there are two bores on the property; these have total dissolved solids at levels greater than 240,000mg/L. The application supporting material identifies a soil profile that consists of topsoil over Bassendean Sand which is underlain by coffee rock and Guildford clays with a moderate to low risk of acid sulfate soil or potential acid sulfate soils at depth of greater than 3 mbgl. These soils are considered to be of low to moderate risk of acid sulfate soils (ASS) or potential acid sulfate soils (PASS).

8.7.4 Criteria for assessment

Relevant land and groundwater quality criteria include the *ANZECC and ARMCANZ, 2000* for freshwater and marine waters, the *Landfill Waste Classification and Waste Definitions 1996* and *ASC NEPM*.

The Premises is also subject to the Unauthorised Discharge Regulations.

8.7.5 Applicant/Licence Holder controls

This assessment has reviewed the controls set out in Table 17 below.

Table 17: Proposed leachate controls

Control	Description
Infrastructure	All waste capable of producing leachate will be stored in skip bins, on hardstand areas with suitable bunding, in shipping containers and undercover sheds within the premises; The ground surface at the facility consists of sealed impermeable concrete material; and Prevention of stormwater ingress into dry bulk waste receival areas through bunding and stormwater diversion system.
Management	The premises will be secured when unattended; No more than 200 tonnes of waste will be stored at the premises at one time; and Green waste material received at the site will be placed on a hardstand and will not undergo any composting or windrowing process but will instead be chipped, downsized and removed within 48 hours from site by City of Swan contractors.

8.7.6 Key findings

The Delegated Officer has reviewed the information relating to leachate entering the environment and has found:

1. Leachate producing wastes will be stored on hardstands and covered where appropriate;
2. That the infrastructure is suitable to containing leachate emissions and diverting storm water;

3. No sensitive receptors have been identified (area not suitable for installation of garden bores and groundwater is hypersaline) that could be impacted by any emissions; and
4. All green waste received on site will be processed and removed on weekdays. While the Licence Holder proposes to store green waste for up to 48 hours prior to removal, this may not be practical when considering public holidays. Allowing the storage for three working days will not increase the risk profile while still constraining chipping (processing) to week days.

8.7.7 Consequence

Based on the information detailed above the Delegated Officer has determined that the impact of leachate from the waste processing and storage areas will have minimal off-site impacts on a local scale. Therefore, the Delegated Officer considers the consequence to be **Minor**.

8.7.8 Likelihood of Risk Event

Taking into consideration the controls in place by the Licence Holder and the Licence conditions to manage wastes, the Delegated Officer has determined that health impacts from asbestos exposure will be **Unlikely** to occur.

8.7.9 Overall rating of Leachate

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 11) and determined that the overall rating for the risk of being adversely exposed to the non-conforming asbestos wastes is **Moderate**.

8.8 Risk Assessment – Air Emissions during Fire

8.8.1 Description of Air Emissions during Fire

During an unplanned fire (upset conditions) within the premises, emissions from burning wastes stored on site (green-waste, tyres etc.) could cause health impacts of residential receptors (residential dwelling) located approximately 40 m from the eastern boundary of the premises.

8.8.2 Identification and general characterisation of emission

The risk of fire has been demonstrated by a number of tyre and landfill fires that occurred in Western Australia and across the country. The intense radiant heat can cause damage to neighboring properties and inhibit fire-fighting efforts, and the incomplete combustion of tyres can cause a health risk from the inhalation of particulates. Tyre fires are very difficult to extinguish and are dangerous to firefighters. The volumes of tyre being stored on site will be below the threshold for regulation as a used tyre facility (category 57 EP Regulations, Schedule 1), which will influence the likelihood or duration of any tyre fire.

Green waste fires will also generate smoke. A fire can also spread to neighbouring properties.

8.8.3 Description of potential adverse impact from the emission

In the event of a fire associated to tyres, timbers and green waste, smoke would be released causing amenity and public health impacts. The inhalation of particulate matter can cause respiratory distress. Emissions generated from combustion of the tyres will contain a number of pollutants including particulate matter (PM), sulfur dioxide (SO₂), polyaromatic hydrocarbons (PAHs) and elemental carbon. These compounds can cause amenity and health impacts. A residential premises is located approximately 40m away from the eastern boundary from the premises.

8.8.4 Criteria for assessment

The National Environment Protection (Ambient Air Quality) Measure (NEPM) 2003 recommends air quality standards that must be maintained. The smoke that is being emitted during a fire contains mostly very fine particles that can cause significant health impacts. The NEPM contains a criterion for these fine particles (PM_{2.5}).

8.8.5 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.

This assessment has reviewed the controls set out in Table 18 below.

Table 18: Proposed controls for fire management

Control	Description
Infrastructure	The site will have: water hose connections with sufficient fire-fighting capacity; Six DCP fire extinguishers (9 kg each); One foam fire extinguisher (9 litres); A road based hard stand area for storing tyres; 1.8m high chain wire mesh fence around the tyre storage area(6mx6mx6m);
Management	The premises will be secured when unattended; Not more than 100 tyres will be stored at any one time; Tyre stockpiles will not obscure any firefighting protection equipment; All stored tyres will be separated by a minimum distance of 6m from any flammable material; A five metre firebreak is maintained around the green waste storage area at all times; Green waste received on site will be processed and removed within 48 hrs by City of Swan contractors; and No burning of waste is permitted on site.

8.8.6 Key findings

The Delegated Officer has reviewed the information regarding the impact of air emissions generated during a fire and has found:

1. Green waste and timber storage capacity on site needs to be regulated to minimise any fire risk
2. Tyre storage restrictions can reduce the risk of impacts from fire;
3. Storage of whole tyres can be regulated through the conditions of the licence;
4. The risk event is acceptable subject to regulatory controls.

8.8.7 Consequence

If smoke emissions are released from a fire within the premises, then the Delegated Officer has determined that the impact of emissions of this fire will be of short term adverse health effects requiring medical treatment. Impact to amenity can also be expected for short periods.

Therefore, the Delegated Officer considers the consequence of air emissions during fire to be **Minor**.

8.8.8 Likelihood of consequence

The Delegated Officer has determined that the likelihood of air emissions during a fire causing negative health impacts is unlikely to occur in most circumstances. Therefore, the Delegated Officer considers the likelihood of air emissions during a fire causing negative health impacts to be **Unlikely**.

8.8.9 Overall rating of Air Emissions during Fire

The Delegated Officer has compared the consequence and likelihood ratings described above with the Risk Rating Matrix (Table 11) and determined that the overall rating for the risk of negative health impacts from air emissions during a fire is **Moderate**.

8.9 Risk Assessment – Liquid Emissions from a Tyre Fire

8.9.1 Description of Liquid Emissions from a Tyre Fire

During a fire within the premises, pyrolytic oils and contaminated firefighting water is discharged to ground and potentially causing the soil and groundwater to be contaminated.

8.9.2 Identification and general characterisation of emission

During a tyre fire, pyrolytic oils containing hydrocarbons, metals and particulate matter can be generated. In addition, the use of firefighting foams could result in perfluorooctanoic acid (PFOA) and per- and poly-fluoroalkyl substances (PFAS), surfactants, organic solvents, and corrosion inhibitors being discharged to the environment.

8.9.3 Description of potential adverse impact from the emission

The discharged materials do not break down readily in the environment or in humans and can contaminate land, surface water, or groundwater. This can then have negative health impacts to users of the water or of the land. PFAS are highly persistent in the environment, moderately soluble, can be transported long distances (in some cases many kilometres) and transfer between soil, sediment, surface water and groundwater.

PFAS have been shown to be toxic to some animals, and because they don't break down they can bioaccumulate and biomagnify in some wildlife. This means that animals higher in the food chain may accumulate high concentrations of PFAS in their bodies.

The impact of a risk event is reduced by the number of tyre to be stored and the proposed storage controls.

8.9.4 Criteria for assessment

Australian water quality guidelines (ANZECC and ARMCANZ 2000) provide recommended trigger values for freshwater and marine water. DER Guideline: Assessment and Management of Contaminated Sites provide ecological and human health assessment levels for soil.

The Applicant's controls to manage pyrolytic oils and firefighting water are set out in Table 199.

Table 19: Proposed controls for Liquid Emissions from a Tyre Fire

Control	Description
Infrastructure	Under normal operating conditions, uncontaminated storm water is collected

Control	Description
	<p>from the premises via a system of storm water drains and is discharged to the City of Swan's storm water system.</p> <p>In order to contain and prevent contaminated firefighting water discharging to the storm water drainage system and the environment, the following controls have been proposed by the Applicant:</p> <ul style="list-style-type: none"> • The tyre storage area is compacted road base hardstand surface and will be restricted to an area of 36m²; and • Store less than 100 tyres;
Management	<ul style="list-style-type: none"> • Contaminated firefighting water contained in the bunded yard area will be collected and transported and disposed of off-site by a licensed contractor.

8.9.5 Key findings

The Delegated Officer has reviewed the information regarding the groundwater impacts from Liquid Emissions from a Tyre Fire and has found:

1. The Delegated Officer considers that based on the number of tyres to be stored on site and the infrastructure for storing tyres the risk events is acceptable subject to Licence Holder proposed controls.

8.9.6 Consequence

If liquid emissions from a tyre fire are released to the environment, then the Delegated Officer has determined that this can cause contamination of soil and groundwater such that relevant criteria are at risk of not being met and a low level impact can occur at local scale. Therefore, the Delegated Officer considers the consequence of liquid emissions from a tyre fire to be **Minor**.

8.9.7 Likelihood of consequence

The Delegated Officer has determined that the likelihood of liquid emissions from a tyre fire causing a negative impact on the soil and groundwater may occur in exceptional circumstances due to the numbers of tyre to be stored and Applicant's controls. Therefore the Delegated Officer considers the likelihood of a negative impact on soil and groundwater from liquid emissions from a tyre fire to be **Rare**.

8.9.8 Overall rating of liquid Emissions during Fire

The Delegated Officer has compared the consequence and likelihood ratings described above through the Risk Matrix (Table 11) and determined that the overall rating for the risk of liquid emissions from a tyre fire during operation is **Low**.

8.10 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 20 below. Controls are described further in section 10.

Table 20: Risk assessment summary

	Description of Risk Event			Applicant controls	Risk rating	Acceptability with controls (conditions on instrument)
	Emission	Source	Pathway/ Receptor (Impact)			
1.	Dust	Waste acceptance handling, reclaiming, vehicle movement, downsizing operation and dust lift off /spillage from stockpiles.	Air/Wind	Infrastructure and management controls	Minor consequence Possible likelihood Medium Risk	Acceptable subject to Licence Holder controls being conditioned and regulatory controls
2.	Noise	Waste acceptance handling, reclaiming, vehicle movement, downsizing operation using chainsaw.	Air/Wind	Infrastructure and management controls	Moderate consequence Possible likelihood Medium Risk	Acceptable subject to Licence Holder controls being conditioned and regulatory controls
3.	Asbestos	Stockpiles, stacking and reclaiming	Air/wind	Infrastructure and management controls	Severe consequence Unlikely likelihood High Risk	Acceptable subject to Licence Holder controls being conditioned and regulatory controls
4.	Leachate	Contaminated stormwater	Direct discharge Direct stormwater to marine environment causing impacts on water quality and visibility and on the surrounding environment	Infrastructure and management controls.	Minor consequence Unlikely Medium risk	Acceptable subject to Licence Holder controls being conditioned and regulatory controls
5.	Air emissions from a fire at the WTS	Burning tyres, green-waste and timber	Air/wind	Infrastructure and management controls	Minor consequence Likely likelihood Medium Risk	Acceptable subject to regulatory controls.

	Description of Risk Event			Applicant controls	Risk rating	Acceptability with controls (conditions on instrument)
	Emission	Source	Pathway/ Receptor (Impact)			
6.	Liquid emissions from a fire at the WTS	Firewater	Direct discharge	Infrastructure and management controls	Minor consequence Rare likelihood Low Risk	Acceptable subject to Licence Holder controls being conditioned as regulatory controls

9. Regulatory controls

A summary of regulatory controls determined to be appropriate for the Risk Event is set out in Table 21. The risks are set out in the assessment in section 8 and the controls are detailed in this section. DER 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 21: Summary of regulatory controls to be applied

		Controls (references are to sections below, setting out details of controls)				
		9.1.1 Throughput Restrictions	9.1.2 Waste restriction and waste acceptance	9.1.3 Infrastructure and equipment	9.1.4 Asbestos Management	9.1.4 Leachate Management
Risk Items (see risk analysis in section 8)	1. Dust	●	●	●	●	●
	2. Noise from infrastructure and operations	●		●		
	3. Asbestos from acceptance/handling and stockpiling	●	●	●	●	
	4. Leachate	●		●		●
	5. Air Emissions	●	●	●	●	
	6. Liquid Fire Water Emissions	●	●	●		

9.1 Licence controls

9.1.1 Throughput restrictions

The Licence Holder shall be subject to total annual volume limitations of throughput of up to 7,000 tonnes of **Solid Waste (category 61a)**, and no more than 10,000 tonnes of **Solid Waste (Category 62)** at the transfer facility per annual period for storing, or sorting, pending final disposal or re-use.

The Licence Holder should record volumes of incoming and outgoing waste and report to the CEO at the end of each quarter.

Grounds: The likelihood of dust, noise and asbestos emissions is related to the throughput at the Premises. Throughput influences the rate of handling of materials, turnover of stockpiles, number of vehicle movements and the length of time machinery is operational. All of these activities are sources of noise, dust and potentially asbestos emissions.

Controls requiring ongoing monitoring and reporting allow DER to determine compliance with these conditions.

9.1.2 Waste restrictions and waste acceptance

The Licence Holder shall only accept Inert Waste Type 1 that does not contain visible asbestos. The Licence Holder should comply with a number of acceptance criteria including 'no asbestos' clauses in contracts, maintaining visible signage at the Premises and obtaining signed declarations from suppliers. The Licence Holder should visually inspect loads as they arrive, reject loads suspected of containing asbestos and maintain accurate records.

Note: These controls are derived from DER's Asbestos Guidelines, which the Licence Holder has implemented as part of its *Asbestos Management Plan (2015)*, and *Asbestos Sampling and Testing Procedures (2015)*.

9.1.3 Infrastructure and equipment requirements

The operational controls, infrastructure and equipment identified in Table 4 should be maintained and operated onsite to manage risk associated with potential emissions and discharges.

9.1.4 Management controls

Management controls will be contained in the licence regarding the green waste and tyre storage specifications and management actions for firewater and leachate.

Conditions include the following as derived from Applicant controls for the premises.

Table 22: Management Controls in the Licence conditions

Control	Description
Management	<p>The premises must be secured when unattended;</p> <p>Not more than 2,500m³ of green waste and timber are stored at the Premises at any one time for processing;</p> <p>Processed green wastes are stored on a crushed gravel lined area, at a maximum size of 50 metres length, 20 metres wide and three metres high;</p> <p>A five metre firebreak is maintained around the green waste storage area at all times;</p> <p>Waste is not allowed to be burnt on site;</p>

Control	Description
	<p>Green waste not to be stored at the premises for more than three working days;</p> <p>Not more than 100 tyres will be stored on site;</p> <p>Tyre storage must be a minimum of 6m from any combustible materials;</p> <p>Construction and demolition waste will not be allowed to exceed 4 m in height;</p> <p>All waste stock piles and any unsealed surfaces will be wetted down during operations;</p> <p>All waste products being removed from the premises and are capable of emitting dust will be wetted down prior to loading; and</p> <p>Speed limits for any vehicles throughout the premises will be 8km/h.</p>

10. Determination of Licence conditions

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

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

Table 23 provides a summary of the conditions to be applied to this licence.

Table 23: Summary of conditions to be applied

Condition Ref	Grounds
Emission Condition 1	This condition is valid, risk-based and consistent with the EP Act.
Infrastructure and Equipment 2	These conditions are valid, risk-based and contain appropriate controls (see section 9 of this decision report).
Throughput restrictions 3, 4, 5, and 6	These conditions are valid, risk-based and contain appropriate controls (see section 9 of this decision report).
Waste type restrictions and waste classification 7, 8, 9, 10, 11, and 12	These conditions are valid, risk-based and contain appropriate controls (see section 9 of this decision report).
Operational controls 13 – 28	These conditions are valid, risk-based and contain appropriate controls (see section 9 of this decision report).
Acceptance and load inspection 29 - 33	These conditions are valid, risk-based and contain appropriate controls (see section 9 of this decision report).
Stockpile Management 33 - 37	These conditions are valid, risk-based and contain appropriate controls (see section 9 of this decision report).
Record Keeping 38 - 43	These conditions are valid and are necessary administration and reporting requirements to ensure compliance.

DER notes that it may review the appropriateness and adequacy of controls at any time and that, following a review, DER may initiate amendments to the [licence/works approvals] under the EP Act.

11. Applicant's comments

The Applicant was provided with the draft decision report and draft licence on 19 June 2017. The Applicant provided a response on the draft on TBA 2017.

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 a Licence will be granted subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements..

Alan Kietzmann
Manager Licensing (Waste Industries)

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

Appendix 1: Key documents

	Document title	In text ref	Availability
1.	Works Approval W5969/2016/1– City of Swan Waste Transfer Station	W5969/2016/1	DER records (A1123380)
2.	DER, July 2015. <i>Guidance Statement: Regulatory principles.</i> Department of Environment Regulation, Perth.	DER 2015a	accessed at www.der.wa.gov.au
3.	DER, October 2015. <i>Guidance Statement: Setting conditions.</i> Department of Environment Regulation, Perth.	DER 2015b	
4.	DER, August 2016. <i>Guidance Statement: Licence duration.</i> Department of Environment Regulation, Perth.	DER 2016a	
5.	DER, November 2016. <i>Guidance Statement: Risk Assessments.</i> Department of Environment Regulation, Perth.	DER 2016b	
6.	DER, November 2016. <i>Guidance Statement: Decision Making.</i> 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	DER response
Opening hours (Section 4.1 of Decision Report)	Can you please alter from 7am to 4pm to 8am to 4.30pm?	Changed
Bunded area for storing tyres (table 18&19 of Decision Report)	Area currently fenced off, do we require bunding as this wasn't specified in the Works Approval?	While tyre storage was not specified in the Works Approval application bunding requirement however has been removed.
Green Waste storage(table 17 & table 18 of Decision Report)	Post wood chipping green waste, would that be ok to remove the downsized green waste within 48 hours instead of by the same day?	Changed to within 48 hours
Section 7.1 of Decision Report	Bullsbrook Material Recovery Centre is now called Recycling Centre Bullsbrook, can you please revise the naming?	Changes made to the Licence document and the decision document.
Table 8 of Decision Report	Walley Jones Park is located 4.5km to north east of the Recycling Centre Site	Table 8 in the Decision report updated
Section 3 and Table 14 of Decision Report	Please amend the wordings to "Skip bins to be fitted with covers/tarps/lids".	Wordings will remain skip bins with lids
Table 18 of Decision Report	No burning of waste is permitted on site. Does the word "site" refer to the whole property site (including the rear and side paddocks) or just the area of the Recycling Centre Footprint?	The licence has not authorised burning of waste within the premises. No information about burning waste onsite was provided with the application and suitability was therefore not assessed. An application will need to be made should the Licence Holder wish to burn certain waste types.

Attachment 1: Issued Licence L9055/2017/1
