



## Application for Licence

### Division 3, Part V *Environmental Protection Act 1986*

---

<b>Licence Number</b>	L9201/2019/1
<b>Applicant</b>	Hastie Waste Pty Ltd
<b>ACN</b>	114 505 485
<b>File Number</b>	DER2017/002090-1
<b>Premises</b>	Hastie Waste Pty Ltd 22 Pedretti Road PICTON EAST, WA 6229 Lot 509 on Plan 59719
<b>Date of Report</b>	7 June 2019
<b>Status of Report</b>	Final

# Table of Contents

<b>1. Definitions of terms and acronyms</b>	<b>1</b>
<b>2. Purpose and scope of assessment</b>	<b>3</b>
2.1 Application details	3
<b>3. Background</b>	<b>4</b>
<b>4. Overview of Premises</b>	<b>4</b>
4.1 Operational aspects	4
4.2 Infrastructure	5
4.3 Exclusions to the Premises	1
<b>5. Legislative context</b>	<b>1</b>
5.1 Contaminated sites	1
5.2 Planning approvals	1
5.3 Part V of the EP Act	1
5.3.1 Applicable regulations, standards and guidelines	1
5.3.2 Works approval and licence history	2
5.3.3 Key and recent works approvals	2
<b>6. Modelling and monitoring data</b>	<b>2</b>
6.1 Monitoring of noise emissions	2
<b>7. Consultation</b>	<b>1</b>
<b>8. Location and siting</b>	<b>1</b>
8.1 Siting context	1
8.2 Residential and sensitive Premises	1
8.3 Specified ecosystems	1
8.4 Groundwater and water sources	1
8.5 Soil type	1
8.6 Meteorology	1
8.6.1 Wind direction and strength	2
8.6.2 Rainfall and temperature	3
<b>9. Risk assessment</b>	<b>5</b>
9.1 Determination of emission, pathway and receptor	5
9.2 Consequence and likelihood of risk events	10
9.3 Acceptability and treatment of Risk Event	11
9.4 Risk Assessment – Dust	11
9.4.1 Description of dust emissions	11
9.4.2 Identification and general characterisation of emission	11
9.4.3 Description of potential adverse impact from the emission	11

9.4.4	Criteria for assessment.....	12
9.4.5	Applicant/Licence Holder controls .....	12
9.4.6	Key findings.....	13
9.4.7	Consequence .....	13
9.4.8	Likelihood of Risk Event .....	13
9.4.9	Overall rating of dust emissions.....	13
9.5	Risk Assessment – Noise Emissions.....	13
9.5.1	Description of Noise Emissions .....	13
9.5.2	Identification and general characterisation of noise emission .....	13
9.5.3	Description of potential adverse impact from the emission .....	14
9.5.4	Criteria for assessment.....	14
9.5.5	Applicant controls .....	14
9.5.6	Consequence .....	15
9.5.7	Likelihood of Risk Event .....	15
9.5.8	Overall rating of noise emissions.....	15
9.6	Risk Assessment – Asbestos .....	15
9.6.1	Description of asbestos emissions .....	15
9.6.2	Identification and general characterisation of emission.....	15
9.6.3	Description of potential adverse impact from the emission .....	15
9.6.4	Criteria for assessment.....	15
9.6.5	Applicant controls .....	16
9.6.6	Key findings.....	17
9.6.7	Consequence .....	17
9.6.8	Likelihood of Risk Event .....	17
9.6.9	Overall rating of asbestos.....	17
9.7	Risk Assessment – Odour .....	17
9.7.1	Description of odour emissions.....	17
9.7.2	Identification and general characterisation of odour emission.....	18
9.7.3	Description of potential adverse impact from the discharge.....	18
9.7.4	Criteria for assessment.....	18
9.7.5	Applicant Holder controls.....	18
9.7.6	Key findings.....	18
9.7.7	Consequence .....	19
9.7.8	Likelihood of Risk Event .....	19
9.7.9	Overall rating of odour emissions .....	19
9.8	Risk Assessment – Air emissions during fire .....	19
9.8.1	Description of air emissions during fire .....	19

9.8.2	Identification and general characterisation of emission.....	19
9.8.3	Description of potential adverse impact from the discharge.....	19
9.8.4	Criteria for assessment.....	19
9.8.5	Applicant Holder controls.....	19
9.8.6	Key findings.....	20
9.8.7	Consequence.....	20
9.8.8	Likelihood of Risk Event.....	20
9.8.9	Overall rating of odour emissions.....	20
9.9	Summary of acceptability and treatment of Risk Events.....	20
<b>10.</b>	<b>Regulatory controls.....</b>	<b>22</b>
<b>5.</b>	<b>Fire.....</b>	<b>22</b>
5.1	Licence controls.....	23
5.1.1	Throughput and waste restrictions.....	23
	• Inert waste – type 1:.....	23
	• Inert waste – type 2:.....	23
	• Putrescible waste.....	23
5.1.2	Infrastructure and equipment.....	23
5.1.3	Dust management.....	23
5.1.4	Asbestos management.....	23
5.1.5	Stockpile management.....	23
5.1.6	Noise management.....	24
5.1.7	Monitoring reports/record keeping.....	24
<b>6.</b>	<b>Determination of Licence conditions.....</b>	<b>24</b>
<b>7.</b>	<b>Applicant’s comments.....</b>	<b>25</b>
<b>8.</b>	<b>Conclusion.....</b>	<b>25</b>
	<b>Appendix 1: Key documents.....</b>	<b>26</b>
	<b>Appendix 2: Summary of Licence Holder Comments.....</b>	<b>28</b>
	<b>Attachment 1: Issued Licence L9201/2019/1.....</b>	<b>29</b>
	Table 1: Definitions.....	1
	Table 2: Documents and information submitted during the assessment process.....	3
	Table 3: Prescribed premises categories in the existing licence.....	4
	Table 4: Premises infrastructure.....	5
	Table 5: Works approval and licence history.....	2
	Table 6: Noise source.....	3
	Table 7: Noise level emissions.....	1
	Table 8: Receptors and distance from activity boundary.....	1

Table 9: Environmental values .....	1
Table 10: Groundwater and water sources.....	1
Table 11. Identification of emissions, pathway and receptors <i>during operation</i> .....	5
Table 12: Risk rating matrix.....	10
Table 13: Risk criteria table .....	10
Table 14: Risk treatment table .....	11
Table 15: Applicant’s proposed controls for dust emission .....	12
Table 16: Applicant proposed controls for Noise Emissions .....	14
Table 17: Applicant’s proposed controls for asbestos.....	16
Table 18: Applicant proposed control for odour emissions .....	18
Table 19: Risk assessment summary.....	21
Table 20: Summary of regulatory controls to be applied.....	22
Table 21: Summary of conditions to be applied.....	24

## 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
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 <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
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 <i>Public Sector Management Act 1994</i> and is responsible for the administration of the <i>Environmental Protection Act 1986</i> along with other legislation.
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	Hastie Waste Pty Ltd
m <sup>3</sup>	cubic metres
Minister	the Minister responsible for the EP Act and associated regulations
mtpa	million tonnes per annum
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.
PM	Particulate Matter
PM <sub>10</sub>	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>

## 2. Purpose and scope of assessment

An Application for a Licence (Application) was received from Hastie Waste Pty Ltd (the Applicant) to operate a category 62 solid waste depot on Lot 509 (22) Pedretti Road, Picton East (the Premises). This Decision Report presents an assessment of potential environmental and public health risks from emissions and discharges from the operation of this Premises. The application was based on the completion of premises construction in two stages under Works Approval W6107/2017/1.

As a result of this assessment, a Licence has been granted (Issued Licence) (Attachment 1).

### 2.1 Application details

The following documentation has been submitted to DWER for review as part of the application details for the proposed new licence L9201/2019/1 for the prescribed premises.

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
<p>Email: Licence Application and supporting documentation received from Heath Morgan Associate. The following attachments were included:</p> <ul style="list-style-type: none"> <li>• Application form</li> <li>• Attachment 1A – lease agreement</li> <li>• Attachment 1B – ASIC extract</li> <li>• Attachment 2 – premises boundary and site plan</li> <li>• Attachment 4 – Shire of Dardanup consultation</li> <li>• Attachment 7 – specified ecosystems and sensitive land uses</li> <li>• Attachment 8 – Environmental Management Plan, including Noise Assessment and Asbestos Management Plan</li> </ul>	28 November 2017
<p>Email from the owner, Nigel Tuia: Stage One compliance documents. The following attachments were included:</p> <ul style="list-style-type: none"> <li>• Letter from the registered builder, confirming the construction of the storage bunkers and other associated infrastructures;</li> <li>• Supporting evidence, in the form of; <ul style="list-style-type: none"> <li>○ Permit to Use the septic system and leach drain from Shire of Dardanup;</li> <li>○ Occupancy Permit BA10 and Certificate of Construction Compliance BA17 from Shire of Dardanup;</li> <li>○ Photograph of compacted hardstand, with office in the background, and prior to fence being erected</li> <li>○ Photographs of Storage Bunker during construction</li> <li>○ Engineers report on Storage Bunker</li> </ul> </li> </ul>	28 February 2019



### 3. Background

A works approval and licence application was received on 28 November 2017 from the Applicant for Prescribed Premises Category 62 (solid waste depot).

The applicant proposed the construction of a solid waste depot within lot 509 on Plan 59719, Picton East, within the Shire of Dardanup. The premises was constructed under Works Approval W6107/2017/1 (amended on 18 October 2018) for a Category 62 – solid waste depot, with a proposed throughput capacity of 30,000 tonnes per annual period.

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 62	Solid waste depot: premises on which waste is stored, or sorted, pending final disposal or re-use.	30,000 tonnes per year

### 4. Overview of Premises

#### 4.1 Operational aspects

The operations at the site are proposed to include the following equipment:

- Excavator with sorting grab (CAT 14C, CAT 320C or equivalent)
- Agri telehandler (JCB 531-70C or equivalent); and
- Forklift (2.5 tonne Toyota 42-7FG25 or equivalent).

The applicant has confirmed that the premises has been constructed, and stage 1 one of the proposed activities will include the following:

- Approximately 30 incoming inert waste trucks will primarily enter and exit from the northern gate adjacent to the Storage Bunker daily;
- Light vehicles will enter and exit from the western gate adjacent to the office.
- Waste material accepted at the facility will be unloaded and bulk sorted on a concrete Storage Bunker (10m x 39.6m reinforced concrete floor x 3.0m high concrete tilt walls) using an excavator with a sorting grab;
- Sorted waste including building rubble and sand will be stored in the concrete Storage Bunker and collected for re-use or recycling off-site
- Scrap metals will be collected by a metal recycler on an intermittent basis when a sufficient quantity is stockpiled.
- Separated waste including plastic, paper, cardboard, putrescible waste, hazardous materials and asbestos containing materials will be temporarily stored in designated storage areas and removed from the premises for recycling or disposal at an appropriate facility.
- Putrescible waste will be stored in enclosed containers within the area labelled 'Rubbish Collection'.
- Asbestos containing materials will be temporarily stored and managed in accordance with the Asbestos Management Plan prepared for the Waste Depot.

## 4.2 Infrastructure

The Premises infrastructure, as it relates to Category 62 activities, is detailed in Table 4 and with reference to the Site Plan (Figure 1 below and attached in the Issued Works Approval).

Table 4 lists infrastructure associated with each prescribed premises category.

**Table 4: Premises infrastructure**

	Infrastructure	Site Plan Reference
	<b>Prescribed Activity Category 62</b>	
Materials recovery facility/Waste transfer station		
1	Storage bunker (10m x 39.6m reinforced concrete floor x 3.0m high concrete tilt walls)	Storage bunker
2	compacted aggregated pavement within Waste Depot yard (outside Storage Bunker)	Compacted crushed aggregate surface
3	1.8m high security fence around the boundary	Boundary fence
4	Three stormwater swales (35m <sup>3</sup> , 25m <sup>3</sup> and 10m <sup>3</sup> )	Stormwater swales
4	Excavator with sorting grab	N/A – mobile equipment
5	Forklift	N/A – mobile equipment
6	Agri telehandler	N/A – mobile equipment
7	Water spray system	N/A – mobile equipment
8	Powder ABE fire extinguisher	Storage area
9	30m Fire reel with 20mm black rubber delivery hose	Near the bin set down area
10	Waste bins for the storage of separated waste including plastic, paper, cardboard, putrescible waste, hazardous materials and asbestos containing materials	in designated bin set down area

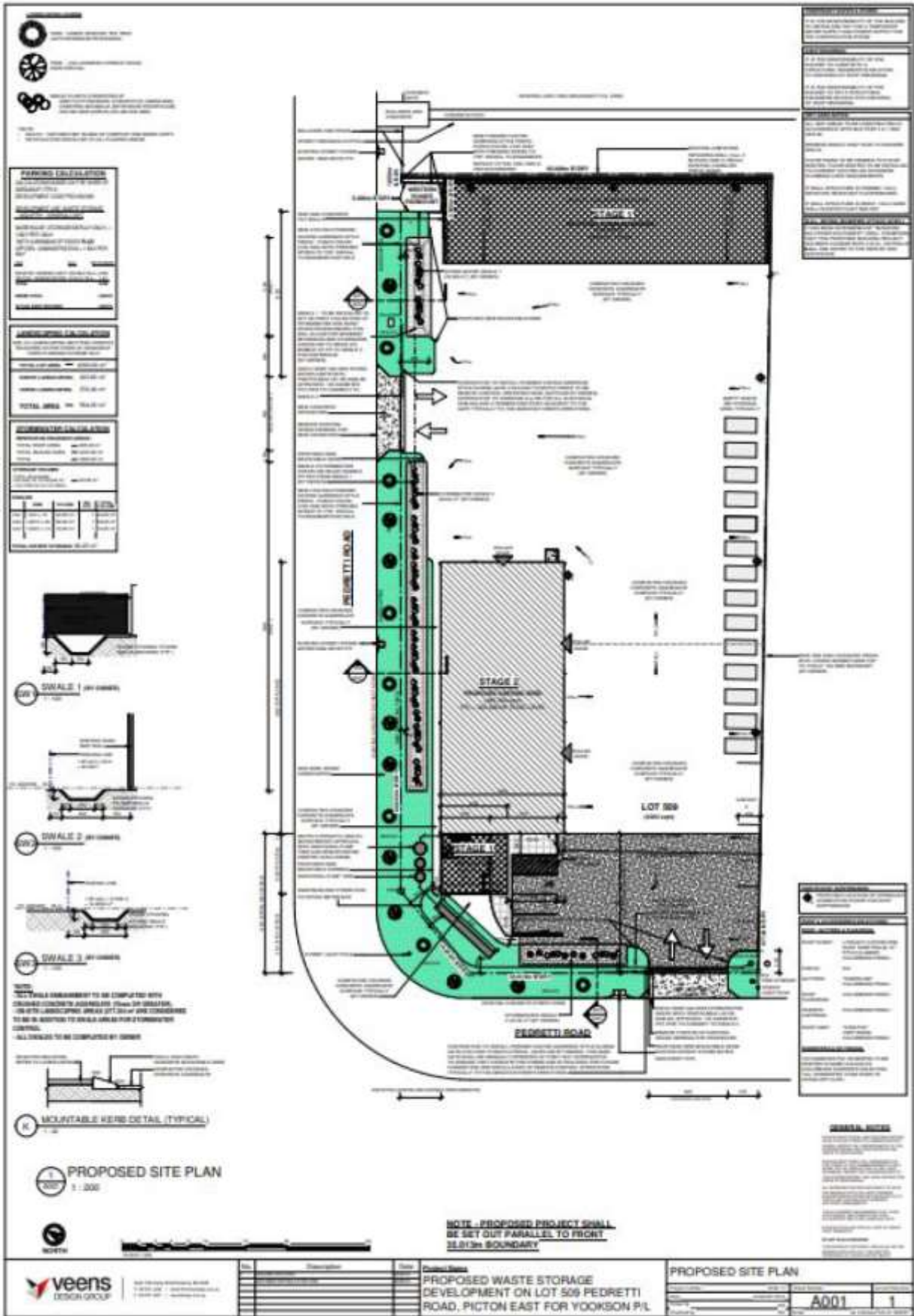


Figure 1. Site plan

## 4.3 Exclusions to the Premises

The Applicant will also be constructing the following infrastructure at the Premises which is not within the scope of this assessment:

- Office;
- Ablutions/toilet facilities;
- Septic system and leach drain; and
- Car parking area.

## 5. Legislative context

### 5.1 Contaminated sites

Lot 509 on Deposited Plan 59719 is not listed on DWER's contaminated sites database.

### 5.2 Planning approvals

The Premises are located in an area zoned as General Industry. The shire of Dardanup (The Shire) granted development planning approval on 1 June 2018 subject to a number of conditions. Supporting information provided with the compliance report shows that a certificate of compliance relating to the planning conditions was issued by the Shire on 19 February 2019.

Further advice from the Shire relating to the land use was to ensure the facility complies with:

- *The Shire of Dardanup Health Local Laws 2000. In particular*
  - *Part 4 (Waste Food and Refuse);*
  - *Part 5 (Nuisance and General, including the control of odours);*
  - *Part 6 (Pest Control)*
- *The Environmental Protection (Noise) Regulations 1997.*
- *The Environmental Protection Act 1986.*
- *The Health (Asbestos) Regulations 1992.*
- *The Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974.*

### 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: Decision Making (February 2017)*

- *Guidance Statement: Risk Assessments (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

Other applicable subsidiary legislation includes:

- *Environmental Protection (Noise) Regulations 1997*
- *Environmental Protection (Unauthorised Discharges) Regulations 2004*

### 5.3.2 Works approval and licence history

Table 5 summarises the works approval and licence history for the premises.

**Table 5: Works approval and licence history**

Instrument	Issued	Nature and extent of works approval, licence or amendment
W6107/2017/1	7/6/2018	Issued works approval
W6107/2017/1	18/10/2018	Amendment Notice 1- construct a purpose built waste depot for sorting and storage of construction and demolition waste in two stages: <u>Stage 1</u> Construction of the concrete sorting bunker <u>Stage 2</u> Construction of the storage and sorting shed
L9201/2019/1	Tba	New licence for category 62 solid waste depot

### 5.3.3 Key and recent works approvals

Works Approval W6107/2017/1 was issued to the Applicant on 7 June 2018 for a Category 62 premises. The instrument was amended on 19 October to allow for the construction of the waste depot in two stages. Compliance documentation for stage 1 work was received on 28 February 2019. DWER confirmed the requirements of the Works Approval (stage one) had been fulfilled by letter dated 28 February 2019.

## 6. Modelling and monitoring data

### 6.1 Monitoring of noise emissions

As part of the works approval application, the Applicant had provided a noise modelling report to demonstrate potential noise impacts from the operations at the proposed solid waste depot located at Lot 509 Pedretti Road, Picton East. The purpose was to assess noise emissions from the facility for compliance in accordance with the *Environmental Protection (Noise) Regulations 1997*. The proposed facility is located within the East Picton Industrial Area and the surrounding lands are zoned industrial under the Regional Planning Scheme, however a number of residences are located in the vicinity of the facility.

The closest noise sensitive premises as identified in the aerial map below.



**Figure 2: closest noise sensitive premises**

The modelling was undertaken using the computer programme SoundPlan to predict noise levels received at the closest noise sensitive premises. Sound power levels used for the calculations were based on file data and manufacturer supplied noise levels. The modelling of the noise levels were based on the sound levels shown in Table 6 for the main items of the facility.

**Table 6: Noise source**

Item of Equipment	Sound Power Level, (dB(A))
Excavator	98
Materials Handler	98
Forklift	84
Truck	97

Results shown in Table 7 below are indicative of compliance with the predicted assigned levels.

**Table 7: Noise level emissions**

Noise Measurement Location	Scenario	Noise Level Parameter	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable Assigned Noise Level (dB)	Exceedance to Assigned Noise Level (dB)
Residence A – Lot 9001	1 (Plant only)	L <sub>A10</sub>	46	Day (L <sub>A10</sub> )	61	Complies
	2 (Plant with trucks)	L <sub>A1</sub>	47	Day (L <sub>A1</sub> )	71	Complies
Residence B – Lot 5	1 (Plant only)	L <sub>A10</sub>	37	Day (L <sub>A10</sub> )	55	Complies
	2 (Plant with trucks)	L <sub>A1</sub>	38	Day (L <sub>A1</sub> )	65	Complies
Residence C – Lot 603	1 (Plant only)	L <sub>A10</sub>	54	Day (L <sub>A10</sub> )	56	Complies
	2 (Plant with trucks)	L <sub>A1</sub>	56	Day (L <sub>A1</sub> )	66	Complies
Residence D – Lot 39	1 (Plant only)	L <sub>A10</sub>	55	Day (L <sub>A10</sub> )	58	Complies
	2 (Plant with trucks)	L <sub>A1</sub>	58	Day (L <sub>A1</sub> )	68	Complies
Caretaker Residence E – Lot 200	1 (Plant only)	L <sub>A10</sub>	53	(L <sub>A10</sub> )	65	Complies
	2 (Plant with trucks)	L <sub>A1</sub>	55	(L <sub>A1</sub> )	80	Complies

**The Delegated Officer has reviewed the Applicant’s noise modelling report and established the following key finding:**

1. The Delegated Officer considers that it is likely that the proposal will comply with the Noise Regulations provided operations are limited to daytime only (i.e. 07:00 to 19:00 hours).

## 7. Consultation

The applicant has undertaken consultation with the Shire of Dardanup regarding the design of the proposed facility. The certificate of construction compliance for stage 1 work was issued by the Shire on 19/02/2019 and approval from the Shire for permission to use the septic system was granted on 27/2/2019.

The Application for a licence was also advertised on the DWER website on 15 April 2019 and in the West Australian on 22 April 2019. No comments were received.

## 8. Location and siting

### 8.1 Siting context

The Premises is located at 22 (Lot 509) Pedretti Road, Picton East. The application states that the site comprises a cleared vacant lot within the Picton East Industrial Area and lies within the Shire of Dardanup.

Lot 509 is zoned “General Industry” under the Shire’s Town Planning Scheme No. 3 (TPS3).

### 8.2 Residential and sensitive Premises

The distances to residential and sensitive receptors are detailed in Table 8.

**Table 8: Receptors and distance from activity boundary**

Sensitive Land Uses	Distance from Prescribed Activity
Residential area	The closest residential premise is located approximately 170m away to the south-east of the site. The other four next closest residential premises including the caretakers residence is located approximately 200m from the site.

### 8.3 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 9. Table 9 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 9: Environmental values**

Specified ecosystems	Distance from the Premises
Multiple use category wetland	Adjacent/east and approximately 200-250m west of the Premises
Resource enhancement category wetland	Approximately 570m north of the Premises
Conservation category wetland	Approximately 1km west of the Premises
Parks and wildlife managed lands (C class timber reserve 40552)	Approximately 1km west of the Premises

### 8.4 Groundwater and water sources

The distances to groundwater and water sources are shown in Table 10.

**Table 10: Groundwater and water sources**

Groundwater and water sources	Distance from Premises	Environmental value
Groundwater	Depth to groundwater is approximately 1.25-15m below ground level.	Groundwater flow is expected to be to the north-west.

### 8.5 Soil type

Geology comprises Bassendean Sands overlying Guildford formation. Geotechnical investigation at the site indicated grey, white and yellow/orange sands to depths of up to 2.2 metres (m) below the surface.

### 8.6 Meteorology

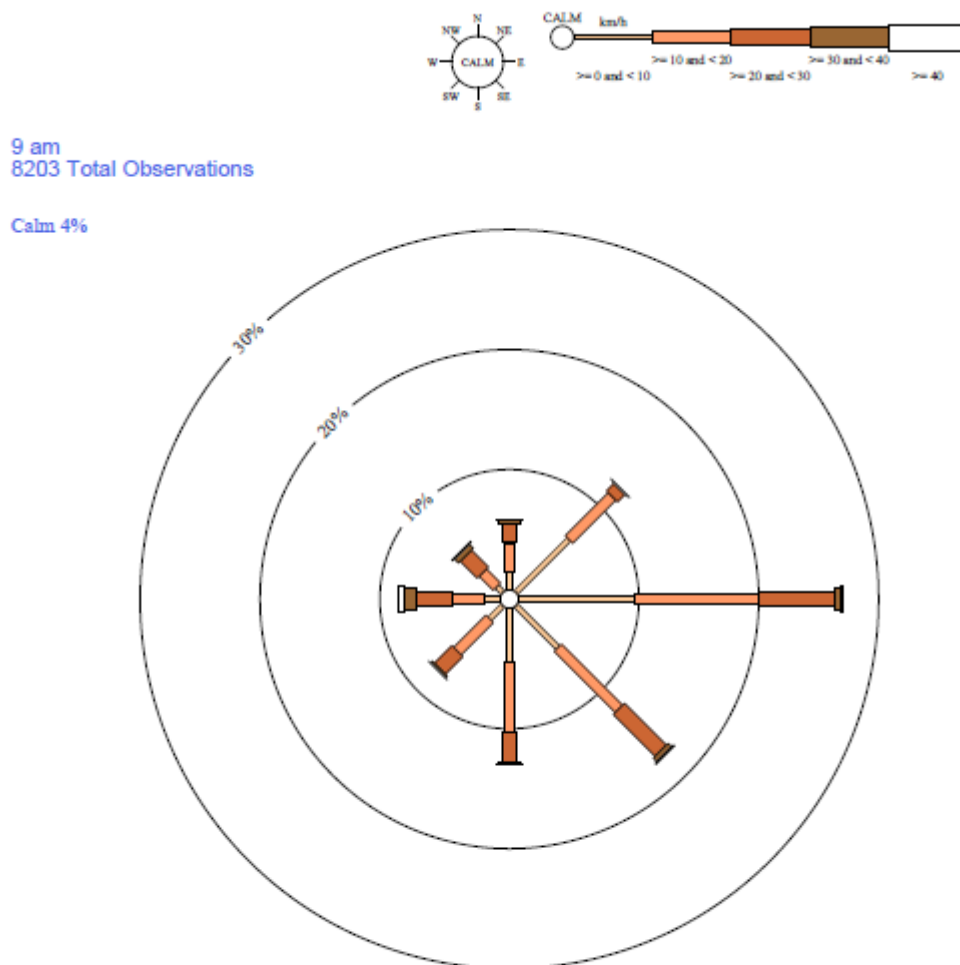
The premises are located in the Bunbury Region. The Bunbury Region experiences a Mediterranean climate characterised by mild and wet winters and warm to hot dry summers. Highest temperatures occur between December to March with average monthly maximum



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.

### 8.6.1 Wind direction and strength

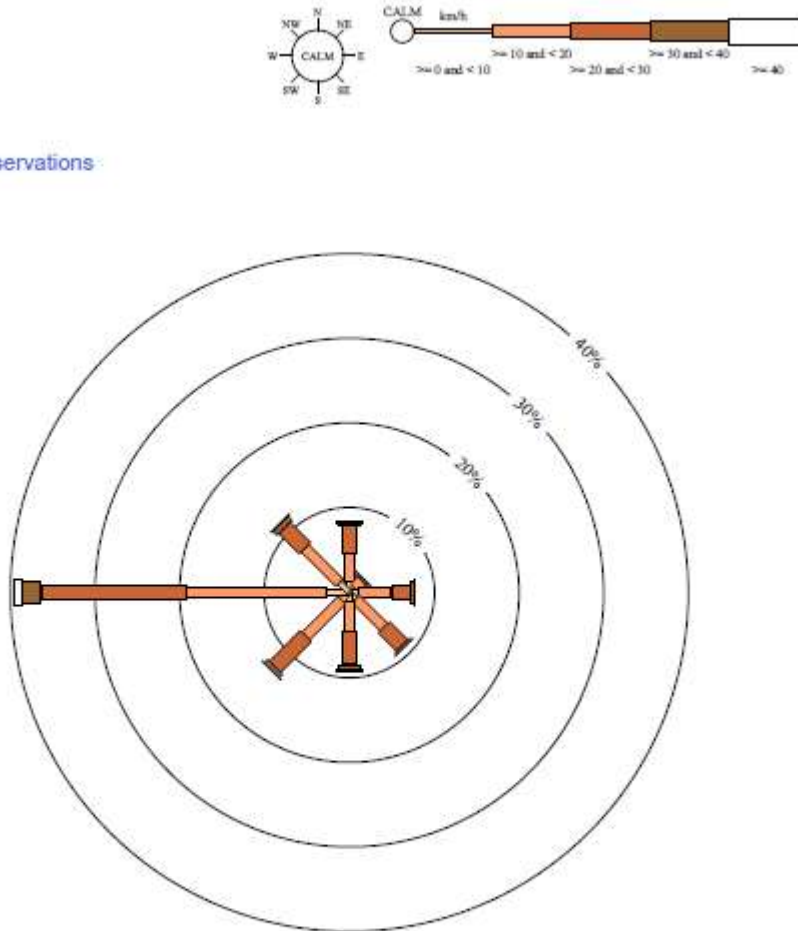
Wind speed and wind direction are important factors influencing the pathway of emissions. It effects noise propagation and transport of fugitive dust. The closest available wind data for the area can be sourced from the Bunbury weather station (number 009965). The Bureau of Meteorology (BoM) provides the 9am and 3pm wind speed and direction for Bunbury weather station. Prevailing winds are to the east and south easterly in the mornings, and to the west in the afternoons.



**Figure 3: Bunbury weather station 9 am average wind speed and direction showing bias to easterly and south easterly winds**

3 pm  
8186 Total Observations

Calm \*

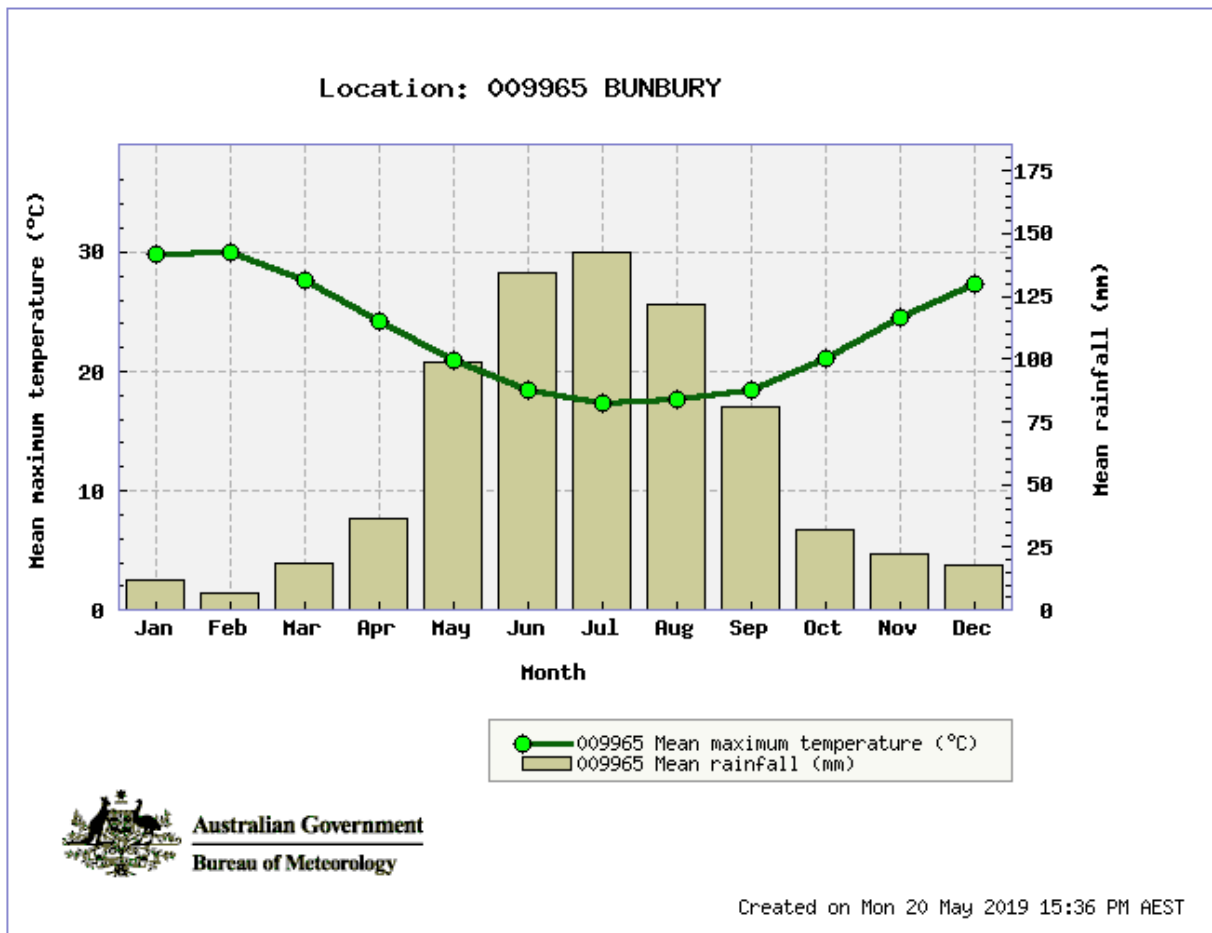


**Figure 4: Bunbury weather station 3 pm average wind speed and direction showing bias to westerly winds**

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.

### 8.6.2 Rainfall and temperature

The Perth area is characterised by cool, wet winters and warm, dry summers. Bunbury is the closest weather station (number 009965) located approximately 1.9 km away providing weather data most representative of the Premises. BoM (2019) provides the mean rainfall and maximum temperatures for the weather station as depicted in figure 5 (mean rainfall and mean maximum temperature 1995 to 2019). Climatic conditions can significantly influence the pathway of emissions. In the context of this Application dust and noise emissions are both affected by climatic conditions such as dry or wet weather.



**Figure 5: Mean maximum temperature and mean rainfall for Bunbury weather station**

## 9. Risk assessment

### 9.1 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 Table 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			
Waste acceptance and handling	Acceptance and handling of imported waste.  Solid waste contaminated with asbestos containing materials and/or asbestos fibres.	Dust	Residential premises located approximately 170m-200m of the site	Air / wind dispersion	Health and amenity impacts.	Yes	See section 9.4
		Noise	Residential premises located approximately 170m-200m of the site		Health and amenity impacts.	Yes	See section 9.5
		Asbestos fibres from non-conforming waste types at the Premises being released into the air.	Residential premises located approximately 170m-200m of the site		Health impacts	Yes	See section 9.6

Risk Events					Continue to detailed risk assessment	Reasoning	
Sources/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts			
<b>Waste storage/ stockpiling</b>	<i>Stockpiling of Inert solid wastes and recycled products.</i>	<i>Dust</i>	<i>Residential premises located approximately 170m-200m of the site</i>	<i>Air / wind dispersion</i>	<i>Health and amenity impacts.</i>	<i>Yes</i>	<i>See section 9.4</i>
		<i>Asbestos fibres from non-conforming waste types at the Premises being released into the air and included in final product.</i>	<i>Residential premises located approximately 170m-200m of the site</i>		<i>Health impacts</i>	<i>Yes</i>	<i>See section 9.6</i>
		<i>Odour from putrescible waste</i>	<i>Residential premises located approximately 170m-200m of the site</i>		<i>Health impacts</i>	<i>Yes</i>	<i>Section 9.7</i>

Risk Events					Continue to detailed risk assessment	Reasoning	
Sources/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts			
		Fire				<p>See section 9.8</p> <p>Refer to Condition 11- Fire controls</p> <p>The operations involve stockpiling of limited quantities of combustible recyclable and waste materials (paper, cardboard, plastics, etc), which presents a fire risk. The applicant however has in place a number of controls in place which includes stockpile management, maintaining stockpile in damp state, fire extinguishers situated on site and fitted to all service vehicles, a fire unit with a capacity of 600 litres is positioned right next to the bin lay down area, and all areas of the premises can be covered in the event of a fire (30m fire reel and mobile unit).</p> <p>The Delegated officer therefore considers that licence condition relating to fire controls and maintaining equipment's in order will be sufficient to manage any fire emergencies at the premises.</p>	
		Vermin-putrescible waste stored on site	Residential premises located approximately 170m-200m of the site	Direct contact	Amenity and public health impacts	No	The Delegated officer considers that vermin infestation will be manageable under the Local Govt Bylaws for Shire of Dardanup

Risk Events					Continue to detailed risk assessment	Reasoning	
Sources/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts			
		Storm-water runoff (leachate and sediments)	Multiple use category wetlands	Overland flow and seepage through soil	Contamination of groundwater, soil and impact on the biological diversity and ecosystem function of wetlands.	No	<p>The Delegated Officer considers that:</p> <ul style="list-style-type: none"> <li>incoming waste deliveries will only be unloaded and sorted within the storage bunker or sorting shed;</li> <li>any leachate generated onsite will be captured and appropriately managed;</li> <li>all stormwater generated at the Premises will discharge to stormwater drainage swale, designed to capture and infiltrate runoff from the 1 hour duration, 1 in 1 year average return interval (ARI) storm event; and</li> <li>Overland flow is not considered likely to travel a significant distance through a developed industrial and urban setting.</li> </ul>
<b>Final Recycled Product</b>	Recycled waste contaminated with asbestos containing material and/or asbestos fibres sold to third parties.	Asbestos fibres from non-conforming waste types at the Premises being released into the air and included in final product.	Residential premises located approximately 170m-200m of the site	Air / wind dispersion	Health impacts	Yes	See section 9.6
<b>Vehicle Movements</b>	Vehicular movements on-site and to and from the	Dust	Residential premises located approximately 170m-200m of the site	Air / wind dispersion	Health and amenity impacts.	Yes	See section 9.4

Risk Events					Continue to detailed risk assessment	Reasoning	
Sources/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts			
	<i>Premises.</i>	Noise	<i>Nearest residence located approximately 170 m from the premises.</i>		<i>Health and amenity impacts</i>	Yes	See section 9.5



## 9.2 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	<ul style="list-style-type: none"> <li>onsite impacts: catastrophic</li> <li>offsite impacts local scale: high level or above</li> <li>offsite impacts wider scale: mid-level or above</li> <li>Mid to long-term or permanent impact to an area of high conservation value or special significance<sup>^</sup></li> <li>Specific Consequence Criteria (for environment) are significantly exceeded</li> </ul>	<ul style="list-style-type: none"> <li>Loss of life</li> <li>Adverse health effects: high level or ongoing medical treatment</li> <li>Specific Consequence Criteria (for public health) are significantly exceeded</li> <li>Local scale impacts: permanent loss of amenity</li> </ul>
Likely	The risk event will probably occur in most circumstances	Major	<ul style="list-style-type: none"> <li>onsite impacts: high level</li> <li>offsite impacts local scale: mid-level</li> <li>offsite impacts wider scale: low level</li> <li>Short-term impact to an area of high conservation value or special significance<sup>^</sup></li> <li>Specific Consequence Criteria (for environment) are exceeded</li> </ul>	<ul style="list-style-type: none"> <li>Adverse health effects: mid-level or frequent medical treatment</li> <li>Specific Consequence Criteria (for public health) are exceeded</li> <li>Local scale impacts: high level impact to amenity</li> </ul>
Possible	The risk event could occur at some time	Moderate	<ul style="list-style-type: none"> <li>onsite impacts: mid-level</li> <li>offsite impacts local scale: low level</li> <li>offsite impacts wider scale: minimal</li> <li>Specific Consequence Criteria (for environment) are at risk of not being met</li> </ul>	<ul style="list-style-type: none"> <li>Adverse health effects: low level or occasional medical treatment</li> <li>Specific Consequence Criteria (for public health) are at risk of not being met</li> <li>Local scale impacts: mid-level impact to amenity</li> </ul>
Unlikely	The risk event will probably not occur in most circumstances	Minor	<ul style="list-style-type: none"> <li>onsite impacts: low level</li> <li>offsite impacts local scale: minimal</li> <li>offsite impacts wider scale: not detectable</li> <li>Specific Consequence Criteria (for environment) likely to be met</li> </ul>	<ul style="list-style-type: none"> <li>Specific Consequence Criteria (for public health) are likely to be met</li> <li>Local scale impacts: low level impact to amenity</li> </ul>
Rare	The risk event may only occur in exceptional circumstances	Slight	<ul style="list-style-type: none"> <li>onsite impact: minimal</li> <li>Specific Consequence Criteria (for environment) met</li> </ul>	<ul style="list-style-type: none"> <li>Local scale: minimal to amenity</li> <li>Specific Consequence Criteria (for public health) met</li> </ul>

<sup>^</sup> 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.

## 9.3 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
<b>Extreme</b>	Unacceptable.	Risk Event will not be tolerated. DWER may refuse application.
<b>High</b>	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.
<b>Medium</b>	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.
<b>Low</b>	Acceptable, generally not controlled.	Risk Event is acceptable and will generally not be subject to regulatory controls.

## 9.4 Risk Assessment – Dust

### 9.4.1 Description of dust emissions

The construction and the operation work have the potential to generate dust as a result of the following activities:

- Vehicle and machinery movements ; and
- Material handling (loading and unloading) associated with the commodity aggregation activities.

### 9.4.2 Identification and general characterisation of emission

Particulate Matter (PM) may be generated due to truck and vehicle movement on unsealed access roads, caused during the acceptance, handling and processing of waste and from dust lift off from the surfaces of waste and recycled products stockpiles.

### 9.4.3 Description of potential adverse impact from the emission

Emissions of dust from the facility can have an impact on indoor air quality in the area or even the neighbouring area depending on the dispersion rate for the day.

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 (PM<sub>10</sub>) or 2.5 (PM<sub>2.5</sub>) 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. The PM<sub>10</sub> fraction can be

inhaled affecting both the respiratory and cardiovascular systems. Coarse particles also deposit on a variety of surfaces potentially degrading amenity value at nearby sensitive receptors.

Risks from certain types of particles are further discussed in 9.6 in relation to asbestos fibres.

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 170m from the Premises.

Figure 3 above is indicating bias to easterly winds around 9am therefore residence D which is located to the east of the facility can be affected from potential dust emission in the mornings. Whereas Figure 4 above shows bias to westerly and south to southwesterly winds around 3 pm therefore residence B located to the west of the facility can be affected from potential dust emission in the afternoon.

#### 9.4.4 Criteria for assessment

Health relevant criteria for air quality are defined by the National Environment Protection (Ambient Air Quality) Measure (NEPM) 2003 which recommends, for the relevant particulate parameter of PM<sub>10</sub> that 50µm/m<sup>3</sup> is not exceeded over a 24 hour averaging period. There are no specific criteria for amenity impacts but achieving acceptable air quality for human health will in the current setting also likely satisfy amenity protection.

#### 9.4.5 Applicant/Licence Holder controls

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

**Table 15: Applicant's proposed controls for dust emission**

Control	Description
<b>Controls for fugitive dust</b>	
Water spray system	Water carts and hoses will be used; Dust suppression through water spray if high dust levels are observed or considered likely to occur; Maintain adequate water supply for dust suppression; Trafficable areas will be watered down at the commencement of each working day. Where conditions are dry and windy, the water cart will make regular/additional passes; and Dry stockpiles will be wetted down using the water spray system (hoses and cart) and visually inspected throughout the day (impacts will be reduced given the acceptance and processing of waste will be wetted down to control any emissions).
Speed limit	A slow speed warning signs will be installed on-site for all vehicles, regulated by all site staff and enforced by the Site Supervisor. Travel at 8 km per hour, signposted at appropriate locations
Stockpile size and location	Incoming waste deliveries will only be unloaded and sorted within storage bunker; Waste will be unloaded slowly from the lowest height that is practical; Maximum height of waste stockpiles within storage bunker will be below bunker walls at all times; and

Control	Description
	Floor of storage bunker will be cleaned of dust and sand on a weekly basis.
Material tipping	Material will be tipped from the lowest possible height.
Employee education	Employees will be made familiar with all dust prevention measures to be implemented onsite at employee inductions.
Complaints management	Any dust complaints received regarding the proposed operation will be registered and supplied to both the Shire and DWER (if required). The following information will be recorded for all complaints received: <ul style="list-style-type: none"> <li>• Date and time of complaint;</li> <li>• Location/activity which the complaint relates to;</li> <li>• Wind direction, speed and atmospheric temperature at the time of the complaint (if available); and</li> <li>• Details of how the complaint was managed/resolved.</li> </ul>

#### 9.4.6 Key findings

**The Delegated Officer has reviewed the information regarding dust emissions and has found:**

1. Maintenance of materials in a damp state whilst sorting or stockpiling onsite will be required to limit dust generation.

#### 9.4.7 Consequence

If dust emissions occur during operation, the Delegated Officer has determined that the health and amenity impacts will be low level. Therefore, the Delegated Officer considers the consequence of dust emissions during operation to be **minor**.

#### 9.4.8 Likelihood of Risk Event

If dust emissions occur during operation, then the Delegated Officer has determined that the health and amenity impacts will be low level. Therefore, the Delegated Officer considers the likelihood of dust impacting health and amenity to be **possible**.

#### 9.4.9 Overall rating of dust emissions

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 13) and determined that the overall rating for the risk of dust emissions during operation is **medium**.

### 9.5 Risk Assessment – Noise Emissions

#### 9.5.1 Description of Noise Emissions

Noise will be generated from the operation of equipment's, excavator, from vehicle traffic (approximately 30 trucks dropping off waste and materials to the site) and from the forklift six days a week. Noise has the potential to impact amenity for receivers.

#### 9.5.2 Identification and general characterisation of noise emission

Noise will be generated from normal operations onsite including noise from the sorting of

wastes, the handling of materials as well as noise emitted from vehicle movements.

The potential sources of noise within the Premises are:

- operation of vehicles (trucks making delivery or pickup, excavators, forklift and water cart).

The Premises will operate between the hours of 7am and 7pm Monday to Saturday. No work is proposed for Sunday or public holidays.

### 9.5.3 Description of potential adverse impact from the emission

Noise emissions have the potential to reduce public well-being, amenity and comfort of noise sensitive receptors are located close to the activity area.

### 9.5.4 Criteria for assessment

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

### 9.5.5 Applicant controls

This assessment has reviewed the controls set out in **Error! Reference source not found.**16 below.

**Table 16: Applicant proposed controls for Noise Emissions**

Control	Description
Vehicles	<ul style="list-style-type: none"> <li>• Vehicles will be restricted to a maximum speed of 8km/hour at the site.</li> </ul>
Raw material storage and handling	<ul style="list-style-type: none"> <li>• Noise reducing workplace procedures will be adopted such as slow unloading of materials from the lowest height possible.</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>• All equipment and machinery will be maintained in good working condition in accordance with manufacturer's specifications.</li> </ul>
Operation	<ul style="list-style-type: none"> <li>• Premises operations limited to 7.00am to 7.00pm Monday to Saturday;</li> <li>• Manufacturer's noise attenuation measures will be maintained on equipment throughout operation;</li> <li>• Incoming waste deliveries will only be unloaded and sorted within storage bunker or sorting shed; and</li> <li>• Equipment and vehicles will not be left idling for extended periods when not in use.</li> </ul>
Complaints Management	<p>Any noise complaints received during the operation works will be registered and dealt with directly. The following information will be recorded for all complaints received:</p> <ul style="list-style-type: none"> <li>• Registration of complaint;</li> <li>• Identification of source;</li> <li>• Assessment of level;</li> <li>• Corrective action to mitigate emission if found to be unreasonable;</li> <li>• Re-assessment to ensure control procedures implemented are successful;</li> <li>• Follow up with complainant; and</li> <li>• Close-out.</li> </ul>

***The Delegated Officer has reviewed the information regarding noise and has found:***

- 1. Noise producing works will be undertaken only during normal hours.*
- 2. The Noise Regulations specify normal hours as 07:00 to 19:00 hours.*
- 3. The facility is likely to comply with the Noise Regulations provided the operation is limited to daytime only (i.e. 07:00 to 19:00 hours).*

### **9.5.6 Consequence**

If noise emission occur during operation, then the Delegated Officer has determined that the impact of noise emissions on amenity will be low level on a local scale. Therefore, the Delegated Officer considers the consequence of noise emissions during operation to be **minor**.

### **9.5.7 Likelihood of Risk Event**

The Delegated Officer has determined that the likelihood of noise impacts during operation will probably not occur in most circumstances. Therefore, the Delegated Officer considers the likelihood of noise impacts during operation to be **unlikely**.

### **9.5.8 Overall rating of noise emissions**

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 13) and determined that the overall rating for the risk of noise impacting health and amenity during operation is **medium**.

## **9.6 Risk Assessment – Asbestos**

### **9.6.1 Description of asbestos emissions**

Asbestos fibres from the waste material accepted at the Premises being released into the air during handling, sorting or stockpiling causing an adverse health impact to Workers on the Premises or people outside the Premises, including final end-users of the product.

### **9.6.2 Identification and general characterisation of emission**

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 the incoming wastes to contain asbestos fibres. As waste is processed at the Premises through moving and sorting inert waste, any residual asbestos fibres left in the waste may result in potential health impacts for workers on the site, residences located at close proximity to the facility and the final end users.

### **9.6.3 Description of potential adverse impact from the emission**

Asbestos is a hazardous material. The inhalation of asbestos fibres can cause slow-developing deadly lung diseases including asbestosis, lung cancer and mesothelioma.

### **9.6.4 Criteria for assessment**

Asbestos content in final product is specified in the 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 offsite disposal, or it should be subject to further actions to remediate it or demonstrate its acceptability by further assessment.

### 9.6.5 Applicant controls

The Applicant is not proposing to accept asbestos at the Premises. This assessment has reviewed the controls set out in table 17 below as provided in the document titled 'Asbestos Management Plan'.

**Table 17: Applicant's proposed controls for asbestos**

Control	Description
Asbestos waste	<ul style="list-style-type: none"> <li>Asbestos waste will not be accepted at the waste depot.</li> </ul>
Signage and information	<ul style="list-style-type: none"> <li>The solid waste depot will have signage stating "No Asbestos" will be accepted at the depot;</li> <li>Concealment of asbestos will result in rejection of future deliveries; and</li> <li>All customers will be informed that waste contaminated with asbestos will not be accepted at the depot;</li> </ul>
Waste deliveries	<ul style="list-style-type: none"> <li>All waste transporters must declare that their load does not contain asbestos in order to gain entry to the depot;</li> <li>All covers to waste loads will be removed to allow visual inspection of loads prior to acceptance and unloading/sorting;</li> <li>Should inspection of loads indicate potential presence of asbestos, the delivery shall be rejected and the transporter referred to a facility licensed to accept asbestos;</li> <li>Records shall be kept of all rejected deliveries including date, transporter, source and vehicle registration; and</li> <li>All accepted loads will be classified as high or low risk as per DWER guidelines for managing asbestos at waste recycling facilities.</li> </ul>
Waste unloading and sorting	<ul style="list-style-type: none"> <li>Deliveries will be unloaded at the high risk area or low risk area at the waste storage bunker;</li> <li>All loads will be visually inspected by Depot staff. Any loads found to contain suspected asbestos materials (fibrous, fines or contaminated material) shall be immediately classified as high risk and unloaded appropriately;</li> <li>All high risk classified loads shall be unloaded with Bunker water spray operating;</li> <li>All high risk loads will be unloaded at a depth of less than 30 centimeters to enable detailed visual inspection; and</li> <li>Any suspected asbestos material identified in loads will either be immediately re-loaded and handed back to the transporter or isolated, wetted and managed in accordance with relevant regulations.</li> </ul>
Asbestos handling and disposal	<ul style="list-style-type: none"> <li>Any suspected asbestos materials removed during waste sorting shall be isolated wetted and disposed of as follows:</li> <li>Appropriate personal protective equipment (PPE) will be worn;</li> </ul>

Control	Description
	<ul style="list-style-type: none"> <li>Asbestos will be immediately wrapped in double layer durable plastic sheeting or bags sealed with durable ties or tape, of a manageable size and weight for manual handling;</li> <li>Wrapped asbestos materials shall be labelled with warning signs;</li> <li>Wrapped asbestos materials and contaminated/disposable PPE and equipment shall be collected from the Depot within 24 hours of wrapping, and disposed off-site at a licensed facility.</li> </ul>
Records of Asbestos	<ul style="list-style-type: none"> <li>All deliveries found to have contained asbestos post-acceptance shall be recorded including date, quantity, transporter, source and registration number;</li> <li>Associated customers will be notified of the asbestos in their delivery and warned to ensure that future deliveries to be asbestos free; and</li> <li>Repeat delivery (more than twice) of asbestos materials to the depot will result in customers being excluded from the depot.</li> </ul>

### 9.6.6 Key findings

The Delegated Officer has reviewed the information regarding Asbestos and has found:

1. No crushing or screening of building materials is proposed. Materials are to be sorted onsite only.
2. The risk of asbestos can be appropriately managed at the Premises if controls in accordance with the Asbestos Guidelines are implemented.

### 9.6.7 Consequence

Taking into consideration the potential impacts associated with asbestos fibres, the Delegated Officer has determined that the impact of asbestos exposure would be a severe consequence with potential loss of life. Therefore, the Delegated Officer considers the consequence of asbestos fibre emissions to be **severe**.

### 9.6.8 Likelihood of Risk Event

The Delegated Officer has determined that impacts asbestos fibre emissions will not occur in most circumstances. Therefore, the Delegated Officer considers the likelihood of asbestos fibre emissions to be **rare**.

### 9.6.9 Overall rating of asbestos

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 13) and determined that the overall rating for the risk of asbestos exposure during operation is **high**.

## 9.7 Risk Assessment – Odour

### 9.7.1 Description of odour emissions

Odour may be produced from the putrescible waste stored in the concrete bunker and when



waste from the bunker is moved by the front end loader into the enclosed containers before removal from site when the facility is operational.

### 9.7.2 Identification and general characterisation of odour emission

Putrescible waste is expected to be left on the bunker floor which may cause odour issues (no sorting of putrescible waste will be done at the site) and also when waste from the bunker is moved by the front end loader into the enclosed containers.

### 9.7.3 Description of potential adverse impact from the discharge

The decomposition of putrescible waste generates gas which comprises a mixture of methane, carbon dioxide and small quantities of trace elements. In high concentrations, methane can pose a human health risk. Other effects of odour can include nausea, headaches, depression and stress. In some cases repeated or prolonged exposure to odour can lead to a high level of annoyance, and the person experiencing it may become particularly sensitive to the presence of the odour. In some cases odour may cause eye or nose irritation when exposed.

### 9.7.4 Criteria for assessment

There are no set threshold or concentration criteria for odour assessment. The general provisions of the EP Act make it an offence to cause or allow unreasonable emissions which includes emissions of odour that unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person.

### 9.7.5 Applicant Holder controls

The Applicant's controls to manage odour emissions are set out in Table 18 below.

**Table 18: Applicant proposed control for odour emissions**

Control	Description
Raw material storage and handling	<ul style="list-style-type: none"> <li>All putrescible waste handling operations will be confined to the waste bunker, then moved by the front end loader into the enclosed containers and disposed off-site at an appropriately licenced facility;</li> <li>Putrescible waste will be collected weekly; and</li> <li>Inspection of all loads dropped within the putrescible waste bunker will be undertaken to identify any potential highly odorous materials and removed from the site.</li> </ul>
Housekeeping	<ul style="list-style-type: none"> <li>The putrescible waste bunker will be swept and washed down regularly with the aim of eradicating any potential odour emitting sources.</li> </ul>
Disposal	<ul style="list-style-type: none"> <li>Majority of refuse will be moved off site weekly.</li> </ul>
Complaints register	<ul style="list-style-type: none"> <li>A complaints register will be maintained to ensure that the community has opportunity to express their concern regarding the operations.</li> </ul>
Monitoring	<ul style="list-style-type: none"> <li>Odour levels at the site will be continuously monitored by staff and action taken if required.</li> </ul>

### 9.7.6 Key findings

***The Delegated Officer has reviewed the information regarding odour impacts from the Premises and has found:***

- 1. It is unlikely odour emissions from small quantities of putrescible waste will have any impacts offsite during the operation;*

2. *The provisions of section 49 of the EP Act is suitable to regulate odour emissions from the facility.*

### 9.7.7 Consequence

If odour emissions occur, then the Delegated Officer has determined that the impact of odour will be minimal offsite impacts. Therefore, the Delegated Officer considers the consequence of odour to be **minor**.

### 9.7.8 Likelihood of Risk Event

Based upon the infrastructure and management controls in place, the Delegated Officer has determined that the odour impacts may not occur in most circumstances. Therefore, the Delegated Officer considers the likelihood of odour impacts on sensitive receptors to be **unlikely**.

### 9.7.9 Overall rating of odour emissions

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 13) and determined that the overall rating for the risk of odour emissions is **medium**.

## 9.8 Risk Assessment – Air emissions during fire

### 9.8.1 Description of air emissions during fire

During a fire within the premises smoke emissions from burning (paper, cardboard, plastics, etc) may cause negative health impacts at neighboring industrial premises or residents at the nearby residential area.

### 9.8.2 Identification and general characterisation of emission

Waste fires can arise across all stages of the waste management chain. The intense heat can cause damage to neighboring properties and the incomplete combustion of waste materials (plastics or other waste types in damp state) can cause a health risk from the inhalation of particulates. The source of combustible material also varies greatly.

### 9.8.3 Description of potential adverse impact from the discharge

If a fire were to occur at the premises, emissions generated from combustion of the waste will contain a number of pollutants including particulate matter (PM), sulfur dioxide (SO<sub>2</sub>) and other hazardous chemicals. These compounds can cause amenity and health impacts to the human population.

### 9.8.4 Criteria for assessment

The National Environment Protection (Ambient Air Quality) Measure (NEPM) 2018 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<sub>2.5</sub>).

### 9.8.5 Applicant Holder controls

The Applicant's controls to manage emissions from fire are set out in Table 19 below.

**Table 19: Applicant proposed controls for air emissions during fire**

Control		Description
Infrastructure	<ul style="list-style-type: none"> <li>Waste material accepted at the facility will be unloaded and bulk sorted on a concrete Storage Bunker (10m x 39.6m reinforced concrete floor x 3.0m high concrete tilt walls) using an excavator with a sorting grab;</li> <li>Waste including plastic, paper, cardboard and other combustible waste will be temporarily stored in designated storage areas and removed from the premises for recycling or disposal at an appropriate facility.</li> </ul>	
Management	<ul style="list-style-type: none"> <li>The premises will be secured when unattended.</li> </ul>	
Disposal	<ul style="list-style-type: none"> <li>Majority of refuse will be moved off site weekly.</li> </ul>	
Fire control	<ul style="list-style-type: none"> <li>The site has an emergency response plan to manage any risks relating to fire;</li> <li>All staffs on site are appropriately trained;</li> <li>Firefighting equipment's are positioned on site</li> </ul>	

### 9.8.6 Key findings

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

- The applicant has fire management controls and infrastructure in place*
- Storage of waste can be regulated through the adoption of the applicant's fire management controls as conditions of the licence;*
- Throughput waste restriction can reduce the risk of impacts from fire;*
- The sites emergency management plan must be maintained in accordance with AS 3745; and*
- The risk event is acceptable subject to multiple regulatory controls.*

### 9.8.7 Consequence

If emissions are released from a fire within the premises, then the Delegated Officer has determined that the impact of the emissions of this fire will be of a low level local scale impact with short term adverse health effects. Therefore, the Delegated Officer considers the consequence of air emissions during fire to be **moderate**.

### 9.8.8 Likelihood of Risk Event

The Delegated Officer has determined that the likelihood of air emissions during a fire causing negative health impacts will probably not occur in most circumstances. Therefore, the Delegated Officer considers the likelihood of air emissions during a fire causing negative health impacts to be **unlikely**.

### 9.8.9 Overall rating of odour emissions

The Delegated Officer has compared the consequence and likelihood ratings described above with the Risk Rating Matrix (Table 6) and determined that the overall rating for the risk of negative health impacts from air emissions during a fire is **medium**.

## 9.9 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	Unloading, Material handling and vehicle movements	Air/wind to sensitive receptor causing health impacts from inhalation of dust	Management and infrastructure controls	Minor consequence Possible likelihood <b>Medium risk</b>	Acceptable subject to Applicant controls conditioned.
2.	Noise	Vehicle movements, acceptance and handling of waste materials	Air/wind to sensitive receptors causing amenity impacts	Management and infrastructure controls	Minor consequence Unlikely likelihood <b>Medium risk</b>	Acceptable subject to applicant controls conditioned and the Noise Regulations.
3.	Asbestos	Potential inadvertent acceptance of asbestos contaminated material	Air/wind to sensitive receptor causing health impacts from asbestos inhalation	None specified however management controls for dust will be applicable	Severe consequence Rare likelihood <b>High Risk</b>	Acceptable subject to applicant controls conditioned and regulatory controls.
4.	Odour from putrescible wastes	Putrescible wastes stored onsite prior to disposal offsite	Air/wind dispersion	Management and infrastructure controls	Minor consequence Unlikely likelihood <b>Medium risk</b>	Acceptable subject to regulatory controls.
5.	Fire	Storing of combustible recyclable and waste materials (paper, cardboard, plastics, etc)	Air/wind dispersion	Management and infrastructure controls	Moderate consequence Unlikely likelihood <b>Medium risk</b>	Acceptable subject to regulatory controls.

## 10. Regulatory controls

A summary of regulatory controls determined to be appropriate for the Risk Event is set out in Table 20. The risks are set out in the assessment in section 9 and the controls are detailed in this section 10. 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 21: Summary of regulatory controls to be applied**

		Controls (references are to sections below, setting out details of controls)						
		10.1.1 Throughput and waste restrictions	10.2.1 Infrastructure and equipment	10.2.2 Dust Management	10.2.3 Asbestos management	10.2.4 Stockpile management	10.2.8 Noise management	10.2.9 Record keeping
	1. Fugitive dust from waste handling, processing and storage	•	•	•	•	•		•
	2. Noise from waste handling, processing and vehicle movements	•	•				•	•
	3. Asbestos fibres from waste handling, processing and storage			•	•	•		•
	4. Odour during operations	•			•	•		•
	5. Fire	•	•			•		

## 5.1 Licence controls

### 5.1.1 Throughput and waste restrictions

The applicant will be limited to accepting a combined total of up to 30,000 tonnes per year at any one time of the following waste types:

- Inert waste – type 1:
- Inert waste – type 2:
- Putrescible waste

**Note:** Controls are consistent with those specified in the Application.

### 5.1.2 Infrastructure and equipment

The applicant will be required to operate and maintain the infrastructure listed in Table 4 in good working condition. The infrastructure was considered by the Delegated Officer in determining the risk of emissions from the Premises and is considered necessary in the minimising the risk associated to fire, dust, noise and odour emissions.

**Note:** Infrastructure and controls have been derived from the Application.

### 5.1.3 Dust management

The Applicant will be required to use specified infrastructure to keep all stockpiles and unsealed roads in a damp or stabilised state.

All vehicles on the Premises should operate at speeds of less than 8km/h throughout the Premises.

**Note:** These controls are consistent with the Application and have been included to ensure the risks associated with dust are appropriately mitigated.

### 5.1.4 Asbestos management

In the event that ACM is found whilst inspecting the incoming waste or sorting time, the Licence Holder will be required to isolate the material onsite in a manner that prevents the emission of asbestos fibres and dispose of to an appropriately licensed facility.

### 5.1.5 Stockpile management

The Applicant will be required to maintain the stockpile in a damp state, separate stockpiles to minimize any chances of contaminating a stockpile, must ensure that stockpile heights will be below the bunker walls at all times.

**Note:** Controls are consistent with those specified in the Application.

### 5.1.6 Fire controls

The Applicant will be required to maintain a fire management plan and firefighting infrastructure onsite.

**Note:** Controls are consistent with those specified in the Application.

### 5.1.7 Noise management

The Applicant will only be authorised to operate during the hours of 07:00 to 19:00 Monday to Saturday. The Applicant will not be authorised to operate on a Sunday or public holiday.

Machinery/equipment utilised onsite must be maintained in accordance with the manufacturer's requirements.

**Note:** Controls are consistent with those specified in the Application.

### 5.1.8 Monitoring reports/record keeping

The applicant will be required to submit an annual audit compliance report to confirm whether the site has complied with all the licence conditions which also includes records for any complaints received and the actions taken.

## 6. 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 21 provides a summary of the conditions to be applied to this licence.

**Table 22: Summary of conditions to be applied**

Condition Ref	Grounds
Emissions Condition 1	This condition is valid, risk-based and consistent with the EP Act.
Throughput and waste restrictions 2	These conditions are valid, risk-based and contain appropriate controls.
Environmental Compliance Condition 1	Environmental compliance is a valid, risk-based condition to ensure appropriate linkage between the licence and the EP Act.
Infrastructure and Equipment 3	These conditions are valid, risk-based and contain appropriate controls.
Dust Management 4, 5, and 6	These conditions are valid, risk-based and consistent with the EP Act.
Asbestos management 7 and 8	These conditions are valid, risk-based and contain appropriate controls.
Stockpile management 9 and 10	This condition is valid, risk-based and consistent with the EP Act.
Fire Control 11	This condition is valid, risk-based and consistent with the EP Act and AS 3745
Noise Management 12	These condition is valid, risk-based and contain appropriate controls.
Record Keeping 13, 14, 15, 16 and 17	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.

## 7. Applicant's comments

The Applicant was provided with the draft Decision Report and draft Issued Licence on 31 May 2019. Comments are outlined in appendix 2.

## 8. 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.

**Steve 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.	<p>Licence application and supporting information received from Matt Collier on 19 December 2018.</p> <p>Email: Licence Application and supporting documentation received from Heath Morgan Associate. The following attachments were included:</p> <ul style="list-style-type: none"> <li>• Application form</li> <li>• Attachment 1A – lease agreement</li> <li>• Attachment 1B – ASIC extract</li> <li>• Attachment 2 – premises boundary and site plan</li> <li>• Attachment 4 – Shire of Dardanup consultation</li> <li>• Attachment 7 – specified ecosystems and sensitive land uses</li> <li>• Attachment 8 – Environmental Management Plan, including Noise Assessment and Asbestos Management Plan</li> </ul>	A1570331	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
2.	Stage 1- compliance document	A1768856	DWER records
3.	Works Approval W6107/2017/1–Hastie Waste Pty Ltd	W6107/2017/1	DWER records (A1693850)
4.	DER, July 2015. <i>Guidance Statement: Regulatory principles.</i> Department of Environment Regulation, Perth.	DER 2015a	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
5.	DER, October 2015. <i>Guidance Statement: Setting conditions.</i> Department of Environment Regulation, Perth.	DER 2015b	
6.	DER, August 2016. <i>Guidance Statement: Licence duration.</i> Department of Environment Regulation, Perth.	DER 2016a	
7.	DER, November 2016. <i>Guidance Statement: Risk Assessments.</i>	DER 2016b	

	Department of Environment Regulation, Perth.		
8.	DER, November 2016. <i>Guidance Statement: Decision Making.</i> Department of Environment Regulation, Perth.	DER 2016c	

## Appendix 2: Summary of Licence Holder Comments

Condition	Summary of Licence Holder comment	DWER response
Decision document: Applicant's comments	Minor Typographical changes	Typographical changes adopted
Licence condition 11	Information on any firefighting controls and infrastructure available at the premises provided as requested	Additional risk assessment for fire and conditions requiring the maintenance of firefighting infrastructure in order to achieve compliance with AS3745 and thereby manage any risks relating to fire on site, has been added to the licence and decision document.

## Attachment 1: Issued Licence L9201/2019/1

---